

RESEARCH ARTICLE



IMPLEMENTATION OF DATA ARCHIVE WAREHOUSE APPLICATION TO OPTIMIZE EMPLOYEE PERFORMANCE AT PALEMBANG PROBATION OFFICE

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ABSTRACT

Digital transformation in public sector organizations has become a critical agenda for strengthening governance reform, yet its implementation often faces institutional, technological, and bureaucratic challenges. This study examines the implementation of the Gudang Arsip Data (GARDA) application as a digital governance instrument for optimizing employee performance at the Class I Correctional Center of Palembang. The research aims to analyze how digital archive transformation is implemented and identify factors influencing its effectiveness within a government institution. This study employs a socio-legal empirical research approach by combining normative analysis of digital governance regulations with qualitative investigation through interviews, observations, and document analysis. The findings indicate that GARDA improves administrative efficiency, document accessibility, and data management; however, its transformative impact remains constrained by limited infrastructure, insufficient technical support, employee adaptation challenges, and weak institutional integration. The study concludes that sustainable digital governance requires alignment between technology, legal frameworks, organizational capacity, and bureaucratic culture. This research contributes to digital governance studies by highlighting internal bureaucratic transformation as an essential dimension of public sector reform.

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1. Introduction

Digital transformation in the public sector has become one of the main agendas of public administration reform in various countries, including Indonesia. This transformation is no longer understood merely as a process of adopting information technology, but rather as a fundamental change in the way public institutions manage resources, exercise authority, deliver public services, and establish accountability to society. Modern governments are required to integrate digital technologies with good governance principles so that bureaucratic processes become more effective, transparent, adaptive, and data-driven. In this context, bureaucratic digitalization serves as an instrument of governmental politics that strengthens state capacity in managing public administration more responsively toward strategic environmental changes (United Nations, 2022).

The development of the digital governance concept demonstrates that the success of government digital transformation is not solely determined by the availability of applications or technological infrastructure, but is strongly influenced by the ability of public organizations to transform work structures, bureaucratic culture, coordination patterns, and the behavior of public officials. Digitalization without institutional reform may create a phenomenon of technology-driven bureaucracy, in which technology merely becomes an additional administrative instrument without generating substantive changes in organizational performance. Therefore, digital transformation in government must be positioned as an integral part of bureaucratic reform that emphasizes institutional transformation, strengthening public sector capacity, and improving the quality of information-based decision-making (Kettunen & Kallio, 2020).

In the Indonesian governmental context, the agenda of bureaucratic digital transformation has been strengthened through the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik/SPBE) policy, which aims to establish an integrated, effective, and efficient government system. SPBE is not merely oriented toward the utilization of information technology but also requires governance transformation through business process integration, high-quality data management, and

improvement of digital competencies among public officials. The Indonesian government, through various bureaucratic reform policies, positions digitalization as a strategic approach to improving public service quality and strengthening institutional accountability. Nevertheless, several studies indicate that major challenges in implementing digital government in Indonesia remain related to organizational capacity, human resource readiness, system interoperability, and bureaucratic resistance to change ([Ministry of Administrative and Bureaucratic Reform, 2023](#)).

One important aspect of bureaucratic digital transformation is the management of governmental archives and data. Archives are no longer merely collections of administrative documents but have evolved into strategic organizational assets that determine the quality of decision-making, institutional accountability, and the sustainability of organizational memory. Within the paradigm of modern public administration, digital archive management has become part of information governance, referring to mechanisms through which public organizations ensure the availability, security, validity, and accessibility of information as the foundation for exercising governmental authority. Poor archive management may lead to weak bureaucratic coordination, delayed administrative services, and increased risks of errors in decision-making processes ([Franks, 2022](#)).

The issue of digital archive management has become increasingly important in civil servant management. Personnel data and employment documents hold strategic positions because they are directly related to career development, performance evaluation, disciplinary supervision, and administrative decision-making. An unintegrated personnel document management system may create bureaucratic problems, including duplication of work, delays in verification processes, and weak information accuracy. From a public administration perspective, this condition reflects a gap between the demands of modern data-based bureaucracy and conventional administrative practices that still rely heavily on physical documents ([Ministry of Home Affairs Human Resources Development Agency, 2021](#)).

Correctional Centers (Balai Pemasyarakatan/Bapas), as governmental technical implementation units, possess work characteristics that require administrative accuracy, rapid information access, and strong internal coordination. Bapas employees do not only perform administrative functions but also carry responsibilities related to correctional services that require accurate and accessible data support. Therefore, modernization of administrative systems through digital technology has become a strategic necessity to enhance institutional capacity and improve public officials' performance. Within this context, Class I Correctional Center of Palembang developed the Gudang Arsip Data (GARDA) Application as an internal innovation for digital personnel archive management.

