

Management Accounting Information and Digitalization for Monitoring the SDGs at the Entikong Border

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Abstract

Sanggau District, home to the Entikong border crossing, scored 63.63 (grade B) in the 2025 performance accountability evaluation, and its only border performance indicator carries no value. This study examines how management accounting information (cost, budget, performance, and decision support) and digitalization connect or fail to connect in supporting monitoring of Sustainable Development Goals (SDGs) 16, 9, and 17 across the district's planning-to-evaluation chain. A descriptive qualitative single-case design analyzed six official planning, regulatory, evaluation, and audit documents. The analysis coded 91 segments and tested table consistency. Performance and budget information carry a formal link, but unit-cost information is absent from the analyzed program table. The border appears in the narrative, while the identified border management program's allocation falls 94.1% in 2026. Digitalization is documented mainly in governance and internal performance monitoring, while SI JAGOR's budget-realization function remains unverified. Consistency tests and the national evaluator point to limited reliability in the analyzed documents. These documents provide insufficient evidence to assess SDG-related progress in Entikong. The study contributes an information-chain framework assessing the availability, linkage, and reliability of information for SDG monitoring, and proposes five actions addressing border indicators, budget realization, indicator definitions, consistent figures, and unit costs.

Keywords: border area; digitalization; management accounting information; performance accountability; SDGs

INTRODUCTION

Sanggau District hosts the Entikong border crossing, the first land border post in West Kalimantan (Pemerintah Kabupaten Sanggau, 2025). The district government does not manage the crossing. Its medium-term development plan assigns border authority to the central government and gives the district a coordinating role (Pemerintah Kabupaten Sanggau, 2025). Yet it plans, budgets, reports, and answers for the territory where the crossing stands.

The plan promises an electronic-based government (Pemerintah Kabupaten Sanggau, 2025). The district's electronic government index rose from 2.36 in 2019 to 3.29 in 2024, and 171 of 865 hamlets (19.77%) lack telecommunication coverage (Pemerintah Kabupaten Sanggau, 2025). The Ministry of Administrative and Bureaucratic Reform [Kementerian PANRB] scored the district's performance accountability at 62.76 in 2024 and 63.63 in 2025 (Kementerian PANRB, 2024, 2025). Both scores are grade B, and the 2025 score falls below the plan's target of 65 (Pemerintah Kabupaten Sanggau, 2025). The 2024 evaluation also found that the monitoring application SI JAGOR reports cumulative program progress, not progress by indicator (Kementerian PANRB, 2024).

Digitalization changes how public organizations produce and use data, yet accounting journals carry few studies of it: only 11 of 232 reviewed papers on digitalization and public accountability appeared there (Agostino et al., 2022). Digitalization can disrupt management accounting practice and the controller's role (Möller et al., 2020). It extends operational control

tasks and instruments but not strategic instruments (Fähndrich & Pedell, 2024), and planning and budgeting mediate its effect on firm performance (Rieg & Ulrich, 2024). In public settings, advanced information systems and management control become interdependent in municipalities (Bredmar & Melin, 2021), and digital control can move hospital management toward real-time, forward-looking use (Baraldi et al., 2026). Evidence from Egypt and Saudi Arabia shows that digital transformation can lower the quality of public accounting information systems (Hamdy et al., 2025).

Performance measurement design links strategy to the use of performance information (Johnsen et al., 2024). Many public sector performance reforms fall short of their promise (Fryer et al., 2009; van Helden et al., 2021). Indonesian local governments show weak integration of planning and budgeting and a focus on compliance over performance (Pudjono et al., 2025). Research on strategic management accounting in the public sector remains thin (Höglund et al., 2021).

The 2030 Agenda sets goals for effective, accountable, and transparent institutions (Goal 16), infrastructure and innovation (Goal 9), and partnerships, data, and monitoring (Goal 17) (United Nations, 2015). Public sector accounting can contribute to these goals when it moves from standard financial reporting toward management accounting (Caruana & Dabbicco, 2022; Dabbicco et al., 2025). In Indonesian public organizations, management accounting tools relate to performance and sustainability (Pramono et al., 2023). Studies of the Entikong–Tebedu border address cross-border integration and informal mobility (Anuar & Raharjo, 2022; Fauzan & Abdullah, 2026), governance problems (Rusdiono et al., 2024), and the limited formal authority of the national border agency (Rusdiyanta et al., 2026).

