

Strategic Evaluation of LENTERA's Innovation in Strengthening the Governance Integrity of the Free Nutritional Meal Program in Kediri City

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ABSTRACT

The Free Nutritious Meal Program (Program Makan Bergizi Gratis—MBG) is positioned as a strategic national agenda fraught with vulnerabilities to fraudulent practices and operational inefficiencies at the local implementation level. This research aims to analyze the strategic feasibility of the LENTERA innovation as a digital whistleblowing system to reinforce the governance of the MBG Program in Kediri City. The methodology employed is a strategic feasibility study triangulated through three analytical frameworks: The Internal-External (I-E) Matrix to appraise competitive positioning, the VRIO Framework to evaluate sustained strategic advantages, and Value-chain Analysis to diagnose operational process efficiencies. The findings from the I-E Matrix and VRIO analyses confirm that LENTERA possesses significant potential for a sustainable competitive advantage and occupies a strategic growth phase. However, critical findings derived from the Value-chain Analysis expose a severe functional disconnect, wherein the demonstrated effectiveness of upstream complaint reception is critically undermined by the absence of an integrated downstream sanctions mechanism. This dysfunction precipitates a fundamental business process failure, despite the presence of robust technological infrastructure. The primary contribution of this research lies in identifying the imperative for a transformative Business Process Reengineering (BPR) initiative that automates evidence-based sanctions as an innovative solution to close the operational accountability loop. Consequently, this reengineering enables LENTERA to evolve from a mere reporting instrument into an effective control mechanism capable of decisively mitigating fraud risks within public food assistance programs

INTRODUCTION

The Free Nutritious Meal Program (MBG) is a fundamental pillar in the national strategic agenda designed to accelerate the improvement of the quality of human capital (human capital) through structured and sustainable nutritional interventions (Jalwani et al., 2023). As a large-scale program involving the deployment of significant public resources, the implementation of MBG at the regional level requires mature governance readiness, accuracy of target data (targeting accuracy), as well as integration. A resilient supply chain is crucial to ensure that program benefits are delivered timely, effectively, and of the right quality to beneficiaries.

However, in practice, social assistance programs—especially those in the form of food distribution—naturally have a high residual risk of malpractice (fraud). These vulnerabilities are spread throughout the program cycle, from recipient data validation, raw material procurement processes, physical distribution, to accountability reporting. (Ham et al., 2025). The literature on public administration and institutional economics consistently shows that programs with implementation structures involving multiple actors (multi-agent implementation) is very vulnerable to information distortion (Terrada et al., 2020). These risks arise in the form of manipulation of target data (inclusion/exclusion errors), vertical collusion between providers and supervisors, moral hazard due to information imbalance, and other opportunistic practices that can reduce program effectiveness if disciplinary mechanisms and internal monitoring systems are not fully established.

This theoretical reality is empirically proven in the implementation of the MBG program in Kediri City. Based on an analysis of local government performance reports and official operational documentation, the launch of the MBG program, which began in July 2025 with a focus on the "3B" priority groups (pregnant women, breastfeeding mothers, and non-PAUD toddlers), faced complex challenges in expanding coverage. In the initial phase, program implementation was limited to three Nutrition Fulfillment Service Units (SPPG): Ngadirejo, Mrican, and Tosaren. (Pemerintah Kota Kediri, 2025) However, the rapid expansion of service coverage to 24 SPPG units supported by a network of 620 accompanying cadres has created a significant administrative burden. The resulting discrepancy in the data is striking: the SPPG database records 3,340 targets, while the recapitulation of field cadre reporting only validates 2,830 targets. (Merdeka.com, 2025). Data gap (data discrepancy) of 510 beneficiaries is not just a minor administrative error, but rather a serious indication of inefficient recording which has the potential to trigger budget allocation errors (budget misallocation), opens up opportunities for logistics abuse, and hinders the effectiveness of evidence-based monitoring and evaluation functions. (Hassenstein & Vanella, 2022).



Figure 1. MBG Program Profile in Kediri City
Source: (SPPG Wilayah Kota Kediri, 2025b)

In addition to data validity issues, the MBG implementation structure in Kediri City also faces acute cross-sector coordination complexity. The need to align data collection accuracy, food production hygiene standards, distribution accuracy, and health impact evaluations requires precise coordination between various parties, including technical Regional Apparatus Organizations (APOs), professional health workers, Nutrition Fulfillment Service Unit (SPPG) managers, and grassroots support cadres. Although the Kediri City Government has addressed this challenge by establishing a Task Force (Satgas) for the Acceleration of MBG Implementation as a means of strengthening governance, operational frictions have been identified, particularly regarding the consistency of reporting formats, data connectivity between agencies, and the validity of key performance indicators. This bureaucratic fragmentation risks creating a "dark space" of accountability where inefficiencies and irregularities can occur undetected.(Talal, 2023).

This constellation of empirical challenges demonstrates the importance of implementing a supervisory mechanism that is not only hierarchical (top-down), but also adaptive, transparent, and digitally integrated. Within the framework of fraud risk reduction, contemporary public management literature strongly recommends the establishment of a violation reporting system or whistleblowing system (WBS) that is inclusive. WBS functions as an early warning or early warning system which encourages active participation from implementing officials and civil society(Van Eijbergen & Siebers, 2025)By providing a secure and anonymous reporting channel, the WBS facilitates the disclosure of suspected misconduct without the risk of retaliation, ultimately strengthening the organizational integrity ecosystem and enhancing the agency's ability to respond preemptively to operational anomalies before they escalate into significant state losses.

