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## IMPERATIVES FOR THE DEVELOPMENT OF PUBLIC ADMINISTRATION MECHANISMS IN THE SPHERE OF DIGITALIZATION AND INNOVATION

### ІМПЕРАТИВИ РОЗВИТКУ МЕХАНІЗМІВ ПУБЛІЧНОГО УПРАВЛІННЯ У СФЕРІ ЦИФРОВІЗАЦІЇ Й ІННОВАТИЗАЦІЇ

*Prospects for ensuring the development of digitalization and the use of its technologies, which occur as a result of significant quantitative and qualitative changes in the functioning of information and socio-economic systems, are outlined. Argued, annihilation and institutional influence in the field of development of public administration in the field of digitization and innovation.*

**Keywords:** *public administration, mechanisms of public administration, digitalization, digitalization technologies, digital economy, innovative activity, innovation, institutional environment.*

*Окреслено перспективи в забезпеченні розвитку цифровізації та використанні її технологій, що відбуваються внаслідок істотних кількісно-якісних змін у функціонування інформаційних і соціально-економічних систем. Аргументовано, анігіляційний та інституційний вплив у сфері розвитку публічного управління у сфері цифровізації й інноватизації.*

**Ключові слова:** *публічне управління, механізми публічного управління, цифровізація, технології цифровізації, цифрова економіка, інноваційна діяльність, інноватизація, інституційне середовище.*

**Problem setting.** Today, significant changes are taking place in the information and technological development of industries and sectors of the economy, economic entities themselves, and regions in general. In addition to ensuring progressive sustainable development, Ukraine had to face a more significant problem -

the undeclared war of the Russian Federation. Therefore, the task of our state is to change universal informatization, which was replaced by digitalization (digitization). It is considered as a policy vector that should ensure digital transformation in one or another sphere of social life and improve the state of its functioning. In addition, it should contribute to the development of an innovative environment and innovative activities. At the same time, it should be noted that the latest phenomena and processes have a powerful impact on digitalization, and it on them. This is an annihilation effect, which involves the emergence of new sources of innovation that ensure sustainable economic growth, the emergence of national initiatives to transfer the economy and social development to a digital path of development. The Russian Federation seeks to push back our state in sustainable development for years. Therefore, Ukraine needs to become more active in the direction of confrontation, defense of its own sovereignty and provision of innovative development. All this determines the relevance of the selected research issues.

**Recent research and publications analysis.** Organizational, legal, economic and other aspects of the formation and implementation of state policy in the conditions of digitalization were studied in the scientific works of foreign and domestic scientists L. Analai, L. Antonova, M. Kastels, L. Gren, O. Gromyko, A. Davidson, O. Karpenko, S. Kvitky, T. Mamotova, Yu. Mykytyuk, N. Nasira, V. Onoprienko, A. Pomaza-Ponomarenko, V. Togobytska, Yu. Ulyanchenko, E. Shchepansky, and others. [1; 3; 5; 6; 7; 8; 9; 11; 12–14]. Without belittling the scientific achievements of researchers, we note that the features of the annihilating impact of digitization and the innovative environment, as well as the role of the state in this context, require a comprehensive consideration.

**Paper objective.** The purpose of the article is to determine the imperative vectors for the development of public management mechanisms in the field of digitization and innovation.

**Paper main body.** Before the full-scale aggression in Ukraine, a number of important normative legal acts were adopted, designed to ensure its innovative and sustainable development. Before proceeding to their consideration, it is necessary to point out the stages of digitalization and formation of e-governance in Ukraine, namely:

1. Computerization (1991-1998).
2. Informatization (1999-2008).
3. Electronic government (2008-2018).
4. Digitization (2018 - by t/h).

In general, researchers distinguish three stages of digital development of society and economy in the world. This research position does not conflict with the opinions of domestic scientists [1; 3; 13], therefore, taking into account this position, we consider it advisable to conduct further research. In this context, we can note that the development of IT keeps pace with the development of management theory and institutionalism. Evidence of this is the provision at the na-

tional and regional levels of the emergence and development of new institutions, institutes and an innovative environment.

