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PROJECT APPROACH TO THE TRANSFORMATIONAL ELECTRONIC GOVERNMENT AT THE REGIONAL LEVEL

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Abstract

Many countries are striving to form a transformational e-government. In the Russian Federation, the transformational scenario is considered as the only possible direction for e-government development due to the current economic situation. For its implementation in the period 2017-2020, new tasks of digital development have been delegated to Russian regions, the solution of which involves the introduction of modern management approaches. International practice shows that the problems of implementation of national plans in the field of e-government depend on the effectiveness of the project management system in government. The relevance of the contribution is to study the project approach to e-government development at the regional level, which will allow identifying the problem context at the present stage. The object of study is the Samara region. The contribution is based on materials of the Information Technology and Communications Department of the Samara region for 2014-2017. The authors analyze the activities of the regional project office of e-government, which operates in three main areas: the creation of electronic services to expand the range of electronic state and municipal services, the development and modernization of services for electronic document management for inter-departmental interaction, improving information security systems. The purpose of the contribution is to characterize the spheres of application of the project approach in the activities of government bodies at the regional level using the example of the Samara region for the implementation of the transformational scenario of e-government; identify problems and make recommendations for improving the efficiency of project tools.

Keywords: E-government, government policy, project management, project office, region, transformational e-government.

1. Introduction

E-government is recognized as a key element in the process of modernizing the government system (Chan & Chow, 2007). This substantiates a wide discourse of issues and directions for improving e-government systems in the last decade (Weerakkody, El-Haddadeh, Sabol, Ghoneim, & Dzupka, 2012; Rodríguez Bolívar, Alcaide Muñoz, & Hernández, 2016), the influence of e-government components on the quality of interaction of public authorities with stakeholders: citizens, companies and other government agencies, employees (Al-Emadi & Anouze, 2018). As a result, a large number of theoretical and applied research was conducted to study various aspects of e-government. Most e-government studies cover developed countries (Dunleavy, Margetts, Bastow, & Tinkler, 2011; Calista & Melitski, 2012) and illustrate best practices in this field. New jobs (Zoo, Lee, & Yoon, 2017; Putra et al., 2018; Alcaide Muñoz & Rodriguez Bolivar, 2018) emphasize the importance of studying e-government in developing and underdeveloped countries.

The concept of e-government has evolved from the simple application of information and communication technologies to the achievement of a qualitative transformation of the public sector through organizational changes and new competencies. E-government is becoming increasingly focused on creating flexible, open and compatible administrative structures that are capable to maintain the leading positions of their countries in the modern knowledge-based economy (European Commission). Recently there has been a demand for new approaches and methods aimed at expanding organizational and functional capabilities of e-government.

Analysis of the content, stages, principles of formation and existence of e-government showed that in economy digitalization, when any information and communication technologies are constantly being improved, the most effective is the design method for e-government development. In this regard, the stimulation of project management in e-government is required. A comprehensive project management solution assumes the availability of tools and user training to consider the impact of holistic, synergistic problems and barriers that surround and affect e-government projects (Furlong, 2016).

The key points of successful implementation of e-government projects are: strategic e-government plan, technologies used, institutional and organizational issues, technology issues, leadership and management skills (human potential), government policy in the field of information and communication technologies, reduction in the digital divide, reducing legal and political barriers (Alcaide Muñoz & Rodríguez Bolívar, 2018).

E-government is advisable to interpret at the junction of two points of view: government policy and project management. Public policy and project management should be balanced in such a way as to achieve sustainable results in e-government development (Melin & Wihlborg, 2018).

The results of foreign studies and modern trends of digital transformation in Russia actualize the search and implementation of the most effective approaches to e-government development at all levels of government.

2. Problem Statement

Public administration in the Russian Federation has undergone significant changes over the past few years. External challenges and threats, the implementation of state policy in the information society

in the country lead to digital transformations of all aspects of public life. As a result of these changes, new tasks are set and delegated to regions and municipalities, which determines the relevance of this contribution.

In the current sense, e-government is a system of organizing the activities of federal and regional state authorities, local self-government bodies, as well as organizations involved in exercising the powers of state (municipal) bodies, ensuring a new level of interaction in the implementation of functions (provision of services) through the use of information and communication technologies (Ministry of Digital Development, Communications and Mass Communications of the Russian Federation).