These studies treat digital governance, performance measurement, and border governance as separate topics. None of the studies reviewed here examines management accounting information across the planning-to-evaluation chain of a border district, or asks whether that information can support SDG monitoring. The proposed information-chain framework extends existing management accounting and digital governance literature by examining how accounting information and digitalization connect across successive stages of public-sector planning and accountability. Its conceptual contribution lies in treating information continuity, cross-stage linkage, and reliability as interconnected conditions for translating development commitments into measurable outcomes, thereby identifying gaps between budget allocations, performance indicators, and evaluation evidence.

This study reads the district as a chain of four stages: planning, budgeting, measurement and reporting, and evaluation (Figure 1). Each stage is checked for four types of management accounting information (cost, budget, performance, and decision support) and four dimensions of digitalization (services, data integration, reporting and monitoring, and governance and capacity). Conceptually, cost and budget information establish the resource basis of development commitments, performance information connects those commitments to indicators and reported achievements, and decision-support information enables the evaluation of results against planned objectives. Digitalization may facilitate these relationships through data integration and monitoring, but its contribution depends on whether information remains consistent, traceable, and sufficiently reliable across the chain. These connections provide a conceptual basis for assessing the availability of evidence relevant to SDG 16 through institutional accountability, SDG 9 through infrastructure and digital connectivity, and SDG 17 through data integration and monitoring capacity. These goals were selected because their respective dimensions correspond to the study's defined information and digitalization categories. The framework therefore evaluates the informational conditions for SDG monitoring rather than claiming to measure SDG achievement directly. Two questions guide the analysis. First, how do management accounting information and digitalization appear and connect across the chain in Sanggau District, with attention to the Entikong border area? Second, how reliable is that information, and what does it imply for SDG monitoring? The objectives are to describe availability and linkage, to assess reliability, and to map the implications for Goals 16, 9, and 17.

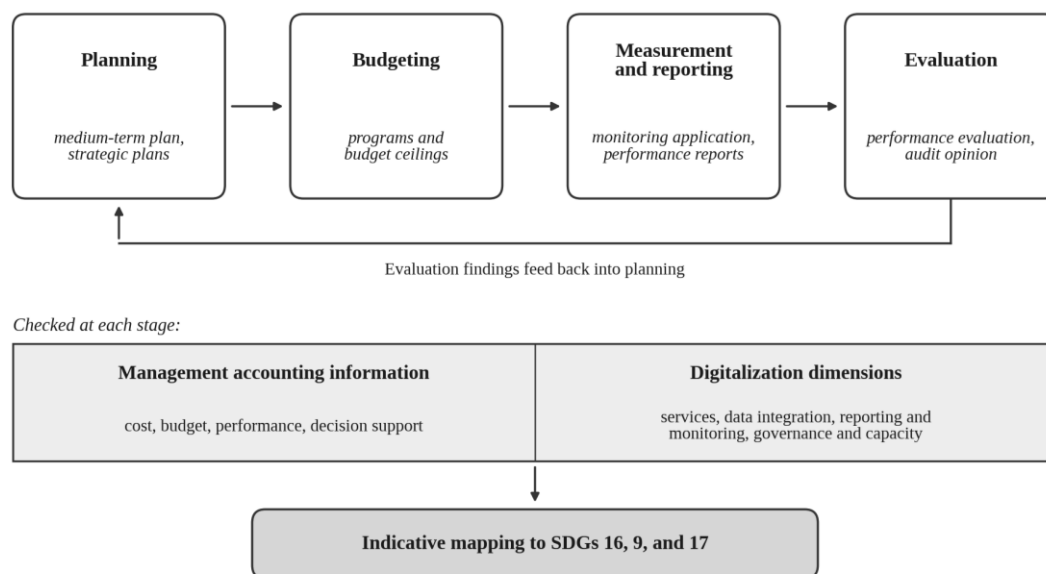


Figure 1. Information-chain framework: four stages, four information types, and four digitalization dimensions
Source: Author's framework.

The design is qualitative and descriptive, so three propositions replace hypotheses. Each proposition is assessed through the stage-by-code matrix: P1 through border indicators and budget allocations, P2 through documented digital functions, and P3 through consistency checks and external evaluations. P1: the border area appears in the planning narrative but carries little weight in indicators and budget allocations. P2: digitalization appears in governance and internal performance management, while border-service applications and SI JAGOR's budget-performance linkage remain unverified in the analyzed documents. P3: budget and performance information share a formal link, but their reliability is limited, in line with the external evaluator's notes. The findings give district planners a list of correctable gaps and give accounting researchers evidence from a setting that the reviewed studies do not cover.

