

Digital maturity of public authorities: the case of Russia

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The digitalization of public relations and the public administration system has led to intensive changes in internal processes in government and administration. Digital transformation should become a strategic transformation of relations between the state and citizens, both in general and in relation to individual public administration bodies. However, understanding its essence and measuring the level of digital maturity of public administration bodies is a debatable issue both among officials and employees, and in the scientific community. Therefore, the purpose of the article is to analyze the features of digital transformation and the state of digital maturity of public administration in Russia.

Methodology. The study is based on the methodological provisions of the concepts of the electronic state, the concepts of digitalization, digital transformation and digital maturity. The main methods used were the analysis of normative legal documents, the analysis of statistical data and data from official reports, the secondary analysis of data from quantitative and qualitative studies on the topic.

Results. The study showed that in the modern period, digital transformation is built into the general state policy of digitalization of the economy and society. Various methods are used to assess the digital maturity of public administration at the international and national levels. To assess the level of digital transformation of the regions of the Russian Federation, a methodology for assessing digital maturity has been adopted, which includes an assessment of the level of digitalization of public administration, healthcare, education, urban economy, construction and public transport. Despite the fact that all regions of Russia have adopted digitalization strategies, significant disparities remain in their level of digital maturity.

The results of this study can be used by those responsible for digital transformation to assess the current situation in the digitalization of public authorities in Russia. Also, the results may be required for a comparative assessment of the processes and results of the digitalization of public authorities in the countries of the post-Soviet space.

Key words: public administration, digitalization, digital transformation, digital maturity, public authorities, digital state.

1 Introduction

Digital transformation in modern public administration processes has become one of the strategically important areas of national development. In recent decades, huge budgetary resources of governments around the world have been directed to the development, implementation and management of digital technologies in public authorities, government organizations and institutions that provide communication opportunities with the public and business. The goal of digital transformation is to extract the maximum usefulness of all types of activities of public authorities through the use of digital technologies and services. Digital transformation is a long process in which objects being transformed go through different stages of digital development. Therefore, among researchers and practitioners, the question naturally arose about the allocation of such stages, methods for measuring and evaluating them. Digital maturity allows you to capture the state of an organization or system in the process of digital transformation.

To date, there has not been an unambiguous understanding of digital maturity in the scientific community, however, the most common definitions affecting the activities of enterprises, companies, organizations. And this result is natural, since it is the commercial sector that has become the flagship of digital transformation.

Currently, in connection with the global trend towards measuring and evaluating the results of digital transformation, there is a need to analyze the experience of individual national states that have gone through certain stages of the digital development of society and the state. Therefore, the purpose of this article is to analyze the features of digital transformation and the state of digital maturity of public administration in Russia. In this regard, the research questions considered in the article are the following:

- review of theoretical sources and analytical studies on the topic of digital maturity of the state, government;
- study of the regulatory and legal aspects of the digital transformation of public administration in Russia;
- analysis of the state of digital maturity of public administration in Russia.

The theoretical significance of the study is due to the existing contradiction between the practice of using the concept of "digital maturity of public administration" in scientific discourse and the lack of its holistic concept. It is necessary to comprehend the existing approaches in the scientific discourse to the disclosure of the concept of "digital maturity" and its content, to determine the place of this concept among other modern theoretical approaches aimed at analyzing the use of ICT and digital technologies in public administration.

The practical significance of the study is related to the need to study regional experience in assessing the digital maturity of public administration bodies. The results of the analysis can be used in scientific discussion to further conceptualize the concept of "digital maturity of public administration" and develop a general model for its assessment.

The research hypothesis is that the necessary conditions have been created for the digital transformation in public administration in the Russian Federation, an appropriate regulatory framework has been developed, significant material resources have been allocated and attracted. Nevertheless, the digital transformation of the public administration system is very uneven across branches of government, levels of government and across regions. The Covid 19 pandemic has had a significant impact on the state of digital maturity of the public administration system, pushing the development of electronic services, communications and communications with the population and business.

Methodology. The study is based on the methodological provisions of the concepts of the electronic state, the concepts of digitalization, digital transformation and digital maturity. As the main methods, the analysis of regulatory legal documents, the analysis of statistical data and data from official reports, the secondary analysis of data from quantitative and qualitative studies on the topic were used.

The subject-semantic limitations of the study include the conditions in which modern systems of public administration evolve and transform. Taking into account the peculiarities of the course of digitalization and digital transformation processes in nation states, it can be assumed that the actual state of digital maturity of public administration bodies in different states will differ, and this, in turn, will affect the theoretical generalization of theoretical and empirical data.

The limitations of the study also include the selection of scientific papers presented in the article, on the basis of which a theoretical study was carried out - these are works posted in the scientometric databases Scopus, Web of science, RSCI, since 1991.

