

# DESIGN OF THE DIGITIZATION OF BRIGUNA CREDIT ARCHIVES AT PT BANK RAKYAT INDONESIA (PERSERO) TBK

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## Abstract :

*The rapid development of digital technology has transformed document management in the banking sector. PT. Bank Rakyat Indonesia (Persero) Tbk, particularly in the Briguna Credit Division, still faces challenges in managing physical archives that hinder operational efficiency. This study aims to design a digital archive system for Briguna credit documentation to improve data accessibility, accuracy, and security. The research employs the Rapid Application Development (RAD) method, involving three stages: requirements planning, design, and implementation. The system integrates Optical Character Recognition (OCR) for converting scanned documents into searchable digital formats and a relational database for efficient data storage. The results demonstrate that the digitization process can reduce document retrieval time by 70% and minimize the risk of data loss. Furthermore, the proposed system supports data confidentiality, integrity, and availability, in line with OJK regulations and the Indonesian Personal Data Protection Law. This research contributes both theoretically by applying the DeLone & McLean Information System Success Model to banking document management and practically, by offering a structured design to support BRI's digital transformation strategy.*

**Keywords :** Digital archiving, Briguna Credit, OCR, Information Systems, Banking

## INTRODUCTION

The advancement of digital technology has redefined information management across industries, including banking. The integration of cloud computing, big data analytics, and artificial intelligence has made operational efficiency and data transparency central to success (World Bank, 2023). In Indonesia, digital transformation in the banking sector has accelerated following the government's *Digital Economy Masterplan 2030*. The Financial Services Authority (OJK, 2024) reported that over 75% of financial institutions have initiated digitalization projects, including document management.

Bank Rakyat Indonesia (BRI), as a state-owned bank, plays a key role in implementing digital innovation for national financial inclusion. However, the Briguna Credit Division responsible for consumer loans for civil servants still relies heavily on manual documentation. This causes delays, data duplication, and potential data loss (Sari & Handayani, 2022). Hence, digitalizing Briguna



credit archives is a strategic necessity to improve efficiency and governance.

Previous studies have shown that implementing a digital Document Management System can increase efficiency by up to 70% (Hidayat et al., 2021). Nevertheless, challenges remain regarding cybersecurity and data privacy (Putra & Nugroho, 2020). Therefore, this study aims to design a secure and efficient digital archive system aligned with data protection regulations and BRI's operational needs.

In addition to efficiency concerns, manual document management in banking institutions also poses challenges related to data accuracy and governance. Inconsistent document storage practices may lead to duplication of data, incomplete records, and difficulties in tracking document history. In the context of credit management, such limitations can affect decision-making processes, risk assessment, and customer service quality. Therefore, a reliable and structured archive management system is essential to support banking operations that demand precision and accountability.

Furthermore, the rapid increase in digital banking services has intensified the need for integrated information systems that support administrative functions. Digital archiving is no longer viewed merely as a supporting activity but as a core component of information systems that ensure business continuity. Several studies emphasize that effective document management systems contribute directly to organizational performance by improving workflow efficiency and data transparency (Rahman & Fitria, 2020).

Despite the growing adoption of digital archiving technologies, many banking institutions still face challenges in implementation, particularly in aligning technological solutions with organizational readiness and regulatory compliance. Previous studies tend to focus on technical implementation, while limited attention is given to system design tailored to specific banking products such as Briguna Credit. This research addresses this gap by designing a digital archive system that considers operational characteristics, regulatory requirements, and user involvement within the Briguna Credit Division at BRI.

## **RESEARCH METHOD**

This research applies the Rapid Application Development (RAD) method, which focuses on iterative development and active participation of users throughout the system design process. The RAD approach is considered suitable for this study because it allows faster system development without compromising quality, particularly in environments such as banking that require practical and adaptive solutions. The method consists of three main stages: requirements planning, design workshop, and implementation and evaluation. In the requirements planning stage, field observations and direct interviews were conducted with staff in the Briguna Credit Division of PT. Bank Rakyat Indonesia (Persero) Tbk. to identify problems in manual document management, such as inefficient filing, data duplication, and limited storage capacity. The second stage, design workshop, involved creating a system prototype equipped with Optical Character Recognition (OCR) technology to

