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DIGITAL GOVERNANCE DEVELOPMENT PLANNING 2025: ROADMAP FOR SMART GOVERNANCE

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Abstract : The development planning for Digital Governance 2025 is a strategic initiative aimed at realizing an adaptive, inclusive, and technology-driven smart government. In response to the rapid digital revolution, the government is required to integrate information systems, utilize big data, automate administrative processes, and strengthen cybersecurity frameworks. This roadmap is designed as a comprehensive guideline to ensure that digital transformation proceeds in a structured and sustainable manner, covering the improvement of digital infrastructure, enhancement of civil servant competencies, service standardization, and cross-stakeholder collaboration. Additionally, the development of Digital Governance emphasizes the importance of data interoperability among government institutions to provide faster, more transparent, and more efficient public services. A participatory approach is also prioritized by involving citizens and private-sector partners in service innovation. The 2025 roadmap is expected to serve as a solid foundation for building a modern, secure, and responsive digital government ecosystem that aligns with the evolving needs of society while enhancing national competitiveness in the digital economy. Thus, the development of smart governance is not only a technological shift but also a transformation of bureaucratic culture, processes, and mindsets toward a more open and sustainable government.

Keywords : Digital Governance, Roadmap, Smart Government, Digital Transformation, Public Service

INTRODUCTION

Digital transformation in government has become a strategic direction for Indonesia to accelerate improvements in the quality of public services and the effectiveness of state governance by 2025. Digital governance is seen as a framework capable of delivering more efficient, adaptive, and transparent administrative processes. The integration of information technology in government institutions is not only related to the provision of digital services, but also encompasses changes in bureaucratic work models, improving the quality of civil servant resources, and consolidating the national data management system. The 2025 Digital Governance development roadmap is aimed at realizing a government that is intelligent, inclusive, and able to respond to the increasingly dynamic needs of society. Furthermore, digital governance opens up opportunities to strengthen cross-institutional coordination through the use of integrated data and system interoperability. Thus, digital transformation is not merely a technical innovation, but a strategic foundation for modern, responsive and accountable governance (Basyir, 2022).

Efforts to realize smart governance require policy reforms that favor efficiency, process simplification, and the sustainable use of technology. The Indonesian government has introduced various service digitization policies, but their implementation still faces challenges such as infrastructure gaps, disparities in digital literacy, and the readiness of state officials to adopt digital systems. Meanwhile, public demand for faster, more transparent, and more accessible public services is increasing, making digital governance a strategic necessity. In this context, e-governance is a key instrument in increasing public trust through more accountable and participatory services. Strengthening transparency through digitalization also encourages the creation of a more accountable government environment free from maladministration. Therefore, the 2025 Digital Governance Roadmap provides direction for strengthening digital policies that are measurable, integrated, and oriented towards improving the quality of public services (Fairuzyah & Arkaan, 2024).

Smart city development is a crucial part of the 2025 Digital Governance Roadmap because it directly relates to improving the quality of life for the community and the effectiveness of regional governance. The smart city concept emphasizes not only the use of technology but also strengthening collaboration between the government, the community, and the private sector.

The use of real-time data, digital sensors, and integrated information systems enables local governments to respond to various public issues more quickly and accurately. However, smart city implementation in Indonesia still faces obstacles, particularly related to data integration, human resource readiness, and policy consistency at the regional level. Therefore, digital development planning must address regulatory aspects, data governance, and capacity building of regional officials to ensure alignment of smart city programs across Indonesia (Kristian & Nuradhawati, 2024).

The role of civil servant resources is a fundamental factor in the success of digital governance. Civil servants are required to be adaptive to technology, understand the working mechanisms of digital systems, and demonstrate a commitment to quality public services. The main challenges that often arise are low digital literacy and resistance to change, which still persists in some government agencies. Furthermore, digital governance requires consistent implementation, encompassing service systems, population administration, and government document management. The implementation of public service applications such as digital population services in various regions demonstrates that increasing civil servant capacity can boost service effectiveness and increase public satisfaction. Therefore, the 2025 Digital Governance Roadmap must place significant emphasis on improving civil servant competency, strengthening a digital work culture, and fostering bureaucratic professionalism (Nurnawati, 2019).

