

Review Paper

# Digitalization of the Management Decisions of Public Authorities as a Tool for Improving the Social Efficiency of Management Activities

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## ABSTRACT

The radical renewal of Ukrainian society has forced the authorities to begin modifying the state administration model, which covers the basics of public life, building a progressive digital country and implementing digital projects nationwide. The relevance of the study of the social effectiveness of management decisions made by public authorities comes primarily from the fact that the reengineering of the administrative system must meet the modern requirements of the public sector in order to achieve a successful result. This process should embody the desires and needs of Ukrainians, when systematic monitoring and analysis will identify existing gaps to improve the state policy of digitalization. The purpose of this article is to study the level of social efficiency of management decisions of state and municipal authorities in the context of ongoing digitalization in Ukraine. The main methods of study are the general scientific method of analysis, which helped to investigate the defining aspects of digitalization of a particular region, to outline its existing problems, as well as the method of generalization, which allowed a comprehensive analysis of the main digital development directions of regional centres. The research work reveals the importance of e-government and key components of its social efficiency at the regional level. At the same time, the article establishes the role of administrative service centres as a primary element of improving the administrative management system.

## HIGHLIGHTS

- The article aims to study the level of social efficiency of management decisions of state and municipal authorities in the context of ongoing digitalization in Ukraine, analysing the defining aspects of digitalization, identifying existing problems, and highlighting the role of e-government and administrative service centers in improving the administrative management system.

**Keywords:** Civil Society, Digitalization, Innovation, Online Platform, Reengineering

Resolution of the Cabinet of Ministers of Ukraine “On approval of the State Strategy for Regional Development for 2021-2027” (2020) cements priority components of digital policy, such as increasing the level of digital literacy of society, developing e-democracy tools, introducing the possibility of receiving services online, open databases. Noting that improving service delivery is one of the key goals of e-government initiatives, the

computerization has quickly found its place in the public sector, continuing to reinvent itself on a daily basis (Spacek *et al.* 2020). The electronic document management, a significant list of online services, official web portals – all these innovations

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have redesigned the way of doing management activities, improving the quality of administrative services. Nowadays the effectiveness of these decisions is of great importance, in particular, the social effectiveness. There is also a need to assess this effectiveness correctly with the help of specific indicators, which is the purpose of this scientific article. Overall, the topic of digitalization of administrative activities is multifaceted, and therefore the e-government problems are the subject of a large number of scientific works (Krupnyk, 2011).

When exploring digital competencies to improve citizen engagement in e-government services, T. Morte-Nadal and M.A. Esteban-Navarro (2022) pointed out the significant impact of digital skills on the successful implementation of online e-government platforms. At the same time, they stressed out that e-government policy could both affect the digital gap and strengthen it. P. Datta *et al.* (2020) came to a similar conclusion by analysing the digital transformation of Italy. In particular, the authors mentioned that digital literacy is a prerequisite for creating a digital workforce and overcoming the digital gap in Italy, for which the country needed to train more students who know how to design and create technology. For their part, M. Mahmood *et al.* (2020) proved by empirical evidence that the government transformation contributes to transparency and accountability of the authority through information and communication technologies and improves the trust of citizens at the same time. It should not be disregarded the work of C.H. Park and K. Kim (2019), which confirms the thesis that e-government is an effective tool for deterring corruption. At the same time, when studying the modification of public administration services in Denmark, A. Scupola (2019) emphasized that the country soon became a world leader in digitalization after strengthening cooperation between government agencies, citizens and companies at the beginning of its transformation.

The purpose of this article is to study the level of social efficiency of management decisions of state and municipal authorities in the context of ongoing digitalization in Ukraine.

## MATERIALS AND METHODS

The basis of methodological research involves general scientific methods of generalization and analysis. The method of generalization helped to consider comprehensively the process of digitalization of management activities as a means of radical renewal of the public sector and to identify the main factors of this process. Authors have analysed the current state of implementation of e-government in the Ukrainian state, revealed the main gaps in the work of state\ non-state institutions, and identified the central components of their activities aimed at transforming the administrative management system. At the same time, the method of theoretical analysis helped to explore key aspects of digitalization and its social efficiency as success indicator of reengineering management activities, in particular at the regional level on the example of the Kherson region. This method also helped to analyse the national legal framework aimed at digital reform of the public administration sector.