However, the discussion regarding the implementation of WBS at the implementation level (street-level bureaucracy), especially in the context of community-based public services such as MBG, is still relatively limited. The MBG ecosystem in Kediri City, characterized by a diversity of actors—from community cadres, cooks, medical personnel, to SPPG administrators—creates a particular need for designing a reporting mechanism that is easily accessible, guarantees absolute confidentiality, and is integrated with responsive complaint handling procedures. (Da Costa et al., 2024). Furthermore, the implementation of the digital governance paradigm (digital governance) is a strategic need to facilitate cross-unit data integration, provide direct performance information, and enable effective participatory monitoring in the nutritious food service value chain.

Based on these rationales, this study seeks to investigate how a whistleblowing system structure can be designed and implemented effectively at the implementing level in the implementation of the MBG Program to reduce the information imbalance between principals and agents, while identifying the most relevant digital governance model to strengthen the integrated MBG oversight ecosystem, particularly in the context of implementing an adaptive WBS mechanism in Kediri City. The study of this issue has strategic significance due to the urgent need for a credible and easily accessible internal control system to minimize fraud risk gaps through protected and consistently actionable reporting channels. Thus, this study is expected to not only contribute to improving administrative accountability in MBG governance, but also strengthen the substantive integrity of public services through the design of a reporting system that is inclusive, responsive to field dynamics, and operates based on the principles of data accuracy and transparency in decision-making.

Library Review

Practice Fraud in Food-Based Public Programs

Fraud in public food programs, this is an inherent issue arising from the complexity of the supply chain, the perishable nature of food commodities, and the numerous actors involved in the distribution process. Food programs such as school feeding or public nutrition interventions often operate at thousands of dispersed service points, creating oversight gaps that cannot be closed through conventional administrative audits alone. (Manning, 2024). The literature on public administration and government procurement shows that fraud in the food context, this generally takes the form of quality markdowns, portion reductions, substitution of low-quality raw materials, manipulation of beneficiary data, and fictitious reporting. This is exacerbated by information asymmetry between regulators and program implementers, as explained in agency theory, which places agents in a strategic position to engage in opportunistic actions when oversight is weak and information is difficult to verify in real time. In the MBG program itself, the risk of fraud becomes increasingly significant given the high frequency of distribution, the vulnerability of food to damage, and the need to comply with strict nutritional standards. In public food-based programs, monitoring mechanisms are needed that are not only administrative, but also participatory, temporal, and evidence-based at the service point. (Spink et al., 2019).

WBS in the Public Sector

WBS is understood as a formal reporting mechanism that provides space for individuals—both internal employees and recipients of public services—to report suspected violations, irregularities, or indications of misconduct. The effectiveness of a WBS is determined by three main pillars: accessibility of reporting channels, protection of whistleblowers, and the existence of a credible follow-up mechanism. Near & Miceli, (1995) and further studies show that whistleblowers are only willing to disclose sensitive information if they are confident that their identities are secure and will not be retaliated against. In public organizations, the success of a WBS depends not only on the technology used, but also on a culture of integrity, standard operating procedures for handling reports, the competence of investigative officers, and transparency in case management. The biggest challenge for WBS in the public sector lies in power distance (power distance), hierarchical bureaucracy, and uncertainty regarding report follow-up. Therefore, a WBS in the context of a public food program requires a design that can handle the large volume of reports, the diversity of types of evidence from the community, and the need for rapid field verification. (Badawi & Prawitno, 2022). An ideal WBS should ensure that reporting channels serve not only as a means of conveying citizens' voices but also as a monitoring instrument integrated with the investigation and decision-making process.

Digital Governance (Digital Governance) in Public Service

Digital governance is an integrative framework that focuses on leveraging technology to strengthen the transparency, accountability, and effectiveness of public services. The digital era governance emphasizes the need for integration between data, service processes, and evidence-based decision-making. (Hanisch et al., 2023). In the context of public program supervision, digital governance provides the ability to perform real-time monitoring, integration between databases, service quality tracking, and the provision of accessible information across organizational units. Well-designed digital systems also enable faster agency coordination through the use of monitoring dashboards, deviation pattern detection, and automated escalation mechanisms. Common challenges in digital governance covering system interoperability, data security, user digital literacy, and organizational resistance to business process changes. In implementing the MBG program, digital governance plays a crucial role in ensuring that target data, food production data, distribution records, and community reports can be connected in one integrated monitoring ecosystem, thereby minimizing the potential for manipulation and accelerating the response to cases. (Schakel & Wolbers, 2021).

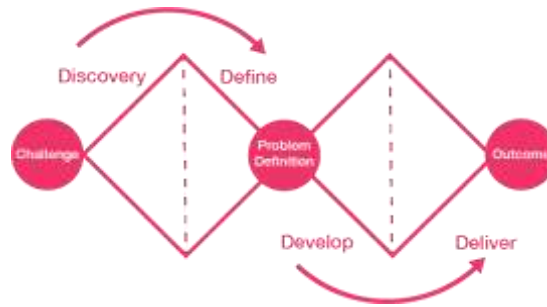
Public Participation and Citizen Reporting in Service Supervision

Public participation in public service oversight has evolved from the traditional concept of public hearings to citizen reporting utilizing digital technology. This approach positions citizens as co-producers of oversight information and allows for much faster, broader, and more contextual field data collection than formal audits. (Sheth et al., 2023). Study Schakel & Wolbers, (2021) Research on public complaint mechanisms shows that citizen reporting is effective when there are easily accessible channels, clear procedures, and consistent feedback. Reporting systems that do not provide a response or follow-up results tend to reduce future participation and create distrust. (Shahbazi & Bunker, 2024) In the MBG context, where food quality, equipment cleanliness, and distribution accuracy can only be directly observed at the service point, the involvement of beneficiaries and cadres is a crucial source of information. Therefore, reporting platforms must accommodate a wide range of user profiles, from parents and cadres to health workers and field implementers, while taking into account variations in digital literacy and limited access to technology.

