

ANALYSIS OF DIGITAL GOVERNANCE IMPLEMENTATION IN MODERN ORGANISATIONS: CHALLENGES AND SOLUTIONS

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Abstract

This study aims to analyse the implementation of digital governance in modern organisations, focusing on identifying the challenges faced and the strategic solutions that can be applied. Digital governance is an important aspect in supporting organisational transformation towards efficiency, transparency, and accountability based on information technology. However, its implementation is not without various obstacles, such as infrastructure constraints, human resource readiness, cyber security, and suboptimal regulations. Through literature review and comprehensive analysis, this study outlines these challenges and formulates strengthening strategies that include technology investment, human resource capacity building, security policies, regulatory collaboration, and technological innovations such as artificial intelligence and big data. The results of this study are expected to provide theoretical contributions as well as practical recommendations for organisations seeking to implement effective and sustainable digital governance.

Keywords: *Digital Governance, Modern Organisations, Challenges, Solutions, Digital Transformation, Cyber Security, Digital Literacy, Technology Policy, Artificial Intelligence, Big Data.*

INTRODUCTION

The rapid development of information and communication technology (ICT) has brought significant changes in various aspects of life, including how modern organisations conduct governance. The digital transformation that is occurring on a global scale has not only encouraged the emergence of new business models, but also forced organisations to adopt new approaches in managing internal processes, public services, and relationships with stakeholders (Barrow, 2024). In this context, the concept of digital governance has become the centre of attention because it serves as a framework to ensure that the use of digital technology supports the achievement of organisational goals while still considering the principles of transparency, accountability, and legal compliance (Arantes, 2025). Digital governance can be understood as a technology-based management mechanism that integrates policies, processes, structures, and resources to achieve added value for the organisation. Its implementation is not merely the use of online applications or systems, but encompasses a comprehensive approach involving strategy, policy, risk management, and data-based monitoring and evaluation (Anonymous, 2023). The strategic role of digital governance is becoming increasingly important as organisations need to adapt to increasingly competitive global competition. Organisations that fail to implement digital governance effectively will face obstacles in terms of efficiency, speed of decision-making, and trust from stakeholders (Kirana et al., 2025).

As organisations become increasingly dependent on digital technology, various complex challenges arise. These challenges are not only technical, but also relate to organisational culture, human resource readiness, and the regulatory framework governing the use of data and technology. For example, low digital literacy and employee resistance to change often hinder the transformation process. On the other hand, the growing threat of cyber security poses a very high risk to organisations, especially regarding the protection of sensitive data and user privacy (Nyeleker et al., 2025). Regulations and policies that are not yet synchronised between the government and organisations are also a problem in themselves. Many countries, including Indonesia, are still in the process of drafting and refining various regulations related to information security, personal data protection, and comprehensive digital governance. This has an impact on legal uncertainty for organisations in taking strategic steps (Anthopoulos

& Vakali, 2020) . As a result, some digital initiatives are too slow to be implemented or even stop at the planning stage. The lack of clarity in regulations can also cause doubts in the application of new technologies such as big data, artificial intelligence, and the Internet of Things (IoT) (Booyens, 2023b) . Apart from regulatory barriers, internal organisational factors also have a significant impact on the implementation of digital governance. Many organisations still face difficulties in integrating between divisions and between systems due to inconsistent digital infrastructure. Siloed systems lead to inefficiencies in workflows, data overlap, and weak coordination. These conditions hinder the effective implementation of comprehensive digital governance (Karinda, 2024) . Therefore, it is important for organisations to plan a clear, measurable digital governance roadmap that is capable of addressing long-term needs.

At the same time, there are also great opportunities through digital governance which, if managed properly, can increase transparency, accountability, and the quality of organisational services. The use of digital technology enables organisations to make data-driven decisions, accelerate services to the public, and increase stakeholder participation in the governance process (Ade & Budi, 2023) . Thus, the existing challenges are not merely obstacles, but opportunities for innovation and increased competitiveness. Therefore, analysis of the implementation of digital governance is not only important from an academic perspective, but also relevant to real-world practices in modern organisations (Permana, 2023b) . At the global level, best practices in digital governance have been implemented by many large organisations, both in the public and private sectors. Models such as COBIT (Control Objectives for Information and Related Technology) and ITIL (Information Technology Infrastructure Library) have been used as frameworks for managing information technology governance. However, the adoption of these practices requires adaptation to the local context, including organisational culture and applicable regulatory conditions. This is a challenge and a learning opportunity for organisations in various countries, especially in Indonesia, to design adaptive solutions (Schneider et al., 2021) .