The GARDA application was designed as a digital instrument to store, manage, and provide systematic access to personnel documents. The existence of this application reflects an effort by public organizations to establish independent data governance and improve administrative efficiency. Theoretically, systems such as GARDA have the potential to accelerate document retrieval processes, reduce dependence on physical archives, improve data security, and strengthen administrative accountability among employees. However, the existence of technology does not automatically generate improved performance if it is not supported by adequate implementation capacity ([Dunleavy, et al., 2020](#)).

The implementation phenomenon of GARDA demonstrates that the success of digital transformation within public organizations depends not only on application design but also on political and administrative factors within bureaucracy. Research findings indicate that GARDA implementation still encounters several challenges, including suboptimal completion of digital documents, limited server infrastructure, insufficient technical support, and the absence of full integration with broader bureaucratic systems. These conditions reveal a gap between the objectives of digitalization policies and the realities of implementation at the organizational level.

From the perspective of public policy implementation, the gap between policy objectives and practical implementation represents a classical issue in government administration. Edwards III explains that successful policy implementation is influenced by four major factors: communication, resources, disposition, and bureaucratic structure. These aspects are highly relevant in explaining how digital innovations within bureaucracy can succeed or encounter obstacles. Communication determines how

policy objectives are understood by implementers; resources determine organizational capacity to execute policies; disposition reflects the acceptance and commitment of bureaucratic actors; while bureaucratic structure determines procedural clarity and distribution of authority (Widodo, 2021).

Communication problems in GARDA implementation are reflected in differences between the strategic objectives of the application and its utilization among users. Although initial instructions regarding application usage were delivered through formal organizational mechanisms, they have not fully resulted in uniform understanding among employees. The absence of continuous evaluation mechanisms and strong technical support has caused some employees to perceive the application as an additional administrative burden rather than an instrument for improving productivity. This condition indicates that digital transformation requires sustainable change communication rather than merely one-way administrative instructions.

In addition to communication, resources represent an essential factor determining the sustainability of digital government innovation. Digitalization requires hardware support, network availability, server capacity, maintenance budgets, and digital competencies among public officials. Research findings indicate that limited local server capacity and insufficient technical training have become major obstacles in optimizing GARDA implementation. This demonstrates that technological investment must be accompanied by human capital investment, as public officials remain the key actors determining whether technology can generate organizational transformation (World Bank, 2021).

Another important aspect concerns bureaucratic disposition toward technological change. In many public organizations, resistance to digitalization is not solely caused by limited technological capabilities but is also related to long-established bureaucratic cultures. Officials accustomed to manual working patterns may perceive digital transformation as a threat to their work comfort or as an additional administrative obligation. Therefore, successful digital transformation requires change-oriented leadership capable of building trust, providing assistance, and creating an adaptive organizational culture (Mergel, *et al.*, 2019).

Furthermore, bureaucratic structure becomes a crucial factor because digital innovation requires procedural certainty and institutional legitimacy. Research findings show that the absence of strong Standard Operating Procedures (SOPs) and limited integration of GARDA with broader bureaucratic systems have resulted in the emergence of dual procedures between digital systems and manual administration. This condition creates an efficiency paradox, where technology intended to accelerate work processes has not yet reduced administrative burdens due to insufficient legitimacy within governmental organizational structures.

From a governance perspective, this phenomenon indicates that digital transformation in government must be understood as a process of institutional change rather than merely a technological project. Successful digital governance requires harmonious relationships between technology, human resources, regulations, and organizational culture. Therefore, innovations such as GARDA require examination through a government science perspective to understand how authority relations, bureaucratic capacity, and public officials' behavior influence the success of digital administrative reform.

The study of GARDA implementation at Class I Correctional Center of Palembang is important because it contributes academically to the development of digital governance studies in the public sector, particularly within correctional institutions, which remain relatively underexplored in digital government transformation literature. This research does not view the application merely as a technological product, but as a bureaucratic reform instrument whose success is determined by policy implementation dynamics, institutional capacity, and bureaucratic readiness.

Therefore, research on the implementation of the Gudang Arsip Data Application as an instrument supporting employee performance optimization at the Palembang Correctional Center has strong relevance within governance and law reform studies. This research seeks to explain how digital innovation can strengthen governmental governance while identifying factors causing gaps between digital policy design and bureaucratic implementation practices. Through George C. Edwards III's policy implementation approach, this study is expected to provide theoretical and practical contributions

toward developing a more adaptive, accountable, and sustainable model of bureaucratic digital transformation.