METHOD

Research design and subject

This study uses a descriptive qualitative single-case design (Yin, 2018). The case is the Sanggau District Government, with the Entikong border area as the focus. A single case suits the question because management accounting information in a district's planning and accountability chain cannot be separated from its institutional setting. The units of analysis are document segments at four stages of the chain: planning, budgeting, measurement and reporting, and evaluation. Document analysis is the data collection method (Bowen, 2009). The study does not compare the district with other regions. Provincial planning documents and regional literature serve as background only.

Data and corpus

The corpus holds six official documents that form the district's information chain or evaluate it (Table 1). Selection was purposive. A document entered the corpus if a government body issued it, if it contained plans, budgets, performance indicators, reports, or evaluations related to management accounting or digitalization, and if the public could access it. The medium-term development plan was selected as the principal source of district-level objectives, indicators, programs, and budget allocations. The strategic plan regulation and regulatory index provided institutional and policy context, while the two national evaluation letters and audit opinion data supplied external accountability evidence. Together, these sources allowed the analysis to

examine formal information linkages and compare documented planning commitments with external evaluations. The author collected the documents from official portals. Annexes to unit-level strategic plans, annual work plans, detailed budgets, and performance reports fall outside the corpus, as do documents from the national border agency and the border post operator. The corpus was delimited to district-level planning and accountability documents and selected external evaluations to maintain a consistent institutional scope. Consequently, the exclusion of detailed financial and performance records prevents verification of whether apparent information gaps persist in operational reporting or budget execution.

Table 1. Corpus of documents by stage of the information chain

Code	Document	Stage	Role in the analysis
E01	Regional Regulation of Sanggau District 2/2025 on the 2025–2029 Medium-Term Development Plan (Chapters II–IV)	Planning; budgeting	Main source: narrative, indicators, programs, and budget ceilings
E12	Regent Regulation 7/2024 on the 2025–2026 Regional Unit Strategic Plan (main text)	Planning	Chain from strategic plan to annual plan; evaluation duty
E13	List of Regent Regulations of Sanggau District, 2024	Planning (index)	Index of local policy; one segment, the title of Regulation 8/2024 on cashless transactions
E19	Ministry of Administrative and Bureaucratic Reform letter B/374/AA.05/2024 on the 2024 evaluation	Measurement; reporting; evaluation	Component scores; findings on the monitoring application
E11	Ministry letter B/244/AA.05/2025 on the 2025 evaluation	Evaluation	2025 score and grade
E20	Audit opinion data on district financial statements, fiscal years 2020–2023	Evaluation	Financial accountability

Notes: Segments coded per document: E01 = 74, E19 = 10, E12 = 3, E11 = 2, E13 = 1, E20 = 1 (91 in total).

Source: Author's compilation.

Coding

Coding followed a protocol with four information categories and four digitalization dimensions. The categories are cost (resources consumed per service or output), budget (allocations, ceilings, and realization), performance (indicators, targets, achievements, and their evaluation), and decision support (evidence that information serves decisions, such as evaluation follow-up or performance-linked allowances). The dimensions are services (electronic services for users), data integration (data exchange across agencies), reporting and monitoring (digital performance reporting), and governance and capacity (indicators, policies, and architecture for digital government). For operational purposes, a coded segment refers to a discrete passage, table entry, or documented observation containing evidence relevant to at least one analytical category. Segment boundaries are determined by the substantive information being examined rather than by a fixed number of sentences or table rows. This definition permits textual and numerical evidence to be examined within the same analytical framework. Each segment also received an actor, a period, and an evidence type. Explicit evidence states the point in plain words. Implicit evidence rests on an inference, and the coding log records its basis. Ambiguous interpretations are therefore classified as implicit unless directly supported by the source document. Searched-absent evidence marks an item that the study looked for and did not find, and each such claim names the document, the section, and the search keywords. The coding produced 91 segments. The distinction between explicit, implicit, and searched-absent evidence also establishes the

interpretive status of each coded observation, preventing inferred or absent information from being treated as directly documented evidence.

The study read text documents as published. It extracted the program and budget table of the medium-term plan (180 program rows, 204 indicators, and 27 regional units) with software, repaired six merged records by hand, and tested the result with row sums and independent counts. These checks assessed extraction consistency but did not constitute complete source-level verification. It read the scanned evaluation letter with optical character recognition and checked its score table against the page image. The key figures reported in the text match the source pages. Counts of anomalies, such as zero budgets and uniform growth factors, come from the extracted table and were not matched row by row. Accordingly, these counts should be interpreted as descriptive screening results rather than fully verified frequencies of errors in the original budget document. The absence of row-by-row verification limits the precision of aggregate anomaly estimates, although individually checked figures and external evaluation findings provide a separate basis for assessing specific inconsistencies.