In recent years, Indonesia has made various efforts towards digital governance, particularly through *e-government* policies and the digitisation of public services. However, the main obstacles still lie in the uneven quality of infrastructure between regions, limited digital literacy among the public, and the need for clearer regulatory harmonisation. This change requires close collaboration between the government, the private sector, and the community so that digital governance can be implemented comprehensively. If these challenges can be overcome, digital governance will become the main foundation for national digital transformation (Permana, 2023b) . In addition, modern organisations must understand that the successful implementation of digital governance depends heavily on the readiness of human resources. Technology can provide tools and platforms, but without adequate understanding, training and skills from employees, the system will not run as expected. Strengthening human resource capacity in terms of digital literacy, risk management, and mastery of the latest technology is a crucial component in designing sustainable digital governance (Setyawan, 2025b) . In the context of increasingly fierce global competition, organisations can no longer rely solely on conventional methods to manage data, risks, and work processes. Digital governance addresses the need for more flexible, rapid, and transparent governance, in line with the demands of the times.

METHOD

This study uses a literature review method with a qualitative approach to analyse the implementation of digital governance in modern organisations. Data and information were collected from various secondary sources, including scientific journals, books, research reports, articles, and the latest policy documents discussing digital governance, challenges, and solutions in the context of organisations (Eliyah & Aslan, 2025) . The analysis was conducted comprehensively by comparing findings from various literature to identify patterns, gaps, and the relevance of the issues studied. This method enabled the research to present a systematic synthesis of theory and practice as a basis for understanding the dynamics of challenges and solutions to digital governance in the context of modern organisations (Bolderston, 2008).

RESULTS AND DISCUSSION

Challenges in Implementing Digital Governance

The implementation of digital governance in modern organisations faces a variety of complex challenges, ranging from technical to non-technical aspects. One of the main challenges is the availability and readiness of adequate information technology infrastructure. Many organisations, especially in areas with limited technology access, experience difficulties in building and managing stable and reliable digital systems. This infrastructure imbalance creates a gap in the ability of organisations to implement digital governance effectively and sustainably,

thereby impacting the overall performance of the organisation (CSIRT Indonesia, 2025) . In addition to infrastructure, human resources are a significant challenge in the implementation of digital governance. Many organisations still face low levels of digital literacy among their employees or members. This unpreparedness is not only related to technological capabilities, but also to a limited understanding of the importance of digital governance and how it can improve transparency and accountability. This problem is exacerbated by employee resistance to change, which generally accompanies any organisational transformation, thereby slowing down the process of adaptation to new systems (Noordiyati, 2025b) . Cybersecurity is also one of the biggest obstacles to digital governance. The threat of hacking, data theft, and other cyber attacks is increasing and becoming more sophisticated as technology advances. Organisations must be able to protect sensitive data and important information from misuse, but in many cases, weaknesses in security systems and a lack of awareness of cyber security practices pose a risk of data leaks. These security issues not only result in financial losses but can also damage the organisation's reputation in the eyes of the public and business partners (Meijer & Bolívar, 2020) .

Regulations and legal frameworks also often pose obstacles to the implementation of digital governance. In several countries, including Indonesia, regulations related to digital governance, personal data protection, and information security are still in the development stage or are not yet fully clear. This regulatory uncertainty makes it difficult for organisations to determine legally appropriate policies and procedures. In addition, differences in the interpretation of existing policies also cause inconsistencies in the implementation of digital governance between organisations (Indrajit, 2004) . The complexity of integrating digital systems between divisions or organisations is also a challenge that needs to be addressed. Many organisations use different technology platforms, making it difficult to synchronise and integrate data effectively. This situation causes business processes to become inefficient, data to be inaccessible in real time, and information to be prone to duplication and inconsistency. Without proper integration, efforts to implement holistic digital governance will be very limited (Alfiani, 2024) . In addition to internal challenges, organisations also face external obstacles in the form of rapid changes in technology and market needs. The ever-changing speed of technological innovation makes it difficult for organisations to keep up and implement a digital governance system that is always up to date. Failure to anticipate technological changes can cause the implemented system to quickly become obsolete and irrelevant, so that digital investments do not provide optimal results . Therefore, organisations need to design a digital governance strategy that is flexible and adaptive to change (Schermann *et al.*, 2023) .