The legal basis consisted of the following legislation: Order of the Cabinet of Ministers of Ukraine No. 167-r “On the approval of the Concept of the development of digital competences and the approval of the plan of measures for its implementation” (2021), Order of the Cabinet of Ministers of Ukraine No. 831-r “Some issues of reforming the public administration of Ukraine” (2021). It also included Order of the Head of the Kherson Regional State Administration No. 207 “On approval of the plan of measures for the implementation in the region of the State Administration Reform Strategy of Ukraine for 2018-2020 in terms of the provision of administrative services” (2018). In this research work, authors primarily seek to emphasize the need to modernize the administration system and assess the effectiveness of management decisions of public authorities in the process of digitalization. The materials of the work, among other things, are normative acts, local legal documents, as well as scientific works of American, British, Spanish, Finnish, Italian, Bulgarian, Slovak and Ukrainian researchers. This scientific research was conducted in three main stages.

First, the authors analysed the notable works on this topic in recent years, which helped to identify the direction and purpose of this work. The first stage of the study reveals the work of governmental and non-governmental organizations, institutions and associations whose activities mainly focus on the renewal of the governance system, in particular the nationwide digitalization process. In addition, authors highlighted the role of central digital projects of the Ministry of Digital Transformation of Ukraine and established the effectiveness of their implementation and the current level of computerization of territorial communities and regional centres. At the second stage, authors also presented statistical and analytical material, clarified and verified the conclusions obtained during the study. At the third stage, the authors made conclusions and proposed recommendations for the collection of demographic data to raise the social efficiency of management decisions, as well as to improve the digitalization process at the regional level.

## RESULTS AND DISCUSSION

The integration of the e-governance model in Ukraine is taking place to secure every citizen with free access to public information and provide an opportunity to influence decision-making processes by public authorities at all levels. Each region has its own specific conditions and opportunities for the implementation of e-government in accordance with the historical and economic conditions of development, specifics of infrastructure formation, mandatory for the organizers of the reform. The implementation of the digitalization concept at the local and regional levels involves the reengineering of processes into completely new forms of organizing the activities of municipal institutions. The key issues here are the establishment of interaction of these bodies with each other, as well as communication with central authorities, citizens and business by providing access to public data, state information resources and electronic administrative services. It also pertains to involvement of citizens in the process of development and adoption of administrative decisions in communities and regions using modern information technologies (Mokhova, 2021).

The adopted Order of the Cabinet of Ministers of Ukraine No. 167-r "On the approval of the

Concept of the development of digital competences and the approval of the plan of measures for its implementation" (2021) envisions these measures. Its concept identifies ways to solve the main problems and to formulate directions for development of digital competencies in Ukrainian society, which defines priority tasks and expected results from its implementation. In addition, the Ministry of Digital Transformation of Ukraine has launched a national project to improve digital literacy "Diia. Digital Education" for the effective use of modern IT technologies in everyday life.

A good example of consideration is the implementation of the state program "Internet Subvention", which was mentioned above. However, these general indicators are not enough to make socially effective management decisions. It is mandatory to improve the collection of information on individual (inclusive) features of the population of communities and consider them when making management decisions. If the information on large families, low-income families or people with disabilities is relevant to collect, many other important data are simply disregarded, especially those related to health: the number of people with allergic reactions, autism spectrum disorders, lactase deficiency, poor gluten absorption, rare diseases, etc. For many years all this has prevented to make the right management decisions, for example, in the organization of baby food in Ukraine, when the above medical indicators were almost lacking. On the other hand, as an example, not all visually impaired people have a disability group, which is important when making decisions on the introduction of electronic services.

In April 2021, the "Communities Capability Portal" project was presented within the framework of the "Decentralisation Gives Opportunities" programme, which allows comparing communities with each other. The portal provided an opportunity to characterize the activities of communities in each field of life using 15 indicators, which, in turn, were divided into three groups: demographic, infrastructure development and financial support. The founders of the project expect that the portal will become a launching site for expanded digital database that will help to determine the situation in each area. A set of complete data will establish a comprehensive indicator of the capacity of

territorial communities and identify the position of each particular association among others in the country. Moreover, this does not imply intention to quarrel with anyone, but to quickly identify problems and help communities in solving them. However, the algorithm for obtaining data for their monthly update, the methodology for calculating the integrated indicator, as well as the further fate of the project, implemented within the framework of grant support, remains unclear. The digitalisation creates conditions for community residents to receive quality and accessible services. However, the remoteness of their peripheral territories often compromises the satisfaction of the needs and interests of the population. In view of this, the Ministry of Digital Transformation of Ukraine is implementing digitalisation of the regions in every possible way.