Analysis

The analysis has three layers. First, thematic analysis in six phases (Braun & Clarke, 2006) combined deductive codes from the protocol with inductive themes, and a matrix of stages by codes displays the results (Miles et al., 2014). The deductive categories structured the initial classification of management accounting information and digitalization, while inductive themes captured recurring patterns that emerged from the documents. The stage-by-code matrix enabled comparisons across planning, budgeting, reporting, and evaluation and supported the interpretation of evidence across the information chain. Second, consistency tests compared the same figure across tables and chapters, zero or empty budget cells with targets present, unusual year-to-year changes, identical series across programs, and the completeness of baseline values. Year-to-year changes exceeding eightfold were flagged as unusual, while conflicting figures were identified through comparisons of equivalent indicators and periods. The study records each anomaly as something the document states and does not treat it as an error in practice. These tests identify potential documentary inconsistencies rather than establish their causes or demonstrate deficiencies in actual budget implementation. Documentary reliability was assessed through numerical consistency, indicator completeness, and comparison with external evaluation findings. Third, SDG mapping tagged segments with Goal 16 (budget, performance, decision support, and digital governance), Goal 9 (connectivity and digital infrastructure), or Goal 17 (data and statistics). Rules assigned the tags first, and a manual check corrected one segment. The mapping is indicative. Three propositions guide the interpretation. They came from an initial reading of the corpus, the analysis refined them, and the coded data test each one.

Trustworthiness and ethics

Three practices support trustworthiness. Source triangulation compares district documents with two independent bodies, the Ministry of Administrative and Bureaucratic Reform and the state audit institution (Carter et al., 2014), and the study reports convergence as convergence, not as proof. An audit trail records each coding decision and correction (Nowell et al., 2017). Reflective notes accompany each segment, because the author's accounting background can draw attention to numbers over institutional aspects. The audit trail and reflective notes provide a basis for tracing coding judgments and distinguishing documentary evidence from interpretation. However, these procedures do not independently establish intercoder agreement or eliminate the possibility of interpretive bias. The study uses public documents and involves no human participants. It reports what the documents plan, budget, and say about performance, and it makes no claim about how officials use the information.

RESULTS AND DISCUSSION

Evidence coded

The 91 coded segments split into 74 explicit, 8 implicit, and 9 searched-absent items. Performance information appears in 38 segments and budget information in 24. Decision support appears in 11 segments. Cost information appears in none as positive evidence: the one cost-coded segment records that the program table holds no unit cost, cost per output, or activity detail. Among the digitalization dimensions, governance and capacity leads with 11 segments, followed by services and data integration with 6 each and reporting and monitoring with 5. These frequencies describe the distribution of documentary evidence within the selected corpus rather than the relative effectiveness of government activities or the achievement of development outcomes. The sections below follow the three propositions. Each presents the evidence first and then discusses what explains it.

The border appears in the narrative, but is weakly reflected in measurable indicators and identifiable budget allocations

The medium-term plan puts the border in plain view. It calls the Entikong post the first in West Kalimantan and records that its management moved from the district to the province and then to the national border agency. It reports July 2024 crossing data, 57,274 crossings and Rp5.88 billion in trade, taken from the agency's portal. Its mission statements and policy directions call for coordination with border managers, fewer underdeveloped villages in the border area, and a border economic area, and they state that border authority belongs to the central government.

Indicators do not follow the narrative. The seven trade indicators include none on cross-border trade or the border post. The only district indicator that names the border, the share of border areas connected to economic centers, has no value for the baseline, for any target year, or for the end state. The border management program carries an indicator on the share of border development programs facilitated: 100% in every year from 2025 to 2030, with no baseline. A keyword search of the budget chapter (pages 119–146) found no mention of the border post, Entikong, Malaysia, Sarawak, Tebedu, Kuching, customs, immigration, quarantine, or cross-border.

Budgets follow the same pattern (Figure 2, panel A). The border management program falls from Rp7.07 billion in 2025 to Rp417.5 million in 2026, a drop of 94.1%, holds that level in 2027, and then grows 5% a year. This reduction represents a change in the allocation recorded under the identified program, not necessarily an equivalent decline in total public spending on border-related activities. The program table does not establish whether the difference reflects changes in expenditure classification, transfers between programs, or adjustments associated with the division of government authority. The growth factor is not specific to this program. Across the whole table, 318 of 325 pairs of consecutive years from 2028 to 2030 differ by a factor of 1.05 or 1.02, which fits a mechanical projection. A support program of the Regional Secretariat names border management in its indicator, with Rp24.1 billion in 2025 and Rp47.1 billion in 2026, but the name does not let anyone separate the border share. Consequently, these support-program allocations cannot be added to the border management program as verified border expenditure. The 154 infrastructure proposals funded from national and provincial budgets carry no cost values and include nothing on the border post, the border area, or digital connectivity. The three proposals for Entikong subdistrict are schools.

