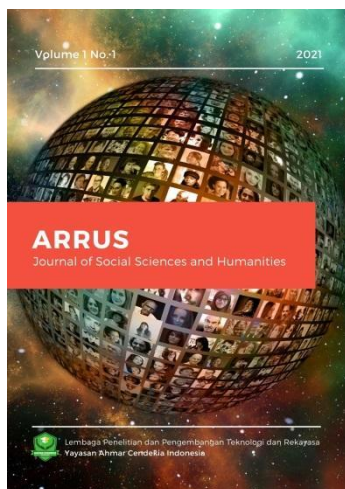




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RESEARCH ARTICLE

Implementation Of Agile Governance In The Application Of Sisenso Mobile (Online Attendance Information System) In Klungkung Regency

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Abstract: The objective of this study is threefold: firstly, to analyse the implementation of agile governance in the application of Sisenso Mobile (Online Attendance Information System) in Klungkung Regency; secondly, to identify the factors that hinder its implementation; and thirdly, to examine the impacts generated by the system. The present study employed a qualitative approach, utilising a descriptive method. The present analysis was conducted based on George C. Edward III's policy implementation theory, which consists of communication, resources, disposition, and bureaucratic structure, as well as Luna et al.'s agile governance theory, which includes the principles of good enough governance, business-driven, human-focused, based on quick wins, systematic and adaptive approach, and simple design and continuous refinement. The findings indicate that the implementation of Sisenso Mobile has been relatively optimal. From the perspective of policy implementation, the indicators of communication, disposition, and bureaucratic structure have effectively supported policy implementation. Nevertheless, the resource indicator continues to encounter difficulties, primarily due to restricted funding for system development and the disparate distribution of internet infrastructure, particularly within the Nusa Penida Islands. From the perspective of agile governance, the implementation of all principles has been achieved through the adoption of adaptive and collaborative system development, orientated towards organisational needs and supported by mechanisms of continuous evaluation and refinement. The implementation has been shown to have a positive impact on the attendance discipline of civil servants and has encouraged the continuous enhancement of the Sisenso Mobile application, rendering it more adaptive and sustainable.

Keywords: Agile Governance, Policy Implementation, Sisenso Mobile.

1. Introduction

Digital transformation has become a practical governance issue for local governments because administrative systems must remain reliable while responding to changing organizational and technological conditions. In personnel administration, digital attendance systems are especially important because attendance data support supervision, discipline, performance management, and accountability. The relevant policy question is therefore not simply whether a local government has adopted a digital application, but whether the application can be implemented, adapted, and sustained under actual institutional and geographical constraints.



Digital attendance systems can accelerate administrative processes, reduce duplication, improve information availability, and create traceable records for monitoring and evaluation ANGGRAENI. At the same time, their effectiveness depends on organizational capacity, human resources, financial support, infrastructure, digital literacy, and the ability to respond to technical problems. These conditions make attendance digitalization a useful context for examining how policy implementation and organizational agility operate together.

In Indonesia, digital transformation in public administration is supported by a regulatory framework that promotes the modernization of government administration and the implementation of electronic-based government. Law Number 20 of 2023 concerning the State Civil Apparatus emphasizes adaptive and merit-based civil servant management, while Law Number 23 of 2014 concerning Regional Government provides local governments with authority to manage governmental affairs and develop innovations according to local needs. Government Regulation Number 94 of 2021 concerning Civil Servant Discipline further establishes discipline as an essential element of public accountability. Meanwhile, Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System (SPBE) provides a broader framework for integrating information technology into government administration. These regulations indicate that digitalization is increasingly positioned as an integral component of public-sector governance rather than merely an administrative innovation.

One area in which digitalization has direct implications for bureaucratic management is civil servant attendance and discipline. Attendance management is not merely an administrative mechanism for recording working hours but also constitutes part of organizational control, performance management, and accountability (Yonita, 2026). Accurate and timely attendance data can support supervision, personnel administration, and disciplinary measures. Accordingly, digital attendance systems can function as organizational instruments for transforming attendance records into information that supports personnel management and decision-making.

This issue is particularly relevant in Klungkung Regency, Bali, where the Civil Service and Human Resources Development Agency (Badan Kepegawaian dan Pengembangan Sumber Daya Manusia BKPSDM) manages a substantial civil servant population. Data from BKPSDM Klungkung indicate that the regency has 6,074 civil servants, consisting of 3,452 civil servants (PNS) and 2,622 government employees under work agreements (PPPK). Before the adoption of digital innovation, civil servant attendance in Klungkung relied on retina and fingerprint machines. Although these mechanisms supported administrative attendance recording, their flexibility and adaptability were limited, particularly under changing working conditions.

