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From Digital Submission to Data Integration: SIASN Pension Services in Maluku

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ABSTRACT

This study examines why digital pension submissions through Indonesia's Civil Servant Information System (SIASN) still rely on manual verification at the Maluku Provincial Civil Service Agency. The paper reports the author's qualitative master's research, drawing on five purposively selected institutional informants, observation descriptions, and procedural documents from September 2026. Interviews and source accounts were re-examined using an interactive data-analysis approach and the Technology–Organization–Environment (TOE) framework. Results distinguish three connected constraints: inconsistent and outdated source records, dependence on one pension-service operator and central system access, and interagency document clarification involving OPDs, the provincial agency, and BKN. The national platform enables electronic forwarding and tracking, but these functions should not be equated with complete data interoperability or verified time savings. The article contributes a distinction between digital transmission, record readiness, and cross-agency workflow integration, with proposed actions for earlier validation, staffing continuity, incident monitoring, and coordinated follow-up. The evidence is a single-agency qualitative case; the proposed improvements have not been outcome-tested.

Keywords: SIASN; digital pension administration; data quality; TOE framework; public-sector interoperability

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INTRODUCTION

Digital personnel services can make administrative transactions more traceable without resolving every dependency in the underlying process. Pension administration is especially sensitive to record accuracy: identity, rank, tenure, and family documents must be checked before a consequential personnel decision is made. The implementation question is therefore not merely whether a government office uses an electronic application but whether the records and interorganizational workflow are ready to support the transaction. This article examines that question for SIASN pension services in Maluku, with an emphasis on the difference between electronic submission and genuinely integrated administration.

SIASN (*Sistem Informasi Aparatur Sipil Negara*) is the national civil-service information system managed by Indonesia's National Civil Service Agency (BKN). Provincial agencies receive pension proposals from regional government units (OPDs), check documentation, and use SIASN to forward qualified applications for the appropriate national technical stages. Technical submission can therefore be digitized even while initial checking, corrections, and clarifications remain distributed among offices. Digital-government research cautions against equating technology adoption with service transformation (Vial, 2019; Purnomo & Khabibi, 2025).

This article treats provincial pension administration as a transaction chain rather than a stand-alone software adoption. The empirical characteristics of the Maluku case—including physical-file checks, discrepancies between documents and electronic entries, and concentration of operating duties—are presented in the Results section, where they are supported by field accounts. The Introduction instead establishes the wider analytical problem: the interdependence of source data, organizational capacity, and external approvals within a nationally operated personnel platform.

The importance of data reliability is supported by Wahyuni et al. (2024), who examine cross-organizational employment-data interoperability, and by Shiferaw (2025), who reviews the organizational consequences of digital human-resource practices. These studies address data maturity and digital HR systems across settings; neither provides a process-level account of pension-document correction at the provincial–national interface. Examining that interface helps distinguish access to a shared platform from the readiness of the records used to make decisions.

The Technology–Organization–Environment (TOE) framework identifies the technological resources, organizational capabilities, and external conditions relevant to implementation (Tornatzky & Fleischer, 1990). In Indonesian public administration, Sihotang et al. (2024) use TOE to explain village-information-system adoption, while Yeremias et al. (2024) examine local e-government maturity. Alfiani et al. (2024) identify infrastructure, managerial support, and regulatory constraints across developing-country e-government initiatives. These contributions establish the usefulness of TOE, but their primary focus remains adoption or organizational readiness rather than the sequence of data verification and interagency action required for pension approval.

More directly related evidence comes from SIASN studies in employee-promotion services. Sirait et al. (2024) report implementation obstacles at a district personnel agency; Khafidho et al. (2026) also identify data-validity, staffing, and technical constraints in a promotion-proposal process. The findings are relevant but cannot be assumed to describe pension cases, where career histories and personal or family records require a different verification chain. Recent public-sector research further shows that digital

transformation involves institutional design and work practices, not systems alone (Figueredo & Silva, 2026; Buonocore et al., 2026).

