e-ISSN **3041-2498**

Public Management and Policy

https://www.eu-scientists.com/index.php/pmap

The Quality Management of Public Services in the Digital Age

Zoriana Buryk [1]* • Myroslav Buryk [2] • Serhii Lapshyn [3]

[1] *Hryhorii Skovoroda University in Pereiaslav (Ukraine). Professor at the Department of Public Management and Administration, Doctor of Sciences in Public Administration, Professor.*

[2] *Hryhorii Skovoroda University in Pereiaslav (Ukraine). Associate Professor at the Department of Public Management and Administration, PhD in Public Administration.*

[3] *Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (Ukraine). Associate Professor at the Department of Public Administration and Management, PhD in History, Associate Professor.*

*** *Corresponding Author,*** e-mail: z.burik@ukr.net

ARTICLE INFO

Research Article

DOI: 10.70651/3041-2498/2025.11.06

Received:
27 September 2025
Accepted:
9 November 2025
Published online:
16 November 2025

ABSTRACT

This article looks into how modern digital technologies can significantly enhance the quality of public services and make governance in the public sector more efficient. It highlights the role of innovative digital platforms, like the "Diia" app, the "Smart City" concept, Internet of Things (IoT) technologies, electronic SIM cards (eSIM), and advancements in artificial intelligence and virtual/augmented reality. These tools foster better interaction between citizens and government bodies, standardize administrative processes, and promote greater transparency and accessibility in public services. The findings suggest that digitalization not only speeds up service delivery but also reduces bureaucratic hassles and boosts public trust in government institutions. The study examines specific examples of digital technology applications in Ukraine's public sector: integration of services within "Kyiv Digital", open budget platforms, the "Safe City" system, implementation of IoT solutions for resource management, and the use of VR/AR technologies in cultural, educational, and social spheres. The role of digital platforms in creating an interactive environment for citizens, implementing socially significant projects, and supporting international communication is highlighted. It is emphasized that the successful digitalization of public services is impossible without infrastructure development, high-speed connectivity, digital competencies of personnel, and protection of personal data. It is established that the implementation of digital solutions in public administration enhances the efficiency of administrative processes, integrates citizens into decision-making, ensures transparency and control, and fosters a systematic approach to public service quality management. At the same time, key challenges are identified, including uneven development of digital infrastructure, the digital divide among the population, and ethical aspects of automation. In conclusion, it is demonstrated that the comprehensive application of digital technologies creates conditions for adaptive, transparent, and high-quality public service delivery in the modern digital era.

KEYWORDS

digital technologies, public services, quality management, digitalization, Smart City, eSIM, IoT, VR, AR, artificial intelligence, digital transformation, digital competencies, transparency of administrative processes.

e-ISSN **3041-2498**

Публічне управління і політика

https://www.eu-scientists.com/index.php/pmap

Управління якістю публічних послуг у цифрову добу

Зоряна М. Бурик [1*] • Мирослав М. Бурик [2] • Сергій А. Лапшин [3]

[1] *Університет Григорія Сковороди в Переяславі (Україна). Професор кафедри публічного управління та адміністрування, д-р держ. упр., професор.*

[2] *Університет Григорія Сковороди в Переяславі (Україна). Доцент кафедри публічного управління та адміністрування, канд. держ. упр.*

[3] *Вінницький державний педагогічний університет імені Михайла Коцюбинського (Україна). Доцент кафедри публічного управління та менеджменту, канд. іст. наук, доцент.*

*** *Автор-кореспондент,*** e-mail: z.burik@ukr.net

СТАТТЯ

Дослідницька

DOI: 10.70651/3041-2498/2025.11.06

Отримана: 27.09.2025 р.
Прийнята: 08.11.2025 р.
Опублікована: 16.11.2025 р.

АНОТАЦІЯ

У статті досліджуються сучасні цифрові технології як основний чинник підвищення якості публічних послуг та ефективності управління у державному секторі. Наголошується, що розвиток інноваційних цифрових платформ, таких як застосунок «Дія», концепція "Smart City", технології Інтернету речей (IoT), електронні SIM-картки (eSIM), штучний інтелект, віртуальна та доповнена реальність, створює умови для оперативної взаємодії громадян із органами влади, стандартизації управлінських процесів та підвищення прозорості та доступності адміністративних послуг. Показано, що цифровізація дозволяє скоротити час на отримання послуг, зменшити бюрократичне навантаження, а також підвищити довіру населення до державних інституцій. Досліджено конкретні приклади застосування цифрових технологій у публічному секторі України: інтеграція сервісів «Київ цифровий», платформи для відкритого бюджету, системи «Безпечне місто», впровадження IoT-рішень для контролю ресурсів, а також використання VR/AR-технологій у культурній, освітній та соціальній сферах. Висвітлено роль цифрових платформ у формуванні інтерактивного середовища для громадян, реалізації соціально значущих проєктів та підтримки міжнародної комунікації. Підкреслено, що успішна цифровізація публічних послуг неможлива без розвитку інфраструктури, високошвидкісного зв'язку, цифрових компетентностей персоналу та захисту персональних даних. Встановлено, що впровадження цифрових рішень у публічному управлінні сприяє підвищенню ефективності адміністративних процесів, інтеграції громадян у прийняття рішень, забезпеченню прозорості та контролю, а також формуванню системного підходу до управління якістю публічних послуг. Разом із тим виділено ключові виклики: нерівномірний розвиток цифрової інфраструктури, цифровий розрив серед населення та етичні аспекти автоматизації. У підсумку доведено, що комплексне застосування цифрових технологій створює передумови для адаптивного, прозорого та високоякісного надання публічних послуг у сучасну цифрову добу.

