



JOURNAL

**ANALYSIS OF EMPLOYEE DOCUMENT ARCHIVE RETRIEVAL
THROUGH THE IMPLEMENTATION OF A QR CODE SYSTEM AT
PT X**

Thabita Salsabila Putri¹, Christian Wiradendi Wolor², Wida Aristanti³

thabitasalsabilaputri06@gmail.com

Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

Abstract:

This study aims to analyze the implementation of a QR Code system in the retrieval process of employee document archives at PT X. The research focuses on the implementation of the QR Code system, the challenges encountered during its use, and the efforts undertaken to support the effectiveness of the archive retrieval process. This study employed a descriptive method with a qualitative approach. Data were collected through observation, in-depth interviews, and documentation. The research participants consisted of one manager and three employees from the Human Capital Division who were directly involved in managing employee document archives and utilizing the QR Code system. The findings indicate that the QR Code system is implemented by linking physical archives with digital archives stored in Google Drive. Each archive box is equipped with a QR Code that can be scanned to access digital folders categorized according to employee document types. The implementation of this system has facilitated and accelerated the archive retrieval process, enabling users to locate archival information more efficiently. However, several challenges remain, including technical issues related to unstable internet connectivity and archival management issues such as discrepancies between digital and physical archives, as well as inconsistencies in digital file naming. To address these challenges, the company has undertaken various efforts in managing digital archives to support a smoother archive retrieval process. Therefore, the QR Code system has made a positive contribution to enhancing the effectiveness of employee document archive retrieval at PT X.

Keywords:

QR Code, Archive Retrieval, Digital Archives, Employee Documents

BACKGROUND

Advances in information technology are driving organizations to undergo digital transformation in information management. One type of critical information that must be managed effectively is records, as they serve as a source of information, evidence, and the organization's memory, supporting the company's operational activities (Yasa et al., 2023). However, the increasing volume of documents has caused conventional archival systems to face various limitations, such as time-consuming document retrieval processes, the need for large storage spaces, and the risk of loss and damage to records (Anjani et al., 2023). Therefore, many organizations have begun implementing digital archives to facilitate document access and management (Ramdan et al., 2024). In records management, the process of retrieving records is a critical aspect because it relates to the ability to find documents quickly and accurately when needed. One technology that can support this process is the Quick Response Code (QR Code). QR Codes can serve as identifiers that link physical records to digital data, thereby facilitating the search, tracking, and verification of documents (Nugroho et al., 2021). The application of this technology is also relevant to the management of employee records,



which hold significant administrative and legal value (Erlina et al., 2025). PT X has implemented a QR code system for its employee document archives by linking each archive box to digital data stored on Google Drive. However, challenges have arisen during implementation, such as slow scanning due to network limitations and discrepancies between the digital data and the physical documents. These issues indicate that the QR code system is not yet functioning optimally in supporting the document retrieval process. Previous research has shown that QR code systems can improve the efficiency of document management and speed up information retrieval (Noguerra & Crispin, 2023). In addition, electronic archives have also been shown to support increased employee work efficiency (Rahmawati et al., 2024). However, other studies have revealed that network limitations and suboptimal data management remain obstacles to their implementation (Iskandar et al., 2025). Therefore, this study aims to analyze the implementation of the QR code system in the process of retrieving employee document archives at PT X, including the obstacles encountered and efforts to address them.

THEORETICAL FRAMEWORK

Record retrieval is one of the key concepts in the field of records management, relating to a system's ability to locate needed records quickly, accurately, and easily. According to Widjaja (1993) as cited in Diani (2022), record retrieval is a method that allows stored documents or records to be located easily, quickly, and accurately. The success of records retrieval is determined by the ability of the records management system to effectively provide the necessary information when needed. In line with this view, Hamsinah (2024) explain that records retrieval is the process of locating and accessing needed records through an established system so that information can be obtained quickly, accurately, and in accordance with user needs. To support the process of retrieving records, organizations have begun to utilize digital archives as a medium for storing information. According to Anjani et al., (2023) , digital archives are a collection of documents stored in electronic form and managed using information technology to support the storage, management, retrieval, and distribution of information. The use of digital archives allows information to be retrieved more quickly and efficiently compared to conventional archive management. Additionally, Zaida et al., (2024) state that digital archives facilitate the process of accessing, managing, and utilizing information according to user needs. One technology that can be utilized to support digital records management is the Quick Response Code (QR Code). According to Setiyo et al., (2023), a QR Code is a two-dimensional code capable of storing a larger amount of information than conventional barcodes and can be quickly accessed through a scanning process using digital devices. Hidayat et al., (2024) explain that QR codes enable the retrieval of information to be carried out more quickly, easily, and efficiently. In the field of archiving, QR codes serve as a link between physical and digital archives, thereby helping to make the processes of searching for, tracking, and verifying documents more effective. Based on this theory, this study is grounded in the understanding that the implementation of a QR code system can support the archival retrieval process through the integration of physical and digital archives. The use of QR codes allows users to access archival information more easily, while digital archives serve as a storage medium and information provider linked to physical documents. Therefore, the theories of archival retrieval, digital archives, and QR codes are used as the foundation for



analyzing the implementation of a QR code system in the process of retrieving employee documents at PT X.