In 2017, the Government of the Russian Federation approved the "Digital Economy" program, which marked a new stage in the process of e-government development. The program provides for the creation of the digital ecosystem in a country in which digital data is a key factor in production in all areas of socio-economic activity and in which effective communication of the business, the scientific and educational community, citizens and the state are ensured.

The program documents emphasize a desire to implement a transformational scenario for e-government development, allowing launching necessary modernization processes in the vertical and horizontal government system. It is characterized by the transformation of values and approaches to management, the totality of which will provide the necessary increase in the quality of the government system.

Transformational e-government is seen as a continuous innovation in the provision of services, citizen participation and management through the transformation of external and internal technologies, especially on the Internet (Furlong, 2015).

In Russia, the transition of e-government from orientation to departmental processes to user orientation is expected, and in the field of management of e-government development - the introduction of modern management approaches. Among these management approaches, we highlight the project as the most effective for use at the regional level.

We focus on the fact that the practice of managing socio-economic processes and systems actualizes the need to introduce a project-based approach to the activities of government bodies. Russian scientists are studying methodological problems of project management, but a small part of them have interdisciplinary connections with the informatization of government, in particular with e-government. The base of the Russian Science Citation Index (RISC) presents works that reveal the features of regional e-government project management (Trutnev & Chugunov, 2014; Kabanov & Sungurov, 2015; Yanovskiy, 2017) or specific aspects of e-government development at this level (Rebrova & Stepanova, 2013; Svechnikova, 2017; Khasanshin, 2016; Garas, 2017).

One of the key problems of e-government development in the Russian Federation is the substantial digital inequality of regions. This problem also extends to the ability of the qualitative development of electronic service channels. More than half of Russian regions use technologically and user-obsolete service portals that are not capable to encourage people to be willing and willing to use them (System project of the Electronic Government of the Russian Federation). The elimination of these gaps, the involvement of all regions and social groups in the use of modern e-government technologies should be an important direction of its development.

Despite this, the E-Government Development Index of the Russian Federation (EGDI) shows positive trends in dynamics (UN E-Government Survey, 2003-2018). Russia's entry into the group of leading countries with a "very high" index is due to the following factors: an increase in the level of citizen involvement in government decision-making processes and the strengthening of the country's position in the rating of the telecommunications infrastructure.

Table 01. E-Government Development Index

Period	2003	2005	2008	2010	2012	2014	2016	2018
EGDI	52	50	60	59	27	27	35	32

Note: Source: UN E-Government Survey, 2003-2018

In 2018, for the first time the study assessed the level of e-government development in cities. Among the 40 cities the first place was taken by Moscow. Along with this, the regions with the highest level of socio-economic development make a significant contribution to the value of the integral index of EGDI. The object of this study is the Samara region. By socio-economic status, the region ranks 12th out of 85 (Rating of The Socio-Economic Status Of The Subjects Of The Russian Federation. Results of 2017). The Samara region demonstrates high rates of e-government development.

Table 02. Indicators of e-government development in the Samara region

Indicator	2014	2015	2016	2017
Share of executive authorities, local governments connected to the regional information and communication network, %	46,4	59,8	59,8	59,8
Share of state and municipal services converted to electronic form, %	96	97	98	98
Share of citizens receiving state and municipal services in electronic form, %	20	23,5	38	54,9
Share of executive authorities of the region exchanging electronic images of documents using the system of interdepartmental electronic interaction, %	100	100	100	100
Share of information systems and resources, communication means of the regional center of information and communication technologies, provided with effective means of information protection, %	60	70	78	83

Note: Source: compiled by the authors

In order to determine how regional e-government is developing according to the transformational scenario embodied in state policy, it is not enough to establish positive trends in statistical indicators. The authors consider that it is necessary to study the organizational characteristics of the e-government of the Samara region, including those related to digital project management.

3. Research Questions

Taking into account the problematic context of e-government development in the regions of Russia and gaps in domestic research, the following research questions were formulated:

▪ How is the project approach to e-government development of the Samara region applied?

▪ What problems may arise in the process of e-government development at the regional level and how can they be solved with the help of project management tools?

