Jurnal MSDA (Manajemen Sumber Daya Aparatur)
Vol 14, No. 1, 2026, pp. 103-123
Webiste : http://ejournal.ipdn.ac.id/JMSDA/
DOI 10.33701/jmsda.v14i1.6148

ISSN 2355-0899
JURNAL MSDA
MANAJEMEN SUMBER DAYA APARATUR

Smart Governance, Weak Implementation? Evaluating Digital Civil Servants Competence in the Age of E-Government

Frans Tory Damara Pradipta[1*]
[1]Universitas Bangka Belitung, Bangka, Indonesia, franstory24@gmail.com

ABSTRACT

Digital transformation in government through the implementation of e-government has become an essential component in achieving smart governance. The success of digital policy implementation depends not only on the availability of technological infrastructure but also on the digital competencies of civil servants as the primary actors responsible for executing public policies. This study aims to evaluate the digital competencies of civil servants and identify factors influencing the effectiveness of smart governance implementation in the e-government era. The research employed a qualitative approach using a literature review method based on scientific articles, government reports, and other relevant publications discussing digital competence, e-government, and smart governance. The findings indicate a significant gap between the advancement of digital governance policies and the actual digital capacities of civil servants in bureaucratic practices. Digital competencies remain unevenly distributed, technology utilization is largely administrative in nature, and competency development programs have not fully addressed the demands of digital transformation. Furthermore, conventional work cultures and limited adaptability to technological change continue to hinder the effectiveness of digital governance initiatives. The study highlights that digital competence is a critical factor in supporting the successful implementation of smart governance and digital bureaucratic transformation in Indonesia.

Keywords: Civil Servants; Digital Competence; Digital Transformation; E-Government; Smart Governance;

Introduction

Digital transformation in the government sector has now become an important part of the bureaucratic reform agenda. The development of information technology encourages the government to transform its previously conventional work patterns into a digital system-based approach. In this context, e-government is used as the main instrument to enhance efficiency, transparency, and the quality of public services (Irawan, 2015). Thru this system, the government strives to provide services that are faster, more accessible, and able to respond to the needs of the community more responsively.

***Corresponding author**
Frans Tory Damara Pradipta
Universitas Bangka Belitung, Bangka, Indonesia
franstory24@gmail.com

Received: April 30, 2026
Revised: June 26, 2026
Accepted: June 27, 2026
Available Online: June 30, 2026

Subsequent developments show that e-government no longer stands as a single concept. The demand for more adaptive public services has led to the emergence of a broader approach, namely smart governance. This concept not only focuses on the use of technology but also on how that technology is integrated into the policy-making process, interactions with the public, and more flexible governance management (Togala et al., 2025). Smart governance positions technology as a tool, not an end goal, so its success is highly determined by how the government utilizes it. Indonesia has shown significant progress in strengthening e-government. The increase in rankings in the United Nations e-government survey is often used as an indicator of the progress in government digitization (Kompas, 2024). That achievement shows progress in terms of policy and infrastructure. However, that picture does not fully reflect the conditions at the implementation level, especially in the daily practices of bureaucracy.

The issues that often arise are actually related to the readiness of the human resources of the state civil apparatus. Digital transformation is not just about technology, but also about the ability of civil servants to understand and manage the system. Digital competence becomes an important element in this regard. These competencies include technical skills, critical thinking abilities, and the ability to adapt to changes in a digital work environment (Herwanto et al., 2024)

Several studies show that the digital competence of civil servants plays a crucial role in the success of bureaucratic transformation. Haryanto and Dewi (2020) emphasize that improving the competence of civil servants is the foundation for creating a bureaucracy that is adaptive to technological developments. Wahyudi (2021) also states that limited digital competencies can hinder public service innovation. Mustafa and Abidin (2020) even show a gap between policy and implementation caused by the weak digital capacity of the apparatus.

Efforts to develop the competencies of civil servants in Indonesia continue thru various training programs and the enhancement of digital literacy. These programs are aimed at supporting a more modern bureaucratic transformation. Ariyanti et al. (2025) explain that the development of civil servants competencies currently focuses on mastering digital technology as part of the bureaucratic reform strategy. Rahim (2024) also emphasizes that competency development needs to be adjusted to the needs of digital governance to keep up with the dynamics of change.

