

## “E-GOVERNMENT” AS A PRIORITY COMPONENT OF THE FORMATION OF NETOCRATIC PUBLIC GOVERNANCE: ESTONIAN DEVELOPMENT VECTOR

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### Summary

The article discusses the main approaches to defining the concept of «electronic government»; it was found that the integration of public administration into the virtual information space creates favorable preconditions for the formation of effective electronic democracy as a logical continuation of the transformation of socio-political processes in the conditions of the information society, which indicates a netocratic vector of development of public administration.

The experience of Estonia regarding the successful testing and implementation of an effective electronic governance system has been studied. The factors that influenced the formation of a high level of electronic government services in Estonia are considered.

It is recommended to focus on the Estonian experience in the practical application of e-government with the aim of developing information and digital infrastructures in the management sphere and effective domestic e-government as an integrated platform for the formation of netocratic public administration.

**Key words:** e-government, e-government, e-democracy, netocracy, netocratic management, information society, information and communication technologies.

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### 1. Introduction

Active implementation of achievements of information and communication technologies in the field of public administration is considered today as a necessary component of the development of e-government, and scientific, legislative, and applied innovations indicate increased government attention to expanding the scope of application of information and communication technologies in the public sector and the formation of a network society as a whole.

In the context of the global digitalization of modern society, the intensification of political, economic, cultural, social and other processes, the issue of creating perfect electronic governance, the introduction of which corresponds to the hopes of citizens for effective public administration, is of particular importance. Today it is difficult to imagine a government agency that would not have its own website, email address, registration on social networks, etc.; in a number of countries around the world they use different methods of electronic expression of will; it is thanks to electronic governance that society and the state are gradually moving to a new «communicative» level: the usual bureaucratic procedures (visits to government agencies, paper documentation, long-term formal procedures, long-term consideration of citizens' appeals and decision-making, etc.) are replaced by an effective process management decisions and the responsibility of specific individuals. Consequently, state policy is gradually acquiring publicity and social accessibility, active participation of society in globalization politics

and government processes becomes possible, which indicates the presence of netocratic processes in public administration.

So, the issue under study is relevant for several reasons: firstly, taking into account the objective need for citizens to receive high-quality public services with minimal expenditure of time, moral, financial, etc. resources; secondly, pressing problems of theoretical, legal, organizational, material and technical nature regarding the functioning of electronic governance require their prompt solution, including by borrowing foreign experience, since this corresponds to the essence of modern requirements of the information society and provides an opportunity for Ukraine to join globalization processes as a full participant.

The problematics of the issue are reflected in a number of scientific studies of domestic and foreign researchers, including: V. Bakumenko, A. Bard, D. Bell, Y. Gabermas, A. Gaidabrus, N. Gritsyak, J. Zoderquist, M. Castells, T. Kozhukhova, M. McLuhan, Y. Mikhailyuk, E. Toffler, etc. In world scientific practice, the genesis of mechanisms for electronic participation of citizens in the life of the state (E-Participation) is also not a new topic for research, in particular, the second half of the 20th century. was marked by the publication of works by C. Cooley, G. Lasswell, R. Park and others.

Despite the importance and significant scientific contribution of the above-mentioned scientists to the development of the theory and practice of the information society, public administration, assessment and analysis of modern digital transformations in different countries of the world, research into the state and features of digitalization and e-government requires further research.

The purpose of the article is to analyze Estonia's experience in creating effective e-government, which forms the basis for the formation of netocratic public administration.

## **2. «E-government»: modern understanding of the concept**

The activities of modern government institutions are impossible without the use of information and communication technologies, which today have one of the leading places in public administration. Today it is impossible to imagine the work of government bodies without the use of automated information systems, special software or complex automation tools.

The idea of active use of information and communication technologies in order to improve the efficiency of government arose on the basis of the ideology of «new public management», designed to facilitate the implementation of administrative reforms begun in Western countries in the 90s of the twentieth century.

The term «electronic government» (E-Government) arose subsequently (1997) at the initiative of the US National Science Foundation (*McDonagh, 2005*). It meant reducing bureaucracy, avoiding traditional paper workflow and replacing it with electronic ones, and transferring state and municipal services to the Internet. Subsequently, the concept of «electronic government» acquired additional content, the essence of which is the formation of a new system of interaction between the state and society.

So far there is no unambiguous interpretation of the concept of «electronic government», however, all characteristics can be divided into several groups: definitions that focus exclusively on the theoretical approach and possible changes in society due to the introduction of e-government; a definition that emphasizes the applied nature of e-government and focuses on the structural elements of the concept; characteristics describing technical aspects (network creation, software, etc.); definitions focused on a comprehensive study of problems and maximum

efficiency of public administration (*Pogrebnyak, 2014 : 28*). So, the domestic understanding of e-government, as an organization of public administration based on electronic means of processing, transmission and dissemination of information, as providing services of government bodies of all branches of government for different categories of citizens (pensioners, workers, businessmen, civil servants, etc.) electronic means and informing them by the same means about the work of government bodies (*Fedulova, 2009*) is completely justified and meaningful.