METHODOLOGY

This research uses an innovation design approach that is oriented towards developing digital solutions to improve the integrity of the MBG Program governance. (Wang et al., 2022) This approach was chosen because the core problem faced was the misalignment of management and risk. fraud, and the lack of standardized reporting channels require intervention in the form of adaptive, participatory, and responsive system design to the needs of stakeholders at the field level. Within the framework of innovation design, the research process not only focuses on describing phenomena but also produces artifacts in the form of system designs. whistleblowing A digital-based system that can be operationalized as an internal oversight mechanism within the MBG of Kediri City. Therefore, this research is applicable, solution-oriented, and follows the principles of design-driven research.

This research design uses the Double Diamond framework developed by Design Council as a systematic approach in designing innovations based on user needs (Viviani et al., 2024) This model was chosen because it facilitates the exploration of complex problems and the development of targeted and adaptive solutions to the context of the MBG Program implementation in Kediri City. The Double Diamond model consists of two main phases: problem space and solution space, each of which is divided into four stages: Discover, Define, Develop, and Deliver. These four stages are arranged iteratively to ensure that the system design, whistleblowing, which is developed is not only theoretically relevant, but also compatible with empirical conditions in the field.



Picture 2. Framework Double Diamond
Source: Murdock, (2022)

All data obtained during the exploration phase was analyzed using an innovation feasibility study. Research validity was maintained through triangulation of sources and methods. member checking at the initial analysis stage, as well as expert validation at the design development stage. Reliability is maintained through systematic process documentation so that each research step can be replicated in other regional contexts. With this methodological approach, the research was able to produce a system design. whistleblowing Which grounded on user needs and relevant to improving the quality of MBG governance in Kediri City.

Innovation Design Process

The innovation design process in this study follows the Double Diamond model, contextually adapted to the needs of developing a public reporting system for the Nutritious Meal Program (MBG) in Kediri City. Each phase in the model is treated not merely as a design step, but as an analytical phase that integrates empirical data, digital governance theory, and the operational needs of program organizers. Thus, the results of each phase do not stand alone but rather support each other to produce an innovation design with strong methodological, theoretical, and pragmatic justification.

Phase Discover This study was conducted through qualitative and quantitative data collection, including a pre-study survey, analysis of public complaint patterns regarding the implementation of MBG, review of policy documents, and tracing of public reports distributed on the official SPPG channels. The empirical data enabled the identification of several core issues, such as the high frequency of food quality issues (inadequate portions, spoiled food, or menu discrepancies), weak documentation of report follow-up, and minimal protection guarantees for reporters. This phase demonstrated that the problems were not only technical but also systemic due to fragmented oversight channels and disconnected information systems.

Phase Define serves to condense findings into a set of requirements. At this stage, user needs are identified, including the reporter's need for a secure, clear, and easily accessible system; the implementer's need for an efficient verification dashboard; and the management's need for an accountable and traceable monitoring system (audit trail). The conceptual analysis uses the perspectives of agency theory, public accountability, and e-governance. This indicates that the biggest gap lies at the point of communication between the "principal" (the

government as regulator) and the "agent" (the field implementer). Therefore, the reporting system should not be merely a complaint-recording tool, but rather a structural correction mechanism.



Figure 3. Workflow Innovation
Source: Author's Data, 2025

Level Develop The project aimed to test design alternatives through reporting flow simulations, feature assessments, and validation against general public sector WBS standards. Some of the functional components produced at this stage included the development of a more comprehensive reporting form structure, the integration of an automatic categorization module, a risk filter mechanism, the development of a follow-up notification system, and the design of a dashboard that displays report status in real time. The initial prototype was tested using a scenario-based walkthrough to assess ease of use, the implementer's workflow, and the system's ability to minimize report ambiguity.

Level Deliver become a concept maturation phase that produces technical system recommendations, implementation governance models, and blue print A WBS in the Public Sector innovation ready to be tested in the administrative context of the SPPG in the Kediri City area. This phase not only produced a design product but also a change management scheme in the form of HR training, SOP development, and cross-unit data integration. Thus, the innovation design process not only created a new system but also reconstructed the MBG supervisory governance ecosystem to be more responsive and integrated.

RESEARCH RESULT AND DISCUSSION

Lentera' Innovation Profile

The LENTERA innovation, an acronym for Complaint and Aspiration Response Service, is the official complaint and aspiration service channel provided by the Kediri City SPPG as part of its efforts to improve the quality of the MBG Program. Referring to information presented on the official Kediri City SPPG website,(Suryawijaya, 2025) LENTERA is designed as a reporting platform that allows the public, particularly MBG beneficiaries, to submit complaints, discrepancies in implementation, and important information regarding potential violations in the field. This system functions as a two-way communication channel between program implementers and the public, thus becoming an integral part of strengthening internal control mechanisms. In its implementation, LENTERA provides an online complaint form that requires

reporters to include details of the incident, location, and a brief description of the problem encountered.