Thus, in 2021, the Law of Ukraine "On stimulating the development of the digital economy in Ukraine" was adopted [2]. In Part 1 of Art. 2 of this law defines the "organizational, legal and financial principles of operation of the legal regime of Diya City, which is introduced in order to stimulate the development of the digital economy in Ukraine by creating favorable conditions for conducting innovative business, building digital infrastructure, attracting investments, as well as talented specialists."

In Art. 1 defines the concept of the legal regime of Diya City, which provides a set of legal norms that determine the rights and obligations of a person that arise, change and terminate in connection with an application for acquisition, acquisition and loss of Diya City resident status (legal entity), as well as the specifics of regulating relations with the participation of a resident of Diya City and regarding participation in its authorized capital [ibid.]. Strictly speaking, by adopting the Law of Ukraine "On stimulating the development of the digital economy in Ukraine" (2021), the domestic legislator created a basis for the institutional development of an innovative environment. It includes interested subjects, first of all, state institutions, residents of Diya City (legal entities) and their employees (individuals). The law specifies that the central body of executive power (i.e., a state institution) must ensure the formation and implementation of state policy in the field of the digital economy, which simultaneously covers innovation and digitalization. Such a central authority is the Ministry of Digital Transformation.

It should be emphasized that, taking into account the norms of civil and economic legislation, the following general principles of the legal regime of Diya City were outlined within the framework of the Law of Ukraine "On Stimulating the Development of the Digital Economy in Ukraine":

1) freedom of activity (economic activity is carried out at one's own risk and within the limits of directions not prohibited by law. The same should happen to residents of Diya City, who have the right to independently conduct economic activity, choosing independently the forms of organization of such activity and cooperation with third parties. This norm applies as well as specialists who work for a resident of Diya City and can independently carry out any activity not prohibited by law, choosing at their own discretion and risk the forms of its organization and cooperation with other persons);

2) non-interference (the state and its apparatus should not interfere in the activities of residents of Diya City, unless such activities are illegal. In our opinion, this fundamental principle should also provide for the transparency of the activities of residents of Diya City, that is, their publicity. This is necessary in order to prevent committing illegal activities by such residents and their employees);

3) presumption of legality of the activities of Diya City residents (the do-

mestic legislator established that in case of an ambiguous situation, the decision is taken in favor of such residents or applicants. This situation arises if the regulatory legal act allows an ambiguous (multiple) interpretation of the rights and obligations of Diya City residents or applicants, or the state, or state bodies or local self-government bodies, or their officials);

4) stability (residents of Diya City are given a guarantee from the state regarding the preservation of the legal regime of Diya City and the stability of its conditions, in particular, regarding the peculiarities of taxation of such residents, as well as the inadmissibility of increasing the regulatory burden on them. In addition, all Diya City residents and their participants the system of state guarantees of investment protection [2, part 5 of article 3]);

5) the formal nature of the procedure for acquiring the status of a Diya City resident (presupposes the absence of requirements for obtaining special permits, licensing or state supervision measures for submitting and considering an application for acquiring the status of a Diya City resident and entering information about the applicant in the Diya City registry);

6) voluntary residency in Diya City (means that direct or indirect coercion of legal entities to acquire Diya City resident status is inadmissible) [2, Part 4 of Art. 2].

In accordance with Part 1 of Art. 3 of this Law, the term of residence of Diya City is established for an unlimited period, but not less than 25 years from the date of entry into the Diya City register of the first resident of Diya City. This norm indicates the foresight of the domestic legislator in the desire to ensure sustainable innovative development of the state, society and regions.

