

Article

Legal Framework for the Emergence and Development of Digital Public Administration

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Abstract: Modification of interaction in the "state–society" system is focused on optimizing public administration and strengthening citizen participation in decision-making. However, the digitalization of public administration is accompanied by several legal conflicts and consequences that require detailed analysis from both the scientific community and legislative bodies. The purpose of this study is to analyze the specifics of the regulatory framework of the Russian Federation governing the use of digital technologies in the field of public administration, including e-government, digital public services and data protection. The paper examines the process of introducing digital solutions into the public policy sphere and their impact on it. The classification of regulations according to the criteria for regulating certain areas of digitalization is presented. The analysis of key legislative documents with the identification of their shortcomings is carried out. In conclusion, it is concluded that the intensive integration of digital technologies into the activities of government agencies does not ensure an increase in efficiency and security of management. It is necessary to develop clear legal mechanisms that guarantee the protection of confidentiality, information security and the rights of citizens.

Keywords: digitalization; public administration; informatization; digital technologies; law

1. Introduction

The current stage of scientific and technological progress, accompanied by the improvement of technical means and the evolution of information and communication technologies, determines the increasing role of the virtual environment as a tool for optimizing social practices and expanding the possibilities of information interaction. However, despite the intensive development of digital technologies, they cannot eliminate traditional forms of socio-economic activity. At the same time, digital information, which is the basis of virtual space, acquires priority importance in the context of legal regulation, due to its transformative impact on the functioning of the information society.

128 of the Civil Code of the Russian Federation, digital information, being an indirect object of civil rights, plays a key role in the process of recording material goods, legitimizing rights to them, identifying subjects of legal relations, as well as documenting the will of the parties (Chernichkina 2019). By 2025, automated technologies have become an integral part of all spheres of public life, including public administration. This trend is due to the formation of a new paradigm of public relations based on the systematization and optimization of government activities through digital solutions. Given the irreversibility of the processes of technologization, the need to develop effective mechanisms for legal regulation of the digital environment and progressive modernization of information legislation is being actualized.

The purpose of the study is to identify and analyze the specifics of the regulatory framework of the Russian Federation governing the use of digital technologies in the public administration system. Within the framework of achieving this goal, the following tasks are being solved: 1) a retrospective analysis of the genesis of the digital public administration system; 2) development of a classification of regulatory legal acts (NPAs) according to the criteria for regulating digitalization and informatization; 3) identification of conflicts caused by the fragmentation of legal regulation and the lack of a systematic codification of legislation in the field of digitalization.

Thus, the research is aimed at forming scientifically sound proposals for improving legislation in the context of the digital transformation of public administration.

2. Methods

This article uses a qualitative research methodology that allows collecting information from both primary and secondary sources to obtain multidimensional information. The primary sources

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include the laws of the Russian Federation and the legislation of foreign countries. This study used secondary materials such as textbooks, scientific publications, law journals, mass media, official documents, and online sources.

3. Conceptualization of the Concept of "Digital Transformation": Scientific Analysis

The term "digital transformation", being well-established in scientific discourse, continues to be the object of methodological discussions. Within the framework of this study, a comprehensive scientometric analysis of publications on the key query "digital transformation" in the ScienceDirect database for the chronological period 2001-2024 was carried out.

The results of the analysis indicate that there are 304.8 thousand scientific publications containing the term under study. It is paradoxical that, despite the origins of the digital revolution dating back to the 1970s, the active phase of academic study of this phenomenon began only after 2016. The maximum research activity was recorded at the end of 2019 and in the period 2021-2024, which correlates with global socio-economic processes: the COVID-19 pandemic (2019), which caused an exponential increase in demand for digital solutions, and the period of sanctions pressure (2021-2024), which stimulated the processes of import substitution and modernization of national digital services.