In foreign scientific literature there is also no unambiguous interpretation of the concept of «electronic government» – all the variety of definitions comes down to two approaches. Within the first, «narrow», e-government is considered as the activity of public authorities using information and communication technologies (providing services to the population and business, organizing public procurement, carrying out financial transactions, receiving and providing information, etc.) (*Fang, 2002 : 6*); the second, «broad» approach involves understanding e-government as a process of transformation of internal and external interaction in the public administration system through the use of information and communication technologies in order to optimize management, improve the quality of service to the population and ensure the constitutional rights of citizens (*McDonagh, 2005*).

The above approaches to defining the concept of «electronic government» indicate the integration of management into the virtual information space, which creates favorable preconditions for the formation of effective electronic democracy as a logical continuation of the transformation of socio-political processes in the information society, which corresponds to the netocratic vector of development of public administration (*Storozhenko, Ignatenko, Yaroshovets, Antypenko, Vlasenko, 2023 : 66*). Elements of electronic control that are successfully tested are gradually being introduced into widespread use. Consequently, we can talk about the gradual formation of netocratic management, which is acquiring more and more mechanisms, tools, methods and forms of communication between government and society.

By netocratic public governance we mean a management model based on transparency, openness, cooperation and public involvement in the decision-making process through information and communication technologies. This approach allows us to ensure a more democratic and open nature of management decision-making, which is a mandatory attribute of the information society (*Storozhenko, 2023 : 99*).

The Organization for Economic Cooperation and Development (OECD) describes e-government as using information and communication technologies, particularly the Internet, as a tool for achieving better government. At the same time, the issue of governance is defined as dominant, and to a lesser extent, as an issue of technology: «E-government is more about government than about "e"» (electronic government is more about government than about technology) – this is the postulate of the OECD's activities in field of electronic government (*The European eGovernment Action Plan 2011–2015*).

This means that governments must use the mechanisms and capabilities of the information society to ensure that the work of government bodies best meets the needs of citizens. Some researchers define e-governance as the ongoing process of optimizing service delivery; citizen participation in governance; public administration with the constant transformation of internal and external processes using information and communication technologies.

Modern information and communication technologies, thanks to which it is possible to introduce e-democratic processes as a form of public relations in which citizens and civil society institutions are involved in the creation of the state, public administration, local self-government, etc., make it possible to strengthen the participation of citizens in public life; improve the response of government officials to citizens' appeals; make the decision-making process

of government authorities transparent and accountable to the public; promote public debate and attract public attention to the decision-making process. Consequently, effective e-democracy presupposes the opportunity for every citizen to participate in the formation and implementation of public policy, decision-making by authorities, while using information technologies for two-way interactive communication between the state and society, which indicates the democratization of public administration and the netocratic vector of its development.

The electronic management platform today is an important tool in improving the efficiency and transparency of management processes, ensuring higher quality of public services, protecting the rights and freedoms of citizens, reducing state budget expenses, etc. In addition, e-governance contributes to the development of digital infrastructure and the country's innovative potential in the international arena.

### 3. Estonian e-government is an example to follow

Indicative in this regard is the state policy of European countries, the leader among which, not without reason, is Estonia, which was facilitated by a number of political, economic, legislative and social factors (*Kalvet, 2012 : 144–145*).

The formation of an effective e-government system in Estonia was due to the use of progressive initiatives, which allowed the country to take a leading position in the implementation of e-government and significantly improve the level of the country's information and communication infrastructure. Let us outline some of the factors that contributed to the high e-government development index in Estonia.

First of all, this is the country's government's awareness of the priority of development of the information and communication technology industry and the possibility of stable government funding. Thus, the ratification of the strategic development plan «Principles of Estonian Information Policy» made it possible to allocate 1% of the country's GDP for the development of information and communication technologies, which led to the active development of the IT sector and the intensive formation of e-democracy.

The next initiative of the national project – the state program of general computerization «Tiger Leap» (1996), focused on educational activities (formation of computer literacy of youth, development of computer and network infrastructure, etc.), led to the acquisition of a high level of digital competencies of more than 90% population of Estonia.

Global informatization of the country served as the foundation for the development of e-government. Another component of this process was the creation of a database and scheduler to streamline government decision-making processes and introduce an electronic office for government meetings.

In addition, electronic banking was created and put into effect at the legislative level; eTax Council; an electronic tax return has been developed; an electronic voting system has been introduced, as well as the platforms «M-parking», «X-road», «Digital signature», «E-digitalization», «E-health», «E-recipe», «E-portal», «E-residence»; the Protect the Tiger initiative was launched to support cybersecurity; large-scale blockchain technology KSI has been developed; the «Green Book of Public Services» system was introduced to systematize challenges and solutions for the development of government electronic services; the world's first data embassy outside the country «Green Lights of Estonia» was created; the «XI-Road NIIS Consortium» (Nordic Institute for Interoperability Solutions (NIIS)) was formed, which provided the development and strategic management of «X-Road» for other electronic solutions;

the «Seamless Roadmap of Services» service was introduced, helping to reduce bureaucracy and human resources for managing public services and establishing communication between citizens and the state (*E-Government Solutions*).

