

DIGITAL-BASED PUBLIC SERVICE INNOVATION (E-GOVERNMENT): A NEW PARADIGM IN PUBLIC SERVICE DELIVERY

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Abstrak

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This article aims to analyze and describe digital-based public service innovation through the implementation of e-government as a new paradigm in public service delivery in the modern era. This study employs a descriptive qualitative approach using a library research method, in which data are collected through a comprehensive review of academic literature, scientific journals, policy documents, and other relevant written sources related to e-government and public services. The findings indicate that the implementation of e-government significantly enhances efficiency, transparency, accountability, and accessibility in public service delivery. Furthermore, digital innovation supports public participation in governance processes and strengthens the relationship between government institutions and citizens. This study concludes that e-government represents an adaptive transformation of public services in response to advances in information and communication technology and serves as a critical pillar in the development of good governance in the digital era.

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INTRODUCTION

E-governance represents one of the most prominent applications of information technology widely adopted by the Indonesian government in delivering public services. In order for governments to effectively participate in building digital infrastructure that facilitates future administrative processes, adaptation to global technological advancements has become imperative. Indonesia's commitment to improving public service quality through digital transformation was initially marked by Presidential Instruction No. 3 of 2003 concerning the National Policy and Strategy for E-Government Development, which outlines the national framework and strategic direction for adopting e-government practices (Hamidi, 2011).

Information technology in this context encompasses various forms, including internet-based platforms, mobile devices, computers, and other digital tools. These technologies function as media through which governments deliver services in digital formats. A significant milestone in Indonesia's e-government development occurred in April 2004, when the government initiated the development of an integrated application system for citizens, incorporating services such as driver's licenses, tax identification numbers, and passports under a single identification number system. As noted by Dewi et al. (2024), the adoption of e-government in Indonesia has been influenced by a substantial transformation in governance structures from a centralized and authoritarian system toward a more democratic framework that recognizes a balance between central authority and regional autonomy.

The rapid advancement of information and communication technology (ICT) in the digital era has fundamentally transformed how governments deliver services to the public. The concept of electronic government (e-government) has emerged as a strategy for bureaucratic modernization and the enhancement of public service quality through greater efficiency, transparency, and accountability. This innovation reflects a paradigm shift from manual service provision to digital-based services that are increasingly adaptive to the dynamic needs of society.

Within the framework of regional autonomy, the implementation of e-government is not solely intended to improve administrative performance but also to bring public services closer to citizens through accessible, user-oriented technologies. This approach aligns with the principles of good governance, in which technology is utilized as a tool to strengthen accountability and public participation in governance processes. Nevertheless, the implementation of e-government continues to face several challenges, including digital infrastructure disparities, limited digital literacy among citizens, and institutional resistance to change. Therefore, further analysis is necessary to understand how digital-based public service innovation can be effectively implemented across various levels of government and how collaborative strategies can support sustainable digital transformation.

Responsive and efficient public services serve as key indicators of governance success. In the era of globalization, public expectations regarding service quality have increased significantly. Slow, bureaucratic, and non-transparent services are no longer acceptable to citizens accustomed to rapid access to information through digital technology. Consequently, governments are compelled to continuously innovate, particularly through the adoption of e-government as a transformative solution for public service delivery. Several regions in Indonesia, such as Denpasar City, have initiated digital public service transformations by fostering multi-stakeholder collaboration through platforms such as Taring Dukcapil and self-service kiosks. These innovations have proven effective in reducing queues and accelerating population administration processes. However, their success largely depends on institutional synergy, infrastructure readiness, and active public engagement.

Conversely, research by Luh et al. (2025) indicates that e-government implementation in rural areas, such as Sriharjo Village, has positively impacted transparency and service effectiveness, despite challenges related to standardization and uneven technology adoption. This finding suggests that digital service innovation has not yet been optimally implemented across all regions and levels of government. Based on prior studies, several research gaps can be identified. Putri et al. (2025) focused on

stakeholder collaboration in urban digital services but did not comprehensively address national or non-urban e-government implementation. Luh et al. (2025) examined village-level e-services and transparency benefits but did not explore broader policy and infrastructure challenges. Meanwhile, Danu et al. (2023) emphasized the urgency of digital public service innovation policies during the pandemic, yet their study remained largely conceptual with limited empirical evidence in the post-pandemic context.

