



## Original Article

### The Implementation of Analog-to-Digital Records Management in Government Institutions to Support the Adoption of an Electronic-Based Government System (A Study at the Office of the Trade Order Supervision Center (BPTN) Surabaya, Ministry of Trade of the Republic of Indonesia)

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#### Abstract:

This study examines the implementation of the transition from analog to digital records management in a government institution as a strategic effort to support the adoption of an Electronic-Based Government System (SPBE). The research was conducted at the Office of the Trade Order Supervision Center (Balai Pengawasan Tertib Niaga/BPTN) Surabaya, Ministry of Trade of the Republic of Indonesia. A descriptive qualitative approach was employed, with data collected through observation, documentation, and a review of relevant literature. Data analysis involved identifying archival management problems, assessing priority issues using the APKL (Actual, Problematic, Feasible, and Appropriate) method, and formulating strategies through SWOT analysis. The findings reveal that archival management at BPTN Surabaya faced several challenges, including unstructured storage systems, difficulties in document retrieval, limited archival space, and the absence of standardized operating procedures. The study demonstrates that the development of integrated Standard Operating Procedures (SOPs) supported by a database-based digital archival system can significantly improve storage efficiency, accelerate document retrieval, and enhance archival security and sustainability. This research concludes that comprehensive digital records management is not merely a technical solution but a fundamental component of effective, accountable, and sustainable archival governance in supporting government supervision functions and SPBE implementation.

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## Introduction

The rapid advancement of information and communication technology has

significantly transformed administrative and managerial practices within organizations, including public sector institutions. In the context of government administration, information is a critical resource that supports decision-making processes, operational efficiency, transparency, and accountability. Consequently, effective records management has become an essential component of modern governance, as records serve not only as administrative evidence but also as legal proof and institutional memory.

Traditionally, many government institutions in Indonesia have relied on analog or paper-based records management systems. Although such systems have long been used, they often create various challenges, including unstructured storage, difficulties in document retrieval, limited physical storage space, and a high risk of document loss or damage. These problems can hinder organizational performance and reduce the quality of public services. As the volume of documents continues to increase, conventional archival practices are no longer sufficient to meet the demands for speed, accuracy, and reliability of information.

In response to these challenges, the Government of Indonesia has promoted digital transformation through the implementation of the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik/SPBE), as mandated by Presidential Regulation No. 95 of 2019. One of the key elements of SPBE is the digitalization of records management, which aims to integrate information systems, improve efficiency, enhance data security, and strengthen institutional accountability. Digital records management enables government agencies to manage documents systematically, facilitate faster access to information, and support transparent and traceable administrative processes.

The Office of the Trade Order Supervision Center (Balai Pengawasan Tertib Niaga/BPTN) Surabaya, under the Ministry of Trade of the Republic of Indonesia, plays a strategic role in supervising trade order, particularly in post-border import control. This function generates a large volume of supervision documents that are critical for regulatory enforcement and accountability. However, prior to this study, BPTN Surabaya had not yet implemented an integrated digital records management system, resulting in inefficiencies in document organization and retrieval.

Therefore, this study focuses on the implementation of analog-to-digital records management at BPTN Surabaya as part of organizational change to support SPBE adoption. By analyzing internal and external factors and formulating strategic and operational steps, this research aims to contribute to the development of effective and sustainable digital records management practices within government institutions.

## Methods

This study employed a descriptive qualitative research design with a case study approach to examine the implementation of the transition from analog to digital records management in a government institution. A qualitative approach was chosen because it allows an in-depth exploration of processes, experiences, and organizational dynamics related to records management transformation ([Creswell, 2014](#)). The case study was conducted at the Office of the Trade Order Supervision Center (Balai Pengawasan Tertib Niaga/BPTN) Surabaya, Ministry of Trade of the Republic of Indonesia, as the institution had not yet fully implemented an integrated digital archival system.

Data collection was carried out using multiple techniques, including direct observation, in-depth interviews, and documentation review. Observation was

conducted to examine archival conditions, document storage practices, and retrieval processes in the existing system ([Sugiyono, 2019](#)). In-depth interviews were conducted with key informants selected through purposive sampling, consisting of institutional leaders, administrative officials, and staff directly involved in records management. This technique was applied to obtain comprehensive and accurate information from individuals who possess relevant knowledge and experience ([Miles, Huberman, & Saldaña, 2014](#)). Documentation review included internal reports, archival records, standard operating procedures, and government regulations related to records management and the implementation of the Electronic-Based Government System (SPBE).

