Turnitin Official

159-172_plagiasi

4.논문 및 과제 검사 - 유사도 검사 시 DB 미 저장 (Originality Check - No Repository)

Document Details

Submission ID
trn:oid:::3618:135144652

Submission Date
Apr 14, 2026, 1:30 PM GMT+7

Download Date
Apr 14, 2026, 1:32 PM GMT+7

File Name
159-172_plagiasi.docx

File Size
5.7 MB

14 Pages

7,423 Words

47,565 Characters

5% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography
- Quoted Text
- Cited Text

Match Groups

43 Not Cited or Quoted 5%
Matches with neither in-text citation nor quotation marks

0 Missing Quotations 0%
Matches that are still very similar to source material

0 Missing Citation 0%
Matches that have quotation marks, but no in-text citation

0 Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

4% Internet sources
2% Publications
3% Submitted works (Student Papers)

Match Groups

- **43** Not Cited or Quoted 5%
  Matches with neither in-text citation nor quotation marks
- **0** Missing Quotations 0%
  Matches that are still very similar to source material
- **0** Missing Citation 0%
  Matches that have quotation marks, but no in-text citation
- **0** Cited and Quoted 0%
  Matches with in-text citation present, but no quotation marks

Top Sources

4% Internet sources
2% Publications
3% Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Internet	
www.mdpi.com		<1%
2	Student papers	
University of Bedfordshire on 2025-07-13		<1%
3	Internet	
ijcsrr.org		<1%
4	Publication	
Ian Firstian Aldhi, Fendy Suhariadi, Elvia Rahmawati, Elisabeth Supriharyanti, Dwi...		<1%
5	Internet	
repository.up.ac.za		<1%
6	Student papers	
The British University in Dubai on 2026-04-10		<1%
7	Student papers	
University of Southampton on 2025-01-10		<1%
8	Internet	
threeseasinfologics.com		<1%
9	Internet	
doaj.org		<1%
10	Publication	
Muhammad Usman Tariq. "chapter 4 Digital Accountability", IGI Global, 2025		<1%

11 Internet
www.hortibiz.com <1%

12 Student papers
University of Strathclyde on 2022-03-26 <1%

13 Internet
erepository.mku.ac.ke <1%

14 Internet
newsreviewwithmonikos.blogspot.com <1%

15 Internet
public-pages-files-2025.frontiersin.org <1%

16 Internet
www.coursehero.com <1%

17 Internet
nepjol.info <1%

18 Internet
norr.numl.edu.pk <1%

19 Internet
www.gerbangkaltim.com <1%

20 Student papers
University of Maryland, Global Campus on 2026-03-15 <1%

21 Publication
Yuwen Lyu, Junxian Xie, Xulei Meng, Xiang Wang. "Digital economy and institutio... <1%

22 Internet
files.tijorifinance.com <1%

23 Internet
lifestyle.luxedb.com <1%

24 Internet
www.igi-global.com <1%

25 Student papers

Coventry University on 2023-12-13 <1%

26 Publication

Nurlinah, Muhammad Chaeroel Ansar, Kuntala Chowdhury. "Impact of governme... <1%

27 Publication

Scott McDonald, Minh Duong Kim Ngo. "Level Up Your Logistics", Springer Scienc... <1%

28 Publication

Afroz Banu, Nismabi A. Nisamudheen, Manoj K. Balyan, Prachi Balyan, Dinesh Vel... <1%

29 Internet

www.frontiersin.org <1%

Digital Transformation Readiness and Its Impact on Achieving Sustainability Goals of Public Sector Organizations in Indonesia

Shinta Happy Yustiari[1)], Yaen Miftakhul Laily[2)], I Gede Eko Putra Sri Sentanu[3)], Fijri Adzanura Zikri[4)]

Abstrak

Salah satu kunci utama yang memberikan banyak kontribusi terhadap pencapaian Tujuan Pembangunan Berkelanjutan (SDGs) khususnya di dalam sektor publik adalah transformasi digital. Penelitian ini memiliki tujuan sebagai bentuk suatu evaluasi bagaimanakah tingkat kesiapan transformasi digital dapat mempengaruhi kemampuan khususnya organisasi sektor publik yang ada di Indonesia untuk mencapai keberlanjutannya. Metodologi penelitian yang digunakan adalah kualitatif. Penelitian ini menggabungkan analisis literatur, analisis dokumen kebijakan, laporan kinerja, serta observasi langsung terhadap kegiatan operasional di berbagai lembaga pemerintah pusat dan daerah. Transformasi digital khususnya pada sektor publik bergantung pada sistem internal organisasi, lingkungan budaya, dan dukungan dari kepemimpinan. Pada akhirnya, peningkatan posisi organisasi pada domain digital sangat penting untuk pengembangan kebijakan serta layanan berkelanjutan di sektor publik pada era digital.

Kata Kunci: Transformasi Digital, Kesiapan Transformasi Digital, Keberlanjutan Organisasi, Indonesia

Abstract

Digital transformation serves as a pivotal driver in advancing the Sustainable Development Goals (SDGs), particularly within the public sector. This research evaluates how the digital readiness of public organizations in Indonesia influences their capacity to achieve long-term sustainability. Using a qualitaive methodology, this study integrates literature reviews, policy document analysis, and performance reports with direct observations of operational activities across various central and regional government agencies. The findings suggest that digital transformation in the public sector is heavily contingent upon internal systems, organizational culture, and leadership support. Utimately, elevating an organization's digital maturity is essential for the formulation of resilient policies and the delivery of sustainable public services in the digital age.

