

*Research Article***Digital Government Post-Reform in Indonesia: Normative Developments and Implementation by State Organizing Institutions**

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ABSTRACT

Digital development has had a positive impact on public services; however, it has also introduced various legal challenges. This study aims to examine the direction of policy, legal preparedness in Indonesia, and the participatory role of Indonesian society in the digital sphere, particularly in relation to the development and implementation of Digital Government in Indonesia since the post-1998 reform era. This research employs a normative legal methodology, focusing primarily on secondary legal sources. The analysis reveals that the implementation of Digital Government in Indonesia following the reform period remains hindered by sectoral egos, leading to a lack of integration among state institutions in enhancing public services through the Digital Government framework. The study concludes that there is an urgent need for the establishment of a dedicated law on Digital Government, as well as the creation of a specialized state institution responsible for regulating, implementing, and evaluating Digital Government initiatives in Indonesia. Such measures are essential to ensure that public services are delivered in an efficient, accountable, transparent, fast, accessible, and cost-effective manner.

Keywords: Digital Government; Public Service; Good Governance

A. INTRODUCTION

Digital government, also referred to as *e-government* or *electronic government* (hereinafter referred to as *digital government*), emerged as a significant agenda for nations worldwide at the beginning of the 21st century. This development is a logical consequence of advancements in information technology, particularly the increasing use of the internet to facilitate the rapid dissemination of information (Yusuf et al., 2021).

In the context of Indonesia, the concept of digital government was first formally recognized in the early 2000s and was normatively introduced

through Presidential Instruction No. 6 of 2001 concerning the Development and Utilization of Telematics in Indonesia. This instruction employs the term "*government online*" to refer to what is now commonly known as digital or electronic government.

Through this directive, Indonesia, in alignment with global trends, committed to integrating information technology into public service delivery. This integration aims to close the digital innovation gap between Indonesia and other countries. The commitment was further reinforced with the issuance of more specific

regulations, particularly Presidential Instruction No. 3 of 2003, which outlines the National Policy and Strategy for the Development of e-Government.

Information that was once accessible only through verbal or written means is now readily available in virtual formats (Rosenberger, 2020). This digital exchange of information has fundamentally transformed interpersonal communication (Denning, 2023). Moreover, this ease of access is closely linked to the invention and advancement of the internet. Originally developed as a system for connecting computers, the internet has evolved dramatically, influencing the social and cultural structures of human society (Packard, 2020).

In its current form, the internet—now recognized as the Internet of Things (IoT)—enables advanced connectivity among devices, systems, and services. It encompasses various protocols, domains, and applications, facilitating automation across nearly all sectors. This progression ultimately contributes to the establishment of robust systems designed to deliver optimal services to individuals (Gan et al., 2023).

The integration of information technology with public services has become a central focus and a key developmental agenda for governments around the world (Ndou, 2004). The enhancement of public services—particularly in terms of accessibility, accountability, and connectivity—undoubtedly offers greater

convenience for citizens in their interactions with government bureaucracies.

To evaluate these developments, the United Nations, through the UN E-Government Development Index (EGDI), ranks countries based on their progress and innovations in the field of e-government. A review of Indonesia's position in the EGDI from 2003 to 2022 reveals a trend of fluctuation, rather than consistent and progressive improvement.

Figure 1. Indonesia's ranking from 2010-2022 in the UN E-Government Development Index (EGDI)

E-Government Development Index	2022	2020	2018	2016	2014	2012	2010
Indonesia (Rank)	77	88	107	116	106	97	109
Indonesia (Value)	0.71600	0.66120	0.52580	0.44784	0.44874	0.49486	0.40264

Sources: UN E-Government Knowledgebase, 2024.

The index shows that Indonesia's development and implementation of digital government have never placed the country among the top 50 out of 193 United Nations member states, despite it being 23 years since the first regulations supporting the concept of digital government were introduced. Numerous state agencies have initiated digital government innovation projects by developing websites and application-based information systems to enhance the delivery of public services. However, these efforts have not been sufficient to significantly improve Indonesia's ranking in the United Nations index (Aritonang, 2017; Nugraha et al., 2022).

The assessment of the E-Government Development Index (EGDI) places considerable emphasis on service provision, which contributes 45% to the total score, followed by electronic participation (e-participation), which accounts for 35%. These two sub-indices are key indicators of the successful implementation of digital government, particularly in terms of fostering community involvement in innovation.

The development of digital government in Indonesia is still widely perceived as having limited impact and remains far from achieving its intended developmental objectives. In response to these challenges, the Government issued Presidential Regulation No. 95 of 2018 on the Electronic-Based Government System. This regulation marked a shift in terminology from "e-government" to the "Electronic-Based Government System."

The regulation was established with the aim of realizing clean, effective, transparent, and accountable governance, as well as delivering high-quality and reliable public services. It emphasizes the necessity of an electronic-based government system and calls for a national framework for the governance and management of such a system to ensure its integration and efficiency.