Data analysis was performed using a qualitative descriptive analysis technique, following three main stages: data reduction, data display, and conclusion drawing ([Miles et al., 2014](#)). To strengthen the analytical framework, a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was applied to identify internal and external factors affecting the digitalization of records management ([Rangkuti, 2018](#)). Furthermore, the APKL method (Actual, Problematic, Feasible, and Appropriate) was employed to prioritize strategic issues and formulate operationally feasible solutions ([Idris, as cited in Pertapan, 2022](#)). [Data](#) validity was ensured through triangulation of sources and methods to enhance credibility and reliability of the research findings ([Sugiyono, 2019](#)).

## Results

The findings of this study indicate that the existing records management system at the Office of the Trade Order Supervision Center (BPTN) Surabaya was predominantly analog and had not yet been supported by an integrated digital archival system. Archival documents resulting from supervision activities were stored manually, leading to several operational challenges. These challenges included unstructured document organization, difficulties in retrieving records when needed, limited physical storage capacity, and potential risks related to document security and preservation. Similar conditions have been identified in previous studies, which note that manual records management often reduces organizational efficiency and increases the risk of information loss ([Aulia & Kurniawan, 2022](#)).

From the internal analysis, the study found that BPTN Surabaya possessed several strengths that could support the transition to digital records management. These strengths included strong leadership commitment, positive attitudes of staff toward technological change, and basic computer literacy among employees. However, internal weaknesses were also identified, particularly the absence of standardized operating procedures (SOPs) for digital archiving, limited archival infrastructure, and uneven digital competencies among staff members. These findings align with [Cahyani et al. \(2025\)](#), who emphasize that inadequate SOPs and human resource readiness often become key barriers in digital transformation initiatives within public institutions.

External analysis revealed significant opportunities that could facilitate digitalization efforts. These opportunities included strong policy support through Presidential Regulation No. 95 of 2019 on the Electronic-Based Government System (SPBE), rapid advancements in information technology, and increasing demands for transparency and accountability in public administration. Conversely, potential threats were identified, such as data security risks, possible resistance to organizational change, and technical disruptions related to hardware or system failures. Such external

challenges have also been highlighted by [Saefulrahman et al. \(2025\)](#) as common risks in implementing digital records management systems in government agencies.

Based on the SWOT analysis, several strategic alternatives were formulated to support the transition from analog to digital records management. These strategies were further refined using the APKL (Actual, Problematic, Feasible, and Appropriate) method to determine priority actions. The results of the APKL analysis indicated that the most urgent and feasible strategy was the development of integrated SOPs supported by a database-based digital archiving system. This approach was considered effective in addressing existing problems while remaining aligned with institutional capacity and regulatory requirements ([Rangkuti, 2018](#); [Pertapan, 2022](#)).

Overall, the results demonstrate that the implementation of a structured digital records management system, supported by clear procedures and organizational readiness, has the potential to improve storage efficiency, accelerate document retrieval, and enhance archival security. These findings reinforce the view that digital records management plays a crucial role in strengthening governance quality and supporting the successful implementation of SPBE in government institutions ([Miles et al., 2014](#); [Sugiyono, 2019](#)).

The findings of this study highlight that the implementation of digital records management at BPTN Surabaya is not merely a technological shift but represents a broader process of organizational change within the public sector. The persistence of analog records management practices reflects a common condition in many government institutions, where archival functions are often perceived as administrative support rather than as strategic assets for governance and decision-making. Previous studies confirm that inadequate records management systems can significantly hinder organizational efficiency and institutional accountability ([Aulia & Kurniawan, 2022](#); [Saefulrahman et al., 2025](#)).

One of the key findings of this research is the presence of strong leadership commitment and positive employee attitudes toward digital transformation. Leadership support has been widely recognized as a critical success factor in digital change initiatives, particularly in public organizations characterized by hierarchical structures and procedural rigidity ([Cahyani et al., 2025](#)). The willingness of leaders at BPTN Surabaya to endorse digitalization initiatives creates an enabling environment for organizational change, reducing resistance and fostering employee engagement. This finding supports the argument of [Miles et al. \(2014\)](#) that leadership plays a decisive role in shaping organizational readiness for change.

Despite this internal readiness, the absence of standardized operating procedures (SOPs) for digital records management emerged as a significant weakness. SOPs function as formal instruments that translate policy directives into operational practices. Without clear SOPs, digitalization efforts risk becoming fragmented and inconsistent, leading to discrepancies between physical and digital records. This condition aligns with findings from [Indriati and Supardal \(2023\)](#), who emphasize that the lack of procedural standards often undermines the sustainability of digital archival systems in public institutions.

