

Analysis of the Implementation of E-Government as An Effort to Reform the Public Service System in Indonesia

Vestu Rizqi Nugroho¹, Edi Hakim Ritonga¹, Muhammad Zul Hairil Aidil¹, Reza Syahputra Alfandi¹, Erinaldi¹

¹STIA Lancang Kuning Dumai, Indonesia

ARTICLE INFO

Keywords:

E-government;
Public services;
Bureaucratic reform;
Digital transformation;
SPBE

Article history:

Received 2026-02-18

Revised 2026-03-22

Accepted 2026-04-26

ABSTRACT

This study aims to analyze the effectiveness of e-government implementation and its impact on public service reform in Indonesia. The rapid development of information technology has encouraged governments to adopt digital-based governance systems to improve service quality. However, various challenges still hinder optimal implementation. This research uses a qualitative approach with a literature review method by analyzing scientific journals, government reports, and policy documents related to e-government. The results indicate that e-government has significantly improved service efficiency, accessibility, transparency, and accountability. Digital-based services enable faster administrative processes and reduce bureaucratic complexity. However, the effectiveness of implementation is still uneven due to limitations in technological infrastructure, human resource competencies, and digital literacy among the public. In addition, system integration between government institutions remains a major challenge. The study concludes that e-government plays a crucial role in supporting public service reform, although continuous improvement is required to ensure equitable and optimal implementation. Strengthening infrastructure, improving human resource capacity, and enhancing system integration are essential strategies for maximizing the benefits of e-government in Indonesia.

This is an open access article under the [CC BY](#) license.



Corresponding Author:

Erinaldi

STIA Lancang Kuning Dumai, Indonesia; erinaldipratama2905@gmail.com

1. INTRODUCTION

The development of information and communication technology has brought significant changes in various aspects of life, including in the administration of government. Digital transformation is an inevitable necessity in the face of increasingly dynamic and modern societal demands. The government is required to be able to adapt to these developments in order to improve the quality of public services that are more effective, efficient, and responsive to the needs of the community (Septiani, Aulia, Resti, &

Fazira, 2022). In this context, the use of digital technology is one of the main strategies in encouraging the realization of good governance.

Public services are one of the main functions of the government that are directly related to meeting the needs of the community. The quality of public services is often used as an indicator of the success of a government in carrying out its duties and functions. However, in practice, public services in Indonesia still face various problems, such as slow service processes, lack of transparency, and procedures that tend to be convoluted (Lestari et al., 2021). This condition shows that the conventional service system is not able to provide optimal services to the community, so there is a need for reform in the public service system.

One form of reform carried out by the government is through the implementation of e-government. E-government is the use of information technology in the administration of government to increase efficiency, effectiveness, transparency, and accountability in public services (Qadriyani & Rumakat, 2025). This concept not only focuses on the digitization of services, but also includes changes in the government work system as a whole, including in terms of data management, coordination between agencies, and interaction between the government and the community.

In Indonesia, the implementation of e-government is strengthened through the Electronic-Based Government System (SPBE) policy which aims to integrate various government services in one digital-based system (Prasodjo, 2020). Through SPBE, the government seeks to create a public service system that is more structured, integrated, and easily accessible to the public. In addition, the implementation of e-government is also expected to support bureaucratic reform that is more modern and adaptive to technological developments.

However, the implementation of e-government in Indonesia has not been fully optimal. There are still various obstacles faced, such as limited technological infrastructure, especially in remote areas, and uneven internet access in all regions (Indrayani, 2020). In addition, the competence of human resources in operating digital systems is also a significant challenge. The lack of training and capacity development of apparatus causes the use of technology to not be maximized in supporting public services (Kurniawan, 2023).

On the other hand, the level of digital literacy of the community also affects the success of the implementation of e-government. Not all people have the ability to utilize digital technology, especially in certain community groups such as people in rural areas and the elderly group. This causes digital-based services that cannot be used optimally by all levels of society (Tridalestari & Nugroho, 2025). This condition shows that the success of e-government is not only determined by the government's readiness, but also by the readiness of the community as service users.

Despite facing various challenges, the development of internet use in Indonesia shows a fairly positive trend. The increase in the number of internet users is a great opportunity for the government to develop digital-based services. This shows that people are starting to get used to the use of technology in their daily lives, so that it can support the success of e-government implementation in the long term (Scott, 2025).