Keywords: *Digital Transformation, Digital Transformation Readiness, Organizational Sustainability, Indonesia*

INTRODUCTION

In the public sector, digital transformation has become very important for improving the efficiency and effectiveness of an organization. The process including the use of digital technology in different organizational structures and departments with the goal of improving value, optimizing processes, and increasing the quality of services (Geada, 2021). Public sector organizations could improve their services by using digital technologies, including cloud computing, big data analytics, artificial intelligence, and the Internet of Things (IoT) (Chatterjee, 2024). Transformation facilities is the simplication of an organization's internal process and the reduction of operating costs as well as improve its responsiveness to the needs and expectations of the people served. The use of big data technology in public institutions has positively improved service delivery, and has been proven to increase transparency, accountability, and responsibility of resource control. Therefore, data technology is essential in the public organization's sustainability and competitiveness, especially in the middle of complexity and rapid challenges. (Jonathan, 2020).

The impact of digital transformation on resource utilization, innovative technology, and process optimization becoming the focus of several studies. This, turning to increase the efficiency. In business, digital technology might be on monitoring and also better on analysis, it's also simplify the process for identify the area which needed to improve and optimize (Jiang et al., 2025). The rise of

digital transformation will also make a technological advances that provide new and effective solutions to operational challenges and organizational performance issues (Li et al., 2021). The impact of digital transformation on internal operations, especially on data formation, human resources, and rental services, is also very important. The implementation of efficient in process business and integrated has been proven a gap, increasing productivity and facilitating data based decision making (Zhang et al, 2024). This, supports the achievement of strategic goals set by the organization and show the superiority in market.

In the context of public administration, the adoption of digital transformation nowadays becoming an important for improving efficiency and transparency in public service. The successful of digital transformation programming is depend on two big factors. The two big factors are (1) The high levels of digital literacy between employees. (2) and, The availability of technological infrastructure. Digital literacy among government employees including the capabilities in utilizing technical tools and the understanding of how to use data and information to support better in decision making. (Nair, 2019). The employees which is having the capability of digital literacy will be more adaptable to policy changes and technological innovations, so that could improving the quality of public services. On the other hand, the development of technological infrastructure is also important to support the implementation of digital initiatives in the public sector (Adewumi, 2024). Without an adequate infrastructure, the efforts to digitize administrative processes will have many barriers, which could impact the decreasing in the quality of public services. Therefore, public institutions needed to allocate some resources for digital skills training and development programs for their employees to address the digital skills gap among them.

This studies focus on exploration concept of "digital transformation readiness," which is defined as an organization's especially in public sector, were ready for adopt and prepare digital transformation on their process. This, including the component technological infrastructure, human resource skills and competencies, and an organizational culture that encourages innovation and adaptability. The understanding of data technology readiness is most important because it provides a foundation for analyse how organizations could respond technological advancement in effectively and completing the demands complexity in the digital era. Moreover, this study examines the impact of digital transformation on achieving sustainability goals in Indonesian public sector organizations.

The impact of digital technology in the Indonesia's public sector on achieving sustainability, is an important area in technological development. Digital transformation is become a tool for improving operational efficiency. Meanwhile, the role of digital technology for supporting public sector organizations in achieving sustainability in public sector is very important. Research shows that implementing digital technology by the organization could bring many kinds of benefits likes increasing the resource of utilization, reducing waste and increasing the transparency in budgeting and programme implementation. Digital transformation has also brought big changes in data collection and analysis methods, empowering organizations and policies which support in sustainability. Therefore, it's important to evaluate the potential of digital technology in realising sustainability for public sector organizations. This study is for improving the understanding of the correlation between digital transformation and sustainability, and also giving the recommendations for the organization on how to using the technology to improve their sustainability.

LITERATURE REVIEW

Concept of Digital Transformation

Digital transformation is a whole process which is of applying digital technology to all areas of business and organization. This process produce significant changes in their system and the way of giving the value to their customers. In the modern digital era, the organization should able to adapt the technological innovations and market demands. The implementation of digital technology in organizational structures increases the operational

efficiency, improving the customer experience and produces innovations that increasing the business growth. Hence, the implementation of digital transformation needs the integration of technological advances, and also making cultural changes and strategic changes in organizational practices and the interactions with consumers and other stakeholders (Haktanır et al., 2023).

The implementation of digital technology in an organizational structure has been proven to increase operational efficiency, increase the customer experience and encourage the innovation to support the business for success. The implementation of digital technology in company operations has been proven to facilitate all the procedures, it could be reducing the time and financial resources which allocated in any specific tasks. This methods has been proven in effective way for increase the productivity and allowing the employees in focusing on strategic tasks for providing in adding the value. The digital technology has been proven for improve the company's understanding of demand and preferences the customer, so that could provide the services and also the products. Adopting this technology also creates new opportunities for organizations in demand and giving the efficient solutions. Therefore, the implementation of digital technologies is very important for achieving a competitive and ensuring corporate sustainability in the middle of rapid change (Alloghani et al., 2022).

This transformation not only involving the adoptions of new technologies but also reassessment and reorganising the business processes, culture and customer experience in order to fulfilling the requirement in the digital era. This includes cultural development that encourages innovation and collaboration, and implementing in efficient way and also responsive. It is important for increasing the customer experience by adopting the strategic and based on data, so could build the stronger partnerships in sustainability. This change requires the commitment in all levels of the organization to adapt and innovate in order to compete effectively in competitive market (Paiithannkar et al., 2024).