2. Methodology

This research employs a socio-legal empirical research approach that integrates normative legal analysis with empirical investigation of governance practices within public institutions. This approach was selected because the research does not merely examine legal norms and regulatory frameworks governing digital transformation, public administration, and electronic-based government systems, but also analyzes how these norms are interpreted and implemented through institutional practices. In the context of digital governance reform, the relationship between legal frameworks, bureaucratic structures, technological capacity, and public officials' behavior becomes an important aspect in understanding the effectiveness of administrative innovation. A socio-legal approach enables researchers to examine the interaction between formal legal arrangements and social realities within governmental organizations (Moleong, 2021). This approach is relevant to the implementation of the Gudang Arsip Data (GARDA) application at the Class I Correctional Center of Palembang because the application represents not only a technological innovation but also an institutional reform instrument within public administration.

From a normative perspective, this research examines legal and policy frameworks related to electronic-based government administration, civil servant management, and digital archive governance. The legal materials analyzed include regulations concerning the Electronic-Based Government System (SPBE), civil servant administration, archival management, and bureaucratic reform policies. These legal materials are examined to determine the extent to which GARDA implementation reflects the principles of administrative legality, accountability, effectiveness, and good governance. However, legal compliance alone cannot fully explain the success of digital transformation because implementation is influenced by organizational capacity, human resources, communication mechanisms, and bureaucratic structures. Therefore, this research combines normative analysis with empirical examination to understand the actual implementation process within the institutional environment (Widodo, 2021). The thesis confirms that GARDA implementation must be analyzed through communication, resources, disposition, and bureaucratic structure because digitalization involves more than merely providing technological infrastructure.

The research was conducted at the Class I Correctional Center of Palembang, South Sumatra, Indonesia. The research location was selected through purposive consideration because the institution has developed and implemented the Gudang Arsip Data (GARDA) application as an internal digital innovation for personnel archive management. The selection of this research site is based on the assumption that government digital transformation must be studied within its organizational context, where institutional culture, leadership commitment, and administrative practices influence implementation outcomes. Case study research is appropriate for examining contemporary governance phenomena within real-life organizational settings because it allows researchers to explore processes, interactions, and contextual factors influencing policy implementation (Yin, 2019). The thesis identifies Bapas Class I Palembang as the research locus because GARDA was developed to support administrative efficiency, document accessibility, and employee performance optimization.

The data sources in this research consist of primary and secondary data. Primary data were obtained through semi-structured interviews with selected informants who possess direct knowledge and involvement in GARDA implementation. Informant selection applied purposive sampling, where participants were chosen based on their institutional authority, operational responsibilities, technical expertise, and experience as users of the application. The informants included the Head of the Correctional Center, personnel administration officials, GARDA operators, information technology support staff, functional officers, administrative employees, and related stakeholders. This selection

strategy was intended to capture diverse perspectives regarding managerial decisions, administrative practices, technical challenges, and employee acceptance of digital transformation. Qualitative research emphasizes the importance of selecting information-rich participants who can provide meaningful explanations regarding the phenomenon being studied (Sugiyono, 2019).

In addition to interviews, primary data were collected through direct observation of organizational practices related to digital archive management, application utilization, administrative workflows, and interactions between users and the GARDA system. Observation was conducted to identify differences between formal procedures and actual practices, including accessibility problems, employee adaptation, technological barriers, and organizational responses toward digital transformation. Field notes were systematically documented to support interpretation and ensure data triangulation. The use of observation, interviews, and documentation as complementary techniques strengthens the credibility of qualitative research findings because each method provides different perspectives for understanding institutional realities (Gunawan, 2022). The thesis applies triangulation methods by comparing interview results, observations, and documentary evidence to ensure research validity.

Secondary data were obtained from legal documents, institutional regulations, government policies, official reports, academic publications, and previous studies related to digital governance, bureaucratic reform, policy implementation, and public sector performance. Secondary sources functioned as theoretical and regulatory foundations to evaluate whether GARDA implementation corresponds with broader principles of public governance and administrative reform. Document analysis was conducted to identify the relationship between government digital policies and institutional practices at the operational level (Bowen, 2020).

The data analysis process employed a qualitative descriptive approach consisting of data reduction, data categorization, data interpretation, and conclusion development. The collected empirical data were analyzed by comparing field findings with legal frameworks and theoretical concepts to identify implementation strengths, weaknesses, and institutional gaps. Data validity was maintained through source and method triangulation by comparing statements from different informants with observational findings and official documents (Miles & Saldaña, 2019).