As a state founded on the rule of law, as stipulated in Article 1, Paragraph (3) of the 1945 Constitution of the Republic of Indonesia, all governmental activities—whether dynamic or static—must be grounded in a strong legal foundation. In the context of digital government,

the existing regulatory framework is primarily limited to presidential instructions and presidential regulations at the national level. According to the legislative hierarchy outlined in Law Number 12 of 2011 concerning the Formation of Legislation, presidential regulations are subordinate to laws (*undang-undang*).

The reliance on presidential regulations and instructions as the main legal instruments raises potential legal concerns regarding their hierarchical status, enforceability, and the long-term sustainability of their application in the continued development of digital government.

The development of digital government must also consider community engagement. As highlighted in the Electronic Government Development Index (EGDI), electronic participation (e-participation) is a crucial component, as the ultimate beneficiaries of digital government initiatives are the citizens. Electronic participation is frequently discussed in conjunction with the concept of electronic democracy (e-democracy), which typically centers on two major domains: electronic participation and electronic voting (e-voting). This article focuses specifically on electronic participation in the context of digital government development, asserting that community involvement is a key indicator of success for digital government innovations, particularly within the broader framework of advancing electronic democracy.

Various theoretical perspectives and legal doctrines affirm the law's capacity to respond to changes across social, economic, and political

dimensions, each founded on distinct normative and intellectual frameworks. However, in the realm of prescriptive regulation, there is a normative obligation to establish a unified legal standard derived from ongoing scholarly discourse. This standard should serve as the foundation for legal development, while also addressing the broader questions of who is affected by these changes and who exercises influence over them.

This article specifically examines: (1) the direction of Indonesia's policy in addressing digital transformation; (2) the country's legal preparedness in the development of digital government; and (3) how the advancement of digital government in Indonesia can facilitate public electronic participation. Furthermore, the discussion is structured into three sub-sections: the first addresses the legal policy direction of Indonesia in navigating digital transformation; the second explores Indonesia's regulatory readiness in fostering digital government; and the third analyzes how the development of digital government converges toward the realization of electronic participation.

a. Good Governance Theory

The implementation of good governance in the management of sustainable development is essential to ensure that governments manage resources efficiently and equitably, while also formulating policies that reflect the needs and aspirations of the community (Keping, 2018). Referring to the definition of governance proposed by the Commission on Global

Governance in its 1995 report titled *Our Global Neighborhood* (Keping, 2018), governance is described as "the sum of the many ways in which individuals and institutions, both public and private, manage their common affairs. It is a continuing process through which conflicting interests may be accommodated and cooperative action may be taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest."

Based on this perspective, good governance can be understood as a collaborative concept between citizens and the government, aimed at maximizing the public interest. Through collaborative and balanced management, the goals of sustainable development can be achieved by proportionally addressing and reconciling the differing interests of both parties (Esty, 2006; Susiatiningsih et al., 2021).

Good governance requires public transparency and institutional accountability to uphold the legitimacy entrusted by citizens to political actors and state institutions. In the digital era, good governance becomes an imperative for governments to remain responsive and regulatory in addressing public interests. This is reflected in the promotion of meaningful participation across all sectors of national development (Ravšelj et al., 2022).

The concept of good governance as collaborative governance emphasizes at least three key elements: the establishment of a

cooperative relationship between the state and its citizens; the presence of a regulatory framework that upholds legitimacy; and the necessity of responsiveness and accountability in effectively addressing public needs.

b. Public Participation

The importance of public participation in the formulation of political, economic, and national development policies underscores the critical need for public involvement in defining the goals of these policies. As a procedural instrument, public participation serves as a fundamental requirement in the practice of governance (Bobbio, 2019). Numerous scholars have attempted to provide comprehensive definitions and frameworks for understanding public participation, both in general terms and in relation to various fields of study (Bobbio, 2019; Innes & Booher, 2005; Rowe & Frewer, 2000; Webler, Tuler, & Krueger, 2001).

One of the most influential figures in the discourse on public participation, Sherry R. Arnstein, argues that “The idea of citizen participation is a little like eating spinach: no one is against it in principle because it is good for you. Participation of the governed in their government is, in theory, the cornerstone of democracy — a revered idea that is vigorously applauded by virtually everyone” (Arnstein, 2019).

Arnstein offers a concrete analysis of public participation through her well-known framework, the “Eight Rungs on a Ladder of Citizen Participation” (Arnstein, 2019). She emphasizes that public participation does not function in

isolation but depends on various enabling factors to ensure its meaningful implementation. The ladder proposed by Arnstein consists of eight rungs, grouped into three broad categories, each representing different levels of citizen influence (Herlambang, Utama, & Putrijanti, 2024).

The eight rungs and three sections of Arnstein’s framework are as follows: non-participation (manipulation and therapy); tokenism (informing, consultation, placation); and citizen power (partnership, delegated power, and citizen control) (Arnstein, 2019). Although Arnstein’s *Ladder of Citizen Participation* was developed in the 1960s, the concept remains highly relevant to shaping meaningful citizen engagement today.

To assess whether public participation has been conducted meaningfully, the indicators outlined in Constitutional Court Decision Number 91/PUU-XVII/2020 can be used. In its *ratio decidendi*, the Court stated that meaningful public participation must fulfill at least three key prerequisites: (1) the right to be heard; (2) the right to have one’s opinions considered; and (3) the right to receive explanations or responses to the opinions submitted.