The TOE evidence on information security by Febrianty et al. (2024) and the conceptual review of government transformation by Simanjuntak et al. (2026) reinforce a related point: organizations need controls, capabilities, and shared practices beyond software installation. Bowen (2009) also provides a methodological basis for treating documents as evidence with explicit provenance and limits. The present article uses those perspectives to identify what its own interview and process descriptions can, and cannot, substantiate.

The research gap concerns the mechanism linking digital submission to administrative integration. Existing TOE research is informative about readiness and adoption, and SIASN studies document practical impediments, but the interaction of record readiness, dependence on a specialist operator, and OPD–BKD–BKN clarification in one pension transaction remains less visible. Drawing on the author's own 2026 master's field research, this article offers a process-level interpretation of the three TOE contexts and derives monitoring indicators tied to specific points of administrative rework. These are analytical and practical contributions, not claims that a new TOE model has been statistically validated.

Three questions guide the analysis: (1) At which stages is SIASN used, and where does manual checking remain? (2) How do data quality, staffing, connectivity, and cross-agency responsibilities interact in the TOE perspective? (3) Which improvements follow from the reported operational difficulties? The analysis distinguishes documented observations from recommended but untested interventions. This separation prevents reported ease of electronic forwarding from being presented as a measured reduction in pension-processing time.

METHODS OF RESEARCH

This article reports findings from the first author's own master's research at the Maluku Provincial Regional Civil Service Agency rather than treating the thesis as an external dataset. The underlying qualitative study used purposive interviews, observation, and documentation; its planned fieldwork period was September–October 2026. Five interviews reproduced in the available thesis are dated 14–24 September 2026. The source does not state an exact thesis defense or final approval date, so no more precise completion chronology is claimed. Analysis for this article draws on the completed thesis narrative and quoted extracts, not newly collected interviews or independently retrieved field recordings.

Five officials or personnel involved in pension administration were selected purposively to include supervisory, personnel-record, technical, and processing perspectives. To reduce identification risk in a small office particularly where only one pension operator is mentioned the manuscript suppresses names, exact titles linked to quotations, and individual interview dates. Quotes are labeled P1–P5, with codes used consistently for separate accounts; they are short English translations of statements recorded in the source. The interval of interviewing is reported collectively, not attached to each participant.

The research focused on three linked activities: preparation and transmission of pension proposals, accuracy and reconciliation of employee records, and follow-up across agencies. For manuscript preparation, relevant thesis passages were selected if they addressed a described workflow stage, an observed problem, or a proposed corrective action. The initial categories were deductive technology, organization, and environment under TOE, while subthemes such as duplicate entries, physical verification,

one-operator dependence, and OPD clarification were identified from the recurring descriptions. This is a structured re-reading of the reported findings, not a fresh coding of original audio files.

An explicit review matrix was prepared to link each extracted claim to its thesis passage, participant perspective, workflow stage, and TOE category. Evidence was condensed into three source-based displays: the pension-service sequence, technology/organization/environment constraints, and proposed response priorities. A theme was retained when it was supported by a concrete quotation or procedural description; where participants expressed similar concerns, the accounts were compared for convergence. Data reduction, display, and conclusion checking follow Miles and Huberman's (1994) interactive logic. The available source does not provide a transcript archive, a complete codebook, or a versioned audit trail, so independent recoding or saturation claims are not made.

The thesis describes interviews, observation, and documentation, but most detailed empirical extracts available to this article are interview narratives. Its operational description of physical submissions and one pension operator is consistent with those accounts, providing limited cross-source corroboration. The underlying report does not furnish observation logs, an inventory of inspected records, documented member checking, or formal ethical-approval and written-consent records; these procedures are therefore not claimed. Participants' names are omitted here, and quotations avoid paired role/date identifiers. All interpretations remain attributable to the supplied thesis, but the absence of original recordings and explicit consent documentation limits independent verification and requires attention under the journal's research-ethics policy.

For transparency, the core source-to-claim chain used in the article is as follows: passages about physical document checking were cross-read against workflow descriptions; statements about incorrect or missing data were compared across records-related interviews; the single-operator account was considered alongside the institutional description; and network disruptions were kept separate from data corrections. The source narrative supports convergence across perspectives, but not a claim that every point was independently verified in field observation records.