The Klungkung Regency Government subsequently introduced Sisenso Mobile (Sistem Informasi Presensi Online) as a digital attendance system for civil servants. Its implementation is supported by local regulatory and administrative instruments. Regulation of the Regent of Klungkung Number 81 of 2019 concerning Civil Servant Working Days and Working Hours established the basis for attendance discipline and was subsequently updated through Regulation of the Regent of Klungkung Number 22 of 2021. Furthermore, Regulation of the Regent of Klungkung Number 5 of 2025 concerning Additional Employee Income establishes attendance and discipline as components in assessing additional income for civil servants. Thus, attendance data recorded through Sisenso Mobile is connected not only to administrative monitoring but also to the broader mechanism of civil servant performance and discipline management.

The function of Sisenso Mobile has also expanded beyond attendance recording. The issuance of BKPSDM Klungkung Circular Letter Number 800/1981/BKPSDM/2023 extended the application toward personnel services, particularly mobile leave applications. This development indicates that Sisenso Mobile is increasingly positioned as part of a broader

digital personnel-service ecosystem rather than functioning solely as an electronic attendance application.

Nevertheless, the implementation of Sisenso Mobile illustrates the tension between the design of digital policy and the realities of implementation. The application currently provides more comprehensive support for Android devices, while access for iOS users remains limited. In addition, the geographical characteristics of Klungkung, particularly the island region of Nusa Penida, create challenges related to unequal and unstable internet connectivity. These conditions can affect real-time attendance recording, location verification, and data synchronization with the central server. Research on digital bureaucracy has similarly emphasized that digital transformation requires adequate and evenly distributed infrastructure, organizational readiness, and alignment between technological systems and institutional capacity (Dunggio et al., 2025).

These conditions demonstrate that the success of a digital attendance system cannot be assessed solely from whether an application is available and operational (Akbar et al., 2026). The implementation process also depends on communication among implementers, the availability of human and technological resources, the disposition of implementing actors, and the clarity of bureaucratic structures. Edward III's policy implementation model provides a framework for examining these dimensions through four variables: communication, resources, disposition, and bureaucratic structure. Previous research has shown that communication and technical resources can become major constraints in the implementation of digital government systems, while organizational commitment and clear bureaucratic structures can support implementation effectiveness (Saleh et al., 2021).

At the same time, the implementation of digital government requires an organizational approach that is capable of responding to changing needs (Fauzan et al., 2024). This provides a rationale for applying the concept of agile governance. Agile governance emphasizes the capacity of public organizations to detect, respond to, and continuously adapt to changes in their environment. Tomažević et al. (2023) demonstrate that agile values can strengthen good governance in public administration, while research by Marfuah & Tobirin (2024) shows the relevance of agile governance in supporting digital transformation and organizational change. Agile governance therefore provides an analytical perspective for understanding whether a digital government system is merely implemented according to predetermined procedures or is continuously adjusted according to organizational needs, user experiences, technological developments, and environmental changes (Li et al., 2025).

Although previous studies have examined digital government implementation and agile governance separately, there remains a need to examine how policy implementation capacity and agile governance interact within the implementation of a specific digital personnel system at the local-government level. Existing studies indicate the importance of communication, resources, organizational commitment, and bureaucratic structure in digital policy implementation, while studies of agile governance emphasize adaptability, user orientation, strategic alignment, rapid problem-solving, and continuous refinement. However, the practical relationship between these dimensions remains particularly relevant in local governments characterized by uneven infrastructure, changing numbers of users, limited fiscal capacity, and geographically dispersed service areas.

The case of Sisenso Mobile in Klungkung Regency provides an empirical setting for examining this relationship. The system operates within an established bureaucratic structure while simultaneously requiring continuous adaptation to technological, organizational, and geographical conditions. The central issue is therefore not simply whether Sisenso Mobile has been implemented, but how agile governance is manifested in its implementation, what factors constrain its operation, and what organizational changes can be observed from its implementation.

Accordingly, this study aims to examine the implementation of agile governance in the application of Sisenso Mobile in Klungkung Regency, identify the factors that constrain its

implementation, and analyze its organizational impacts, particularly in relation to civil servant discipline and digital personnel management. By integrating Edward III's policy implementation perspective with the principles of agile governance, this study seeks to provide a more comprehensive understanding of how local governments can maintain digital service implementation while simultaneously adapting to changing organizational needs and resource constraints.

2. Literature Review

Previous studies demonstrate that digital government implementation is shaped by the interaction between technological infrastructure, organizational capacity, communication, human resources, and institutional arrangements (Gasco-Hernandez et al., 2022; Hasrullah et al., 2025; Oktarina, 2023; Ramadan et al., 2023). Meanwhile, studies on agile governance emphasize organizational responsiveness, user orientation, adaptive decision-making, rapid problem-solving, and continuous refinement (Janssen & van der Voort, 2020; Luna et al., 2015; Marfuah & Tobirin, 2024; Tomaževič et al., 2023). Research on digital attendance further shows that location-based and online attendance systems can support administrative efficiency and employee discipline, although their effectiveness remains dependent on infrastructure, organizational support, and implementation capacity (Rahayu et al., 2024; Solikhah et al., 2024; Sukmawati et al., 2024).