The analytical framework of this research is based on George C. Edwards III's policy implementation theory, which identifies four major dimensions affecting implementation effectiveness: communication, resources, disposition, and bureaucratic structure. These dimensions were operationalized into analytical indicators. The communication dimension examines the clarity, consistency, and effectiveness of information transmission regarding GARDA implementation, including socialization processes, technical guidelines, and feedback mechanisms. The resource dimension analyzes organizational capacity, including human resources, digital competencies, infrastructure availability, server capacity, and maintenance support. The disposition dimension evaluates employee commitment, acceptance, motivation, and resistance toward digital transformation. Meanwhile, the bureaucratic structure dimension examines institutional arrangements, including Standard Operating Procedures (SOPs), authority distribution, coordination mechanisms, and integration between GARDA and broader administrative systems (Nugroho, 2021). The thesis confirms that these four dimensions are essential in explaining why GARDA implementation has not yet achieved optimal organizational performance outcomes.

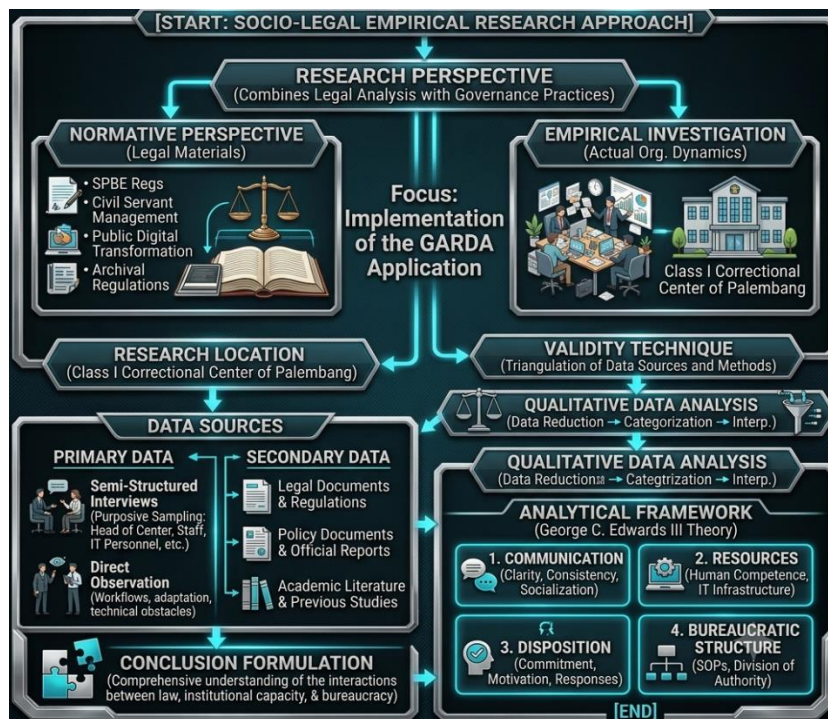


Figure 1. Flowchart of Data Collection, Analysis, and Policy Implementation Dimensions (George C. Edwards III Model) at Class I Correctional Center of Palembang.

Through this socio-legal empirical methodology, this research seeks to provide a comprehensive understanding of digital governance implementation by examining the relationship between legal frameworks, institutional capacity, technological adoption, and bureaucratic behavior. This approach allows the study to explain not only whether GARDA complies with administrative governance principles but also how organizational realities influence the success of digital transformation within government institutions.

3. Results and discussion

The findings of this study indicate that the implementation of the Gudang Arsip Data (GARDA) application at the Class I Correctional Center of Palembang represents an internal digital governance initiative aimed at improving personnel archive management and strengthening administrative efficiency. GARDA was developed as an institutional innovation to transform conventional personnel document management into a digital-based system that enables systematic storage, retrieval, and monitoring of employee documents. The application functions as a digital repository containing various personnel records, including appointment documents, career development records, educational documents, competency certificates, and employee performance-related documents.

The empirical findings reveal that GARDA implementation has produced positive administrative impacts, particularly in improving document organization, reducing the risk of physical archive loss, and accelerating document retrieval processes. Employees experienced greater convenience in accessing personnel documents compared with conventional manual filing mechanisms. The availability of a centralized digital archive also contributed to improving data accuracy because documents were organized based on employee identification numbers and stored within an institutional system. However, despite these benefits, the implementation process has not yet achieved optimal organizational transformation because several governance and institutional challenges remain unresolved.

Based on the analytical framework of Edwards III, the implementation process was examined through four dimensions: communication, resources, disposition, and bureaucratic structure. These four dimensions demonstrate that technological availability alone is insufficient to ensure successful digital governance implementation. Instead, the effectiveness of GARDA depends on the interaction between institutional capacity, employee acceptance, regulatory support, and organizational management mechanisms. The results demonstrate that communication was initially established through formal organizational channels. The leadership of the Class I Correctional Center of Palembang delivered instructions regarding GARDA implementation through official meetings, internal communication channels, and digital communication platforms. This approach enabled rapid dissemination of initial information regarding the purpose and importance of digital archive transformation.