The reality on the ground shows that the readiness of civil servants to face digital transformation is still uneven. The report from the National Civil Service Agency (2026) shows that the large number of civil servants is not in line with the digital capacity they possess. Only about 30 percent of civil servants are considered ready to face digital transformation (IDN Times,

DOI: https://doi.org/10.33701/jmsda.v14i1.6148

2024). The rest still face difficulties in understanding the digital-based work system (IDN Times, 2023). This situation highlights the gap between policy demands and the capabilities of the apparatus.

This condition becomes increasingly apparent in the implementation of e-government at the regional level. Nasrullah (2017) shows that the main obstacle in the implementation of e-government often lies in the aspect of human resources. Gafar and Nurrahman (2024) also found that the implementation of smart governance still faces obstacles in the capacity of personnel, despite the availability of policy and technology support.

The success of smart governance heavily depends on the ability of officials to integrate technology into work processes. Kesuma et al. (2023) emphasize that the implementation of e-government will not run optimally without the readiness of human resources. Diana et al. (2024) show that a good digital system still requires personnel who are capable of thoroughly understanding how it works. Digital competence serves as a bridge between policy and practice on the ground.

In this situation, a tendency emerges that shows an imbalance between narrative and reality. The government continues to promote digitalization and build the image of smart governance thru various policies. On the other hand, the implementation at the operational level still shows weaknesses, especially in the readiness of the apparatus's competencies. This condition illustrates a gap between policy design and field implementation, which in this study is understood as weak implementation.

This phenomenon indicates that digital transformation has not yet been fully and deeply implemented. Sitorus and Saputra (2021) emphasize the importance of developing civil servants competencies in facing the digital era, although its implementation has not been consistent. Sarjito and Djati (2025) show that the digital competence of civil servants has a direct impact on the success of digital bureaucratic reform. Pramono and Lubis (2019) also emphasize that the development of competencies within the framework of smart government needs to be carried out systematically.

This research departs from that condition, noting that the main issue in the implementation of smart governance lies in the capacity of the apparatus, not merely on technology. The focus of the research is directed toward evaluating the digital competence of civil servants in supporting the implementation of e-government. In addition, this research also seeks to identify the factors that cause the gap between concept and practice.

DOI: https://doi.org/10.33701/jmsda.v14i1.6148

The approach used is not only descriptive but also attempts to provide a critical reading of the existing reality. This research places digital competence as a key factor in determining the effectiveness of digital policy implementation. The research results are expected to contribute to the development of public administration studies and serve as a consideration in formulating policies for the development of civil servants competencies in the digital era.

The novelty of this research lies in the critical analysis of the gap between the implementation of smart governance and the level of digital competence of civil servants thru a review of recent literature. Unlike previous research that focused more on the technological aspects or e-government policies, this study highlights the digital competence of civil servants as the main determinant of the success of digital bureaucratic transformation.

Research Method

This research uses a qualitative approach with a literature study method to evaluate the digital competence of civil servants in the implementation of smart governance in the e-government era. The research data comes from secondary sources obtained thru literature searches in the Google Scholar, Scopus, and SINTA databases. The analyzed literature includes scientific articles, government reports, and relevant publications published in the period 2020–2025. The search process was conducted using the keywords "digital competence," "digital skills," "civil servants," "CIVIL SERVANTS," "e-government," and "smart governance." The selection of literature was conducted selectively based on relevance, source credibility, and its relation to the research focus.

Data analysis was conducted using qualitative analysis techniques thru the stages of data reduction, data presentation, and conclusion drawing. The collected data is classified based on the main themes, namely civil servants digital competence, e-government implementation, and smart governance. Next, the data is analyzed descriptively-evaluatively to identify patterns, interconceptual relationships, and gaps between digital transformation policies and their implementation in government bureaucracy. The validity of the data is maintained thru source triangulation by comparing various relevant references to enhance the validity of the research results.

Result and Discussion

This research found that digital transformation in the Indonesian government shows significant progress at the policy and infrastructure levels, but has not yet been fully matched by

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the readiness of officials in terms of digital competence. These findings reveal an imbalance between policy directions that promote digitalization and the capacity of human resources to implement it. This condition serves as a starting point in understanding why the implementation of smart governance often does not run optimally.

One of the important findings in this research is that the digitization of bureaucracy in Indonesia tends to develop faster in terms of systems compared to human aspects. The government has built various digital platforms in public services, ranging from e-office to online-based service systems. This step demonstrates a strong commitment to driving digital transformation. However, the readiness of the apparatus to operate and utilize the system has not developed at the same pace. This shows a gap between technological development and the strengthening of apparatus competence.