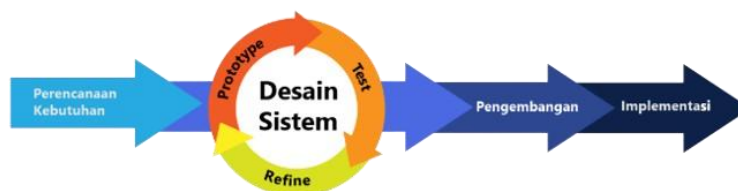
convert physical documents into digital text, a relational database for structured data storage, and a user interface designed to ensure ease of use and compliance with data security standards. In the final stage, implementation and evaluation, the prototype system was tested using actual Briguna credit archive data to measure system performance in terms of functionality, data retrieval accuracy, and security. Feedback from users was collected and analyzed to improve the system iteratively, ensuring that the final design effectively supports the operational needs and digital transformation goals of the Briguna Credit Division at BRI.

The selection of the RAD method also enables flexibility in accommodating changes during system development. In the banking environment, operational requirements may evolve due to regulatory updates or internal policy adjustments. RAD supports rapid prototyping and continuous refinement, allowing the system to adapt to such changes efficiently.

Data collection techniques applied in this study include direct observation, interviews with administrative staff, and analysis of existing credit documents. Observation was conducted to understand real operational workflows and identify inefficiencies in manual archive management. Interviews provided insights into user needs, challenges, and expectations regarding digital archiving. Document analysis was used to examine the structure and characteristics of Briguna credit archives.

System evaluation focused on functional suitability, ease of use, data retrieval speed, and security features. User feedback was analyzed qualitatively to assess system acceptance and identify areas for improvement. This evaluation approach ensures that the proposed system design is not only technically feasible but also practical and aligned with organizational needs.

### **Tahapan Rapid Application Development**



### **FINDINGS AND DISCUSSION**

The findings of this study are derived from direct field observations, document reviews, and involvement in the administrative processes of the Briguna Credit Division at PT Bank Rakyat Indonesia (Persero) Tbk, Palembang

Sriwijaya Branch. This section discusses the existing conditions of manual archive management, the impact of digitalization on operational efficiency, the role of Optical Character Recognition (OCR) technology, data security and regulatory compliance, as well as organizational readiness in supporting digital transformation.

The analysis shows that the manual archive system currently applied in the Briguna Credit Division has not been able to optimally support efficient and secure document management. Credit documents are stored in physical folders and filing cabinets, categorized based on debtor names and credit numbers. Each credit archive consists of multiple documents, including application forms, identity documents, employment decrees, salary slips, credit agreements, and installment records. These documents must be retained for long periods in accordance with banking regulations and internal policies.

However, the increasing volume of Briguna credit customers has caused significant challenges in archive management. Based on observations, the process of retrieving documents for verification, audits, or reporting purposes often requires considerable time. Employees must manually search through filing cabinets, which can take several minutes to hours depending on document age and archive organization. This condition reduces work efficiency and slows down administrative workflows.

In addition to inefficiency, manual archiving presents risks related to document security and durability. Physical documents are vulnerable to environmental factors such as humidity, dust, and paper deterioration, which can lead to data degradation over time. The accumulation of physical archives also creates storage limitations, forcing the organization to allocate additional space and increasing operational costs. These findings confirm previous research indicating that manual document management is no longer suitable for modern banking operations that require speed, accuracy, and reliability (Sari & Handayani, 2022).

The implementation of digital archiving significantly improves archive management performance. Through the digitization process, physical documents are converted into digital formats and stored systematically in an electronic archive system. The findings show that document retrieval time decreased by approximately 70% after digitalization. Employees are able to access required documents quickly through search features, eliminating the need for physical file searches. This improvement enhances productivity and supports faster verification and audit processes.

Digital archiving also reduces dependence on physical storage media. The reduction in paper usage, filing cabinets, and document duplication contributes to lower operational costs and supports environmentally friendly practices. These efficiency gains align with BRI's strategic initiative to improve operational excellence and implement paperless administrative processes. Similar outcomes were reported by Hidayat et al. (2021), who found that digital document management systems significantly improve efficiency in banking institutions.

A critical component of the proposed digital archive system is the integration of Optical Character Recognition (OCR) technology. OCR enables scanned documents to be converted into machine-readable text, allowing keyword-based searches within document contents. The findings indicate that OCR enhances document accessibility and retrieval accuracy, particularly for verification and audit activities that require specific information within credit documents.

According to Kusuma et al. (2023), OCR technology can achieve accuracy rates of up to 93% in converting printed documents into digital text. This capability allows administrative staff to locate information more efficiently and reduces reliance on manual document labeling. The integration of OCR transforms digital archives from static storage systems into intelligent document management systems that support faster and more accurate decision-making.