In addition, the implementation of e-government also has great potential in increasing government transparency and accountability. Digital systems allow people to access information more openly, so that it can encourage the creation of a more accountable and reliable government (Hasanah, Andaryani, Sari, & Dwikurniawati, 2024). In addition, e-government also opens up space for public participation in the government process through various available digital platforms.

Based on this description, it can be concluded that the implementation of e-government is a strategic step in supporting the reform of the public service system in Indonesia. However, there are still various challenges that need to be overcome so that the implementation of e-government can run optimally. Therefore, this study aims to analyze the effectiveness of the implementation of e-government and its impact on the quality of public services in Indonesia.

2. METHODS

This research uses a qualitative approach with the literature *review* method. This approach was chosen because the research aims to analyze in depth the application of *e-government* as an effort to reform the public service system in Indonesia through various relevant scientific sources. By using this method, researchers can obtain a comprehensive picture of the phenomenon studied without collecting direct field data.

This research is not tied to a specific geographical location, but is national in nature by examining various research results and studies that have been carried out in various regions in Indonesia. The data sources used in this study are secondary data obtained from scientific journals, academic books, official government reports, and policy documents related to *e-government* and Electronic-Based Government System (SPBE). Data are also obtained from related agencies such as the Ministry of State Apparatus Empowerment and Bureaucratic Reform (PANRB), the Ministry of Communication and Informatics, and the Central Statistics Agency (BPS).

In this study, the population is not an individual, but an entire literature relevant to the research topic. The population includes journal articles, reference books, research reports, and policy documents that discuss the implementation of *e-government*, public service reform, and digital transformation in government. From this population, a selection was made to determine the literature sample used in the research. The sample selection was carried out based on certain criteria, namely: (1) it has a direct relationship with the research topic; (2) it comes from credible and accountable sources; and (3) it is relevant to the focus of the analysis on the effectiveness and impact of *e-government* in public services.

The data collection technique is carried out through *library research*, which is by identifying, reviewing, and processing various relevant literature sources. The data collection process is carried out through several stages, namely: (1) tracing of data sources through academic platforms such as Google Scholar, SINTA, and Garuda; (2) selection and filtering of literature based on the relevance and quality of sources; (3) grouping of data based on themes, such as the effectiveness of *e-government*, implementation constraints, and its impact on public services; (4) recording of important information from each source; and (5) data verification to ensure the accuracy and consistency of the information used.

Data analysis in this study uses content analysis techniques. This technique is used to identify patterns, themes, and relationships between concepts in the literature studied. The analysis process is carried out through several stages, namely data reduction, data presentation, data interpretation, and conclusion drawn. In the data reduction stage, the researcher sorts out information that is relevant to the focus of the research. Furthermore, the data is presented in the form of a systematic descriptive narrative so that it is easy to understand. The interpretation stage is carried out by relating the data to the theory used in the research, resulting in an in-depth analysis. The final stage is the drawing of conclusions that are logically arranged to answer the formulation of the research problem.

To maintain the validity of the data, the researcher conducted a comparison between literature sources to obtain objective information and avoid bias. In addition, the researcher also prioritized the use of the latest sources so that the research results could reflect the current conditions related to the implementation of *e-government* in Indonesia.

3. FINDINGS AND DISCUSSION

A. The Effectiveness of E-Government Implementation in Public Services

Application *e-government* in Indonesia shows significant developments in improving the effectiveness of public services. The transformation from manual systems to digital systems has brought changes in speed, efficiency, and ease of access to services. This is in line with the main goal of implementing the Electronic-Based Government System (SPBE), which is to create more effective and integrated governance (Prasodjo, 2023).

Table 1.1
Percentage of Internet Users in Indonesia in 2021–2025

No.	Year	Percentage (%)
1	2021	73,70%
2	2022	76,80%
3	2023	78,50%
4	2024	81,20%
5	2025	83,10%

Data Source: National Digital Report, 2025

From various literature reviews, the effectiveness of *e-government* It can be analyzed through several main indicators, namely service speed, ease of access, administrative efficiency, and transparency. In terms of speed, digital systems are able to significantly cut service time because the administrative process is carried out automatically and in a structured manner. These findings are in line with research Hidayat & Lestari (2024) which shows that the implementation of SPBE is able to increase the speed of public services.

In addition, ease of access is the main advantage of *e-government*. The public can access services anytime and anywhere without having to come directly to government agencies. This shows that there is a shift in the paradigm of public services from *government-centered* become *citizen-centered*. However, this ease of access has not been felt evenly, especially in areas with limited technology infrastructure and internet networks (Primary, 2023).

