

Optimizing Digital Public Services for Enhanced Citizen Satisfaction and Transparent Governance

Digital-Based Public
Services to Increase
Public Satisfaction

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ABSTRACT

Digital transformation has become a vital pillar in modernizing public service delivery worldwide, including in Indonesia. In the past five years, the government has increasingly adopted digital services to improve efficiency, reduce corruption, and foster participation. Yet, issues such as infrastructure gaps, digital illiteracy, and resistance to change hinder full optimization. This study aims to analyze strategies for strengthening digital public services to boost satisfaction while promoting transparent and accountable governance. A qualitative approach was employed using a structured literature review of ten scholarly articles published between 2017 and 2025. The literature was examined through content analysis, focusing on three themes: forms and structures of digital service implementation, impacts on citizen satisfaction, and contributions to governance quality. The findings indicate that successful digital transformation depends not only on infrastructure but also on institutional readiness, legal frameworks, citizen engagement, and inter-agency coordination. Digital services that emphasize accessibility, interactivity, and transparency foster trust and satisfaction. However, digital divides and unequal access remain significant obstacles. Ultimately, digitalization should align with principles of good governance to ensure inclusivity and strengthen relationships between citizens and the state while delivering meaningful improvements in service delivery and governance quality.

Keywords: Citizen Satisfaction, Digital Public Services, E-Government, Governance Transparency, Public Sector Innovation.

ABSTRAK

Transformasi digital telah menjadi pilar penting dalam memodernisasi pemberian layanan publik di seluruh dunia, termasuk di Indonesia. Dalam lima tahun terakhir, pemerintah semakin mengadopsi layanan digital untuk meningkatkan efisiensi, mengurangi korupsi, dan mendorong partisipasi. Namun, isu-isu seperti kesenjangan infrastruktur, buta huruf digital, dan resistensi terhadap perubahan menghambat optimalisasi penuh. Penelitian ini bertujuan untuk menganalisis strategi penguatan layanan publik digital untuk meningkatkan kepuasan sekaligus mempromosikan tata kelola yang transparan dan akuntabel. Pendekatan kualitatif digunakan menggunakan tinjauan literatur terstruktur dari sepuluh artikel ilmiah yang diterbitkan antara 2019 dan 2025. Literatur diteliti melalui analisis konten, dengan fokus pada tiga tema: bentuk dan

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struktur implementasi layanan digital, dampak terhadap kepuasan warga, dan kontribusi terhadap kualitas tata kelola. Temuan ini menunjukkan bahwa keberhasilan transformasi digital tidak hanya bergantung pada infrastruktur tetapi juga pada kesiapan kelembagaan, kerangka hukum, keterlibatan warga, dan koordinasi antar-lembaga. Layanan digital yang menekankan aksesibilitas, interaktivitas, dan transparansi menumbuhkan kepercayaan dan kepuasan. Namun, kesenjangan digital dan akses yang tidak setara tetap menjadi hambatan yang signifikan. Pada akhirnya, digitalisasi harus selaras dengan prinsip-prinsip tata kelola yang baik untuk memastikan inklusivitas dan memperkuat hubungan antara warga negara dan negara sambil memberikan peningkatan yang berarti dalam pemberian layanan dan kualitas tata kelola.

Kata kunci: *Kepuasan Warga, Layanan Publik Digital, E-Government, Transparansi Tata Kelola, Inovasi Sektor Publik.*

INTRODUCTION

Digital transformation has become the mainstream direction in the development of modern governance. In Indonesia, the implementation of digital-based public services represents a strategic effort to increase bureaucratic efficiency, reduce corruption, and strengthen public participation (Choirunnisa et al., 2023; Fauzi & Hakim, 2024). Through the Electronic-Based Government System (*Sistem Pemerintahan Berbasis Elektronik/SPBE*), the government seeks to integrate services into a single digital platform as a measure of performance accountability (Ditasman & Amrullah, 2024). This policy aims to build a government that is open, responsive, and data-driven (Mozin et al., 2025). Public service is a core element of governance aimed at promoting social welfare. In recent years, Indonesia has experienced major changes in service delivery through digitalization and decentralization. Local governments like Kediri have optimized service applications to improve responsiveness and participation (Astuti, 2024). In health, better Antenatal Care (ANC) has directly raised satisfaction, while regional autonomy has encouraged service innovations and strengthened civil servant performance (Jannah et al., 2024; Sulyawanti, 2024).

