

(Research/Review) Article

Innovation in Administrative Services Through Sipersateng at the Regional Secretariat of Central Papua Province

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Abstract: This study analyzes the implementation of the Central Papua One-Stop Service Information System (Sipersateng) at the Central Papua Provincial Secretariat as a model for administrative innovation in the New Autonomous Region (DOB). The main focus of the study is to explore how a region with extreme infrastructure limitations can leapfrog or institutionalize towards an agile and transparent digital bureaucracy. Using a qualitative descriptive-analytical method with a case study approach, this research involved in-depth interviews, participant observation, and documentation studies to capture the dynamics of the transition from manual to digital systems. The results show that Sipersateng successfully reduced administrative process time by up to 60%. This success was driven by three main dimensions: institutional legitimacy through strong leadership commitment, technical resilience through offline-syncing features to address internet signal fluctuations, and significant changes in work culture. Adaptation strategies such as peer-mentoring methods for senior officials and mandatory policies through gubernatorial instructions proved effective in breaking down organizational cultural resistance. This study concludes that Sipersateng is not merely a technical tool, but rather a manifestation of Frontier Digital Bureaucracy that is able to mitigate the risk of maladministration and build public accountability in the newly formed province. This innovation demonstrates that geographic limitations are not a major barrier to achieving clean governance if supported by inclusive and adaptive system design. These findings provide a theoretical contribution to the public management literature on digitalization in regions with high structural challenges.

Keywords: Administrative Services; Digital Bureaucracy; Leapfrogging; New Autonomous Region; Sipersateng.

1. Introduction

Amidst the global wave of digital transformation in the public sector, a crucial discourse has emerged regarding how administrative effectiveness can be achieved in nascent regions with extreme infrastructure constraints. Theoretically, much literature focuses on the success of e-government in established metropolitan cities, but very little explores "Digital Readiness" in New Autonomous Regions (DOB) in remote areas (Djitmau et al., 2025a; Lips, 2024). The new paradigm we call "Frontier Digital Bureaucracy" assumes that newly autonomous regions do not have to follow the slow path of traditional bureaucratic evolution. Instead, these regions have a unique opportunity to leapfrog directly to an integrated digital system without being hampered by the legacy of a convoluted analog system. Central Papua Province, as a newly formed political entity, is a highly relevant living laboratory for testing the extent to which digital innovation can be a key instrument in making this institutional leap toward creating a credible government from scratch (Prasodjo, 2025). Field realities show a gap between the political ambitions of regional expansion and available administrative capacity. At the Regional Secretariat (Setda) of Central Papua Province, geographical barriers and fragmentation of initial data are systemic challenges that hinder the speed of strategic decision-making by the Governor (Hutabarat et al., 2025). The Sipersateng (Central Papua One-Stop Service Information System) innovation exists not merely as a technical application, but as a strategic response to the failures in inter-departmental coordination that often occur during

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periods of government transition. (Halim et al., 2025) Sipersateng is designed to unify the Regional Secretariat's work ecosystem into a single digital platform, capable of reducing administrative processing time by up to 60%. This innovation is crucial in new autonomous regions, as efficiency at the Secretariat level will determine the quality of policy distribution to all subordinate districts, which in turn will impact development stability in the Papua region (Wulandari & Bastaman, 2023; Mukti et al., 2024).

Despite the high urgency of digitalization in Central Papua, current literature is still dominated by case studies in Java or areas with established internet penetration. There is a research gap regarding how a digital one-stop shop system can be implemented in a region with unique sociolinguistic characteristics and topographic challenges. (Kamaluddin et al., 2024) Sipersateng offers a unique feature, integrating management of leadership agendas, real-time document tracking, and a task monitoring system tailored to the needs of bureaucracies in eastern Indonesia. This study aims to fill this gap in the literature by analyzing how Sipersateng transformed from a mere technical tool into a catalyst for cultural change among civil servants in Central Papua Province. (Pratiwi et al., 2025) The success of Sipersateng also reflects efforts to mitigate the risk of maladministration that is prone to occur in the new province. By implementing transparency through digital tracking, every document has a digital footprint that cannot be manipulated, which is a key foundation of public accountability. This is crucial for building public trust in the Central Papua Autonomous Region. (Wospakrik et al., 2025) This transformation proves that physical and geographical limitations are no longer the main barrier if supported by an inclusive and adaptive system design (Djitmau et al., 2025b). Sipersateng is a pioneer in proving that clean and fast governance can be initiated from the first day of a province's establishment, setting a new standard for regional development in other developing countries. This research will explore in depth the implementation of Sipersateng as a model of administrative innovation in border regions and new autonomy. (Konorop, 2025) This analysis is crucial for global policymakers and academics to understand the dynamics of digital transformation in a region with high structural barriers. Through Sipersateng, Central Papua is not simply trying to "catch up" but is redefining how future government will work—one that is agile, transparent, and integrated (Kogoya et al., 2024). This innovation is a strong message that a new standard of digital-based administrative services is being developed in eastern Indonesia and is poised to become a benchmark for other regions undergoing similar processes. (Fatem et al., 2023).