2 Research methodology

For a comprehensive study and systematization of information about the phenomenon of digital maturity of public administration bodies, a mix method was used: quantitative analysis (scientometric analysis of publications and keywords in databases, analysis of statistical data and data of indexes and digitalization ratings) and qualitative analysis (study of the content of theoretical sources and context, analysis of legal documents). The search and selection of scientific information was carried out according to the scientometric citation databases Scopus and Web of science, in the national bibliographic database of scientific citation of the RSCI with a search depth since 1991 as of 03/30/2022.

Search in scientometric citation databases Scopus, Web of science was carried out using the keywords "digital maturity" in the title, abstract and keywords of publications, after which the most relevant publications were selected. The sample included only scientific articles and conference proceedings. In the selection, one of the fundamental factors was also the scientific branch for which the publication is indexed (social and human sciences). In the database of the Russian Science Citation Index, the search was carried out using the keywords "digital maturity", publications were selected, in the title, abstract and keywords of which this concept was mentioned. The next step was a meaningful study of the annotations. If both the abstract and the keywords mentioned the digital university, it was clear from the abstract that the text would contain a disclosure of the concept, its conceptualization - the material would fall into the final sample.

Full-text open access articles were selected for qualitative analysis. Materials from abstract resources containing only abstracts of articles (that is, without full-text documents), as well as providing access to the text on a pay-per-view basis (that is, for a separate fee for each article) were not considered.

The analysis of statistical data was carried out according to the statistical data of the UN, the World Bank, the data of the Federal State Statistics Service, the Ministry of Digital Development, Communications and Mass Media of the Russian Federation, ANO Dialog.

3 Literature review

In Scopus scientometric citation database, the first publications on digital maturity appeared in 2006. As of March 30, 2022, the number of publications on the topic of digital maturity amounted to 280 papers. The peak of publications falls on 2021 - 105 units, in 2020 - 56 units. In total, 16 documents in the public domain are devoted to the digital maturity of public administration, of which 7 are about the healthcare system, 5 are about the education system, that is, publications dedicated to the digital maturity of public authorities and administration - no more than 3. The largest number of publications were prepared by researchers from the Russian Federation, Germany, the United Kingdom and Italy. According to the report on sources of funding, 8 publications on digital maturity were funded by the European Commission and 7 by the Russian Foundation for Basic Research.

In the scientometric citation database Web of Science as of March 30, 2022 - a total of 1918 results since 1990. The peak of publications also falls on 2021 - a total of 345 publications, in 2020 - 241 publications. Open access - 658 articles. The European Commission funded 64 publications. The top 5 countries with the highest number of published articles are the USA, Germany, China, the UK and Italy. In terms of the number of published articles on the topic of digital maturity, Russia ranks 11th with 51 publications. 183 publications are devoted to the digital maturity of public authorities, the government, the public administration system, the first of which appeared in the database in 1998. The leader in publications on the digital maturity of government is Spain - 25, 24 publications were made by researchers from the United States, Russian researchers prepared 11 publications.

The Russian Science Citation Index has a total of 233 digital maturity publications since 2017. There are a total of 168 open publications¹ available to researchers. There are 25 publications devoted to the digital maturity of authorities.

The data of the analysis carried out indicate an increase in research interest in the processes of digital transformation of public authorities around the world. However, the available results of theoretical and empirical research are not enough to understand and conceptualize this phenomenon of the digital maturity of public administration and its comprehensive assessment.

The need to analyze the processes of digitalization and digital transformation has led to the emergence of the concept of digital maturity. To date, there have been attempts in the scientific literature to assess digital maturity in various areas - in industrial enterprises, the agro-industrial sector, the banking sector, etc. Attempts have also been made to assess digital maturity in the public sector - healthcare, education, public organizations, etc. In Russian scientific thought, interest in digital maturity was due to the adoption of a number of legal documents, incl. methods for assessing the digital maturity of individual sectors of the economy.

Nevertheless, the researchers failed to develop a unified approach, to reach mutual understanding regarding the interpretation of the digital maturity of the organization. In the scientific literature, there are diametrically opposed opinions regarding the relationship between digital maturity and digital transformation of organizations **!**

The main consideration of digital maturity in organizations comes down to understanding it as a characteristic of the result of digitalization and / or digital transformation of an organization. For example, according to Chaniyas, S., Hess, T. , "digital maturity" is the final stage of digital transformation, it describes "what the company has already achieved in terms of transformation efforts" (Chaniyas, 2016).

G. A. Khachatryan and I. V. Mukhina consider digital maturity as a set of company characteristics that allow assessing its state both before and after digital transformation (Khachyatryan , 2020).

