SOCIETY: Jurnal Pengabdian Masyarakat,
Vol. 5, No. 1 (2026): Januari, pp. 122-132
E-ISSN:2827-878X (Online -Elektronik)

Development of the SIPANDA Archival Management Website for BKPSDM Sukabumi Regency

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ARTICLE INFO

Article history
Received : 13-12-2025
Revised : 30-1-2026
Accepted : 30-1-2026

Keywords
Personnel Archive Management; Digital Archiving System; Community Engagement; Government Institution; SIPANDA

ABSTRACT

The management of personnel archives at the Civil Service and Human Resources Development Agency (BKPSDM) of Sukabumi Regency was still conducted manually, leading to several challenges such as long document retrieval times, limited physical storage, high risk of document loss or damage, and difficulties in monitoring archive status. These issues reduced administrative efficiency and increased the workload of archive staff. To address these problems, a community engagement activity was conducted through the development and implementation of the SIPANDA (Regional Personnel Archive Management System). The system was developed using a structured software development approach and implemented in collaboration with archive management staff to ensure alignment with institutional needs. SIPANDA enables digital storage, archive classification, metadata management, and role-based access control to support secure and efficient archive management. The results of the implementation showed significant improvements in archive organization and accessibility, reduced document retrieval time, and enhanced data security and accountability. User evaluation indicated that the system was easy to use and effectively supported daily administrative activities. Overall, the community engagement activity successfully contributed to improving the efficiency and reliability of personnel archive management while supporting the digital transformation of public service administration at BKPSDM of Sukabumi Regency.

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A. INTRODUCTION

The rapid development of information and communication technology in the digital era has driven a fundamental transformation across various sectors, including the government sector (Natika, 2024). Governments around the world, including Indonesia, are urged to adopt Electronic-Based Government Systems (SPBE) to improve efficiency, effectiveness,

transparency, and accountability in public service delivery (Republic of Indonesia, 2018). One of the crucial aspects of government administration is the management of human resources, particularly in terms of personnel recordkeeping.

The Civil Service and Human Resources Development Agency (BKPSDM) of Sukabumi Regency plays a strategic role in managing personnel data and records for all civil servants (ASN) within its jurisdiction. Personnel records, which include vital documents such as appointment decrees (SK), promotion letters, diplomas, training certificates, and other personal data, are critical assets that must be properly maintained. Conventional record management often faces various challenges, such as the need for extensive physical storage space, time-consuming data retrieval processes, risks of document damage or loss, and difficulties in quickly and accurately updating data (Putu Aditya Pratama S.Kom, 2025).

Recognizing the various challenges arising in the practice of managing personnel archives, the Civil Service and Human Resources Development Agency (BKPSDM) of Sukabumi Regency required a digital solution capable of overcoming the limitations of the manual system that had been used, in line with the call to transition from manual to digital archive management (Oktariani & Al Kadri, 2024). In this context, the community engagement program focused on developing a new system called SIPANDA (Regional Personnel Archive Management System), which was designed and built from the ground up to comprehensively meet the administrative needs of regional personnel management.

Nevertheless, prior to the development of SIPANDA, personnel archival services at BKPSDM Sukabumi Regency were still characterized by fragmented processes and the absence of an integrated digital system. This condition created a clear service gap between the existing archive management practices and the expected digital, efficient, and integrated personnel services mandated by SPBE principles. Therefore, the development of SIPANDA was aimed at bridging this service gap by providing a reliable digital platform to enhance the performance of the archival division and improve the overall quality of civil service administration in Sukabumi Regency.

B. METHODS

This community engagement project was implemented using the Waterfall Software Development Method, which is suitable for activities that require structured, sequential, and well-documented development processes (Sunarya et al., 2025). The Waterfall approach was chosen not only to ensure systematic system development, but also to facilitate continuous and meaningful community engagement at each stage of the activity. Through this approach, the Civil Service and Human Resources Development Agency (BKPSDM) of Sukabumi Regency was actively involved as a collaborative partner, participating in discussions, needs identification, system validation, and evaluation. Community members were positioned not merely as system users, but as active contributors whose inputs directly influenced system design decisions, feature prioritization, and evaluation outcomes, ensuring that the developed system addressed real operational challenges faced by archive management staff.

The community engagement activity was conducted at the Civil Service and Human Resources Development Agency (BKPSDM) of Sukabumi Regency, located at Jl. Raya

Kadupugur, Cijalingan, Cicantayan District, Sukabumi Regency, West Java. The implementation period took place from 3 March 2025 to 9 May 2025 under a Work From Office (WFO) scheme, allowing direct interaction, coordination, mentoring, and continuous assistance between the project team and the archive management community.