Digital Transformation Readiness

Digital Transformation Readiness is a concept that describes an organization's level of preparedness to face and implement comprehensive digital transformation. This readiness encompasses not only technological aspects but also human resources, organizational culture, leadership, and adaptive governance. In an increasingly dynamic era of digital disruption, organizations are required to adapt quickly and strategically to remain relevant, competitive, and sustainable.

This approach need the public institutions for adapting technological advances and the fluctuates demands of society. The implementation of digital technologies in public organization, includes the integration of information system, analytics data, and also the efficiency of communication platform, has been proven for increase the operational efficiency, transparency and the accountability in public service (Alloghani et al., 2022).

In addition, the implementation of digital transformation has been shown for make organizations more responsive to public demands, encouraging the public participation and also improving the service quality. Therefore, the understanding about digital transformation and the implementation are very important for the leader of public organization for developing the strategic in achieving the sustainability of better public service (Geada, 2021). The conclusion is digital transformation is not only a choice but also the strategic needed for public institutions to maintain their relevance and succeed in the digital era.

The readiness of the public sector for digital transformation is influenced by some factors, including technological infrastructure, organizational culture and human resource competencies. The important of key components have been identified:

a. Technological Infrastructure

The Development of Information and Communication Technology (ICT) is a key point in the process of digital transformation, especially about the readiness society's in digital era. Information and communication

technology not only provides the tools and platforms to support many digital initiatives but only influences the way society interacts with technology. The degree of adaptation demonstrated by individuals in responding to digital transformation reflects their level of digital literacy, the factor which influences the effectiveness of implementation, including in the public sector. The accessibility and understanding of information and communication technology has been facilitated of digital services provided by government agencies. Therefore, very important for stakeholders to advocate for information and communication technology and increased the digital literacy among the public, so the ecosystem could support effective digital transition. Investment in information and communication technology development and digital education will contribute significantly to the success of digital transformation at community and organizational levels (Gankhuyag et al., 2024).

b. Organizational Culture

It is important to realize that influence from corporate to the successful of digital transformation initiatives. The characteristics such as the culture of creativity, agility and resilience are important for creating the environment that supports digital transformation. Established an innovative culture in internal company has been proven have positive impact of employees (Nugraha et al., 2025). An environment improve the innovation by motivates the employees to explore the ideas and new technologies, which is resulting an innovative solutions and improve the proces (Chandratreya, 2025). Cultural agility is important for the companies to adapt quickly to every change in the digital environment, ensuring competitiveness and relevance for their sustainability. Resilience is also important for organizations to handling the challenges and how they handling the obstacle in the process of transformation (Kocak et al., 2022). An adaptive culture, when synchronize with leadership efforts, significantly accelerate the digital transformation process. This phenomenon could be associated with collaboration and transparent communication between teams, which are part of cultural characteristics. Conversely, a rigid or resistant culture can hinder progress by creating barriers to the acceptance of new technologies and practices (Khalayleh, 2024). Therefore, it is important to support the corporate culture to digital transformation.

c. Human Resources Skill

The important things for improving the digital skills of public officials are training programs and competency frameworks, ensuring they have the capabilities to manage the complexities of the digital environment. These programmes should integrate into many variety of educational techniques, including sessions of formal training, workshops, and online courses which is focussing on an important digital skills such as data analysis, cybersecurity, and also digital communication (Manana et al., 2022). Besides that, giving access to new technical are important for develop the skills. The practical application of these tools is giving the possibility to public officials to apply their expertise in real life situations. As Kesar et al. (2025), the governments could facilitate their work to adapt to technological advances and improve service quality by develop the culture and develop the quality of service by developing the lesson culture and learning and sustainability. The investment in the digital competencies of public officials has been develop the individual performance and develop the effectivity and efficiency of the public sector, so could produce better outcomes for citizens.

The Indonesian Sustainability Goals in the Public Sector

The public sector is an important role in achieving the goal of sustainability, especially by

implement of the Sustainable Development Goals (SDGs) determined by the United Nations. In this context, the public sector are responsibly in establish policies that support sustainability, as well as ensuring their effective implementation. The involvement of many stakeholders, including the community, in the development of public sector programmes could effectively direct the efforts for poverty, environment conservation and improved the quality of life. Besides it, the public sector plays an important role in public education for participation for achieving the goal. By the coordinated efforts and commitment, the public sector could be the key points for sustainable in future.

Although the sustainability become an important role on social and economic, the policy implementation and sustainability practices which integrated with the public sector are inadequate. This phenomenon are correlated with some factors, including a lack of awareness and the understanding about the long term benefits of sustainability, also the challenges in allocating the necessary resources for policy implementation (Figueira et al., 2018).

The implementation of sustainable practices are often become a barrier by the bureaucratic that discouragement the innovation. Many government agencies still using the traditional techniques that ignoring the environmental and social consequences for their decisions. Therefore, it is important for the government to increasing the commitment and the initiative for developing the policies more comprehensive and integrated, also giving the training and supporting to the civil servant for make sure their understanding and implementing the principal of sustainability in all of their aspect. Its estimated that compliance to the stage could probably making the public sector for becoming a role model in implementing the stage of sustainability and encourage the positive social change (Calazans et al., 2025).

The Republic of Indonesia has been shown the strong commitment for achieving the Sustainable Development Goals (SDGs) until 2030. This commitment shown by the integration of the SDGs into various policies and initiatives in the public sector. This commitment reflects the government's to the crucial role of sustainability in national development, and their efforts to improving the quality of life for all Indonesians. To achieving the SDGs, the Indonesian government has developing in many programmes in targeting the dimension of social, economic, and environmental of sustainable development. These programmes including the stage to reducing poverty, improving the access to education, and protecting the environment. The implementation of these policies are depend on the cooperation between the central and regional governments, and their area could adapting the programmes to their needs and their specific condition. By implementing the integrated strategy and the participatory, Indonesia is expected for achieving the SDGs. This plan is expected for the future result of sustainability and prosperous for Indonesian people.