Despite progress, challenges persist, such as unequal access to services, limited budgets, and low digital literacy in many regions. Studies show that legal aid remains unequal despite regulations, while public services are also exposed to technological disruptions and data security risks (Nugroho & Rochmadi, 2024; Ismaidar et al., 2025). Thus, continuous innovation, cross-sector collaboration, and citizen participation are needed to achieve inclusive and competitive governance. In the context of public service, the quality of service directly influences public satisfaction and trust in the state. Digital technology enables faster, cheaper, and more transparent access to services (Wijaya et al., 2025). Research shows that the success of digital services is not only determined by infrastructure but also by human resource readiness and mature governance systems (Da Mendez et al., 2025; Renanda & Rosidin, 2025). In various regions, platforms such as Sidoarjo Public Service System (*Sistem Pelayanan Rakyat Sidoarjo/SIPRAJA*) in Sidoarjo and Banjarmasin Pintar have proven effective in streamlining bureaucratic processes (Tamrin et al., 2022; Silaban & Bingamawa, 2024).

Nevertheless, serious challenges remain, including digital literacy disparities, cybersecurity vulnerabilities, and resistance from government officials who are not adaptive to technological change (Achmad & Ananto, 2025; Hanasi, 2025). A lack of adaptive regulations and performance-based evaluation systems also hinders the optimization of digital public services (Putri et al., 2024). Therefore, optimizing public services is not merely a technological matter; it also involves designing participatory, transparent, and accountable governance systems (Yulanda & Adnan, 2023). From a good governance perspective, accountable and transparent public services must be supported by auditable digital systems that are open to public input and capable of providing real-time information. The optimization of digitalization in public service should not be seen as the ultimate goal but as a tool to strengthen state–citizen relations

through humane, adaptive, and quality service delivery (Kabuam et al., 2025). This effort also aligns with the bureaucratic reform agenda, which places digitalization as the backbone of governance in the age of disruption.

This research is urgent to develop strategies that optimize digital public services not only for efficiency but also for citizen satisfaction. As a key indicator of service effectiveness and government legitimacy in the digital era, Budijaya and Situmeang (2025) and Heriyanto and Voutama (2025), public satisfaction must remain central; otherwise, digitalization risks becoming a mere formality that neglects real societal needs. Previous studies have examined the implementation of digital services in various regions such as Kediri, Jember, and Bubode Village. These studies indicate that although technology adoption is increasing, not all service aspects lead to measurable improvements in public satisfaction. Furthermore, some research remains limited to technical aspects without comprehensively exploring the correlation between digital optimization and the principles of transparency and accountability in governance (Prakoso et al., 2025). The objective of this study is to identify and analyze strategies for optimizing digital-based public services that enhance citizen satisfaction while simultaneously strengthening transparent and accountable governance. This study is expected to provide both conceptual and practical contributions for designing digital service systems that are adaptive to social dynamics and aligned with the principles of good governance.

LITERATURE REVIEW

Digital Public Service Model

The implementation of digital public services in Indonesia represents a structural and cultural transformation within public administration. Various models have been developed to improve efficiency, integration, and accountability in service delivery. The SPBE, for instance, aims to unify administrative processes and digitalize inter-agency coordination to enhance performance accountability (Ditasman & Amrullah, 2024). Local governments have also created innovative platforms such as SIPRAJA in Sidoarjo and Banjarmasin Pintar, which integrate licensing, population administration, and complaint mechanisms (Tamrin et al., 2022; Silaban & Bingamawa, 2024). These initiatives reflect the multi-level nature of digital governance in Indonesia, where national and regional systems coexist under a shared policy framework. However, Fitriyanti (2024) emphasizes that implementation success depends not only on technological tools but also on bureaucratic readiness, leadership commitment, and institutional culture, suggesting that digitalization must be accompanied by administrative reform.

Moreover, international experiences show that digital service implementation requires adaptive governance structures supported by legal certainty and strong data governance. The maturity model proposed by Zakiuddin and Anggara (2024) highlights three essential dimensions, leadership, data management, and citizen feedback, that determine the effectiveness of digital transformation in the public sector. Comparative cases such as e-Estonia demonstrate that interoperability and auditability of systems are key to building public trust (Lindman et al., 2020). In the Indonesian context, Daulay et al. (2025) and Wijaya et al. (2025) found that local initiatives integrating online administration systems improve transparency, reduce processing time, and enhance satisfaction. Thus, the implementation model for digital public services should not be seen as a one-size-fits-all framework but as a dynamic, multi-dimensional system that aligns technology with human resources, regulation, and citizen engagement.

