GCPMED 2020
Global Challenges and Prospects of the Modern Economic Development

DIGITAL GOVERNMENT: ACHIEVEMENTS AND IMPLEMENTATION CHALLENGES

A. S. Fogel (a)*, K. A. Nikitin (b), V. V. Voroshilov (c)
*Corresponding author

(a) Samara State University of Economics, Soviet Army Str., 141, Samara, Russia, alexander_fogel@inbox.ru
(b) Povolzhskiy State University of Telecommunications and Informatics, Lva Tolstogo Str., 23, Samara, Russia, forbsd@list.ru
(c) Samara State Technical University, Molodogvardeyskaya Str., 244, Samara, Russia, vitekio@yandex.ru

Abstract

This article covers the problem of development and implementation of digital government in the present-day world. The significance of the work is ascertained by the rapid development of information technologies and their transformation into a necessary part of social development and management. The objectives of our study are to identify typical trends in the use of digital government in the world and to study the achievements and specifics of practices in different countries. The work is based on an interdisciplinary approach, using the methods of political science, sociology, public administration, management and communication science. The study highlights the main achievements of countries in the implementation of digital government over the past 10 years. But the process of large-scale modernization, in addition to obvious successes, gives rise to various problems and difficulties that hinder many successful initiatives. The problems associated with digital government are diverse and complex in nature, related to both the peculiarities of the geographical location, the structure of the population and the level of social development, management traditions, economic and political factors. These aforementioned problems are significant and serious, but on the whole surmountable provided that the efforts of state and public institutions are coordinated. Our research is dedicated to the identification of these problems, their analysis and possible ways to overcome them.

Keywords: Authorities, citizens, contemporary society, digital government, e-government

1. Introduction

The significance of the study of digital government arises from the constant increase in the importance of information technology in all areas of modern life. Many public figures say that digitalization is increasingly becoming a global trend. In an increasingly dynamic development of society and information technologies, there is a need for their active implementation and adaptation to the existing mechanisms of social impact through the transition to absolutely new qualitative levels of communication. Since the public administration system is a key link that determines the functioning of the entire country as a whole, it becomes necessary to implement such a mechanism that will improve the efficiency of officials, reduce the time for providing services and meet the constantly growing needs of the population. Present-day society demands a lot of new models of state governance, forcing both the state employees and the government system itself to find more adaptable and open-end strategies and government decrees (Starostin et al., 2019). One of the mechanisms for achieving this goal today is a digital government, which implies a comprehensive transformation of public services into a fully digital format (from the stage of application to their execution), which saves citizens from "paper" communication with government officials and frequent visits to public institutions. Information technology is becoming an integral part of life. It is actively and successfully implemented both in the household sphere and in the business sphere. This process is perceived by everyone as necessary and irreversible. In this regard, the governments of the most advanced countries, and also Russia, are experiencing increasing pressure from both citizens, who demand an improvement of the quality of the provision of state and municipal services, and from business, which seeks to build stable and mutually beneficial relations with the state. In the present-day world, both citizens and business expect new formats and ways of providing public services from the state. Realizing this, the states are going to appropriate reforms aimed at introducing information technologies into the work of the government. At the same time, even the leaders in building e-government (Great Britain, Australia and the Republic of Korea) have not been able to carry out a full-scale digitalization of government mechanisms and move to a fully digital government by default. However, progress does not stand still - states gain invaluable experience that allows them to move and improve.

2. Problem Statement

The informatization of life in general and the creation of a digital government act in the present-day world as indispensable indicators of progress and conditions for further successful development. This is typical not only for Europe or America, but for any country; the present-day world becomes ever more multipolar and at the same time integral. In these conditions, the value of the experience of each specific country increases, as it allows you to find and understand the strengths and weaknesses, problems and advantages. At the present stage, the leaders in the implementation of elements of digital government in life are such countries as the USA, Great Britain, Australia, South Korea, striving to develop common standards and development strategy. But with a common implementation strategy, each country follows its own unique path. Thus, Russia as a modern and dynamically developing country also has experience in implementing digital technologies in life. However, in addition to successes, there are also problems that

need to be resolved. Highlighting significant problems and finding ways to effectively resolve them will be the focus of our research.