КЛЮЧОВІ СЛОВА

цифрові технології, публічні послуги, управління якістю, цифровізація, Smart City, eSIM, IoT, VR, AR, штучний інтелект, цифрова трансформація, цифрові компетентності, прозорість управлінських процесів.

1. Introduction

In the context of modern digital transformation, the public administration system is undergoing significant structural changes caused by both global technological processes and the growing need to improve the quality of public services. The quality of such services is not only an indicator of the effectiveness of the authorities but also a primary factor in the formation of public trust in state institutions.

In the age of digitalization, it is technological innovations – from e-government to the use of artificial intelligence – that determine the level of openness, convenience, speed and individualization of communication between the state and the citizen. At the same time, the introduction of digital technologies is accompanied by several difficulties, in particular, the uneven development of digital infrastructure, the existence of a digital divide between individual regions, the lack of digital competencies among the population and ethical challenges arising in the process of automating management decisions [2; 7].

The Digital 2023: Global Overview Report states that at the beginning of 2023, more than 68% of the world's population used mobile devices, 64.4% had access to the Internet, and more than 60% actively interacted on social networks [20]. At the same time, these indicators demonstrate the unprecedented depth of digital integration of humanity into the global information space, which forms the basis for the transformation of state institutions towards service management models focused on the needs of citizens. At the same time, despite the intensive development of digital technologies, the problem of the "digital divide" remains, which causes inequality in access to digital resources and affects the quality of public services.

Taking into account the above, we see the importance of developing digital public administration platforms that provide access to electronic services, analytical tools, information bases and feedback mechanisms. As V. Kokhan notes, digital platforms act as the core of the transformation of public administration, forming a new architecture of interaction between citizens, business and government [5, p. 82]. They allow minimizing administrative barriers, increasing the efficiency of communication, and creating an ecosystem of transparent management processes.

2. Literature Review

The problems of quality management of public services in the digital age are the subject of active study by domestic and foreign researchers. O. Bulgakova et al. propose a methodology for assessing the quality of electronic services in the public administration system, taking into account that the leading parameters are speed, convenience and user trust. Scientists prove that without effective monitoring of citizens' satisfaction indicators, digital initiatives cannot be considered fully successful [2].

M. Dubel examines the impact of digital platforms on economic processes, proving that the digital economy forms new rules of interaction between the state and business, where priority is given not only to efficiency, but also to transparency of managerial decision-making [3]. A. Zhornytska notes that the digitalization of civil society creates new opportunities for the active participation of people in public administration. However, this also requires the development of institutional trust and ensuring adequate protection of personal data [21].

According to V. Sereda and S. Yessimov, digital platforms for the provision of public services can be classified according to the level of integration, accessibility, and functional flexibility, which makes it possible to create uniform standards for evaluating their effectiveness [13]. In particular, the described approach is of particular importance for Ukraine, where, according to the observations of Y. Semchuk, the development of e-governance is at the stage of formation, and ensuring the quality of public services remains the leading challenge of the state's digitalization policy [11].

O. Rozgon emphasizes that digital platforms are a tool for the functioning of the technology transfer network, and therefore ensure the circulation of knowledge and improve the quality of management decisions through the integration of innovations [10]. In this context, it is worth mentioning the "Digital State UA" initiative launched by the Ministry of Digital Transformation of Ukraine in 2025 [6], which became a logical continuation of *the Concept for the Development of the Digital Economy and Society of Ukraine for 2018–2020* [4]. It provides for the creation of a single space of digital public services, covering both administrative and social services.

An important contribution to the study of the processes of digital transformation of public administration was made by V. Redziuk and D. Darmostuk, who emphasize the need for a comparative analysis of global and Ukrainian digital governance practices [9]. The authors emphasize that the effectiveness of electronic services depends on the degree of technological interoperability of systems, the level of cybersecurity and user trust. At the same time, this position is developed by N. Sokolova, noting that digital technologies in the public sphere are becoming not only a management tool, but also a new form of public communication, in which state institutions must adapt to the principles of openness, flexibility and personalization [16].

In the monograph edited by V. Voronkova and N. Metelenko, the concept of digital transformation of management processes is systematically revealed, which emphasizes that quality management of public services in the digital age should be based on the principles of innovation, adaptability and user orientation [19]. A similar opinion is shared by L. Storozhenko, who analyzes the phenomenon of "netocratization" of public administration, i.e., the transformation of power structures into flexible network formations capable of promptly responding to the challenges of the information society [17].