Digital Public Service Transformation

Digital transformation has become the backbone of modern bureaucratic reform in many countries, including Indonesia. According to Choirunnisa et al. (2023) and Fauzi and Hakim (2024), the implementation of the SPBE represents a strategic effort to increase efficiency, minimize corruption, and expand public participation. Similarly, Ditasman and Amrullah (2024) argue that digitalization enables the integration of various services into a unified platform, ensuring measurable government accountability.

However, Fitriyanti (2024) emphasizes that the adoption of e-government does not always run smoothly. Several obstacles persist, such as limited digital literacy, inadequate infrastructure, and resistance from bureaucrats who are reluctant to embrace technological change. Thus, digital transformation should not be perceived merely as a technological shift but also as an institutional and cultural transformation within the public sector.

The quality of public service delivery has a direct influence on citizen satisfaction. Ramadhan and Pribadi (2024), through their study on the Population Administration Information System (*Sistem Informasi Administrasi Kependudukan/SIAK*), found that accessibility and system reliability are key drivers of citizen satisfaction. Dewi and Ratri (2024) further highlight that efficiency and responsiveness in digital public services significantly determine public trust, particularly in dynamic or crisis contexts. Yunita (2025) stresses the importance of interactivity in digital service platforms, noting that feedback mechanisms enhance engagement and satisfaction. Conversely, Mursyidah and Fadillah (2024) reveal that despite overall positive reception, digital services often fail to accommodate vulnerable groups such as the elderly and low-income citizens due to the digital divide.

Transparency and Accountability

Beyond efficiency, digitalization is also a key enabler of transparency and accountability in governance. Zakiuddin and Anggara (2024) propose a digital service transformation maturity model that emphasizes leadership, data governance, and citizen feedback as crucial dimensions in creating public value. The case of e-Estonia demonstrates how open data systems and digital audit trails foster accountability and trust (Lindman et al., 2020). In the Indonesian context, Wijaya et al. (2025) show that digital integration at the village level improves transparency and enhances service delivery quality. However, Putri et al. (2024) and Nugroho and Rochmadi (2024) note that weak regulatory frameworks and cybersecurity vulnerabilities remain critical barriers. Strengthening legal safeguards and data protection measures is therefore essential to ensure accountable digital governance.

Although digital services provide promising benefits, several challenges hinder their optimization. First, infrastructure gaps between urban and Remote, Frontier, and Outermost (*Tertinggal, Terdepan, dan Terluar/3T*) regions create unequal access to digital services (Ramalingam et al., 2017). Second, low digital literacy reduces citizens' ability to fully engage with online platforms (Fitriyanti, 2024; Mursyidah & Fadillah, 2024). Third, bureaucratic resistance to organizational change slows down effective adoption (Achmad & Ananto, 2025). In addition, cybersecurity risks present a serious concern. Nugroho and Rochmadi (2024) highlight the importance of robust digital security frameworks to safeguard citizens' data and maintain trust in digital governance. These challenges suggest that optimization requires not only technological innovation but also regulatory readiness, institutional reform, and social inclusion strategies.

The reviewed studies indicate that digital transformation in Indonesian public services contributes significantly to citizen satisfaction and strengthens governance transparency. Nevertheless, the success of such initiatives is highly dependent on infrastructure readiness, supportive regulatory frameworks, and equitable access across regions. Moreover, elements such as interactivity, accountability, and data protection distinguish effective digital services from those that serve merely as administrative formalities. In summary, optimizing digital-based public services requires a multidimensional approach that integrates technology, human resources, legal frameworks, and inclusive participation. Only then can digital transformation deliver meaningful public value and reinforce democratic accountability.

RESEARCH METHODS

This study employs a qualitative approach using a literature review (library research) method. A literature study is selected because the focus of this research is to examine and

analyze prior research findings, relevant theories, and government policy documents related to the optimization of digital-based public services to increase citizen satisfaction and promote transparent and accountable governance. Qualitative methods through literature studies enable researchers to explore in-depth understandings of social phenomena based on scientifically available data (Creswell & Poth, 2016; Zed, 2018).