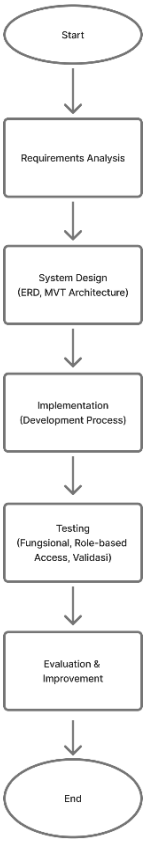

Figure 1. SIPANDA Development Method

1. Preliminary Study and Needs Assessment

The activity began with an institutional introduction and discussions with archive management staff. Informal interviews and direct observations were conducted to analyze the existing workflow, identify archival types, and understand system expectations. This stage aimed to obtain accurate information regarding functional needs, obstacles in conventional archival management, and user requirements for the new system (Tjahyanti & Sutama, 2025). These interactions enabled the co-identification of problems and ensured that system requirements were jointly defined with the community based on their daily operational practices.

2. System Requirements Analysis

Based on the initial findings, a requirements analysis was performed to map essential system features, user roles, data interactions, and security needs. This process involved classifying archive categories, determining mandatory metadata, and aligning system functions with internal administrative procedures. Community input gathered during discussions and consultations was used as the primary reference in defining system priorities and functional specifications. The outcome of this stage became the blueprint for system development.

3. Database and System Design

After determining the requirements, a relational database structure was designed using an Entity–Relationship Diagram (ERD). Normalization principles were applied to ensure data consistency and prevent redundancy. The system architecture was designed following the Model–View–Template (MVT) pattern, which is the standard approach for applications built using the Django framework (Sabita et al., 2022). Design decisions were continuously aligned with community feedback to ensure usability and contextual relevance.

4. System Development

The development phase was executed iteratively, beginning with core features and progressing to more complex modules. The technologies used included HTML, CSS, and JavaScript for the frontend, Django Framework for backend logic, and Git for version control. Key modules developed included Destruction Proposal (Usul Musnah), Transfer Proposal (Usul Serah), Inactive Archives, Vital Archives, Archive Supervision, and Gallery. Each module was built with full CRUD (Create, Read, Update, Delete) functionality. Throughout this phase, periodic consultations with archive staff were conducted to ensure alignment with user expectations and operational needs.

5. Testing and System Validation

Functional testing was conducted for every implemented feature to ensure accuracy, stability, and compliance with the intended workflow (Fitrisia, 2021). The testing process involved input validation, access rights verification based on user roles, and scenario-based simulations to ensure that the system responded appropriately to valid and invalid data. Community members actively participated in system validation by testing features, identifying usability issues, and providing practical feedback. Debugging and iterative refinements were carried out based on feedback from supervisors and archive staff.

6. Implementation and Evaluation

After completing testing, the developed SIPANDA modules were reviewed and evaluated together with the archive management division. Feedback obtained from field supervisors was used to refine the interface, improve data access speed, and enhance security settings. This collaborative evaluation confirmed that the system met the community's needs and strengthened their capacity in managing digital personnel archives, while also improving administrative efficiency within the agency.

C. RESULTS AND DISCUSSION

1. Initial Condition of the Problems

Before the implementation of the SIPANDA system, the personnel archive management process at the Civil Service and Human Resources Development Agency (BKPSDM) of Sukabumi Regency was still conducted manually. Personnel documents such as appointment decrees, promotion letters, diplomas, training certificates, and other supporting files were stored in physical folders and cabinets. This condition caused several operational problems in daily administrative activities.

Based on initial observations and discussions with archive management staff, the

manual system resulted in long retrieval times when specific documents were required, particularly for administrative verification, audits, or personnel services. In addition, the increasing volume of archives led to limited physical storage space and made document organization more complex. There were also risks of document damage and loss due to frequent handling and inadequate archival protection.

Another significant issue was the difficulty in updating and monitoring archive status, such as distinguishing between active, inactive, and vital archives. The lack of integration between archive data further reduced efficiency and increased the workload of archive staff (Nauli et al., 2024). These conditions indicated an urgent need for a digital archive management system that could improve efficiency, accuracy, and data security.

2. Implementation Process

The implementation process of the SIPANDA system was carried out through a series of structured stages in collaboration with BKPSDM Sukabumi Regency. The process began
with needs assessment activities involving direct communication with archive management staff to identify system requirements and operational workflows. This participatory approach ensured that the system was developed in accordance with real conditions and user needs.

Following the needs assessment, the system was designed and developed gradually by implementing core archive management features, including archive classification, document upload, metadata management, and access control based on user roles. The development process emphasized usability and compliance with internal administrative procedures.