However, the findings indicate that communication effectiveness decreased during the operational phase. Although employees received general instructions regarding GARDA utilization, technical guidance and continuous assistance remained limited. Some employees experienced difficulties understanding document submission procedures, file classification mechanisms, and system utilization processes. Consequently, differences in understanding emerged among employees, particularly between those with higher digital literacy and those who were less familiar with digital systems. The absence of a structured feedback mechanism also became an obstacle in communication effectiveness. Employees experiencing technical problems often relied on informal communication with operators rather than established institutional support channels. The findings indicate that GARDA implementation lacked a sustainable communication strategy involving continuous evaluation, technical consultation, and user assistance.

The resource dimension represents one of the most significant challenges identified in this research. The findings show that GARDA implementation was constrained by limitations in technological infrastructure, financial support, and human resource capacity. Although the application was developed using an internal and cost-efficient approach, sustainability challenges emerged due to limited maintenance support and insufficient technological resources. The research findings indicate that server capacity, network stability, and technical support availability influenced the effectiveness of GARDA operations. During periods of increased document uploads, system performance decreased, affecting employee access and reducing user confidence in the application. In addition, GARDA operators faced limitations because they were assigned operational responsibilities without comprehensive technical training related to system management and troubleshooting.

Human resource capacity was another critical issue. Employees demonstrated different levels of digital competence, creating unequal adaptation patterns. Younger employees tended to adapt more quickly and became informal facilitators for colleagues who experienced difficulties in using the application. Nevertheless, reliance on informal peer assistance indicates that institutional capacity-building mechanisms have not been fully established. The findings show that employee disposition toward GARDA implementation was characterized by both acceptance and resistance. On the positive side, several employees demonstrated commitment and willingness to adopt digital practices, particularly employees who recognized the benefits of digital archives for administrative efficiency.

Nevertheless, the research identified passive resistance among some employees who perceived GARDA as an additional administrative obligation rather than an instrument supporting their daily work. This perception emerged because employees continued to experience dual administrative procedures, where digital submission through GARDA did not completely replace conventional physical document submission requirements. As a result, some employees considered GARDA as increasing administrative workload instead of reducing bureaucratic complexity. The findings also show that employee acceptance was influenced by perceived organizational benefits. Employees were more supportive when they understood the practical advantages of GARDA, such as faster document retrieval and improved administrative security. Conversely, limited integration between GARDA and broader personnel

management systems reduced employee motivation because the application was not yet perceived as having a direct impact on career administration or performance evaluation.

The bureaucratic structure dimension emerged as a major determinant affecting GARDA sustainability. The findings indicate that the absence of formal Standard Operating Procedures (SOPs) created uncertainty regarding document management processes, verification mechanisms, responsibility distribution, and technical problem resolution. Although GARDA had been implemented as an internal innovation, its institutional position remained limited because it had not been fully integrated into the broader bureaucratic ecosystem. The application operated independently without strong regulatory linkage with higher-level administrative systems. This condition created administrative duplication because employees were required to maintain both digital and physical documentation processes.

The unclear division of responsibilities between personnel administrators, GARDA operators, and technical support personnel also influenced implementation effectiveness. When technical problems occurred, employees often experienced difficulties determining the appropriate institutional channel for resolution. Therefore, the bureaucratic structure surrounding GARDA requires strengthening through formal procedures, authority clarification, and institutional integration. The findings identify several supporting factors contributing to GARDA implementation. First, leadership commitment played an important role in initiating digital transformation. The willingness of organizational leaders to move away from conventional archive management created institutional momentum for innovation. Second, the utilization of open-source development frameworks reduced financial dependence on external technology providers. Third, younger employees with stronger digital literacy acted as agents of change by assisting colleagues during the transition process.

However, several inhibiting factors limited GARDA effectiveness. These included insufficient maintenance resources, unstable server infrastructure, limited technical support, absence of formal SOPs, and resistance from some employees. The findings demonstrate that the main challenge was not the absence of technological innovation but the lack of comprehensive governance mechanisms supporting digital transformation. The findings indicate that GARDA contributed positively to several administrative aspects of employee performance. The application improved document organization, increased data accuracy, and accelerated retrieval processes. Employees could access required documents more efficiently compared with traditional archive systems. However, the contribution of GARDA toward systemic employee performance optimization remains limited. The absence of integration with formal performance management systems and broader administrative mechanisms prevented GARDA from becoming a fully transformative governance instrument. Instead of eliminating administrative redundancy, GARDA currently operates alongside conventional procedures, resulting in what can be described as an efficiency paradox.