The next finding shows that the digital competence of civil servants is still at an uneven level. Some civil servants have been able to adapt to digital systems and even utilize them to improve service performance. However, others still face difficulties in understanding and using technology effectively. This condition is reinforced by data showing that only about 30 percent of civil servants are deemed ready to face digital transformation (IDN Times, 2024). Additionally, many civil servants still do not fully understand the digital-based work system (IDN Times, 2023). This disparity indicates that digital transformation has not yet been implemented inclusively within the bureaucracy.

This research also found that various digital competency development programs that have been implemented have not fully met the needs in the field. Training programs tend to be formalities and have not yet addressed the substantive aspects of digital competence. In many cases, the training only focuses on the use of certain applications without providing a deeper understanding of the overall digital system. This condition causes the apparatus to only be able to perform technical functions, but not yet able to develop innovations in public service. This finding aligns with the view that the development of civil servants competencies is still in the transitional stage toward the needs of digital governance (Rahim, 2024).

In addition, this study found that the implementation of e-government at the regional level still faces various obstacles related to the capacity of the apparatus. Some regions already have fairly good digital systems, but their utilization is not optimal due to the limited competence of the apparatus. In some cases, the digital system is even used only administratively without having a real impact on improving service quality. This condition shows that the presence of technology

DOI: https://doi.org/10.33701/jmsda.v14i1.6148

does not automatically result in changes in bureaucratic practices. These findings are consistent with research results that show the implementation of e-government is often hindered by human resource limitations (Nasrullah, 2017).

Other findings indicate that there is a tendency within the bureaucracy to place more emphasis on achieving formal indicators rather than on the quality of implementation. The increase in e-government rankings is often used as a measure of success without being followed by a thorough evaluation of the system's effectiveness in the field (Kompas, 2024). This condition shows that the digitalization of bureaucracy is still oriented toward administrative output, not public service outcomes. As a result, many digital innovations do not fully have a significant impact on society.

This research also found that the digital competence of civil servants is not only related to technical skills but also to mindset and readiness to face changes. Officials with technical skills may not necessarily be able to adapt to the dynamics of the ever-evolving digital system. In some cases, resistance to change actually becomes the main obstacle in the implementation of digitalization. This indicates that digital transformation requires a change in work culture, not just an improvement in technical skills. This view aligns with the concept of digital competence, which encompasses cognitive and adaptive aspects (Herwanto et al., 2024).

On the other hand, this research also found a significant potential in the development of civil servants's digital competencies, especially among the younger generation. Apparatus from the millennial generation tend to be more adaptive to technology and have better skills in utilizing digital systems. This potential can become an important asset in driving the transformation of bureaucracy toward a more modern direction. However, without a structured competency development system, that potential is difficult to maximize. This indicates the importance of a more systematic approach in the development of civil servants competencies (Sarjito & Djati, 2025).

The next finding shows that the success of smart governance highly depends on the ability of the apparatus to integrate technology into work processes. The available digital systems will not have a significant impact if they are not used optimally. In many cases, officials still use old work patterns even tho a more modern digital system is available. This condition indicates a gap between technological innovation and bureaucratic work practices. These findings reinforce the view that the success of e-government is not only determined by technology but also by the capacity of human resources (Diana et al., 2024).

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Overall, the findings of this research indicate that digital transformation in the Indonesian government still faces quite complex challenges, particularly in the aspect of civil servants's digital competence. There is a noticeable gap between policies that promote digitalization and the readiness of officials to implement them. This condition reflects the phenomenon of weak implementation, where policies that are conceptually sound have not yet been fully effective at the operational level.

These findings serve as the basis for further discussion on the factors influencing the digital competence of civil servants and its implications for the implementation of smart governance. The subsequent discussion will delve deeper into these dynamics thru several structured sub-sections of analysis.

A. The gap between Digital Policy and Civil Servant Capacity

Digital transformation in the Indonesian government has been developing in a relatively clear direction in recent years. The government consistently encourages the use of information technology in various aspects of public services, both thru the development of e-government and system integration within the framework of smart governance. Various policies have been formulated to support the acceleration of digitalization, ranging from the digitization of internal administration to online-based public services. This direction indicates an awareness that the modernization of bureaucracy cannot be separated from the utilization of technology. At the policy level, digitization is often positioned as a solution to various bureaucratic issues, such as slow service, lack of transparency, and low work efficiency. Digital systems are considered capable of simplifying procedures, speeding up service processes, and enhancing accountability. In this framework, smart governance is understood as an advanced stage of e-government that not only relies on technology but also integrates processes, actors, and data in decision-making (Togala et al., 2025).