Community participation also plays a vital role in the development of digital government, particularly in ensuring the protection of personal data. According to Article 8 of Law Number 39 of 1999 concerning Human Rights, the protection, promotion, enforcement, and fulfillment of human rights are primarily the responsibility of the Government. Furthermore, Article 44 of the same law guarantees that every individual or group has

the right to express opinions, submit requests, file complaints, and/or communicate with the Government in the interest of implementing clean, effective, and efficient governance. These rights may be exercised both verbally and in writing, in accordance with prevailing laws and regulations.

In light of these provisions, electronic community involvement in the development of digital government is essential to ensure that such development aligns with established plans and public expectations.

The advancement and proliferation of information technology have ushered humanity into a digital era defined by speed, efficiency, and transparency. In the context of Indonesia, digital disruption—especially in the realm of bureaucratic reform—has introduced a new trajectory for enhancing public services. This transformation emphasizes the principles of good governance and serves as a critical foundation for rebuilding public trust in government in the post-reform era (Barrett et al., 2015).

Based on these issues, this research is crucial for comprehensively examining the implementation of digital government in post-reform Indonesia, which demands transparency, accountability, and effectiveness in public service delivery. Unlike other studies, this research highlights both the periodic and historical transformations that have taken place in Indonesian public services following the advent of the digital era and the penetration of information technology. Moreover, this study addresses the challenges of digital government from a legal and

regulatory perspective by analyzing the interconnections within the legal framework underpinning the implementation of digital government in Indonesia.

The preceding discussion illustrates that the primary aim of this paper is to examine the direction of Indonesia's policy in embracing digital transformation, as well as to assess the development of digital government as a mechanism to facilitate public participation in a digital context.

Numerous prior studies have provided the academic foundation and background for this research. The first is a study titled *“Digital Transformation of the Government: A Case Study in Indonesia”* by Siti Aminah and Heri Saksono, which suggests that the development of digital government or e-government in Indonesia is relatively slow compared to other ASEAN countries. However, the study does not explore the direction of Indonesia's policy or its legal readiness in implementing digital government (Aminah & Saksono, 2021). The primary distinction between that study and this research lies in the focus: this study specifically investigates the obstacles hindering digital transformation, which have caused Indonesia to lag behind its regional neighbors in advancing the digital government agenda. The barriers identified include inadequate regulation, poor data integration, infrastructure gaps, limited competencies, and a weak bureaucratic culture.

The second relevant work is an article by Angelina Egawati titled *“The Impact of New Public*

Management Approach Toward Digital Government in Indonesia." This article examines the implementation of information technology in Indonesia's government sector through the lens of the New Public Management (NPM) approach (Egawati, 2022). While the study concludes that the NPM approach aims to enhance the efficiency and effectiveness of public services, it has instead resulted in sectoral silos and fragmented digital service applications. Egawati advocates for a shift towards a Whole-of-Government Approach (WGA), which emphasizes collaborative governance and aims to create an integrated experience in public service delivery. However, the study does not examine the direction of public policy or Indonesia's legal preparedness in supporting the implementation of digital government—an aspect that is central to this research.

Third, the article titled *"Evaluating E-Government Implementation by Local Government: Digital Divide in Internet-Based Public Service in Indonesia,"* authored by Budi Hermana and Widya Silfianti, focuses specifically on the implementation of e-government or digital government at the local government level. This article primarily evaluates the characteristics of digital government tools, such as web services, website popularity, and site metrics. However, it does not examine the direction of Indonesian policy or the country's legal preparedness for implementing digital government (Hermana & Silfianti, 2011).

Nevertheless, the article identifies key obstacles to digital government implementation in Indonesia—similar to those highlighted in the two previous studies—namely, the limited competency of human resources and inadequate telecommunications infrastructure. These issues also contribute to a digital divide between local governments on the island of Java and those in other regions. Although significant efforts have been made to utilize digital tools through information technology to improve public services and generate broader community impact, many local governments have yet to fully harness the potential of their websites. The key difference between this article and the present study lies in the focus: this research centers on the policy direction and implementation of digital government in Indonesia.

Fourth, the article by Alvedi Sabani, Hepu Deng, and Vinh Thai, titled *"Evaluating the Development of E-Government in Indonesia,"* examines the implementation of e-government development with an emphasis on the stages of digital public service delivery (Sabani, Deng, & Thai, 2019). Although initiatives to enhance public service accessibility and transparency have been underway since 2001, the development of digital government continues to face numerous challenges. As with the previously discussed studies, this article identifies inadequate infrastructure and a lack of skilled human resources as major barriers to progress. However, it does not assess the policy direction or legal readiness of Indonesia in implementing

digital government. Rather, its focus is on service-level development.

Additionally, the article highlights the low level of community readiness in adopting innovative e-government services due to a persistent digital literacy gap. The authors emphasize that collaboration between the government and the public is essential to advancing an effective and efficient digital government agenda aimed at enhancing the overall quality of life (Sabani, Deng, & Thai, 2019).