Picture 4. LENTERA page
Source: SPPG for Kediri City Region, (2025a)

This procedure is intended to ensure that each report has sufficient context for verification and action. In addition to emphasizing the importance of complete information, the official website also emphasizes that this service is free of charge, thus preventing potential misuse by unauthorized parties. This policy reflects SPPG's commitment to transparency, integrity, and public protection in the public service process. Functionally, LENTERA can be understood as the embryo of a public service mechanism.whistleblowingIn the context of food-based social program governance. Although not explicitly categorized as a WBS, the basic features and principles adopted, such as formal reporting channels, verification procedures, and an orientation toward improving service quality, align with the characteristics of public complaint mechanisms commonly adopted within the framework.digital governance. The existence of LENTERA also shows that the Kediri City SPPG has initiated digital governance practices that support transparency and citizen participation in MBG supervision, although the level of its utilization and the effectiveness of its follow-up still require empirical evaluation.



Picture 5. Appearance of the LENTERA Complaint Form
Source: SPPG for Kediri City Region, (2025a)

Prototype Testing

This research perspective demonstrates that LENTERA is an important object for analysis due to its position as an interface between the community and program organizers. This system provides insight into how public reporting is constructed, how information is captured and processed, and how the role of field implementers is influenced by the existence of a digital-based complaint mechanism. Analysis of LENTERA's operations also allows researchers to assess whether the available features meet user needs, both from the reporter's side and those handling the report. This assessment forms the basis for designing an innovative reporting system that is more adaptive, inclusive, and oriented toward strengthening program accountability. Thus, LENTERA functions not only as an administrative channel for the community but also as a strategic instrument for understanding risk dynamics, fraud, information gaps between agents and coordinators, and the level of transparency in MBG implementation. Its existence provides a strong empirical foundation for this study to develop a more systematic WBS model as part of the MBG digital governance ecosystem in Kediri City.



Figure 6. Results of the LENTERA System Trial Period 29 September – 4 October 2025

Source: Author's Data, 2025

Figure 6 presents the results of the initial trial of the LENTERA System from September 29 to October 5, 2025. The bar graph shows the number of reports received on each test day, while the trend line illustrates the cumulative report resolution rate. In the initial phase of the trial, the report volume was quite high,

reflecting user responsiveness to the new reporting channel. However, the graph shows a decrease in the number of reports in subsequent days, which may indicate a stabilization of the reporting process or a reduction in reported incidents. Meanwhile, the trend line for the resolution rate shows a consistent increase, approaching 100 percent by the end of the trial period. This illustrates that the report follow-up and verification mechanisms through the system prototype have been running effectively. Thus, this trial provides a positive indication that the initial design of the LENTERA System is capable of facilitating public reporting and processing reports with an adequate level of responsiveness.

Innovation Feasibility Study

LENERA's innovation will be analyzed using three evaluation methods, namely the I-E Matrix;VRIO Framework; And Value-chain Analysis. The combination of these three methods provides the view that the I-E Matrix justifies the direction of system development,HOTevaluate the quality of system resources, andValue-chainDiagnose the efficiency of its operational processes. This triangulation of analytical tools ensures that the resulting recommendations are not only technical, but also strategic and managerial.

Matrix I-E

Evaluation using the I-E Matrix is based on factors influencing the innovation designed to determine the stages achieved by the innovation (Speth, 2024). The I-E Matrix is used because the LENTERA innovation is a systems-based organizational intervention, so feasibility cannot be evaluated solely on technical requirements.

Table 1. I-E Matrix in LENTERA Innovation

No	Internal Factors	Weight	Rating	Score	Information
1	Digital infrastructure readiness	0.23	4	0.92	Main strength
2	HR competency in report management	0.12	3	0.36	Strength
3	The existence of SOP for report verification	0.16	3	0.48	Strength
4	Protection of whistleblowers is not optimal	0.17	2	0.34	Significant weaknesses
5	Follow-up is not yet uniform among officers	0.21	3	0.63	Weaknesses
6	Monitoring reports are still partial	0.11	2	0.22	Weaknesses
Total		1.00		2.95	Power is still dominant (medium-strong value)

No	External Factors	Weight	Rating	Score	Information
1	MBG national policy support	0.20	4	0.8	Big opportunity
2	Demands for public accountability	0.15	4	0.6	Opportunity
3	The trend of digitalization of public services	0.15	3	0.45	Opportunity
4	Risk of fraud in the field	0.20	2	0.4	Significant threat
5	Supplier quality is unstable	0.15	2	0.3	Threat
6	Lack of national MBG reporting standards	0.15	3	0.45	Opportunity
Total		1.00		3	Strong external position

Source: Author Data, 2025

Table 1 visualizes LENTERA's strategic position, which is currently in the growth phase. This condition reflects the system's potential for sustainable adoption, but requires managerial intervention in the form of technological infrastructure upgrades, staff competency enhancements, and accelerated digital transformation.

VRIO Framework Analysis

Furthermore, the VRIO framework was used to validate whether LENTERA's innovations had the capacity to be a source of sustainable organizational excellence, rather than simply a temporary technical solution (Fisher et al., 2020). In the context of the whistleblowing system, this strategic assessment goes beyond mere functionality by examining four crucial dimensions in an integrated manner: Value to measure the effectiveness of problem solving, Rarity to assess the uniqueness of the system compared to other regions, Imitability to test the complexity of the design to make it difficult to replicate, as well as the aspects of Organization to ensure SPPG managerial readiness in managing and utilizing the system optimally (Murcia et al., 2022).