Organisational cultures that do not yet support digital governance are also often a real obstacle. Organisations that still rely on traditional ways of working with a rigid and hierarchical culture tend to find it difficult to accept transparency and more open digital processes. A lack of openness in communication and decision-making hinders the implementation of digital governance, especially if there is mistrust between management and employees. Cultural transformation is important and must be carried out alongside the implementation of new technology (Slathia, 2025b) . Immature change management often leads to the failure of digital governance implementation. The transition from manual or conventional systems to digital systems requires comprehensive change planning and implementation, including effective communication, employee training, and resistance management. Without the right approach, change can cause uncertainty and concern, which ultimately reduces employee motivation to support the implementation of new digital systems. This can cause digital governance projects to stall or not run optimally (Sapto Setyo Nugroho, 2024) .

Funding constraints also pose a significant barrier. The initial investment to build digital infrastructure, train human resources, and implement cybersecurity systems often requires large amounts of funding. Organisations with limited financial resources will find it difficult to allocate an adequate budget to ensure the success of digital governance. In addition, the costs of ongoing system maintenance and updates also need to be considered to prevent stagnation or system failure (Gil-Garcia *et al.*, 2020) . Imbalances in access to and quality of technology between regions are also a challenge that cannot be ignored, especially for organisations with branches in remote or less developed areas. Limited network infrastructure, low internet connectivity, and a lack of supporting technology can hinder the comprehensive implementation of digital governance in various locations. This leads to disparities in organisational performance and services provided between regions, which has the potential to reduce the overall quality of the digital governance system (Setyawan, 2025a) . Privacy and personal data protection issues are also increasingly important in the context of digital governance. Strict regulations and public awareness of privacy rights require organisations to be more careful in managing user and employee data. Failure to maintain privacy can result in legal consequences and a decline in public trust. These challenges require organisations to implement clear data protection policies and strict encryption and access control technologies (Noordiyati, 2025a) . Finally, obstacles in monitoring and evaluating the implementation of digital governance are a significant barrier. Many organisations do

not yet have effective measurement and reporting mechanisms to assess the success of digital governance. Without systematic evaluation, it is difficult to know whether the strategies being implemented are appropriate or need to be adjusted. This reduces the ability of organisations to continuously improve and optimise their digital governance systems.

Solutions and Strategies for Strengthening Digital Governance

In terms of overcoming the challenges of implementing digital governance in modern organisations, strengthening technological infrastructure is a crucial first step. Organisations need to invest in IT systems that are reliable, scalable, and easily integrated with other platforms. A strong digital infrastructure supports smooth operations while ensuring real-time data availability, which is the basis for quick and accurate decision-making. Infrastructure development must be accompanied by regular maintenance and technological updates to remain relevant to technological advances (Cordella & Paletti, 2021). Apart from technology, human resource development is one of the main pillars of strengthening digital governance. Organisations must design continuous training programmes that not only improve the technical capabilities of employees but also build awareness and understanding of the importance of digital governance. Training should involve all levels of the organisation, from leadership to operational staff, in order to create a digital work culture that is inclusive and adaptive to change. A training approach based on practical exercises and real-life case simulations can also be effective in accelerating the acceptance of technology (Hanisch, 2023).

Strengthening cybersecurity policies is another strategic step that should not be overlooked. Organisations must implement a comprehensive security framework with international standards such as ISO 27001. These policies include routine security audits, data encryption systems, strict access controls, and incident response protocols. Cybersecurity awareness must also be instilled in all employees through specialised education and training to minimise the risks of human error, which is often the main security breach (Slathia, 2023). It is also important for organisations to collaborate closely with regulators and the government in strengthening regulations and digital policy support. Organisations need to actively provide input on the drafting of relevant regulations so that the regulations implemented are in line with field requirements and are able to accommodate technological developments. This collaboration can also open access to various government programmes that support digital transformation, including incentives and technical assistance (Mergel *et al.*, 2020). The integration of systems between divisions and organisations must be carefully designed through an integrated technology architecture approach. The use of cloud-based platforms, APIs (Application Programming Interfaces), and microservices can accelerate integration and real-time data exchange. This approach not only improves work efficiency but also enhances transparency and internal coordination, which are essential in digital governance (Slathia, 2025a). To ensure that digital governance systems remain up-to-date with technological developments, organisations need to implement proactive innovation management. This includes monitoring technology trends, pilot project testing, and periodic evaluation of implemented digital solutions. In this way, organisations can continue to improve their systems and anticipate changes in order to remain competitive and responsive to stakeholder needs (Kettunen & Kallio, 2022).