During implementation, archive staff were involved in system trials to simulate real usage scenarios. Feedback obtained from these trials was used to refine system features, improve the user interface, and adjust workflows to better align with daily operational practices. This iterative process helped ensure that SIPANDA could be effectively adopted by users without disrupting existing administrative processes.

3. Results of Implementation and Evaluation

The implementation of SIPANDA demonstrated positive results in improving the personnel archive management process at BKPSDM Sukabumi Regency. The system successfully enabled digital storage and centralized management of personnel archives, allowing documents to be accessed more quickly and accurately compared to the previous manual system.

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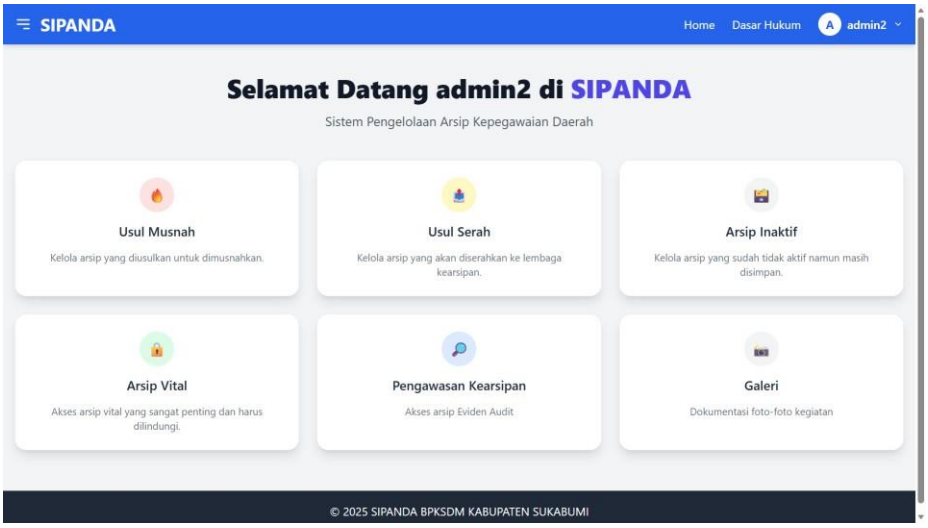

Figure 2. Main Interface of the SIPANDA System

Evaluation results showed that archive retrieval time was significantly reduced, as staff could search for documents directly through the system using predefined categories and metadata. The digital archive structure also minimized the risk of document duplication and loss. Furthermore, the system provided clearer archive status classification, making it easier for staff to manage active, inactive, and vital archives.

The effectiveness of SIPANDA can be attributed to its centralized data management and structured metadata-based search mechanism. By replacing manual folder-based storage with a digital classification system, the process of locating and verifying personnel documents became more systematic and less dependent on individual staff experience. This structural change directly contributed to faster retrieval times and improved data accuracy.

User evaluation conducted through direct feedback indicated that SIPANDA was easy to use and supported daily administrative tasks effectively. Archive staff reported increased efficiency and reduced workload, particularly in handling repetitive tasks such as document
searching and data verification.

This improvement occurred because SIPANDA automated routine archival processes and standardized workflows, thereby reducing redundant manual activities and minimizing human error. As a result, archive staff were able to focus more on supervisory and administrative tasks rather than time-consuming document handling. Overall, the evaluation confirmed that the system met the initial objectives and operational needs of the partner institution.

4. Impact and Benefits for the Partner Institution

The adoption of SIPANDA provided significant benefits for BKPSDM Sukabumi Regency as the partner institution. One of the primary impacts was the improvement in administrative efficiency, as personnel archive management became more organized, structured, and reliable. Digital archives reduced dependency on physical storage and supported more sustainable archival practices.

This efficiency gain is primarily driven by the integration of archive data into a single

system, which eliminated fragmented record-keeping practices and improved coordination among archive management staff. The availability of real-time archive status information also enhanced decision-making related to archive retention, transfer, and destruction processes.

In addition, SIPANDA enhanced data security and accountability by implementing controlled access based on user roles, ensuring that sensitive personnel data was protected. The system also supported better transparency and traceability of archive management activities, which is essential for government institutions (Sanjani et al., 2025).

From a governance perspective, the effectiveness of SIPANDA lies in its alignment with SPBE principles, particularly in terms of accountability, transparency, and digital service delivery. By embedding access control and auditability into the system, SIPANDA strengthened institutional compliance while reducing administrative risks. From a long-term perspective, SIPANDA supports the implementation of Electronic- Based Government Systems (SPBE) by facilitating digital transformation in personnel administration. The system has the potential to be further developed and integrated with other internal systems, thereby contributing to continuous improvement in public service quality at BKPSDM Sukabumi Regency.

