Journal of Public Administration and Government Management (JPAGM)
Vol 1, No. 1, 2026, pp. 28 - 33

Available *Online* di https://journals.polimaritimekautama.ac.id/index.php/jpagm
ISSN xxxx-xxxx

Artificial Intelligence Adoption in Public Service Delivery and Its Impact on Government Efficiency in Jakarta

Ufa Anita Afrilia[1], Andi Sukandi[2], Deni Ramdani[3]
[1]Universitas Padjadjaran
[2]Politeknik Bina Global
[3]Universitas Wanita Internasional[3]
E-mail: ufa.afrilia@unpad.ac.id. No. HP yg dpt dihubungi -

Received: 15-01-2026 *Revised: 13-02-2026* *Accepted:14-03-2026*

Abstract: The rapid advancement of artificial intelligence (AI) technologies has significantly transformed the way governments deliver public services. AI has increasingly been adopted by public institutions to improve administrative efficiency, enhance decision-making processes, and provide more responsive services to citizens. In the context of digital governance, AI-based technologies such as chatbots, automated service systems, and data analytics platforms have enabled governments to modernize public administration practices and improve service accessibility. This study aims to examine the adoption of artificial intelligence in public service delivery and analyze its impact on government efficiency in Jakarta. The research employs a qualitative approach using a case study design to explore the implementation of AI-based public service systems in local government administration. Data were collected through semi-structured interviews with government officials, public service administrators, and citizens who utilize digital government services, supported by document analysis and observations of digital service platforms. The findings indicate that AI adoption has contributed to improving administrative efficiency, reducing service processing time, and strengthening communication between government institutions and citizens. AI-based service platforms allow citizens to access information, submit service requests, and receive responses more quickly compared to traditional service systems. However, the study also identifies several challenges related to technological infrastructure, digital literacy among citizens, and the need for institutional readiness in managing AI-driven governance systems. The research highlights the importance of strengthening digital infrastructure, improving institutional capacity, and developing regulatory frameworks for AI governance to ensure sustainable digital transformation in public administration. Overall, the adoption of artificial intelligence in public service delivery represents an important step toward building more efficient, transparent, and responsive governance systems in Jakarta.

Keywords: Artificial Intelligence Governance, Digital Government, Public Service Innovation, Government Efficiency, Public Administration

How to cite: A*nita Afrilia et.al* (2026). Article title. *Journal of Public Administration and Government Management (JPAGM), 1(1): 27 - 32*

INTRODUCTION

The rapid development of digital technologies has significantly transformed governance practices across the world. Governments are increasingly integrating advanced technologies such as artificial intelligence (AI), big data analytics, and digital platforms into public administration systems to improve service delivery and administrative efficiency. These technological innovations have created new opportunities for governments to modernize bureaucratic systems, reduce administrative complexity, and enhance communication with citizens (OECD, 2021).

Artificial intelligence has emerged as one of the most influential technologies in the digital transformation of public administration. AI technologies enable government institutions to automate administrative processes, analyze large volumes of data, and provide faster responses to citizen requests. Through the use of AI-driven systems such as chatbots, automated licensing systems, and predictive data analytics, governments can significantly improve the efficiency of public service delivery (Wirtz et al., 2019).

The concept of AI governance refers to the integration of artificial intelligence technologies into government systems to improve policy implementation and administrative decision-making processes. AI-based governance systems allow governments to process information more efficiently and develop data-driven policy solutions that respond to complex social challenges. As a result, AI adoption has become an important component of digital government initiatives in many countries (Sun & Medaglia, 2019).

In the context of public service delivery, AI technologies can help government institutions provide more responsive and accessible services for citizens. AI-based chatbots, for example, can answer citizen inquiries, provide information about administrative procedures, and guide users through service applications. These automated systems allow citizens to access government services at any time without relying solely on human administrative staff (Dwivedi et al., 2021).

Indonesia has also begun to explore the potential of artificial intelligence in improving public administration systems. The Indonesian government has introduced several digital governance initiatives aimed at modernizing public services and improving administrative efficiency. These initiatives include the development of integrated digital service platforms, smart city systems, and AI-based administrative tools that support decision-making processes within government institutions (Bappenas, 2021).

Jakarta, as the capital city of Indonesia, has become one of the leading regions in implementing digital governance innovations. The Jakarta Provincial Government has introduced various smart city initiatives that integrate digital technology into public administration systems. These initiatives include digital complaint platforms, integrated public service applications, and AI-based information systems that facilitate communication between government institutions and citizens.

Despite the potential benefits of AI adoption in public administration, several challenges remain in ensuring the effective implementation of AI-driven governance systems. Issues related to technological infrastructure, data governance, institutional readiness, and digital literacy among citizens may affect the effectiveness of AI-based public services. Understanding how AI technologies are implemented in public administration is therefore important for evaluating their impact on governance practices.