Digital governanceDigital systems also play a crucial role in increasing transparency and accountability in government administration. With digital systems, the process of recording, monitoring, and evaluating government performance becomes more objective and accessible to the public. This aligns with the principles of good governance, which emphasize information transparency and accountability for official performance. Digitalization enables the public to more effectively oversee the planning, budgeting, and implementation of government programs. However, the government still needs to ensure that digital transformation focuses not only on providing applications but also on strengthening technology-based oversight systems capable of preventing abuse of authority. Therefore, strengthening the digital regulatory framework and technology-based audit systems is a strategic part of the journey towards a more transparent and accountable smart government in 2025 (Santoso, 2025).

Digital Governance Roadmap 2025provides a clear direction for Indonesia to create efficient, adaptive, and sustainable governance. This digital transformation is expected to encourage innovation in public services through system integration, the utilization of big data, and the use of artificial intelligence-based technology. Regional and central governments must share a common vision so that digital development can proceed in sync and support each other. Furthermore, public participation is a crucial element in ensuring that digital governance implementation is accountable and meets public needs. Therefore, the 2025 Digital Governance development plan is not merely a technological modernization agenda, but a national strategy to strengthen governance quality and enhance national competitiveness. Consistent and measurable implementation is key to success towards an inclusive and trusted smart government (Utami, 2025).

THEORETICAL REVIEW

Digital governance is a governmental management concept that utilizes information and communication technology (ICT) to improve bureaucratic efficiency, transparency, and accountability. This concept encompasses the implementation of e-government, integrated data management, and the strengthening of smart cities to support responsive and participatory public services. Digital governance also emphasizes the importance of apparatus capacity, information security, and public involvement in policy oversight. The Digital Governance 2025 roadmap directs Indonesia to create an adaptive, inclusive, and data-driven administrative system (data-driven decision-making), enabling more effective inter-institutional coordination and sustainable public service innovation. Digital transformation is not merely the provision of technology, but a strategic foundation for modern, intelligent and accountable governance (Basyir & Fairuzyah, 2022).

Digital Governance Theory

Digital governance has evolved as a theoretical framework explaining how technology can be used to improve government processes, increase transparency, and strengthen the efficiency of public services. From a digital governance theoretical perspective, the use of information and communication technology (ICT) is a key instrument enabling governments to build faster, more responsive, and more accountable systems. This approach emphasizes the importance of data integration

between agencies, the interoperability of public service applications, and the consistency of digital policies across all levels of government. Furthermore, digital governance requires the support of competent human resources so that digital transformation is not merely technical but also drives a shift in bureaucratic culture toward a modern service model. This theory positions technology as a catalyst for smart governance, where data forms the basis for strategic decision-making. Thus, digital governance serves as a conceptual foundation for understanding the roadmap for smart governance towards 2025 (Basyir, 2022).

Smart City Theory

The smart city concept theoretically describes the use of digital technology to improve the quality of life for citizens, simplify public services, and create efficiency in managing city resources. Smart city theory emphasizes the integration of digital systems such as sensors, real-time data, and smart infrastructure to support faster and more accurate decision-making by local governments. In addition to technological aspects, this theory also emphasizes the importance of collaboration between the government, the community, and the private sector as a pillar of successful smart city development. Within the Digital Governance 2025 framework, smart city theory provides a basis for how governments can create adaptive, inclusive, and long-term-oriented urban environments. Barriers such as unprepared human resources, data inconsistencies, and infrastructure gaps are crucial in this theoretical study. Therefore, smart city theory serves as an analytical foundation for understanding the focus of digital development at the regional level (Kristian & Nuradhawati, 2024).