A strategic framework has been established to support public sector managers in Indonesia for fulfilling their task and also their responsibilities. This paradigm points to the importance of effective governance, infrastructure development, and community empowerment as the key factors in achieving sustainability at provincial, regional, and municipal levels. This strategic framework is expected to empowering the public sector managers to developing and implementing the policies that promote sustainable development more effectively. The concept of good governance is based on three pillars there are: transparency, accountability and public participation in the process of decision making. At the same time, the sustainable infrastructure development will supporting the economic growth and improving the accessibility to public services. The community empowerment are important because the participation in the planning and implementing the development projects are increasing the local ownership and the accountability for the environment (Simangunsong, 2019). Integrating these three components are expected to promoting the efficient and sustainable achievement of sustainability goals in all area of Indonesia.

The Indonesian government in facilitating public services, especially in rural and border areas, has been criticized because only serving in urban areas. It has been suggested that metropolitan areas receiving extra attention than rural and border areas, meanwhile rural and border areas always got insufficient access to essential public services. This will cause significantly disparities in residents quality of life in those areas. A suggestion for informal cross border cooperation in service delivery has been a solution to this problem, the aim is to increasing the coverage of essential public services in these areas efficiently. This cooperation could make the local governments to utilizing the regional resources and expertise in those areas. In other word, it could be strengthening the networks between communities on both sides of the border. It is expected that this project will improving the public services and ensuring the better access to education, healthcare, and other essential services for residents in rural and border areas (Andini et al., 2022).

This strategy will increasing the individual welfare, strengthening international relations and making synergies for the advantages of regional development. In conclusion, even though the public sector are important in supporting the sustainability, there are some significant barriers in adoption, coordination, and policy standardization also the practice of sustainability. This problem would become a problem to the capability of public sector and become the catalysator for sustainability development. To solve this problem, it's important to making a comprehensive framework that could become a sustainability integration concept to all aspect in public policy. The important of local government program will focusing in sustainability are crucial, because this institution could identify their needs and their local condition so probably the solution implementation are related and effective. In other word, it is important for increasing the procedures for sustainable procurement for make sure if public sector will get the goods and the services which facilitate their needs and also considering the environment and social in future. The implementation of the policies is expected in significantly to increasing the commitment in public sector to the sustainability of development, and could giving the positive impact for society and environment also.

The Relationship Between Digital Transformation and Sustainability

Digital transformation and sustainability are related each other, the digital technologies playing a important role in achieving the Sustainable Development Goals (SDGs) in various sectors. This relation are affected by many contextual factors such as environmental sustainability of institutions and also the society. The strategic relation between digital initiative and sustainability program are open the new chance for creating the value of economic and also increasing the responsibility and the environment performance. The utilization of data analytic would facilitate the monitoring, optimization, and controlling of resource, thereby increasing the efficiency of resource management processes. The application of advanced digital tools, including Artificial Intelligence (AI), the Internet of Things (IoT), and blockchain, has demonstrated the benefits in reducing the waste and mitigating carbon emissions. However, this empirical studies and multidisciplinary research are needed to fully uncover and maximize the synergistic potential between digital transformation and sustainability outcomes. A deep comprehensive understanding of these interactions is important for the formulation of policies and regulatory strategies that deliver short term performance improvements while ensuring inclusive and sustainable growth for future generations. Recognize and utilize these interdependencies in effectively were being part of integral from building the socio technology system that could supporting the future of equitable and sustainable.

Digital technologies, including the Internet of Things (IoT), Artificial Intelligence (AI), and big data analytics, are significantly impacting to the operational of organization, increasing the efficiency and improving the process of decision making (Shukla et al., 2025). The integration of devices and

systems through the Internet of Things (IoT) make the easier and resource management in real time, thereby improving energy efficiency and reducing waste (Avasthi et al., 2025). Hereby, artificial intelligence systems analyzing the datasets to identify patterns and trends, so enabling the companies to make decision by data driven that are aligned with their sustainability objectives. Predictive analytics have been the ability to predict the usage of energy, enabling the companies to improving their operations and reducing their environmental impact (Saha et al., 2025). These technologies not only increasing the operational efficiency but also giving contribution in significantly to environmental sustainability. The adoption of digital solution by company could potentially facilitate the sustainability in future where the economic and the responsibility are depends on each other. The adoption of these technologies not only increasing the capability of technologies but as the commitment for creating the future planet for the next generation.

RESEARCH METODOLOGY

This research uses a qualitative approach to analyze the level of digital transformation readiness and its impact on achieving sustainability goals in the Indonesian public sector. The method used is a case study, focusing on government agencies that have initiated and implemented digital transformation. This research specifically covers agencies at the national level as well as several selected local governments in Indonesia, to obtain a more comprehensive and contextual picture.

To deeply understand stakeholders' perspectives on digital readiness and its contribution to sustainability goals, data was collected through in-depth interviews with relevant informants. The informants in this study were not only from the managerial level but also included technical personnel and technical field staff, thus providing a more comprehensive picture of digital transformation implementation at various organizational levels.

A thematic analysis approach used to identifying the patterns and themes from the interviews. Depth analysis will include interview transcription, data coding, and the organization of the material according to key themes. This technique would facilitate the identification of several aspects which is influencing the digital transformation readiness, as well as the barriers and opportunities that happened by public sector organizations in achieving their sustainability goals. The results of this study are expected to provide valuable insights for policymakers and public organization leaders in formulating some effective strategies to enhance digital transformation readiness. This research will contribute to the literature which related between digital transformation and sustainability, especially in the Indonesian public sector.