Thus, the analysis of scientific literature shows that the digitalization of public services forms a new paradigm of public administration, where quality is determined not only by formal performance indicators, but also by the level of trust, accessibility and technological innovation.

3. Problem Statement

The purpose of the study is to establish what role digital technologies play in improving the quality of public services in the context of digital transformation. It is also necessary to analyze both Ukrainian and international approaches to assessing their effectiveness. In addition, it is important to formulate the foundations for creating an innovative quality management system for public services in the digital age.

4. Methods and Materials

The methodological basis of the study comprises a complex of general scientific and special methods aimed at analyzing the impact of digital technologies on public service quality. The method of system analysis was employed to determine the structural elements of the digital ecosystem in public administration. Through theoretical generalization and bibliographic analysis, the works of domestic and foreign scholars were synthesized to define key concepts of digital governance.

The case study method was applied to examine the functionality of specific Ukrainian digital platforms, such as "Diia", "Kyiv Digital", and "Smart City" technologies. Statistical analysis was used to interpret data from the "Digital 2023: Global Overview Report" and the Digital Transformation Index of Ukraine. Additionally, comparative analysis allowed for the assessment of various digital tools (IoT, eSIM, VR/AR) in different sectors. The information base includes legislative acts, official reports from the Ministry of Digital Transformation of Ukraine, and open statistical data.

5. Results and Discussion

Ensuring a high level of administrative, social, cultural and educational services is impossible without the systematic introduction of digital technologies, including integrated electronic platforms, e-government systems, Internet of Things technologies, artificial intelligence, as well as virtual and augmented reality. As O. Orlov rightly emphasizes, innovative tools create prerequisites for standardization of management processes, increasing the efficiency of service provision, reducing bureaucratic burden and forming transparent procedures for interaction with citizens [7, p. 53–54]. At the same time, effective quality management of public services in the digital age involves an integrated approach, including infrastructure modernization, development of digital competencies of personnel, ensuring the protection of personal data and active integration of citizens into the process of managerial decision-making [10, p. 22]. This approach allows not only to increase the efficiency of state bodies, but also contributes to sustainable socio-economic development and the formation of new standards of interaction between the state and society in the digital age.

As shown in Table 1, the Diia application and other digital services ensure prompt interaction of citizens with the authorities, simplify the implementation of administrative procedures and maintain the socio-psychological state of the population during martial law

Table 1. Main Digital Platforms of Public Services of Ukraine and Their Functionalities

Digital Platform Category	Example of implementation	Functions	Purpose of use	Expected effect
Government Digital Services	Diia app	Execution of administrative procedures in electronic format; interactive services for children and adults	Ensuring quick and convenient interaction of citizens with authorities; Maintaining the socio-psychological state of the population during martial law	Increasing the availability and efficiency of public services; reducing the bureaucratic burden; Building Citizens' Trust
Electronic documents	Electronic certificates, certificates, passports	Online receipt and storage of documents	Reducing the time for paperwork	Improving the speed and convenience of administrative procedures
Interactive services	Educational and entertainment modules for children	Providing access to interactive educational materials	Psychological support and development of children	Maintaining an emotional state during stressful situations, integrating children into the digital environment

Source: Formed by the author based on [17].

M. Dubel notes that Diia demonstrates the potential of Ukrainian digital transformation and the prospects for its export to other countries, including USAID partner countries [3, p. 17–18]. The first international Diia in DC Summit, held on May 23, 2023, in Washington, D.C., clearly demonstrated the platform's achievements and its role in modernizing public services [6].

The concept of "Smart City" is also an example of the integration of digital solutions to improve the quality of life of citizens. The basic principles of smart cities are comfort, safety, and convenience for residents. Kyiv began implementing Smart City elements in 2015, when Mayor Klitschko signed an agreement with SAP at the World Economic Forum in Davos. This has led to the creation of an open budget platform, as well as the integration of services such as e-tickets, voting for Public Budget projects, as well as payment of utilities and parking [9, p. 169].

In January 2021, all services were combined into a new Kyiv Digital application, which allows citizens to remotely use transport and administrative services, receive notifications and participate in the processes of improving the city. Smart City systems are also actively developing in other Ukrainian cities, such as Ivano-Frankivsk, Lviv, Mukachevo, Drohobych, Zaporizhzhia, Poltava, Ternopil and Kharkiv, and in Mariupol, there is a "Safe City" system, as noted by A. I. Zhornytska [21, p. 657–658].

The introduction of Smart City technologies and digital platforms is impossible without the development of high-speed wireless communication, in particular 5G. Testing of the technology in Ukraine was carried out at the end of 2021, and, according to experts, there were no technical obstacles to its implementation. Licensing issues that previously restricted the use of radio frequencies in the 3400–3600 MHz bands were unblocked by the Supreme Court of Ukraine in February 2023, which opens up prospects for the development of 5G after the end of the war [19, p. 45].