The data in this study are secondary data obtained from various scholarly publications such as accredited national journals, conference proceedings, academic books, government reports, and relevant scientific articles published in the last eight years (2017-2025). The main references are derived from research outputs issued by academic institutions, government agencies, and credible digital platforms such as Google Scholar, SINTA, and Garuda. The data were collected using a systematic literature search. This involved identifying, selecting, interpreting, and synthesizing relevant documents using keyword combinations such as “digital public services”, “citizen satisfaction”, “e-government”, and “governance accountability”. The selection of sources was carried out purposively, ensuring that only credible, current, and thematically relevant literature was included in the analysis (Ridwan et al., 2021). Each document was evaluated based on its credibility, relevance, and contribution to the research objectives.

Although qualitative, this study was guided by key conceptual variables. The independent variable is the implementation of digital-based public services, encompassing e-government platforms, online applications, and digital tools for efficiency and accessibility. The dependent variable is public satisfaction, understood through trust, responsiveness, ease of access, and user experience. Intervening variables include transparency, accountability, accessibility, and interactivity. Transparency and accountability highlight citizen monitoring of government actions, accessibility reflects equal service reach, and interactivity emphasizes two-way communication and feedback. These variables were not measured quantitatively but functioned as analytical dimensions for interpreting the literature (Krippendorff, 2018; Moleong, 2021).

This study applies a content analysis technique to interpret and draw meaning from the collected literature. The analysis was carried out descriptively and qualitatively by grouping findings into core themes such as: forms of digital public service implementation, its impact on citizen satisfaction, and its role in improving governance transparency and accountability. The analysis procedure includes coding, identifying key concepts, classifying findings, and formulating thematic conclusions (Krippendorff, 2018; Moleong, 2021). This method is expected to provide a comprehensive and conceptual understanding of how digital public services are optimized in Indonesia’s public sector. Software is used to ensure systematic analysis, and the study employed NVivo 12 for qualitative coding and categorization. Mendeley was used for reference management, and Microsoft Excel supported the tabulation of bibliographic data and thematic matrices.

RESULTS

Literature Review Findings on Digital Governance and Citizen Satisfaction

This study employed a structured literature review to identify strategies for optimizing digital-based public services in Indonesia. A systematic search was conducted using the keywords “digital public services,” “citizen satisfaction,” “e-government,” and “governance accountability” across Google Scholar, SINTA, and Garuda databases, covering publications from 2017 to 2025. From over 120 initially identified articles, 68 were subjected to full-text review, and 10 were finally selected based on their thematic relevance, focus on the Indonesian context, and direct contribution to the three core themes: forms of digital service implementation, impacts on citizen satisfaction, and contributions to governance quality. The selected studies predominantly adopted qualitative case study approaches and spanned various administrative levels, from national platforms to local innovations in regions such as Sumatra, Java, Kalimantan, and Sulawesi. Table 1 presents the complete list of selected articles along with their key findings.

Table 1. Key Literature Review

No.	Author	Title	Key Findings
1	Fua and Wirantari (2025)	Redefining Citizenship in Motion: Smart Governance and the Digital Transformation	Smart governance improves citizen engagement via digital letters
2	Zakiuddin and Anggara (2024)	Developing Digital Service Transformation Maturity Model in the Public Sector	Maturity model helps assess readiness and public value outcomes
3	Daulay et al. (2025)	Efficiency of Administrative Processes Through Digital Technology in Labuhanbatu	Digital services increase efficiency and staff performance
4	Fitriyanti (2024)	The Effect of Digital Transformation on Governance in Indonesia	e-Government improves service transparency but faces bureaucratic challenges
5	Ramadhan and Pribadi (2024)	Citizen Satisfaction with E-Government Services: SIAK System Case Study	Service quality in population systems affects satisfaction
6	Dewi and Ratri (2024)	Evaluating Efficiency of Public Administration in Dynamic Environments	Digital systems improve admin speed and citizen outcomes
7	Hermawati et al. (2024)	ISO 9001 Compliance in Agile Digital Public Projects	Certification and agility enhance quality and satisfaction
8	Yunita (2025)	The Interactivity of Local Government in Kalimantan	Interactivity level is key to satisfaction in digital adoption
9	Mursyidah and Fadillah (2024)	Digital Public Services and Adaptation Challenges	High satisfaction, yet gaps remain in inclusivity and access
10	Lestari et al. (2025)	Agile Governance in Online Queuing at RSUD Palopo	Digital queue system boosts patient satisfaction and efficiency