METHOD

This study employs a descriptive method with a qualitative approach to gain an in-depth understanding of the implementation of the QR Code system in the process of retrieving employee document archives at PT X. The qualitative approach was chosen because it is capable of depicting real-world conditions and revealing the various challenges and efforts involved in implementing the system. The study was conducted at PT X in the Human Capital Division, which is responsible for managing employee document archives. Research informants were selected using purposive sampling, which involves selecting informants based on specific criteria aligned with the research objectives. The informants consisted of one Human Capital Manager and three employees directly involved in managing employee document archives. Research data were collected through observation, semi-structured interviews, and documentation. Subsequently, the data were analyzed through the stages of data collection, data reduction, data presentation, and drawing conclusions. To ensure the validity of the data, this study employed source triangulation by comparing the results of observations, interviews, and documentation obtained during the research.

RESULT

The research findings show that PT X has implemented a QR code system to facilitate the retrieval of employee document archives by linking physical archives in storage boxes to digital archives stored on Google Drive. The implementation of this system helps users identify the location of records and access document information in a more structured manner. This finding aligns with the opinion of Hidayat et al., (2024), who state that QR codes can simplify and speed up access to information. Nevertheless, the implementation of the QR Code system has not yet been optimal. Findings from observations and interviews indicate that the scanning process often experiences delays due to limited internet connectivity. Additionally, discrepancies between digital and physical records have been identified; some documents have not been fully uploaded; and some digital files are named in a way that does not accurately reflect the document's content, making it difficult to identify records. These conditions indicate that the system's effectiveness is influenced not only by technology but also by data management and infrastructure support. To address these challenges, PT X regularly updates its digital archive data, verifies the consistency between digital and physical records, adjusts file names to match the document content, and enhances coordination with the information technology department. These efforts are expected to improve data accuracy and support a more effective process for retrieving employee records.

DISCUSSION

The research findings indicate that the implementation of a QR code system at PT X has helped link physical archives with digital archives, thereby making the process of identifying and retrieving employee documents more structured. This finding aligns with the views of Ariyandi & Handayani (2022), who state that QR codes can improve the efficiency of accessing archival information and speed up the document retrieval process. Additionally, these research results also support the study by Rona et al., (2026), which found that the use of QR codes facilitates archival searches through the interconnection between physical archives and digital data. However, this study indicates that the benefits of QR codes have not yet been fully realized due to ongoing challenges such as limited internet connectivity, discrepancies between digital



and physical records, and digital file names that do not accurately reflect the document's content. These findings support the view of Lestari and Oktarina (2025) that limitations in technological infrastructure can hinder the use of QR codes in records management. Furthermore, the results of this study indicate that the successful implementation of QR codes depends not only on the technology used but also on consistent digital records management. Therefore, regular data updates, adjustments to file naming conventions, and verification of the correspondence between digital and physical records are necessary so that the QR code system can support the records retrieval process more effectively.

CONCLUSION

Based on the research findings, the implementation of the QR Code system in the process of retrieving employee document archives at PT X has helped link physical archives with digital archives stored on Google Drive, thereby making it easier for users to identify and locate the documents they need. However, the implementation of this system is not yet fully optimal because several obstacles remain, namely: the scanning process sometimes takes longer due to limited internet connectivity; discrepancies between digital and physical records; documents that have not been fully uploaded; and the naming of some digital files that does not accurately reflect the document's content. To address these challenges, the company conducts regular checks and updates of archive data, ensures consistency between digital and physical records, corrects the naming of digital files to better reflect the document's content, and enhances coordination with the IT department to resolve system and network issues. Thus, the implementation of a QR code system can support the retrieval of employee document records more effectively when backed by consistent data management and adequate technological infrastructure.