D. CONCLUSION

The community engagement activities carried out at the Civil Service and Human Resources Development Agency (BKPSDM) of Sukabumi Regency successfully addressed the challenges of manual personnel archive management through the development and implementation of the SIPANDA system. The system provided a digital solution that improved the efficiency, organization, and reliability of personnel archive management in accordance with the initial objectives of the activity.

The implementation of SIPANDA enabled faster archive retrieval, better archive classification, and reduced risks of document loss or damage. In addition, the system enhanced data security and supported administrative accountability by applying role-based access control. These outcomes demonstrate that the digital archive management system effectively met the operational needs of the partner institution and contributed to improving the quality of personnel administration.

Despite the positive results, this activity had certain limitations, including limited implementation time and the use of a local database that may require further optimization for large-scale deployment. Future development is recommended to include system integration with other internal government applications, broader user training, and performance optimization to support long-term sustainability and scalability.

E. ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to the Civil Service and Human Resources Development Agency (BKPSDM) of Sukabumi Regency for their cooperation, support, and active participation throughout the community engagement activities. Appreciation is also extended to supervisors and archive management staff

who provided valuable input and assistance during the system development, implementation, and evaluation stages.

F. AUTHOR CONTRIBUTIONS

Activity implementation: Muhamad Fahraz Firdaus (MFF); System development and technical implementation: MFF; Data collection and needs assessment: MFF; Results analysis and impact evaluation: MFF; Article preparation and writing: MFF; Supervision, technical validation, and guidance during system development: Somantri (S); Manuscript preparation, editing, and revision for publication: MFF, S; Final approval of the manuscript: MFF, S.

G. REFERENCES

Fitrisia, Y. (2021). Pengembangan Aplikasi Pengelolaan Tugas Dan Fungsi Balai Monitor (Studi Kasus: Sarana Dan Pelayanan). *Jurnal Komputer Terapan*, *7*(2), 228–239.

Natika, L. (2024). *Transformasi Pelayanan Publik Di Era Digital: Menuju Pelayanan Masa Depan Yang Lebih Baik*. *6*(1), 1–11. Https://Doi.Org/Https://Doi.Org/10.37950/Wpaj.V6i1.2040

Nauli, Y. M., Subagja, I. K., & Hakim, A. (2024). Pengaruh Kearsipan Terhadap Efisiensi Penyimpanan Jangka Panjang Di Biro Umum Bagian Bangunan Kementerian Sekretariat Negara Republik Indonesia. *Journal Of Social & Technology/Jurnal Sosial Dan Teknologi (Sostech)*, *4*(12).

Oktariani, A., & Al Kadri, H. (2024). Analisa Dan Perancangan Aplikasi E-Arsip Divisi Msdm. *Zonasi: Jurnal Sistem Informasi*, *6*(2), 355–369.

Peraturan Presiden Republik Indonesia Nomor 95 Tahun 2018 Tentang Sistem Pemerintahan Berbasis Elektronik, 1 (2018). Https://Jdih.Bappenas.Go.Id/Peraturan/Detailperaturan/155

Putu Aditya Pratama S.Kom, M. K. (2025). Pengembangan Sistem Arsip Digital Berbasis Website Dengan Framework Laravel Untuk Efisiensi Penyimpanan Dan Keamanan Data. *Komteks*. Https://Api.Semanticscholar.Org/Corpusid:282027120

Sabita, H., Herwanto, R., Syafitri, Y., & Prasetyo, B. D. (2022). Pengembangan Aplikasi Akreditasi Program Studi Berbasis Framework Django. *Jurnal Informatika*, *22*(1), 33–37.

Sanjani, M. A., Damanik, R., Hamidah, H., Faqrurrowzi, L., & Savira, D. (2025). Peningkatan Kapasitas Aparatur Desa Dalam Pengelolaan Arsip Dan Administrasi Persuratan Di Desa Sei Litur Tasik Kecamatan Sawit Seberang. *Center Of Knowledge : Jurnal Pendidikan Dan Pengabdian Masyarakat*. Https://Api.Semanticscholar.Org/Corpusid:280093608

Sunarya, P. A., Rahardja, U., Santoso, N. P. L., Mulyati, Mustofa, K. I., & Bennet, D. (2025). Pengaruh Metode Waterfall Dalam Penyempurnaan Proses Pengembangan Sistem Informasi Akademik Secara Sistematis. *Technomedia Journal*. Https://Api.Semanticscholar.Org/Corpusid:277036727

Tjahyanti, L. P. A. S., & Sutama, G. R. (2025). Peran Analisis Kebutuhan Dalam

Menciptakan Sistem Informasi Yang Responsif Dan Berkelanjutan. *Komteks*. Https://Api.Semanticscholar.Org/Corpusid:282019320