RESULT

A comprehensive review of existing literature, accompanied by an in-depth analysis of relevant policy documents, performance reports, and direct observation of operational activities in various central and regional government institutions, was conducted to identify key findings that reflect the current state of digital transformation readiness in the public sector and its implications for achieving sustainability goals. This investigation uses a qualitative approach with data collected through in-depth interviews with informants, including structural officials, technical personnel, and technical field staff, to ensure consistency of terminology with the methodology section. The collected data reveals that the digital transformation process is not progressing equally across all areas and governmental entities. Instead, it is significantly influenced by variations in technological capacity, institutional support, the quality of human resources, and organizational culture within each agency. Observations reveal that in certain agencies, the adoption of digital technology has progressed to an advanced level, marked by the integration of information systems, the use of online public service applications, and the employment of data analysis to enhance strategic decision-making. Conversely, in certain institutions, especially in regions with inadequate infrastructure, the digital transformation process is marked by its lethargy. This lethargy is

frequently ascribed to constraints in internet infrastructure and technology, alongside a deficiency in training and technical support for personnel. These findings confirm that the readiness for digital transformation in Indonesia's public sector is a complex spectrum, ranging from institutions that have implemented a comprehensive technology-based approach to those that are still in the early stages of adaptation. This condition directly affects the organization's ability to devise, execute, and assess sustainability-focused policies.

A. Level of Digital Transformation Readiness

An extensive examination of the existing literature indicates that three essential factors—technological infrastructure, organizational culture, and human resource competencies—are interconnected and interact dynamically, thereby creating patterns that significantly influence the success of digital transformation initiatives within organizations. Research constantly underscores the interrelatedness of these aspects. Weaknesses in one area can impede the overall process, while concurrent strengthening of all factors can facilitate the achievement of sustainability goals (McCartney et al., 2020).

The interplay among these elements suggests that digital transformation is not simply a technological enhancement, but a comprehensive transition that requires equitable advancement across all facets. An analysis of contemporary practices indicates that the successful incorporation of technology can augment public services and refine data management. A notable illustration of this phenomenon is the development of integrated digital portals, which consolidate various public services into a unified access point, thereby enhancing accessibility for the public and streamlining cross-sector data management (Filgueiras et al., 2019; Ningsih, 2024). This integration has, in certain cases, resulted in decreased data duplication and improved administrative efficiency. Research has shown that tailored training programs, specifically designed to meet the unique demands and diverse competence levels of employees, have significantly improved digital skills among government servants.

These competencies encompass a spectrum from fundamental literacy to sophisticated analytical abilities (Dörr et al., 2023; Hendrawan et al., 2024). Transformational leadership has emerged as a pivotal factor in this success, as leaders who proactively promote and exemplify the use of technology engender an adaptive and innovative work culture, thereby rendering organizations better prepared to confront the challenges posed by digital transformation (Lee et al., 2023; Ulatowska et al., 2023).

Collaboration with other entities, including universities, private firms, and research institutions, has expedited the advancement of digital systems and enhanced human resource capability via knowledge and technology transfer. These findings correspond with the existing literature highlighting the crucial importance of networks in enabling a successful digital transformation (Hendrawan et al., 2024; Užule & Verina, 2023).Collaborative initiatives help bridge capability gaps, implement innovative practices, and ensure organizational preparedness for change. Conversely, simultaneous improvements in all these elements have been shown to accelerate the achievement of organizational sustainability goals (McCartney et al., 2020).

Despite the progress achieved, significant obstacles remain. Significant gaps in infrastructure access persist, particularly in areas with limited or unstable internet connectivity, which hinders the functioning and reach of online services (Espina-Romero et al., 2024; Taufani & Widjaja, 2023). The fragmentation of information systems, wherein disparate systems function independently, persists in impeding effective data integration and cross-sector analysis. Resistance to change among certain employees, especially those accustomed to manual methods, remains a persistent challenge, even with structured training programs (Dörr et al., 2023; Vladsenko et al., 2024). Budgetary limitations compound this issue, as financial resources allocated for technology infrastructure maintenance and human resource development are frequently

variable or inadequate, leading to stalled initiatives and unfulfilled benefits (Nakaziba & Ngulube, 2024; Taufani & Widjaja, 2023).

This circumstance bears substantial ramifications for the realization of sustainability objectives. The absence of competent human resources to complement adequate technological infrastructure can lead to suboptimal utilization of systems. Concurrently, skilled workers operating within a rigid or resistant organizational culture may face challenges in maximizing the potential of available technology. From this perspective, achieving meaningful and sustainability-focused digital transformation requires a holistic strategy that integrates the provision of robust technology with sustainable cultural adaptation and continuous competency development (Gaffley & Pelser, 2021; McCartney et al., 2020). In conclusion, an effective approach must prioritize not only technology acquisition but also the cultivation of an adaptive work culture and the maintenance of sustainable investment in civil servants' digital skills. This will ensure that the transformation is impactful and sustainable.

B. The Relationship Between Digital Transformation and Achieving Sustainability Goals

The results of field research indicate a substantial and persistent correlation between the adoption of digital technology and the advancement of sustainability goals in the public sector. This relationship is not incidental; it signifies a structural transformation in the operational dynamics of public institutions when technology is adeptly incorporated into their fundamental tasks. An analysis of interviews with officials and technical personnel reveals that digital technology serves not merely as an administrative or operational tool, but also as a transformative catalyst that fundamentally alters organizational workflows, decision-making processes, and service delivery systems. This technology enables a transition from conventional, paper-based, disjointed systems to cohesive, data-driven, adaptable governance frameworks that can tackle modern sustainability issues.