This study aims to examine the adoption of artificial intelligence in public service delivery and analyze its impact on government efficiency in Jakarta. By exploring how AI-based technologies are implemented within local government institutions and how they influence public service delivery processes, this research seeks to provide insights into the role of artificial intelligence in shaping the future of digital governance.

METHOD

This study employs a qualitative research approach to examine the adoption of artificial intelligence (AI) in public service delivery and its impact on government efficiency in Jakarta. A qualitative approach was chosen because it allows the researcher to explore in depth how AI technologies are implemented in government institutions and how these technologies influence administrative processes and citizen interactions with public service systems. Through qualitative inquiry, this research aims to understand the perspectives and experiences of government officials, public service administrators, and citizens who interact with AI-based public service platforms.

The research design adopts a case study approach focusing on AI-based digital governance initiatives implemented by the Jakarta Provincial Government. The case study method is appropriate for analyzing complex technological and governance phenomena within a specific institutional and geographical context (Yin, 2018). Jakarta was selected as the research locus because it has implemented several smart city initiatives and digital public service systems that integrate artificial intelligence technologies into government administration. These initiatives provide an important context for examining how AI adoption influences public service delivery in local government institutions.

Data were collected using several qualitative data collection techniques. The primary method of data collection was semi-structured interviews conducted with key informants who are directly involved in the implementation and utilization of AI-based public service systems. These informants included government officials responsible for digital governance programs, administrative staff working in public service units, and citizens who have utilized AI-driven digital platforms such as government chatbots and digital service applications. The interviews aimed to gather information regarding the implementation process, perceived benefits, and challenges associated with AI adoption in public administration.

In addition to interviews, document analysis was conducted to examine official government documents related to digital governance and AI-based public service initiatives in Jakarta. These documents included regional government policies, smart city development strategies, digital governance reports, and official publications related to technological innovation in public administration. Document analysis provided important contextual information regarding the policy framework and institutional strategies supporting AI adoption in government systems.

Furthermore, observations were conducted to understand how AI-based digital public service systems operate in practice. The observations focused on the use of digital government platforms such as online complaint systems, AI-powered chatbots, and integrated public service applications. Through these observations, the study aimed to analyze how citizens interact with AI-driven service systems and how government institutions manage digital service platforms in daily administrative operations.

The collected data were analyzed using thematic analysis. This analytical method involves organizing qualitative data, coding relevant information, identifying recurring themes, and interpreting patterns that emerge from the data (Braun & Clarke, 2006). Through this analytical process, the study identified several important themes related to AI adoption in public service delivery, improvements in administrative efficiency, citizen accessibility to digital services, and institutional challenges associated with digital governance transformation.

To ensure the credibility and reliability of the research findings, this study applied data triangulation by comparing information obtained from interviews, document analysis, and field observations. Triangulation helps strengthen the validity of qualitative research by ensuring that findings are supported by multiple sources of evidence (Denzin, 2017). Through this methodological approach, the study aims to provide a comprehensive understanding of how artificial intelligence technologies are implemented in public administration and how they influence public service efficiency in Jakarta.

RESULTS AND DISCUSSION

The findings of this study indicate that the adoption of artificial intelligence (AI) in public service delivery within the Jakarta Provincial Government has significantly transformed administrative processes and improved the efficiency of public services. AI-based technologies have been integrated into several digital governance systems, including public complaint platforms, chatbot-based service systems, and integrated digital service applications that allow citizens to access government services through online platforms. Based on interviews with government officials, administrative staff, and citizens who have utilized digital public services, as well as observations of digital governance platforms and analysis of government documents, several key themes emerged regarding AI adoption in public administration, including improvements in administrative efficiency, enhanced citizen access to services, institutional readiness, and challenges associated with AI-driven governance systems.

AI-Based Public Service Systems in Jakarta

One of the most important findings of this research is the increasing integration of AI technologies into digital public service platforms managed by the Jakarta Provincial Government. The development of smart city initiatives in Jakarta has encouraged the use of digital technologies to support more efficient and responsive governance systems. Several public service applications and platforms have incorporated AI-based features such as automated responses, data processing systems, and predictive analytics tools to improve the efficiency of government services.

One example of AI implementation is the use of chatbot systems that assist citizens in obtaining information about administrative procedures and government services. These AI-driven chatbots are capable of responding to frequently asked questions related to public services, guiding users through administrative processes, and directing citizens to appropriate service units. By providing automated responses to common inquiries, chatbot systems reduce the workload of administrative staff and enable government institutions to respond to citizen requests more quickly.

In addition to chatbot systems, AI technologies are also utilized in digital complaint platforms that allow citizens to report issues related to public services, infrastructure problems, or environmental concerns. These platforms use AI-based systems to categorize complaints, prioritize urgent issues, and forward reports to

relevant government agencies for further action. The integration of AI technologies into these platforms allows government institutions to manage large volumes of citizen reports more efficiently.