4. Purpose of the Study

The purposes of this study are the following:

▪ Characterize the spheres of application of the project approach in activities of authorities at the regional level to implement the transformational scenario for e-government development.

▪ Analyze the activities of the Project Office of the Samara region, identify problems and make recommendations to improve the efficiency of project tools.

5. Research Methods

The study uses three fundamental methods: the system method, the method of analysis, and modeling.

The system method is that e-government as an object of study is considered as an integral set of elements, taking into account relations between them. E-government is being a researched as integrated system.

The analysis method assumes that e-government is analyzed at the regional level.

Modeling provides an opportunity to study e-government on real-world models. The information model allows us to consider the state of an object due to the transformational scenario.

6. Findings

The evolution of the project approach in the field of public administration implies a transition of the management system from a process approach to result-oriented activities. The regulatory framework for project management in Russia was developed not ago.

Figure 01. Legal basis for regulating project management in government
Source: compiled by the authors

To implement the projects, it is planned to create organizational and managerial structures (project teams, project offices, research teams) and provide them with state support.

Guided by the documents of the federal level, the Samara region adopted a number of documents that regulate project activities by executive authorities at the regional level.

Table 03. The regulatory framework of the project activity of the Samara region

№	Document	Content
1	Resolution of the Government of the Samara region "On the Organization of Project Activities in the Government of the Samara Region" No. 326 dated May 18, 2017.	The Department of Information Technologies and Communications of the Samara region is defined as a regional project office.
2	Decree of the Government of the Samara region "On the Council for the Implementation of Priority Projects" No. 437 dated July 11, 2017.	The Council for the implementation of priority projects is organized.
3	Regulations on the Council for the Implementation of Priority Projects, approved by the Government of the Samara region No. 477 dated July 11, 2017.	The objectives of the Council are defined: selecting and ensuring the effective implementation of priority projects, the functions, composition and management of the Council.
4	Regulations on Project Activities in the Government of the Samara region No. 524 dated August 18, 2017.	The procedure for organizing project activities in the Government of the Samara region has been established.

The introduction of a project approach to the activities of federal and regional executive authorities implies: the development of a methodology for managing the preparation and implementation of projects; co-building and ensuring the work of new bodies to work with projects; the creation of a system of project stimulation; implementation of a project information system; conducting an audit of projects.

The "Regional Project Office" means a comprehensive system of support for small and medium-sized technological entrepreneurship, operating on the "single window" principle and providing quick and unimpeded access to the services of an innovative, engineering-technological and financial-credit infrastructure.

The purpose of the "Project Office" of the Samara region is the development and support of technology companies at all stages of their life cycle with a view to their early development and access to the Russian and international markets.

The regional project office of the Samara region is the Department of Information Technologies and Communications of the Samara region. The Department has the following organizations:

1) Regional Center for Management of State and Municipal Information Systems and Resources of the Samara Region. The main activity is the use of information technologies, the work on digital security, as well as the implementation of e-government support and the development of the digital economy in the Samara region. The Center implements state policy in the field of digital technologies, provides unified policy in the field of information security and e-government of the Samara region, and transits the provision of state and municipal services to electronic form.

2) Regional Center of Telecommunications is mainly engaged in activities in various communication technologies. It conducts the formation, maintenance and operation of a complex of telecommunications, television and broadcasting networks of the Government of the Samara region.

3) Safe Region. The main activity of the institution is to provide emergency calls, collecting, storing and transmitting information about traffic flows, movement of vehicles and violation of vehicles.

One of the basic principles of building an organizational structure for managing a "project office" is to optimize the interaction of key participants in order to effectively implement the project.