Fifth, the study conducted by Madya Putra Yaumil Ahad and Adhityo Nugraha Barsei, titled *“Collaborative Governance in the Implementation of Electronic-Based Governance System: Best Practices from Local Government in Eastern Indonesia,”* explores the implementation of the Electronic-Based Governance System (SPBE) in Polewali Mandar Regency, West Sulawesi, as a case study of local best practices in Eastern Indonesia (Ahad & Barsei, 2023). This study highlights the successful integration of services among regional apparatuses, as evidenced by a significant year-over-year increase in the SPBE Index. However, it does not examine the broader policy direction or national legal framework supporting digital government implementation in Indonesia.

Using a case study approach, the research underscores the importance of digital transformation in Polewali Mandar Regency. It finds that collaborative efforts and strong leadership are crucial to the successful

implementation of SPBE. Moreover, a shared understanding and alignment of objectives between local government and collaborative partners are key in supporting the regional digital transformation agenda.

B. RESEARCH METHODS

This article employs a combination of normative legal methodology and empirical research methods. The normative approach is utilized to analyze the development of digital governance regulations, while the empirical approach is applied to assess the implementation of those regulations. The study draws on both secondary and primary data, which are derived from primary, secondary, and tertiary legal sources.

Primary legal sources include all relevant statutes and regulations pertaining to the subject of this article (Ridwan, Jaya, & Imani, 2022). Secondary legal sources consist of scholarly books and journal articles related to digital governance. Tertiary legal sources comprise legal and language dictionaries as well as encyclopedias, which serve as repositories of general knowledge. The analysis is conducted qualitatively, and conclusions are drawn using deductive reasoning.

C. RESULTS AND DISCUSSION

1. Direction of Indonesia's Digital Transformation Policy

The reform movement at the beginning of the 21st century marked a significant milestone in

the transformation of Indonesia's constitutional system (Fatlolon, 2022). This reform successfully dismantled the political power of the New Order regime, which was characterized by centralization, authoritarianism, and a lack of transparency. The movement was largely driven by public dissatisfaction with the governance practices of the regime (Dwiyanto et al., 2006).

In addition to restructuring governance in the post-reform era, Indonesia also encountered rapid advancements in information technology during the same period (Lim, 2003). The widespread use of the internet (interconnection-networking) for information dissemination, data exchange, and communication experienced substantial growth, enabling individuals to interact and connect rapidly within virtual environments. Over time, these developments have significantly influenced vital and strategic sectors of the nation, including the economy, social affairs, culture, and law (Lim, 2003).

The Indonesian government must continue to adapt to the progression of information technology. Normatively, the government has acknowledged the impact of these technological advancements and has sought to formulate responsive measures. This is evidenced by the establishment of the Indonesian Telematics Coordination Team through Presidential Decree No. 30 of 1997. The preamble to this Presidential Decree reflects the government's recognition of the increasing importance of synergy between telecommunications and informatics. Consequently, the government has taken

proactive steps to address and engage in the development of information technology (Dinata & Kurniawan, 2024).

Although Presidential Decree Number 30 of 1997 was issued, the government's adaptation has not shown sufficient progress in responding to the changes brought about by advancements in information technology. In the post-reform period, the slow pace of adaptation to technological developments in Indonesia has been acknowledged by the government. As a result, Presidential Instruction Number 6 of 2001 concerning the Development and Utilization of Telematics in Indonesia was issued. The rationale outlined in Section C of this Presidential Instruction emphasizes the need for a strong commitment from all government agencies and telematics stakeholders to undertake strategic policy initiatives aimed at optimizing the use and development of telematics, both as a means of community empowerment and as a unifying tool for the nation (Nagara & Maulana, 2025).

This commitment is further reflected in the government's admission of its limited capacity to fully harness the potential of telematics technology, as stated in the annex to the aforementioned Presidential Instruction. Moreover, Indonesia's delayed response to rapid technological advancements increases the risk of a digital divide, which could significantly hinder progress in national development and state governance.

Based on the Annex to Presidential Instruction Number 6 of 2001, the government is committed to implementing policies and undertaking measures in the form of action programs aimed at effectively addressing the digital divide. One such program, as outlined in Point 21, concerns the development of online government services as a crucial prerequisite for achieving good governance—thereby enhancing transparency, accountability, and public participation in various governmental activities and functions.

Furthermore, e-Government is intended to improve public service delivery, increase the efficiency of regional autonomy implementation, and minimize potential budgetary leakages. This commitment is executed by all government institutions in coordination with the Indonesian Telematics Coordination Team to ensure alignment in the planning and implementation of programs and initiatives for the advancement and utilization of information technology in Indonesia (Kennedy & Suhendarto, 2020).

The government's full commitment to enhancing public services through information technology is further reflected in the issuance of Presidential Instruction No. 3 of 2003 concerning the National Policy and Strategy for E-Government Development. In this instruction, the government acknowledges that the bureaucratic structure remains rigid, hindering its ability to respond promptly to complex and dynamic changes. Additionally, the hierarchical nature of

governmental administration contributes to delays in public service delivery.

The government also recognizes significant obstacles in engaging with the private sector, which impedes the establishment of effective public-private partnerships. To realize effective governance, the government must leverage advancements in information technology to enhance its capacity for processing, managing, delivering, and disseminating information and public services.