Nevertheless, limited attention has been given to the interaction between policy implementation capacity and agile governance in digital attendance systems operating across geographically uneven infrastructure. This study addresses this gap by examining Sisenso Mobile in Klungkung Regency, where the system must simultaneously comply with bureaucratic implementation requirements and adapt to differences in connectivity, organizational capacity, and user needs.

3. Research Method and Materials

This study employed a descriptive qualitative approach to examine the implementation of agile governance in the application of Sisenso Mobile (Online Attendance Information System) in Klungkung Regency. This approach was selected to describe the implementation process, organizational responses, obstacles, and impacts of the application within its actual institutional context (Waruwu, 2023).

The research was conducted in BKPSDM as the main research setting. The study also involved civil servants in the Klungkung Regency Secretariat Office area and Nusa Penida to capture differences in geographical and infrastructural conditions, particularly internet accessibility.

The study used qualitative data supported by quantitative data (Creswell & Creswell, 2023). Qualitative data were obtained from interviews, observations, and documents concerning the implementation of Sisenso Mobile. Supporting quantitative data included civil servant discipline and attendance records, application users, and relevant personnel administration records. Primary data were obtained directly from informants, while secondary data consisted of official BKPSDM documents, SOPs, attendance records, regulations, reports, and documents concerning Sisenso Mobile implementation.

Informants were selected through purposive sampling based on their knowledge and involvement in the implementation of the application (Kaharuddin, 2020). The study involved 15 informants drawn from BKPSDM officials, application administrators, and civil servants in the Klungkung Regency Secretariat Office area and Nusa Penida. Data were collected through semi-structured in-depth interviews, observation, and documentation. Observation focused on attendance recording, facial registration, assignment verification, and online leave services. To improve methodological transparency, the informant grouping is summarized in Table 1. The source data did not systematically record individual tenure or

interview duration; therefore, these variables are explicitly reported as unavailable rather than inferred, and they were not used in the analysis.

Table 1. Research Informants

No.	Informant	Organizational Role	Administrative Level	Number
1	Head of BKPSDM Klungkung Regency	Head of Agency	Regency Government	1
2	Madya Functional Officers of BKPSDM Klungkung Regency	Functional Officers	Regency Government	2
3	Head of the Division of Apparatus Performance Assessment and Awards	Division Head	Regency Government	1
4	Civil Servants in the Klungkung Regency Secretariat Office Area	System Users	Regency Government	5
5	Civil Servants in Nusa Penida Islands	System Users	Regional/Island Area	5
Total				15

Source: Research data, processed by the researcher, 2026.

The informants were purposively selected to represent policy and managerial actors, functional personnel, system administrators, and system users. The inclusion of civil servants from both the Klungkung Regency Secretariat area and Nusa Penida Islands was intended to capture differences in the implementation of Sisenso Mobile across geographical contexts. Information on individual tenure was not systematically recorded in the original research documentation; therefore, tenure data are not presented.

Data credibility was examined through source and technique triangulation. Source triangulation compared information obtained from different groups of informants, while technique triangulation compared interview findings with observations and documentary evidence. Data analysis followed the interactive model of Miles, Huberman, and Saldaña (2018), consisting of data collection, data reduction, data display, and conclusion drawing and verification.

The analysis employed two complementary frameworks. First, Edward III's policy implementation model was used to analyze four implementation variables: communication, resources, disposition, and bureaucratic structure. Second, Luna et al. (2015) agile governance framework was used to examine six principles: good enough governance, business-driven, human focused, based on quick wins, systematic and adaptive approach, and simple design and continuous refinement. The combination of these frameworks enabled the study to examine both the factors influencing Sisenso Mobile implementation and the organization's ability to respond, adapt, involve users, solve problems, and continuously improve the digital attendance system.

4. Results and Discussion

4.1. Implementation of Sisenso Mobile Based on Edward III's Policy Implementation Model

The implementation of Sisenso Mobile can be examined through Edward III's policy implementation model, which emphasizes four determinants: communication, resources, disposition, and bureaucratic structure. The research findings indicate that the implementation is generally supported by adequate communication mechanisms, committed implementers, and a clear bureaucratic structure. However, resource limitations, particularly internet infrastructure and development funding, remain the main constraints.

4.1.1. Communication

Communication is a fundamental component of policy implementation because policy objectives and implementation procedures must be transmitted clearly among the actors involved (Kondolele et al., 2025). In the implementation of Sisenso Mobile, communication takes place primarily through internal coordination within the BKPSDM and communication groups involving administrators from each Regional Apparatus Organization (OPD).

The findings indicate that technical problems and user complaints are generally communicated through administrator groups and subsequently coordinated with the BKPSDM and the application developer. This mechanism enables information concerning system disruptions, attendance problems, and other technical issues to be transmitted relatively quickly to the parties responsible for addressing them.