The findings of this study demonstrate that the implementation of the Gudang Arsip Data (GARDA) application at the Class I Correctional Center of Palembang represents a form of digital governance innovation within public sector administration. However, the results also reveal that technological innovation alone does not automatically produce bureaucratic transformation. The effectiveness of digital government initiatives depends on the interaction between regulatory frameworks, institutional capacity, organizational culture, and the readiness of public officials. These findings reinforce the argument that digital transformation in government should be understood as an institutional reform process rather than merely a technological modernization project (Mergel & Haug, 2019).

The first important finding relates to the role of communication in determining the success of GARDA implementation. Although organizational leaders successfully transmitted initial instructions regarding digital archive transformation, communication effectiveness declined during the operational stage due to limited technical guidance, insufficient feedback mechanisms, and the absence of continuous assistance. This finding confirms Edwards III's policy implementation perspective, which emphasizes that policy messages must not only be transmitted but also clearly understood and

consistently interpreted by implementers. A communication gap between policy makers and operational actors may create implementation distortion, where the original objectives of innovation are not fully realized in practice (Widodo, 2021).

The findings are consistent with previous studies on digital government implementation, which indicate that communication is a critical governance mechanism in ensuring successful technology adoption. Mergel et al. (2019) explain that digital transformation requires organizational change management because public sector employees must understand not only how technology works but also why institutional changes are necessary. In the context of GARDA, employees' limited understanding of the strategic value of digital archives contributed to the perception that the application represented an additional administrative burden rather than an instrument for improving efficiency. Therefore, digital governance initiatives require communication strategies that emphasize organizational benefits, role clarity, and continuous engagement rather than one-directional instructions.

The second finding concerns resource limitations as a major determinant affecting GARDA sustainability. The research indicates that insufficient infrastructure capacity, limited server availability, and inadequate technical training constrained the effectiveness of the application. This finding highlights that digital transformation requires more than technological availability; it requires organizational readiness, including financial resources, skilled personnel, and sustainable maintenance mechanisms. According to the World Bank (2021), many digital government programs fail not because of technological limitations but because institutions lack the organizational capability required to maintain and scale digital systems.

The GARDA case illustrates this challenge clearly. Although the application was developed as an internal innovation with relatively low financial dependency, the absence of long-term resource planning created operational vulnerabilities. Limited server capacity and insufficient technical support reduced system reliability and influenced employee trust toward the technology. This finding supports Janssen and van den Hoven's (2019) argument that digital government requires strong information governance mechanisms, including infrastructure reliability, data management capacity, and institutional responsibility for technology sustainability.

From the perspective of public administration reform, these findings indicate that digital transformation must be accompanied by investment in human capital. Technology adoption requires employees who possess adequate digital competencies and the ability to adapt to changing administrative processes. Becker and Huselid (2020) emphasize that organizational performance improvements depend on the alignment between technological systems and human resource capabilities. Therefore, improving GARDA effectiveness requires structured digital literacy programs, technical training, and professional development for employees rather than relying only on informal peer assistance among digitally skilled staff.

The third finding relates to employee disposition toward digital transformation. The research identified a combination of acceptance and passive resistance among employees. Some employees recognized the benefits of GARDA, particularly regarding faster document retrieval and improved archive organization. However, others perceived the application as an additional administrative requirement because digital procedures had not fully replaced manual processes. This situation demonstrates that resistance to digital transformation is not always caused by technological inability but also by institutional uncertainty and unclear organizational incentives.