The Presidential Instruction outlines the objectives of e-Government development, articulated through four primary goals: (1) strengthening the information network and ensuring the quality of accessible and affordable public service transactions; (2) establishing interactive relationships with business stakeholders to foster economic development and meet global trade challenges; (3) creating communication mechanisms between institutions to facilitate public participation in policy formulation; and (4) developing transparent, efficient, and sustainable systems and workflows across government agencies and local administrations.

Several regulations accommodating the digital transformation within the digital government sector in Indonesia during the early 2000s have, in reality, not demonstrated dynamic progress. Their implementation remains relatively slow and fluctuating, as reflected in the rankings presented by the EGD in the background section.

Examining the strategy outlined in the Presidential

Instruction, there are six strategies for the implementation of information technology in the public service sector, which include:

1. Developing reliable and trustworthy service systems that are accessible to the wider community.
2. Structuring the systems and work processes of the government and autonomous regional governments holistically.
3. Optimally utilizing information technology.
4. Enhancing the participation of the business sector and developing the telecommunications and information technology industry.
5. Developing human resource (HR) capacity, both in government and autonomous regional governments, alongside improving the e-literacy of the community.
6. Implementing development systematically through realistic and measurable phases.

The implementation of digital government in Indonesia, following Presidential Instruction No. 3 of 2003, has not yet resulted in a significant impact on the development of the digital ecosystem in the country. All government efforts, such as the formulation of steps necessary for preparing the infrastructure and facilities for the digital ecosystem (Widowati, 2023), particularly in implementing the concept of digital government, have been carefully planned and organized. These efforts include categorization based on the nature of information transactions and public services provided by the government through information networks. The implementation is structured across four levels:

1. Level 1 - Preparation, which includes:
 - Creation of informational websites for each agency;
 - Preparation of human resources;
 - Provision of accessible facilities, such as Multipurpose Community Centers, internet cafes, SME Centers, etc.;
 - Socialization of informational websites for both internal stakeholders and the public.
2. Level 2 - Maturation, which includes:
 - Development of interactive public information websites;
 - Establishment of an interface for connectivity with other agencies.
3. Level 3 - Stabilization, which includes:
 - Creation of public service transaction websites;
 - Development of interoperability between applications and data with other agencies.
4. Level 4 - Utilization, which includes:
 - Development of applications for services that are integrated across Government-to-Government (G2G), Government-to-Business (G2B), and Government-to-Citizen (G2C) interactions.

The strategies and stages for implementing digital transformation in digital government are categorized into four levels and can be evaluated in the context of the information technology developments of the time. A comprehensive elaboration of the regulations aimed at accelerating digital transformation in the digital government sector, aligned with technological

advancements in the early 2000s, was timely and demonstrates that the government's actions during that period were highly visionary.

However, the envisioned acceleration has not yet been realized. In fact, it can be argued that government institutions continue to operate and innovate in a siloed, sectorally egocentric manner. While the development of digital public services has become a necessity, the advancement of these digital initiatives lacks structured direction and coherent digital leadership (Souza & Pietrafesa, 2023). As a result, the pace of digital transformation in Indonesia has been slow, contributing to fluctuations in the country's ranking on the E-Government Development Index (EGDI). Digital leadership plays a critical role in driving successful digital transformation (Hensellek, 2022). It is imperative for organizations to adapt their management models and embrace innovation to remain competitive and sustainable.

Normatively, there are no explicit regulations or legislative provisions specifically addressing digital leadership. However, in essence and context, digital leadership is formally vested in the National Information and Communication Technology Council. The legal foundation for this council is established under Presidential Decree Number 1 of 2014 concerning the National Information and Communication Technology Council. In the preamble to this Decree, the government recognizes the importance of digital leadership as a coordinated and synergistic effort involving all stakeholders to

advance the development and utilization of information and communication technology. Accordingly, the Council was established to formulate general policies and strategic directions for national development through information and communication technology—including infrastructure, applications, and digital content—as outlined in Article 1 of the Decree.

The affirmation of digital leadership is further reinforced by Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System (SPBE). This regulation addresses the development of leadership within the SPBE framework at both central and local government levels. Leadership within the SPBE is expected to foster collaboration and drive innovation to ensure the successful implementation of digital government initiatives. Moreover, strong commitment, exemplary conduct, and guidance from leadership are required to create a work environment and organizational culture that supports the advancement of the Electronic-Based Government System.

Although the Presidential Regulation explicitly mandates a commitment to enhancing human resource capacity—particularly in leadership within the Electronic-Based Government System—it also broadly emphasizes the necessity of digital leadership to achieve the overarching objectives of advancing the system. Similarly, digital leadership is essential for formulating policies that drive Indonesia's broader digital transformation agenda.

Digital leadership is vital for governments and public sector organizations to keep pace with the rapid changes brought about by digital transformation. It contributes to improving the efficiency, quality, transparency, participation, and accessibility of public services (Nuryadin, Subandi, & Santoso, 2023). However, weak coordination and insufficient empowerment of human resources in the technology sector remain significant internal challenges for the government in implementing digital governance.