E-Government Theory

E-government theory bases its understanding on the digitalization of government services to accelerate service delivery, improve bureaucratic quality, and strengthen public governance. This concept focuses on the use of digital platforms, online service delivery, and integrated applications to support government administration. Theoretically, e-government not only changes the way the government serves the public but also encourages structural transformation by simplifying processes, reducing bureaucratic barriers, and increasing transparency.

The e-government model also emphasizes public participation through more open and accurate access to information. In the context of Digital Governance 2025, this

theory provides a scientific foundation for understanding how digitalization can increase public satisfaction, strengthen public trust, and prevent maladministration. Therefore, e-government theory is a crucial element in designing a smart government roadmap (Nurita, 2024).

Digital Apparatus Competence Theory

Digital transformation in government cannot be effective without the support of adequate civil servant competency. The theory of digital civil servant competency emphasizes that technical skills, technological literacy, adaptability to change, and professionalism are key factors in implementing digital governance. Civil servants need to master digital workflow systems, data management, and the use of public service applications to be able to provide fast and accurate services. This theory also highlights resistance to change as a common obstacle in bureaucracy, so training, coaching, and improving a digital work culture must be carried out continuously. Within the framework of Digital Governance 2025, the role of civil servants is strategic because the success of digital policies is highly dependent on the quality of their implementers in the field. The implementation of digital population services in various regions provides empirical evidence of the importance of human resource capacity in supporting smart governance (Nurnawati, 2019).

Theory of Digital Transparency and Accountability

The theory of digital transparency and accountability explains how technology can be used as a tool to ensure information transparency and accountability in governance. The use of digital systems allows for more objective, accurate, and publicly accessible monitoring, reporting, and performance evaluation processes. This theory emphasizes that digitalization is not just about applications, but also about providing oversight mechanisms based on digital auditing and data tracking to prevent abuse of authority. In modern governance, digital transparency is expected to strengthen public trust and create a clean government environment. This theory serves as an important conceptual foundation for understanding the direction of the Digital Governance 2025 roadmap, particularly in ensuring that digitalization also brings increased accountability, not just technological modernization (Santoso, 2025).

Public Participation Theory in Digital Governance

Public participation theory emphasizes the importance of public involvement in the planning, implementation, and evaluation of digital governance policies. This approach views citizens as strategic partners who can provide input, monitor program implementation, and assess the effectiveness of technology-based public services. Digital tools such as online feedback platforms, complaint applications, and social media enable citizens to interact directly with the government, making decision-making more transparent, accountable, and responsive to public needs. In the context of the Digital Governance 2025 roadmap, public participation not only improves service quality but also strengthens the legitimacy of government policies and builds public trust. This theory asserts that the success of digital transformation depends on synergy between government and citizens, where technology serves as a medium that facilitates two-way communication and ongoing collaboration to create an inclusive and adaptive smart government (Fairuzyah & Arkaan, 2024).

METHODOLOGY

This research method uses a descriptive qualitative approach to analyze the 2025 Digital Governance development plan as a roadmap for smart governance. This research emphasizes an in-depth understanding of digital transformation policies, strategies, and practices in the context of technology-based public services. Data were collected through literature reviews, official government documents, policy reports, journal articles, and publications related to the implementation of digital governance in Indonesia. The analysis was conducted by identifying key themes, evaluating the alignment between policies and practices, and assessing infrastructure readiness, apparatus capacity, and system interoperability. This research also highlights the role of public participation and the private sector as partners in public service innovation. Using a descriptive approach, this research aims to map the overall Digital Governance development strategy, so that the 2025 roadmap can be understood as a comprehensive guide to creating adaptive, inclusive, transparent, and sustainable governance, while strengthening national competitiveness in the digital era (Basyir, 2022; Fairuzyah & Arkaan, 2024).