Table 2. VRIO Analysis Results

No	Resource	In	R	I	TH E	Results
1	MBG digital-based reporting system	✓	✓	✦	✓	Sustainable competitive advantage
2	SOP for report follow-up	✓	✦	✦	✓	Temporary advantage
3	SPPG reporting database	✓	✦	✓	✓	Strong advantage
4	HR capacity of report managers	✓	✦	✦	✦	Temporary advantage

5	City MBG implementation experience	✓	✓	✓	✓	Sustained competitive advantage
6	Complaint channel and dashboard integration	✓	✓	◆	✓	Sustainable excellence

Source: Author's Data, 2025

Information:

✓ = Yes / Meets

◆ = Sufficient / Moderate

Table 2 reveals that the majority of LENTERA's innovation elements meet the criteria for sustainable competitive advantage in the theoretical framework.Resource-Based View(RBV). This empirical validation not only confirms the viability of the implementation and its acceptability (adoptability) the innovation, but more importantly, indicates its strategic capacity to create long-term, sustainable value. This sustainability is projected to originate from the characteristics of the innovation that are difficult to imitate (causally ambiguous dan path dependent), thus enabling organizations to not only optimize internal processes and build truststakeholder, but also maintain its strategic position in a competitive environment through mechanisms embedded in the organizational system and culture.

Value-chain Analysis

After mapping the strategic position through the I-E Matrix and validating the resource assets through VRIO, the analysis continues withPorter's Value Chain Analysis. This method is used to dissect LENTERA's operational activities as a management information system, dividing it into main activities (primary activities) and supporting activities (support activities). The goal is to identify blockages (bottleneck) specific in the value stream from reporting to problem solving, as well as determining at what point the values of "transparency" and "accountability" are disconnected (Reinartz et al., 2019; Schmitz, 2005).

Table 3. Analysis ResultsValue-chain

Activity Categories	ElementsValue-chain	Activities in LENTERA	Performance Status	Value Analysis (Value Analysis)
Main Activities	Inbound Logistics (Input Logistics)	Receipt of complaint data from beneficiaries (Digital Input).	Very Effective	High accessibility is evidenced by the complaint volume reaching 23.1%. Data input barriers are minimal.
	Operations (Operational)	Verification, validation, and categorization of reports (Complaints vs	Moderate	The process is running, but manual verification still depends on the

		Aspirations) by Admin.		accuracy of the admin (elementhuman error).
	Outbound Logistics (Output Logistics)	Distribution of complaint tickets to related units (Head of SPPG).	Weak	Information distortion occurs. Reports enter the system, but often don't reach the executors in the field.
	Marketing & Sales (Socialization)	Socialization of the use of LENTERA to parents/beneficiaries.	Effective	User adoption rates are high, indicating successful socialization.
	Service (After Sales Service)	Follow-up (Follow-up), Sanctions, and Notification back to the reporter.	Critical (Bottleneck)	The value is broken here. Repeated cases of poor quality indicate a failure to resolve issues and a lack of deterrent effect.
Supporting Activities	Firm Infrastructure (Infrastructure)	Leadership (Leadership) Head of SPPG and Unit Management.	Weak	The absence of leaders in the field weakens the managerial control function over incoming reports.
	HR Management (Human Resource Management)	Admin training and integrity of verification officers.	Enough	Technical competence is adequate, but integrity in executing sanctions needs strengthening.
	Technology Dev (Technology Development)	LENERA application architecture and data security.	Strong	Stable platform and user-friendly, become the basis of the system's power.
	Procurement (Procurement)	LENERA data integration with vendor contracts.	Not Connected	Complaint data has not been used as a basis for contract evaluation

				(financial sanctions).
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Source: Author Data, 2025

Based on the analysisvalue-chainIn Table 3, it can be concluded that LENTERA Innovation, although it has a mature and adequate technological foundation from the technical readiness aspect (tech-ready), actually experienced a fundamental failure in the business process (process-failure). The root of the problem lies in two crucial factors: (1) the weakness of the leadership and governance infrastructure needed to drive adoption and accountability, and (2) the lack of integrated financial or performance consequences for units or individuals who violate the quality standards that have been complained about. Therefore, strategic recommendations for future system development must shift from an incremental approach that focuses on adding application features, to a transformative approach through business process reengineering. (business process reengineering). This re-engineering should be designed to automatically link verified complaint outcomes to structured and inevitable sanction or correction mechanisms, thereby creating a closed feedback system that ensures operational accountability.

Based on the results of comprehensive triangulation through a strategic analysis framework, it can be concluded that LENTERA's innovation has a strong foundation as well as critical challenges in its implementation. Evaluation using the I-E Matrix places LENTERA in a growth phase, supported by internal strengths in the form of a well-established digital infrastructure and external opportunities through the national MBG policy, which collectively form a strong justification for the allocation of sustainable investment. The VRIO analysis further confirms LENTERA's position as a strategic asset capable of creating sustainable competitive advantage, particularly through its unique digital reporting system and codified implementation experience. However, this strategic potential is hampered by operational dysfunctions revealed through the Value Chain Analysis, where effective systems in primary Upstream activities (Inbound Logistics- the complaint acceptance process) experienced value disintegration in downstream activities (Service- follow-up handling). This functional disconnection occurs primarily due to the lack of automatic integration between complaint data and financial sanction mechanisms in Procurement support activities, exacerbated by weaknessesFirm Infrastructurein the form of suboptimal leadership, thus transforming LENTERA from its potential as a comprehensive managerial control tool into merely an administrative reporting instrument that fails to close the operational accountability cycle.