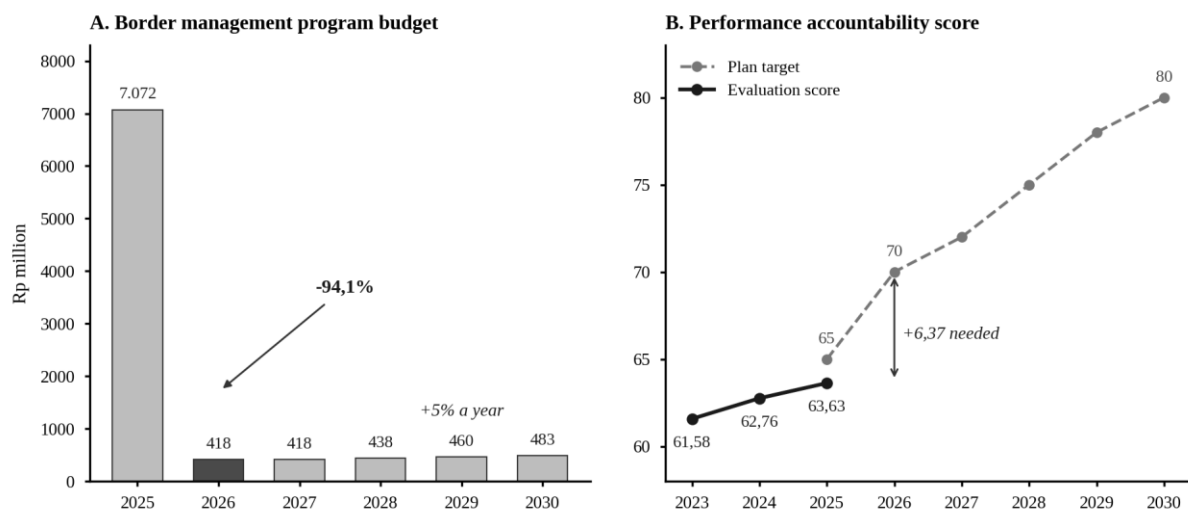


Figure 2. Border management program budget (panel A) and performance accountability score against the plan target (panel B)

Source: Medium-term development plan 2025–2029 (Tables 4.2 and 4.4); Ministry of Administrative and Bureaucratic Reform letters, 2024 and 2025.

P1 holds for the medium-term plan. One possible explanation is the division of authority rather than neglect. The plan assigns border authority to the central government (Pemerintah Kabupaten Sanggau, 2025), and the national border agency has limited formal authority of its own (Rusdiyanta et al., 2026). This division of responsibility may help explain the limited connection between district-level indicators, budget lines, and border outcomes. This reading is an interpretation, since the documents do not state it. The program name and code also appear to follow a standard program list, so the facilitated-programs indicator may not reflect a local choice. Governance problems in Entikong (Rusdiono et al., 2024) fit the same reading. Conceptually, this distinction reveals an accountability boundary within the information chain: territorial development objectives may be included in district planning narratives without corresponding budgetary and performance information at the same administrative level. The resulting discontinuity limits the ability of management accounting information to connect local commitments with measurable outcomes, particularly where responsibilities are distributed across levels of government. The finding concerns district documents. It does not show that border information is missing at the national border agency or the border post operator, which the corpus excludes.

Digitalization is documented mainly in governance and internal monitoring

The district's electronic government index rose from 2.36 in 2019 to 3.29 in 2024, rated Good. Targets for 2026 to 2030 run from 2.6 to 3.0, all below the 2024 level, and the plan gives no reason. A change in the index scale would explain the drop, but the documents do not say so. The program behind the index shows Rp1.65 billion for 2025, Rp2.98 billion for 2026, and Rp0 for 2027, while the 2027 target of 2.7 stays in place. Two indicators on network interconnection (25% to 95%) and digital infrastructure (20% to 95%) have no matching program or budget in the program table.

Digital services are general and internal: e-procurement at 100% since 2020, a planned digital public service mall, and digital revenue collection. The plan calls for integrating service portals and administrative portals, including planning and budgeting, but it does not say which data they exchange. The one indicator that tracks data use changes over time: the share of regional units using population data rises from 53% in 2025 to 75% in 2030. The indicators for use of planning results stay at 100%.