Strengthening an organisational culture that supports digital governance is a crucial aspect that needs to be addressed. Cultural transformation needs to start with leaders who set an example and demonstrate a strong commitment to digital governance. Open communication, rewarding innovation, and empowering employees in digital decision-making can accelerate technology adoption and strengthen inter-departmental collaboration. This approach also builds trust and reduces resistance to change (Wijaya, 2024). Change management must be designed systematically and comprehensively, including strategic communication planning, the involvement of all stakeholders, and the provision of support systems such as helpdesks and additional training. Employee resistance can be addressed through coaching and mentoring approaches, as well as incentives that motivate technology adoption. Implementing changes gradually can also minimise disruption to operations and allow sufficient time for adaptation (Arantes, 2024). Funding is an important element that must be prioritised in strengthening digital governance. Organisations need to develop realistic and sustainable budgets to support infrastructure investment, human resource training, and security systems. Funding can also be obtained through strategic partnerships with the private sector or government funding programmes that support digitalisation. Transparent and accountable budget management also contributes to the successful implementation of digital governance (Booyens, 2023a). Addressing technological disparities between regions can be achieved by expanding access to and equal distribution of network infrastructure, particularly in remote areas. Organisations can seek to use satellite technology or alternative networks to reach areas that are difficult to access by cable infrastructure. Digital training and mentoring programmes also need to be expanded so that digital knowledge and skills can be evenly distributed across the organisation's entire

area of operation (Janssen & Helbig, 2022). To improve data protection and privacy, organisations must implement strict data management policies and security technologies such as encryption, tokenisation, and multi-factor authentication. Compliance with data protection regulations, such as the GDPR in Europe or the Personal Data Protection Law in Indonesia, must be ensured through regular audits and transparent reporting. This will increase public trust and reduce potential legal risks (Permana, 2023a). The development of effective monitoring and evaluation mechanisms is fundamental to strengthening digital governance. Organisations need to adopt key performance indicators (KPIs) and clear evaluation standards to measure the effectiveness of digital governance implementation on a regular basis. The use of digital dashboards that provide real-time data also facilitates evidence-based decision-making and early detection of problems in the system (Barrow, 2024). The application of advanced technologies such as artificial intelligence (AI) and big data analytics can be utilised to support transparency and accountability in digital governance. AI can help automate monitoring, anomaly detection, and risk analysis processes more efficiently. Meanwhile, big data enables organisations to analyse trends and behaviour patterns that are useful in strategic planning and decision-making (Arantes, 2024).

Effective and participatory communication strategies are also necessary to strengthen digital governance. Organisations must establish two-way communication channels with stakeholders, such as employees, customers, and business partners, to obtain feedback and build trust. The transparent dissemination of information about digital governance policies and developments will increase the involvement and support of all relevant parties (Anonymous, 2023). Finally, developing a collaborative digital ecosystem between organisations, government, and the private sector is an important long-term strategy. This synergy can accelerate knowledge exchange, technological innovation, and more effective regulation. Cross-sector collaboration can also drive inclusive and sustainable digital governance progress, addressing challenges while capitalising on opportunities in the era of digital transformation.

CONCLUSION

The implementation of digital governance in modern organisations presents a range of complex challenges, from technological infrastructure constraints and human resource readiness to cybersecurity issues and immature legal regulations. These obstacles are not only technical in nature but also encompass organisational culture, change management, and regional disparities in technology access. All of these challenges have the potential to hinder the effectiveness of digital governance in achieving organisational goals that are more transparent, accountable, and responsive. However, these challenges can be overcome by implementing integrated and sustainable solutions and strategies. Investment in reliable digital infrastructure, strengthening human resource capacity through training, and robust cybersecurity policies are the main foundations for strengthening digital governance. In addition, active collaboration with the government and stakeholders, the development of an adaptive organisational culture, and the application of advanced technologies such as artificial intelligence and big data are key to improving transparency, efficiency, and accountability in digital governance. Strengthening digital governance is not only about technology, but also about changes in management and communication that support organisational cultural transformation. Developing effective evaluation mechanisms and participatory communication strategies will increase the sustainability and success of implementation. Thus, modern organisations can respond proactively to the dynamics of the digital era, making digital governance a strategic asset to increase competitiveness and provide significant added value to all stakeholders.

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