The thematic distribution of publications demonstrates the dominance of technical trends: "Procedia Computer Science" (2,893 publications, GRTI 50.00.00); "Science of The Total Environment" (2,388 publications, GRTI 87.01.00); "Journal of Cleaner Production" (2,200 publications, GRTI 44.00.00 and 55.00.00). It is noteworthy that the share of research in the field of sociology and law does not exceed 1% of the total, which indicates an insufficient study of the socio-legal aspects of digital transformation.

The analysis made it possible to formulate the author's interpretation of the concept: 1) In the macro perspective, it is a systematic process of qualitative modernization of organizational structures and state institutions through the introduction of a complex of digital technologies (information, computing, communication) (Vial 2019). 2) In a micro perspective, strategic integration of technological solutions and expertise to optimize public administration and public policy processes. The authors emphasize the need to differentiate the concepts of "digital transformation" and "e-government", since the former implies not only technological modernization, but also fundamental changes in organizational paradigms, management practices, and institutional mechanisms of public administration (Omar 2020). The lack of consensus on the definition of the term confirms its interdisciplinary nature and the methodological complexity of conceptualization.

4. Theoretical and Methodological Foundations of the Digital Transformation of Public Administration

The digital transformation of public administration is a systematic activity of public authorities and local governments aimed at optimizing the management of public relations and economic processes through the introduction of digital and information and communication technologies (ICT).

The analysis of this phenomenon requires the application of a systematic approach, which provides a methodological basis for improving the effectiveness of state strategic planning. Within the framework of this approach, the following key areas of digital transformation are highlighted:

1. Formation of digital space: The creation of a unified digital ecosystem, including infrastructural, legal and organizational components, complies with the provisions of Presidential Decree No. 633 dated 11/08/2021¹. This process is aimed at revalorizing strategic management, optimizing information flow control and efficient use of data in government information systems (GIS).
2. Digitalization of state and municipal services: In accordance with the Decree of the President of the Russian Federation dated 07/21/2020 No. 474, by 2024 95% of socially significant services should be converted to digital format². According to the Ministry of Finance of the Russian Federation, 132 services were digitized in 2022-2023, and by 2023 their number reached 204. The introduction of the GOSTECH platform contributed to the integration of 60,000 representatives of public authorities and 7,000 departments, which significantly increased the level of digitalization of public administration.
3. Development of digital twin technologies: The concept of technology appeared in the second half of the 20th century. Practical application took place later due to the underdevelopment of information technology: since 2011 in the USA, in early 2022 in the Russian Federation after the entry into force of GOST R 57700.37-2021 "Computer models and modeling. Digital counterparts of products. General provisions"³. According to the provisions of the Center for Strategic Research, a citizen, identifying himself on the state platform through a "digital twin", will interact with the digital ecosystem and receive digital services in accordance with his needs (Petrov 2018). In other words, the "society-state" dialogue in the digital plane will look like a "digital twin of a citizen-a digital twin of an authority/civil servant".
4. Private sector integration: The transition not only of the entire public administration system to the digital space, but also of individual entities: commercial and non-profit organizations. The private sector has a significant role to play in developing ICTs for the digital state, but government structures are responsible for creating transparent policies and regulatory frameworks that ensure appropriate development conditions.
5. Digital citizen participation.: Involvement of Russian citizens in solving issues of public life in the Internet space (digital participation) as a new principle of participation or participation, which includes a factor of digital activism, which, in turn, is aimed at the manifestation of civic identity. The interaction of the population with public authorities on the Internet is carried out in various forms (categories of digital activism). It is rational to take as a basis the classification of

¹. Decree of the President of the Russian Federation No. 633 "On Approval of the Fundamentals of State Policy in the field of Strategic Planning in the Russian Federation", 2021.

². Decree of the President of the Russian Federation No. 474 "On National Development Strategies of the Russian Federation for the period up to 2030", 2020.

³. GOST R 57700.37-2021 "Computer models and modeling. Digital counterparts of products. General provisions", 2021.

a foreign scientist L.W. Milbrath, which identifies 3 categories of digital activism: 1) spectator actions (clicktivism, meta-voting, approval); 2) transit actions (botivism, e-finance, consumer protection and digital petitions); 3) gladiatorial actions (data activism, hacktivism) (Milbrath 1985).

