



Digital Transformations in Public Administration

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Abstract. The analysis of big data has facilitated significant achievements in the field of information technology, creating conditions for improving the efficiency of state governance through intelligent monitoring and decision-making systems. Digital transformations are realized through the formation of e-infrastructure and databases, and the application of technologies such as AI, cloud computing, IoT, and blockchain leads to rapid socio-technological development. E-government increases citizen satisfaction by providing personalized services based on artificial intelligence. The shortcomings revealed during the pandemic forced governments to become more flexible and accountable. Open government data and increased citizen participation strengthen transparency and trust. Digital transformation contributes to the development of e-government by improving public services and implementing innovative solutions. However, targeted measures must be taken to bridge the digital divide and meet the needs of all members of society. Considering these factors, the thesis explores new approaches to e-government, identifies challenges, and presents proposals.

Keywords: E-government, Digital Transformation, Artificial Intelligence.

Introduction

The analysis of big data supports governments through various intelligent systems such as intellectual monitoring systems, decision-making systems, and forecasting systems. Digital transformations are implemented by forming large databases and e-infrastructures. Recent trends indicate rapid socio-technological development through the use of technologies like artificial intelligence (AI), cloud computing, the Internet of Things (IoT), blockchain, and others. These concepts are crucial for the next generation of e-government, as big data analytics and solutions will significantly impact government operations across all sectors.

The maturity model of the digital state is essentially characterized by the provision of personalized services based on artificial intelligence to citizens. Research shows that an increasing number of governments are using advanced technologies like cloud computing, AI, and blockchain to meet the needs of citizens, improve the efficiency of services, and ensure citizen satisfaction. These approaches enable governments to enhance their analytical and forecasting capabilities and create forward-looking development scenarios. However, if accessibility for everyone is not ensured, the progress in e-government could deepen the digital divide.

It is essential for innovations in e-government to focus on the development of human potential, ensuring that people are not left behind by technology but are instead empowered by it. It can be expected that in the near future, the role of e-government will continue to grow in delivering public services, responding to crises like pandemics, and strengthening digital cooperation and interconnectivity at global and regional levels [2].

Digital Transformations in Government Sector

Digital transformation in government sector does not only consist of increasing functionality and efficiency of government agencies, but also plays an important role in expanding government services

and strengthening e-participation. Creating an opportunity for citizens' close participation in the public administration, giving them the right to vote during decision-making and cooperation in management creates a greater sense of public trust. From this standpoint, governments must find new ways to expand the rights and opportunities of members of society and citizens and to promote close participation while discussing the decisions of government importance. Providing open government data increases transparency and accountability, while creating accessible platforms and applications encourages people's participation. For example, the Danish government has implemented an e-participation initiative where citizens can submit proposals for a new legislation in the form of e-petitions. This initiative, translated as "citizen suggestion" is managed by the Danish Parliament [2].

COVID-19 pandemic has exposed many shortcomings in government systems and approaches to governance. This proved once again that the existing public administration systems and government institutions do not have the ability to adapt to sudden changes or unexpected crises that may occur in society in a short period of time. Global challenges and digital transformations are changing the status quo and requiring governments to adopt innovative technologies that can help them become more responsive, agile, accountable and effective.

New approaches to E-Government

Governments are working on solving practical issues related to the development and integration of digital technologies (e.g., cloud computing, security concerns), but it is also essential to focus on innovative solutions that improve system functionality and user experience. Governments should implement data management and collection systems based on artificial intelligence. Additionally, dynamic simulation models should be used to encourage users, respond more effectively to their requests, and evaluate the impact of e-services.

Moreover, creating a cloud-based e-government model itself is considered an innovative solution, as this technology serves as a platform for virtually endless digital development. However, for the digital transition of the public sector to be fully realized, leading governments must explore several emerging technologies and approaches in greater detail. These include smart government, cognitive government, agile and adaptive government, and the concept of "seamless" government.

Technological advancements, the analysis of complex systems, artificial intelligence, and big data have provided governments with the tools to identify potential problems and opportunities, thus enhancing forecasting capabilities to shape future development scenarios [1]. Ultimately, digitalization will allow traditionally bureaucratic governments to become virtually invisible by delivering personalized services that are accessible to anyone, anytime, and anywhere.

Although the 2022 report on e-government development shows steady progress in digital transformation, it also highlights that many of the benefits of digital transformation, particularly in less developed and transitioning economies, have yet to be realized [1].

The development of e-government can play a crucial role in bridging the digital divide. Research indicates that the digital divide persists, and if targeted, systematic measures are not taken to support low-income and developing countries, this gap may deepen further. Therefore, governments worldwide must have a structured, phased, long-term national digital transformation plan that ensures the needs of all members of society are met and that no one is left behind.

Conclusion

On a global scale, digital government is increasingly viewed as a pathway for the implementation of national programs, the development of innovative solutions, achieving economic efficiency, and fostering a more sustainable future. Digital government is considered an integral part of governance that can significantly influence public trust. This research provides a panoramic view of the current state of digital government construction and analyzes digital transformations in public administration.

While governments worldwide are at various stages of maturity in digital government, all states should focus in the coming years on providing services centered around citizen needs and life events. It is clear that this is only possible through the implementation of digital transformations in public administration and the application of artificial intelligence technologies. All of these factors can help governments create more efficient business models, achieve higher citizen satisfaction, and obtain various economic benefits. However, digital inequality, the existence of different public administration models, and the varying perspectives of states regarding e-government indicate numerous challenges, suggesting that their resolution in the near future will not be straightforward.

Governments face various difficulties in changing their digital policies, legislations, and regulations to accelerate the transition to accessible e-government services. In the future, states should strive to create a unified government platform for the formation of digital government according to their strategic priorities. Furthermore, governments must address digital trust issues and strengthen confidence in the reliability and security of digital services. This can be supported by having robust cybersecurity strategies and capabilities that meet current demands. Precise and reliable governance mechanisms should be developed to increase trust in digital government services and transform relationships with citizens.

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