Monitoring supplies the most concrete evidence. The 2024 evaluation reports that the district's monitoring application, SI JAGOR, shows quarterly progress by program in cumulative form and not by indicator, and it recommends adding quarterly budget realization. These observations are explicit findings and recommendations in the evaluation document. However, the document does not independently establish the complete functionality of the application or confirm that budget realization data are entirely absent. Whether SI JAGOR links budget realization to performance indicators therefore remains unverified. A second application, e-phyo, ties individual performance to allowances. It is the clearest case of performance information driving a decision, but the decision concerns staff, not programs or the border. The 2024 internal evaluation report had not reached the national reporting system.

On the digital side, the border has little presence. The program table has no digital service or reporting item for the border, and the words digital and electronic do not occur in it. Entikong has 5 of 34 hamlets (14.71%) without telecommunication coverage, against 19.77% for the district. The plan takes its border crossing data from the national agency's portal, a central system.

P2 holds in part. In the analyzed district documents, digitalization is more visible in governance and internal monitoring than in border-specific services. The claim that the monitoring application does not link budget with performance rests on implicit evidence. The pattern echoes Fährndrich and Pedell (2024), who found that digitalization extends operational control instruments but not strategic ones: the applications here track program progress and individual performance, and the analyzed documents do not establish an instrument linking budget, cost, and output. The case further suggests that digitalization and management accounting integration represent distinct dimensions of administrative capability. Digital applications may strengthen the recording and communication of activities without establishing traceable relationships between resource consumption, performance indicators, and development outcomes. Within the information-chain framework, the theoretical significance of digitalization therefore depends on its contribution to information linkage and reliability, rather than the presence of applications alone. Quarterly cumulative reporting also differs from the real-time, forward-looking control that Baraldi et al. (2026) describe in a public hospital. The planned portal integration cannot be judged. Bredmar and Melin (2021) show that advanced information systems and management control become interdependent in municipalities, so the unspecified data exchange is the item to watch. The monitoring gap agrees with Hamdy et al. (2025), whose evidence shows that digital transformation can lower information quality. Rieg and Ulrich (2024) find that planning and budgeting mediate the effect of digitalization on performance. If that holds here, the weaknesses documented under P3 would limit what the district's applications can deliver. Only data on practice can test this conjecture.

Budget and performance link in form, and reliability is limited

The documents define the link. The plan describes the accountability system as the integration of planning, budgeting, and performance reporting, and the strategic plan regulation sets a chain from strategic plan to annual plan with an evaluation duty. The program table lists programs, outcome indicators, annual targets, and funding needs for 27 regional units. Consistency between the medium-term plan and the annual plan stood at 100 from 2021, and consistency between the annual plan and the budget stayed at 100 except 98.92 in 2020. These indicators measure agreement between documents, not the quality of the information. On decision support, the indicator for use of planning, control, and evaluation results in policy stays at 100 from 2019 to 2024, the planning index holds 100 through 2030, and the planning evaluation program has no indicator.

The consistency tests find gaps in every test (Table 2). Budgets read Rp0 for 42 programs in 2026 and 14 in 2027 while targets stay filled. Baselines appear for 17 of 204 indicators. Of 151 programs with budgets in 2025 and a later year, 36 change more than eightfold. The information-security program of the communication and informatics office and the support program of the Regional Council Secretariat list the same 2025 budget of Rp41.99 billion. The finance and revenue offices share a budget series for 2027 to 2030 under one program code. The performance

score indicator appears in the support programs of 12 units with different units of measure. Figures differ across tables. The bureaucratic reform index baseline is 78.63 in one chapter and 62.96 in another, and its targets repeat the series of the environmental quality index. The statistics index for 2028 reads 3.00 in one table and 3.30 in another. Telecommunication coverage for 2024 reads 88.79% in the text and 83 in the table. The study records these items as the documents state them and does not determine their cause.

Table 2 presents selected numerical and indicator inconsistencies alongside their documentary sources and evidentiary status. Explicit evidence refers to figures or statements reported in the source documents, whereas analytical inference refers to comparisons or interpretations derived from those figures. The table distinguishes comparisons involving individually checked figures from aggregate anomaly counts generated from the extracted program table.