However, communication remains predominantly operational rather than fully institutionalized. Information is often distributed through administrators rather than directly to all ASN users. This means that the effectiveness of communication depends partly on the ability of administrators to relay information to employees within their respective units. Thus, communication in the implementation of Sisenso Mobile can be assessed as effective, although strengthening formal and systematic communication channels would improve consistency of information delivery.

4.1.2. *Resources*

Resources include human resources, technological infrastructure, facilities, and financial support required to implement a policy. The research findings show that Sisenso Mobile is supported by system administrators, facilities at the BKPSDM, and cooperation with external technical providers.

The availability of administrators at the organizational-unit level supports the daily operation of the system and provides a first line of response when users experience problems. However, resource limitations remain evident, particularly in internet connectivity in Nusa Penida. Uneven network availability may interfere with attendance recording, GPS verification, and data synchronization.

Financial resources also influence the sustainability of system development. Supporting data show that server management expenditure increased from IDR 98 million in 2023 and 2024 to IDR 145 million in 2025, representing an increase of 47.96%. This increase indicates that the government has continued to allocate resources to maintain and develop the digital infrastructure.

Nevertheless, the increase in expenditure also illustrates that maintaining Sisenso Mobile requires continuous financial support as system capacity, security requirements, and user numbers increase. Therefore, the resource dimension is assessed as not yet optimal, particularly because infrastructure inequality and development funding remain limitations.

4.1.3. *Disposition*

Disposition refers to the commitment, willingness, and responsiveness of policy implementers in carrying out the policy (Ridho et al., 2023). The findings indicate that the disposition of the actors involved in Sisenso Mobile is relatively strong.

Organizational leaders provide direction regarding the implementation of the system, while administrators respond to problems reported by users. The commitment to maintaining employee discipline is also reflected in the continued use and development of digital attendance mechanisms.

The responsiveness of administrators is particularly important because technical problems cannot always be resolved through the system itself. When disruptions occur, administrators coordinate with the BKPSDM and external developers to seek solutions. This demonstrates that implementers do not merely follow the existing procedures but actively respond to implementation problems.

However, the effectiveness of this responsiveness remains partly dependent on the technical capacity of individual administrators and the availability of external technical support. Nevertheless, the overall disposition of implementers can be assessed as effective because commitment and responsiveness are consistently demonstrated during implementation.

4.1.4. Bureaucratic Structure

The bureaucratic structure determines how responsibilities, procedures, and authority are distributed among the actors implementing a policy. The implementation of Sisenso Mobile is supported by a formal regulatory and procedural framework, including the Standard Operating Procedure for Employee Attendance Recording Using Sisenso Mobile, Regional Regulation of the Regent of Klungkung, and the appointment of administrators within individual work units.

The existence of administrators in each organizational unit creates a clear division of responsibilities. The BKPSDM functions as the principal manager, while administrators facilitate implementation and user coordination within their respective units. This structure supports the operation of Sisenso Mobile because responsibility for attendance management is not concentrated exclusively at the BKPSDM.

Nevertheless, technical disruptions may require coordination across organizational units and, in certain cases, involvement from external developers. This creates additional coordination requirements when problems cannot be resolved internally. The bureaucratic structure can be assessed as effective because the implementation is supported by formal procedures, a clear division of responsibilities, and designated administrators.

Table 2 Implementation of Sisenso Mobile Based on Edward III's Policy Implementation Model

No.	Edward III Indicator	Main Empirical Evidence	Implementation Strength	Main Gap	Assessment
1	Communication	Coordination through BKPSDM and OPD administrator groups; problems are communicated and followed up	Operational communication channels are available	Communication is not yet fully systematic and formal for all users	Effective
2	Resources	Administrators, BKPSDM facilities, external technical support, and server funding are available	Human resources and institutional facilities are available	Uneven internet infrastructure and development funding limitations	Not Yet Optimal
3	Disposition	Leadership direction, responsive administrators, and commitment to employee discipline	Strong commitment and responsiveness	Some technical problems depend on administrator and external-provider capacity	Effective
4	Bureaucratic Structure	SOP, regional regulation, administrators in each unit, and system management team	Clear procedures and division of responsibilities	Cross-unit coordination is required when technical problems occur	Effective

Source: Research findings, processed by the researcher, 2026.

The findings demonstrate that the implementation of Sisenso Mobile is relatively effective from the perspective of Edward III's policy implementation model. Communication, disposition, and bureaucratic structure provide strong institutional support, while resources constitute the primary limitation. The most significant resource constraints are uneven internet connectivity in Nusa Penida and the need for sustainable funding to support system maintenance and development.

This finding is significant because it demonstrates that the implementation of digital government cannot be assessed solely from the availability of an application. The effectiveness of Sisenso Mobile depends on the interaction between organizational communication, implementer commitment, institutional arrangements, and supporting resources. Thus, while the institutional foundation for Sisenso Mobile is relatively strong, the sustainability of its implementation requires continued strengthening of the resources supporting the digital system.



