

Implementing Digital Public Services in Local Government: Evidence from Bengkulu City, Indonesia

Oktaviana Nurti, Zulya Ardila Putri, Titi Darmi

Public Administration Study Program, Universitas Muhammadiyah Bengkulu,
Bengkulu, Indonesia

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ABSTRACT

Digital transformation has become a central agenda in public sector reform; however, empirical evidence from Bengkulu cities in developing countries remains limited. This study examines the implementation of digital public service policies in Bengkulu City, Indonesia, and analyzes their administrative and institutional implications. Using a qualitative case study design, data were collected through in-depth interviews with six key informants representing managerial, operational, and citizen perspectives, complemented by policy document analysis and limited observation. The findings reveal that digitalization has contributed to improved procedural efficiency, reduced processing time, and enhanced service accessibility through online monitoring mechanisms. Nevertheless, implementation remains uneven due to infrastructural instability, disparities in digital literacy, and initial organizational resistance to procedural change. Rather than producing an immediate structural transformation, digital reform in this context reflects incremental institutional adaptation shaped by leadership mediation and resource constraints. The study identifies leadership commitment, human resource capacity, inter-unit coordination, and system integration as critical determinants of implementation effectiveness. By situating local administrative realities within broader national digital reform mandates, this research contributes to the growing scholarship on digital governance in emerging economies and offers policy insights for secondary cities pursuing sustainable e-government development.

Corresponding Author:

Oktaviana Nurti

Public Administration, Universitas Muhammadiyah Bengkulu, Bengkulu, Indonesia.

Jl. Adam Malik Kota Bengkulu

Email: oktaviananurti762@gmail.com

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1. Introduction

Digital transformation has become a central agenda in contemporary public sector reform. Governments worldwide increasingly adopt information and communication technologies (ICT) to improve efficiency, transparency, and citizen engagement. Initially framed as e-government-primarily concerned with digitizing administrative procedures-digital reform has evolved into a broader paradigm emphasizing systemic organizational change, data integration, and service redesign (Mergel, Edelmann, & Haug, 2019). Rather than representing a purely technological shift, digital transformation entails institutional restructuring, leadership adaptation, and changes in bureaucratic culture (Janssen & van der Voort, 2020). Consequently, the success of digital public service reform depends not only on infrastructure availability but also on governance capacity and organizational readiness.

Global policy institutions have reinforced this perspective. The World Bank (2022) highlights that digital government reforms can strengthen public trust and administrative performance when embedded in accountable governance systems. Similarly, the Organisation for Economic Co-operation and Development (2021) emphasizes citizen-centered design and collaborative governance as critical elements of sustainable digital transformation. These perspectives suggest that digitalization is multidimensional, requiring technological, institutional, and socio-cultural alignment.

In Indonesia, digital government reform is institutionalized through the Sistem Pemerintahan Berbasis Elektronik (SPBE), which mandates integration, interoperability, and performance evaluation of digital services across government agencies. The SPBE framework aims to accelerate bureaucratic reform by reducing procedural complexity and enhancing service accessibility. Empirical studies indicate that SPBE implementation has improved administrative efficiency in certain sectors, particularly civil registration and licensing services (Pratama, 2021). Other research highlights that digital service performance is influenced by human resource competence and citizens' digital literacy (Nugroho & Sari, 2022). Leadership commitment and organizational support have also been

identified as enabling factors in promoting bureaucratic innovation (Setiawan et al., 2023).

Despite these positive findings, the literature also reveals persistent implementation challenges. Digital transformation initiatives frequently encounter organizational resistance, fragmented legacy systems, and limited inter-agency coordination (Cordella & Paletti, 2021). In decentralized governance systems such as Indonesia, disparities in fiscal capacity and digital infrastructure further complicate policy implementation (Rahman, 2022). These disparities produce uneven digital governance outcomes across regions, suggesting that national mandates alone are insufficient to ensure substantive reform.