Accordingly, this study seeks to fill these gaps by providing a descriptive qualitative analysis based on library research to examine how e-government, as a new paradigm of public service innovation, reshapes bureaucratic systems in Indonesia. This research also highlights adaptive strategies and challenges in implementing e-government across various governmental levels.

LITERATURE REVIEW

The Concept E-Government

E-government refers to the utilization of information and communication technology (ICT) by governments to deliver public services digitally. Its primary objective is to enhance efficiency, transparency, and accountability in public service delivery (Irawan, 2015). E-government also represents bureaucratic modernization aimed at providing faster, more accessible, and citizen-oriented services in the digital era (Hamidi, 2011).

Thus, e-government can be understood as a strategic innovation in public service delivery that leverages technological advancements to establish more efficient, transparent, accountable, and responsive bureaucratic systems. Its implementation constitutes a crucial step in modernizing governance and strengthening the relationship between governments and citizens.

Good Governance and Digital Transformation

High-quality public services are fundamental to the principles of good governance. In this context, e-government supports increased public participation, administrative transparency, and effective communication between governments and citizens (Ramadhan, 2024). This paradigm shift marks a transition from top-down governance to participatory, citizen-centered service delivery.

Good governance emphasizes accountability, transparency, public participation, and effectiveness in managing public affairs. E-government functions as an innovative solution that promotes information openness and expands opportunities for public engagement in administrative processes. Through digital services, citizens can access information efficiently, submit complaints, and interact directly with government agencies without navigating complex bureaucratic procedures.

Moreover, e-government signifies a paradigm shift in governance, in which governments no longer act as sole dominant actors but rather as facilitators enabling collaboration with private sectors and civil society. This transition from a top-down approach to a participatory governance model enhances service adaptability and public satisfaction. Consequently, e-government represents not merely a technological transformation but also a manifestation of governmental commitment to inclusive and sustainable governance.

Regional Digital Service Innovation

Various regions in Indonesia have developed diverse e-government models. For instance, Denpasar City has successfully implemented digital services such as *Taring*

Dukcapil and self-service kiosks, which significantly reduce queues and expedite population administration processes (Luh et al., 2025). At the village level, Sriharjo has implemented an online service platform that promotes transparency and citizen-government interaction.

These initiatives demonstrate that regional digital service innovation, both in urban and rural contexts, enhances efficiency, transparency, and service accessibility. E-government implementation at the local level effectively addresses conventional bureaucratic challenges while strengthening citizen-government relations through faster, more transparent, and participatory services.

Supporting Strategies and Policies

To support digital transformation, the Indonesian government has issued policies such as Presidential Instruction No. 3 of 2003 on the National Strategy for E-Government Development, which serves as the foundational framework for digital public service systems nationwide (Hamidi, 2011). Strong regulatory support, cross-sector collaboration, and private sector involvement are essential factors for successful e-government implementation.

Thus, the success of e-government implementation largely depends on clear strategies, robust regulatory frameworks, and multi-stakeholder collaboration. Presidential Instruction No. 3 of 2003 provides a critical legal foundation for advancing national digital public service transformation. Synergy among government institutions, private sectors, and communities is key to building a sustainable and adaptive e-government ecosystem.

RESEARCH METHOD

This study adopts a descriptive qualitative approach using a library research method. According to Basuki, (2021) library research involves a systematic and scientific process of collecting, organizing, and analyzing bibliographic materials relevant to research objectives. This method was selected because the research questions can be addressed through a comprehensive review of books, academic journals, and relevant literature.

Data were collected by examining academic publications, policy documents, and regulatory frameworks related to e-government, public services, and administrative innovation. The data were analyzed using content analysis techniques, including data categorization, interpretation, and thematic synthesis. Data validity was enhanced through source triangulation to ensure consistency and credibility. This approach provides a comprehensive understanding of e-government implementation, challenges, and future development potential in Indonesia.