Among the latest progressive electronic innovations is the «Artificial Intelligence Strategy for Government», the application of which contributes to the creation of strategic and legislative norms to accelerate the development of artificial intelligence and its application in the public and private sectors (*E-Government Solutions*).

As can be seen from the above, a high-quality, effective electronic management system has been created in Estonia, the implementation of which, in our opinion, complies with the recommendations of the European program «European Interoperability Framework» (EIF), developed to ensure interaction between the governments of the member states of the European Union (*JOINUP*).

Compliance is evidenced by the following positions: user orientation of electronic services and information and communication interaction between communicants; the model for constructing Estonian electronic services regarding the level of security is consistent with the principles of the conceptual model defined in the EIF; Citizens' access to the e-government system is ensured through the use of electronic identification cards, which allow them to use all government Internet services (*JOINUP*). In addition, the Estonian e-government system meets the development of the organizational (rules of interaction between institutions and organizations for the provision of electronic services), content (interpretation of data by stakeholders) and technical (ensuring accessibility and understandability of information and communication services) levels declared by the EIF.

#### 4. Conclusions

So, the experience of Estonia is eloquent evidence of the possibility of practical application of information and communication technologies in public administration and the provision of high-quality management services using an e-government system. It is noteworthy that, starting in 2019, there has been a «shift» in Ukraine towards accelerating the development of e-democracy and digitalization, which indicates that the country's officials have realized the priority of developing the information and communication technology industry, and as noted in the study, this is one of the key factors for effective development of e-government.

In addition, for further successful transformation and effective practical application of e-governance, it is necessary to: ensure stable government funding and attract investment (financial aspect); improve the legal framework for regulating the digital activities of domestic institutions (legislative aspect); provide the relevant authorities with greater powers to implement e-government initiatives on a large scale, using the best global practices (administrative aspect); at the state level, strengthen support for educational projects on digital literacy of the population (educational aspect); improve information and communication technology systems related to the functioning of e-government (social aspect); unify the IT structure in accordance with European requirements (infrastructural aspect).

The implementation of the above positions will not only allow developing information and digital infrastructures, deepening the digital competencies of society, but also forming an effective e-government as an integrated platform for the formation of netocratic public administration.

## References

1. Pogrebnyak, I.E. (2014), *Elektronnyy uryad (e-government) i elektronne uryaduvannya (e-governance): ponyattya ta pryntsyipy funktsionuvannya [Electronic government (e-government) and electronic governance (e-governance): concepts and principles of operation]. Pravo ta innovatsiyi [Law and innovation]. № 3, pp. 26–35 [in Ukrainian].*
2. Fedulova, L.I. (2009), *Elektronnyy uryad. Entsyklopediya Suchasnoyi Ukrayiny [Electronic government. Encyclopedia of Modern Ukraine], in Dzyuba, I.M., Zhukovsky, A.I., Zheleznyak, M.H. (ed.), Institute of Encyclopedic Research of the National Academy of Sciences of Ukraine, Kiev [in Ukrainian].*
3. *E-Government Solutions, [Online], available at: <https://e-estonia.com/solutions/>.*
4. Fang, Z. (2002), *E-Government in Digital Era: Concept, Practice, and Development, International Journal of the Computer, the Internet and Management, Vol. 1, № 2, pp. 1–22.*
5. JOINUP, [Online], available at: <https://joinup.ec.europa.eu/collection/nifo-nationalinteroperability-framework-observatory/eif-european-interoperabilityframework-0>.
6. Kalvet, T. (2012), *Innovation: a factor explaining e-government success in Estonia, Electronic Government, an International Journal, 2012, Vol. 9(2), pp. 142–157.*
7. McDonagh, J.A. (2005), *Strategic advisory note on «e-government and the challenge of change in public sector management», UNDP Bratislava Regional Centre, Bratislava, Slovakia.*
8. Storozhenko L., Ignatenko O., Yaroshovets T., Antypenko I., Vlasenko V. *E-democracy in the context of the information society: prospects, challenges and opportunities. Amazonia Investiga. 2023. Vol. 12. № 70. P. 63–77. DOI: <https://doi.org/10.34069/AI/2023.70.10.6>.*
9. Storozhenko, L.H. (2023), *Netocratic vector of formation of public administration in the information society, Modernization of the system of public management and administration in Ukraine: the experience of the Republic of Latvia, pp. 99–114, Baltija Publishing, Riga, Latvia.*
10. *The European eGovernment Action Plan 2011–2015, [Online], available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0743:FIN:EN:PDF>.*