The progressive Law of Ukraine "On stimulating the development of the digital economy in Ukraine" defined who cannot be a resident of Diya City, in particular, a legal entity:

1) which is registered on the territory and/or in accordance with the legislation of a foreign state;

2) 25 or more percent of the authorized capital of which directly or indirectly belongs to the state of Ukraine or a territorial community;

3) which has the status of a non-profit enterprise, institution, organization;

4) the direct or indirect owner of shares (shares) in the authorized (share) capital of which is the aggressor state;

5) in the authorized capital of which 25 percent or more are directly or indirectly owned by legal entities registered in countries included by the Financial Action Task Force (FATF) on the list of countries that do not cooperate in the field of combating money laundering ;

6) in relation to which special economic or other restrictive measures (sanctions) have been applied in accordance with the legislation of Ukraine, or international sanctions;

7) which is recognized as bankrupt, or which is in the process of termina-

tion, except for conversion;

8) who for more than 30 days has a tax debt, the total amount of which is more than 10 minimum wages;

9) which is a provider of services related to the circulation of virtual assets;

10) which carries out activities related to the organization and/or conduct of gambling [2, part 2 of Art. 5].

As you can see, the domestic legislator has quite loyally approached the definition of requirements for Diya City residents, which indicates a liberal approach to regulating their activities. Actually, we see a vivid example of the application of the principle "everything that is not prohibited by the law is allowed by them."

Among the types of activities, the implementation of which is stimulated by the creation of the legal regime of Diya City, the following are defined:

1) computer programming, informatization consulting, computer equipment management activities;

2) publication of computer games, as well as other software;

3) provision of software products, including computer games, in "online" mode and providing web services for the delivery of software applications;

4) educational activities in the field of information technologies, including provision of higher, professional pre-tertiary and vocational education in such specialties as computer science, information systems and technologies, computer engineering, cyber security, data science, as well as provision of other types of education, namely: teaching computer literacy (digital literacy), which includes services for teaching digital literacy, development, modification, testing and technical support of software, including computer games, business analysis training (for the purposes of development, modification, testing and technical support of software), construction of graphic interfaces, organization of quality control processes, system administration, project management, documentation development;

5) data processing and related activities, except for providing infrastructure for data processing and hosting;

6) research and experimental developments in the field of natural and technical sciences regarding information and information and communication technologies;

7) conducting marketing campaigns and providing advertising services using software developed with the participation of a Diya City resident on the Internet and/or on users' devices;

8) activities of organizers of e-sports competitions, e-sports teams, specialized computer centers and/or clubs designed to hold e-sports competitions;

9) activity of a provider of services related to the circulation of virtual assets;

10) ensuring cyber security of information and communication systems, software products and information;

11) design (design), research, testing (testing) activities of robotics technologies, devices and systems using computerized control systems, etc. [2, Part 4 of Art. 5].

The features of the operation of Diya City residents, which require the creation of appropriate organizational and legal conditions by the state for the development of such residents. In addition, it is important to provide guarantees from the state for the residents of Diya City. There are conditions that go beyond the competence of the state and concern the IT infrastructure of society. It is indisputable that such infrastructure should be at the disposal of the state itself, but the rule of the "invisible hand of the market" is then applied (what the state does not control, it only regulates and coordinates). Important in this context is the simultaneous influence of the institutional and innovative environment necessary for the proper functioning of Diya City residents. We believe that it is in this direction that the annihilating influence of the state, society (with their institutions), digitization and innovation is taking place. This influence is marked primarily by the scale of distribution and the depth of penetration (as a result, significant quantitative and qualitative changes should occur). Taking into account the fact that innovations contribute to the development of digitalization and vice versa, exerting a significant transformational influence, and the state is completely indispensable in this (it creates the necessary legal framework), we consider it appropriate to consider the peculiarities of the functioning of public management mechanisms in this context.

Features of the operation of residents of Diya City provide for the creation of appropriate organizational and legal conditions by the state for the development of such residents. In addition, it is important to provide guarantees from the state for the residents of Diya City. There are conditions that go beyond the competence of the state and concern the IT infrastructure of society. It is indisputable that such infrastructure should be at the disposal of the state itself, but the rule of the "invisible hand of the market" is then applied (what the state does not control, it only regulates and coordinates). Important in this context is the simultaneous influence of the institutional and innovative environment necessary for the proper functioning of Diya City residents. We believe that it is in this direction that the annihilating influence of the state, society (with their institutions), digitization and innovation is taking place. This influence is marked primarily by the scale of distribution and the depth of penetration (as a result, significant quantitative and qualitative changes should occur). Taking into account the fact that innovations contribute to the development of digitalization and vice versa, exerting a significant transformational influence, and the state is completely indispensable in this (it creates the necessary legal framework), we consider it appropriate to consider the peculiarities of the functioning of public management mechanisms in this context.