4.2. Implementation of Agile Governance in Sisenso Mobile

The implementation of agile governance in Sisenso Mobile can be assessed through six principles proposed by Luna et al., namely good enough governance, business-driven, human-focused, based on quick wins, systematic and adaptive approach, and simple design and continuous refinement. The empirical findings show that these principles are generally reflected in the management and development of Sisenso Mobile, although the implementation remains influenced by resource limitations.

4.2.1. Good Enough Governance

The principle of good enough governance emphasizes that governance should provide an adequate response to actual organizational needs without requiring excessive procedures. In Sisenso Mobile, this principle is reflected in the continuous adjustment of the system to organizational requirements. The system has been developed according to changes in the number and characteristics of ASN users. One example is the adjustment of server capacity following the increase in the number of PPPK employees. Security features and other system functions have also been developed in response to operational requirements.

These findings indicate that the Government of Klungkung does not maintain Sisenso Mobile as a static system. Instead, adjustments are made when organizational conditions change. This reflects the principle of good enough governance, because system development is directed toward practical requirements rather than technological development for its own sake. Accordingly, the implementation of good enough governance is assessed as optimal.

4.2.2. Business-Driven

The business-driven principle requires technology to support the core objectives and processes of an organization. Sisenso Mobile is not implemented merely as an attendance application but as part of the BKPSDM's broader personnel-management process. The application supports employee attendance monitoring, personnel administration, leave applications, and the availability of attendance data for organizational monitoring. Its implementation is therefore connected to the BKPSDM's objective of strengthening ASN professionalism and discipline.

The supporting data also show that attendance information can be used as an input for monitoring and employee disciplinary development. The number of ASN receiving disciplinary guidance increased from 50 people in 2023 to 95 people in 2024 and 150 people in 2025. Although this increase cannot be attributed exclusively to Sisenso Mobile, the digital attendance data provide an additional source of information for identifying attendance-related issues and supporting disciplinary supervision. Therefore, Sisenso Mobile demonstrates a clear orientation toward organizational needs and is assessed as optimal under the business-driven principle.

4.2.3. Human-Focused

The human-focused principle places users at the center of system development and governance. The findings indicate that Sisenso Mobile is developed with consideration of user experiences and operational needs. Users can report technical problems through administrator communication groups, allowing problems to be identified and forwarded to the relevant parties. This creates a feedback mechanism between users, administrators, BKPSDM, and the application developer.

The availability of mobile attendance and leave services also reduces dependence on conventional administrative procedures. However, differences in network conditions, particularly between mainland Klungkung and Nusa Penida, mean that user experiences are not completely uniform. Despite this limitation, the involvement of users in identifying problems and improving the system demonstrates that Sisenso Mobile has adopted a user-oriented approach. Thus, the human-focused principle is assessed as optimal.

4.2.4. *Based on Quick Wins*

The based on quick wins principle emphasizes the ability of an organization to respond quickly to problems and produce immediate improvements. In Sisenso Mobile, technical disruptions are generally reported through administrator groups and followed up through coordination between BKPSDM and the system developer. This mechanism allows problems to be identified and addressed without waiting for lengthy formal procedures. The response process therefore reflects a relatively short feedback cycle between users and system managers.

The existence of rapid responses is particularly relevant because attendance recording is time-sensitive. Delays in resolving technical problems can directly affect attendance recording, GPS verification, or synchronization. Accordingly, the implementation of the based on quick wins principle is assessed as optimal because the organization demonstrates responsiveness to operational problems.

4.2.5. *Systematic and Adaptive Approach*

The systematic and adaptive approach combines structured management with the ability to adjust to changing circumstances. Sisenso Mobile demonstrates this principle through continuous evaluation, system development, synchronization with other personnel-management requirements, and adjustment to organizational changes. The increase in the number of users following the addition of PPPK required adjustments to system capacity. At the same time, the system continues to accommodate changing personnel-administration needs, including digital leave services and improvements to security and system functions.

This approach demonstrates that system development occurs progressively rather than through a single implementation stage. However, adaptation remains constrained by network infrastructure and financial resources. Therefore, the principle is assessed as optimal, with resource availability remaining an important condition for sustaining further adaptation.

4.2.6. *Simple Design and Continuous Refinement*

The principle of simple design and continuous refinement emphasizes simplicity in system use combined with continuous improvement. Sisenso Mobile has undergone successive improvements involving features, security, system capacity, and personnel services. The development of mobile leave services and the continuous response to technical problems indicate that the application is not treated as a finished product. Instead, improvements are made according to organizational needs and user experience.

The increase in server-management expenditure from IDR 98 million in 2023 and 2024 to IDR 145 million in 2025 also provides empirical evidence of continuing support for system maintenance and development. This financial commitment indicates that continuous refinement requires not only organizational willingness but also adequate resources. Therefore, this principle is assessed as optimal with qualifications, because continuous improvement is evident but remains dependent on available funding, infrastructure, and technical capacity.