BIBLIOGRAPHY

- Anjani, S., Sukaesih, & Prahatmaja, N. (2023). Pengelolaan Arsip Dinamis Berbasis Elektronik Di Kantor Kecamatan Cileunyi Dalam Mempermudah Kegiatan Temu Kembali Arsip. *Jurnal Ilmu Perpustakaan Dan Informasi Islam*, 4(1), 10–21. <https://doi.org/10.19109/Tadwin.V4i1.16358>
- Ariyandi, H. Z., & Handayani, A. N. (2022). Peran Penggunaan Teknologi Qr Code Untuk Meningkatkan Keterhubungan Dan Efisiensi Masyarakat Menuju Era Transformasi Society 5.0. *Jurnal Inovasi Teknik Dan Edukasi Teknologi*, 2(7), 299–306. <https://doi.org/10.17977/Um068v1i72022p299-306>
- Diani, M., & Suwanto, S. A. (2022). Analisis Sistem Penyimpanan Dalam Temu Kembali Arsip Inaktif Izin Mendirikan Bangunan Titipan Organisasi Perangkat Daerah Di Dinas Arsip Dan Perpustakaan Kota Semarang. *Jurnal Ilmu Perpustakaan*.
- Erlina, N., Manafe, L. A., & Chamid, A. (2025). Transformasi Digital Dalam Pengelolaan Arsip Kepegawaian : Studi Kasus Penerapan Document Management System (Dms). *Jurnal Administrasi Bisnis Nusantara*, 4(2), 69–78.
- Hamsinah, Juairiah, & Asmawardah. (2024). Mekanisme Sistem Temu Kembali Arsip (Studi Deskriptif Di Dinas Perpustakaan Dan Kearsipan Provinsi Kalimantan Selatan). *Jurnal Ilmiah Ilmu Perpustakaan Dan Informasi*, 12(2), 149–163.
- Hidayat, T., Handayani, Y., & Hafidz, A. A. (2024). Perancangan Sistem Informasi Absensi Menggunakan Kode Qr. *Jurnal Teknik Informatika Dan Desain Komunikasi Visual*, 3,



21–26.

- Iskandar, M. S., Munazilin, A., & Susanto, A. (2025). Implementasi Aplikasi Manajemen Arsip Surat Berbasis Optical Character Recognition Pada Badan Pusat Statistik Banyuwangi. *Jurnal Teknologi Dan Manajemen Industri Terapan (Jtmit)*, 4(3), 622–631.
- Jr, C. P. N. (2023). Design And Evaluation Of An Innovative Mobile Solution: Qr Code-Based Inventory Monitoring System. *International Journal Of Advanced Engineering And Management Research*, 8(03), 231–242. <https://doi.org/10.51505/Ijaemr.2023.8317>
- Lestari, D., & Oktarina, T. (2025). Analisis Proses Pengelolaan Arsip Dinamis Di Dinas Kearsipan Provinsi Sumatera Selatan. *Jurnal Teknologi Dan Informasi*, 4(1).
- Nugroho, Y. K., Ariance, M., & Pakereng, I. (2021). Perancangan Sistem Manajemen Validasi Document Security Menggunakan Qr Code Berbasis Website. *Jurnal Informatika*, 8(1), 41–48.
- Rahmawati, E., Ariyani, N. D., & Ganesha, P. P. (2024). Implementasi Dan Evaluasi Sistem Arsip Elektronik Dalam Pengelolaan Surat Masuk Di Rumah Sakit: Tinjauan Terhadap Efisiensi Operasional Dan Keamanan Data/Informasi. *Journal Of Economic, Business And Accounting*, 7, 8663–8672.
- Rona, N., Salama, A., & Sukma, E. A. (2026). Pembuatan QR Code Untuk Temu Kembali Arsip Inaktif Di Depot Arsip Dinas Perpustakaan Umum Dan Arsip Daerah Kota Malang. *Jurnal Ilmiah Sultan Agung*, 360–367.
- Setiyo, Nugroho, A., & Purnomo, A. (2023). Perencanaan Strategis Sistem Informasi Dan Teknologi Informasi Pada Perusahaan Pt. Media Distribusi Nasional Di Provinsi Lampung. *Institut Informatika Dan Bisnis Darmajaya*, 172–181.
- Wanda Taupik Ramdan, Dadang Yusuf, & Purwantoro. (2024). Rancang Bangun Portal Document Management System Berbasis Web Untuk Digitalisasi Arsip Menggunakan Framework Laravel (Studi Kasus : Pt . Bridgestone Tire Indonesia). *Jurnal Mahasiswa Teknik Informatika*, 8(4), 8091–8097.
- Yasa, I. M. Y., Trisnayanti, K. A., Juniari, N. W., & Meirawati, D. K. (2023). Autentikasi Arsip Sebagai Legalitas Formal Pertanggungjawaban Kegiatan. *Media Sains Informasi Dan Perpustakaan*, 3(2), 1–13.
- Zaida, F., Rahman, E. A., & Hasugian, A. H. (2024). Perancangan Arsip Elektronik Berbasis Website Pada Balai Penerapan Standar Instrumen Lingkungan Hidup Dan Kehutanan Aek Nauli. *Jurnal Ilmiah Sain Dan Teknologi*, 2, 89–100.