Data collection in this study was conducted through an extensive review and examination of relevant written sources. The data sources include:

1. Academic literature, such as scholarly books that discuss theories of e-government, public service delivery, and public administration innovation.
2. National and international scientific journals that present empirical findings and conceptual discussions related to the implementation of e-government in various contexts.
3. Government policy documents and regulations, including Law Number 25 of 2009 on Public Services, Presidential Instruction Number 3 of 2003 concerning the National Strategy for E-Government Development, and other relevant technical

regulations (Irawan, 2015).

The collected data were analyzed using content analysis techniques, which involve identifying, categorizing, and interpreting key information from the selected sources. Subsequently, thematic patterns were developed to systematically present the research findings. To enhance data validity and credibility, source triangulation was applied by comparing information from different types of literature to ensure consistency and reliability.

Through this methodological approach, the study is expected to provide a clear and comprehensive overview of e-government implementation, the challenges encountered, and the potential development of digital public services in the future

RESULT AND DISCUSSION

In the current era of globalization, the rapid advancement of information and communication technology (ICT) is no longer a new phenomenon. This development offers various advantages, such as increased efficiency, faster dissemination of information, cost effectiveness, and enhanced transparency, which are also highly relevant in the context of government administration. Particularly within the framework of regional autonomy, the utilization of ICT commonly referred to as e-government is essential for realizing the principles of good governance. E-government provides a foundation for improving the quality and accessibility of public services.

In Indonesia, the implementation of e-government has been underway for quite some time. However, questions remain regarding the actual quality of these services. Based on existing literature and user perspectives, the quality of e-government services can be evaluated using four main indicators: efficiency, public trust, system reliability, and citizen empowerment or support. These indicators help assess whether digital public services truly meet the expectations and needs of citizens:

1. Efficiency

Efficiency in this context refers to how effectively a website or application functions in meeting user needs, as well as the quality of the information it provides. Digital platforms must be capable of accommodating service users by offering relevant content and ensuring ease and clarity in accessing public services (Lenak et al., 2021). In addition, the information presented should be regularly updated, concise, yet sufficiently detailed to comprehensively explain the available content. Users' perceptions of e-government service quality are often shaped by the ease of platform navigation and the overall effectiveness of the media used to communicate information and services. In Indonesia, various government institutions have adopted digital platforms to deliver public services.

2. Trust

Public trust in government websites and applications plays a crucial role in their utilization. Ensuring the security of user information is a primary responsibility of the government. All personal data entered during authentication processes must be securely stored. One of the factors contributing to the low usage of e-government services is the lack of public trust (Pratama, 2013). Furthermore, transparency in the information provided by the government through these platforms can significantly enhance public trust. Ultimately, the implementation of e-government systems facilitates the government's ability to make transparent and accountable decisions.

3. Reliability

Reliability refers to the suitability and speed of websites or applications in enabling public access. Government websites and applications are intended to be accessible at all times; however, access may be disrupted due to poor network conditions or server issues within the targeted platforms.

4. Citizen Support

The primary objective of government-developed websites and applications is to facilitate communication with the public. Ramadhan, (2024) identifies three stages in e-government development based on public service aspirations: publication, interaction, and transaction. The first stage in developing e-government is publication, as it is essential to make all relevant information accessible to the public. Subsequently, interaction becomes the next critical step, as it involves meaningful public engagement through communication between government and citizens via websites or applications.

Based on a review of literature, academic journals, and policy documents related to e-government, several key findings can be discussed in the context of digital-based public service innovation in Indonesia. This discussion is classified into three main aspects: (1) forms of e-government innovation in public services, (2) supporting and inhibiting factors of implementation, and (3) a new paradigm in public governance.

1. Form of E-Government Innovation in Public Services

Several digital innovations identified include application-based e-services such as *Taring Dukcapil* in Denpasar City, which enable citizens to access population administration services without having to visit service offices directly; self-service kiosks provided by the Population and Civil Registration Office that facilitate independent document printing; and village service websites, such as those in Sriharjo, which have developed features for online letter applications, public complaints, and access to public information.

These innovations demonstrate that the use of information technology has improved efficiency, transparency, and accessibility of public services.