The importance of digitalization for the effectiveness of public administration is determined by existing domestic methods. Scientific papers offer classifications, in particular: 1. by subject (government authorities; public associations); 2. by object (assessment of digitalization of subjects of the Russian Federation or individual sectors of the economy); 3. by goals (monitoring of specific indicators of federal programs; comprehensive assessment of digitalization development) (Kostina 2022). The authors do not aim to analyze statistical data on the digitalization of the public administration sector using these methods. It is important to understand in general what role digitalization plays in the institution of government. According to the World Bank's GovTech Maturity Index 2022, out of 198 countries, Russia entered the group of countries with the highest rating of the public administration digitalization index in 2022 and took 10th place, scoring 0.897 points⁴. The Russian Federation has the highest value in terms of the subindex of public services and the development of digital state platforms (PSDI – Public Service Delivery Index) – 0.960 bps, the lowest in terms of citizens' involvement in digital participation (DCEI – Digital Citizen Engagement Index) – 0.828 bps.

Thus, digital transformation transforms public administration in the direction of customer orientation and personalization of services, which corresponds to modern challenges of technological development.

5. The Genesis of the Digital Public Administration System: Historical and Theoretical Analysis

The formation of the modern digital public administration paradigm is an extensive historical process that can be structured into several conceptual stages.

The first stage (1994-2004): Institutionalization of the digital state. At the turn of the XX-XXI centuries, the concept of "E-government" was formed in international practice, which was codified in EU and UN documents. The institutional marker of this process was the creation in 1994 of the first official government web portal (administration of U.S. President B. Clinton). In parallel, a mechanism for electronic interagency interaction (Net Results) was developed, integrated into the USAGov national information system in 2000. The American experience has become a catalyst for the introduction of ICT in public administration in countries such as Germany, Japan and the Republic of Korea.

In 2004, the E-Participation Index methodology was developed to assess the quality of government web resources, which revealed the problem of digital inequality. In the Russian Federation, an attempt at systemic digitalization was made through the Electronic Russia (2002-2010) program, but the low level of internetization of government structures (19% of government authorities, 1% of officials) led to its low efficiency, despite the institutional foundations laid.

The second stage (2005-2009): Network Government. The evolution of web technologies from Web 1.0 to Web 2.0 has created prerequisites for the formation of a Networked Government model aimed at optimizing public-public interaction. In Russia, the implementation of the Electronic Russia program was fragmented, focusing on solving local technological problems. A conceptual turnaround occurred with the adoption of the "Concept of e-Government formation until 2010", which laid the foundations for a systematic approach.

The third stage (2010-2022): The Digital State. The transformation of Digital government marked the transition to a platform-based management model, where digital technologies have become an autonomous management tool. As noted in the 2012 UN report, this period is characterized by the integration of disparate systems into a single digital ecosystem with centralized provision of public services.

The fourth stage (2023 - present): The discussion phase. The current stage of development is characterized by scientific controversy regarding the completeness of digital transformation. Some researchers consider Digital government as a continuation of the network model, while others state the completion of the basic transformation. The uncertainty of the prospects (7-12 years) is due to the dynamic development of ICTs and their unpredictable impact on socio-political systems.

The issue of legal regulation of digital space is becoming particularly relevant. The lack of effective regulatory mechanisms creates risks: loss of control over artificial intelligence, erosion of national security, systemic violations of citizens' rights, and the growth of cybercrime. Thus, the historical analysis demonstrates the evolution from fragmented computerization to a comprehensive digital transformation of public administration, requiring constant methodological reflection and legal support.