It should be noted that the community website is not only a resource for publishing local news. It is the powerful information and communication tool used to interact with the residents of these communities, in particular their peripheral areas. Among the analysed websites of the communities of the region, an electronic petition can be submitted only through the website of the Henichesk District Council and the websites of 28 territorial communities. Online voting for the public budget was possible only in 8 communities of the Kherson Oblast, including: urban communities Kakhovka, Nova Kakhovka, Skadovsk, Oleshky, Kherson, rural communities Velyka Oleksandriivska and Muzykivka, as well as Chaplynka settlement territorial communities. The process of reengineering management activities can be clearly traced on the example of digitization and reorganization of administrative services at the regional level. Seven ASCs have installed an electronic queue management system to ensure that residents of the Kherson Oblast do not spend extra time waiting and can choose the date and time convenient for them. Another 28 ASCs and 1 territorial subdivision in the village of Novooleksiyivka are connected to the mini-queue, which enables registration for services in high demand. The registration is possible through the official website of the RSA at the regional ASCs, as well as through the official websites of village and settlement councils. The POS-terminals, self-service software and hardware complexes and other

payment terminals, such as iBox, are installed in the ASCs for the purpose of convenient payment for administrative services.

The public authorities at various levels are doing a lot to improve the usual processes and to make effective reengineering of activities to increase social efficiency and bring services closer to citizens. In particular, the Order of the Head of the Kherson Regional State Administration No. 207 "On approval of the plan of measures for the implementation in the region of the State Administration Reform Strategy of Ukraine for 2018-2020 in terms of the provision of administrative services" (2018) had been adopted in order to increase the social efficiency of the administrative service delivery system in the region. This legislation was implemented in accordance with Order of the Cabinet of Ministers of Ukraine No. 831-r "Some issues of reforming the public administration of Ukraine" (2021).

According to the approved plan, a survey was conducted once a year to determine the quality of administrative services. According to the said questionnaire, in particular, the criteria for assessing the organisation and activities of the ASCs based on reengineering included the following items: introduction of electronic document management, availability of a separate website or webpage, the possibility of preliminary online appointment. The authors believe that the development and implementation of this questionnaire was a worthy start to quantify the degree of satisfaction of social needs and interests of residents and hence the social efficiency of the administrative service delivery system. However, it should be noted that this system requires constant review when updating local programs with a gradual increase of importance (in points) of the reengineering process. The unstoppable transformation in the process of reengineering the public administration system deems a rather logical and predictable phenomenon, since this system serves as a pivotal factor in the process of democratization and sustainable development of society. The public administration process covers all fields of society's life without exception and ensures the implementation of civil rights and freedoms, which is an essential condition for the successful national development of the country. Therefore, in order to ensure the continuous movement of society forward, the

mandatory process of updating the outdated model is the digitalization of the organizational activities of public authorities and in particular the modernization of the administrative service provision.

Many researchers emphasize the benefits of introducing IT technologies in the public sector as an effective tool for improving policy and service delivery. For example, according to A. Bertrand (2019), digital technologies create opportunities to bring new models of service delivery, improve resource management through more efficient spending and connect money invested in programs and services to the results they deliver to citizens, thus increasing accountability and trust. At the same time, O. Chinedu (2021) noted that digitalization is fundamental and strategic for public services in meeting the current expectations of citizens to provide quality service. The authors fully agree with these statements, because, as this study has shown, the implementation of e-government increases practicality, efficiency, focus, personalization, transparency. Certainly, the reorganization of administrative service delivery through online portals and innovative technologies revises the traditional channels of interaction between citizens and government officials, which ultimately promotes a modern, more convenient and flexible system to meet the needs of the public. However, it is also worth noting that the reengineering of the management system based on the use of digital technologies serves as an effective tool to increase the social value of a particular institution. It also ensures its positive image and consolidate its inclusiveness, as well as interaction with residents of peripheral territories. In addition, it should be noted that although the preparations and the process of digitalization in Ukraine began long before the introduction of restrictive quarantine measures due to the COVID-19 pandemic, this epidemic has laid a solid foundation for future large-scale digitalization. Therefore, the development of e-government and the digitalization of public life is an adequate response to the challenge in the situation faced by humanity, given the COVID-19 pandemic (Kirilova and Naydenov, 2020).