According to Art. 15 of the Law of Ukraine "On stimulating the develop-

ment of the digital economy in Ukraine" residents of Diya City are self-governing in the implementation of their activities, including in the formation of associations in the form of non-entrepreneurial (non-profit) organizations [2]. At the same time, the association of Diya City residents may be assigned the following tasks:

- 1) popularization of the legal regime of Diya City in Ukraine and abroad;
- 2) improving the quality of education, developing talents and promoting the development of professions in the digital industry of Ukraine;
- 3) assistance in the formation and implementation of state policy;
- 4) participation in conducting, in accordance with the legislation, public consultations and examination of draft laws, other normative legal acts concerning the rights and interests of Diya City residents, representation and protection of the interests of Diya City residents in relations with state bodies and international organizations, etc.

According to the Diya.City Registry data, as of July 26, 2024, 1,331 residents of Diya City were registered in Ukraine [4]. It should be noted that the first residents of Diya City were registered on February 15, 2022. And since that time, the register has been replenished with new residents. This testifies to the relevance and perspective of the direction of activities of Diya City residents, as well as the direct interest of the state in them. It is not possible to unequivocally state that the "chicken or the egg" or "initiative of the state or legal entities in innovative development" came first. However, the result is obvious - in Ukraine, legislation was developed in the field of stimulating the digital economy in 2021, and, despite the efforts of the aggressor state, in 2024, more than 1,300 residents of Diya City were registered on domestic territory.

As mentioned above, residents of Diya City can hire gig specialists who are endowed with appropriate social guarantees (regarding the amount of payment not less than 1200 euros, regarding rest, etc.). At the same time, such specialists must fulfill certain obligations of the gig contract regarding non-disclosure of confidential commercial information, timely and high-quality performance of the tasks assigned to them. This is all defined in Art. 17, 18, 19, 20, 21, etc. of the Law of Ukraine "On stimulating the development of the digital economy in Ukraine" [2]. It is clear that it is gig specialists who have the main responsibility for applying creative approaches that will allow them to get an innovative product at the end. Therefore, we believe that the provision and provision of important guarantees necessary for such specialists should be taken into account in the further improvement of the labor legislation of Ukraine. After all, the current Code of Labor Laws of Ukraine contains outdated provisions that will not allow to regulate relations between employees of new professions.

Consequently, the growth of the volume of information resources has led to the formation of new opportunities for the development of information support for innovative activities of public and private institutions of almost all types of economic and managerial activities. The first feature is the intellectualization of the

automated processing of information resources. The second feature is the creation of residents capable of providing innovative development and the introduction of appropriate legal regimes for the functioning of such residents. In Ukraine, relevant legislation has been adopted in the field of stimulating the digital economy. The adoption of the relevant law took into account the current level of IT development, which allows fully or partially automating the intellectual processing of information resources for specific purposes. At the same time, the declared war of the Russian Federation complicates the process of implementing the Law of Ukraine "On stimulating the development of the digital economy in Ukraine." However, issues of sustainable innovative development must be dealt with in parallel with the preservation of territorial integrity and sovereignty, so this is a combined task for Ukraine today.

**Conclusions of the research.** The information infrastructure created in the global and Ukrainian society contributes to the development of digitization, digital transformation and innovation. This infrastructure includes IT infrastructure, telecommunications networks, computing power and content volume, creating the basis for the expanded use of IT and the development of innovative activities. It is insisted that digitalization characterizes a new level of use of the entire IT set in the economy and society, which involves not only the devices of the business entity itself, but also consumers of its products and services, as well as the state and its apparatus. Evidence of this is the adopted Law of Ukraine "On stimulating the development of the digital economy in Ukraine" (2021) [2]. We believe that it outlines progressive innovations in the sphere of ensuring innovative development of the state, regions and society. It was found that this law determines the legal regime of operation of Diya City residents (legal entities). Their corresponding status is secured by the central executive body.