6. Legal Aspects of the Digital Transformation of Public Administration: Problematic Issues

Before proceeding to the analysis of the regulatory framework of digital public administration in the Russian Federation, it is necessary to note two key international documents that have had a conceptual impact on the development of information and communication technologies. We are talking about the Okinawan Charter for the Global Information Society dated 07/22/2000, adopted at the G8 summit, and the United Nations Millennium Declaration dated 09/08/2000 (General Assembly resolution 55/2)⁵⁶. Despite the absence of a legally binding character for the Russian Federation (which is confirmed by the remark of President V.V. Putin on the informal status of these initiatives)⁷, these documents formulated the conceptual foundations for the development of ICT and the transition to a digital state.

In the domestic legal system, the foundation of the digital transformation of public administration is laid in the system of national strategic documents. An analysis of regulatory legal acts (NPAs) shows that government agencies primarily focus on the

4. WBG GovTech Maturity Index, 2022.

<https://documents1.worldbank.org/curated/en/099035001132365997/pdf/P1694820bcef0903e091160315d2050d03b.pdf>.

5. The Okinawan Charter for the Global Information Society, 2020.

6. United Nations Millennium Declaration, 2000.

7. Vladimir Putin called the G7 a club of interests and wished him success, 2015.

<https://govoritmoskva.ru/news/41989/?ysclid=lpjpv6doux863013070>.

positive aspects of digitalization for both government institutions and society. However, problematic aspects of this transformation often remain outside the field of regulatory regulation, which is of scientific and practical interest.

As part of the study, a SWOT analysis of strategic documents of the Russian Federation was carried out, the results of which are systematized. Special attention is paid to identifying the weaknesses of regulatory regulation, which makes it possible to identify the key problems of legal support for the digital transformation of public administration in the Russian Federation.

The concept of formation of the Information Society in Russia dated 05/28/1999 No. 32 (generally substantiates the specifics of Russia's transition to the information society, defines the provisions and sets priorities for the state information policy)⁸. Federal target program "Electronic Russia (2002-2010)" dated 28.01.2002 No. 65 (program did not contribute to improving the quality of interaction between the state and the population. Information systems duplicated traditional paper document management)⁹. The concept of using information technologies in the activities of federal government bodies until 2010 and the action plan for its implementation dated September 27, 2004, No. 1244-r (the period of execution of the concept coincided with the events within the framework of the Federal Target Program "Electronic Russia (2002-2010)", the tasks were duplicated. On the part of the legislator, there was a need for repeated revision of the provisions of the act)¹⁰. The concept of regional informatization until 2010 dated 17.07.2006 No. 1024-r (did not consider the specifics of the subjects of the Russian Federation at all. Territorial differences and the disparity of financial opportunities have predetermined the difficulties faced by the regions and their inhabitants. The de facto constitutional rights of citizens of individual regions to equal access to information and services were violated)¹¹. Strategy for the Development of the Information Society in the Russian Federation No. Pr-212 dated 07.02.2008 (the implementation of the Strategy required the publication of additional regulations (for example, to prevent threats to the security of the Russian Federation in the context of digitalization, the Information Security Doctrine No. 646 dated 05.12.2016 was adopted))¹².

The concept of e-government formation in the Russian Federation until 2010 dated 05/06/2008 No. 623-r (In 2009, the Government of the Russian Federation pointed to the lack of regulatory support for the provision of electronic services to the public as the main problem hindering the implementation of the concept)¹³. The State Program of the Russian Federation "Information Society (2011-2020)" dated 20.10.2010 No. 1815-r (proved to be insufficiently flexible and adapted to global ICT development trends. The provisions of the document were duplicated by other state programs for the introduction of ICT in the activities of government bodies)¹⁴. The concept of development of mechanisms for the provision of state and municipal services in electronic form dated December 25, 2013 No. 2516-r (the slow introduction of electronic public services, the low proportion of publications of information on the activities of government authorities, the lack of an effective mechanism for digitizing documents, confusion and inconsistency in the act are obstacles to achieving the indicators of the concept)¹⁵. The concept of regional informatization for 2014-2018 dated December 29, 2014, No. 2769-r (made it possible to coordinate the process of informatization in the subjects of the Russian Federation after the 4-year absence of acts. Despite solving the problems of converting services to electronic format, there remains a financial and personnel shortage in the regions, and inconsistency in the actions of the branches of government)¹⁶. Strategy for the Development of the Information Society in the Russian Federation for 2017-2030 dated 05/09/2017 No. 203 (It provides for the improvement of legislation in terms of including new information relations in the subject of legal regulation)¹⁷.