Table 2. Selected budget and indicator inconsistencies and evidentiary status

Evidence item	Source and comparison	Evidentiary status and verification
Border management program allocation	Medium-term development plan, program budget table: Rp7.07 billion (2025) versus Rp417.5 million (2026), a calculated reduction of 94.1%	Explicit allocations; calculated change. Key reported figures were checked against source pages. Changes in classification or authority were not verified.
Zero allocations with retained targets	Medium-term development plan, extracted program table: 42 programs in 2026 and 14 in 2027	Aggregate analytical screening; counts were not verified row by row.
Different bureaucratic reform index baselines	Medium-term development plan, separate chapters: 78.63 versus 62.96	Explicit documentary figures; cross-chapter inconsistency identified by comparison.
Different statistics index targets	Medium-term development plan, separate tables: 3.00 versus 3.30 for 2028	Explicit documentary figures; cross-table inconsistency identified by comparison.
Different telecommunications coverage figures	Medium-term development plan, narrative versus table: 88.79% versus 83 for 2024	Explicit documentary figures; inconsistency identified by comparison.
Digital government program allocation	Medium-term development plan, program table: Rp0 in 2027 despite an index target of 2.7	Documented figures; the mismatch is an analytical comparison and does not establish actual spending.

Source: Author's analysis of the medium-term development plan 2025–2029.

The aggregate counts in Table 2 should be interpreted cautiously because extraction and screening were not followed by complete row-level verification. They establish patterns requiring further examination but cannot determine whether each flagged entry represents an error, a valid administrative classification, or an incomplete representation of budget information.

Table 3. Evidence, status, and SDG link by proposition

Proposition	Main evidence in the corpus	SDG goals	Status and condition
P1. The border appears in the narrative but carries little weight in indicators and budgets	Only border indicator has no value; program indicator fixed at 100% without a baseline; program budget falls 94.1% in 2026, then grows 5% a year; 154 infrastructure proposals hold no border or digital item	16, 9	Supported. Tested on the medium-term plan only
P2. Digitalization serves governance and internal monitoring, not the border; the monitoring application does not link budget with performance	Index targets for 2026–2030 below the 2024 level; index program budget Rp0 in 2027; no program behind interconnection or digital infrastructure targets; monitoring shows cumulative progress by program and appears to omit budget realization; e-phyo links performance to allowances	9, 16, 17	Supported in part. Budget link rests on implicit evidence
P3. Budget and performance share a formal link, and reliability is limited	Formal chain in plan and regulation; Rp0 budgets with targets (42 programs in 2026, 14 in 2027); baselines for 17 of 204 indicators; same growth factor in 318 of 325 year pairs; 36 of 151 programs change more than eightfold; identical series across units; one indicator in 12 units with different units; figures differ across tables; score 63.63 (grade B)	16, 17	Supported. Anomaly counts come from the extracted table

Source: Author's analysis.

The external evaluator reaches a similar view. The performance accountability score rose from 61.58 in 2023 to 62.76 in 2024 and 63.63 in 2025, all grade B (Figure 2, panel B). The 2025 score missed the plan's target of 65, and the 2026 target of 70 needs a gain of 6.37 points, about seven times the 2024–2025 gain of 0.87. Measured against weights, measurement (57.5%) and internal evaluation (58.0%) score lowest, and reporting fell from 65.7% to 63.3%. The evaluator notes indicators that miss SMART criteria, targets that lack realism, indicator documents without formulas or data sources, and performance reports that omit comparison with medium-term targets, prior years, and causes. The audit opinion on the district's financial statements was unqualified for fiscal years 2020 to 2023, which speaks to financial accountability and not to management information.

P3 holds: the link exists in form, and reliability is limited. The evaluator's notes agree with several anomalies, such as mixed units for one indicator and indicators fixed at 100, although the letter names none of these cases. The pattern fits Pudjono et al. (2025), who found weak integration of planning and budgeting and a focus on compliance over performance in Indonesian local governments, and Johnsen et al. (2024), who show that indicator design links strategy to the use of performance information. Weak indicator design leaves little to use, whatever the application. This finding extends the conceptual distinction between formal information integration and substantive information reliability. A planning and accountability system may contain aligned documents, common indicators, and established reporting procedures while still lacking the consistent and sufficiently detailed information needed to evaluate resource use against outcomes. The information-chain framework therefore identifies reliability as a necessary complement to formal linkage in the use of management accounting information for public-sector decisions. Many public performance reforms fall short of their promise (Fryer et al., 2009; van Helden et al., 2021). Without cost information, the strategic management accounting that Höglund et al. (2021) study in the public sector has little to build on. Meng and Li (2025) find that performance information has more effect on stakeholders when a third party delivers it, so the national evaluation can serve as a lever for repair. The evaluator records that the district followed up only part of the earlier recommendations, according to the district's own report.