I. Shavkun and Y. Dybchynska note that the latest telecommunication companies already offer ready-made IoT solutions that increase the efficiency of resource management and ensure infrastructure security. Kyivstar has implemented the Smart Metering system for automated control of water, gas and electricity consumption, which allows it to quickly respond to emergencies [14]. Also, the Mobile Network as a Service provides customers with the opportunity to receive a public or private network with a given level of radio coverage. Lifecell has implemented IoT projects for remote reading of electricity, gas and water metering devices for enterprises in different regions of Ukraine.

The introduction of digital technologies in the field of public administration, in particular the Diia and Smart City platforms, increases the transparency and accessibility of administrative services, reduces the time for receiving them and reduces the bureaucratic burden on citizens. However, there are also certain challenges that are directly related to the digital divide, uneven development of infrastructure and ethical aspects of automation of management processes, which are drawn to the attention of O. Orlov [7], Y. I. Semchuk [11] and L. Storozhenko [17].

In the current conditions of digitalization of public administration, ensuring the high quality of public services is becoming a leading factor in the efficiency of state bodies and the formation of citizens' trust. One of the examples of the implementation of modern digital solutions in Ukraine is the technology of electronic SIM cards (eSIM), which is provided by all leading telecommunications companies.

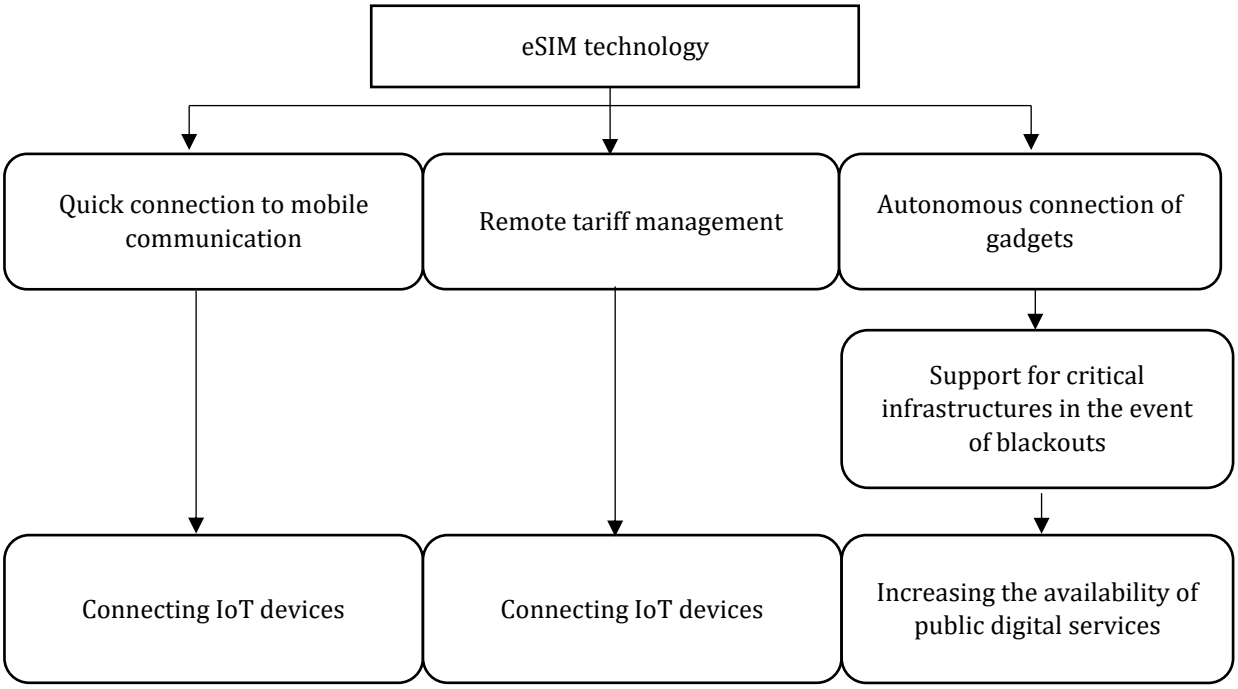

Fig. 1. The role of eSIM technology in the digitalization of public administration and improving the quality of public services

Source: Formed by the author independently.

In this case, it is advisable to note that, unlike traditional SIM cards, eSIM is integrated into the device and allows you to flexibly configure the user profile, including changing the network without physically replacing the card. This is especially true in the context of partial blackouts and unstable network operation, and for telecom companies, this technology provides autonomous and fast connection of various gadgets, including Internet of Things (IoT) devices [14]. Users have the opportunity to connect to mobile communications or change the tariff plan through the online form, which not only reduces the use of plastic, but also increases overall security [11, p. 491]. According to Strategy Analytics forecasts, in 2025 there will be about 326 million eSIM cards in the world, which emphasizes the global trend towards digitalization of communications [8].