In other interpretations, digital maturity is seen as a property of an organization that determines the success of the digital transformation process. A. Rossmann proposes to understand digital maturity as a combination of various factors that influence digital transformation initiatives in companies (Rossmann, 2018). According to G. C. Kane, digital maturity is the systematic preparation of an organization to continually adapt to constant digital change (Kane , 2017).

Bititci , U. S ., Garengo , P ., Ates , A ., Nudurupati , S . S. define "maturity" as "the ability to adequately respond to the environment using management methods" (Bititci , 2015), that is, digital maturity is considered by the authors as a certain ability or property of an organization or system to adapt to changing conditions, influencing them. Digital maturity can be viewed from both a technological and managerial point of view (Wernicke , 2021), as a process and as a goal, as a set of methods and ways to achieve a goal, and as a program of action and a mechanism for its implementation.

Different approaches to understanding the content of digital maturity lead to the emergence of various methods for its assessment, of which a significant number are presented in the scientific literature. However, no unified approach to this issue has been developed. Thus, Thordsen , T ., Murawski , M ., Bick , M . evaluated 17 existing digital maturity models presented in scientific publications from 2011 to 2019 in terms of their measurement validity and concluded that most of them do not meet the established evaluation criteria (Thordsen , 2020).

Ebru Gökalp and Veronica Martinez as a result of a systematic review of the literature, they note that none of the 18 existing models of maturity in the field of digital transformation fully meets all the criteria for suitability, completeness, clarity and objectivity. To fill this research gap, the authors developed a holistic digital transformation maturity model called DX-CMM (Gökalp , 2021).

In general, we can talk about two main approaches to the study of digital maturity of anything - digital maturity as a result of the introduction of digital technologies and digital maturity as a result of digital transformation. In accordance with these approaches, methods for assessing digital maturity are also being formed.

Some of the currently most popular approaches to assessing the digital maturity of organizations are: COBIT 4.1 maturity model, OMZ model, integrated CMMI model, SPICE model (Ilin, 2021). According to Ilin I., Levaniuk D., Dubgorn A., all these approaches have their own characteristics and different criteria, but most of them have 5 certain levels of maturity - from the basic one, which involves the introduction of IT technologies necessary for innovative development in general, to adaptive, where systems are implemented that have a corrective effect on equipment (Ilin, 2021).

In addition, we can note the assessment models: Industry Maturity Index 4.0, KPMG Digital Ability Assessment Model, Digital Piano from the Global Center for Digital Business Transformation, the Russian company Team A (KMDA), Adapted methodology of the CSD in collaboration with experts from the RCT Training Center of the GSSU RANEPА (Rakhlis, 2022). They are expected to be assessed on selected key areas of change (eg strategy, digital processes, people or culture).

N. Sh. Vatolkina and N. R. Kamynina distinguish two types of digital maturity assessment depending on the degree of generalization of maturity parameters (Vatolkina, 2020):

- cascade model: several successive stages of maturity are distinguished, when each stage is characterized by certain values of the selected parameters. The level of maturity acts as an integral characteristic and at each individual moment in time the object is at a certain level of maturity;
- discrete model: certain levels of maturity are distinguished for individual parameters. Individual components of a system, process, or technology may be at different levels of maturity .

In public administration, the assessment of digital maturity can be carried out at the level of a separate authority, territory, industry or the state as a whole. According to Gartner experts, digital transformation in public administration involves passing through 5 stages of maturity, as a result of which e-government, open government, data-driven government, fully digital government and smart (smart) government (Di Maio, 2017) . In this model, the formation of digital maturity is based more on the openness of data. So, at the first, initial level, the focus is on moving services online, but the data and its use are fragmented and extremely limited. The fifth level (optimization) assumes that the process of digital innovation using open data is deeply rooted and is predictable and stable.

In relation to digital maturity models of public administration, it is worth highlighting the approach proposed by Renteria S. et al. The authors developed a non-linear digital government maturity model based on implementation factors. The model relies not so much on the gradual achievement of results, but also on the assessment of opportunities, as well as specific mechanisms for their implementation (Renteria, 2019).

One of the most important methodological issues is the assessment of the result of the digital transformation of public administration, which, by and large, shows the level of its digital maturity. Dobrolyubova E.I. et al., based on the analysis, identified three main areas of research (Dobrolyubova, 2021). The first direction is related to the identification and analysis of possible effects of digitalization of public administration (the model of F.M. Luna-Reyes (Luna-Reyes, 2012)), including improving the quality of public services, the effectiveness of the performance of functions, reducing the labor costs of civil servants, and increasing the involvement of certain categories citizens, etc.

The second direction is related to the quantitative and qualitative analysis of international ratings in the field of digital transformation of public administration. These include the e-Government Development Index, DESI Digital Economy and Society Index, Digital Government Index (originally digital processes, government as a platform, data-driven public sector, default openness, user management and proactivity). As a disadvantage of the digital government

index, it can be noted that it can be used to evaluate various digitalization practices, but not to assess the final results of digital transformation.