Table 1. Focus of the qualitative analysis

Analytical focus	Operational questions	Evidence
Service digitalization	Where do electronic and manual procedures meet?	Service descriptions; staff interviews
Data integration	Which personnel records need correction?	Information officers; SIASN operator
Administrative process	How does an OPD submission reach BKN?	Workflow descriptions; interviews
TOE conditions	Which technological, organizational, and external constraints recur?	Cross-role interview comparison
Optimization	Which actions address the documented constraints?	Thesis strategy synthesis

Source: Analytical coding matrix prepared from the author's 2026 master's research, Chapters III–V; proposed analytical groupings, not additional field observations.

RESULT AND DISCUSSION

1. Institutional setting and the pension-service workflow

The provincial agency has responsibility for regional personnel records and the administrative steps associated with pension proposals. In 2026, the source reports 58 agency employees overall, but only one

principal operator for the pension module; these are different denominators and must not be conflated. The findings below are based on five purposively selected institutional participants (P1–P5), whose perspectives cover records management, managerial oversight, and system operation. The case is therefore informative about administrative practices inside BKD, not an evaluation of all pension applicants or BKN personnel.

The process description combines the interviews and the thesis's institutional workflow: an originating OPD sends a proposal and supporting documents; BKD checks completeness and consistency; discrepancies are clarified; eligible information is entered or validated in SIASN; and the relevant BKN office conducts the technical stage before further local action. This order is not an observed timing log. It documents how responsibilities pass among units and why an electronic national submission channel still requires reliable documentation prepared outside the platform.

The source lists supporting documents that may be required according to the type of pension application, including an OPD transmittal letter, employee request, decisions on rank and service history, family register, marriage certificate, children's records, and other relevant materials. Their diversity explains why checking completeness is not a trivial clerical exercise. A single missing historical decision or conflicting family detail can require reconciliation before a proposal can be forwarded. The system therefore connects records that have different origins, dates, and custodians.

Participants described electronic forwarding and tracking as administratively useful. These accounts do not include a standardized time series, transaction-level error count, or measured before-and-after comparison. Accordingly, this study makes no estimate of hours saved, acceleration, or reduced pension delays. Future monitoring would need to record receipt dates, first-submission completeness, returns, correction cycles, and final completion dates.

Table 2. Pension-application process observed at BKD Maluku

Stage	Main actor	Documented mode / challenge
Submission	OPD	Initial proposals and supporting documents often remain physical
Preliminary verification	BKD personnel	Manual examination of completeness and consistency
Data reconciliation	BKD / responsible data units	Corrections when digital records differ from documents
Electronic forwarding	SIASN operator	Submission and monitoring through the SIASN platform
Technical processing	BKN / regional office	Dependent on valid documentation and interagency follow-up
Subsequent decision	Authorized local officials	Follow-up after required technical consideration

Source: Author's 2026 field study, interview-based workflow descriptions and thesis Table 4.11; reconstructed analytically for this article.

2. Digitalization without complete removal of manual processing

The reported accounts distinguish two stages. Electronic transfer to BKN is supported by SIASN, whereas local receipt and preliminary checks still rely in part on physical records. Participants described this as a workable but incomplete form of digital integration. The organizational observation of physical-file processing is consistent with descriptions in the interview narratives, but no independent transaction audit was available. The relevant result is therefore a hybrid workflow, not a measured improvement in speed.

One participant (P2) explained that "documents from OPDs are still received in physical form and must be checked" (translated field interview, September 2026). Another participant (P5) described verification of missing or inconsistent documents before a proposal could proceed. Together, these accounts locate rework before the national system's technical decision stage. Necessary legal verification should not be confused with avoidable repetition caused by outdated or incompatible records.