The analysis of the regulatory framework allows us to state that the author's review covers only a limited list of fundamental legal acts that formed the regulatory basis for Russia's transition to a digital society. The study revealed a systemic problem that has persisted from 1999 to the present - significant defects in legislative regulation, manifested in: 1) legal conflicts; 2) duplication of regulations; 3) irrational systematization of legal norms; 4) excessive regulatory regulation.

As of 2024, a significant number of regulatory legal acts (laws, by-laws, departmental documents) regulating various aspects of digitalization have been adopted at the federal level. The materials of the official portal of legal information served as the source base of the research. pravo.gov.ru, the selection of which was carried out according to classification codes in accordance with Decree of the President of the Russian Federation dated 03/15/2000 No. 511¹⁸.

The low level of systematization of normative material leads to multiple duplication of legal norms. Thus, only the conceptual framework in the field of digital relations is fixed in a dozen regulatory acts, including Federal Law No. 149-FZ of 06.27.2006; Federal Law No. 210-FZ of 27.07.2010; Federal Law No. 152-FZ of 27.07.2006.

Constant changes and additions to these acts exacerbate the inconsistency of legislation, and extensive law enforcement practice contributes to the arbitrary interpretation of norms. A striking example is Federal Law No. 126-FZ dated 07.07.2003 "On Communications", adopted in an environment where only 9% of the population used ICT, and which has undergone more than 92 changes. Despite the extensive regulatory framework, key issues remain unresolved.: criteria for classifying information systems as GIS; Legal foundations of digital platforms and ecosystems; regulation of the use of artificial intelligence; information security standards; guarantees of citizens' rights when using a digital profile.

⁸ The concept of formation of the Information Society in Russia No. 32, 1999.

⁹ Federal target program "Electronic Russia (2002-2010)" No. 65, 2002.

¹⁰ The concept of using information technologies in the activities of federal government bodies until 2010 and the action plan for its implementation No. 1244-r, 2004.

¹¹ The concept of regional informatization until 2010 No. 1024-r, 2006.

¹² Strategy for the Development of the Information Society in the Russian Federation No. Pr-212, 2008.

¹³ The concept of e-government formation in the Russian Federation until 2010 No. 623-r, 2008.

¹⁴ The State Program of the Russian Federation "Information Society (2011-2020)" No. 1815-r, 2010.

¹⁵ The concept of development of mechanisms for the provision of state and municipal services in electronic form No. 2516-r, 2013.

¹⁶ The concept of regional informatization for 2014-2018 No. 2769-r, 2014.

¹⁷ Strategy for the Development of the Information Society in the Russian Federation for 2017-2030 No. 203, 2017.

¹⁸ Decree of the President of the Russian Federation No. 511 "On the Classifier of Legal acts", 2000.

Based on the analysis, the authors propose the following classification of regulations (with an indication of the approximate number of documents):

1. Strategic documents in the field of informatization (20);
2. Regulations governing technical and technological aspects (26); principles of working with data (10); technical regulation (7); GOST standards (81);
3. Regulations on the functioning of GIS (27);
4. Regulations on Digital interaction: principles of interaction (8); forms and channels of interaction (23); mechanisms of interaction (17).

The presented classification, which requires further methodological study, nevertheless allows us to systematize the areas of legal regulation of the digitalization of public administration. Special attention should be paid to the need to identify a separate category of acts regulating constitutional rights and freedoms in the digital environment. As a key conclusion, there is an urgent need to develop a systematizing document, the digital code, which: unifies the conceptual framework; consolidate the common principles of regulation; eliminate existing administrative barriers; ensure the consistency of the legal institutions of digital transformation.