Table 3. Implementation of Agile Governance in Sisenso Mobile

No.	Agile Governance Principle	Empirical Evidence	Form of Implementation	Assessment
1	<i>Good Enough Governance</i>	System development follows organizational needs; server capacity was adjusted following the increase in PPPK users; security features were developed	Technology and governance are adjusted according to actual needs	Optimal
2	<i>Business-Driven</i>	Sisenso supports attendance, personnel administration, discipline monitoring, and BKPSDM objectives	System functions are aligned with organizational processes	Optimal

3	<i>Human-Focused</i>	Users report problems through administrators and their experiences are considered in system improvement	User feedback forms part of system management	Optimal
4	<i>Based on Quick Wins</i>	Technical problems are reported through administrator groups and followed up by BKPSDM and developers	Problems are addressed through rapid coordination	Optimal
5	<i>Systematic and Adaptive Approach</i>	System is evaluated, developed, synchronized, and adjusted to changes in organizational needs	Development occurs progressively and adaptively	Optimal
6	<i>Simple Design and Continuous Refinement</i>	Features, security, capacity, and personnel services continue to be improved	Continuous system refinement	Optimal with qualifications

Source: Research findings, processed by the researcher, 2026.

The findings demonstrate that Sisenso Mobile reflects the six principles of agile governance. The strongest characteristics are the system's ability to adjust to organizational needs, respond to technical problems, involve users, and undergo continuous development. However, the implementation is not entirely free from constraints. Infrastructure inequality, particularly in Nusa Penida, and limitations in development resources may restrict the speed and scope of future system improvements. Therefore, agile governance in Sisenso Mobile should not be understood simply as the rapid adoption of digital technology. Rather, it is reflected in the organization's ability to continuously adjust technology, organizational processes, and user responses to changing administrative needs. This finding complements the Edward III analysis in Section 4.1: the organizational commitment and structure support agility, while resource limitations remain the principal boundary of that agility.

4.3. Factors Inhibiting the Implementation of Agile Governance in Sisenso Mobile

Although the implementation of agile governance in Sisenso Mobile has generally shown positive characteristics, the findings indicate several factors that limit its optimality. These constraints are mainly related to digital infrastructure, budget availability, increasing system users, technical disruptions, dependence on third-party developers, and differences in regional conditions. These factors do not eliminate the implementation of agile governance, but rather determine the extent to which the system can respond quickly and continuously to changing organizational needs.

4.3.1. Unequal Internet Infrastructure in Nusa Penida

The most significant obstacle is the uneven availability and stability of internet infrastructure, particularly in Nusa Penida. The geographical characteristics of Klungkung, which include mainland and island areas, create different levels of access to digital infrastructure.

This condition directly affects the operation of Sisenso Mobile because several functions, including GPS-based attendance, real-time attendance recording, and data synchronization, require a relatively stable internet connection. When the connection is unstable, employees may experience difficulties in recording attendance or synchronizing attendance data.

This finding shows that the implementation of agile governance is influenced not only by the internal capacity of government organizations but also by the external technological environment. The organization may be able to respond quickly to user complaints, but its response is limited when the underlying infrastructure is inadequate. Based on this finding, practical policy responses should combine infrastructure and organizational measures: map connectivity problems by service location, prioritize network strengthening in Nusa Penida, establish coordination with relevant connectivity providers and local digital-infrastructure authorities, and maintain a clear escalation mechanism for attendance disruptions. These measures would complement the existing administrator communication mechanism by shifting part of the response from reactive problem handling toward preventive service continuity.

To address connectivity constraints in Nusa Penida, the Klungkung Regency Government should adopt a geographically differentiated digital infrastructure strategy. First, BKPSDM, in coordination with the regional communication and information technology agency, should map connectivity conditions at the locations of government offices and identify areas with recurring connectivity disruptions. Second, the government should establish priority areas for network strengthening and coordinate with telecommunications providers to improve service reliability in identified locations. Third, the Sisenso Mobile system should be developed to accommodate low-bandwidth conditions, including mechanisms for temporary data storage and synchronization when connectivity is restored. Fourth, a clear technical escalation mechanism should be established so that attendance problems caused by network disruption can be verified and resolved without immediately being interpreted as employee non-compliance. These measures would allow agile governance to operate not only through organizational responsiveness but also through institutional arrangements that recognize geographical differences in digital infrastructure.

4.3.2. Budget Limitations

The second obstacle concerns the availability of budget for system development. Although the management of Sisenso Mobile has received financial support, not every desired improvement can necessarily be implemented immediately. The available data show that server-management expenditure remained at IDR 98 million in 2023 and 2024, before increasing to IDR 145 million in 2025. The increase of IDR 47 million or 47.96% indicates stronger financial support for system infrastructure. At the same time, the increase also demonstrates that maintaining and developing a digital system requires continuing financial resources. Accordingly, budget limitations may affect the speed of feature development, infrastructure strengthening, and implementation of technical improvements. This represents a limitation to the continuous refinement principle because organizational willingness to improve the system must be accompanied by sustainable financial capacity.