#### **Список використаних джерел:**

1. Оноприєнко В. Інтернет і наука в глобалізованому світі : Мануель Кастельс. Інтернет-галактика. Міркування щодо Інтернету, бізнесу і суспільства. Пер. з англ. К.: "Видавництво "Ваклер", 2007. 304 с.
2. Офіційний веб-сайт Верховної Ради України. URL: <https://www.rada.gov.ua/>.
3. Помаза-Понмоарено А.Л., Микитюк Ю.М. Цифровізація державної політики vs. державна політика цифровізації у сфері правового регулювання : монографія. Харків: НУЦЗ України, 2021. 200 с. URL: <http://repositsc.nuczu.edu.ua/handle/123456789/14203>.
4. Реєстр Дія City. URL: <https://city.diiia.gov.ua/registry/resident>.
5. Anaya L. An Investigation into the Role of Enterprise Information Systems in Enabling Business Innovation / L. Anaya, M. Dulaimi, S. Abdallah // Business Process Management Journal. 2015. Vol. 21. N 4. P. 771–790.
6. Castells M. The new public sphere: Global civil society, communication



networks, and global governance // The Annals of the American Academy of Political and Social Science. 2008. Vol. 616, no. 1. P. 78–93.

7. Davidson A. Commerce Department Digital Economy Agenda 2016 / Department of Commerce, United States of America. May 2019. URL: [https://www.ntia.doc.gov/files/ntia/publications/alan\\_davidson\\_digital\\_economy\\_agenda\\_deba\\_presentation\\_051616.pdf](https://www.ntia.doc.gov/files/ntia/publications/alan_davidson_digital_economy_agenda_deba_presentation_051616.pdf).

8. Nambisan S. Digital Innovation Management: Reinventing innovation management research in a digital world / S. Nambisan, K. Lyytinen, A. Majchrzak, M. Song // *Mis Quarterly*. – 2017. – Vol. 41. – No. 1. – pp. 223-238.

9. Nasir N. Smart Nation and Digital Government Group Office to Be Formed under PMO. 20.03.2017. URL <https://www.gov.sg/news/content/smart-nation-and-digital-government-group-office-to-be-formed-under-pmo>.

10. Nica E. ICT Innovation, Internet Sustainability, and Economic Development / E. Nica // *Journal of Self-Governance and Management Economics*. 2015. N 3(3). P. 24–29.

11. Pomaza-Ponomarenko A., Hren L., Durman O., Bondarchuk N., Vorobets V. Management mechanisms in the context of digitalization of all spheres of society // *Revista San Gregorio. SPECIAL EDITION-2020. Núm. 42*. URL: <http://revista.sangregorio.edu.ec/index.php/REVISTASANGREGORIO/issue/view/RSAN42/showToc>.

12. Pomaza-Ponomarenko A., Kryvova S., Hordieiev A., Hanzjuk A., Halunko O. Innovative Risk Management: Identification, Assessment and Management of Risks in the Context of Innovative Project Management // *Economic Affairs (New Delhi)*. 2023, 68(4), pp. 2263–2275. DOI: 10.46852/0424-2513.4.2023.34. URL: <https://ndpublisher.in/admin/issues/EAv68n5z8.pdf>.

13. Pomaza-Ponomarenko A., Taraduda D., Leonenko N., Poroka S., Sukhachov M. Ensuring the safety of citizens in times of war: aspects of the organization of civil defense // *AD ALTA: Journal of Interdisciplinary Research*. 2024. Volume 14. Issue 1. Pp. 216–220. URL: [https://www.magnanimitas.cz/ADALTA/140139/papers/K\\_10.pdf](https://www.magnanimitas.cz/ADALTA/140139/papers/K_10.pdf).

