TRANSITION FROM E-GOVERNMENT TO A DIGITAL STATE IN THE CONTEXT OF DIGITAL TRANSFORMATION

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Abstract: The rapid advancement of digital technologies has transformed the way governments operate, leading to the evolution from traditional e-government models to the concept of a fully digital state. This paper explores the process of transitioning from e-government to a digital state, highlighting the key drivers, challenges, and opportunities associated with digital transformation in public administration. Using a qualitative analysis of existing literature and case studies, this study identifies best practices for successful digital state implementation.

Keywords*: Digital transformation, e-government, digital state, public administration, technological integration, citizen engagement, cybersecurity, digital infrastructure, interagency collaboration, digital governance, digital strategy.*

ПЕРЕХОД ОТ ЭЛЕКТРОННОГО ПРАВИТЕЛЬСТВА К ЦИФРОВОМУ ГОСУДАРСТВУ В КОНТЕКСТЕ ЦИФРОВОЙ ТРАНСФОРМАЦИИ

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Аннотация: Быстрое развитие цифровых технологий трансформировало работу государственных органов, приведя к эволюции от традиционных моделей электронного правительства к концепции полностью цифрового государства. В данной работе рассматривается процесс перехода от электронного правительства к цифровому государству, выделяются ключевые факторы, вызовы и возможности, связанные с цифровой трансформацией в государственном управлении. С использованием качественного анализа существующей литературы и кейс-стади, исследование выявляет лучшие практики для успешной реализации цифрового государства.

Ключевые слова: *цифровая трансформация, электронное правительство, цифровое государство, государственное управление, интеграция технологий, вовлечение граждан, кибербезопасность, цифровая инфраструктура, межведомственное сотрудничество, цифровое управление, цифровая стратегия.*

RAQAMLI TRANSFORMATSIYA SHAROITIDA ELEKTRON HUKUMATDAN RAQAMLI DAVLATGA O‘TISH

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Annotatsiya: Raqamli texnologiyalarning tez sur’atda rivojlanishi hukumatlarning faoliyat yuritish uslubini tubdan o‘zgartirib, an’anaviy elektron hukumat modellari evolyutsiyasi natijasida to‘liq raqamli davlat tushunchasi paydo bo‘ldi. Ushbu maqolada elektron hukumatdan raqamli davlatga o‘tish jarayoni o‘rganilib, raqamli transformatsiya jarayonidagi asosiy omillar, qiyinchiliklar va imkoniyatlar ta’kidlanadi. Mavjud adabiyotlar va amaliy tadqiqotlar sifatida sifatli tahlil orqali ushbu tadqiqot muvaffaqiyatli raqamli davlatni joriy etish bo‘yicha eng yaxshi tajribalarni aniqlaydi.

Kalit so‘zlar: *raqamli transformatsiya, elektron hukumat, raqamli davlat, davlat boshqaruvi, texnologiyalar integratsiyasi, fuqarolar ishtiroki, kiberxavfsizlik, raqamli infratuzilma, idoralararo hamkorlik, raqamli boshqaruv, raqamli strategiya.*

INTRODUCTION

Digital transformation has become a central focus for governments worldwide. While e-government initiatives primarily aimed to digitize public services, the concept of a digital state encompasses a more comprehensive integration of digital technologies into governance, policymaking, and citizen engagement. This study investigates the transition process from e-government to a digital state, emphasizing the technological, organizational, and social factors that influence its success.

Government digital transformation is a lot less about technology and more about reimagining what the relationship might be between citizens and their government. We foster deep enthusiasm here at WPTG in support of governments embracing this transformation to shape a more efficient, transparent, and responsive public service.

By leveraging our experience in e-governance solutions, governments can meet their citizens’ expectations that have turned technology savvy. This would create new frontiers for innovation, efficiency, and social development. We keep outdoing

ourselves in governance and call upon all government leaders to join hands in carving the future of public service delivery in the digital era[1].

Within the landscape of global governmental digitalization, China exhibits certain pronounced characteristics. Foremost among these is China's position as one of the earliest nations to elevate the construction of a digital government to a national strategic level. In 2022, the State Council of China issued the “Guidelines for Strengthening the Construction of Digital Government,” signaling the government's view of digital transformation as a pivotal tool for augmenting governance capabilities and efficiencies. This policy emphasized the creation of a “synergistically efficient digital government capability system” and proposed the strategic goal of “coordinated advancement of the intensive construction, interconnectivity, and collaborative linkage of government application systems across various industries and fields.” This focus indicates that the Chinese government's commitment goes beyond merely introducing digital technologies; it is also deeply invested in leveraging these technologies to reform and innovate administrative management and services, thereby enhancing governmental performance[2].