The digital transformation has been slowly but steadily growing in Ukraine in particular due to the tremendous progress in computer software

in the world over the past decades. However, the pandemic has forced the public sector and business to adapt their practices, making them merely virtual and accessible in modern realities, which has stimulated the emergence of real e-government. The computerization and instant modernization have become an imperative for regional centres, especially for remote territorial communities and their peripheral areas, which have felt the urgent need for digitalization. In this context, it is worth mentioning the work of M. Sullivan *et al.* (2021), who in a joint study concluded that as the pandemic created demand for entirely new services, the key to success was to create a “whole of government” digital architecture that made certain solutions born in one area of government available to another. This concept, which envisions coordinated work between institutions and organizations, as well as the creation of a large number of transparent online platforms, has indeed found its embodiment in the Ukrainian e-government system, which is of course only at the initial stage. The analysis of the policy of non-governmental and governmental organizations, in particular the Ministry of Digital Transformation of Ukraine, demonstrates the desired course towards the integration of the e-government model through the development of joint digital projects and coordinated work with regional centres. However, the acceleration of the electronic transformation of public administration has revealed not only the attractive aspects of this innovation but also its setbacks. Highlighting the concept of digitalization and its possibilities, T. Gorenšek and A. Kohont (2019) noted that the process of digitalization requires a completely different mindset, high availability of resources for investment and achievement of digital transformation goals, as well as improving the various competencies and knowledge of existing staff. A.I. Krakovska and M.K. Babyk (2022) call the digital inequality “a barrier to overcome”. Thus, working on raising awareness and strengthening the position of e-government among the residents, the governmental and non-governmental organizations have not yet created the proper conditions for the use of the latest means of obtaining electronic services. Therefore, according to the authors, the modernization of management activities depends not so much on the fact of the introduction of electronic services but on the ability of the population to use them.

It is quite logical to pay considerable attention to the development of the ASCs network as a component of reengineering in the public sector. As rightly noted by T. Mamatova *et al.* (2020), if the main tool for the provision of public services in digital form at the central level is a single portal of digital services, then the main role in this process at the regional and local levels is assigned to administrative service centres. Indeed, the experience of the Kherson Oblast has confirmed the important role of the ASCs as an integral element of the rapid digitalization of society but the need for offline functioning of such centres will not lose its relevance for a long time despite the high urge in the availability of online services. It is clear that the use of e-services is a choice and opportunity for every citizen. Thus, there is a high probability that part of the population deliberately does not want to receive services online, and some number of offline platforms should remain as close to people as possible. At the same time, it should be noted that not all services can be converted into electronic form and therefore they should be provided in the most optimal format through physical channels. Obviously, the interconnection between online and offline forms is necessary for further successful digitalization, because despite the progress made in integrating IT technologies into the public sector or digitizing paper documents, further transformation should not undermine the interest of certain segments of the population but only stimulate the public to the necessary changes. Thus, it would be relevant that the reengineering process of management activities is a multifaceted phenomenon that involves the reconstruction of outdated tools of functioning of the system of state bodies and improvement of the administrative sector with the help of innovative technologies. By modernizing society, the experts are quite confidently implementing national projects and accelerating the digitalization of the country. It is clear now that the concept of digitalization needs further refinement, such as improving the data collection system on the inclusive needs of a particular region or raising the level of digital awareness of the population. However, it can be confirmed the emergence of a reliable basis supported by legal acts and the presence of experienced entities (institutions and organizations). The public authorities should focus their efforts primarily on creating conditions for

overcoming and preventing digital discrimination of Ukrainian citizens to achieve social efficiency of management decisions.

## CONCLUSION

In Ukraine, there are a number of bodies, institutions and organisations whose work is aimed at modifying management activities and assessing the social efficiency of administrative centres and digital service renewal. Over the past few years, these entities have introduced such important innovations as the development of its infrastructure, the creation of all-Ukrainian digital platforms, the introduction of the smart city concept. The government has taken decisive steps giving impetus to the digitalization of Ukraine at the state, regional and local levels. In particular, it is the introduction of the projects "Diia" and "Diia. Digital Education". However, the issue of taking into account the level of individual digital skills remains open for people with visual and hearing impairments and the elderly. The authors believe that systematic measures should be taken at the state and regional levels to raise awareness and motivation of all segments of the population and improve digital skills of citizens as even the best digital management solutions that do not work can be socially ineffective. The introduction of IT technologies in the processes of preparation, adoption and implementation of management decisions contributes to the expansion of public participation in these processes and leads to greater social validity and accordingly to social efficiency of these decisions. In addition, the digitalization of management processes in the united territorial communities expands the opportunities for residents of peripheral territories to influence the formation and implementation of local policies. However, given the shortcomings and gaps in the functioning of digital portals, it is necessary to rethink thoroughly the activities of public authorities to create the necessary conditions for innovative IT technologies to take their rightful place in the administrative management system.

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