A hybrid workflow is not necessarily evidence that officers are resisting digitalization. Pension decisions require appropriate evidence, and verification can be a legal and operational safeguard. The concern is whether routine physical checks repeat work that reliable records could already establish or whether they catch errors that would otherwise be transmitted electronically. The source points toward both possibilities: staff value digital access, but incomplete source records compel additional checking. Optimization should therefore distinguish necessary verification from avoidable re-entry, repeated documentation, and correction arising from outdated data.

This distinction matters to performance management. A count of applications entered into SIASN may indicate use of the system, but it does not indicate whether submissions were complete on first review or whether operators spent additional time reconciling documents. Better process metrics would record the number of returned packages, common deficiencies, and completion time at each stage. These indicators would not replace qualitative assessment; they would allow the institution to identify which parts of the hybrid process impose the greatest administrative burden.

The contrast between submission and integration can be located in the work sequence itself: documents first enter from OPDs; local staff compare them with existing records; discrepancies generate further clarification; only then can an application proceed through the national electronic channel. This reconstructed process is based on repeated descriptions in the thesis rather than a measured audit of each pension case. It supplies the explanatory link between the hybrid workflow and the three TOE domains.

3. Data integration, accuracy, and recurring reconciliation

The interviews repeatedly identify personnel-data integrity as an issue. Participants P2, P3, and P5 described information that was incomplete, not current, or inconsistent with submitted records; one described duplicate entries requiring clarification. This is evidence of encountered cases, not a quantified error prevalence. The distinction is important: SIASN provides centralized access, but it cannot automatically determine whether a historical rank record, personal detail, or family document is correct.

Participant P3 observed that incomplete or outdated records create additional checking for officials (translated field interview, September 2026). Participant P5 similarly described the need to match SIASN entries with documents submitted by OPDs. This convergence supports an interpretation of upstream record readiness as a central constraint. It is consistent with Wahyuni et al. (2024), who link employment-data interoperability with governance and preparedness, while the present case follows the resulting administrative correction during a pension transaction.

A major implication is temporal: record maintenance should occur well before an individual initiates retirement. If administrative corrections are postponed until an application arrives, the pension process absorbs tasks that could have been completed during routine personnel management. The proposed remedy is periodic checking and updating of employment histories and personal records, including the removal or resolution of duplicated entries. The thesis also supports coordination with originating OPDs so that local information and SIASN entries are aligned.

These accounts do not establish how frequently each defect occurs. A future audit could distinguish missing fields, contradictory career history, duplicate person records, and incomplete family documentation. Such a breakdown would show whether corrective efforts should prioritize routine master-data updates, documentary checklists, or clarification agreements among institutions.

4. Technological context: infrastructure and dependence on national access

Technology-related constraints encompass local connectivity, devices, platform stability, and access to national services. P4 and P5 discussed interruptions associated with network conditions or centrally managed system availability. These accounts distinguish failures under local control from incidents requiring intervention by BKN. An incident register showing the duration, location, and responsible support unit would make this distinction visible, but such data were not included in the thesis.

Participant P5 noted that unstable access or maintenance could interrupt work (translated field interview, September 2026). The institutional implication is narrower than the claim that SIASN is unreliable overall: personnel reported particular disruptions, without an uptime audit or incident frequency table. Comparative TOE studies also identify infrastructure as one component of broader adoption conditions (Alfiani et al., 2024; Sihotang et al., 2024). In this case, central platform dependency further limits the remedies available to the provincial agency.

The technology findings justify maintenance of local devices, more reliable connections, and a documented escalation protocol for incidents affecting the system. These actions should be paired with incident logs distinguishing local connectivity failures from central outages and recording the duration and number of affected applications. The source does not provide such logs, so it is not possible to rank network problems against data defects by lost hours. Still, staff reports establish that stable access is a precondition for the promised convenience of a digital pension channel.

5. Organizational context: dependence on a single operator

The organizational finding concerns concentration of specialist responsibilities. The thesis identifies one principal pension-service operator and reports concern about operational continuity when workload rises or the operator is absent. Participants' descriptions support a staffing dependency, not an observed numerical rate of delays. Role distribution, procedure documentation, and authorized backup capacity are therefore proposed safeguards. Related digital-HRM studies also emphasize that workforce capability is integral to system implementation (Shiferaw, 2025; Buonocore et al., 2026).