New private technologies are emerging on the Ukrainian IoT market that simplify people's lives. For example, there is a smart workplace system that automatically monitors temperature, pressure, light and humidity. It analyzes this data, stores it in the cloud and sends a message to a mobile phone or computer if the indicators are outside the norm [9, p. 169].

In Ukraine, artificial intelligence is gradually being introduced into the public sphere, in particular in municipal administration. A. Zhornytska argues that AI is actively used to optimize administrative processes and automate accounting with resources [21, p. 658]. The Cabinet of Ministers of Ukraine has approved the concept for the development of the digital economy and society for 2018–2020, which creates the necessary legal and organizational conditions for the digital transformation of public administration [4].

The Diia application uses facial recognition technologies based on AI models to authenticate users, which ensures their reliable identification and protection of personal data [15, p. 29]. Deputy Minister of Digital Transformation O. Bornyakov notes that such solutions help identify individuals, in particular using ClearView AI technologies, to maintain security during martial law [12]. Also, the necessary human resources potential has been formed in Ukraine: about 10 thousand IT engineers specialize in AI systems, which opens up new opportunities for the development of solutions in the field of public administration [21, p. 660].

One example of international recognition of Ukrainian developments is the Grammarly platform, which allows users to improve English-language texts taking into account stylistic features and context.

The service offers basic and premium versions: the basic version checks grammar, spelling, and punctuation, while the premium version provides text optimization for clarity, the selection of more accurate words, and the formation of an appropriate style depending on the purpose of the text. Especially important is the function of monitoring the inclusiveness of language, which allows avoiding expressions that may be perceived as discriminatory or sexist in Western culture [3, p. 19]. The company has representative offices in Kyiv, San Francisco, New York, Vancouver and Berlin, which confirms the global nature of its influence [3, p. 22].

During the COVID-19 pandemic in Ukraine, a CRM service was successfully implemented in a network of fitness centers, which made it possible to determine the location of visitors in gyms in real time, monitor social distance and notify administrators about violations. The system also provided an opportunity to remotely track the number of visitors and make decisions on visiting the halls in accordance with quarantine requirements [10, p. 24].

In the first days of the full-scale war in Ukraine, the Fundraising for humanitarian aid to Ukraine project was launched, which was initiated by Ukrainian IT developers from Sirens Gallery. They used open-source models to create about 2000 paintings based on textual descriptions of the events of the war, of which 1991 were put up for sale in NFT format. It is worth noting that this project eventually raised more than 250 thousand dollars for humanitarian aid and reconstruction of the country, demonstrating how digital solutions can affect socially important areas [19, p. 43].

In addition, Ukrainian cities are actively implementing virtual and augmented reality technologies in the public sector. For example, in Lviv, in 2018, a 3D scanning project of architectural monuments called “Pocket City” was launched. This initiative allows buildings to be digitized in detail for further analysis and restoration. In addition, today 24 buildings have been scanned in Lviv, which greatly facilitates the restoration of monuments, inspired by the experience of the restoration of Notre Dame Cathedral [19, p. 45].

The introduction of such digital technologies in the public sphere not only increases the efficiency and accuracy of service provision, but also contributes to effective quality management, reducing bureaucratic barriers and increasing the level of citizens’ trust in state institutions. O. V.Bulgakova, K. O. Nesterenko, N. M. Sklyar, O. O. Fomina, P. D. Kaminsky note that the systematic use of electronic platforms allows standardizing processes, monitoring their efficiency and ensuring transparency in the provision of public services [2, p. 20]. Similar conclusions are also confirmed by V. Redziuk and D. Darmostuk, noting that digital platforms are a leading tool for the modernization of public administration and communications with citizens [9, p. 171].

In modern conditions, digitalization is becoming an important factor in improving the quality of public services and expanding citizens’ access to cultural, educational and tourist resources. One of the successful examples is the implementation of the project “Pocket City: Chortkiv”, completed in 2020 by the NGO “Center Initiative” and Skeiron with the support of a grant from Re_HERIT and the Chortkiv City Council. The project involved the digitization of eight monuments reflecting the city’s multicultural heritage. Thanks to the creation of three-dimensional models with a 360° viewing angle, users can virtually view the sights on the Chortkiv website. City, and with the help of an augmented reality application, view them in 3D and listen to historical references [16].

Similarly, augmented reality technologies are used in the Tustan State Historical and Cultural Reserve in the Lviv region. The Tustan AR application allows you to reproduce in real time the medieval fortification buildings of the complex of the IX–XIII centuries. Being near the rocks, visitors can see the reconstruction of the fortress and take virtual tours on the official website of the reserve, which significantly increases the level of interactivity and accessibility of historical knowledge for citizens [16].

Museums are also actively using digital technologies to better interact with visitors. For example, for the 120th anniversary of the Odesa Art Museum, Snapchat has created special augmented reality lenses for exhibits. With the help of the mobile application, you can scan codes and see the dynamic playback of artistic elements. For example, I. K. Aivazovsky’s painting “Night on the Black Sea” literally comes to life in augmented reality – waves and clouds move on it. Such innovations attract young people to the cultural environment and set new standards of museum services [5, p. 84].