DISCUSSION

Between Transparency Simulation and Agency Gaps – Why LENTERA Failed to Close the Accountability Cycle

The findings of this study reveal a fundamental paradox: LENTERA is technically and strategically in a very strong position (confirmed by the I-E Matrix placing it in the growth phase and the VRIO Analysis predicting sustainable competitive advantage), but operationally it fails to carry out its primary function as a fraud control instrument. The disconnect between upstream effectiveness (receiving complaints) and downstream failures (follow-up and sanctions) is not simply a technical glitch, but rather an indication of a structural failure in designing the enforcement mechanism. This study argues that LENTERA, in its current form, only creates a "simulation of transparency" – an illusion that participatory oversight is in place, while in reality, the accountability value chain is broken at the most crucial point.

This paradox can be explained theoretically through the lens of the Design-Reality Gap and Principal-Agent Theory. Within the Design-Reality Gap framework, LENTERA's failure lies not in the technological reality – which is well-established and user-friendly – but rather in the organizational reality and values reality. Digital systems are designed as if behavioral changes will follow automatically once information is available (information availability fallacy). However, the organizational reality at the SPPG and vendor levels shows that without binding financial and administrative consequences, information is simply noise. In other words, LENTERA successfully bridges the digital divide between the public and the government, but fails to bridge the accountability divide between field findings and managerial decisions.

Furthermore, within the framework of Principal-Agent Theory, this failure creates a systemic structural moral hazard. The local government (principal) places its trust in LENTERA as a monitoring mechanism, but the agents (vendors and SPPG implementers) realize that incoming reports – even though verified – never translate into effective sanctions. Procurement activities that are not integrated with complaint data are the most obvious evidence of this gap: the vendor payment system operates separately and is impermeable to quality information from the field. As a result, the cost of non-compliance is effectively zero. Vendors can with impunity substitute raw materials or reduce the quality of portions, knowing that citizen complaints will never affect their cash flow. This condition is not just a technical failure, but a flawed institutional design, where the principal unconsciously creates incentives for agents to continue deviating.

The implications of this transparency simulation are highly detrimental to the program's sustainability. In the short term, the public perceives a responsive complaints channel – marked by a high volume of complaints and a near-perfect administrative resolution rate. However, in the medium term, when the public realizes that their reports are not producing tangible changes on the ground – food quality remains poor, portions remain reduced, and the same vendors continue to win tenders – a massive erosion of public trust will occur. The phenomenon of reporting fatigue (Shahbazi & Bunker, 2024) will emerge; people will stop reporting, viewing the system as merely a toothless "suggestion box."

Ironically, as public participation wanes, LENTERA loses the only resource that makes it valuable: real-time data from the field. Without data, the system loses its early warning function, and the cycle of accountability dysfunction accelerates. Thus, this study concludes that LENTERA, in its current form, is not a solution to fraud but rather a reflection of deeper governance problems, where technology is positioned as a substitute rather than a complement to political will to enforce regulations.

Closing the Loophole Through Sanction Automation and Strengthening Leadership Infrastructure

This research strongly argues that saving LENTERA from functional failure requires more than simply adding interface features or increasing server capacity; it demands transformative business process reengineering (BPR), not just incremental improvement. The Value Chain Analysis findings explicitly show that the point of failure is not in primary activities such as Inbound Logistics (complaint reception) or Marketing & Sales (socialization), but rather in supporting activities (Procurement and Firm Infrastructure) that are structurally disconnected from upstream data flows. Therefore, the recommendation to automate verified, evidence-based sanctions is an operational necessity, not simply a policy option. This mechanism must be designed in such a way that every complaint that passes verification and validation automatically triggers a payment hold or incentive deduction in the vendor payment system, creating a closed-loop accountability that cannot be intervened at discretion by any actor.

However, implementing BPR through automated sanctions is not a smooth road; it has complexities and risks that must be carefully considered. The biggest threats come from two sources: bureaucratic resistance and the potential for system abuse. First, bureaucratic resistance is almost certain, especially from actors who have traditionally benefited from regulatory loopholes. Vendors accustomed to escaping sanctions will engage in political lobbying to thwart system integration. Similarly, SPPG officials with patronage relationships with vendors will resist automation because it eliminates their bargaining power. Second, the risk of system abuse by corrupt verifiers is also real—they could deliberately manipulate verification to undermine vendors who fail to deliver their "share," or, conversely, suppress evidence of complaints from compliant vendors. Without strong checks and balances, automated sanctions will simply replace one form of irregularity with another.

To address these challenges, this study proposes three non-negotiable prerequisites for success. First, revise procurement regulations to explicitly recognize LENTERA data as legitimate evidence for imposing administrative and financial sanctions, while rigidly defining the parameters and limits of sanctions to prevent discriminatory conduct. Second, establish an independent and transparent appeals mechanism, where sanctioned vendors can automatically file objections with a panel comprised of internal supervisors, academics, and community representatives, preventing the system from becoming an unfair and repressive tool. Third, and most crucially, strengthen Firm Infrastructure through leadership transformation at the Head of SPPG (Special Procurement Supervisory Agency) level. The VRIO and I-E Matrix

analyses collectively demonstrate that while LENTERA's technological infrastructure is robust, its leadership infrastructure (organizational culture and managerial capability) remains fragile and provides only temporary advantages. SPPGs must be granted formal authority, legal protection (legal immunity for policies based on system data), and ethical leadership training so that they act not as obstructive gatekeepers but as enforcers who consistently and courageously implement the system's verification results.