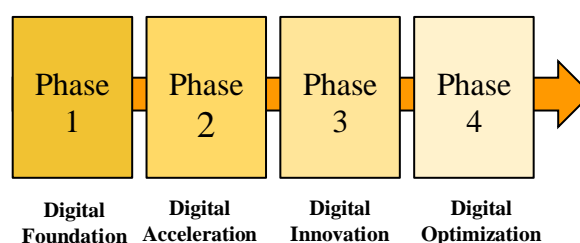
The development of network infrastructure also presents a challenge to ensuring equitable access to digital-based public services (Situmorang et al., 2023). While urban areas generally enjoy widespread internet accessibility, the situation is markedly different in rural areas—especially in regions with mountainous or rugged terrain—where topographical challenges hinder infrastructure development and connectivity (Amron et al., 2016).

Moreover, the enthusiasm for developing a digital ecosystem without a sustainable framework often results in stalled initiatives that fail to provide long-term benefits (Priyanta & Zulkarnain, 2023). In response to these challenges, it is recommended that the government establish a well-targeted collaborative framework involving academia, civil society, business actors, and other relevant stakeholders to improve the effectiveness of digital transformation initiatives in Indonesia (Hernanda et al., 2022).

The government may consider adopting the digital transformation framework proposed by the National Information and Communication Technology Council, as detailed in the accompanying document. By reinforcing the digital foundation—including infrastructure, operational systems, human resource preparedness, and strategic policy formulation—the government can lay the groundwork for gradually enhancing national readiness and aligning public understanding regarding the direction, objectives, and strategies for digital transformation.

A robust digital foundation will accelerate the rollout of digital initiatives by fostering innovation in the development of operational systems, which have been recognized as essential to the digital transformation process. Once this foundational acceleration leads to meaningful innovation, efforts must be made to optimize and sustain the momentum to ensure the long-term success of Indonesia's digital transformation.

Figure 2. Stages of the National Information and Communication Technology Council.



Source: Reprocessed by the Author

Community participation is also important in the development of digital government which will further protect personal data. According to Article 8 of Law Number 39 of 1999 concerning

Human Rights, the protection, advancement, enforcement, and fulfillment of human rights are essentially the responsibility of the Government.

2. Regulatory Readiness in Indonesia in Realizing Digital Government

The changes occurring at both national and international levels, along with strategic issues that are essential to the development of the nation and its people, must be addressed through legal instruments in the form of legislation. Such legislation should serve as a sustainable legal foundation that encourages collaboration, elaboration, and transformation aimed at maximizing the nation's potential for the welfare of society (Nataliia, Yuliia, & Volodymyr, 2022). In the context of digital government and digital transformation driven by advancements in information technology, legal frameworks must be developed to accommodate these issues and provide a solid foundation for the growth of the digital ecosystem.

Previously, several legal instruments, including presidential instructions and presidential decrees, have been identified as the foundational legal basis for digital transformation—particularly in the early phases of digital government development in Indonesia. At the legislative level, various laws have been enacted to regulate activities involving digital-based information technology within society, including those related to e-commerce, e-payment systems, and similar digital services. In the domain of public services and governmental administration, systems such as electronic-based population information

systems, digital licensing services, and digital tax payment platforms have been implemented.

In 2018, the President enacted Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System. This regulation sets forth provisions related to the management, governance, information technology audits, acceleration strategies, institutional arrangements, as well as the monitoring and evaluation of Electronic-Based Government System implementation. It is important to note that since the introduction of regulations concerning digital government in 2001, there has been a lack of consistency in the terminology used to define the concept of digital government.

For example, Presidential Instruction Number 6 of 2001 on the Development and Utilization of Telematics in Indonesia refers to digital government as “government online.” In contrast, Presidential Instruction Number 3 of 2003 on the National Policy and Strategy for the Development of E-Government uses the term “electronic government” or “e-government.” Lastly, in Presidential Regulation Number 95 of 2018—which serves as a comprehensive legal framework for digital government—the concept is referred to as the “Electronic-Based Government System.”

Referring to the legislative hierarchy as regulated in Law Number 12 of 2011 concerning the Formation of Legislation (P3 Law), as amended by Law Number 13 of 2022 on the Second Amendment to Law Number 12 of 2011,

the position and legal authority of presidential regulations are clearly defined (Isnawati, 2022). As the head of government who exercises executive authority under the 1945 Constitution of the Republic of Indonesia, regulations issued by the President do not automatically possess superior legal force or hierarchical authority over other legislative instruments.

According to Article 7, Paragraph (1) of Law Number 30 of 2014 on Government Administration, presidential regulations are hierarchically subordinate to government regulations, laws or regulations in lieu of laws, decrees of the People's Consultative Assembly, and the 1945 Constitution itself. Essentially, presidential regulations function as complementary instruments intended to support the President's role in executing legislative mandates or to facilitate the administration of government affairs (Sinaga & Sa'adah, 2024).

As such, presidential regulations cannot serve as a comprehensive legal foundation for the implementation of digital government. In addition to being merely implementing instruments, they also lack the authority to regulate other branches of government, such as the legislative or judicial branches. This becomes problematic when digital government is envisioned as a cross-sectoral initiative that requires a unified framework and cooperation across various institutions.