RESULTS AND DISCUSSION

RESULTS

Research resultStudies have shown that the implementation of digital governance in Indonesia has strengthened administrative efficiency and transparency in public services. E-government and data system integration enable the government to respond quickly and with evidence-based responses to public needs. Smart cities are a key strategy, where digital technologies such as sensors, monitoring dashboards, and online complaint platforms support the quality of life and the effectiveness of public services. However, this implementation faces obstacles in the form of limited human resources, infrastructure readiness, and uneven digital literacy. Increasing the capacity of civil servants, as well as public outreach and education, are crucial steps to ensure effective and equitable digital transformation. Thus, digital governance serves as a strategic framework that integrates technology, policy, and human resources to achieve responsive and accountable governance (Kristian & Utami, 2024).

In addition to technical aspects, human resources are a key determinant of successful digital governance implementation. Officials are required to possess digital competency, adapt to technological innovation, and commit to quality public services. Dashboard-based monitoring systems and IT audits support accountability and prevent maladministration. Digital transformation also encourages cross-institutional collaboration and the integration of public services. Emerging challenges include resistance to change, technological adaptation, and consistent implementation across regions. Therefore, the Digital Governance roadmap

Table 1: National Digital Governance Strategy

No	Strategic Aspects	Implementation	Impact	Challenge
1	Digital Policy	Roadmap 2025	Process efficiency	Limited infrastructure
2	Data Management	Big Data Integration	Transparency	Low human resource literacy
3	Public Services	E-Service	Public satisfaction	Apparatus resistance

4	Information Security	IT Security System	Public trust	Cyber threats
5	Evaluation & Monitoring	Monitoring Dashboard	Accountability	Synchronization between institutions

Explanation of Table 1:

Table 1 emphasizes strategic aspects in the development of digital governance, where digital policy serves as the foundation for the implementation of the 2025 roadmap. The integration of big data and monitoring dashboards strengthens evidence-based decision-making, resulting in faster and more efficient and responsive public services through e-services. Information security and monitoring systems ensure public trust is maintained and support accountability. This digital transformation not only introduces technology but also transforms bureaucratic processes, strengthens collaboration between institutions, and improves the overall quality of public services. Digital governance provides a framework that enables adaptation to the dynamic needs of modern society, while emphasizing the principles of good governance.

Despite its numerous benefits, the implementation of digital governance faces significant challenges, such as limited infrastructure, apparatus resistance, and varying levels of human resource readiness. Strengthening digital literacy is a strategic necessity to ensure effective and equitable transformation. A monitoring dashboard enables real-time evaluation and oversight, allowing each digital policy to be quickly adapted to changing public needs. Furthermore, system integration and cybersecurity are prerequisites for the smooth operation of public services. Therefore, the digital governance roadmap serves as a strategic foundation that combines technology, human resources, and policies to create a modern, intelligent, and accountable government.

Table 2: Smart City Implementation

No	Smart City Components	Implementation	Benefit	Obstacle
1	Smart Transportation	IoT Transport	Smooth mobility	Data integration
2	Digital Environment	Air Quality Sensor	Public health	High costs
3	IT infrastructure	Cloud Governance	Management efficiency	Limited human resources

4	Public Participation	Online Complaint Platform	Transparency	Community adoption
5	Data Security & Protection	Firewall & Encryption	Public trust	Cyber threats

Explanation of Table 2:

Table 2 highlights the role of smart cities in digital development, including smart transport, digital environments, and cloud-based IT infrastructure. IoT-based transportation systems enable smoother and safer public mobility (efficient mobility), while environmental sensors support air quality and public health monitoring. Cloud governance facilitates data management and inter-agency coordination (data-driven management), while online complaint platforms enhance public participation and accountability (public engagement and accountability). Data security and protection are top priorities to maintain public trust and ensure the security of digital systems. Each component of a smart city must be integrated to maximize the benefits of digitalization.