The third direction is related to the analysis of the impact of digital technologies on socio-economic development and improving the quality of public administration in general. Correlation between the development of e-government and the development of entrepreneurship by Y. Abu-Shaban and M. Osmani (Aby - Shanab , 2019), the correlation between the digitalization of public administration and the development of the digital economy F. Zhao (Zhao , 2015) .

According to Dobrolyubova E.I. and others, digitalization indicators should be formed based on the following requirements: the end result of the digitalization of public administration is an increase in its quality; indicators of digitalization at the level of final results should take into account the effects of digital technologies for all stakeholders; the need to take into account the risks of this process for all stakeholders (Dobrolyubova , 2021). As a result, the tasks of the digital transformation of public administration, in their opinion, should be to increase the validity of state intervention and the non-discrimination of public administration based on digital transformation, to increase the effectiveness and efficiency of public administration based on digital transformation, and to minimize the risks of digitalization.

The digital maturity of public administration on the example of Germany is considered by Meuche , T. (Meuche , 2022). He singled out 5 components of the maturity level: employees (mitarbeiter), technology, data (daten), processes, management (steuerung), strategy (strategie), leadership (führung). Employees - competencies and qualifications, technology - flexibility and integration (flexibilität and integration), processes - simplification and automation, management - integration and measurement, strategy - goals and implementation (ziele and Umsetzung), leadership - cooperation and dexterity (zusammenarbeit and agilität) .

Erdal B. et al. used the DEMATEL method as one of the multi-criteria decision-making methodologies (MCDM) to assess the level of digital maturity of healthcare organizations in Turkey (Erdal , 2022). According to the results, the main criterion that has the greatest impact on the rest was "Organization and management", that is, it is the managing and organizing activity that is the factor. Having the maximum impact on the state of digital maturity.

Polyakova T. A., Minbaleev A. V. , based on the analysis of the definitions of "digital maturity" used in the current legislation of the Russian Federation and the scientific literature, define it as the result (level) of the development of a particular subject or object, institution or direction in the framework of the implementation of strategic tasks for digital transformation, which is characterized by both a general and a special set of indicators (Polyakova , 2021). We fully agree with this generalizing definition, which can describe digital maturity in relation to any kind of objects.

Kapkaev, Y. and Kadyrov, P _proposed a methodology for calculating the index of digital maturity of the territory. The process of assessing the digital maturity of the territories is a multi-level study of the critical sectors of the economy of the territories (5 sectors), which allows you to assess the potential for its growth, identify development zones and develop an individual strategy for digital transformation. The index includes 6 sub-indices - Urban Development Index, Transport and Logistics Index, Healthcare Index, General Education Index, Education and Science Index (Kapkaev, 2021) .

Summing up the study of the theoretical and methodological aspects of digital maturity, we can state the existence of various approaches to the concept of digital maturity, and, consequently, existing methods for measuring it. The lack of a universal consistent vision of the phenomenon of digital maturity makes it difficult to possibly assess it in relation to the specific conditions of the digital development of any object - from a microorganization to a nation state.

4 The state policy of the Russian Federation on the digital transformation of the sphere of public administration

The first steps of a targeted state policy for the digitalization of public administration in Russia are related to the coming to power of a new President, the signing of the Okinawa Charter for the Global Information Society, and the beginning of administrative reform (2000-2004). It was then that legal documents were developed and adopted for implementation that determined the architecture and further development of e-government in the Russian Federation. Among them: the Federal Target Program "Electronic Russia (2002 - 2010)", the Concept for the use of information technologies in the activities of federal government bodies until 2010, the Concept of regional informatization until 2010 , the Concept for the formation of electronic government in the Russian Federation until 2010 , the Concept regional informatization (Bannykh , 2022).

In 2016, the second stage of the development of e-government began in the Russian Federation: the System Project of the e-government of the Russian Federation was approved . According to this document, the development of e-government involves the implementation of the "4L" principle - so that any citizen and any department can interact anywhere and at any time.

The fundamental regulatory document that establishes the goals, objectives and measures for the implementation of the domestic and foreign policy of the Russian Federation in the field of application of information and communication technologies aimed at the formation of a national digital economy is the Strategy for the Development of the Information Society in the Russian Federation for 2017–2030, approved by the Decree of the President of the Russian Federation of May 9, 2017 No. 203. It is in the Strategy that the concept of "digital economy" is first fixed at the state level.