Improvement in Government Efficiency

Another important finding of this study is that the adoption of AI technologies has contributed to improving the efficiency of public administration in Jakarta. Government officials reported that AI-based systems enable administrative processes to be completed more quickly compared to traditional bureaucratic procedures. Automated systems allow government agencies to process service requests, manage administrative data, and respond to citizen inquiries without relying solely on manual administrative procedures.

The use of AI-driven systems also reduces administrative errors and improves the accuracy of data management within government institutions. Automated data processing systems allow government agencies to analyze large volumes of information more effectively and make more informed decisions regarding public service delivery. For example, predictive analytics tools can help government institutions identify service demand patterns and allocate resources more efficiently.

Furthermore, AI technologies support the development of data-driven governance systems in which government institutions utilize digital data to evaluate service performance and identify areas that require improvement. By analyzing data generated through digital public service platforms, government institutions can monitor service efficiency, identify service bottlenecks, and develop strategies for improving administrative performance.

Citizen Accessibility to Digital Public Services

The implementation of AI-based digital service systems has also improved citizen access to government services in Jakarta. Through digital platforms and mobile applications, citizens can access public services, submit administrative requests, and obtain information about government programs without the need to visit government offices. This increased accessibility is particularly beneficial for residents who have limited time to access government services through traditional administrative procedures.

AI-powered service systems also allow citizens to receive faster responses to their inquiries and service requests. Chatbot systems provide immediate responses to frequently asked questions, allowing citizens to obtain information about service requirements and procedures without waiting for assistance from administrative staff. This real-time communication improves the overall user experience and enhances citizen satisfaction with government services.

Additionally, digital complaint platforms supported by AI technologies enable citizens to report public service issues more easily. Residents can submit reports regarding infrastructure damage, environmental problems, or administrative difficulties through digital platforms. AI systems categorize and process these reports, allowing government institutions to respond more efficiently to public concerns.

However, the findings of this study also indicate that the level of digital service utilization varies among different segments of the population. While younger citizens and individuals who are familiar with digital technology tend to use digital service platforms frequently, some residents—particularly older individuals—may face difficulties in using digital systems due to limited digital literacy. This situation highlights the importance of improving digital literacy among citizens to ensure inclusive access to AI-based public services.

Institutional Readiness for AI Governance

The successful implementation of AI technologies in public administration also depends on the institutional readiness of government agencies. The findings of this research indicate that the Jakarta Provincial Government has made significant efforts to develop digital infrastructure and improve the technological capacity of public institutions. Government agencies responsible for digital governance initiatives have introduced training programs aimed at improving the digital competencies of government employees.

These training programs help ensure that administrative staff are able to operate AI-based digital platforms and assist citizens in accessing digital services. In addition, the development of integrated digital systems allows government institutions to coordinate more effectively when responding to citizen requests or addressing public service issues.

Despite these efforts, institutional challenges remain in the implementation of AI-driven governance systems. Government institutions must continuously update digital infrastructure, maintain cybersecurity systems, and ensure the reliability of AI-based service platforms. Without adequate technological infrastructure and institutional support, the effectiveness of AI-based governance systems may be limited.

Challenges in Implementing AI-Based Governance

Although AI adoption has produced several positive outcomes in improving public service efficiency, the study also identified several challenges that affect the implementation of AI-driven governance systems in Jakarta. One of the primary challenges is the digital divide among citizens. Differences in access to digital technology and internet connectivity may limit the ability of certain groups to utilize digital public service platforms.

Another challenge involves ensuring the security and privacy of citizen data within AI-based administrative systems. Government institutions must implement strong cybersecurity measures to protect sensitive citizen information and maintain public trust in digital governance systems. Data protection and ethical considerations therefore become important aspects of AI governance in public administration.

Furthermore, the integration of AI technologies into public administration requires continuous institutional adaptation. Government agencies must develop regulatory frameworks and operational guidelines to ensure that AI technologies are used responsibly and effectively. Ensuring transparency in AI-based decision-making processes is also important to prevent potential biases or unfair outcomes in automated systems.

Implications for Public Administration

From a public administration perspective, the findings of this study highlight the transformative potential of artificial intelligence in improving governance practices. AI technologies enable government institutions to modernize administrative systems, improve service efficiency, and strengthen communication between government and citizens.

The experience of Jakarta demonstrates that AI-based digital governance initiatives can significantly improve the accessibility and efficiency of public services when supported by adequate technological infrastructure and institutional capacity. However, ensuring inclusive access to digital services and addressing challenges related to digital literacy remain important priorities for local governments.