Moreover, scholars caution against equating procedural digitization with genuine institutional transformation. The mere existence of digital platforms does not automatically translate into improved service quality or enhanced public value. Without accompanying changes in organizational culture and administrative routines, digital reform risks becoming symbolic compliance rather than substantive transformation (Hidayat, 2023). This distinction between formal adoption and practical implementation remains underexplored, particularly in local governments outside major metropolitan centers.

While previous research has extensively examined regulatory frameworks, system maturity indices, and macro-level evaluations, fewer studies have investigated how digital public service policies are implemented and experienced at the operational level of local administration. Much of the existing literature focuses on large cities or national assessments, leaving secondary urban contexts relatively understudied. Secondary cities often face resource constraints, limited technical expertise, and infrastructural gaps, yet they remain crucial actors in decentralized governance systems. Understanding how digital reform unfolds in such contexts is essential for assessing the broader effectiveness of national digital policies.

Bengkulu City represents a relevant case for examining these dynamics. As a secondary city within Indonesia's decentralized administrative structure, Bengkulu operates under national SPBE mandates while navigating local capacity constraints. The city has

introduced various digital public service initiatives aimed at enhancing administrative accessibility and efficiency. However, the extent to which these initiatives generate substantive improvements in service delivery and administrative practice requires empirical examination. Analyzing this case provides insight into how digital reform is interpreted, implemented, and perceived at the local level.

This study aims to analyze the implementation of digital public service policies in Bengkulu City and explore their implications for administrative service quality. Employing a qualitative case study approach based on in-depth interviews with government officials, system operators, and service users, complemented by document analysis, the research investigates three central questions: (1) how digital public service policies are operationalized at the local level; (2) what organizational and institutional factors shape their implementation; and (3) how stakeholders perceive their implications for service quality. By focusing on a secondary urban context, this study contributes empirical evidence to the literature on local digital governance and highlights the interaction between national reform mandates and local administrative realities.

2. Method

This study employs a qualitative case study approach to examine the implementation of digital public service policies at the local government level. A qualitative design was selected to capture institutional dynamics, administrative practices, and stakeholder perceptions that cannot be adequately understood through quantitative indicators alone. The research focuses on one local government agency in Bengkulu City that has implemented a digital-based administrative service system under the national SPBE framework. Bengkulu City was selected as a secondary urban context representing non-metropolitan local governments operating under national digital reform mandates while facing capacity constraints.

Data were collected through semi-structured, in-depth interviews, document analysis, and limited non-participant observation of digital service processes. Purposive sampling was used to select informants based on their direct involvement in policy implementation and service utilization. Six key informants participated in the study: the

Head of the Agency, the Secretary of the Agency, a Digital System Operator, a frontline Service Staff member, and two citizens who had utilized the digital services. This composition was intended to capture both managerial and operational perspectives, as well as user experiences, allowing for cross-level analysis of implementation practices.

Interviews were conducted using an interview guide covering policy implementation processes, organizational adaptation, technological challenges, and perceived service quality implications. Each interview lasted between 45 and 90 minutes and was recorded with consent. Data collection continued until thematic saturation was reached, indicated by repetition of patterns across interviews. Policy documents, internal reports, and relevant digital service guidelines were analyzed to complement interview findings and contextualize administrative practices.

Data analysis followed the interactive model developed by Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña (2019), consisting of three concurrent stages: data condensation, data display, and conclusion drawing/verification. Transcribed interviews were coded thematically using an iterative process. Initial open coding identified recurring themes related to leadership, infrastructure readiness, digital literacy, organizational culture, and system integration. These codes were then grouped into broader analytical categories to identify patterns of institutional adaptation and implementation challenges.

To enhance research rigor, several validation strategies were applied. Source triangulation was conducted by comparing perspectives across hierarchical positions and service users. Method triangulation was achieved by integrating interview data with document analysis and observational notes. Additionally, member checking was conducted with selected informants to verify interpretation accuracy. An audit trail documenting coding decisions and analytical memos was maintained to strengthen dependability and transparency.