The tourism industry is also integrating digital tools to improve the quality of services. On the website of the tourist hub “Kyiv Digital” you can find 3D models of fifteen historical monuments of the capital, which were created during the war. They can be viewed in augmented reality format. This allows users to study cultural objects in detail without physical presence, which is very important in conditions of limited mobility of citizens [5, p. 85].

In the educational environment, digital technologies help to increase the efficiency of the educational process. For example, the interactive AR Book system allows you to conduct laboratory experiments on a smartphone, which significantly improves the assimilation of material during distance learning. Research from Ain Shams University confirms that augmented reality increases student engagement and makes learning more effective [16]. In the spring of 2023, a pilot project was launched in Ternopil, Lutsk, Khmelnytskyi and Kamianets-Podilskyi to teach students in grades 7–11. Schoolchildren can conduct laboratory work in physics using special helmets and software. The platform already has more than 200 interactive three-dimensional laboratory and practical works, which are adapted to the curriculum of the Ministry of Education and Science of Ukraine.

Digital technologies open up new horizons for improving public services and strengthening the connection between the state and citizens. Nowadays, virtual (VR) and augmented reality (AR) are especially actively used to popularize cultural and social initiatives, as well as to draw the attention of the international community to events in Ukraine.

In 2023, Advin Ukraine launched several AR and VR projects that combine humanitarian support with communication tasks. The interesting project "Under Sirens" was supported by more than twenty well-known fashion brands. Audio tracks were integrated on the tags of Ukrainian clothes, which in augmented reality turned into the sound of an air raid siren. Thus, Europeans could at least partially feel the realities of the war in Ukraine [1].

Cultural heritage is also becoming an important tool for self-identification and citizen engagement. On December 13, 2022, the Tvorchi band presented a virtual mural in Kyiv on Zhylianska Street right on the wall destroyed by rockets. The mural was dedicated to the 145th anniversary of the birth of composer Mykola Leontovych. The project combines AR images and musical accompaniment of the track Broken Heart, which uses a sample of the folk song "Cranes Have Flown In". This is a vivid example of the combination of national cultural heritage with modern digital technologies [16].

Digital platforms are actively used to create interactive social products that document tragic and important events. On the anniversary of the start of the full-scale war, the February Year calendar was created, which recreates memorable events through augmented reality. The project was implemented jointly by the advertising agency AdvertGroup, the volunteer headquarters "Volunteers of Dnipro-1" and Advin Ukraine. The goal was not only to remind of the tragic events, but also to show the resilience of the Ukrainian people [15, p. 30]. The VR Museum of War Memory gives visitors the opportunity to experience the realities of destroyed cities through a virtual tour. They are accompanied by a 5-year-old girl who shows her destroyed house, kindergarten and other objects. 360° technology creates maximum immersion and allows the viewer to convey the entire emotional and social context of events in Ukraine [12].

In healthcare, virtual simulators and augmented reality technologies are becoming key tools for improving public services, especially during war. VR simulators from Advin Ukraine help to rehabilitate civilians and military personnel after amputations or with musculoskeletal disorders. When the patient is immersed in a virtual environment, it provides an integrated approach: restoration of limb functions, adaptation to a new physical condition and simultaneous psychological rehabilitation. This helps to overcome post-traumatic mental disorders [16].

Such experiences demonstrate the potential of digital technologies in the field of social and health services, highlighting their ability to increase the efficiency and accessibility of citizen care.

Digital technologies are becoming an important part of our daily lives, especially when it comes to the public sphere. They not only improve the quality of services, but also promote transparency in various processes and citizen engagement. For example, the UN predicts that more than two million new jobs will be created by 2030, and approximately 90% of them will require some digital skills. At the same time, it opens up unequivocally new opportunities for citizens, but it also emphasizes the problem of digital inequality, which is especially significant for Ukraine, where the processes of digital transformation are taking place very quickly [18].

The data of the study "Digital Literacy of the Population of Ukraine" (2021) indicate an improvement in the situation compared to 2019: the percentage of citizens aged 18 to 70 who did not have digital skills at all decreased from 15.1% to 11.1%, and the number of people with a basic level of digital competence decreased from 53% to 47.8%. In 2019, about 47% of citizens expressed interest in learning digital skills. To implement the strategic goal of the Ministry of Digital Transformation – to train six million citizens in digital competencies by 2024 and transfer 100% of services to the online format – more than 6 thousand services were created. digital education hubs. The platform "Diia. Digital

Education" allows you to watch educational series and receive certificates even in wartime, gradually forming the digital culture of the population and a new norm in education [2, p. 22; 6].