However, the reality of implementation shows that the direction of such progressive policies does not always align with the readiness of the state civil apparatus. The gap begins to emerge when policies designed with high standards must be implemented by officials with varying levels of competence. This condition creates a gap between what is planned in policy and what happens in the daily practice of bureaucracy. One of the most visible forms of this gap is the difference between the availability of digital systems and the ability of officials to utilize them. Many agencies already have various applications and digital platforms to support public services. The

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system is designed to increase efficiency and simplify work processes. However, in practice, not all personnel are able to use the system optimally. Some only use basic features, while the overall potential of the system is not fully utilized.

This condition shows that the digitalization of bureaucracy still tends to focus on system development, rather than on strengthening user capacity. In fact, the success of a digital system greatly depends on the abilities of the individuals operating it. Herwanto et al. (2024) explain that digital competence includes not only technical skills but also the ability to understand systems, think critically, and adapt to changes. When these competencies are not adequately possessed, the available technology cannot provide optimal impact.

The gap between policies and the capacity of civil servants can also be seen from empirical data related to the readiness of officials in facing digital transformation. Most civil servants are still at the early adaptation stage to the digital system. Only a small fraction truly possesses adequate competence to support the effective implementation of policies (IDN Times, 2024). Additionally, many civil servants still do not fully understand how the digital system works (IDN Times, 2023). This condition shows that competency development has not been able to keep pace with the speed of policy changes.

This issue becomes even more complex when linked to the competency development approach that has been implemented so far. Training programs often emphasize formalities more than substantive needs. Officials are given training on the use of certain applications, but they are not equipped with a broader understanding of the digital system as a whole. As a result, the competencies that are formed are partial and unable to support innovation in public services. Rahim (2024) emphasizes that the development of civil servants competencies in the era of digital transformation needs to be directed toward the more complex needs of digital governance. An approach that only focuses on technical aspects is not sufficient to build adaptive capacity. Ariyanti et al. (2025) also show that the development of civil servants competencies must be carried out continuously and based on needs, not merely to fulfilll administrative obligations.

In addition to individual competence factors, this gap is also influenced by the bureaucratic organizational structure that has not yet fully supported digital transformation. The work system, which is still hierarchical and rigid, often does not align with the characteristics of digital technology that demand flexibility and speed. Personnel accustomed to conventional procedures tend to have difficulty adapting to a more dynamic system.

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In some cases, the shift toward a digital system is met with resistance. This resistance does not always manifest as open rejection, but often appears in the form of suboptimal system usage or a return to old working methods. This shows that digital transformation is not just a matter of technology, but also a change in work culture within the bureaucracy.

Nasrullah (2017) shows that one of the main obstacles in the implementation of e-government is the limited capacity of officials to understand and operate digital systems. Gafar and Nurrahman (2024) also found that the implementation of smart governance still faces obstacles in the aspect of human resources, despite the availability of supporting policies. These findings reinforce the argument that the gap between policies and the capacity of civil servants is a real issue in the implementation of government digitalization.

This gap is also related to the differences in conditions between regions. Not all regions have the same level of readiness in facing digital transformation. Some regions have better resources, both in terms of infrastructure and the quality of personnel. Meanwhile, other regions still face quite significant limitations. These differences cause the implementation of digital policies to be uneven and result in varying quality of services.

In the context of smart governance, this condition becomes a quite serious challenge. Smart governance demands the integration of technology, policy, and the capacity of the apparatus. When one of the elements does not function optimally, the entire system will be affected. Diana et al. (2024) emphasize that the optimization of e-government heavily relies on the ability of officials to effectively utilize technology. Kesuma et al. (2023) also show that the success of smart governance implementation is highly determined by the readiness of human resources.

The gap between policy and the capacity of civil servants also reflects differences in understanding the goals of digitalization. At the policy level, digitalization is aimed at improving efficiency and service quality. However, at the implementation level, digitalization is often understood as an administrative obligation. As a result, many digital innovations do not have a significant impact because they are not accompanied by changes in work methods.