While the qualitative design allows in-depth exploration of contextual dynamics, this study does not aim for statistical generalization. Instead, it seeks analytical generalization by linking

empirical findings to broader discussions on local digital governance and administrative reform in decentralized settings.

3. Results and Discussion

3.1. Results

3.1.1. Administrative Efficiency and Process Simplification

Findings indicate that digital public service implementation in Bengkulu City has altered procedural dynamics, particularly in terms of time efficiency and process simplification. Service users reported reduced physical visits and shorter processing times. One citizen (Informant 5) noted that administrative procedures no longer required repeated in-person visits because application status could be monitored online. This perception was corroborated by the system operator (Informant 3), who estimated that digital verification reduced processing time by approximately 40% compared to manual procedures.

However, closer examination suggests that efficiency gains were not solely the result of technological automation. Interviews with managerial officials revealed that prior to digital deployment, certain procedural redundancies had already been reviewed and simplified. Thus, efficiency improvements stemmed from the interaction between technological adoption and procedural redesign. In units where workflow restructuring accompanied digital implementation, time reductions were more significant. Conversely, in cases where digital systems merely replicated existing bureaucratic layers, improvements were marginal.

This distinction highlights that efficiency outcomes depend on institutional adjustment rather than technology alone. Digitalization functioned as an enabling mechanism, but organizational adaptation determined its practical impact.

3.1.2. Transparency and Traceability of Service Processes

Another major finding concerns increased transparency and traceability. The Head of the Agency (Informant 1) emphasized that digital platforms record every stage of service processing, creating an auditable trail. Citizens confirmed that they could track application progress independently (Informant 6). This visibility reduced

uncertainty and minimized informal interactions that previously characterized manual procedures.

Nevertheless, transparency improvements were primarily procedural. While digital logs enhanced monitoring capacity, they did not automatically guarantee substantive accountability. Internal oversight mechanisms remained necessary to ensure data integrity and prevent discretionary manipulation. Thus, transparency gains were conditional upon institutional enforcement structures.

The findings suggest that digital systems can expand informational openness but require complementary governance controls to translate procedural visibility into accountability.

3.1.3. Infrastructure Constraints and Operational Disruptions

Despite reported improvements, infrastructural limitations emerged as a significant constraint. Frontline staff (Informant 4) indicated that unstable internet connectivity frequently disrupted service processes. In such situations, digital systems slowed down rather than accelerated service delivery.

Infrastructure-related disruptions created a paradox: while digitalization promised efficiency, inadequate connectivity temporarily reintroduced delays. Staff often reverted to partial manual processing during system interruptions, resulting in hybrid administrative practices. This hybridization reflects adaptive coping strategies but also signals incomplete digital consolidation.

The data reveal that technological reliability is a prerequisite for consistent performance outcomes. Without stable infrastructure, digital reform remains vulnerable to operational setbacks.

3.1.4. Digital Literacy and Uneven Access

Digital literacy emerged as another structural challenge. According to the Secretary of the Agency (Informant 2), not all citizens were able to navigate the digital platform effectively. Elderly users and individuals with limited technological exposure often required assistance from staff or family members.

This uneven capability distribution created differentiated user experiences. While digitally literate citizens benefited from remote access, others continued to rely on in-person support. Consequently,

digital reform did not uniformly enhance accessibility; rather, it redistributed administrative burden depending on user capacity. The findings indicate that digital inclusion strategies-such as public assistance desks or simplified user interfaces are essential to prevent the reproduction of inequality within digital governance systems.

3.1.5. Organizational Culture and Adaptive Capacity

Institutional culture significantly shaped implementation outcomes. The Head of the Agency acknowledged initial resistance among staff members who perceived digital systems as increasing workload or threatening established routines. Over time, training sessions and leadership directives facilitated gradual adaptation.

Resistance did not manifest as overt opposition but as passive reluctance and slow procedural compliance. Following structured training and mentoring, staff members became more confident in system utilization. This transition suggests that cultural adaptation is incremental and contingent upon leadership support and skill development.