Since 2018, the federal project Digital Public Administration has been implemented in Russia as part of the Digital Economy national project. The goal of the project is "the introduction of digital technologies and platform solutions in the areas of public administration and the provision of public services, including in the interests of the population and small and medium-sized businesses, including individual entrepreneurs." Among the targets to be achieved by 2024 is a full transition to the provision of public services and services without the need for personal visits to government bodies and other organizations, using a registry model, online (automatically), proactively (without an application); as well as the transfer of 70% of the interactions of citizens and commercial organizations with state (municipal) bodies and budgetary institutions, carried out in digital form (See Table 1).

Table 1. Additional indicators for the implementation of the federal project "Digital Public Administration" by 2024

Indicator	Value in 2024
The share of interaction between citizens and commercial organizations with state (municipal) bodies and budgetary institutions, carried out in digital form	70
The share of priority public services and services that correspond to the digital transformation model (providing without the need for a personal visit to government agencies and other organizations, using a registry model, online (automatically), proactively)	100
The share of refusals in the provision of priority public services and services, from the number of refusals in 2018	90
Percentage of master data harmonized	70

In the fall of 2020, the Government of the Russian Federation approved the Regulations on Departmental Digital Transformation Programs. The Regulations disclose the basic concepts and procedure for the development, adoption and approval of departmental programs. A departmental digital transformation plan is a comprehensive plan that contains a set of goals, a set of activities, and associated timelines and budgets. Departmental digital transformation programs for 2021-2023 To date, 40 federal authorities have published (there are more than 50 federal ministries in the Russian Federation , their subordinate agencies, services and oversight, as well as 19 federal services and agencies).

Decree of the President of the Russian Federation dated July 21, 2020 No. 474 “On the national development goals of the Russian Federation for the period up to 2030” sets a target for achieving “digital maturity” in key sectors of the economy and social sphere, including public administration; increase in the share of mass socially significant services available in electronic form, up to 95%.

To promptly address all issues of digital transformation in federal government bodies, in the constituent entities of the Russian Federation and government bodies of the constituent entities of the Russian Federation, positions were introduced and digital transformation leaders were appointed - CTC (Chief Digital Transformation Officer - *CDTO*). The main tasks of the RTC are the transfer of public services to electronic form, the digitalization of control and supervisory activities, the development of a feedback platform and regional management centers, and the effective management of the region based on the data received. Given the need for digital transformation of the entire system of state and municipal government by 2030, today the head of digital transformation is a key position in the system of modern public administration.

In 2020, the Ministry of Digital Development of the Russian Federation developed methods for calculating target indicators for the national goal "Digital Transformation". 2021 has become the year of the global implementation of the mechanism for assessing the digital maturity of regions. Orders of the Ministry of Digital Development of Russia No. 600 dated November 18, 2020 “On approval of methods for calculating target indicators of the national development goal of the Russian Federation “Digital Transformation” and No. 601 of November 18, 2020 “On approval of methods for calculating predictive values of target indicators of the national development goal of the Russian Federation “Digital Transformation” establish quantitative indicators of digital transformation, determine the method for predicting the values of these indicators, give a forecast of the digital transformation of the constituent entities of the Russian Federation.

It should be noted that the Covid19 pandemic has had a significant impact on the digital development of public administration. The pandemic has had a positive impact on the digital transformation of the public sector in two ways. Firstly, the long overdue digitalization of processes, which were less effective in the “analog” form, has accelerated. Secondly, the introduction of digital transformation (DT) in the civil service began to be perceived with greater optimism, as many decision makers saw real benefits and benefits from the digitization of processes.

Finally, during the pandemic, the use of digital technologies by the population intensified. 1/3 of respondents claim that during the pandemic they began to use digital services more often . Public authorities are in a state of transition to a client-centric model of interaction with citizens, which in the current conditions implies the need for digital transformation and a change in the culture of public administration. According to the results of the study “ Digital Turn. The Economic Consequences of the Pandemic and New Strategies ”, conducted by the RANEP and the Higher School of Economics in 2021, there is no holistic understanding of the strategic tasks of DH in most public authorities - this is noted by civil servants themselves. The fact that digital transformation is in the strategic priority of the government helps to get closer to the goal: 20% of economic recovery actions are digital transformation and

informatization measures. For the state, these areas, for example, include online submission of applications for subsidies, electronic document management within departments, further and accelerated development of public services.

Despite significant positive changes in achieving the overall digital maturity of public administration, it should be noted that in the Russian Federation, due to the federal structure with a fairly large and sparsely populated territory, the digitalization of public administration not only goes through several stages, but also takes place in the hierarchical network structure of public authorities and management: the federal center - the constituent entities of the Russian Federation - municipalities (of the first and second levels).

5 Assessment of the state of digital maturity of the state and regions in the Russian Federation

Since digital maturity is an element of the digital transformation process, its assessment may also affect the general aspects of measuring the levels of digital development. Currently, there are several levels of digitalization assessment:

1. International (global) methods
2. National methods, which include Russian methods of the federal level.
3. Regional (local) methods.