Sitorus and Saputra (2021) emphasize that the development of civil servants competencies is an important factor in facing digital transformation. Without sustainable capacity building, digital policies will struggle to achieve the expected goals. Pramono and Lubis (2019) also emphasize that the development of competencies within the framework of smart government needs to be carried out systematically in order to meet the demands of the digital era.

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In the framework of this research, the gap between digital policies and the capacity of civil servants is one of the main factors explaining the emergence of the weak implementation phenomenon. Policies that are well-designed are not fully followed by the readiness of the apparatus in implementing them. This condition causes the implementation to not run optimally and has not been able to produce significant changes in public services.

This situation indicates that digital transformation in the Indonesian government is still in a transitional phase. On one hand, there is a strong push to adopt technology and build more modern systems. On the other hand, the readiness of the apparatus has not yet fully matched these changes. This imbalance creates a gap that affects the effectiveness of policy implementation.

This discussion shows that strengthening the digital competencies of civil servants is an urgent need to support digital transformation. Good policies need to be accompanied by adequate bureaucratic capacity in order to be implemented effectively. Without serious efforts in competency development, the digitalization of bureaucracy risks not having a significant impact on the improvement of public service quality.

B. The Limitations of civil servants's Digital Competence in Bureaucratic Practices

The discussion on the gap between digital policies and the capacity of civil servants brings attention to a more concrete issue, namely how the digital competencies of civil servants are truly implemented in the daily practices of bureaucracy. At this stage, the issue is no longer at the level of concepts or policies, but rather how officials directly interact with the provided digital systems. Here, it becomes evident that the limitations in digital competence are not just a potential issue, but a reality that affects the effectiveness of public services.

In practice, the use of digital systems in bureaucratic environments often remains partial. Officials tend to use technology only in certain parts of their work, while other processes are still done manually. For example, an online-based administrative system is already available, but verification or internal coordination processes are still done conventionally. Patterns like this indicate that digital integration has not been fully realized, so the benefits of technology are not fully felt.

This condition is closely related to the level of understanding of the apparatus regarding the digital system used. Many civil servants are able to operate certain applications, but they do not yet understand how the system works as a whole. This limited understanding makes the use of technology merely procedural, not strategic. Officials operate the system due to job demands, not because they understand its value and benefits in improving performance.

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Emilia and Soemaryani (2025) show that digital competence has a direct impact on employe performance. Personnel with good digital skills tend to work more efficiently and provide higher quality services. Conversely, limited digital competence can slow down work processes and increase the potential for errors. These findings show that digital competence is not merely an addition, but a determining factor in the quality of bureaucratic performance.

The limitations in competence are also evident from the low ability of the apparatus to adapt to system changes. Digital transformation demands that officials continuously learn and adapt to evolving technologies. However, in practice, not all civil servants are ready to face these changes. Some officials tend to feel comfortable with the old way of working and are less motivated to learn the new system. This condition creates obstacles in the digitalization process that should be dynamic.

Moreover, there is a tendency that the use of technology in bureaucracy is still instructive in nature. Officials use the system because of orders or obligations from superiors, not because of an awareness of the importance of digitalization. Such a pattern makes the utilization of technology limited and stagnant. The apparatus is not encouraged to explore features or develop innovations that can improve service quality.

Lubis et al. (2024) emphasize that the development of civil servants competencies toward digital transformation requires a change in mindset, not just an increase in technical skills. Officials need to understand that technology is part of the work process that must be utilized optimally. Without a change in mindset, digitalization will only become a new routine without making a significant impact.

The limitations of digital competence also affect the effectiveness of public services. In some cases, the digital systems that are supposed to simplify services actually become obstacles because they are not used optimally. The public still has to face convoluted procedures even tho the services are already digital-based. This shows that the presence of technology does not automatically improve the quality of service.

Pakpahan(2026) explains that the implementation of e-government in the era of technological development, including artificial intelligence, demands a higher level of readiness from the apparatus. Officials are not only required to use technology but also to understand how that technology can be integrated into the service process. Without that readiness, digital innovation has the potential to not yield optimal results.

In bureaucratic practice, the limitations of digital competence are often seen in data management. Digital systems generate large amounts of data that should be used to support

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decision-making. However, not all officials have the ability to manage and analyze the data. As a result, the potential of data as a source of strategic information is not being maximally utilized.

This condition indicates that the digital competence of civil servants is still at a basic level and has not yet developed toward a more strategic direction. Apparatus tend to act as users of technology, rather than as managers or developers of systems. This becomes one of the factors that limits innovation in the bureaucracy, as the ability to creatively utilize technology has not yet widely developed.