LITERATURE REVIEW

The process of digital transformation and the transition from e-government to a digital state has been rapidly developing in recent years. This process is carried out with the aim of increasing the efficiency of state governance, ensuring transparency, and providing convenient services to citizens. A digital state is a complex system formed through the integration of technological infrastructure, political documents, and human resources, fundamentally changing the relationship between the state and society.

Today, the United States, Germany, China and Japan are among the countries trying to play this leading role. Germany has set an industrial 4.0 strategy in the face of China's rise. Thinking that the conditions were more appropriate, the Japanese developed a 5.0 target for society, while China, which did not intend to leave the race, continued to compete with the 2025 target. Singapore and Estonia have set an example to the world in transforming their small-scale statehood into a state. Turkey aims to play a decisive role in the new era with a national transformation that can compete with the world without missing the previous industrial ages. Many countries worldwide are trying to transfer the capabilities of technology to some government agencies[3].

Understanding the evolution of digital government is crucial for contextualizing the proposed Model Framework. Examining the development of digital government

[1] https://whitepearltech.com/news/e-governance-and-digital-transformation-wptgs-vision-for-modernising-public-services/

[2] https://www.sciencedirect.com/science/article/pii/S0040162524005201

[3] Transformation from electronic government to smart government *Moldabay, Nauryzkhan*. 2022/2023

over time allows the identification of key trends, challenges, and success factors that have shaped past and current digital government strategies and practices. The historical perspectives, findings and analyses – as seen through the lens of the successive editions of the United Nations E-Government Survey – offer valuable insights for the design and conceptualization of a Digital Government Model Framework, ensuring that it addresses real-world needs, leverages lessons learned, and drives better outcomes in achieving the 2030 Agenda for Sustainable Development[4].

There are several scholarly sources on the concept of the digital state and its formation process:

1. In their article "Digital Era Governance: IT Corporations, the State, and e-Government," P. Dunleavy, H. Margetts, S. Bastow, and J. Tinkler analyze the concept of e-government and the key principles of digital governance, highlighting the role of digital technologies in public administration [1].

2. The OECD's study titled "Digital Government Review of Brazil: Towards the Digital Transformation of the Public Sector" examines effective practices and challenges faced by governance systems in the process of building a digital state [2].

3. In their scientific work, M. Janssen, Y. Charalabidis, and A. Zuiderwijk analyze the importance of open data and open government concepts in enhancing transparency and efficiency in digital states [3].

4. B. A. Begalov and M. Q. Abdullayev, in their textbook "Digital Economy," discuss the stages of forming the digital economy and digital state in the national context, as well as their impact on economic efficiency [4].

The formation of a digital state is a complex process not only technologically but also socially and politically. Therefore, its development depends on modern governance methods, legal frameworks, and improving interactive relations with citizens.

METHODOLOGY

The purpose of this study is to analyze the main stages, advantages, and challenges of the transition from e-government to a digital state in the context of digital transformation, to determine its role in the modern digital governance system, and to identify development and improvement strategies in this area.

DISCUSSION AND RESULTS

The analysis revealed that the transition from e-government to a digital state involves a significant shift in how governments operate and deliver services. While e-government primarily focuses on offering online public services, the concept of a

[4]https://desapublications.un.org/sites/default/files/publications/202409/%28Chapter%201%29%20E-Government%20Survey%202024%201392024.pdf

digital state encompasses a broader integration of digital technologies throughout governance structures. This integration enables more advanced features such as data-driven policymaking, the implementation of digital identity systems, and the automation of administrative processes, all of which contribute to more efficient and transparent governance.

Several key factors drive this transition. Technological advancements, including artificial intelligence, cloud computing, and blockchain technologies, provide the necessary tools and infrastructure to support complex digital ecosystems. Additionally, growing citizen demand for faster, more efficient, and accessible public services puts pressure on governments to innovate. Policy initiatives aimed at fostering innovation and digital transformation further accelerate this process by creating supportive regulatory and financial environments.

However, despite these drivers, governments face substantial challenges. Cybersecurity risks remain a critical concern, as increasing digitalization exposes public systems to potential threats. The digital divide, where certain populations lack adequate access to digital resources or skills, threatens to create inequalities in service delivery. Resistance to organizational change within public institutions and the shortage of skilled personnel capable of managing advanced digital systems also impede progress.