3. Research Questions

In the course of the study, we must deduce conditions that affect the implementation of elements of digital government in world practice. The main reasons for the need to implement digital government in modern countries are:

- transformation of information into a strategic resource of contemporary society;
- the need to increase the competitiveness of countries in the world arena;
- the constant growth of requirements for the quality and accessibility of services;
- the need to reduce administrative costs.

At the same time, when introducing digital services, one must take into consideration the size of the country, its population, the degree and level of computer literacy of the population, the readiness for changes and integration of the government itself and its individual structures, the percentage and quality of technical and informational equipment of specific regions. The need to take into account the whole variety of specific conditions inevitably gives rise to various features and problems of introducing new digital technologies.

4. Purpose of the Study

The purpose of our work is to emphasize the main world achievements against the background of emerging trends in the development and implementation of information government. We strive to understand the need and degree of digitalization in world practice. We also try to understand the peculiarities of a particular country - using the example of Russia, in the field of digitalization and the introduction of modern technologies. Also, we must consider not only the successes, but also the main shortcomings and problems encountered by countries along the way. It is quite necessary for us to assess the severity of these problems. We will try to outline possible ways out of the difficulties that have arisen, steps from both the state and society. Finally, we will try to emphasize the prospects of the chosen path for the world in general and individual countries in particular.

5. Research Methods

The specificity of the topic and its complexity necessitate the use of an interdisciplinary approach in our work. The research uses the methods of political science, sociology, public administration, management and communication science. The application of a systematic approach and structural and functional analysis made it possible to present the concept of digital government as an integral system of ideas and ideas about the forms and methods of digitalization of power. The use of sociological methods made it possible to investigate the dynamics of public sentiment regarding the implementation of the use of digital government technologies. The need to apply a socio-cultural approach is associated with solving the problem of adapting digital government technologies to modern political and social realities. The typological approach made it possible to see the main (typical) features and emerging trends in the

implementation of digital government. Also, in our work it was necessary to use comparative analytical methods to ascertain overall patterns in the expansion of digital government as an idea in foreign countries and to translate them into specific conditions.

6.   Findings

In the present-day world, in the context of informatization, the introduction of digital government is becoming an urgent need. However, in practice, when trying to implement the government and citizens in the implementation of plans, they face a number of significant problems. The most worth noting are as follows:

⁻ low level of provision and use of services (although at the state level digitalization is often quite high, the informatization of municipal authorities in some cases is still at the stage of formation and development (Bogoslavtseva et al., 2020);

⁻ their relatively small distribution;

⁻ problems with computer literacy of a certain part of the population;

⁻ underdeveloped legal framework and administrative regulations;

⁻ inconvenience for users;

⁻ "underdigitalization" of internal administrative processes and the need for true digitalization, rather than stopping at the stage of digital cladding of traditional processes;

⁻ the need to ensure a cybersecurity system both on the part of citizens and on the part of the government;

⁻ lack of financial and technical means and specialists.

All of this is quite a drag on progress and requires additional efforts from both the governments and the citizens.

To successfully resolve the aforementioned problems, the undertaking of the following efforts is essential:

⁻ the correct prioritization - strengthening the powers of several crucial agencies responsible for digitalization or singling out one of them;

⁻ increasing of the efficiency of existing structures;

⁻ the establishment of broad intersectoral interaction;

⁻ the possibility of using a system of alternative channels and ways to resolve the problems of citizens and organizations;

⁻ establishing close feed-back interactions with users and potential users of services;

⁻ increasing the computer and digital culture of the population;

⁻ increasing coverage of the population with digital services;

⁻ taking into account and promptly resolving problems and specific requirements of the population;

⁻ improving the quality of the services themselves and their unification both within a particular country and on a global scale;

⁻ ensuring the growth of horizontal instead of vertical integration of the system and the interaction of various state structures; in other words, significant changes in management systems and the raising of the question of restructuring the entire modern state (Petrin et al., 2020);

‾ constant tracking and use of innovations and provision of new services, interaction with leading global partners and coordination of efforts;