Participant P2 explained that pension input 'is still handled by one operator' (translated interview, September 2026). To protect the participant, the text does not pair this excerpt with an exact job title and date. The associated risk is concentration of procedural knowledge and platform access. Additional personnel should be prepared through formal authorization and training, not through credential sharing or informal substitution.

Institutional preparation should include recurring operator training on changes to the SIASN interface, data validation, and pension-service rules. Training should also encompass identifying common discrepancies and resolving them without creating inconsistent parallel records. Work allocation should distinguish initial checks, data maintenance, electronic processing, and follow-up with BKN, so that the principal operator is not expected to perform every role. These steps may protect continuity when volumes change, although their effectiveness requires subsequent monitoring rather than assumption.

6. Environmental context: OPD–BKD–BKN coordination

The environmental context becomes visible at the points where an application crosses institutional boundaries. OPDs originate documents; BKD performs provincial verification and digital processing; BKN conducts the national technical stage. Participants noted that missing attachments and inconsistent personal or family records require clarification with other units. These observations make external coordination a constituent part of pension-service performance, not merely a background condition.

Participants P1 and P5 described the need for follow-up when documentation was incomplete or when another agency had not yet acted. The result supports a chain-of-responsibility analysis: a delay or clarification at one stage can affect the next, but the thesis contains no transaction chronology that would allocate exact delay durations to each organization. Interoperability scholarship likewise recognizes that common platforms and information exchange depend on coordinating institutional practices (Wahyuni et al., 2024).

Coordination improvements should be specific. OPDs need a shared pre-submission checklist and guidance on the documentary quality expected by BKD. BKD needs clear channels for communicating errors, resolving cases, and monitoring the status of returned submissions. Where central decisions are involved, designated contacts and escalation arrangements can reduce uncertainty about the next action. The thesis suggests direct coordination, meetings, and online communication, but does not empirically compare different coordination channels. These remain practical strategies grounded in identified deficiencies rather than tested causal interventions.

Table 3. TOE interpretation of the qualitative findings

Context	Repeated observation	Implication for optimization
Technology	P4/P5: system disruptions and central access; P2/P3/P5: inconsistent records	Connectivity maintenance, incident records, data quality control
Organization	P2/P5: single-operator dependence; specialized checking	Backup staffing, task clarification, recurrent training
Environment	P1/P5: interoffice clarification; OPD-originating documents	Checklists, designated contacts, shared follow-up arrangements

Source: The author's 2026 interview evidence, descriptively categorized with TOE; participant excerpts in Sections 2–6. Categories were set deductively, subthemes developed from the source narratives.

7. Proposed optimization priorities

The following six actions are proposals derived from reported difficulties, not interventions whose outcomes have been tested. First, OPDs could use a common pre-submission checklist for required identity, career, and family documents, with BKD checking consistency before electronic forwarding. Second, local connectivity and equipment should be maintained while central interruptions are logged and escalated through designated BKN support channels. These measures respond respectively to repeated verification and service-access problems described by the informants.

Third, periodic record reviews should move corrections earlier in an employee's career rather than leave them until the pension filing. Each discrepancy should be documented with a responsible office and resolution status. Fourth, authorized staff backups should be trained to support the principal operator, with clear separation between verification, data correction, electronic submission, and follow-up. These proposals address a combination of technological data quality and organizational continuity rather than attributing all difficulty to the software.

Fifth, OPD–BKD–BKN coordination could be organized through named service contacts, explicit requirements, and traceable clarification requests. Sixth, performance reviews should monitor the full pathway: initial completeness, frequency of returned cases, pending corrections, system interruptions, and processing time by stage. This monitoring design is a recommendation by the paper, not a dataset that was collected in 2026.