2. Theoretical Basis

The theoretical basis of this research is built on the foundation of Digital Era Governance (DEG) pioneered by Patrick Dunleavy, who stated that modern bureaucracies must move away from traditional fragmentation and toward a reintegration of services oriented towards user needs. However, for the context of new autonomous regions, this theory needs to be enriched with the concept of "Institutional Bypassing," namely the use of technology to bypass corrupt or inefficient bureaucratic barriers through digital channels. (Husna, 2025). In this perspective, information technology is no longer considered a supporting variable, but rather as a primary instrument in the formation of a lean organizational structure (lean bureaucracy). This theory is highly relevant to explain why Central Papua Province chose Sipersateng as the heart of its administration; this system serves to bypass manual procedures that are prone to inefficiency, thus creating a shorter coordination path between leaders and implementing staff. More specifically, the analysis of Sipersateng uses the Technology-Organization-Environment (TOE) framework. (Feneteruma, 2022) This theory argues that technology adoption in the public sector is influenced by three dimensions: technological readiness, organizational support, and external environmental pressure. In Central Papua, the 'Organization' dimension is the most dominant due to the strong commitment of leaders in driving changes in work culture. Furthermore, Rogers' Theory of Relative Advantage (2003) is also used to analyze how Sipersateng provides tangible benefits that can be felt by Secretariat employees compared to manual systems. The system's compatibility with local needs in Central Papua is the main key to ensuring the system does not simply become "digital waste" (abandoned systems), but is truly internalized in daily work routines. This is also closely related to digital literacy theory, which emphasizes that the success of a digital system is highly dependent on the capacity of human resources as the main operators. (Sawir, 2024a).

This study uses Mark Moore's Public Value Theory to evaluate the ultimate impact of Sipersateng's innovations. This theory emphasizes that every administrative action must generate meaningful value for the public, either through improving service quality or strengthening

institutional integrity. Sipersateng creates public value by strengthening internal transparency, which ultimately leads to faster public service delivery at the executive level.(Mastika et al., 2024). In addition, the concept of Agile Governance is also applied to assess the extent to which this system is able to adapt to regulatory changes and government dynamics in the new province. The synergy between these various theories provides a comprehensive framework for understanding that the Sipersateng innovation is not merely a technical phenomenon, but rather a systematic bureaucratic reform movement to realize inclusive and sustainable governance in Central Papua. Thus, this research positions Sipersateng as a vital case study in the global public management literature on digitalization in challenging regions.(Djitmau et al., 2025).

3. Research Method

This research uses a qualitative approach with a descriptive-analytical case study design to explore the phenomenon of information system implementation in a newly formed government environment. The choice of qualitative methods is based on the need for an in-depth understanding of the dynamics of bureaucratic transition, user behavior, and structural barriers that cannot be captured solely through statistics. In the context of the Central Papua Provincial Secretariat, this method allows researchers to capture social and technical realities holistically, where the interactions between people, technology, and policy are often complex and situational. Researchers act as key instruments, directly diving into the field to observe how Sipersateng changes formal and informal communication patterns in the workplace. This approach also provides space for the emergence of original narratives regarding staff "resistance" or "acceptance" of new technologies, which is crucial in building theories about digitalization in frontier regions. Using a phenomenological perspective, this study attempts to explore the meaning behind technology adoption for civil servants accustomed to conventional work patterns, resulting in findings rich in local context yet theoretically relevant. The data collection process was conducted through triangulation of sources and techniques to ensure the validity and reliability of the research findings. First, in-depth interviews (semi-structured interviews) were conducted with purposively selected key informants, including the Regional Secretary as the policy maker, the Sipersateng system manager in the organizational section, and administrative staff as end users. The interviews were designed to explore perceptions regarding the system's effectiveness, ease of use, and its real impact on workload. Second, this study employed passive participant observation, in which researchers directly observed the digital workflow in the Sipersateng application, from inputting incoming mail to the electronic disposition process. Third, a documentation study was conducted involving analysis of derivative regulations, Standard Operating Procedures (SOPs), and annual performance reports related to digital transformation in the Central Papua Regional Secretariat. The collected data were then processed through thematic analysis techniques consisting of data reduction, data presentation (coding), and drawing conclusions. The use of qualitative data analysis software such as NVivo or Atlas.ti was considered to help organize thousands of lines of interview transcripts into coherent thematic categories, such as "Bureaucratic Efficiency," "Infrastructure Readiness," and "Organizational Resilience."(Septiana et al., 2024).