‾ ensuring the possibility of transferring certain functions of the state to private authorized organizations

‾ decrease in the cost of providing services;

‾ taking into account national characteristics and traditions;

‾ stimulating innovation within governments (grants, conferences, joint projects, inviting experts, courses, digital camps, internships, etc.);

‾ decentralization of the organization of state power and wide delegation of operational management functions to non-state structures (up to firms or corporations) (Shatkovskaya et al., 2020);

‾ increasing the attractiveness of digital services for the population;

‾ modernization of all existing infrastructure;

‾ development and improvement of the legal framework governing digitalization (Abdurakhmanova et al., 2020), and this legal framework should be as transparent and understandable as possible for the entire population (Korobova, 2021), and not only for narrow specialists.

If the aforementioned problems are successfully overcome, the world community can move on to the next stage of integration and joint solution of global problems. A striking example of the successful adaptation of digital technologies in predicting (at the level of government strategy generation) is the Internet platform Predictiv adopted in the UK, which allows calculation of public opinions in real time. Thanks to Predictiv government agencies are capable of testing new regulations using controlled online experiments and getting feedback on how control measures and other public policies are adopted in real life. The practice of the United States is interesting to us in the focus of applying AI technologies in designing surveillance strategies. For instance, the Southern Nevada Department of Health and Human Services, which is in charge of public healthcare, has an oversight function that audits businesses for food safety issues. In 2014, the department carried out 35,855 inspections in about 16 thousand institutions. In 2014, the UN Department of Statistics established the UN Global Working Group on Big Data to develop a strategic project, course and holistic plan for the application of large databases in official national and international statistical analysis, support the practice of integrating of large-scale information sources for analytics, and find answer to questions and hinderances related to their introduction, and ensure technological development and sharing of practices on this issue. Today 20 countries and 9 international organizations are already part of UN Global Working Group. In 2014–2015 years this agency has done a considerable job of information acquisition on initiatives directed at using Big Data in analytical or formal statistics. The Australian experience also offers some practical value in using up-to-date technologies in assessing the occupational skill of state officials. For instance, to enhance the qualification of HR work with public servants whose professional knowledge and skills do not meet the skill requirements, a special mobile application was introduced, through which employees on a daily basis are asked new questions related to the service. Thus, the mobile application step-by-step improves the skills of the state employees and provides conditions for a better quality of their service.

As an example of the digital development of a specific country, Russia has a number of significant achievements in the implementation of elements of digital government: a network of successfully operating

MFCs, a really operating Unified public services portal; system of interagency digital intercommunication is being formed; basic information resources and national databases are built, which provide wide range of basic public services, such as authentication, or tax payment. Introduced in 2009, the Public Services Portal of the Russian Federation (PSPRF) has been functioning, where information, application forms are posted and through which payments are made; in 2015 PSPRF is combined with the Integrated Identification and Authentication System (IIAS). Many scientists and politicians confidently say that the main priority of Russia's modern policy in the field of state information resources should be the formation of open state information resources to inform citizens and organizations about government policy and government decisions (Barinov et al., 2020). Such practices form the basis for the subsequent digitization and integration of the country into the global system of digital governments.

At the moment, a platform of state services is actively developing in Russia, the number of users of which rapidly increased and by 2016 has surpassed 40 million users, which is equal to 50 percent of the Internet users in Russia. Using this internet platform, citizens can gain access to a wide range of municipal services. But despite the increasing deployment of digital portal PSPRF, on the whole its utilization by the population is still low - in this respect it is still inferior to the advanced countries. Also, the realization of municipal services through PSPRF is not entirely digital: personal attendance, reception or filing of documents is often required, in contrast to the advanced states such as Estonia or Iceland which have a full-fledged "digital government". Accessibility of the online services in Russia is quite developed, but still lags badly behind the similar Internet platforms used by the countries of the EU. In general, we can state with regret that modern Russia is characterized by an insufficiently high level and slow pace of informatization of society (Ragulina et al., 2019). However, few would dispute that that in 2017 the digital revolution on a global scale entered a decisive phase: every second inhabitant of the Earth became connected to the Internet. At the present stage, the world community must not stop there and strive not just to provide a number of services, but to fully transfer government services to digital format. Moreover, it is necessary to carry out not only breakthroughs at the level of individual countries, but also, as far as possible, to equalize the global level of digitalization.