Thus, LENTERA's transformation from a reporting tool to a managerial control tool requires fundamental changes to three pillars: the system (automated sanctions), regulations (legal recognition of digital data), and people (leadership with integrity). These three pillars are interconnected and cannot operate in isolation. Reengineering business processes without strengthening leadership will result in a technically ineffective system; strengthening leadership without automated sanctions will result in subjective decisions that are easily corrupted; and regulations without technical support will become dead documents. This study concludes that only by integrating all three into a comprehensive BPR grand design can LENTERA transcend its status as a transparency simulation and truly become the last line of defense against fraud in the MBG Program. Failure to undertake this reengineering will not only compromise LENTERA's effectiveness but also bury the MBG program's enormous potential to become a model for digital social assistance governance in Indonesia, given that the complexity and scale of the problems it faces will only increase as the program's scope expands across the country.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of a strategic feasibility study conducted through triangulation of three analytical frameworks—Internal-External (I-E) Matrix, VRIO Framework, and Value-chain Analysis—on the LENTERA innovation as a digital whistleblowing system in the context of the Free Nutritional Meal Program (MBG) in Kediri City, this study produces a number of integrative conclusions.

Overall, LENTERA has proven to have solid strategic feasibility. The I-E Matrix analysis confirms that the system is in a growth phase with dominant internal strengths and a strong external position, supported by a well-established technological infrastructure and the support of the MBG national policy. Furthermore, the VRIO analysis shows that the majority of innovation elements, particularly the digital-based reporting system and implementation experience in Kediri City, meet the criteria for sustainable competitive advantage because they are rare, difficult to imitate, and supported by adequate organizational capacity. Therefore, from a positional and resource perspective, LENTERA is a strategic asset worthy of investment and sustainable development.

However, critical findings from the Value Chain Analysis revealed a fundamental governance paradox. On the one hand, LENTERA demonstrated highly effective performance in upstream activities, particularly in complaint reception (Inbound Logistics), characterized by high accessibility and significant reporting volume, as well as successful outreach (Marketing & Sales), reflected

in high user adoption rates. On the other hand, the system experienced fundamental failures in downstream activities, particularly in after-sales services (Service), which include follow-up, sanctions, and feedback to complainants. This functional disconnection was primarily caused by two factors: the lack of integration between verified complaint data and the Procurement system (vendor procurement/contracts), and weak leadership infrastructure (Firm Infrastructure) at the KaSPPG level. As a result, LENTERA failed to close the operational accountability cycle and only functioned as an administrative reporting instrument (reporting tool) without the capacity to create a deterrent effect or correct behavior for implementers and vendors who violate quality standards.

Theoretically, this structural failure can be explained through the lens of the Design-Reality Gap and Principal-Agent Theory. Within the Design-Reality Gap framework, LENTERA's dysfunction lies not in the established technological reality, but rather in the organizational reality and values reality that do not support the transformation of information into corrective actions. In other words, the system successfully bridges the digital divide between the public and the government, but fails to bridge the accountability divide between field findings and managerial decisions. Meanwhile, from an agency theory perspective, the lack of an integrated sanction mechanism creates a structural moral hazard, where the cost of non-compliance for agents (vendors and SPPG implementers) is zero. This condition is exacerbated by the potential for reporting fatigue among the public, which, if left unchecked, will erode public participation and weaken LENTERA's function as an early warning system.

To address these operational dysfunctions, this study recommends transformative Business Process Reengineering (BPR), not just incremental improvements. The primary strategic recommendation is the automation of evidence-based automated sanctions, where each complaint that passes verification and validation automatically triggers a payment hold or incentive deduction in the vendor payment system, thus creating a closed-loop accountability that cannot be intervened discretionarily. The implementation of BPR requires three non-negotiable prerequisites: (1) revision of procurement regulations that explicitly recognize LENTERA data as legitimate evidence for the imposition of administrative and financial sanctions; (2) the establishment of an independent and transparent appeal mechanism to ensure due process; and (3) strengthening the leadership infrastructure at the Head of SPPG level through the granting of formal authority, legal immunity, and integrity-based leadership training.

Thus, LENTERA's transformation from a reporting tool to a managerial control tool requires fundamental changes to three interrelated and inextricably linked pillars: the system (sanction automation), regulations (legal recognition of digital data), and people (leadership with integrity). Reengineering business processes without strengthening leadership will result in a technically ineffective system; strengthening leadership without sanction automation will result in subjective decisions that are vulnerable to corruption; while regulations without technical support will become dead documents. Only by integrating all three

within a comprehensive BPR grand design can LENTERA transcend its status as a transparency simulation and become an effective bulwark in mitigating fraud risks and definitively ensuring the operational accountability of the MBG Program. Failure to undertake this reengineering will not only compromise LENTERA's effectiveness but will also bury the MBG program's potential to become a model for digital social assistance governance in Indonesia, given that the complexity and scale of the problems it faces will only increase as the program's scope expands across the country.

Research Limitations

This study has limitations in its geographical scope limited to Kediri City, so the generalizability of the findings needs to be tested in other regional contexts with different governance characteristics and operational challenges. In addition, this study uses a qualitative approach through a strategic feasibility study, so it has not empirically measured the effectiveness of LENTERA through comprehensive quantitative data. Further research is recommended to: (1) conduct a trial of BPR implementation on a limited scale to measure the impact of sanction automation on reducing violation rates and increasing vendor compliance; (2) develop a digital-based WBS effectiveness measurement instrument in the context of social assistance programs; and (3) conduct a comparative study between cities to identify contextual factors that influence the successful implementation of the public reporting system.