As shown in Table 1, the selected studies reflect a strong emphasis on practical implementation at the local level, with eight out of ten articles focusing on specific regional cases (e.g., Labuhanbatu, Palopo, Kalimantan, and Sidoarjo). This distribution highlights the growing role of decentralized governance in driving digital innovation, while only two studies offer broader theoretical or national-level frameworks (Zakiuddin & Anggara, 2024; Fitriyanti, 2024). The predominance of case-study methodologies underscores the contextual richness of Indonesian digital transformation but also suggests a need for more comparative or large-scale quantitative analyses in future research.

Implementation of Digital Public Services and Impacts on Citizen Satisfaction

The implementation of digital public services in Indonesia exhibits considerable diversity, ranging from national platforms such as the SPBE to localized applications including SIPRAJA in Sidoarjo, Banjarmasin Pintar, and the online queuing system at the Regional Public Hospital (*Rumah Sakit Umum Daerah/RSUD*) Sawerigading Palopo (Tamrin et al., 2022; Lestari, Abdullah, & Hasniati, 2025). These platforms typically integrate population administration, licensing, health services, and public complaints into unified digital interfaces. Fua and Wirantari (2025) demonstrate that digitizing non-permanent residence letters not only simplifies bureaucratic procedures but also enhances civic participation through more inclusive access. Daulay et al. (2025) report a reduction in administrative processing time by up to 70% in Labuhanbatu Regency following digital adoption, simultaneously boosting civil servants' motivation and performance. Dewi and Ratri (2024) further note that digital systems enable rapid policy adaptation, particularly during crises, thereby ensuring service continuity and improving citizen outcomes. Table 2 summarizes these satisfaction dimensions, their key characteristics, observed outcomes, and associated challenges as derived from the reviewed literature.

Table 2. Dimensions and Outcomes of Public Satisfaction in Digital Services

Satisfaction Dimension	Key Characteristics	Observed Outcomes	Challenges
Information Transparency	Real-time tracking of service process and outcomes	Increased trust and perceived openness	Limited transparency in some regions or services
Ease of Access	Access across multiple devices and user groups	Wider public participation, especially among youth	Digital divide, especially for elderly and low-income groups
Interactivity	Ability to provide direct feedback and engagement	Higher user engagement and system responsiveness	Limited follow-up on feedback in some systems

Citizen satisfaction with digital services is primarily shaped by three core dimensions: information transparency, ease of access, and interactivity. Ramadhan and Pribadi (2024) identify system reliability in the SIAK as a critical determinant of satisfaction in population services. Yunita (2025) emphasizes that interactivity levels in Kalimantan’s local government platforms directly correlate with user satisfaction, especially when responsive feedback mechanisms are in place. Hermawati et al. (2024) reveal that integrating ISO 9001 standards into agile software development significantly enhances perceived service quality. Nevertheless, Mursyidah and Fadillah (2024) highlight a persistent paradox: while overall satisfaction levels are high, vulnerable groups such as the elderly and low-income citizens continue to face substantial access barriers.

The Impact of Transparency and Accountability in Digital Governance

Digital public services have made tangible contributions to enhancing governance transparency and accountability. Zakiuddin and Anggara (2024) propose a maturity model for digital service transformation that underscores leadership, data governance, and citizen feedback as foundational pillars for creating public value. Fitriyanti (2024) finds that e-government initiatives improve information openness, although legacy infrastructure and bureaucratic inertia continue to pose constraints. Mechanisms such as service dashboards, open data portals, digital audit trails, and online complaint features collectively form a robust ecosystem for accountable governance. Figure 1 illustrates the interdependent relationships among these elements in strengthening transparency and accountability.