2. Supporting and Inhibiting Factors of Implementation

Several factors support the successful implementation of e-government, including policy support from the central government through Presidential Instruction Number 3 of 2003 on the National Strategy for E-Government Development; advancements in information and communication technology that facilitate service digitalization; and partnerships between government and the private sector, such as the collaboration between the Denpasar Population and Civil Registration Office and service providers like Grab and Gojek for document delivery.

Nevertheless, several obstacles remain in its implementation. These include limited digital infrastructure, particularly in remote or rural areas; low levels of digital literacy among the public, which hinder optimal utilization of online services; and the lack of system standardization and integration across government institutions at both central and regional levels

3. A New Paradigm in Public Service Governance

E-government has established a new paradigm in public service governance, in which the government is no longer the sole dominant actor but collaborates with the private sector, civil society, and technology communities through a multi-stakeholder governance approach. Public services are no longer merely administrative in nature but have become interactive platforms that emphasize accessibility, participation, and service

personalization according to citizens' needs. This shift reflects a transition from government-centered governance to citizen-centered governance, positioning citizens as both subjects and active partners in service delivery processes.

The findings of this study indicate that digital-based public service innovation through e-government represents a strategic step toward creating a more adaptive, efficient, and responsive government in addressing the dynamic needs of modern society. Digital transformation in public services is not merely an administrative modernization effort but also reflects a fundamental shift in governance paradigms that positions technology as a key driver in enhancing service quality and strengthening relationships between governments and citizens.

The implementation of e-government has delivered tangible benefits, including accelerated bureaucratic processes, improved transparency, and expanded service reach across various segments of society. Innovations such as online population administration services, self-service kiosks, and integration with application-based delivery services demonstrate that information technology is capable of addressing the challenges of conventional public services, which tend to be slow, bureaucratic, and inefficient.

However, to ensure that the benefits of e-government are equitably and sustainably realized, strong policy support from both central and local governments is required. Such policies must promote inter-agency system integration, establish national digital service standards, and provide clear guidance for regions in developing and implementing e-government systems in accordance with local characteristics and needs.

In addition, improving public digital literacy is a critical aspect that cannot be overlooked. Technology adoption will not be optimal if citizens, particularly in rural and remote areas, continue to face limitations in accessing and understanding digital services. Therefore, structured and continuous education and socialization programs are necessary to enable communities to independently utilize e-government services.

Another important factor is the strengthening of technological infrastructure, especially in underdeveloped, frontier, and outermost (3T) regions. Disparities in internet access and technological devices between urban centers and remote areas remain a serious obstacle to achieving equitable digital public services. Without adequate infrastructure, digital services will only be effective in certain regions, leaving communities in 3T areas behind and limiting their access to administrative rights.

Thus, e-government implementation cannot stand alone as a purely technical solution but must be integrated into broader policy transformation, infrastructure development, and community empowerment efforts. Synergy among government, society, the private sector, and educational institutions is essential in creating an inclusive, participatory, and sustainable public service system in the digital era.

CONCLUSION

Digital-based public service innovation through e-government has become a cornerstone of modern governance reform. This study demonstrates that ICT implementation in the public sector significantly improves administrative efficiency, transparency, and service accessibility. However, challenges such as infrastructure disparities, limited digital literacy, and uneven institutional commitment persist.

Nevertheless, the transformation toward digital-based public services is not without complex challenges. Infrastructure disparities, low levels of digital literacy, and uneven institutional commitment remain major obstacles in realizing an inclusive and

sustainable e-government system. Therefore, cross-sector synergy among government institutions, the private sector, and civil society is required to build a robust and adaptive digital ecosystem. This study emphasizes the importance of strengthening policies and regulations as a clear and consistent legal foundation to support the implementation of digital services across all levels of government.

In addition, community empowerment through digital education and equitable infrastructure development, particularly in underdeveloped, frontier, and outermost (3T) regions, must be prioritized to prevent disparities in access to public services. In this context, e-government should not be viewed merely as a technological tool, but also as a symbol of transformation in public service values toward greater openness, participation, and citizen satisfaction. In the future, the success of e-government implementation will largely depend on the government's ability to lead innovation, build public trust, and ensure that every citizen receives fair and equitable access to public services in the digital era.

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