Table 4. Recommended actions and monitoring evidence

Priority	Proposed action	Proposed future indicator (not measured)
Early verification	Standardized checklist before BKD input	Percentage of complete first submissions
Technology support	Maintain connectivity and record disruptions	Duration and frequency of outages
Data management	Update, reconcile and deduplicate ASN records	Number of files requiring correction
Human resources	Train and authorize backup operator	Number of trained operators; continuity
Coordination	Designated OPD–BKD–BKN contacts	Age of unresolved clarification requests
Evaluation	Periodically review full pension workflow	Processing duration and repeated returns

Source: Proposed actions synthesized from the author's 2026 interviews and thesis Table 4.13; evaluation indicators are proposed, not measured outcomes.

The propositions in Table 4 distinguish the source-based problem from the proposed indicator for future verification. They are not evidence that an intervention has been implemented or evaluated. This differentiation is important because increased access to SIASN, better data quality, and shorter total processing time are three different outcomes that must be measured separately.

8. Theoretical interpretation and research limitations

The TOE framework helps explain why the three contexts overlap in a transaction chain. For example, inconsistent personnel records are a technological issue because they limit system use, an organizational issue because correction responsibilities must be assigned, and an environmental issue when originating records are maintained by OPDs. The findings therefore extend an adoption-focused TOE discussion into the operational distinction among digital submission, validated data, and completed cross-agency decisions. Related e-government studies emphasize adoption and organizational readiness (Sihotang et al., 2024; Yeremias et al., 2024); this case shows why adoption does not itself establish transaction-level integration.

The SIASN studies of Sirait et al. (2024) and Khafidho et al. (2026) likewise report data-quality, personnel, and technical barriers in promotion administration. The Maluku evidence accords with those difficulties but adds the pension-specific sequencing of career and family-record checks before the national technical decision. The broader digital-government syntheses of Purnomo and Khabibi (2025) and Figueredo and Silva (2026) also distinguish systemic change from the mere introduction of a tool. The present contribution is thus a grounded process interpretation, not the proposal of a previously untested statistical model.

For practice, the findings suggest aligning interventions with where rework originates: prepare reliable records before applications arrive; use checklists and verification at the appropriate stage; distribute specialist knowledge; clarify organizational responsibilities; and monitor exceptions from receipt to decision. As administrative outcomes were not measured longitudinally, these remain recommendations

requiring later evaluation. The structured comparison is useful for identifying what an agency would need to record to test them.

This is a single-institution qualitative case with five insiders. The available thesis does not include original interview recordings, full observation logs, a document register, BKN interviews, pension-applicant accounts, measured processing times, a formal member-checking record, or documentary proof of research-ethics clearance and informed consent. The author's own study is reported transparently, but these gaps limit replication and any assertion that the proposed strategies are already effective. The thesis records the September 2026 interview dates but does not specify the exact defense/completion day. Future research should include consent documentation, external participants, a source audit trail, and service logs.

CONCLUSION

The 2026 field accounts show that SIASN enables electronic forwarding and tracking of pension applications at the Maluku provincial agency, while preceding documentary checks and data reconciliation remain partly manual. Accounts from different institutional roles identify incomplete or outdated records, reliance on a single pension operator, unstable system access, and cross-agency clarification as recurrent concerns. These observations indicate operational dependencies; they do not quantify the extent of delay or prove improvement in processing time.

TOE clarifies the interdependence of technological data quality, organizational continuity, and institutional coordination. The article's contribution is to separate digital transmission from data readiness and end-to-end integration within one pension workflow. Six proposed actions—early checking, infrastructure support, routine record maintenance, staff backup, coordinated follow-up, and process monitoring—should be tested using documented application records and the perspectives of pension applicants before being described as proven improvements.

AUTHOR CONTRIBUTIONS

The first author designed and conducted the original master’s research, collected and interpreted the field material, and developed this article's analysis and recommendations. Responsibility for verifying quotation accuracy, source references, research ethics disclosures, and approval of the final manuscript remains with the author. The article is derived from the author's own thesis, disclosed to the editor as such.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ARTIFICIAL INTELLIGENCE (AI) USE STATEMENT

Generative AI assisted with English-language editing, paragraph organization, and formatting the thesis-derived manuscript. AI did not conduct field interviews or generate empirical observations. The author is responsible for interpretation, source validation, ethical disclosure, and final content.

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