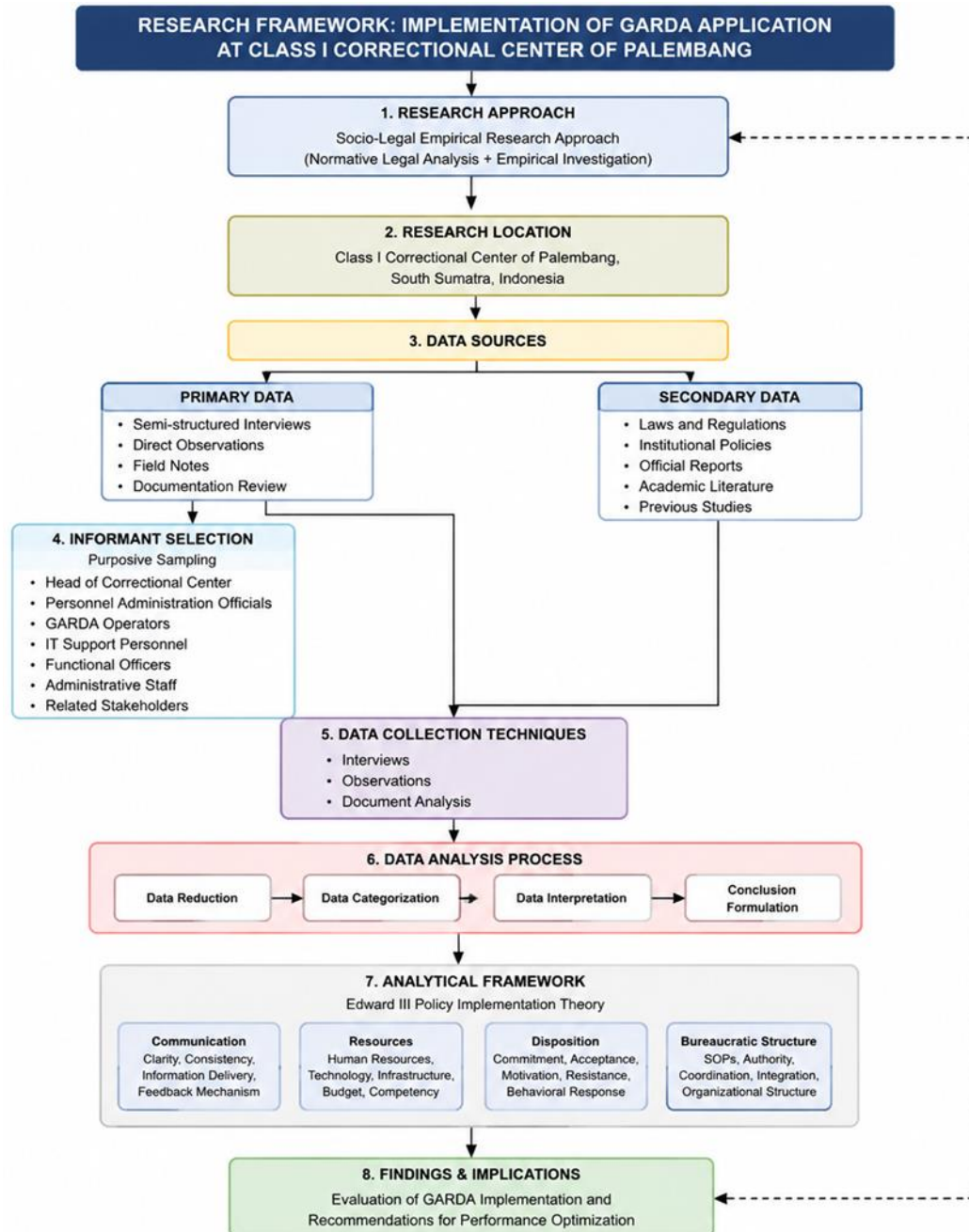


Figure 2. GARDA Implementation Research Framework

This finding is consistent with Kane et al. (2019), who argue that digital transformation is fundamentally a leadership and organizational culture issue. Technology adoption requires a shared organizational understanding that digital systems provide meaningful improvements to work processes. Without such understanding, employees may comply formally with technology requirements while maintaining previous bureaucratic practices. In the GARDA implementation context, the continuation of physical documentation procedures weakened employees' perception of the application's practical value and reduced motivation for full adoption.

The fourth finding concerns bureaucratic structure and institutional legitimacy. The research reveals that the absence of formal Standard Operating Procedures (SOPs), unclear authority distribution,

and limited integration with broader administrative systems became significant barriers to GARDA effectiveness. This finding demonstrates that digital innovation within government institutions requires strong institutional arrangements. Without clear rules and organizational legitimacy, digital systems may operate as isolated technological tools rather than integrated governance mechanisms. This result supports the perspective of digital governance scholars who argue that successful digital transformation requires alignment between technology architecture and institutional architecture. According to [OECD \(2020\)](#), digital government maturity depends on integrated governance structures, coordinated processes, and institutional ownership of digital systems. In the GARDA case, the application has demonstrated technical benefits but has not yet achieved full governance integration because it remains separated from broader personnel management systems.

The findings also reveal an important governance paradox. On one hand, GARDA improves administrative order, document accessibility, and data accuracy. On the other hand, incomplete institutional integration creates administrative duplication because employees must maintain both digital and manual procedures. This situation reflects what digital governance literature describes as partial transformation, where technological innovation exists without corresponding organizational redesign ([Dunleavy et al., 2020](#)). Therefore, digitalization should not only focus on converting physical documents into digital formats but also redesign administrative processes to eliminate unnecessary bureaucratic complexity. The contribution of this research lies in demonstrating that digital governance implementation within correctional institutions requires a multidimensional approach combining legal legitimacy, organizational capacity, and administrative reform. Previous studies on digital government often focus on service delivery or technological development, while this research highlights the internal governance dimension of digital transformation, particularly personnel archive management within a government institution.