4.3.3. Increasing Number of Users

The increase in the number of ASN users, particularly following the addition of PPPK in 2025, creates additional demands on system capacity. A larger number of users means that the system must accommodate greater volumes of attendance data and simultaneous access. This condition requires capacity planning and periodic evaluation of server performance. If system capacity does not grow proportionally with the number of users, the possibility of slow access, synchronization problems, or other technical disruptions may increase. Thus, the growth in the number of ASN does not merely represent an administrative change but also creates a technological requirement for the government to continuously adjust the capacity of Sisenso Mobile.

4.3.4. Technical Disruptions

Technical disruptions constitute another factor affecting the implementation of Sisenso Mobile. The findings indicate that users may experience slow access or synchronization problems. Because attendance recording is performed within a specific time period, technical disruptions can directly affect the user experience and the reliability of attendance records. The existing administrator communication mechanism allows these problems to be reported and followed up relatively quickly. However, recurring technical problems indicate that responsive problem-solving must be accompanied by systematic monitoring and incident response mechanisms. Consequently, the organization has demonstrated the principle of “quick wins,” but the sustainability of this responsiveness requires stronger preventive mechanisms so that the organization does not rely primarily on reactive responses.

4.3.5. Dependence on Third-Party Developers

The maintenance and development of Sisenso Mobile involve cooperation with external parties. This arrangement provides technical support for the government organization but

also creates a degree of dependence on the responsiveness and technical capacity of the third-party developer.

When system improvements or technical problems require intervention from the external developer, the speed of resolution may depend on coordination between the BKPSDM and the provider. This can become a limitation when rapid system adaptation is required.

Therefore, strengthening internal technical capacity and establishing clear service-level arrangements are relevant to maintaining the agility of the system. The government organization needs sufficient internal capacity to identify, monitor, document, and manage technical problems even when system development remains supported by external parties. A practical capacity-building strategy is to establish an internal technical focal team, require structured knowledge transfer and technical documentation from the provider, provide regular administrator training, and define service-level expectations for response and recovery. These measures can reduce operational dependence on the vendor without requiring the government to immediately internalize all software-development functions.

4.3.6. Differences in Regional Conditions

The final obstacle concerns differences between mainland Klungkung and the island areas. The implementation of the same digital attendance system does not necessarily produce the same experience for all ASN because users operate under different infrastructure and geographical conditions. The experience of ASN in Nusa Penida may differ from that of ASN working in the mainland area, particularly in relation to internet connectivity and accessibility. This finding indicates that uniform digital policies require contextual adaptation when implemented across areas with different conditions. Therefore, agile governance requires the government to consider regional characteristics rather than applying a completely uniform approach. Adaptation based on local conditions is particularly relevant for ensuring that digital transformation remains accessible and operational for all users.

Table 4. Factors Inhibiting Agile Governance Implementation in Sisenso Mobile

No.	Inhibiting Factor	Empirical Evidence	Impact	Required Response
1	Internet infrastructure	Internet connectivity in Nusa Penida is uneven and unstable	Attendance, GPS, and synchronization may be disrupted	Strengthen infrastructure and coordinate with relevant institutions
2	Budget limitations	System development must be conducted progressively	Feature development and improvement may be delayed	Prioritize development according to urgency
3	Increasing number of users	Increase in PPPK users in 2025	Greater server workload	Conduct server <i>capacity planning</i>
4	Technical disruptions	Slow access and synchronization problems	User convenience and attendance recording may be affected	Strengthen monitoring and <i>incident response</i>
5	Third-party dependence	Maintenance and development involve external providers	Resolution may depend on provider responsiveness	Strengthen internal capacity and service-level arrangements
6	Regional differences	Different conditions between mainland and island areas	User experiences are not uniform	Apply an implementation approach based on regional characteristics

Source: Research findings, processed by the researcher, 2026.

The findings demonstrate that the main constraints on agile governance in Sisenso Mobile are predominantly resource and environmental constraints rather than organizational resistance. The government organization has demonstrated commitment, communication mechanisms, and responsiveness in managing the application. However, agility cannot be maintained solely through organizational commitment when infrastructure, financial capacity, system capacity, and technical independence remain limited.

Policy-wise, the connectivity problem should be treated as a service-continuity issue rather than only a user complaint. The findings support a layered response consisting of connectivity mapping and prioritization in Nusa Penida, escalation procedures for attendance disruptions,

coordination with relevant infrastructure providers, and periodic review of system performance by location. This approach is consistent with the systematic and adaptive principle because it combines immediate problem resolution with preventive improvement.

Thus, the main challenge is not whether the Government of Klungkung is willing to implement agile governance, but whether its resources and technological infrastructure are sufficiently capable of supporting continuous adaptation. This distinction is important because it explains why Sisenso Mobile can simultaneously demonstrate strong characteristics of agile governance while still experiencing practical limitations in its implementation.