Implications for the SDGs

The SDG mapping applied three thematic criteria to the coded evidence: Goal 16 covered institutional accountability, budget and performance information, decision support, and digital governance; Goal 9 covered connectivity and digital infrastructure; and Goal 17 covered data integration, statistical capacity, and monitoring information. Segments were assigned according to their substantive relevance to these domains rather than their presumed contribution to SDG achievement. Mapped to the SDGs, 68 segments bear on Goal 16, 8 on Goal 9, and 8 on Goal 17, and 7 segments on the border narrative carry no goal tag. These totals represent the distribution of relevant evidence in the analyzed documents and should not be interpreted as measures of SDG progress, institutional effectiveness, or policy failure. For Goal 16, the information chain exists, but its indicators and budgets provide insufficient evidence to assess progress toward effective, accountable institutions. For Goal 9, connectivity targets have no program or budget behind them in the analyzed program table. For Goal 17, data integration remains a plan, and statistics targets disagree across tables. For the border area, no indicator or budget line within the analyzed district documents lets anyone monitor progress on these goals.

This agrees with the argument that public sector accounting serves the SDGs when it moves from standard financial reporting toward management accounting (Caruana & Dabbicco, 2022; Dabbicco et al., 2025), and with the link that Pramono et al. (2023) find between management accounting tools and performance in Indonesian public organizations. Conceptually, the findings indicate that the contribution of management accounting to SDG monitoring depends on whether development priorities can be traced through resource allocations, measurable indicators, reporting arrangements, and evaluation evidence. The information-chain framework makes these connections observable while distinguishing the capacity to monitor development commitments from evidence of their actual achievement. Five steps lie within district authority. The district can set outcome indicators and baselines for the border program, show budget realization beside performance in the monitoring application, define each indicator with a formula and a data source, align figures across tables, and introduce unit costs for priority services. The plan allows changes to non-fundamental targets through a regent regulation (Pemerintah Kabupaten Sanggau, 2025), which makes target corrections the quickest step to start.

CONCLUSION

Sanggau District's planning documents link budget and performance in form, and they leave little for monitoring the border area. The medium-term plan names the border in its narrative. Its only border indicator has no value, its program indicator never moves from 100%, and its program budget follows a projection pattern shared across the whole table. Digital tools described in the analyzed documents primarily serve governance and internal monitoring. The documents provide no direct evidence that these tools support border services, and the monitoring application appears not to show budget beside performance. Consistency tests and the national evaluator point to limited reliability of the documented planning and performance information, so the documents examined provide insufficient evidence for assessing SDG-related progress in Entikong. These documentary limitations do not necessarily indicate deficiencies in actual government implementation.

The study offers one conceptual framework and two empirical contributions. First, it offers an information-chain framework that pairs four types of management accounting information with four digitalization dimensions at each stage of a local government's cycle. The framework extends management accounting analysis by examining how information availability, cross-stage linkage, and reliability jointly shape the capacity to connect resource allocations with reported performance and development objectives. Availability establishes the information base, cross-stage linkage connects budgets with performance, and reliability determines whether this information can support credible public-sector decisions. Second, it supplies evidence from a border district, a setting that the reviewed studies do not cover. Third, it shows that documented

digitalization initiatives can coexist with weaknesses in indicator design and budget linkage. These findings support the conceptual importance of information quality and integration, rather than the mere presence of digital tools, for management accounting in public-sector planning and accountability.

For practice, the district can start with the most directly documented gaps: establishing border-specific outcome indicators and baselines, specifying indicator formulas and data sources, and correcting inconsistent targets and figures across tables. These measures take priority because they are supported by explicit documentary evidence and external evaluation findings. The plan allows changes to non-fundamental targets through a regent regulation. The next priority is to verify SI JAGOR's existing reporting functions before introducing budget realization alongside indicator-level progress, since the identified application gap is partly inferential. Unit costs for priority services can be developed subsequently, once the core indicator and budget linkages are established. Together, these improvements could strengthen the basis for connecting border-related spending with reported results. A district that can trace border spending to results should also have a firmer basis for budget requests to higher levels of government.

Four limits qualify these conclusions. The documents show plans, budgets, and evaluations, not how officials use information. The analysis rests on the medium-term plan, and annexes to unit-level strategic plans, annual work plans, detailed budgets, and performance reports lie outside the corpus, so an item missing here may exist elsewhere. The anomaly counts come from an extracted table and were not matched row by row. The case is single and the SDG mapping is indicative, so the findings offer transferability to other border districts, not generalization.

Future research can test the findings in three ways. Analysts can read the annexes and detailed budgets to see whether the gaps persist. Interviews with planning, informatics, and inspectorate staff can show how officials use the information and whether the monitoring application holds budget data. A comparison of several border districts can show whether the split between narrative and indicators is local or structural, and it can test the conjecture that weak planning and budgeting limit the benefit of digitalization.

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