A significant and noticeable consequence of digital integration is evident in the enhancement of resource management, a crucial area in sustainability-oriented governance. The amalgamation of big data analytics, real-time monitoring systems, and the Internet of Things (IoT) enhances the oversight of essential resources by governmental entities, including electricity, water, and financial allocations (Awadh et al., 2020; Castro & Lopes, 2021; Fang et al., 2015). This technology enables the continuous collection, analysis, and visualization of operational data, facilitating the identification of concealed consumption patterns, allowing for the early detection of resource leaks before they escalate into substantial losses, and achieving significant waste reductions that were previously challenging, if not unattainable, through manual monitoring (Asianzu, 2019; Azizi Meshkin, 2024). These systems enable predictive maintenance of public infrastructure, dynamic resource distribution during peak demand, and enhanced tracking of environmental impacts. These functions are essential for advancing sustainable public management.

Moreover, the persistent and continuous implementation of digital technology has proven to improve transparency and accountability in public service delivery. Digital platforms serve as both channels of communication and tools for public accountability. Digital platforms that provide public access to information about budgets, program advancements, and performance metrics enable citizens to assess and scrutinize government efficacy in real time (Pribadi et al., 2024; Sahur & Amiruddin, 2023; Shenkoya, 2022). This transparency not only alleviates enduring apprehensions regarding governmental secrecy but also fosters an environment in which public scrutiny is inherently integrated into governance. This dynamic has demonstrated a beneficial impact on public trust in governmental institutions. Moreover, it has been shown to actively motivate civil officials by enhancing integrity and quality in program execution (Batubara et al., 2019; Sabani, 2020). A digital system characterized by transparency cultivates a reciprocal relationship, wherein the

government is motivated to maintain high performance standards, and citizens are empowered to demand responsibility from institutions.

The incorporation of analytical tools markedly enhances data-driven decision-making, transitioning governance from intuition-based methods to evidence-based policymaking. Analytical systems that can handle extensive and intricate information allow government organizations to develop more precise and contextually relevant policies. The utilization of spatial data and demographic insights is crucial for identifying priority service recipient regions, enabling interventions to be customized to community needs instead of employing generic solutions. Simultaneously, predictive analytics enhances budget planning and resource allocation by forecasting future demands and recognizing potential threats (Asianzu, 2019; Azizi Meshkin, 2024; Mansoor, 2021). This strategy enhances short-term efficiency while fostering long-term resilience, as policy decisions are guided by trends and projections instead of reactive measures.

The integration of digital technologies into governmental management systems enhances operational efficiency and significantly aids in achieving sustainability goals. This is accomplished through prudent resource management, increased information transparency, and the institutionalization of evidence-based policymaking (Asianzu, 2019; Castro & Lopes, 2021; Mansoor, 2021). The revolutionary potential of digital technology resides in its capacity to link different tasks, integrate fragmented processes, and create feedback loops that foster continual enhancement. The planned and effective utilization of digital technology is crucial for enhancing administrative efficiency and achieving broader societal and environmental objectives that support sustainability goals. In the absence of such integration, sustainability initiatives may be compromised by inefficiency, insufficient accountability, and misaligned policies. Consequently, governments are more effectively equipped to address the intricate requirements of sustainable development in a progressively data-centric environment.

C. Implementation Challenges

Despite the potential of digital transformation in the public sector to enhance efficiency and service quality, research repeatedly identifies significant challenges that must be overcome for optimal implementation. A significant concern is the infrastructure disparity between developed and impoverished regions. Interviews with informants across various regions suggest that urban areas typically enjoy reliable internet connectivity, sufficient hardware, cohesive information systems, and comparatively extensive technical support. In contrast, remote and border regions frequently encounter restricted internet connectivity, insufficient supporting infrastructure, obsolete or inadequate equipment, and challenging geographical accessibility, all of which impede the execution of digital initiatives (Afrilia et al., 2024; Dharma & Yudiono, 2025; Vernandhie, 2023). These differences directly affect public service delivery, resulting in service gaps that threaten to exacerbate socio-economic and developmental inequalities among areas (Afrilia et al., 2024; Dharma & Yudiono, 2025). In addition, the uneven development of technological infrastructure exacerbates the digital divide, not only in terms of access but also in the quality and reliability of services provided to citizens.

A notable difficulty is organizational resistance to change, especially among staff accustomed to traditional procedures and established habits. Field observations reveal that this resistance manifests in various ways: delays in adopting new systems, skepticism regarding the benefits of technology, or reluctance to participate in training programs. In certain instances, employees view digital transformation as an extra encumbrance rather than a facilitator of efficiency. Psychological elements are essential in this challenge, with anxieties of role loss, diminished work stability, and perceived inability in managing new technology frequently identified as fundamental causes (Teo & Ho, 2024). This scenario demonstrates that digital transformation transcends a mere technical enhancement; it necessitates a holistic change management strategy that actively cultivates employee motivation, instills confidence

in utilizing digital tools, and promotes their active participation in the transition process (Hutabarat, 2025). Effective change management in this context necessitates explicit communication of transformation goals, collaborative planning, focused skills development, and continuous support systems to facilitate employee adaptation.