Table 1.2
Types of E-Government Services in Indonesia

Yes	Service Type	Remarks
1	Population Administration	e-KTP, KK Online
2	Licensing	OSS (Online Single Submission)
3	Taxation	e-Filing, e-Billing
4	Public Complaints	Reporting via website
5	Health	Protect Your Privacy, JKN

Data Source: Government Services Portal, 2025

In terms of efficiency, digitization of public services is able to reduce the use of physical documents and minimize administrative errors. Computerized systems allow for more accurate and integrated data management. However, in practice, there are still obstacles related to system integration between government agencies that are not optimal, causing data duplication and lack of information synchronization (Wardana, Putri, & Umar, 2025).

On the other hand, service transparency has also increased through the implementation of *e-government*. The community can monitor the service process directly, thereby reducing the potential for abuse of authority (Inspiration, Dewi, & Gusty, 2020). However, the effectiveness of this transparency is highly dependent on the quality of the information systems used and the data disclosure provided by the government.

Despite showing positive developments, the effectiveness of the implementation *e-government* in Indonesia still faces various challenges. Limited technological infrastructure, low competence of human resources, and uneven digital literacy of the community are the main factors that affect the success of

implementation (Indrayani, 2020, 2023; Kurniawan, 2023). This shows that the success of *e-government* is not only determined by technology, but also by the readiness of the support system as a whole.

B. The Impact of E-Government on the Quality of Public Services

The implementation of *e-government* not only has an impact on effectiveness, but also provides significant changes to the quality of public services. These changes can be seen from increasing efficiency, accessibility, transparency, and accountability in the provision of services. First, from the efficiency aspect, digital systems allow service processes to be carried out faster and simpler. Processes that previously took a long time can now be completed in a shorter time. This shows that *e-government* is able to increase the productivity of government apparatus while reducing administrative burdens.

Second, from the aspect of accessibility, *e-government* provides convenience for the community in obtaining public services. Digital-based services can be accessed without space and time restrictions, so they are very helpful to the community, especially those in remote areas. However, the digital divide is still an obstacle in the equitable distribution of the benefits of this service (Munir et al., 2023).

Third, service transparency has increased significantly. Information related to procedures, costs, and service times can be accessed openly by the public. This not only increases public trust in the government, but also encourages the creation of better governance. Fourth, from the aspect of accountability, the digital system allows every service process to be documented systematically. This makes it easier to supervise and evaluate the performance of government apparatus. With a digital track record, every action can be accounted for more clearly.

Nevertheless, despite the various positive impacts that have been felt, the implementation of *e-government* still faces various limitations. The gap in access to technology, low digital literacy of the community, and the lack of optimal system integration are the main challenges that need to be overcome (Novalia, Ethics, & Lubna, 2024). Therefore, continuous efforts are needed to improve the quality of infrastructure, human resource capacity, and integration of digital service systems.

4. CONCLUSION

The implementation of *e-government* in Indonesia is a strategic step in supporting the reform of the public service system that is more modern, efficient, and transparent. Based on the results of the literature review, it can be concluded that *e-government* has made a significant contribution to improving the effectiveness of public services, especially in terms of speed, ease of access, efficiency, and transparency of services. However, the level of effectiveness of the implementation of *e-government* has not been fully optimal and evenly distributed throughout Indonesia. This is due to various factors, such as the limitation of technological infrastructure, low human resource competence, and digital literacy gap in society. In addition, the problem of system integration between agencies is also an obstacle in realizing integrated public services.

In terms of impact, the implementation of *e-government* has been able to significantly improve the quality of public services, especially in terms of efficiency, accessibility, transparency, and accountability. The digitalization of public services also encourages the creation of a more responsive and community-oriented service system.

Therefore, continuous efforts are needed from the government to improve the quality of digital infrastructure, strengthen the capacity of human resources, and develop an integrated system. Thus, the implementation of *e-government* in Indonesia can run optimally and provide equitable benefits for all people.