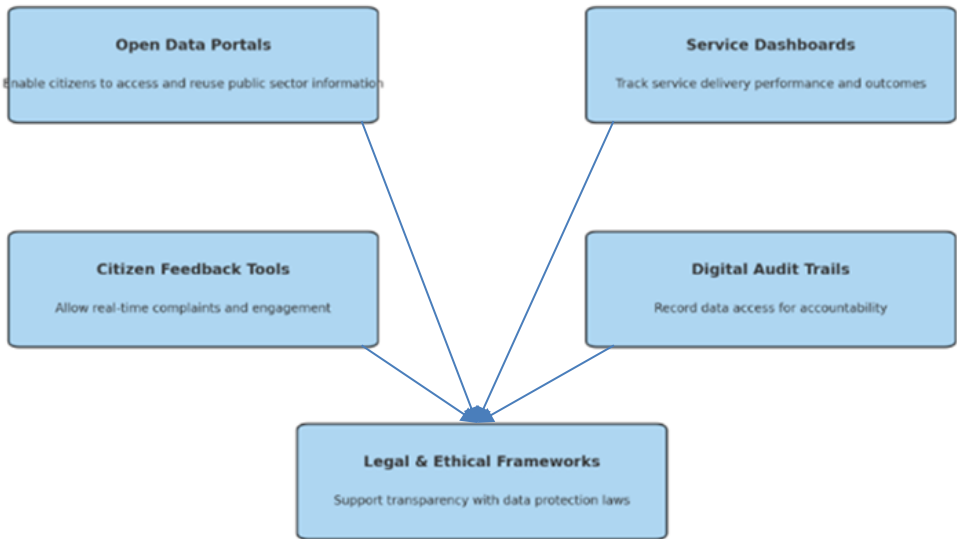


Figure 1. Key Elements Supporting Transparency and Accountability in Digital Governance

Despite these advances, significant challenges persist. Fitriyanti (2024) and Mursyidah and Fadillah (2024) consistently highlight infrastructure disparities in 3T

regions, alongside low digital literacy among marginalized communities. Bureaucratic resistance and inadequate inter-agency coordination further impede progress, as noted by Achmad and Ananto (2025). Nugroho and Rochmadi (2024) add that cybersecurity vulnerabilities remain a critical threat capable of eroding public trust. The synthesis of all ten articles affirms that successful digital transformation hinges not merely on technology but on institutional readiness, adaptive legal frameworks, inclusive citizen engagement, and cross-sector coordination. Digital services that prioritize accessibility, interactivity, and transparency consistently foster greater trust and satisfaction; however, without deliberate efforts to bridge the digital divide and overcome internal resistance, their benefits risk remaining confined to privileged segments of society.

The synthesis of these studies demonstrates that digital public services in Indonesia have strengthened governance through improved efficiency, heightened citizen satisfaction, and greater transparency. Despite these advancements, persistent challenges remain, including ensuring inclusivity, safeguarding cybersecurity, and addressing bureaucratic resistance (Abrahams et al., 2023). The Indonesian experience aligns with global findings, illustrating that technological adoption alone is insufficient without concurrent institutional adaptation and citizen empowerment.

The collective findings indicate that digital transformation is most effective when technological innovation is integrated with citizen participation and institutional readiness (Achmad et al., 2025). Citizens experience higher satisfaction not only because services are delivered more efficiently but also because they are treated as active stakeholders in governance processes. Institutional readiness, reflected through leadership commitment, infrastructure quality, and human resource competence, ensures that transformation efforts are sustainable and impactful rather than superficial. This alignment between technology and governance capacity forms the backbone of digital public value creation.

The reviewed studies collectively provide a multidimensional understanding of digital public service optimization in Indonesia. They affirm that technology alone does not guarantee the success of transformation initiatives. Effective digital transformation requires the alignment of technological, institutional, cultural, and policy dimensions to ensure lasting outcomes. Moreover, citizen satisfaction is influenced not only by service availability but also by perceived responsiveness, transparency, and fairness in access. Therefore, digital governance must be inclusive, strategic, and participatory to achieve sustainable public value creation and uphold democratic accountability.

DISCUSSION

Digital transformation has emerged as the backbone of bureaucratic reform in Indonesia, shifting public service delivery from manual processes to integrated digital platforms such as the SPBE, Online Single Submission (OSS), and local innovations like SIPRAJA and Banjarmasin Pintar (Tamrin et al., 2022; Silaban & Bingamawa, 2024). These initiatives have significantly reduced transaction times, lowered costs, and minimized corruption opportunities by limiting direct human intervention. As shown in the Results section, the reviewed studies consistently demonstrate that successful implementation extends beyond technology adoption to encompass institutional readiness and cultural change within the public sector (Daulay et al., 2025). The maturity model proposed by Zakiuddin and Anggara (2024) underscores that leadership commitment and data governance are critical for sustainable transformation, aligning with global experiences where integrated ecosystems enhance transparency and enable real-time auditing (Abrahams et al., 2023).