Sitorus and Saputra (2021) emphasize that the development of civil servants competencies in the digital era must encompass various aspects, including analytical and adaptive abilities. Competencies that are purely technical are not sufficient to face the complexities of the ever-evolving digital system. Officials need to be equipped with broader skills to actively participate in bureaucratic transformation.

The limitations in digital competence also highlight the generational differences within the bureaucracy. Younger officials tend to adapt to technology more quickly, while more senior officials take longer to adjust. This difference creates a unique dynamic within the organization, where not all personnel have the same level of readiness. If not managed well, these differences can slow down the digital transformation process.

Sarjito and Djati (2025) show that the millennial generation of civil servants has great potential in supporting digital bureaucratic reform. However, that potential needs to be supported by a system that allows them to develop. Without adequate support, that potential will not have a significant impact on the organization.

In the framework of smart governance, the limited digital competence of civil servants is one of the factors that hinders the integration between technology and bureaucratic work processes. Smart governance demands the optimal use of technology in every aspect of governance. When the apparatus lacks adequate competence, the integration cannot proceed effectively.

Diana et al. (2024) emphasize that the optimization of e-government requires personnel who are not only capable of using technology but also understand how that technology can enhance work effectiveness. Kesuma et al. (2023) also show that the success of smart governance highly depends on the readiness of human resources to utilize technology.

This discussion shows that the limitations in the digital competencies of civil servants are not just an individual issue, but also impact the bureaucratic system as a whole. When officials are unable to utilize technology optimally, the digital policies that have been designed cannot achieve the expected goals. This condition reinforces the finding that the implementation of digital policies still faces various obstacles at the operational level.

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In the context of this research, the limited digital competence of civil servants is one of the main factors explaining why digital transformation has not yet been fully effective. The apparatus, as the main actors in the bureaucracy, play a crucial role in the success of policy implementation. Without adequate competency support, digitalization will only result in a change in the system, not in the quality of service.

C. Bureaucratic Culture and Resistance to Digital Transformation

The discussion regarding the limitations of civil servants's digital competencies cannot be separated from a broader context, namely the bureaucratic culture that still shapes the working methods of officials to this day. Digital transformation essentially demands not only changes in systems and technology but also changes in values, habits, and mindsets within the organization. In many cases, the main obstacle to digitalization does not actually come from the technology itself, but rather from a work culture that has not yet fully embraced change.

The bureaucratic culture in Indonesia is generally still influenced by hierarchical and procedural work patterns. Work systems like this prioritize rules and administrative stages, limiting flexibility in working. In the context of digital transformation, this condition becomes a challenge in itself, because technology demands speed, efficiency, and adaptability. When the old work patterns are maintained, the introduced technology cannot bring about significant change.

One form of resistance that often arises is the tendency of officials to continue using conventional work methods even tho a digital system is available. Officials may use digital systems to fulfilll administrative duties, but in practice, they still rely on manual processes. For example, data has been input into the system, but it is still manually recorded again as a form of "security" or old habit. Patterns like this indicate that digital transformation has not yet been fully embraced as part of the main workflow.

Resistance to change often manifests in the form of an attitude that is not open to new technology. Some officials view digitalization as an additional burden, rather than a tool that can simplify their work. This perception leads to a lack of motivation to learn and optimally utilize technology. As a result, the implementation of digital systems is limited and not developing. In this context, it is important to understand that resistance is not always caused by inability, but also by discomfort with change. Personnel who have long worked with conventional systems tend to take longer to adapt to new systems. If this adaptation process is not supported by the right approach, resistance will continue to emerge and hinder the transformation process.

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Sitorus and Saputra (2021) emphasize that the development of civil servants competencies is not only related to skill enhancement but also to attitude changes and readiness to face changes. This indicates that digital transformation requires a more comprehensive approach, encompassing both technical and non-technical aspects. Without changes in cultural aspects, improvements in technical competencies will not yield optimal results.

The bureaucratic culture that is still oriented toward compliance with procedures also affects the way officials utilize technology. In many cases, officials are more focused on compliance with rules than on achieving results. Technology is used to ensure that procedures have been followed, not to improve the quality of service. This condition causes digitalization to lose its essence as a tool to drive innovation.