The assessment of certain aspects of the development of digitalization can be carried out by various structures - state bodies, public organizations, specialized expert organizations. Key positions in the development of analytics methods and accounting standards in this area are occupied by the United Nations (UN), the Organization for Economic Cooperation and Development (OECD), the International Telecommunication Union (ITU), the World Economic Forum (WEF) and other international organizations.

Now in the world there are more than 20 different methods for assessing the processes of digitalization and digital transformation in society and public administration. Consider the results of those that measure the digitalization of public organizations, structures, services (See Table 2)

Table 2 Indices and ratings of digitalization of the state, government agencies

Index name	Organization developing the index	Groups/subgroups of indicators	Number of countries participating in the index	Place of the Russian Federation
E-Government Development Index ²	United Nations Department of Economic and Social Development (W DESA)	The index is calculated as the arithmetic mean of three normalized sub-indices: - sub-index of telecommunication infrastructure (Telecommunication Infrastructure Index - TII). Consists of five indicators characterizing the development of fixed and cellular communications, plus the Internet; - sub-index of human capital (Human Capital Index - HCI). Consists of four indicators that assess the literacy of the population, involvement in education, duration of education; - Online Service Index (OSI): we are talking about the volume and quality of public online services, the assessment is carried out according to the results of a survey of official websites.	193 countries	36 (2020)

² <https://publicadministration.un.org/en/Research/UN-e-Government-Surveys> (accessed 03/20/2022)

Local index online services (Local Online Service Index, LOSI)	United Nations Department of Economic and Social Development (W DESA)	Calculated on the basis of 60 indicators in 4 areas: technological, provision of content, basic services through the city's website, citizen engagement	193 countries	Moscow - 6th place (2020)
Index (EPART) ³	UN	Based on an assessment of three components that reflect the use of digital technologies to assess the involvement of citizens in the development and adoption of decisions by state bodies: electronic information; electronic hearings; electronic decision making.	193 countries	27th (2020)
Open budget index ⁴	International Budget Partnership (IBP)	Evaluated in the following areas: Providing extensive information to citizens (81-100%) Providing significant information to citizens (61-80%) Providing little information to citizens (41-60%) Providing minimal information to citizens (21-40%) Providing little or no information to citizens (0-20%)	117 countries	Transparency: 74/100 Public Participation: 22/100 Budget Oversight: 85/100
GovTech Maturity Index ⁵	World Bank Group	The GovTech Maturity Index (GTMI) measures key aspects of GovTech's four priority areas - supporting core government systems, improving service delivery, enhancing citizen engagement, and facilitating GovTech activists - and helps consultants and practitioners develop new digital transformation projects	198	B High: significant focus on GovTech

According to the data presented in Table 2, it can be concluded that the Russian Federation has a stable position in assessing the processes of digitalization of public administration. Traditionally, in accordance with the indicators, various state systems and services are highly developed in the country, there is a rapid development and provision of electronic services and interaction with citizens, entrepreneurs, however, openness of certain areas of public administration and participation of citizens in governance are low.

Attempts to develop a national index of digital maturity of the regions have been made since 2018. In October 2019, the Federation Council of the Russian Federation presented a "visual concept of the regional digitalization rating". In 2020, the Government of the Russian Federation presented the index of digital maturity of the regions, promising to calculate its values for each region by April 2021. In August 2020, it was determined that the Perm Territory would become the first ("pilot") region for calculating the rating.

The Ministry of Digital Development of the Russian Federation has developed indicators for the rating of digital maturity of regions. The subjects included in it were divided into three groups:

- with high (with values over 50%);
- with an average (from 25% to 50%);
- low value of digital maturity (less than 25%).

³ <https://publicadministration.un.org/egovkb/en-us/About/Overview/E-Participation-Index> (accessed 03/20/2022)

⁴ <https://www.internationalbudget.org/open-budget-survey> (accessed 03/20/2022)

⁵ <https://openknowledge.worldbank.org/handle/10986/36233> (accessed 03/20/2022)

The evaluation criteria were the number of regional specialists using information and communication technologies, the costs of implementing and using digital solutions of organizations in the field of industry, agriculture, construction, energy, financial services, healthcare and public administration.

9 subjects of the Russian Federation fell into the first group - advanced regions with a high level of digital maturity, 62 subjects of the Russian Federation - in the group with an average value of digital maturity, 14 subjects - in the group with a low level of digital maturity.

Chirkunova, EK et al. analyzed digital maturity data from 85 Russian regions based on indicators such as the speed, depth, and scope of digital transformation of the local economy and society (Chirkunova, 2020). The results show that the regions of digital maturity are among the most successful subjects of the Russian Federation in terms of socio-economic development, innovation and the pace of digitalization. However, the level of differentiation of the subjects of the Russian Federation is significant for achieving the digital maturity of public administration.