The implementation of Presidential Regulation Number 95 of 2018, when evaluated in light of the legislative formation principles outlined in Article 5(g) of the Law on the

Formation of Legislation—particularly the principle of alignment between the type, hierarchy, and substance—demonstrates that this regulation falls short in comprehensively governing both the upstream and downstream mechanisms of digital government in Indonesia. Article 13 and its elucidation stipulate that the content of a presidential regulation must be limited to matters expressly mandated by law, materials necessary for the implementation of government regulations (either explicitly or implicitly), or materials essential for the exercise of governmental authority.

A critical point of concern arises from the ambiguous phrase “governmental authority” mentioned in Article 13. The key question is: to what extent does this authority extend, and how should its limits be interpreted and applied? When viewed through the lens of the President's role within the government structure, the President serves as a high-ranking official within the executive branch. In the classical doctrine of *trias politica*, the legislative, executive, and judicial powers are considered equal and mutually limiting. Therefore, the scope of “governmental authority” as exercised by the President should be understood as confined to executive functions, including administrative and diplomatic affairs, as well as other matters under the purview of the executive as defined in presidential doctrine.

Based on the analysis, Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System is limited in its applicability to executive institutions only.

While this Presidential Regulation may serve as a guideline for other branches of state institutions beyond the executive, it does not fully conform to the legal hierarchy of regulations or the substantive content requirements of legislative provisions.

The urgency to establish a legal instrument with broader scope—specifically, legislation in the form of a law—is imperative in light of the rapid advancement of information technology. Failure to establish such legal instruments may lead to delays and setbacks in digital transformation, particularly within the government sector, which urgently requires a concrete legal foundation. Moreover, the weaknesses in digital governance—currently regulated only through a presidential regulation—may foster perceptions of strong institutional sectoral egoism. As a result, each state institution (executive, legislative, and judicial) may struggle to build a unified database for harmonizing data in public services.

In addition, when examining the regulations that form the legal basis for accelerating digital infrastructure development, it is essential to address statutory laws or regulations with digital dimensions. At the constitutional level, the 1945 Constitution of the Republic of Indonesia—specifically Article 31, Paragraph (5), as further elaborated in Articles 33 and 34, Paragraph (3)—provides a constitutional foundation for Indonesia's digital transformation. These articles underscore the government's obligation to anticipate and respond to technological advancements through strategic planning to

ensure the provision of public services that support public welfare and enhance democratic quality.

At the legislative level, several laws are relevant, including Law Number 36 of 1999 concerning Telecommunications. Articles 4 and 7, Paragraph (1) of this law play a significant role in shaping the development of information technology. The implementation of telecommunications—including the provision of telecommunications networks, services, and special telecommunications—must be aligned with the advancements in information technology.

Furthermore, the state has an obligation to actively participate in the comprehensive management of telecommunications infrastructure—from upstream to downstream. Such involvement is essential to prevent monopolistic practices and discriminatory behavior that conflict with the foundational principles of telecommunications governance.

Law Number 14 of 2008 concerning Public Information Disclosure, particularly Articles 9, 10, and 11, Paragraph (1), establishes that public access to information is a core component of digital government. Government services must encompass Government-to-Government (G2G), Government-to-Citizen (G2C), Government-to-Business (G2B), and Government-to-Employee (G2E) interactions. Facilitating public access to information in the digital era has become a necessity and serves as a benchmark for evaluating an institution's ability to operate in line with global developments.

Law Number 17 of 2007 concerning the National Long-Term Development Plan for the Years 2005–2025 serves as the foundational framework for the development of digital infrastructure in Indonesia. Law Number 24 of 2013, which amends Law Number 23 of 2006 concerning Population Administration, explicitly states in Article 82 that the implementation of the population administration information system by the government has, *mutatis mutandis*, a significant impact on the development of digital government and the ongoing digital transformation process.

Law Number 23 of 2014 concerning Regional Government—particularly Articles 101, 102, 274, Article 391 paragraph (2), Article 393 paragraph (2) letter f, and the Appendix on the Division of Government Affairs in the fields of Public Works and Spatial Planning—emphasizes the need for an information system that fundamentally depends on advancements in information technology to support the performance and functionality of such systems.

All provisions within Law Number 30 of 2014 concerning Government Administration play a vital role in shaping the legal content and normative standards necessary to realize digital government in Indonesia. This law provides a normative foundation for the implementation of digital government, particularly regarding the rights and obligations of public officials in delivering public services based on the principles of good governance.

Furthermore, Law Number 19 of 2016, which amends Law Number 11 of 2008 on Electronic Information and Transactions—and which was most recently amended by Law Number 1 of 2024—states in Article 40 that the government plays a key role as a facilitator in the development of information technology and electronic transactions. This role is particularly important in protecting the public interest from the misuse of electronic information and transactions.