Financial limitations exacerbate the dilemma, particularly for regional organizations that necessitate significant funds for expenditures in technological infrastructure, system maintenance, and human resource development. In some instances, financing designated for digitalization initiatives is ephemeral or unsustainable, resulting in halted projects once initial budgets are depleted (Hutabarat, 2025; Мостова et al., 2024). Several informants reported that budget priorities often shift toward more politically pressing needs, diverting essential financial support away from long-term digital transformation programs (Teo & Ho, 2024). These alterations in funding priorities compromise continuity, hinder momentum, and restrict the expansion of effective pilot initiatives. The absence of a stable and enduring budgetary framework for digital initiatives hinders agencies from executing essential upgrades, performing routine system maintenance, and facilitating ongoing skills development for staff.

The interplay of these three principal challenges—infrastructural inequities, opposition to organizational change, and budgetary constraints—illustrates that attaining a successful and sustainable digital transformation in the public sector necessitates a comprehensive and cohesive plan. This strategy must encompass long-term budget planning with dedicated funding lines for digital projects, equitable distribution of infrastructure development to close regional gaps, and deliberate organizational culture change to cultivate openness, adaptability, and digital readiness (Afrilia et al., 2024; Dharma & Yudiono, 2025; Teo & Ho, 2024). Moreover, policy frameworks must institutionalize capacity-building initiatives, connect infrastructure development projects with service delivery priorities, and integrate performance monitoring systems to assess progress over time.

In summary, while digital transformation holds the potential to significantly enhance the performance, transparency, and responsiveness of public sector institutions, realizing its full benefits will require confronting and systematically addressing these structural and cultural barriers. A comprehensive, well-funded, and inclusive approach will not only create an enabling environment for sustainable digital governance but also ensure that improvements in efficiency and service quality are equitably distributed across all regions, thereby supporting broader national development and sustainability objectives (Afrilia et al., 2024; Dharma & Yudiono, 2025; Hutabarat, 2025; Teo & Ho, 2024; Мостова et al., 2024).

D. Best Practices

The research identified numerous best practices that are empirically validated to facilitate the effective execution of digital transformation in the public sector and possess significant potential for replication by other agencies. Integrating public service applications into a consolidated portal is a strategic initiative that improves service efficiency and assures data consistency. Consolidating diverse services into a unified system enhances inter-unit cooperation, streamlines administrative processes, and simplifies public access to services. Empirical findings and prior research suggest that agencies implementing this model achieve significant decreases in data redundancy and administrative barriers, concurrently enhancing user satisfaction (Nur et al., 2023; Rachmawati et al., 2018).

Secondly, the implementation of digital literacy training programs customized to the distinct requirements of each work unit has shown a considerable positive effect on enhancing staff competencies. These training programs are intentionally crafted to correspond with the roles and duties of the individual work units, guaranteeing that the content is pertinent and readily usable. Public service professionals are trained in online queue systems and digital complaint channels, whilst planning personnel acquire abilities in data analysis and visualization technologies. This method enhances technical

expertise and increases employee confidence in the effective adoption and utilization of new technology (Pambudi et al., 2022; Pedersen et al., 2021).

28 The application of data analytics for planning and forecasting community requirements has become an essential instrument for developing targeted and evidence-based policy. Agencies utilizing this methodology employ trend analysis, demographic data mapping, and socio-economic variables to ascertain service priorities with enhanced accuracy. As a result, resource allocation is optimized, enabling programs to provide measurable outcomes that correspond with community need. Qualitative data from interviews suggest that analytics improves policy transparency, since program creation procedures may be explicitly articulated and supported by rational, evidence-based reasoning (Rachmawati et al., 2021; Shao et al., 2023).

These findings confirm that implementing system integration, needs-based employee development, and data analytics is strategically important for enhancing digital transformation readiness and advancing sustainability objectives in the public sector. In addition to their operational benefits, these practices reinforce the essential tenets of governance—specifically transparency, accountability, and adaptability—ensuring that public sector organizations remain responsive to changing technological, social, and policy challenges (Bevilacqua et al, 2022; Rachmawati et al., 2021).

CONCLUSION

29 1 The result of this study says that preparation for digital transformation in the Indonesian public sector is a strategic issue which influence the capability of government institutions in achieving the sustainability goals. This indicated that the effectiveness of digital transformation implementation is related with three key factors. First, in achieving the successfulness needs the availability of technology infrastructure. Second, need a supportive an organizational culture that is support in any changes. Third, human resource expertise in the effective utilization of technology is also a key factor needed. That three factors are interdependent each other, deficiencies in any one factor would potentially become a barrier on the whole process, while improvements in all components could be accelerate in achieving of sustainability goals. The implementation of digital technology has been proven in maintaining the resource, increasing the transparency and also the accountability, and facilitating the decision making by data driven. Others, the issues such as the uneven infrastructure, staff hard to change, and limited budget are becoming the barriers that require systematic solution. Any best practice, including the consolidation to public service on official portal, training on digital literacy which is suitable on team work, and also the implementation of analytic data for better strategic planning indicate big potential. The acceleration of digital transformation with a focusing on the sustainability needed a comprehensive strategy that includes infrastructure improvement, innovative and adaptive culture work, human resource capacity building, adopt on management system based on data. This strategic goals is for building the public sector which efficient and effective and also become the catalysator in achieving the object of sustainability development in Indonesia.

REFERENCES

Afrilia, U. A. **et al.** (2024). *Transforming public services: The role of digital innovation in Indonesian municipal governance*. VISIONER: Jurnal Pemerintahan Daerah di Indonesia, 16, 60–70.

Awadh, W. A. **et al.** (2020). *A review on Internet of Things architecture for big data processing*. Iraqi J. Comput. Inform., 46, 11–19.