To overcome these challenges, best practices have emerged from successful cases worldwide. Establishing a clear and comprehensive digital strategy is fundamental to guiding efforts and aligning stakeholders. Encouraging collaboration between different government agencies ensures coherence and efficiency in implementing digital initiatives. Significant investments in digital infrastructure are necessary to provide a reliable foundation for services. Furthermore, involving citizens in the co-creation of digital services enhances user-centered design and fosters greater trust and adoption of digital solutions.

The digital state is a logical continuation of e-government and differs from it in several significant ways:

- all public services must be digital. This does not mean simply digitizing existing documents, but rather creating a digital state that involves local transformations;
- all regulatory documents must be reviewed, as laws applicable in the analog world may not function effectively in the digital realm. Public authorities must change the format of their operations and strive to be as open and transparent as possible;
- government bodies must transition to open-source software, which allows not only the exchange of decisions among all authorities but also enables the co-creation of public services with all stakeholders;

- as electronic public services develop and citizen demand continues to grow, services must be delivered across any platform, on any device, and within a broader ecosystem.

All these aspects must be considered when developing a national strategy for the transition to a digital state[5].

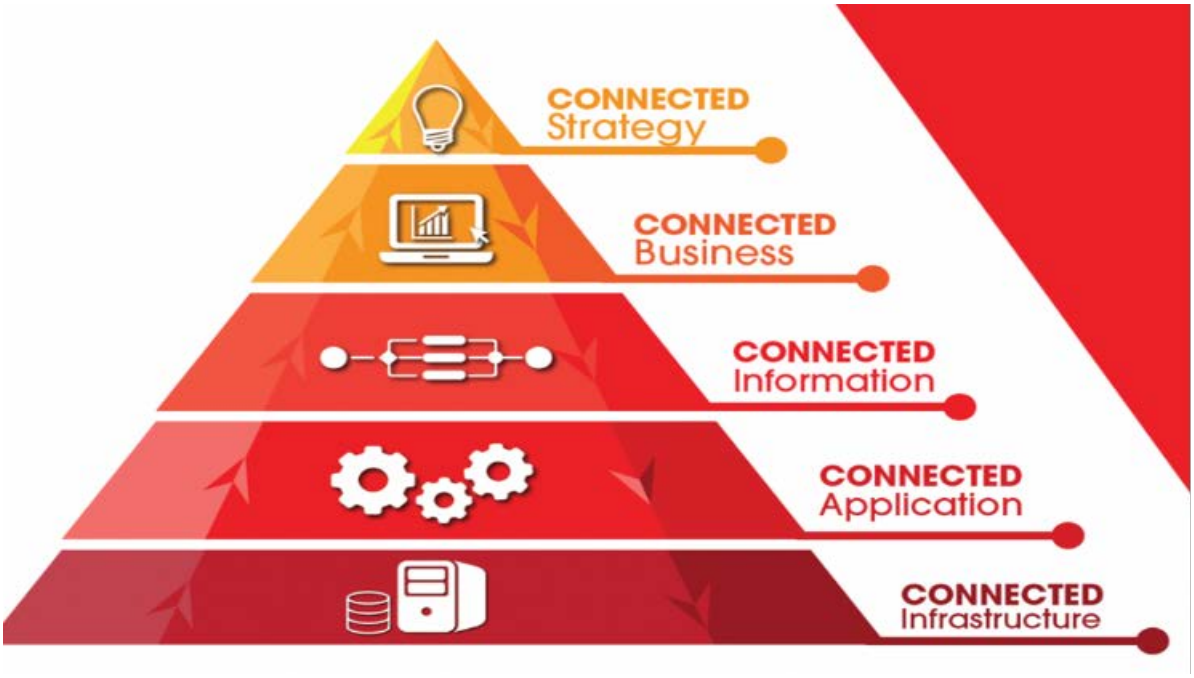

Figure 1. Connected Framework Pyramid in the Transition from EGovernment to Digital State within Digital Transformation

This pyramid illustrates the key stages and components in the formation of a digital state. Each layer reflects different aspects of digital transformation and demonstrates the systematic path from e-government to a fully developed digital state.

Connected Infrastructure – This layer forms the technological foundation of the digital state. Servers, databases, network infrastructure, and cloud solutions support all digital services provided by the government.