At the level of government regulation, Government Regulation Number 96 of 2012 concerning the Implementation of Law Number 25 of 2009 on Public Services serves as an implementing regulation of that law. This regulation is crucial in the context of elaborating public service mechanisms in line with technological advancements that support digital transformation (digital government). Additionally, Government Regulation Number 71 of 2019 concerning the Administration of Electronic Systems and Transactions holds significant importance, as it facilitates the use of information technology and electronic transactions while ensuring the protection of public interests from the misuse of digital information and electronic systems that could disrupt public order.

There is also concern regarding the government's database, which is currently regulated only through a Presidential Regulation—specifically, Presidential Regulation Number 39 of 2019 concerning One Data Indonesia. As previously discussed, the limitations of Presidential Regulations in terms of

their authority to bind all branches of state institutions—executive, legislative, and judicial—underscore the need for database governance to be regulated through a higher legal instrument, namely a law.

Although the issuance of this regulation aims to address the legal vacuum in managing government data, prevent data fragmentation, and facilitate the integration of planning, implementation, evaluation, and control processes through the development of accurate, integrated, up-to-date, accessible, sustainable, and accountable data, the inherent limitations of Presidential Regulations pose a significant challenge to realizing the envisioned digital ecosystem.

3. Convergence of Digital Government Development to Facilitate Electronic Participation

The utilization of digital tools in public services in Indonesia has had a significant impact. Digitalization has improved performance systems within local governments by bridging gaps related to nepotism and enabling the selection of more competent civil servants (Nugroho, Rahayu, & Yusuf, 2023). However, the implementation of digital government policies still lacks a robust structural regulatory framework (Firmandayu & Elfaki, 2023; Putrijanti & Wibawa, 2021).

Collaborative governance plays a crucial role in supporting the development of digital villages, enhancing information services, and

improving the community's economy (Hamka, Murtinah, & Giyanto, 2023). On the other hand, the implementation of digitization in public service governance does not always proceed as expected, leading to conflicts between the government and the community, particularly in the management of population documents (Nulhaqim, Deliarnoor, & Putri, 2023). Good governance is essential for realizing a sustainable digital ecosystem, as it can reduce cybercrime and support the growth of e-commerce and digital startups in the economic sector (Marwan, Garduno, & Bonfigli, 2022).

Obstacles to the utilization of digital tools in the governance of public services in Indonesia include inadequate regulations and policies that are necessary to encourage and guide the implementation of digital government, which remain significant challenges (Firmandayu & Elfaki, 2023). Furthermore, the lack of data integration can hinder the effective implementation of digital governance. Disparities in the availability of information technology infrastructure across regions, limited competencies in the field of information technology, and the prevailing bureaucratic culture and leadership practices present further challenges to the development of digital government in Indonesia.

The protection of personal data in digital governance in Indonesia must be given special attention. Digital transformation has significant implications for the legal framework. Ensuring the protection and implementation of citizens'

fundamental rights is part of the government's responsibility. Efforts to protect personal data in Indonesia have only recently materialized with the enactment of Law Number 27 of 2022 on Personal Data Protection.

This law is crucial for preventing privacy violations and ensuring data protection, particularly concerning financial transactions and digital information related to personal data. However, existing laws and regulations must continuously adapt to the current landscape of digital developments. The significant rise in digital attacks in Indonesia has resulted in vulnerabilities in personal data security, potentially exacerbating risks (Yuspin et al., 2023). Additionally, one issue that needs to be addressed within the government is the lack of intensive collaboration among government agencies, the community, and the private sector. This hampers digital transformation and the provision of quality information services.

In addition to personal data protection, community involvement as part of public participation is also essential in the development of digital government, which further safeguards personal data. According to Article 8 of Law Number 39 of 1999 concerning Human Rights, the protection, promotion, enforcement, and fulfillment of human rights is primarily the responsibility of the government. Furthermore, the Human Rights Law in Article 44 guarantees that every individual or group has the right to express opinions, submit requests, lodge complaints, and/or engage with the government in the context of implementing clean, effective, and efficient

governance, both verbally and in writing, in accordance with the provisions of statutory regulations. Considering the provisions of this article, electronic community involvement in developing the concept of digital government is crucial for the government to ensure that digital government development aligns with the established plans.

D. CONCLUSION

Based on the results of this study, the following conclusions can be drawn:

The demand for digitalization is increasingly unavoidable, particularly in the public service system. For Indonesia, the digitalization of governance presents a significant challenge due to sectoral egos that continue to influence the development and implementation of digital governance. A key recommendation to improve the quality of digital governance in Indonesia is the establishment of a law specifically addressing digital governance. This step aims to ensure that all high state institutions have a guiding framework, fostering well-coordinated integration to support digital transformation across the country.

It is essential to establish a separate state institution tasked with regulating, implementing, and evaluating the digital government system. This is necessary to mitigate the perception of sectoral egoism in the development of digital government in Indonesia. In terms of infrastructure to accelerate digital transformation, government attention must also be directed

toward this area, as a well-conceived concept without well-prepared infrastructure will ultimately be ineffective.

The development of digital talent capable of responding swiftly to changes in information technology is critical for accelerating the digital transformation itself. Additionally, attention to electronic community involvement is an important aspect that needs to be considered to ensure that public services produced through the development of digital government are beneficial to the communities that rely on these services.

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