Asianzu, E. (2019). *Improving e-consultation through digital crowdsourcing in Uganda: A quantitative survey*. Proceedings of the 18th International Conference on WWW/Internet 2019.

Azizi-Meshkin, M. **et al.** (2024). *E-government and inclusive development: Bridging the digital divide in Azerbaijan*. Socium, 1, 84–94.

Bevilacqua, C. **et al.** (2022). *From deinstitutionalization to community-based urban development*. Sustainability, 14, 1348.

Udrescu, L.-M. **et al.** (2024). *The evolution and impact of digital transformation on internal audit*. Proceedings of the International Conference on Economics and Social Sciences.

Castro, C. & Lopes, C. (2022). *Digital government and sustainable development*. J. Knowl. Econ., 13, 880–903.

Dharma, B. A. & Yudiono, N. (2025). *MSMEs go digital*. International Journal of Business and Quality Research, 3, 224–234.

Dörr, L. **et al.** (2023). *A taxonomy on influencing factors towards digital transformation in SMEs*. J. Small Bus. Strat., 33.

Espina-Romero, L. **et al.** (2024). *The role of digital transformation and digital competencies*. Sustainability, 16, 6993.

Fang, H. **et al.** (2015). *A survey of big data research*. IEEE Netw., 29, 6–9.

Filgueiras, F. **et al.** (2019). *Digital transformation and public service delivery in Brazil*. Lat. Am. Policy, 10, 195–219.

Gaffley, G. & Pelser, T. G. (2021). *Developing a digital transformation model*. S. Afr. J. Bus. Manag., 52.

Ha, D. T. **et al.** (2024). *Assessment of digital transformation levels in hospitals*. VNU University of Economics and Business, 4, 32.

Hernawan, H. (2025). *Digital innovation in public services*. Pdr, 8, 209.

Hutabarat, J. S. **et al.** (2025). *Peluang dan Tantangan dalam Efisiensi Anggaran Negara*. Konstitusi, 2, 28–40.

Kirana, N. W. I. & Majid, N. (2022). *Challenges of digital transformation on Good Governance*. Nuscientech, 43–47.

Korol, P. (2025). *Development of public administration mechanisms*. Public Administration and State Security Aspects.

Lee, C. **et al.** (2023). *Competency modeling and training needs assessment*. In Education and Human Development.

Lyu, Y. **et al.** (2024). *Digital economy and institutional dynamics*. Front. Public Health, 12, 1330044.

Magnusson, J. **et al.** (2025). *The polyphony of deviance. Transform*. Gov. People Proc. Policy, 19, 37–52.

Mansoor, M. (2021). *Citizens' trust in government*. Gov. Inf. Q., 38, 101597.

McCartney, S. **et al.** (2021). *21st century HR competency model*. Pers. Rev., 50, 1495–1513.

Nakaziba, S. & Ngulube, P. (2024). *A model for enhancing digital transformation*. Discov. Educ., 3.

Ningsih, F. (2024). *The importance of IT-based public accounting transformation*. Indonesian Journal of Business Analytics, 3, 2191–2206.

Nur, M. **et al.** (2023). *Smart governance arrangement*. KnE Soc. Sci.

Nyeleker, K. P. **et al.** (2025). *From E-government to digital government*. Public Accounting and Sustainability, 2, 1–18.

Pambudi, A. S. **et al.** (2023). *Portrait of public service issues*. Jurnal Perencanaan Pembangunan, 6, 369–385.

Pedersen, J. F. **et al.** (2022). *Public involvement in health services*. Health Soc. Care Community, 30, 809–835.

Pribadi, U. **et al.** (2024). *Nexus of public organization, transparency*. J. Public Aff., 24.

Rachmawati, R. **et al.** (2021). *ICT-based applications for smart cities*. Infrastructures, 6, 119.

Batubara, F. R. **et al.** (2019). *Unraveling transparency and accountability*. Proceedings of Digital Government Research.

Sabani, A. (2021). *Transparency and e-government adoption*. J. Sci. Technol. Policy Manag., 12, 236–255.

Sahur, A. & Amiruddin, A. (2023). *Digital service delivery in Indonesia*. International Journal Papier Public Review, 4, 1–9.

Sanchez, M. A. (2020). *University E-readiness*. Rev. Gest. Tecnol., 20, 75–97.

Shao, T. **et al.** (2023). *Public service satisfaction*. Sustainability, 15, 2752.

Shenkoya, T. (2023). *Digital transformation and transparency*. Transform. Gov., 17, 54–71.

Simakov, K. **et al.** (2021). *Public administration in digital era*. Economic Herald of the Donbas, 179–185.

Taufani, M. & Widjaja, A. W. (2023). *Digital transformation in logistics*. J. Manaj., 27, 428–448.

Teo, T. C. & Ho, R. C. (2024). *Dynamic capabilities of SMEs*. IGI Global.

Ulatowska, R. **et al.** (2023). *Digital transformation in HRM*. J. Organ. Chang. Manag., 36, 1180–1192.

Uzule, K. & Verina, N. (2023). *Digital barriers*. Econ. Cult., 20, 125–143.

Vernandhie, D. (2023). *Sustainable digital governance transformation*. IWLEG Proceedings.

Vlasenko, T. **et al.** (2024). *Digital transformations worldwide*. Socratic Lectures.

Wahyudi, R. **et al.** (2024). *Digital public relations strategy*. Feedback Int. J. Communication, 1, 165–177.

Pochenchuk, G. **et al.** (2022). *Public government system transformation*. Bulletin of Chernivtsi Institute, I, 29–41.