REFERENCES

- Badawi, A. I., & Prawitno, A. (2022). Penerapan E-Government melalui Whistleblowing System (WBS) dalam Pengawasan Penyelenggaraan Pemerintahan di Kabupaten Bulukumba. *Matra Pembaruan*, 6(1), 69–81. <https://doi.org/10.21787/mp.6.1.2022.69-81>
- Da Costa, T. P., Da Costa, D. M. B., & Murphy, F. (2024). A systematic review of real-time data monitoring and its potential application to support dynamic life cycle inventories. *Environmental Impact Assessment Review*, 105, 107416. <https://doi.org/10.1016/j.eiar.2024.107416>
- Ham, J.-H., Lee, Y.-J., Lee, S.-S., & Kim, H.-Y. (2025). Food Fraud in Plant-Based Proteins: Analytical Strategies and Regulatory Perspectives. *Foods*, 14(9), 1548. <https://doi.org/10.3390/foods14091548>
- Hanisch, M., Goldsby, C. M., Fabian, N. E., & Oehmichen, J. (2023). Digital governance: A conceptual framework and research agenda. *Journal of Business Research*, 162

- Hassenstein, M. J., & Vanella, P. (2022). Data Quality – Concepts and Problems. *Encyclopedia*, 2
- Jalwani, D. R., Riyaz Ali, & Chaturvedi, S. (2023). Role Of Nutrition In Human Capital Development: An Empirical Study In The Indian Context. *ShodhKosh: Journal of Visual and Performing Arts*, 4(2). <https://doi.org/10.29121/shodhkosh.v4.i2.2023.2127>
- Manning, L. (2024). Fraud in the food system: Critiquing the ‘bad apple’ perspective. *Trends in Food Science & Technology*, 149, 104563. <https://doi.org/10.1016/j.tifs.2024.104563>
- Merdeka.com. (2025, October 17). Terungkap! 510 Sasaran Program Makan Bergizi Gratis di Kediri Terancam Tak Terlayani Akibat Perbedaan Data. *Merdeka.Com*. <https://www.merdeka.com/peristiwa/terungkap-510-sasaran-program-makan-bergizi-gratis-di-kediri-terancam-tak-terlayani-akibat-perbedaan-data-465866-mvk.html>
- Near, J. P., & Miceli, M. P. (1995). Effective Whistle-Blowing. *The Academy of Management Review*, 20(3), 679. <https://doi.org/10.2307/258791>
- Pemerintah Kota Kediri. (2025). Luncurkan Program MBG Bagi 3B di Kota Kediri, Gus Qowim Terus Pantau dan Lakukan Pendampingi Agar Program Berjalan Optimal. <https://www.kedirikota.go.id/p/berita/10113290/luncurkan-program-mbg-bagi-3b-di-kota-kediri-gus-qowim-terus-pantau-dan-lakukan-pendampingi-agar-program-berjalan-optimal>
- Schakel, J. K., & Wolbers, J. (2021). To the edge and beyond: How fast-response organizations adapt in rapidly changing crisis situations. *Human Relations*, 74(3), 405–436. <https://doi.org/10.1177/0018726719893450>
- Shahbazi, M., & Bunker, D. (2024). Social media trust: Fighting misinformation in the time of crisis. *International Journal of Information Management*, 77, 102780. <https://doi.org/10.1016/j.ijinfomgt.2024.102780>
- Sheth, J. N., Jain, V., & Ambika, A. (2023). The growing importance of customer-centric support services for improving customer experience. *Journal of Business Research*, 164

- Spink, J., Vincent Hegarty, P., Fortin, N. D., Elliott, C. T., & Moyer, D. C. (2019). The application of public policy theory to the emerging food fraud risk: Next steps. *Trends in Food Science & Technology*, 85, [116–128](#).
<https://doi.org/10.1016/j.tifs.2019.01.002>
- SPPG Wilayah Kota Kediri. (2025a). *LENTERA SPPG Kota Kediri*.
<https://www.sppgkotakediri.web.id/lentera>
- SPPG Wilayah Kota Kediri. (2025b). *Profil MBG Kota Kediri*.
www.sppgkotakediri.web.id/profil
- Suryawijaya, T. (2025). *LENTERA (Layanan Tanggap Aduan dan Aspirasi) (Version 2.4)* [ID; Website]. SPPG Kota Kediri.
<https://www.sppgkotakediri.web.id/lentera>
- Talal, O. (2023). Fragmentation of Political Authority and Bureaucratic Entrepreneurship: Explaining Instances of Minority Accommodation in Israel and Estonia. *Comparative Political Studies*, 56(5), [625–654](#).
<https://doi.org/10.1177/00104140221115175>
- Terrada, L., Khaïli, M. E., & Ouajji, H. (2020). Multi-Agents System Implementation for Supply Chain Management Making-Decision. *Procedia Computer Science*, 177
- Van Eijbergen, R., & Siebers, V. M. (2025). Understanding Whistleblowing in Practice: Experiences in The Netherlands. *Public Integrity*, 27(1), [22–34](#).
<https://doi.org/10.1080/10999922.2023.2275346>
- Viviani, S., Gulino, M.-S., Rinaldi, A., & Vangi, D. (2024). An Interdisciplinary Double-Diamond Design Thinking Model for Urban Transport Product Innovation: A Design Framework for Innovation Combining Mixed Methods for Developing the Electric Microvehicle “Leonardo Project.” *Energies*, 17(23), [5918](#). <https://doi.org/10.3390/en17235918>
- Wang, R., Cao, N., Guo, Y., Ji, S., & Kumar, S. (2022). A Comparative Analysis of Fraudulent Recruitment Advertisement Detection Methods in the IoT Environment. *Journal of Sensors*, 2022