This phenomenon is also related to leadership patterns in the bureaucracy. Leadership plays a crucial role in determining the direction of organizational change. When leaders do not provide strong support for digitalization, the staff below them tend to lack the motivation to change. Conversely, when leaders actively encourage the use of technology, change is more likely to occur. In this context, leadership becomes a factor that influences the success of digital transformation.

Lubis et al. (2024) show that the transformation toward smart civil servants requires a change in mindset supported by the organizational environment. Apparatus cannot develop optimally if the existing system does not provide space for innovation. Therefore, changing the bureaucratic culture becomes an inseparable part of developing digital competencies.

Resistance to digital transformation is also evident from the lack of initiative in utilizing technology. Officials tend to wait for instructions rather than taking proactive steps in developing innovations. Work patterns like this cause the utilization of technology to stagnate and not develop. However, in the context of smart governance, innovation is one of the important elements in improving the quality of public services.

Moreover, there is a tendency that failures in the implementation of digital systems are often not evaluated in depth. When a system does not run optimally, the solutions taken are often technical in nature, such as fixing the application or adding features. In fact, the root of the problem often lies in the cultural and behavioral aspects of the apparatus. Without an evaluation that addresses those aspects, the same problems will continue to recur.

Diana et al. (2024) emphasize that the success of e-government implementation does not only depend on the system used, but also on the organization's readiness to embrace change.

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Kesuma et al. (2023) also show that smart governance requires the integration of technology and a work culture that supports innovation. This shows that digital transformation cannot proceed partially.

In the context of this research, a bureaucratic culture and resistance to change become factors that reinforce the occurrence of weak implementation. Well-designed digital policies cannot be optimally implemented because they are not supported by an adaptive work culture. This condition creates a gap between concept and practice, which ultimately hinders the effectiveness of the policy.

This discussion shows that digital transformation requires a more comprehensive approach. Changes are not enough at the level of technology and policy, but must also touch on aspects of organizational culture. Officials need to be encouraged to see technology as part of the work process, not as an additional burden. Without this change in perspective, digitalization will struggle to achieve the expected goals.

In this situation, strengthening digital competencies needs to be accompanied by efforts to change the bureaucratic culture. These two aspects are interconnected and cannot be separated. Good competence requires a supportive environment, while cultural change requires personnel with the capacity to adapt. If both do not progress in balance, then digital transformation will continue to face obstacles.

D. Implications for Smart Governance and Directions for Improvement

Various findings previously outlined indicate that digital transformation in the Indonesian government still faces non-trivial challenges. The gap between policies and the capacity of apparatus, the limited digital competencies in bureaucratic practices, and the organizational culture that is not yet fully adaptive are interrelated factors that shape the suboptimal implementation conditions. This situation has direct implications for efforts to realize smart governance as the goal of government digitization.

Smart governance essentially demands a balanced integration between technology, policy, and human resources. These three aspects cannot operate separately, as they influence each other in determining the effectiveness of governance. In the context of this research, it is evident that the aspect of human resources, particularly the digital competence of civil servants, is the most determining factor. When the capacity of the apparatus cannot keep up with technological developments, the system that has been built cannot be utilized optimally.

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The first implication that can be seen is that the success of smart governance cannot be measured solely by the existence of digital systems or the number of innovations produced. The indicators of success need to shift to the extent to which the technology is truly used to improve the quality of public services. That means the focus of evaluation is no longer on administrative output, but on the outcomes felt by the community. This shift is important so that digitalization does not stop at the symbol of modernization, but truly brings about real change.

The next implication relates to the approach in developing civil servants competencies. Research findings indicate that the development of technical and administrative competencies is not sufficient to support digital transformation. Officials need more comprehensive competencies, which include analytical abilities, adaptability, and a thorough understanding of digital systems. Herwanto et al. (2024) emphasize that digital competence should be understood as a multidimensional ability, not merely as a skill in using technology.

In this context, the direction of improvement needs to be focused on changing the approach to competency development. Training programs should not only focus on the use of applications but must also be able to build a deeper understanding of the logic behind digital systems. Officials need to be encouraged not only to become users of technology but also to be able to utilize technology as a tool to create innovations in public service.

In addition, it is important to strengthen the needs-based approach in the development of civil servants competencies. Training programs should be tailored to the conditions and needs of each agency, rather than being conducted uniformly. Ariyanti et al. (2025) show that effective competency development requires a clear needs mapping so that the training provided is relevant to the duties and functions of the apparatus. This approach is expected to reduce the gap between the competencies possessed and the demands of the job in the field.