The diagram (Figure 02) shows that the state authorities of the subjects of the Russian Federation are recommended to organize project activities at the regional level. The implementation of project activities will optimize the work at the regional level.
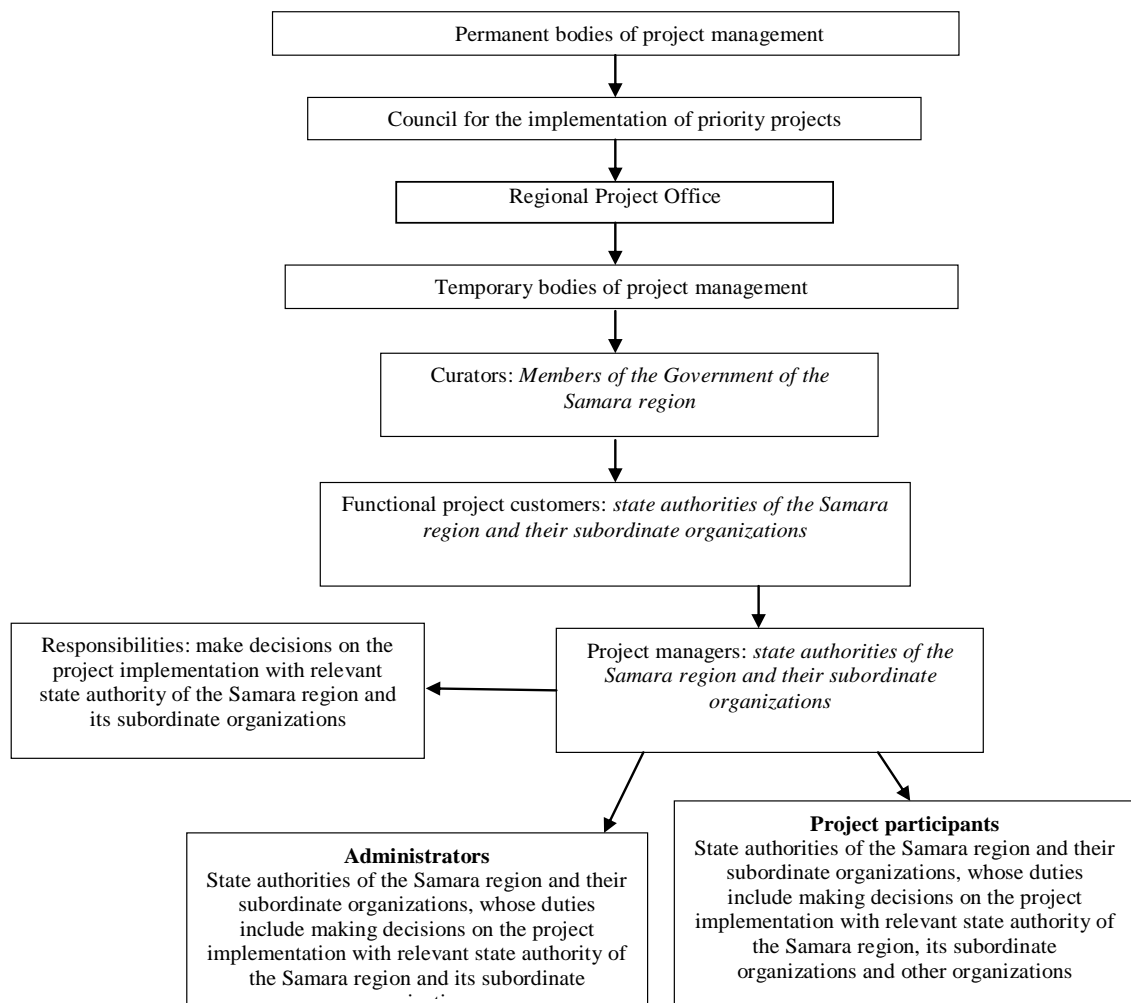
Figure 02. Organizational structure of the project management system in the region
Source: compiled by the authors

To implement the transformational scenario for e-government development, we identified the following problems.

First, users are not always satisfied with e-government electronic services (Table 02). Receiving information through official websites and portals of state and municipal services, receiving results of

providing state and municipal services in electronic form (including through a personal account on the portal of state and municipal services) does not have a definite tendency to increase.

Secondly, users are not always ready to interact through e-government services, because do not have enough knowledge and skills to interact on the Internet. This is evidenced by the fact that the share of citizens using the mechanism of receiving state and municipal services in electronic form is not stable and easily predictable for the period of 2014-2017 with a tendency to increase.

Thirdly, a number of key indicators of e-government development do not always correspond to planned ones, which indicates either accepting understated or overestimated plans, which contradicts the very methodology of project management, in accordance with which every goal that was planned – has to be achieved.

We propose the following ways to improve the project management of e-government in the Samara region.