Although smart city technology offers significant benefits, its implementation faces challenges, such as complex data integration, limited competent human resources, high costs, and varying levels of public adoption. The government needs to develop a phased implementation strategy, including human resource training and public outreach. Strengthening information security regulations and data encryption are crucial steps to prevent cyber threats. With a systematic approach, smart city development is not only about technology, but also about transforming local governance, improving the quality of public services, and encouraging active citizen participation.

DISCUSSION

Table 3: The Role of State Apparatus in Digital Governance

No	Functions of the Apparatus	Implementation	Impact	Challenge
1	Public service	E-Service Training	Citizen satisfaction	Resistance to change
2	Data Management	System Integration	Work efficiency	Limited human resources
3	Supervision	IT Audit	Transparency	Lack of competence

4	Decision-making	Analytics Dashboard	Accountability	Technology adaptation
5	Cross-Institutional Coordination	Integrated System	Effective collaboration	Policy synchronization

Explanation of Table 3:

Table 3 emphasizes the importance of the civil service's role in digital governance, where e-service training, IT audits, and the use of analytical dashboards are key instruments for improving public service quality. System integration and cross-agency coordination strengthen inter-agency collaboration and bureaucratic accountability. A technologically adaptive civil service is able to respond quickly to public needs, increase citizen satisfaction, and minimize the potential for maladministration. Digital transformation demands changes in work culture, human resource competency, and technological mastery for effective and sustainable digital governance implementation.

However, challenges persist, including resistance to change, limited digital competency, and adaptation to new technologies. Increasing the capacity of civil servants through training, technical guidance, and regular evaluations is a key strategy (capacity building). Analytical dashboards enable real-time performance monitoring, enabling data-driven decision-making. Furthermore, cross-agency system integration fosters effective collaboration and policy alignment. Thus, the civil servant's role is not merely as an implementer, but also as a key driver of digital transformation toward smart governance.

Table 4: Transparency, Accountability, and Digital Monitoring

No	Aspect	Implementation	Benefit	Obstacle
1	Transparency	Public Dashboard	Access to information	Community readiness
2	Accountability	IT Audit System	Accountability	Limited human resources
3	Monitoring	Program Evaluation	Service effectiveness	Data integration
4	Public Participation	Online Feedback	Public oversight	Low adoption

5	Risk Management	IT Security System	Public trust	Cyber threats

Explanation of Table 4:

Table 4 emphasizes transparency, accountability, and monitoring as pillars of digital governance. Public dashboards and online feedback enable the public to access information openly (public access to information) and participate in citizen oversight of government programs (citizen oversight). An IT audit system and program monitoring and evaluation support bureaucratic accountability and improve the effectiveness of public services. Risk management through an IT security system builds public trust and minimizes potential cyber threats. This implementation demonstrates that digital governance is not simply technology, but also a governance transformation that simultaneously combines transparency, accountability, and public participation.

Despite its significant benefits, several obstacles need to be addressed, such as public readiness to access digital systems, limited human resources, complex data integration, and evolving cyber threats. The government needs to strengthen digital literacy, expand public participation, and enhance oversight capacity through technology. Real-time dashboard-based monitoring is a strategic tool for policy and program evaluation. With this holistic approach, digital governance not only increases efficiency and transparency but also strengthens government accountability and credibility in providing smart, adaptive, and responsive public services.

CONCLUSION

This conclusion confirms that the 2025 Digital Governance development plan is a strategic step towards realizing intelligent, adaptive, inclusive, and sustainable governance. This roadmap focuses not only on technological transformation but also on strengthening the capacity of civil servants, standardizing services, inter-agency data interoperability, and the participation of the public and the private sector as innovation partners. The implementation of an integrated digital governance strategy will increase the efficiency, transparency, and accountability of public services, while strengthening national competitiveness in facing the dynamics of the digital economy. Thus, the development of Digital Governance 2025 serves as the foundation for the creation of a modern government ecosystem that is responsive to public needs, professional, and trustworthy, and able to effectively address the challenges of the digital revolution.

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