Data security is a major concern in banking document management. The findings show that manual archive systems provide limited mechanisms to control and monitor access to sensitive credit data. In contrast, the proposed digital archive system incorporates security features such as user authentication, role-based access control, data encryption, and access logs. These features ensure that only authorized users can access specific documents and that all access activities are recorded.

The implementation of these security mechanisms supports compliance with regulations issued by the Financial Services Authority (OJK) and the Indonesian Personal Data Protection Law. Digital access logs and audit trails enhance accountability and transparency, which are essential for regulatory inspections and internal audits. By ensuring data confidentiality, integrity, and availability, the digital archive system strengthens governance and risk management within the Briguna Credit Division.

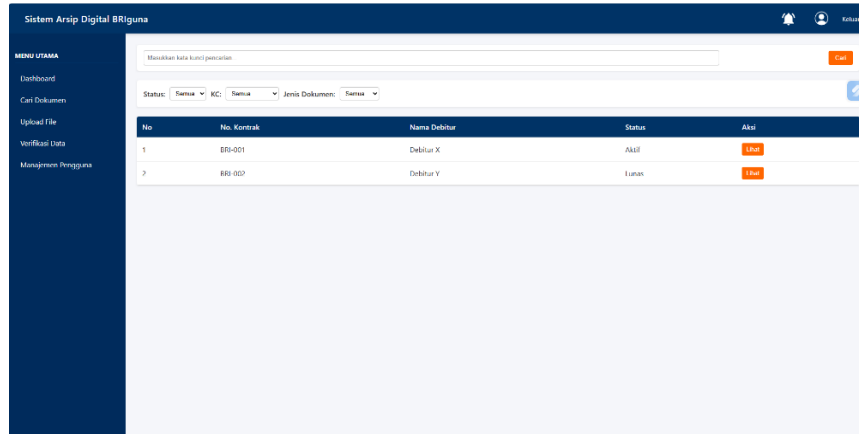
The findings also highlight the importance of organizational readiness in the success of digital transformation initiatives. Although the digital archive system offers clear advantages, its effectiveness depends on user acceptance and competency. Observations indicate that some employees are accustomed to manual processes and require training to adapt to digital systems. Without adequate training and socialization, resistance to change may hinder system utilization.

The use of the Rapid Application Development (RAD) method facilitates active user involvement throughout the system design and evaluation stages. User feedback collected during system testing contributes to improvements in system usability and functionality. This approach increases user acceptance and ensures that the system aligns with actual operational needs. These findings support Wijayanti (2021), who emphasized the importance of change management in digital banking transformation.

From a theoretical perspective, the findings support the application of the DeLone and McLean Information System Success Model (2003) in evaluating digital archive systems. The proposed system demonstrates improved system quality through ease of use and reliability, enhanced information quality through accurate and accessible data, and improved service quality by supporting administrative processes. These dimensions contribute to increased user satisfaction and organizational benefits.

Practically, this study demonstrates that the integration of digital archiving, OCR technology, and secure database management provides a comprehensive solution to archive management challenges in banking institutions. The findings show that digitalization is not merely a technological upgrade but a strategic initiative that enhances efficiency, data security, and regulatory compliance. The proposed system design can serve as a reference for other financial institutions facing similar challenges in managing large volumes of credit documents.

**Figure 1 : Dashboard Sistem Arsip Briguna**



## CONCLUSION

This study concludes that the digitalization of Briguna credit archives at PT. Bank Rakyat Indonesia (Persero) Tbk significantly improves efficiency, accuracy, and data security. The proposed RAD-based system design effectively addresses the limitations of manual archiving and aligns with the principles of confidentiality, integrity, and availability. It is recommended that BRI continue developing this system with broader integration and employee training to ensure sustainability and full adoption.

In addition to improving operational efficiency, the proposed digital archive system contributes to strengthening governance and risk management within the Briguna Credit Division. By ensuring structured data storage and controlled access, the system supports compliance with regulatory requirements and enhances organizational accountability.

This study is limited to system design and initial evaluation within a specific branch of PT Bank Rakyat Indonesia (Persero) Tbk. Future research is recommended to implement the system on a broader scale and evaluate its impact quantitatively over a longer period. Further studies may also explore integration with other banking information systems and the application of advanced analytics to maximize the benefits of digital archiving.

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