Overall, the adoption of artificial intelligence in public service delivery represents an important step toward creating more responsive, efficient, and citizen-centered governance systems. By strengthening digital infrastructure, developing institutional capacity, and establishing clear regulatory frameworks for AI governance, governments can maximize the benefits of technological innovation in public administration and improve the quality of public service delivery.

CONCLUSIONS

This study examined the adoption of artificial intelligence (AI) in public service delivery and its impact on government efficiency in Jakarta. The findings indicate that the integration of AI technologies into public administration has significantly contributed to improving the efficiency, accessibility, and responsiveness of government services. Through the implementation of AI-based systems such as chatbots, digital complaint platforms, and automated data processing tools, government institutions are able to deliver services more quickly and effectively compared to traditional bureaucratic processes.

The results of this research show that AI adoption has enhanced administrative efficiency by reducing manual procedures, improving data management, and enabling faster responses to citizen requests. Automated systems allow government institutions to process large volumes of service requests and public reports more efficiently, which helps reduce administrative delays and improve overall service performance. In addition, AI-based data analysis systems provide valuable insights that support evidence-based decision-making within government institutions.

Another important finding of this study is that AI-based public service systems have improved citizen access to government services. Digital platforms supported by AI technologies allow citizens to obtain information, submit administrative requests, and report public service issues more conveniently through online systems. These platforms help simplify communication between government institutions and citizens while also increasing transparency in public service delivery.

However, the study also identified several challenges related to the implementation of AI-driven governance systems. Differences in digital literacy among citizens, unequal access to internet infrastructure, and the need for stronger institutional capacity in managing digital technologies may affect the effectiveness of AI-based public services. In addition, issues related to data security, ethical governance, and regulatory

frameworks must be carefully addressed to ensure responsible use of artificial intelligence in public administration.

From a public administration perspective, the adoption of artificial intelligence represents an important step toward the development of modern governance systems. AI technologies enable governments to modernize administrative processes, improve service efficiency, and enhance the quality of interactions between public institutions and citizens. The experience of Jakarta demonstrates that technological innovation can significantly strengthen the performance of government institutions when supported by adequate digital infrastructure and institutional readiness.

Overall, the implementation of artificial intelligence in public service delivery has the potential to transform governance practices by creating more efficient, transparent, and citizen-oriented public administration systems. Continuous efforts to improve technological infrastructure, strengthen institutional capacity, and promote digital literacy among citizens will be essential for ensuring the long-term sustainability of AI-driven governance initiatives in Jakarta.

REFERENCES

Archon Fung. (2015). Putting the public back into governance. *Public Administration Review, 75*(4), 513–522.

Bappenas. (2021). *Digital Transformation Strategy for Public Services*. Jakarta: Bappenas.

Bernd Wirtz, Jan Weyerer, & Carolyn Geyer. (2019). Artificial intelligence and the public sector: Applications and challenges. *International Journal of Public Administration, 42*(7), 596–615.

Darrell West. (2015). *Digital Government: Technology and Public Sector Performance*. Princeton University Press.

Elinor Ostrom. (2010). Beyond markets and states: Polycentric governance of complex economic systems. *American Economic Review, 100*(3), 641–672.

Jane Fountain. (2001). *Building the Virtual State: Information Technology and Institutional Change*. Brookings Institution Press.

Janowski Tomasz. (2015). Digital government evolution: From transformation to contextualization. *Government Information Quarterly, 32*(3), 221–236.

John W. Creswell. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications.

Jonathan Fox. (2007). The uncertain relationship between transparency and accountability. *Development in Practice, 17*(4–5), 663–671.

Mark Bovens. (2007). Analysing and assessing accountability: A conceptual framework. *European Law Journal, 13*(4), 447–468.

Ministry of Administrative and Bureaucratic Reform of Indonesia. (2021). *Digital Transformation in Indonesian Public Administration*. Jakarta: KemenPAN-RB.

Organisation for Economic Co-operation and Development. (2021). *The OECD Digital Government Policy Framework*. Paris: OECD Publishing.

Richard Heeks. (2020). *Information and Communication Technology for Development*. Routledge.

Robert Yin. (2018). *Case Study Research and Applications*. Sage Publications.

Søren S. Pedersen, & Davide Medaglia. (2019). Artificial intelligence in government: Opportunities and challenges. *Government Information Quarterly, 36*(2), 368–383.

United Nations Development Programme. (2020). *Digital Governance and Public Sector Innovation*. New York: UNDP.

United Nations. (2022). *E-Government Survey 2022: The Future of Digital Government*. New York: United Nations.

Virginia Braun, & Victoria Clarke. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

World Bank. (2020). *Digital Government and Public Service Delivery*. Washington DC: World Bank.

Yogesh Dwivedi, et al. (2021). Artificial intelligence adoption in public sector services. *International Journal of Information Management, 57*, 101256.