Rostec Corporation and the Perm Territory jointly determined the level of digital maturity of public administration and sectors of the economy based on an assessment of 40 key criteria. According to the results of the analysis, the information systems of the Perm Territory in the field of finance, education, comprehensive improvement and urban planning were highly rated.

According to the results of the study "Digitalization in small and medium-sized cities of Russia", conducted in 2018 by the Higher School of Urban Studies, National Research University Higher School of Economics and Yandex Taxi⁶, it was concluded that 21% of the urban population is practically or completely not provided with local digital services. And in this study, it was possible to fix a high level of unpreparedness of the population of cities for digital interaction with municipal institutions.

In 2018, the Center for Financial Innovation and the Cashless Economy of the Moscow School of Management SKOLKOVO created its own methodology for assessing digitalization in a territorial context - "Digital Russia". The complex index consists of seven sub-indices: - normative regulation and administrative indicators; - personnel and training programs; - research competencies and technological groundwork; - information infrastructure; - Information Security; - economic indicators; - social effects. The "Digital Life of Russian Regions" study, conducted in 2020 by the Moscow School of Management SKOLKOVO, showed that "the quality of the digital environment in the city significantly correlates with the perceived quality of life, i.e., digital is becoming one of the key factors in overall life comfort"⁷. In 2020, a high level of digital inequality was also recorded at the level of large cities - the value of the final Digital Life Index of the leading cities (Krasnodar and Yekaterinburg) is almost 5 times higher than that of the closing city (Magas-Nazran, as a single agglomeration). According to the results of the ranking, Moscow, the Republic of Tatarstan, St. Petersburg took the first three places, and the Karachay-Cherkess Republic, the Jewish Autonomous Region and the Republic of Tuva took the last three.

One of the tools for assessing the digital maturity of municipalities, including public administration at the municipal level, is the urban digitalization index "IQ of cities" developed by the Ministry of Construction and Housing and Public Utilities of the Russian Federation. Despite the name, the index measures the efforts of more than just city districts. However, in total, 209 municipalities from 82 subjects of the Russian Federation take part in the study, which does not allow us to talk about digital inequality throughout the state. Nevertheless, even within the limits of the index, the lag of municipalities that are poorly implementing projects for the implementation of Smart City practices from

⁶Another Internet: digitalization of small towns in Russia. Graduate School of Urban Studies, National Research University Higher School of Economics. 2021. URL: <https://urban.hse.ru/news/220104443.html> (accessed 20.03.2022)

⁷Digital life of Russian megacities. Moscow School of Management SKOLKOVO. 2016. URL: https://iems.skolkovo.ru/downloads/documents/SKOLKOVO_IEMS/Research_Reports/SKOLKOVO_IEMS_Research_2016-11-30_ru.pdf (accessed 20.03.2022)

the leaders is very significant - by 4 or more times. In 2019, Russian cities paid attention to the least digitalized areas of urban economy (smart transport, urban management, tourism) ⁸. This indicates the penetration of digital services into Russian public law entities.

In 2019, the All-Russian Interdepartmental Competence Center in the field of Internet communications and the operator of the digital dialogue between the government and society "Dialogue" were created. The main goal of the organization is to form sustainable links between digital government and citizens. The unification of technological and management practices in the digital environment has accelerated the resolution of population issues both at the federal and regional levels. For 2022, the state Internet communication system and feedback platforms are actively developing to increase the productivity of interaction.

In 2022, the Dialog Center published a rating of federal executive bodies on the quality of feedback on the Internet. In 2021, among 62 federal ministries and departments, Rospotrebnadzor is in first place, Rosmolodezh is in second, and the Ministry of Education is in third ⁹. The evaluation of the work was carried out in the following areas: official publics, content planning, own projects, integration with bloggers, integration with unofficial publics.

Another tool for effective communication between youth and authorities is the Regional Management Centers (RCCs), which monitor citizens' messages, provide interdepartmental interaction between authorities to reduce the time to receive a response and resolve the issue. The role of the SDGs in the digitalization of the country is great, but the indicators of recognition of the centers among young people require a revision of the ways of awareness.

The All-Russian Interdepartmental Center "Dialogue" annually analyzes the activity of media communication of state bodies at all levels of government, their involvement in dialogue with citizens through digital means, and the perception of digitalization by young people. Public administration authorities use social networks to inform and build a dialogue with citizens. Expectations regarding the effectiveness of communication in social networks are low, there is a significant demand for active informing users about the work of authorities

In the Russian Federation, the concept of digital maturity has been actively promoted in the practice of public administration in connection with the implementation of the state policy on digitalization and digital transformation. A digital maturity model for public services was developed based on the following indicators: Availability (quality) of services in electronic form - accessibility, Demand for digital interaction channels for receiving services, Satisfaction with the quality of electronic services, Digital trust . The model itself includes 6 levels of digital maturity: from minus 1 to super-level ¹⁰. Comparing these valuation models with Gartner's model, it takes into account only the first three stages of digital maturity.