In 2022, the team of the Ministry of Digital Transformation developed the Digital Transformation Index to assess the level of digitalization of the regions of Ukraine. This index reflects progress in eight main areas: from institutional capacity to the development of Internet infrastructure, the functioning of Administrative Service Centers, the introduction of paperless technologies, digital education, regional business cards, the availability of electronic services and industry digitalization. The overall index for Ukraine is 0.650 points out of the maximum possible 1. The best results were demonstrated by Dnipropetrovsk (0.916), Ternopil (0.910) and Odesa (0.836) regions, which indicates a significant difference in the level of digitalization and accessibility of public services [13, p. 61; 9, p. 171].

Modern digital technologies, such as artificial intelligence and virtual and augmented reality, are actively changing our daily lives and creating new opportunities to improve the quality of public services. However, it is important to emphasize that the implementation of such innovations in the public sphere is possible only if the confidentiality of data and personal information of citizens is reliably protected.

6. Conclusions

Based on the analysis, it can be concluded that in the context of the modern digital transformation of public administration, ensuring a high level of quality of public services is a determining factor in the effectiveness of the functioning of state institutions and the formation of trust on the part of citizens. The integration of digital platforms provides an opportunity for citizens to quickly interact with authorities, carry out administrative procedures in an electronic environment and gain access to critical social services at any convenient time. The use of such innovative solutions stimulates the modernization of management processes, increases the efficiency of public services and creates systemic prerequisites for optimizing the interaction of the state with the population.

The integration of Smart City concepts, telecommunication solutions and Internet of Things technologies can significantly increase the comfort, security and availability of city services. Automated resource accounting systems, electronic platforms for payment of utilities and administrative services, as well as new generation mobile networks, provide transparency, efficiency and control over the urban infrastructure. The use of digital tools reduces the bureaucratic burden on citizens and increases the efficiency of resource management at the city and regional levels.

Artificial intelligence, virtual and augmented reality open up new opportunities for improving the quality of public services, developing cultural, educational and social initiatives, as well as providing medical and humanitarian support. At the same time, digitalization creates challenges related to cybersecurity, personal data protection, and uneven infrastructure development. A systematic approach to quality management of public services, standardization of processes and efficiency control allow the formation of a transparent, adaptive and modern public administration system that meets the needs of citizens and the requirements of the digital age.

References

1. Advin Ukraine. (2023). *Peretvorennia realnosti: yak dopovnena ta virtualna realnist dopomahayut vidnovlyuvaty Ukrainu* [Transformation of reality: how augmented and virtual reality help restore Ukraine]. https://www.adv.ua/article/peretvorennya-realnosti-yak-dopovnena-ta-virtualna-realist-dopomagayut-vidnovlyuvati-ukrainu (in Ukrainian)
2. Bulhakova, O. V., Nesterenko, K. O., Skliar, N. M., Fomina, O. O., & Kamynskyi, P. D. (2022). *Metodyka otsinky yakosti nadannia elektronnykh posluh v systemi publichnoho administruvannia (naukovo-praktychni rekomendatsii)* [Methodology for assessing the quality of electronic services in the public administration system (scientific and practical recommendations)]. Lviv: Vydavets Marchenko T. V. https://rep.dnuvs.ukr.education/server/api/core/bitstreams/8a894b78-eeba-437a-9ef0-a25ef41a41d9/content (in Ukrainian)
3. Dubel, M. (2021). Osoblyvosti rozvytku tsyfrovykh platform ta yikh vplyv na svitovu ekonomiku [Features of digital platforms development and their impact on the global economy]. *Taurida Scientific Herald. Series: Economics*, (7), 17–26. https://doi.org/10.32851/2708-0366/2021.7.2 (in Ukrainian)
4. Kabinet Ministriv Ukrainy (2018). *Pro skhvalennia Kontseptsii rozvytku tsyfrovoi ekonomiky ta suspilstva Ukrainy na 2018–2020 roky ta zatverdzhennia planu zakhodiv shchodo yii realizatsii* [On the approval of the

Concept for the development of the digital economy and society of Ukraine for 2018–2020 and the action plan for its implementation]. Retrieved from https://zakon.rada.gov.ua/laws/show/67-2018-%D1%80#Text