From a technological perspective, the adoption of a database-based digital archiving system offers substantial advantages in terms of efficiency, accessibility, and security. Digital records systems enable faster retrieval of documents, reduce physical storage requirements, and minimize the risk of document loss or deterioration ([Azahra &](#)

[Putra, 2024](#)). However, the effectiveness of such systems is highly dependent on human resource capacity and institutional discipline in maintaining data integrity. As noted by ISO 15489-1:2016, digital records must maintain authenticity, reliability, integrity, and usability throughout their lifecycle, regardless of the storage medium.

The SWOT and APKL analyses applied in this study provide a structured framework for understanding both contextual challenges and strategic priorities. The SWOT analysis reveals that external policy support, particularly Presidential Regulation No. 95 of 2019 on SPBE, creates a strong institutional mandate for digital records management. This regulation positions digital archives as an integral component of e-government, reinforcing transparency, accountability, and inter-agency integration (Presidential Regulation No. 95/2019). Nevertheless, external threats such as data security risks and technological disruptions must be addressed through robust governance mechanisms and adequate infrastructure investment ([Zainuddin et al., 2023](#)).

The APKL analysis further refines strategic priorities by emphasizing the feasibility and relevance of proposed interventions. The prioritization of SOP development and integrated digital systems demonstrates that effective digital transformation does not always require complex or costly solutions. Instead, it requires alignment between institutional needs, regulatory frameworks, and available resources. This finding is consistent with [Rangkuti \(2018\)](#), who argues that strategic success depends on the organization's ability to translate analytical insights into actionable and context-sensitive solutions.

In the broader context of public sector reform, the implementation of digital records management at BPTN Surabaya contributes to the realization of good governance principles. Digital archives enhance transparency by ensuring traceable and auditable records, support accountability by preserving evidence of institutional actions, and improve service quality through faster information access ([Iqbal et al., 2023](#)). Consequently, digital records management should be viewed as a foundational element of bureaucratic modernization rather than a standalone administrative innovation.

Overall, this discussion reinforces the notion that digital records management is a socio-technical process involving technology, human resources, organizational culture, and regulatory compliance. The experience of BPTN Surabaya illustrates that successful implementation depends on the integration of these elements within a coherent change management strategy. These findings contribute to the growing body of literature on digital transformation in government institutions and offer practical insights for similar organizations seeking to align archival management with SPBE objectives.

## Conclusion

This study concludes that the transition from analog to digital records management at the Office of the Trade Order Supervision Center (BPTN) Surabaya is a strategic necessity to support the implementation of the Electronic-Based Government System (SPBE). The findings indicate that the existing analog records management system has led to inefficiencies in document organization, retrieval, storage capacity, and archival security, thereby constraining organizational performance and accountability.

The analysis demonstrates that BPTN Surabaya possesses adequate internal

readiness to implement digital records management, particularly in terms of leadership commitment and positive staff attitudes toward technological change. However, significant challenges remain, including the absence of standardized operating procedures, limitations in archival infrastructure, and uneven digital competencies among personnel. External factors, such as strong regulatory support for SPBE and advancements in information technology, provide substantial opportunities, while data security risks and potential resistance to change represent key threats.

Overall, this study confirms that the development of integrated standard operating procedures supported by a database-based digital archiving system constitutes an effective strategy for managing organizational change. Such an approach not only enhances efficiency and accessibility of records but also strengthens archival governance by ensuring accountability, security, and sustainability. Therefore, comprehensive digital records management should be regarded not merely as a technical innovation, but as a fundamental element of good governance and public sector reform in support of SPBE implementation.

### **Suggestion**

Based on the findings and conclusions of this study, several recommendations are proposed to support the sustainable implementation of digital records management in government institutions. First, the Office of the Trade Order Supervision Center (BPTN) Surabaya is advised to formally establish and institutionalize standardized operating procedures (SOPs) for digital records management. These SOPs should be aligned with national regulations on archiving and the Electronic-Based Government System (SPBE) to ensure consistency, compliance, and accountability across all organizational units.

Second, continuous capacity building programs should be implemented to enhance the digital competencies of personnel involved in records management. Regular training, technical workshops, and knowledge-sharing activities are essential to reduce skill gaps, strengthen adaptability to technological change, and foster a digital-oriented organizational culture. This effort will also help minimize resistance to change and improve the effectiveness of system utilization.

Third, it is recommended that BPTN Surabaya gradually invest in adequate archival infrastructure, including secure server facilities, reliable hardware, and data backup systems. Strengthening information security measures, such as access control and data protection protocols, is crucial to mitigate risks associated with digital records management and to ensure the long-term preservation of institutional records.

Finally, future research is encouraged to expand the scope of analysis by employing quantitative or mixed-method approaches, as well as comparative studies across different government institutions. Such studies may provide broader empirical evidence on the effectiveness of digital records management systems and contribute to the development of best practices for supporting SPBE implementation at the national level.

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