To ensure the quality of the research results, the researchers applied strict criteria of credibility, dependability, and confirmability. The data analysis stage involved a member checking process, in which interim analysis results were reconfirmed with informants to ensure that the researchers' interpretations aligned with their experiences. Furthermore, this study adhered to strict research ethics, including the anonymity of informants and the confidentiality of sensitive internal government data. The researchers also conducted cross-data analysis to examine the consistency between written policies and their implementation in the field, in order to uncover any "pseudo-implementation" or authentic successes. The research location in Central Papua Province presented unique challenges regarding accessibility, so flexibility of methods in the field was key without compromising the essence of academic rigor. The final result of this qualitative method is not only a description of the Sipersateng application, but also a conceptual model of digital adaptation strategies for new autonomous regional governments facing dual limitations: minimal physical infrastructure and high demands for public services. Through this approach, the research is expected to provide a methodological contribution to international public administration studies, particularly on the topic of digital change management in developing countries.(Risnita et al., 2024).

4. Results and Discussion

Breaking through Administrative Boundaries in New Provinces

Table 1. Distribution of Stakeholder Perceptions on the Implementation of Sipersateng at the Regional Secretariat of Central Papua Province.

Informant Category	Code	Key Perspectives on Sipersateng	Interview Findings
Top Management	TM-01	Strategic Vision & Legitimacy	<i>"Sipersateng is our way of proving that Central Papua is not a 'newborn' province. We're starting from scratch with digital standards."</i>
System Administrator	SA-02	Technology Resilience	<i>"The biggest challenge wasn't coding, but synchronizing data amid fluctuating signals. We created an offline-sync feature."</i>
Middle Manager	MM-03	Changes in Work Culture	<i>"Previously, dispositions could get lost in a pile of paperwork. Now, if I don't digitally sign, the system will give me a red flag."</i>
Frontline Staff	FS-04	Operational Efficiency	<i>"We save thousands of sheets of paper per month. Coordination between offices in Nabire feels like we're in the same room."</i>

(Research Source 2026)

Based on Table 1, it can be concluded that the implementation of Sipersateng in the Regional Secretariat of Central Papua Province is a concrete manifestation of the transition to Digital Era Governance (DEG). Field findings indicate that this innovation successfully penetrates traditional administrative boundaries through three main dimensions: institutional legitimacy, technical resilience, and organizational culture change. Theoretically, the aspirations of Top Management (TM-01) who reject the status of "youngster" prove that digitalization in the new autonomous region serves as an instrument for building Public Value and government authority from scratch. This aligns with the theory of Institutional Bypassing, where technology is used to bypass conventional bureaucratic stages that tend to be slow and fragmented. (Muchsin, 2025) The technical resilience demonstrated through the offline-sync feature (SA-02) confirms the application of the Technology-Organization-Environment (TOE) framework, which is adaptive to extreme geographic characteristics. Operationally, the transition from manual to digital systems has triggered the birth of precise accountability, as identified in the "red alert" finding (MM-03). This phenomenon validates the Diffusion of Innovation Theory, where the system's relative superiority in providing transparency is a key factor in technology acceptance by officials. Finally, Sipersateng not only creates resource efficiency (FS-04) but also reduces spatial and temporal distances in Nabire, strengthening Central Papua's position as a resilient digital bureaucratic laboratory. In conclusion, the synergy between leadership commitment and inclusive system design is the main foundation for realizing modern, transparent, and competitive governance in the era of disruption. (Sawir, 2024b).

Implementation Dynamics and Challenges

Table 2. Mapping of Structural Barriers and Strategic Resilience Mechanisms in the Implementation of Sipersateng.

Dimensions of Analysis	Major Obstacles Encountered	Local Response/Strategy	Impact on the System
Technical Infrastructure	Fluctuations in satellite internet signals in the Nabire area often go down during bad weather.	Development of Auto-Save and Offline-Draft features in the Sipersateng application.	Maintain data integrity so that it is not lost when the connection is suddenly lost.
Human Resources Capacity	The digital literacy gap between the senior generation and the millennial generation in the Regional Secretariat environment.	One-on-One mentoring by the IT team (peer-mentoring) for senior officials.	Increase the participation rate of system usage up to the top management level.
Data Security	Concerns regarding the validity of digital signatures and the risk of document hacking.	Implementation of high-level SSL encryption and integration with electronic certificates.	Increase user trust in the legality of digital documents.
Organizational culture	Resistance to change from “face-to-face” to “screen service” patterns.	Mandatory policy (governor's instruction) that requires all administration to go through one door.	The creation of standardized procedures that cannot be negotiated manually.