5. Kokhan, V. P. (2021). Do pytannia pro derzhavni tsyfrovi platformy [On the issue of state digital platforms]. In *Aktualni problemy hospodarskoi diialnosti v umovakh rozbudovy ekonomiky Industrii 4.0* (pp. 80–86). Kharkiv: NDI PZIR NAPrN Ukrainy. https://openarchive.nure.ua/handle/document/17624 (in Ukrainian)
6. Mintsyfra (2025, April 3). Platforma tsyfrovoi Ukrainy – Mintsyfra zapustyla Digital State UA [Digital Platform of Ukraine – Ministry of Digital Transformation launched Digital State UA]. https://thedigital.gov.ua/news/technologies/platforma-tsifrovoi-ukraini-mintsifra-zapuskae-digital-state-ua
7. Orlov, O. (2025). Tsyfrova etyka ta alhorytmichna prozorist: vyklyky ta metody zabezpechennia spravedlyvosti avtomatyzovanykh rishen u derzhavnomu upravlinni [Digital ethics and algorithmic transparency: challenges and methods of ensuring fairness of automated decisions in public administration]. *Aspekty publichnoho upravlinnia*, *13*(2), 51–60. https://doi.org/10.15421/152520 (in Ukrainian)
8. Premier NX (2025). *The future of analytics: 2025 trends, opportunities, and challenges*. https://premiernx.com/blog/the-future-of-analytics-2025-trends/
9. Redziuk, V., & Darmostuk, D. (2024). Tsyfrovi platformy dlia nadannia derzhavnykh posluh: dosvid Ukrainy ta svitu [Digital platforms for providing public services: experience of Ukraine and the world]. *Publichne upravlinnia: kontseptsii, paradyhma, rozvytok, udoskonalennia*, (9), 168–173. https://doi.org/10.31470/2786-6246-2024-9-168-175 (in Ukrainian)
10. Rozhon, O. (2023). Tsyfrova platforma yak instrument funktsionuvannia merezhi transferu tekhnolohii [Digital platform as a tool for the functioning of the technology transfer network]. *Pravo ta innovatsii*, *2*(42), 21–34. https://doi.org/10.37772/2518-1718-2023-2(42)-3 (in Ukrainian)
11. Semchuk, Yu. I. (2023). Sutnist ta rol elektronnogo uriaduvannia v umovakh didzhytalizatsii publichnoho upravlinnia [The essence and role of e-governance in the conditions of public management digitalization]. *Naukovi zapysky Lvivskoho universytetu biznesu ta prava. Seriia ekonomichna. Seriia yurydychna*, (36), 491–495. http://dx.doi.org/10.5281/zenodo.10077977 (in Ukrainian)
12. Semenov, M. A., Medvedska, V. Yu., & Mezhenska, O. V. (2025). Tsyfrovi platformy derzhavnykh komunikatsii yak chynnyk pryiniattia rishen [Digital platforms of state communications as a factor of decision-making]. *Ukrainian Political and Legal Discourse*, (15). https://doi.org/10.5281/zenodo.17129821 (in Ukrainian)
13. Sereda, V., & Yesimov, S. (2024). Klasyfikatsiia tsyfrovykh platform dlia nadannia publichnykh posluh [Classification of digital platforms for providing public services]. *Naukovyi visnyk Lvivskoho derzhavnoho universytetu vnutrishnikh sprav. Seriia yurydychna*, (2), 58–65. https://doi.org/10.32782/2311-8040/2024-2-9 (in Ukrainian)
14. Shavkun, I. H., & Dybchynska, Ya. S. (2017). Novyi publichnyi menedzhment yak kontseptsiia publichnoho upravlinnia [New public management as a concept of public administration]. *Humanitarnyi Visnyk Zaporizkoi Derzhavnoi Inzhenernoi Akademiyi, 69*(1), 195–201. http://nbuv.gov.ua/UJRN/znpgvzdia_2017_69%281%29__30 (in Ukrainian)
15. Sichkarenko, K. O. (2018). Tsyfrovi platformy: pidkhody do klasyfikatsii ta vyznachennia roli v ekonomichnomu rozvytku [Digital platforms: approaches to classification and role in economic development]. *Prychornomorski ekonomichni studii*, *35*(2), 28–32. http://nbuv.gov.ua/UJRN/bses_2018_35(2)__7 (in Ukrainian)
16. Sokolova, N. (2023). Tsyfrovi tekhnolohii v publichnii sferi [Digital technologies in the public sphere]. *Public Administration Aspects*, *11*(2), 57–64. https://doi.org/10.15421/152319 (in Ukrainian)
17. Storozhenko, L. (2025). Netokratyzatsiia publichnoho upravlinnia: trendy informatsiinoho suspilstva [Netocratization of public administration: trends of the information society]. *Publichno-upravlinski ta tsyfrovi praktyky*, *1*(4), 100–110. https://doi.org/10.31673/2786-7412.2025.015423 (in Ukrainian)
18. United Nations (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. https://sdgs.un.org/2030agenda
19. Voronkova, V. H., & Metelenko, N. H. (Eds.). (2024). *Tsyfrova transformatsiia promyslovoho menedzhmentu u konteksti vyklykiv, mozhlyvostei ta zmin: monohrafiia* [Digital transformation of industrial management in the context of challenges, opportunities and changes]. Lviv; Torun: Liha-Pres. https://dspace.znu.edu.ua/jspui/handle/12345/24045 (in Ukrainian)
20. We Are Social, Meltwater, & Datareportal (2023). *Digital 2023: Global overview report*. https://datareportal.com/reports/digital-2023-global-overview-report
21. Zhornytska, A. I. (2024). Tsyfrovizatsiia hromadianskoho suspilstva: perspektyvy ta vyklyky dlia rehioniv Ukrainy [Digitalization of civil society: prospects and challenges for Ukrainian regions]. *Derzhavne budivnytstvo, 2*(36), 656–664. https://doi.org/10.26565/1992-2337-2024-2-45 (in Ukrainian)