The GARDA case provides evidence that internal administrative digitalization can strengthen bureaucratic accountability when supported by appropriate institutional mechanisms. From a socio-legal perspective, the implementation of GARDA illustrates the relationship between formal administrative regulations and organizational practices. Legal and policy frameworks provide legitimacy for digital transformation, but actual implementation depends on how bureaucratic actors interpret, accept, and operationalize these frameworks. Therefore, governance reform cannot be achieved solely through regulatory mandates; it requires institutional learning, leadership commitment, and continuous adaptation among public officials.

The findings also have practical implications for government institutions. First, organizations implementing digital governance initiatives should establish clear regulatory frameworks, including SOPs, authority structures, and integration mechanisms with existing government systems. Second, institutions should strengthen digital competencies through continuous training and technical support. Third, leadership should promote organizational change by building employee awareness that digital transformation is not merely an administrative obligation but a strategy for improving institutional performance. Overall, this study confirms that GARDA represents an important step toward digital bureaucratic reform at the Class I Correctional Center of Palembang. However, achieving sustainable digital governance requires moving beyond technology adoption toward comprehensive institutional transformation. The success of digital reform depends on the synergy between communication, resources, employee commitment, and bureaucratic restructuring. Therefore, the GARDA model provides valuable insights for other government institutions seeking to develop digital governance systems that are adaptive, accountable, and aligned with principles of good governance.

4. Conclusion

This study concludes that the implementation of the Gudang Arsip Data (GARDA) application at the Class I Correctional Center of Palembang represents an important institutional innovation in

strengthening digital governance and bureaucratic reform within public sector organizations. The research advances the current understanding of digital transformation by demonstrating that the effectiveness of government digitalization is not determined solely by technological availability but by the interaction between legal legitimacy, organizational capacity, bureaucratic structure, and human behavior. Through a socio-legal empirical approach, this study reveals that GARDA functions not merely as an electronic archive management tool but as an administrative reform instrument that has the potential to improve accountability, efficiency, and information governance within governmental institutions. The findings contribute to governance studies by expanding the discussion of digital transformation beyond service-oriented applications toward internal bureaucratic management, particularly in the context of correctional institutions that remain relatively underexplored in digital government research.

The research objectives were achieved by identifying how GARDA implementation operates through four dimensions of policy implementation: communication, resources, disposition, and bureaucratic structure. The study demonstrates that successful digital governance requires effective communication mechanisms, adequate technological and human resources, positive employee disposition, and strong institutional arrangements. Although GARDA has contributed to improving personnel archive organization, data accuracy, and document accessibility, its transformative impact remains limited due to unresolved governance challenges. These challenges include insufficient technical support, limited infrastructure capacity, absence of comprehensive operational procedures, incomplete institutional integration, and the persistence of dual administrative processes between digital and conventional systems. These findings provide empirical evidence that digital transformation initiatives within government institutions require simultaneous reform of technology, regulations, organizational processes, and bureaucratic culture.

The theoretical contribution of this research lies in strengthening the application of policy implementation theory within the context of digital governance reform. The study confirms that Edwards III's framework remains relevant for explaining the success and limitations of digital innovation implementation because communication, resources, disposition, and bureaucratic structure continue to determine whether technological initiatives can generate organizational change. However, this research extends the framework by emphasizing the importance of institutional legitimacy and digital governance integration as additional considerations in understanding contemporary bureaucratic transformation. Thus, this study provides a broader conceptual perspective that digital governance should be analyzed as a socio-institutional process rather than merely a technological adoption process.

Practically, this research provides implications for government organizations implementing digital transformation programs. Public institutions should develop comprehensive governance mechanisms that include clear regulatory foundations, standardized operating procedures, sustainable infrastructure planning, continuous digital competency development, and effective change management strategies. The GARDA model may serve as a reference for other governmental institutions seeking to develop internal digital governance systems that enhance administrative performance and accountability. However, further development is required to ensure interoperability with broader government information systems, particularly personnel management and performance evaluation platforms, so that digital applications can generate systemic improvements rather than operate as isolated innovations.

Future research should extend this study by conducting comparative analyses across different government institutions to identify variations in digital governance implementation based on organizational characteristics and institutional environments. Further studies may also employ mixed-method approaches or quantitative evaluation models to measure the direct relationship between digital governance maturity, employee performance, and organizational effectiveness. Longitudinal research is also recommended to examine how institutional learning, regulatory adaptation, and technological development influence the sustainability of digital transformation initiatives over time. Through these

future research directions, the development of digital governance in the public sector can move beyond technology adoption toward the creation of adaptive, accountable, and sustainable government institutions.

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