7. Digital Code: Systematization or Fragmentation of Legal Regulation

The concept of the digital code is a regulatory legal act at the constitutional level that regulates the functioning of cyberspace as a transnational environment with the participation of citizens in shaping the rules of the digital ecosystem. This codified act is intended to structure public relations in a virtual environment according to the following levels of regulation: Data (digital resources, state registers, official Internet resources of government authorities); Services (government digital platforms and ecosystems); Systems (data centers, GIS, artificial intelligence systems) The multilevel regulatory architecture is conditioned by the complex nature of legal relations in the digital sphere.

The institutionalization of the digital code will contribute to legitimizing the phenomenon of "digital participation", establishing not only the rights and obligations of subjects of digital relations, but also forming a stable legal link between digital identity and digital citizenship. The idea of codifying legislation in the field of digitalization of public administration has deep scientific roots. Back in 2014, academician I.L. Bachilo and his colleagues developed the concept of the Information Code of the Russian Federation (Bachilo 2014). Later, in 2022, A.V. Minbaleev justified the need for systematic streamlining of legal norms in the field of digital transformation (Minbaleev 2022). However, scientific developments have not been implemented in law-making practice in a timely manner.

The draft Strategy for the development of the communications industry until 2035 (Ministry of Finance of Russia, 08/15/2023) provides: short-term measures (1 year) to improve legislation; long-term perspective (5-10 years) of developing the digital code as a system-forming act¹⁹.

A legitimate question arises about the temporal adequacy of such an approach: will the digital code remain relevant in a decade in the context of exponential technological development? The authors believe that either the immediate development of the code is required, or the search for alternative mechanisms for systematizing legislation.

Comparative legal analysis shows a variety of approaches to the codification of digital legislation: Italy (Digital Administrative Code (2005)); Canada (Digital Charter Implementation Act (2022)); Singapore (National Digital Government Program (2020)); Kyrgyzstan (Draft Digital Code (2022)); Germany (Law on the Development of Electronic Government (2015))

The variety of national models demonstrates the different stages of the codification process, adapted to specific legal systems. At the same time, the thesis about Russia's lagging behind in this area does not correspond to reality - the Russian approach is characterized by a balanced consideration of technological and legal realities.

8. Conclusions

The conducted study of the legal regulation of the digital public administration system allows us to formulate a number of key conclusions. The transformation of the Russian Federation from the traditional model of public administration to the concept of an information state, accompanied by the integration of a wide range of information and communication technologies (ICT) into the activities of government authorities, took place in an insufficiently systematized regulatory framework. Despite significant achievements in such areas as the digitalization of public services, improving the efficiency of civil servants, the introduction of blockchain technologies, the legal regulation of artificial intelligence as an independent object of law, as well as the development of online platforms for government and society interaction, there is an urgent need for systematic codification of legislation regulating the use of digital technologies and related areas. Empirical evidence suggests that the intensive development of the IT sector in the absence of adequate legal regulation not only creates obstacles to further digital transformation of the country, but also generates significant risks, including external and internal threats to information security. Moreover, insufficient legal regulation may lead to a decrease in the rate of citizens' involvement in public administration processes through digital platforms, which will lead to a critical drop in the level of public confidence in government institutions. In conclusion, it should be emphasized that this study is of considerable scientific interest. The problems of digital transformation of public administration, including the analysis of regulatory and legal aspects and individual elements of the phenomenon under study, require further theoretical, methodological and legislative development. The prospects of the study are seen in an in-depth study of the mechanisms of legal support for the digitalization of public administration, considering modern technological challenges.

¹⁹ Discussion of the "Digital Code" has begun in Russia, which will put IT and communications legislation in order, 2023.

https://www.cnews.ru/news/top/20231108_v_pravitelstve_nachalos?ysclid=lrans81qn630671388.

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