The Ministry of Digital Development, Telecommunications and Mass Media of Russia has developed a model for assessing the digital maturity of regions. The index itself is well adapted to the requirements of the national program "Digital Economy", however, it is not entirely correct to give a comparative assessment of the subjects within their single set, because they are too heterogeneous, incomparable. When identifying the "digital maturity" of a region, one should look not at the number of technologies used in the subject, but at the effects of their implementation.

In general, the sphere of public administration in the Russian Federation has good indicators of digital maturity and a high potential for further digital development according to comparable indicators of international assessments. At the same time, according to internal assessments, the digital maturity indicators of public administration are

⁸ The Ministry of Construction of Russia presented the results of the third Cities IQ Index. 2021. Ministry of Construction of the Russian Federation URL: <https://minstroyrf.gov.ru/press/minstroy-rossii-predstavil-resultaty-tretego-indeksa-iq-gorodov/> (access: 1.03.2022)

⁹ All-Russian Competence Center in the field of public relations and Internet communications. 2022. DIALOGUE. Access mode: <https://dialog.info/> (access: 1.03.2022)

¹⁰ Matrix for assessing the "digital" maturity of state and municipal services / Ministry of Digital Development, Communications and Mass Media of the Russian Federation. 2019, pp. 1–11. URL: <https://digital.gov.ru/uploaded/files/matritsa-otsenki-tsifrovoy-zrelosti.pdf> (date of access: 10.10.2020)

somewhat contradictory: good pace and speed of development and implementation of technologies in the public sector are accompanied by strong differentiation by levels of government and in the interregional aspect. Another significant obstacle can be considered the digital development target mainly for the public services sector, measured by the number of implemented technologies.

6 Conclusion

The use of digital technologies in public administration helps to solve a number of tasks - communication (collection of information, its storage, archiving and distribution, informing the population), managerial (decision-making and control over their execution), administrative (electronic document management and office work), educational (webinars, video courses, educational portals, employee knowledge testing systems), security and data protection tasks (access control, prevention and neutralization of threats and cyber attacks) and control (measurable performance indicators). Modern technologies make it possible to achieve "digital maturity" of public administration to create a comfortable environment and increase the confidence of citizens.

As part of the article, an analysis was made of the features of digital transformation and the state of digital maturity of public administration bodies in Russia.

A review of theoretical sources and analytical studies on the topic of digital maturity of the state, the government showed that a unified position in understanding the content of the concept of "digital maturity" in science has not yet developed. There are diametrically opposed opinions in the scientific literature: the vision of digital maturity as a result of digitalization, as a set of characteristics of a company before the start of digitalization, as a set of properties of digital development, as a process of digital development.

Different approaches to understanding the content of digital maturity lead to the emergence of various methods for its assessment, of which a significant number are presented in the scientific literature. Nevertheless, each nation state or group of states develops its own methodologies for assessing the digital maturity of public administration.

And the study of the regulatory and legal aspects of the digital transformation of public administration bodies in Russia has shown that at present there is a sufficient regulatory and legal framework for the further digital development of public administration bodies. In foreign practice and publications, digital transformation in public administration indicates attention to assessing the impact of digital technologies on the functions and goals of public administration itself. An analysis of legal sources on the digitalization of public administration in the Russian Federation (for example, the content of the passport of the federal project "Digital Public Administration" in the Russian Federation) shows that digitalization often comes down only to changes in the provision of public *services* (the national goal of digital transformation is also tied to this). Due to this aspect, it is difficult to conduct comparative studies of the achievement of digital maturity of public administration in Russia and other states.

The hypothesis of the study during the analysis was confirmed - the main and sufficient conditions for achieving the digital maturity of public administration in Russia have been created. Nevertheless, the digital transformation of the public administration system is very uneven across branches of government, levels of government, and across regions. The Covid 19 pandemic has had a significant impact on the state of digital maturity in public administration, exponentially increasing certain indicators of digital maturity in public administration.

However, in general, by now in Russia there is no optimal method for measuring the level of digital maturity of public administration, which prevents its full assessment. Existing indices and methods provide some general and sectoral cuts. Thus, according to comparable parameters of digital development in the international context, the Russian Federation has good indicators of digital maturity and a high potential for further digital development.

However, internal assessments indicate the presence of problems at the level of regions and municipalities, an imbalance in assessment methods, etc.

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