The results demonstrate that digital reform is embedded within broader organizational transformation processes. Technological deployment alone does not guarantee change; rather, it interacts with existing administrative norms and professional identities.

3.2. Discussion

3.2.1. Digital Reform as Institutional Transformation Rather Than Technological Adoption

The findings demonstrate that digital public service implementation in Bengkulu City extends beyond technological deployment and reflects a gradual institutional transformation. This aligns with arguments by Mergel, Edelmann, and Haug (2019) that digital transformation in government requires structural and cultural change, not merely ICT adoption. Similarly, Janssen and van der Voort (2020) emphasize that digital governance necessitates adaptive administrative capacity capable of responding to technological and societal change.

The Bengkulu case shows that efficiency gains were contingent upon workflow restructuring rather than automation alone. This

finding reinforces Cordella and Paletti's (2021) argument that without organizational redesign, digitalization risks producing "digital bureaucracy," where legacy inefficiencies are simply replicated online. In contrast to studies conducted in high-capacity administrative contexts (Dunleavy et al., 2006; Linders, 2012), the present study reveals that in secondary urban settings, institutional readiness significantly shapes digital outcomes.

Moreover, the results support institutional theory perspectives (DiMaggio & Powell, 1983), suggesting that local governments may adopt digital reforms partly due to regulatory pressure under the national SPBE framework. However, substantive transformation depends on internal capacity and leadership commitment. Thus, compliance with national digital mandates does not automatically guarantee meaningful administrative change.

3.2.2. Efficiency as a Conditional and Contextual Outcome

The reported reduction in verification time by approximately 40% suggests tangible administrative efficiency. This finding is consistent with OECD (2021) and World Bank (2022) assessments that digital automation reduces transaction costs and procedural delays. Similar empirical evidence has been reported in Indonesian contexts (Pratama, 2021; Nugroho & Sari, 2022).

However, this study nuances those conclusions. Efficiency improvements were uneven and occasionally disrupted by infrastructural instability. This supports the findings of Gil-Garcia and Pardo (2005), who argue that digital government performance depends heavily on technological integration and system reliability. Likewise, Heeks (2002) warns that many e-government initiatives in developing contexts experience partial success due to infrastructural and capacity gaps.

Unlike metropolitan-focused studies (Nam, 2019; Meijer & Bolívar, 2016), the Bengkulu case illustrates how infrastructural fragility produces hybrid administrative practices, where digital and manual processes coexist. Therefore, efficiency should be conceptualized as a context-dependent outcome mediated by infrastructural resilience and institutional coordination.

3.2.3. Transparency, Traceability, and the Limits of Digital Accountability

The enhancement of transparency through real-time tracking aligns with arguments by the World Bank (2022), which associates digital governance with improved service traceability. Bannister and Connolly (2014) similarly argue that digital transparency strengthens administrative accountability by reducing discretionary opacity.

However, this study demonstrates that procedural transparency does not automatically translate into substantive accountability. This finding resonates with Meijer (2013), who distinguishes between informational transparency and participatory accountability. Without oversight mechanisms, digital records may improve visibility but not necessarily alter power relations or prevent manipulation.

The results also align with Grimmelikhuijsen et al. (2013), who found that transparency initiatives can improve trust only when citizens perceive information as credible and usable. In Bengkulu, while users appreciated tracking capabilities, institutional audit mechanisms remained crucial for sustaining accountability. This reinforces the argument that digital tools must be embedded within governance structures to produce normative improvements.

3.2.4. Digital Divide and Social Equity Implications

The findings concerning digital literacy disparities confirm prior research on digital divide challenges in developing countries (Heeks, 2002; van Dijk, 2006). In Indonesia, Rahman (2022) and Nugroho & Sari (2022) similarly highlight that uneven digital skills constrain service accessibility.