Connected Application – This layer creates convenience for citizens by automating government services and developing online platforms. Applications collect data, streamline processes, and enhance management efficiency.

Connected Information – At this stage, all government and public data are integrated. Data-driven decision-making, analytics, and strategic planning take place, forming the core of the digital state.

Connected Business – This layer ensures the integration of government business processes and interagency collaboration. Through digital platforms, different departments and units cooperate, processes are simplified, and efficiency is increased.

[5] B.A. Begalov, M.Q. Abdullayev. Digital Economy: Textbook / B.A. Begalov, M.Q. Abdullayev. – Tashkent: "Iqtisodiyot", 2023. 215-216 pages.

Connected Strategy – The top layer represents the overall strategy and governance for digital transformation. Priorities are identified, resources are allocated, and policies engaging citizens are developed.

Overall, this pyramid demonstrates the importance of interconnection and integration at each layer in the transition from e-government to a digital state. From technological infrastructure to strategic management, each stage ensures the effective and transparent operation of a digital state.

In the context of digital transformation, studying the state of digital governance within a country plays a crucial role in analyzing the effectiveness of government operations and determining strategic development pathways. Digital analysis allows governments and policymakers to assess the real potential of digital initiatives, the efficiency of service delivery, system reliability, cybersecurity resilience, and overall readiness for a fully digital state. Particularly in an environment characterized by rapid technological change and increasing citizen expectations, continuous monitoring and evaluation of a government's digital condition becomes a critical strategic necessity.

The results of digital analysis are applied in several key areas: First, the efficiency of digital service delivery is evaluated by measuring how well digital platforms meet citizen needs and facilitate access to government services.

Second, the reliability and security of digital systems are assessed to ensure that online services can operate without interruption and maintain the integrity of sensitive data.

Third, the effectiveness of technological resource utilization is examined by analyzing system performance, adoption rates, and process automation across government agencies.

Fourth, the overall digital stability and readiness of government institutions are evaluated, including the integration of data-driven decision-making, interagency coordination, and long-term sustainability of digital initiatives.

In the transition from electronic government to a digital state, it is necessary to clearly define and analyze the definitions, concepts, and developmental directions of e-government, as well as the stages of its evolution. Government structures and the technological sector must first determine what needs to be done digitally and coordinate the technologies to be used in transitioning to a digital state.

CONCLUSION

The transition from e-government to a digital state represents a transformative shift in public administration, driven by the rapid advancement of digital technologies, changing citizen expectations, and the increasing need for efficiency, transparency, and accountability in governance. Unlike traditional e-government, which primarily focuses on providing online public services, a digital state embodies a holistic

integration of digital technologies across all levels of government operations. It enables data-driven decision-making, streamlined administrative processes, digital identity systems, and citizen-centric service delivery, ultimately enhancing both the effectiveness and legitimacy of government actions.

This transformation is guided by multiple interrelated factors, including technological innovations such as artificial intelligence, cloud computing, and blockchain, as well as policy initiatives that foster digital adoption, interagency collaboration, and citizen engagement. At the same time, the transition poses considerable challenges, including cybersecurity risks, digital inequalities, resistance to organizational change, and shortages of skilled personnel capable of managing complex digital infrastructures. Addressing these challenges requires comprehensive strategic planning, substantial investment in digital infrastructure, the development of human capital, and the establishment of open, transparent, and inclusive governance mechanisms.

The framework of a digital state, as illustrated by the interconnected layers of infrastructure, applications, information, business processes, and strategy, emphasizes the necessity of systematic integration. Each layer reinforces the others, ensuring that technological systems are aligned with organizational processes and that both are governed by clear strategies aimed at sustainable development. Furthermore, continuous monitoring, evaluation, and adaptation are essential to respond to emerging technologies, evolving citizen expectations, and dynamic social and economic conditions [5].

Ultimately, the successful creation of a digital state requires a comprehensive vision that goes beyond the mere digitization of services. It necessitates a fundamental rethinking of governance models, regulatory frameworks, and public administration practices to foster innovation, inclusivity, and resilience. By strategically leveraging technology while maintaining a focus on citizen needs, governments can build digital states that not only improve administrative efficiency but also enhance public trust, promote equitable access to services, and strengthen the overall digital ecosystem. The journey from e-government to a fully realized digital state is not merely a technological endeavor, but a complex socio-technical transformation that reshapes the relationship between governments, citizens, and the broader society, paving the way for more transparent, responsive, and adaptive governance in the digital age.

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