REFERENCES

- Hasanah, A. U., Andaryani, S., Sari, F. H., & Dwikurniawati, I. U. (2024). Inovasi Pelayanan Publik Berbasis Teknologi Digital : Tantangan Dan Peluang Di Pemerintah Daerah. 4, 5228–5235.
- Hidayat, T., & Lestari, S. (2024). Efektivitas Sistem Pemerintahan Berbasis Elektronik Dalam Meningkatkan Kualitas Pelayanan Publik. *Jurnal Kebijakan Publik*, 9(1).
- Ilham, A. R., Dewi, Y. S., & Gusty, R. (2020). Sistem Pemerintahan Berbasis Elektronik (Spbe) Sebagai Pilar Good Governance : Refleksi Tata Kelola Pemerintah Daerah Electronic-Based Government System (Spbe) As A Pillar Of Good Governance : A Reflection On Local Government Management.
- Indrayani, E. (2020). E-Government Konsep, Implementasi Dan Perkembangannya Di Indonesia (1st Ed.). Sumatera Barat: Lpp Balai Insan Cendekia.
- Indrayani, E. (2023). Integrasi Sistem Layanan Digital Transformasi Digital Untuk Masa Depan Pelayanan Publik Di Indonesia.
- Kurniawan, A. (2023). Peran Teknologi Informasi Dalam Meningkatkan Efisiensi Dan Kinerja Pelayanan Publik. *Jurnal Manajemen Publik*, 7(2).
- Lestari, P. A., Tasyah, A., Syofira, A., Rahmayani, C. A., Dwi, R., Cahyani, & Tresiana., N. (2021). Inovasi Pelayanan Publik Berbasis Digital (E-Government) Di Era Pandemi Covid-19. *Jurnal Ilmu Administrasi*, 18(2), 212–224.
- Munir, F., Nursetiawan, I., Cahyaningrum, Y., Oppier, H., Suardi, S., Riwayati, A., ... Tahir, M. I. (2023). Kebijakan Publik Di Era Digital (A. Riwayati, Ed.). Cv. Karsa Cendekia.
- Novalia, D., Etika, G., & Lubna, K. (2024). Analisis Efisiensi Dan Efektivitas E-Government Dalam Administrasi Publik. 10(1), 128–136. <https://doi.org/10.25299/jiap.2024.16516>
- Prasodjo, T. (2020). Manajemen Pelayanan Publik (1st Ed.; Zulkarizki, Ed.). Yogyakarta: Zahir Publishing.
- Prasodjo, T. (2023). Pelayanan Publik Era Digital.
- Pratama, Y. (2023). Analisis Penerapan E-Government Dalam Pelayanan Publik Berbasis Digital Di Indonesia. *Urnal Administrasi Negara*, 11(2).
- Qadriyani, L., & Rumakat, M. (2025). Analisis Efektivitas Pelayanan Publik Dalam Penerapan Sistem Administrasi Berbasis Elektronik Di Pemerintah Daerah. 4(2), 4282–4289.
- Sartika, I. (2025). Tantangan Dan Strategi Implementasi Spbe Dalam Reformasi Birokrasi Pelayanan Publik Di Indonesia. 7(6), 4648–4656.
- Septiani, A., Aulia, A. R., Resti, A., & Fazira, V. (2022). Peranan E-Government Dalam Pelayanan Publik. *Jurnal Ilmu Sosial Dan Pendidikan*, 3(5).
- Tridalestari, F. A., & Nugroho, P. D. (2025). Systematic Literature Review: Sistem Informasi Pemerintahan Cerdas Dalam Meningkatkan Kualitas Pelayanan Publik Di Indonesia. 467–476.
- Wardana, R. I., Putri, N. E., & Umar, G. (2025). Digitalisasi Pelayanan Publik : Solusi Atau Masalah Baru ? 5(2), 7933–7943.
- Peraturan Presiden Republik Indonesia Nomor 95 Tahun 2018 tentang Sistem Pemerintahan Berbasis Elektronik
- Republik Indonesia. 2009. Undang-Undang Nomor 25 Tahun 2009 tentang Pelayanan Publik.
- Republik Indonesia. 2008. Undang-Undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik.
- Republik Indonesia. 2014. Undang-Undang Nomor 30 Tahun 2014 tentang Administrasi Pemerintahan.

<https://setkab.go.id/menteri-panrb-layanan-spbe-di-indonesia-terus-tuai-capaian-positif/>

<https://www.menpan.go.id/site/berita-terkini/indeks-spbe-nasional-meningkat-menteri-rini-penguatan-integrasi-pelayanan-publik-berbasis-digital>

<https://jdih.menpan.go.id/>

<https://rattahhandisa.blogspot.com/2026/04/literasi-informasi-asn-dalam-era.html>

<https://www.cnbcindonesia.com/tech/20250806142256-37-655596/2294-juta-warga-ri-sudah-terhubung-internet-ini-data-terbaru-2025>

<https://www.cnbcindonesia.com/news/20250822105242-4-660487/digitalisasi-dorong-pertumbuhan-dan-pemerataan-ekonomi-indonesia>