This study extends those findings by illustrating micro-level inequality within a single municipality. While digitally literate citizens benefited from remote access, others remained dependent on physical assistance. This layered accessibility supports Linders' (2012) argument that digital government may unintentionally privilege technologically advantaged groups.

Furthermore, the results echo the OECD (2021) recommendation that digital government must adopt inclusive design principles. Without targeted literacy programs, digitalization risks reinforcing existing socio-economic disparities. Thus, digital governance reform

must integrate equity considerations into policy design and implementation.

3.2.5. Organizational Culture, Resistance, and Digital Leadership

Resistance observed during initial implementation aligns with findings by Hidayat (2023) and Mergel et al. (2019), who argue that bureaucratic culture significantly influences digital reform trajectories. Organizational resistance often stems from uncertainty, perceived workload increases, and fear of technological displacement (Cordella & Tempini, 2015).

The Bengkulu case demonstrates that leadership intervention and structured training mitigated resistance over time. This finding reinforces Setiawan et al. (2023), who emphasize the role of digital leadership in facilitating bureaucratic innovation. Similarly, Kotter's (1996) change management theory underscores leadership communication and capacity-building as critical to transformation success.

Unlike studies emphasizing top-down enforcement (Mazmanian & Sabatier, 1983), this research suggests that successful digital reform requires a hybrid approach combining regulatory legitimacy with participatory adaptation. Organizational buy-in emerges as a decisive variable in sustaining reform outcomes.

3.2.6. Hybridization of Digital and Conventional Practices

A notable contribution of this study is the identification of hybrid administrative practices during infrastructural disruptions. Rather than fully abandoning digital systems, staff temporarily integrated manual procedures. This hybridization reflects adaptive governance mechanisms consistent with Janssen and van der Voort's (2020) concept of administrative resilience.

Hybrid practices challenge linear models of digital transformation. As Dunleavy et al. (2006) argue, digital-era governance does not entirely replace traditional bureaucracy but reconfigures it. The Bengkulu case supports this view, illustrating incremental and negotiated transformation rather than abrupt systemic change.

3.2.7. Theoretical Implications: Integrating Policy Implementation and Digital Governance

The study contributes to theoretical integration between policy implementation theory (Mazmanian & Sabatier, 1983) and digital governance scholarship. While top-down regulatory frameworks such as SPBE provide formal legitimacy, bottom-up administrative adaptation determines operational outcomes.

The findings suggest that digital reform effectiveness depends on the interaction among five dimensions: regulatory legitimacy, infrastructure reliability, human resource capacity, digital literacy, and leadership commitment. This multidimensional interaction supports Gil-Garcia's (2012) view that digital government operates within complex socio-technical systems.

By demonstrating that digitalization outcomes are contingent rather than deterministic, this study challenges techno-optimistic narratives prevalent in early e-government literature.

3.2.8. Practical Implications for Secondary Cities

Compared to research conducted in high-capacity metropolitan environments (Nam, 2019; Meijer & Bolívar, 2016), this study highlights the unique constraints of secondary cities. Limited fiscal resources and infrastructural instability complicate reform trajectories.

Policy implications include: Strengthening infrastructural resilience, Institutionalizing continuous digital training, Integrating audit mechanisms into digital platforms, Implementing inclusive literacy programs, and Encouraging participatory evaluation mechanisms.

These recommendations align with global digital governance principles articulated by the Organisation for Economic Co-operation and Development (2021) but contextualize them within subnational realities.

3.2.9. Synthesis: From Compliance to Contextual Adaptation

Overall, the findings indicate that digital public service implementation in Bengkulu City represents contextual institutional adaptation rather than full systemic transformation. While efficiency

and transparency gains are evident, they remain dependent on infrastructural stability, cultural change, and capacity development.

This nuanced outcome bridges optimism and skepticism within digital governance literature. It supports arguments that digital reform can generate administrative improvement (Mergel et al., 2019; OECD, 2021) while affirming critiques emphasizing capacity constraints and socio-technical complexity (Heeks, 2002; Cordella & Paletti, 2021).