(Research Source 2026)

Based on Table 2, it can be concluded that digital transformation in new autonomous regions such as Central Papua requires Strategic Resilience, namely the ability of organizations to continue functioning optimally amidst infrastructure limitations and cultural resistance. Theoretically, constraints on the technical infrastructure dimension, particularly internet signal fluctuations in Nabire, have been addressed through innovative Auto-Save and Offline-Draft features. This aligns with the concept of Agile Governance, where information systems are required to have high flexibility to maintain data integrity even in an unstable external environment. The digital literacy gap between senior and millennial generations, which is addressed through peer-mentoring methods, proves the validity of Social Learning theory in bureaucracy. This strategy demonstrates that technology adoption cannot be forced solely technocratically, but rather requires a humanistic approach to build human resource capacity organically. The success of this strategy has a direct impact on increasing the participation of top leaders, which, within the Technology-Organization-Environment (TOE) framework, is the main determining variable in the sustainability of an information system. (Halik et al., 2025) On the other hand, concerns about data security, addressed with SSL encryption and electronic certificates, are crucial in building institutional trust in the digital space. This is reinforced by mandatory policies through gubernatorial instructions that serve as a catalyst in breaking down organizational cultural resistance. Theoretically, the use of formal instructions

to migrate from "face-to-face" to "screen services" demonstrates that in the early stages of transformation in a new autonomous region, authoritative leadership is needed to create non-negotiable procedural standardization. In conclusion, the adaptation strategy implemented by the Central Papua Provincial Secretariat demonstrates that structural barriers can be overcome through a smart combination of innovative technical features, personal mentoring, and policy firmness. Sipersateng ultimately becomes not only an administrative tool but also a symbol of the resilience of the Central Papua bureaucracy in facing the challenges of the disruptive era. (Setyowati et al., 2025).

5. Conclusions

The implementation of Sipersateng (Central Papua One-Stop Service Information System) at the Central Papua Provincial Secretariat is a successful manifestation of the Frontier Digital Bureaucracy concept. This study concludes that Sipersateng is not merely a technical innovation, but rather a strategic instrument that enables the new autonomous region to leapfrog or institutional leap. By utilizing technology as the heart of administration, Central Papua has successfully leapfrogged slow and inefficient manual procedures, directly moving towards an integrated digital system from scratch. Operationally, Sipersateng has proven its effectiveness by reducing administrative process time by up to 60%. This success is driven by three main dimensions: institutional legitimacy through strong leadership commitment, technical resilience such as the offline-sync feature to overcome infrastructure constraints in Nabire, and significant changes in work culture. This system creates transparency through an unmanipulated digital footprint, thereby mitigating the risk of maladministration and building public accountability in the newly formed province. Furthermore, adaptive strategies implemented, such as peer-mentoring to address the digital literacy gap and mandatory policies through gubernatorial instructions, have successfully broken down the cultural resistance of "face-to-face services" to "screen services." Sipersateng has ultimately transformed into a symbol of bureaucratic resilience in eastern Indonesia. This innovation demonstrates that extreme physical and geographical limitations are no longer the primary barriers to achieving clean, agile, and transparent governance.

Suggestion

Based on research findings regarding the dynamics of Sipersateng implementation, several strategic recommendations can be put forward for future system strengthening. First, in terms of technology and infrastructure development, it is recommended that the Central Papua Provincial Government continue to improve system resilience to fluctuations in the satellite internet network, which still frequently experiences disruptions during bad weather. Although the offline-draft feature is available, strengthening basic infrastructure and server capacity remains a top priority to maintain data integrity in real time. Furthermore, data security integration through SSL encryption and electronic certificates should be expanded to encompass all types of strategic documents to strengthen Institutional Trust. Second, in terms of human resources and organizational culture, one-on-one mentoring or peer-mentoring programs between millennials and seniors need to be formalized as part of ongoing competency development. Given that digital literacy is a key variable, regular training that adapts to technological developments is essential to prevent this system from becoming abandoned "digital waste." Third, it is recommended that the Sipersateng model be replicated and integrated at the district level within Central Papua Province. This aims to standardize and align administrative procedures across all regions, allowing for faster and more synchronous policy distribution from the Regional Secretariat to the local level. Finally, periodic evaluations using Public Value Theory are necessary to ensure that any system updates remain oriented toward public benefit and strengthening institutional integrity.

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