The first problem is the development of electronic services that would meet the best modern level of domestic and foreign digital services, which the majority of citizens of the Samara region use. Electronic e-government services must be understandable, accessible and durable. Therefore, when developing them, it is necessary to use the most advanced scientific and technical achievements, research in the field of information technologies and practical developments.

The second problem is the additional training of residents of the Samara region to work with information and communication systems, especially middle-aged and elderly people, for whom interaction on the Internet is vital, for example, to call a doctor.

The third problem is that project management, implemented by the Regional Project Office, does not use the existing standards of project management, which is necessary for the purpose of its instrumental improvement.

In the near future, it is planned to develop a Project Office for digital development in the Samara region. At the same time, the Department of Information Technologies and Communications of the Samara region (Regional Project Office) will continue digital transformation in government bodies and municipalities, and the new organization will undertake the events necessary for the digital development of the region and regional business. The Project Office will develop and implement pilot projects which can become integrators of the efforts of regional centers of competence in the field of education, science and business and can attract large Russian and foreign high-tech leading companies to the region. The Project Office is charged with organizing large-scale training and retraining of personnel for the digital economy.

7. Conclusion

Favorable conditions have been created in the Samara region for the implementation of the transformational e-government scenario embodied in state policy. The following aspects contribute to the institutional environment for the development of government project activities at the federal and regional levels: supporting structure - Regional Project Office, positive trends in socio-economic development and information society indicators, in particular, a steady increase in the number of people interacting with state authorities in the network the Internet.

To solve the existing problems on the way to the transformational e-government at the regional level, the following proposals are formulated.

7.2. Systemic use of the potential of business, science and education in the development and implementation of e-government projects

Stakeholder coordination plays an important role in the development of e-government. All structures involved in e-government projects should be aware of the functions and competencies of each unit.

To obtain a positive synergy of the public sector, business, science and education in the implementation of e-government projects, it is proposed to improve the organizational structure of the Regional Project Office. It is required to update the functions and tasks of the Project Office to implement the transformational scenario for e-government. In this connection, the basis will be the distribution of powers between the Regional Project Office in the structure of the Government of the Samara region and the Project Office of Digital Development, established in the structure of the Regional Center for the Development of Entrepreneurship in the region, as well as establishing sustainable coordination links between these structures.

7.3. Effective use of project management tools

It was determined that the activities of the coordinator of the Project Office (Department of Information Technologies and Communications in the structure of the Government of the Samara region) are not based on the standards of project management. In order to form a transformational e-government in the region, it is recommended to follow the PMBoK5 (Project Management Body of Knowledge) standard.

Since the project approach is dominant for the implementation of the transformational scenario for e-government development, it is suggested using RMWOCs tools in accordance with the key areas of activity of the Regional Project Office. These proposals are made on the division of the project management process into five stages: initiation - planning - execution of development - monitoring and control - shutdown.

Table 04. Project tools used for e-government development

Project phase	Tools		
	Direction 1. **Creation of electronic services for expanding the range of electronic state and municipal services**	**Direction 2.** **Development and modernization of services for electronic document circulation for interdepartmental interaction.**	**Direction 3.** **Improving the information security of information systems.**
Initiation	- expert assessments; - group work on decision-making (various types of brainstorming)	- group work on decision-making (various types of brainstorming)	- expert assessments
Planning	- meetings;	- meetings;	- meetings;

	- group work on making decisions	- group work on making decisions	- group work on making decisions
Execution	- exchange of information; - decision making; - meetings; - assessment of options	- exchange of information; - decision making; - meetings; - assessment of options	- exchange of information; - meetings; − assessment of options
Monitoring and control of service	- meetings; - expert assessments; - analytical evaluation; - calculation of indicators	- meetings; - expert assessments; - analytical evaluation; - calculation of indicators	- meetings; - expert assessments; - analytical evaluation; - calculation of indicators
Shutdown on creating a service	-expert qualitative and analytical assessments of achieving project goals	-expert qualitative and analytical assessments of achieving project goals	-expert qualitative and analytical assessments of achieving project goals

Note: Source: compiled by the authors

Currently, the main task is to fully implement the project approach to the transformational e-government, rather than individual tools for individual projects. In this regard, it is necessary to develop a holistic and flexible project management system at the level of the regional government that is accountable to a higher level.

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