Another implication relates to the importance of changing bureaucratic culture to support digital transformation. The work culture that is still rigid and procedure-oriented needs to be directed toward a more flexible and adaptive work pattern. Digital transformation requires an organizational environment that is open to change and encourages innovation. In this case, the role of leadership becomes very important in shaping the direction of the change.

Leaders in the bureaucracy need to act as change agents who can drive the optimal use of technology. Support from leaders can increase the motivation of staff to adapt to digital systems. Without such support, digitalization efforts tend to be limited and unsustainable. Lubis et al. (2024)

DOI: https://doi.org/10.33701/jmsda.v14i1.6148

emphasize that the transformation toward smart civil servants requires strong organizational support so that the apparatus can develop optimally.

Furthermore, there is a need to strengthen the evaluation system in the implementation of digital policies. The evaluations conducted so far tend to focus on technical and administrative aspects, while the aspects of utilization and impact have not received sufficient attention. In fact, a comprehensive evaluation is crucial to determine the extent to which digital policies have been effectively implemented. Pakpahan (2026) emphasizes that the implementation of e-government requires continuous evaluation to adapt to technological developments and societal needs.

The direction of improvement also needs to consider the importance of change management within the bureaucracy. Digital transformation is a process that takes time and cannot be done instantly. Therefore, a strategy capable of managing change gradually and sustainably is needed. An approach that is too rapid without the readiness of the apparatus actually has the potential to widen the gap between policy and implementation.

In the framework of smart governance, strengthening collaboration is also an important aspect. The government cannot work alone in driving digital transformation, but needs to involve various parties, including the community and the private sector. Recupero et al (2016) show that the involvement of various actors in the digital governance system can enhance the effectiveness of policy implementation. This collaboration can also serve as a means to enrich innovation in public services.

The final implication that can be drawn from this research is the importance of a paradigm shift in viewing government digitalization. Digitalization cannot be understood merely as the technologization of bureaucracy, but as a comprehensive transformation that encompasses systems, people, and work culture. Without this paradigm shift, digitalization will struggle to achieve the expected goals.

In the context of this research, the phenomenon of weak implementation reflects that digital transformation still faces various limitations. This condition does not mean that digital policies are incorrect, but rather indicates that implementation requires a more comprehensive approach. The existing gaps need to be understood as areas for improvement that can be utilized to strengthen the transformation process moving forward.

This discussion emphasizes that the success of smart governance is not only determined by the quality of policies or the sophistication of technology but also by the readiness of the apparatus

DOI: https://doi.org/10.33701/jmsda.v14i1.6148

to implement them. Therefore, strengthening the digital competencies of civil servants should be a priority in the bureaucratic reform agenda. This effort is expected to reduce the gap between concept and practice, as well as encourage the creation of more effective and responsive governance.

This research has limitations because it uses a literature study approach, so the findings depend on the quality, scope, and availability of the analyzed sources. In addition, this research has not been supported by empirical data obtained directly from government agencies or civil servants as the research subjects. Therefore, the research results place more emphasis on the conceptual and evaluative synthesis of the available literature. Subsequent research is recommended to use survey, interview, or case study approaches to obtain a more comprehensive picture of civil servants's digital competencies in the implementation of smart governance.

Conclusion

This research shows that the implementation of smart governance within the framework of e-government in Indonesia still faces various obstacles related to the digital competence of state civil apparatus. Although policies and digital infrastructure continue to develop, the digital capacity of civil servants has not yet fully supported the effective implementation of policies at the operational level. These limitations are not only evident in the technical aspects of technology use but also in the ability of civil servants to integrate digital systems into work processes. Moreover, the bureaucratic culture, which has not yet fully adapted to change, also causes the digitalization of government to occur more in the administrative aspect rather than in the comprehensive transformation of public services. Therefore, strengthening the digital competencies of civil servants becomes an important factor in supporting the successful implementation of smart governance and the digital transformation of bureaucracy in Indonesia.

The government needs to develop programs to enhance the digital competencies of civil servants that not only focus on technical skills but also include adaptability, digital literacy, and understanding of technology-based governance systems. In addition, support for a more adaptive organizational culture is needed so that the implementation of digital policies can run optimally. Further research is recommended to use an empirical approach thru surveys, interviews, or case studies in government agencies to obtain a more comprehensive picture of the dynamics of civil servants's digital competencies in supporting the implementation of smart governance.

DOI: https://doi.org/10.33701/jmsda.v14i1.6148

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