14. Tapscott D., Williams A. *Macrowikinomics: Rebuting Business and the World*. Penguin. 2012. 428 p.

15. The World Bank Digital Adoption Index. URL: <https://www.worldbank.org/en/publication/wdr2019/Digital-Adoption-Index>.

### References:

1. Onoprienko, V. Internet and science in a globalized world: Manuel Castells. *Internet galaxy. Marketing for the Internet, business and marriage*. Per. from English K.: "Vidavnistvo "Vakler", 2007. 304 p.

2. Official website of the Verkhovna Rada of Ukraine. URL:

<https://www.rada.gov.ua/>.

3. Pomaza-Ponmoareno, A.L., Mykytyuk, Yu.M. Digitization of state policy vs. state policy of digitization in the field of legal regulation: monograph. Kharkiv: NUTSZ of Ukraine, 2021. – 200 p. URL: <http://repositsc.nuczu.edu.ua/handle/123456789/14203>.

4. Registry Action City. URL: <https://city.diia.gov.ua/registry/resident>.

6. Castells M. The new public sphere: Global civil society, communication networks, and global governance // *The Annals of the American Academy of Political and Social Science*. 2008. Vol. 616, no. 1. P. 78–93.

7. Davidson A. Commerce Department Digital Economy Agenda 2016 / Department of Commerce, United States of America. May 2019. URL: [https://www.ntia.doc.gov/files/ntia/publications/alan\\_davidson\\_digital\\_economy\\_agenda\\_deba\\_presentation\\_051616.pdf](https://www.ntia.doc.gov/files/ntia/publications/alan_davidson_digital_economy_agenda_deba_presentation_051616.pdf).

8. Nambisan S. Digital Innovation Management: Reinventing innovation management research in a digital world / S. Nambisan, K. Lyytinen, A. Majchrzak, M. Song // *Mis Quarterly*. – 2017. – Vol. 41. – No. 1. – pp. 223-238.

9. Nasir N. Smart Nation and Digital Government Group Office to Be Formed under PMO. 20.03.2017. URL <https://www.gov.sg/news/content/smart-nation-and-digital-government-group-office-to-be-formed-under-pmo>.

10. Nica E. ICT Innovation, Internet Sustainability, and Economic Development / E. Nica // *Journal of Self-Governance and Management Economics*. 2015. N 3(3). P. 24–29.

11. Pomaza-Ponomarenko A., Hren L., Durman O., Bondarchuk N., Vorobets V. Management mechanisms in the context of digitalization of all spheres of society // *Revista San Gregorio. SPECIAL EDITION-2020. Núm. 42*. URL: <http://revista.sangregorio.edu.ec/index.php/REVISTASANGREGORIO/issue/view/RSAN42/showToc>.

12. Pomaza-Ponomarenko A., Kryvova S., Hordieiev A., Hanzhyuk A., Halunko O. Innovative Risk Management: Identification, Assessment and Management of Risks in the Context of Innovative Project Management // *Economic Affairs (New Delhi)*. 2023, 68(4), pp. 2263–2275. DOI: 10.46852/0424-2513.4.2023.34. URL: <https://ndpublisher.in/admin/issues/EAv68n5z8.pdf>.

13. Pomaza-Ponomarenko A., Taraduda D., Leonenko N., Poroka S., Sukhachov M. Ensuring the safety of citizens in times of war: aspects of the organization of civil defense // *AD ALTA: Journal of Interdisciplinary Research*. 2024. Volume 14. Issue 1. Pp. 216–220. URL: [https://www.magnanimitas.cz/ADALTA/140139/papers/K\\_10.pdf](https://www.magnanimitas.cz/ADALTA/140139/papers/K_10.pdf).

14. Tapscott D., Williams A. *Macrowikinomics: Rebuting Business and the World*. Penguin. 2012. 428 p.

15. The World Bank Digital Adoption Index. URL: <https://www.worldbank.org/en/publication/wdr2019/Digital-Adoption-Index>.