3.3 Research Contribution

This study contributes to the digital governance literature by demonstrating that digital public service outcomes are not determined by technology alone but by the interaction between institutional adaptation, infrastructural capacity, and user readiness. It also introduces the notion of hybrid administrative practices as an adaptive response to infrastructural constraints, while highlighting micro-level digital inequality within a single municipal context.

3.4 Limitations and Future Research

This study is limited by its single-case design, which restricts generalizability, and its reliance on qualitative data, which may not fully capture measurable performance outcomes. In addition, user perspectives are only partially explored, and infrastructural analysis remains experience-based rather than technical. Future research should employ comparative and mixed-method approaches, incorporate stronger citizen-centered analysis, and examine the long-term sustainability of hybrid governance practices across different administrative contexts.

4. Conclusion

This study advances the understanding of digital public service reform by conceptualizing implementation as a contingent institutional process rather than a linear technological upgrade. The findings demonstrate that digitalization outcomes are shaped by the interaction between regulatory frameworks, organizational culture, infrastructural capacity, and citizen readiness. Rather than confirming deterministic assumptions that digital reform automatically improves

governance quality, the evidence shows that performance gains emerge through negotiation between formal policy mandates and local administrative realities.

Theoretically, the study contributes to digital governance scholarship by integrating policy implementation theory with socio-technical systems perspectives. National regulatory frameworks such as Indonesia's SPBE provide strategic direction and formal legitimacy, yet local transformation depends on organizational adaptation and leadership mediation. This interaction challenges techno-centric narratives common in early e-government discourse, which often equated ICT deployment with institutional improvement. Digital reform is embedded within bureaucratic routines, incentive structures, and power configurations; therefore, technological adoption alone is insufficient to guarantee administrative transformation.

The research also refines the concept of efficiency in digital governance. Efficiency should be understood as a conditional outcome influenced by system reliability, inter-unit coordination, and digital literacy levels. Automation can reduce procedural delays, but sustained performance improvements require organizational learning and infrastructural resilience. This systemic view aligns with whole-of-government approaches emphasizing integration over fragmented innovation. In this regard, digitalization becomes effective when technological redesign is accompanied by procedural simplification and institutional alignment.

Another conceptual contribution lies in distinguishing procedural transparency from substantive accountability. While digital traceability enhances visibility and monitoring, accountability depends on institutional oversight and normative commitment. Transparency through information access does not automatically translate into responsible governance. Digital platforms may facilitate auditability, but they do not substitute for ethical standards, supervisory mechanisms, and enforcement capacity. This distinction broadens the governance debate beyond information disclosure toward deeper institutional responsibility.

From a policy perspective, the findings highlight several strategic implications for local governments, particularly in secondary cities.

First, infrastructural stability must be treated as a strategic investment rather than a technical afterthought. Digital service reliability directly affects public perception and administrative performance. Second, human resource development should emphasize continuous competency enhancement rather than one-off technical training. Digital transformation requires cultural adaptation, not merely skill acquisition. Third, inclusive digital strategies are essential to mitigate literacy gaps and prevent new forms of exclusion. Without attention to access disparities, digital reform risks reinforcing inequality rather than reducing it.

The study also underscores the central role of digital leadership. Effective leaders mediate between technological innovation and bureaucratic norms, translating reform objectives into shared organizational meaning. Leadership thus operates as cultural alignment, ensuring that technological change supports rather than disrupts institutional coherence. In the absence of such mediation, digital initiatives may stagnate or become symbolic compliance.

Although limited by its qualitative scope, the research provides an empirically grounded account of digital governance as a socio-institutional transformation. It suggests that reform success should be measured not merely by service digitization levels but by institutional coherence, inclusivity, accountability depth, and adaptive capacity. Ultimately, sustainable digital public administration depends less on technological sophistication than on institutional alignment and human capacity development.

Declaration of Conflicting Interest

No potential conflict of interest was reported by the author(s).

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