Citizen satisfaction is not merely a function of speed but deeply tied to perceived transparency, accessibility, and interactivity. Real-time tracking and open complaint systems foster trust by making government actions visible and accountable, while interactive features empower citizens as active participants rather than passive recipients (Yunita, 2025; Fua & Wirantari, 2025). However, high satisfaction levels reported in many studies mask persistent inequalities; vulnerable groups continue to be excluded due

to the digital divide and limited follow-up on feedback (Mursyidah & Fadillah, 2024). This paradox highlights the risk of “performative transparency,” where digital openness exists on the surface but lacks genuine scrutiny or inclusivity, particularly in remote regions (Fitriyanti, 2024). Comparative insights from e-Estonia illustrate that blockchain-based audit trails and citizen notification systems can reinforce accountability when supported by strong legal frameworks, a lesson Indonesia can adopt to move beyond formality (Lindman et al., 2020).

The five foundational pillars identified, such as infrastructure equity, human resource capacity, data integration, centralized platforms, and robust cybersecurity, emerge as essential for optimization (Ramalingam et al., 2017; Nugroho & Rochmadi, 2024). Without addressing bureaucratic resistance and low digital literacy, even advanced platforms risk underperformance (Achmad & Ananto, 2025). The application of ISO 9001 standards in agile development further signals growing institutional maturity, ensuring that quality assurance is embedded in digital projects (Hermawati et al., 2024). Moreover, agile governance models, such as the online queuing system in Palopo, demonstrate how local autonomy can accelerate innovation and responsiveness when supported by adequate resources (Lestari et al., 2025).

Digital optimization must align with good governance principles: effectiveness through rapid and accurate delivery, participation via online reporting mechanisms, responsiveness through swift feedback loops, and rule of law via automated, rule-based systems (Choirunnisa et al., 2023; Wijaya et al., 2025). When these principles are integrated, digital tools not only modernize services but also strengthen democratic legitimacy and state–citizen relationships.

The implications of these findings are significant for policymakers and administrators. First, priority must be given to expanding digital infrastructure in 3T regions and implementing nationwide digital literacy programs targeting civil servants and marginalized communities. Second, regulatory reforms should mandate interoperability standards and strengthen data protection laws to build lasting trust (Putri et al., 2024). Third, institutionalizing feedback mechanisms and performance-based evaluation systems will ensure that digital platforms remain citizen-centered rather than merely administrative tools. By addressing these gaps, Indonesia can transform digital public services from efficiency-driven initiatives into inclusive instruments of transparent and accountable governance, ultimately enhancing public satisfaction and democratic resilience.

CONCLUSION

This study concludes that optimizing digital-based public services is not solely a technological innovation, but rather a multidimensional reform that intersects with governance structure, institutional integrity, and citizen inclusion. Digital transformation plays a crucial role in modernizing bureaucracy, enhancing transparency, and building public trust. However, its success is contingent on various factors, including adequate digital infrastructure, competent human resources, adaptive legal frameworks, and the meaningful participation of citizens. While several digital platforms in Indonesia, such as SPBE, SIPRAJA, and SIAK, have demonstrated efficiency gains and improved service satisfaction, gaps remain in terms of accessibility and inclusivity. Hence, optimization must go beyond digitization and ensure that digital public services are equitable, accountable, and human-centered. In addressing the research objective, this study confirms that digital transformation is central to optimizing public service delivery in Indonesia. However, true optimization goes beyond digitization, requiring technology to be integrated with institutional readiness, citizen participation, and legal frameworks. Thus, the research question is answered affirmatively, with improvements contingent on equitable access, skilled human resources, and adaptive governance.

The implications of these findings are threefold. For policymakers and public administrators, priority should be given to strengthening digital infrastructure in underserved areas to ensure equal access, while also promoting digital literacy among

both civil servants and the wider public. Integrating feedback mechanisms and real-time tracking can further enhance responsiveness and public trust. Institutions are encouraged to adopt quality assurance frameworks, such as ISO 9001, and foster cross-sector collaboration to create interoperable and transparent service ecosystems. For future research, empirical studies should examine citizen experiences with digital public services across regions, particularly in rural and marginalized communities. Comparative analyses of centralized and decentralized governance models could provide valuable lessons, while further exploration of ethical and legal issues, such as digital surveillance, data privacy, and the role of AI, will be critical in building secure and trustworthy digital governance systems.

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