4.4. *Impact of Agile Governance Implementation in Sisenso Mobile*

The implementation of agile governance through Sisenso Mobile has generated several observable impacts on ASN attendance monitoring, disciplinary supervision, administrative efficiency, and data-based personnel management. The empirical findings are summarized in the following tables.

Table 5. Impact of Sisenso Mobile on Attendance and Personnel Administration

No.	Sisenso Mobile Mechanism	Change Produced	Observable Impact
1	Location-based attendance	Employee attendance can be verified based on location	Reduces the opportunity for inappropriate attendance recording
2	Facial/video identification	Employee identity is validated digitally	Strengthens attendance authentication
3	Real-time attendance recording	Attendance data are recorded digitally	Facilitates real-time monitoring
4	Attendance history	Attendance records can be traced	Supports verification and transparency
5	Dashboard and recapitulation	Attendance information is available to administrators	Facilitates supervision and evaluation
6	Mobile leave service	Leave administration is conducted digitally	Supports administrative efficiency
7	System integration and synchronization	Data can support various personnel-management needs	Supports data-based governance
8	Administrator communication groups	Technical problems can be reported and followed up	Strengthens organizational responsiveness

Source: Research findings, processed by the researcher, 2026.

Table 6. ASN Disciplinary Achievement, 2020–2026

Year	Target	Realization	Target–Realization Gap
2020	97.15%	96.19%	-0.96
2021	97.25%	95.30%	-1.95
2022	97.35%	96.97%	-0.38
2023	97.50%	96.54%	-0.96
2024	98.00%	97.16%	-0.84
2025	98.00%	97.50%	-0.5
2026	98.25%	—	—

Source: BKPSDM Kabupaten Klungkung, 2026.

The disciplinary data indicate an overall improvement in realization between 2020 and 2025, from 96.19% to 97.50%. The smallest gap between target and realization during this period occurred in 2025, at 0.50 percentage points. This trend provides supporting evidence that digital attendance management has strengthened the monitoring of ASN discipline. However, the improvement cannot be attributed solely to Sisenso Mobile because disciplinary performance is also influenced by supervision, organizational policies, leadership, employee behavior, and other institutional factors.



Table 7. ASN Disciplinary Guidance, 2023–2025

Year	ASN Receiving Disciplinary Guidance	Change	Percentage Increase
2023	50	—	—
2024	95	45	90.00%
2025	150	55	57.89%
Total	295	—	—

Source: BKPSDM Kabupaten Klungkung, processed by the researcher, 2026.

The increase in the number of ASN receiving disciplinary guidance indicates that the disciplinary monitoring and development function became more intensive during 2023–2025. In this process, attendance information generated by Sisenso Mobile can serve as supporting evidence for identifying attendance-related issues and determining the need for disciplinary guidance. Nevertheless, the increase in disciplinary guidance should not be interpreted as a direct causal consequence of the application alone.

In summary, Sisenso Mobile contributes to strengthening digital attendance monitoring, supporting disciplinary supervision, simplifying personnel administration, and providing data that can be utilized for organizational decision-making. The impact is therefore not limited to replacing conventional attendance mechanisms but extends to strengthening the availability and usability of personnel data. At the same time, the findings demonstrate that the effectiveness of these impacts remains dependent on supporting factors, particularly network infrastructure, system capacity, financial resources, and organizational supervision.

5. Conclusion

Based on the findings and discussion on the implementation of *agile governance* in the application of Sisenso Mobile in Klungkung Regency, three conclusions can be drawn.

- (1). The implementation of Sisenso Mobile demonstrates substantial characteristics of agile governance. Edward III's model shows that communication, disposition, and bureaucratic structure support implementation, while resources remain the principal limitation, particularly because of uneven internet infrastructure in Nusa Penida and continuing system-development requirements. From the agile governance perspective, the six principles of good enough governance, business-driven, human-focused, based on quick wins, systematic and adaptive approach, and simple design and continuous refinement are reflected in system management and development. The strongest characteristics are responsiveness, adaptation to changing needs, user involvement, and continuous improvement.
- (2). The main inhibiting factors are unequal internet infrastructure, budget limitations, increasing system-user capacity requirements, technical disruptions, dependence on third-party developers, and differences in geographical conditions between mainland Klungkung and Nusa Penida. These constraints indicate that the principal boundary of agility is not organizational commitment but the availability and capacity of resources required to sustain continuous adaptation.
- (3). Sisenso Mobile contributes to stronger ASN attendance monitoring, disciplinary supervision, administrative efficiency, and data-based personnel management. ASN discipline realization increased from 96.19% in 2020 to 97.50% in 2025, while the number of ASN receiving disciplinary guidance increased from 50 in 2023 to 150 in 2025. These trends cannot be attributed solely to Sisenso Mobile because discipline is also influenced by supervision, organizational policies, leadership, and employee behavior. The principal contribution of the application is therefore better digital recording, verification, monitoring, and utilization of attendance data, together with a more adaptive system-development process.

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