7. Conclusion

According to all available data it is apparent that (judging by the present-day world practice) there is an urgent need to make significant efforts to move from an "industrial", bureaucratic and rather closed way of governing countries to a more modern democratic, open and digital one. But when transitioning the governmental system, one must consider the rather heterogeneous, depending on specific countries and regions, level of computer competence and equipment of the population with technical means, the government's willingness to actively and on equal terms to interact with the population and business, as well as the real capabilities and desire of the government itself to constantly modernize and integrate into global community. At the same time, the transition to digital government requires a fairly large amount of knowledge and skills from modern citizens. And this is not just computer literacy, with which a certain part of the population has problems. It is also the need for constant activity, keeping track of changes, readiness to develop institutions of democracy and civil society. That is, digital government is not just imposing services and tracking trends, it is a process that requires activity and competence from all its participants.

Digital government in the present-day world is not services, nor gadgets, nor interfaces, nor communication channels, nor technology as such, but data, its collection, integration, cross-processing, analysis and extraction of useful information and knowledge from it for all the participants. This process requires not only initiative and general activity, but also a high political culture, as well as reliance on legal aspects, which contributes to the preservation and development of truly democratic institutions.

References

Abdurakhmanova, I. V., Vlasova, G. B., & Orlova, N. E. (2020). Tendencies and prospects of the legal state development under digitalization. In E. G. Popkova & B. S. Sergi (Eds.), *Digital Economy: Complexity and Variety vs. Rationality. Lecture Notes in Networks and Systems*, *87* (pp. 379-386). Springer.

Barinov, E. E., Berlyavskiy, L. G., Golovko, A. G., & Dzhagaryan, N. V. (2020). Digital constitution as a scientific direction. In E. G. Popkova & B. S. Sergi (Eds.), *Digital Economy: Complexity and Variety vs. Rationality. Lecture Notes in Networks and Systems*, *87* (pp. 891-898). Springer.

Bogoslavtseva, L. V., Karepina, O. I., & Bogdanova, O. Y. (2020). Development of the program and project budgeting in the conditions of digitization of the budget process. In E. G. Popkova & B. S. Sergi (Eds.), *Digital Economy: Complexity and Variety vs. Rationality. Lecture Notes in Networks and Systems*, *87* (pp. 951-959). Springer.

Korobova, A. P. (2021). Legal policy in the era of digitalization. In S. I. Ashmarina & V. V. Mantulenko (Eds.), *Current Achievements, Challenges and Digital Chances of Knowledge Based Economy State's. Lecture Notes in Networks and Systems*, *133* (pp. 131-138). Springer.

Petrin, I. V., Pogodina, I. V., Stankevich, G. V., & Mamedov, S. N. (2020). Informatization and state administration: Possible scenarios and consequences. In E. G. Popkova & B. S. Sergi (Eds.), *Digital Economy: Complexity and Variety vs. Rationality. Lecture Notes in Networks and Systems*, *87* (pp. 379-386). Springer.

Ragulina, J. V., Lobova, S. V., & Alekseev, A. N. (2019). Informatization of the Russian society: Evaluation and perspectives. In E. G. Popkova (Ed.), *The Future of the Global Financial System: Downfall or Harmony. Lecture Notes in Networks and Systems*, *57* (pp. 341-347). Springer.

Shatkovskaya, T. V., Epifanova, T. V., Vovchenko, N. G., & Maslova, I. S. (2020). Goals and interests in the law of the digital age. In E.G. Popkova, B.S. Sergi (Eds.), *Digital Economy: Complexity and Variety vs. Rationality. Lecture Notes in Networks and Systems*, *87* (pp. 899-907). Springer.

Starostin, A. M., Tovanchova, E. N., & Shepeleva, Y. L. (2019). An individual in the contemporary public administration. In E. G. Popkova (Ed.), *The Future of the Global Financial System: Downfall or Harmony. Lecture Notes in Networks and Systems*, *57* (pp. 647-656). Springer.