

Building a Digital Archive Management System for Local Government Using Rapid Application Development: The Case of Arsipinaker

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ABSTRACT

Background: The digitization of vital archives is a strategic necessity for local government agencies in realizing effective, transparent, and accountable public services. Despite this need, many regional institutions still rely on manual archive management, which creates obstacles in retrieval efficiency and supports the broader push toward implementing the Electronic-Based Government System (SPBE) in Indonesia.

Purpose: This study aims to develop and test a web-based vital archive digitization system called "Arsipinaker" at the Madiun Regency Manpower and Industry Office.

Methods: The Rapid Application Development RAD method was employed for its ability to accelerate prototype development and enable direct user involvement in the design process. The system was tested using the Black-Box Testing method with the Equivalence Partitioning technique to ensure each function met the desired specifications. The menus tested included login, archive upload, document format validation, archive search, and data management in each field.

Findings: Test results showed that all main functions successfully produced correct output without fatal errors, and the system was able to handle both valid and invalid inputs according to the specified data classes. The implementation of Arsipinaker significantly improves the efficiency of archive retrieval and reduces obstacles commonly encountered in manual archive management.

Originality/Value: This study provides a practical model for implementing RAD-based digital archive systems in regional government institutions to support the implementation of the Electronic-Based Government System (SPBE). It contributes to strengthening the literature on local government archive digitization and offers a system model that can serve as a reference for other Regional Apparatus Organizations (OPD) seeking to accelerate SPBE implementation.

Keywords: Vital archives digitization; Rapid Application Development (RAD); Arsipinaker; Electronic records management

1. INTRODUCTION

Digital transformation in the public sector has become a global trend aimed at improving organizational efficiency, accelerating access to information, and enhancing the accuracy of public documentation. In government institutions, archive digitization has become a key tool for implementing good governance. Digital archives serve as official records of bureaucratic activities and also improve transparency, accountability, and the quality of public services. (Lufiana & Kuswantoro, 2025). Digitalization can speed up service processes by as much as 40% compared to traditional bureaucratic systems. However, several major challenges still exist, such as disparities in technological infrastructure across regions, cultural resistance within bureaucracy to innovation, and unaddressed data security risks (Widodo, 2025).

Digitalization not only impacts the effectiveness of public services but also changes the paradigm of archive management and storage in government agencies (Saefulrahman et al., 2025). The current need for digital transformation is fundamentally changing the way public administrations leverage knowledge management practices to effectively improve service delivery (Alvarenga et al., 2020). The use of information technology enables the acquisition, storage, management, and retrieval of archives to be faster, more accurate, and more efficient, as archives are no longer solely dependent on physical media but are instead controlled through a systematic and integrated database system.

Based on Law Number 23 of 2014 concerning Regional Government, regional governments have the authority to regulate and manage government affairs according to the needs and priorities of their respective regions. This authority includes archives management. In line with this regulation, various archives organizers, both in state institutions, regional governments, educational institutions, public organizations, and the non-government sector, are encouraged to adopt digitalization in the documentation and archives management process. The goal is to improve the effectiveness of data input processes, archive processing, information services, archive access, and the security of activity records in a more accountable manner, especially within the government environment (Kalarikkal et al., 2024).

In the field of records management, it is crucial to distinguish between general documents and vital records. Documents refer to active information that is being created or modified, while vital records are finalized records with intrinsic strategic value. Their existence directly affects operational continuity, public accountability, and an institution's legal status (ANRI, 2025). In the local government sphere, vital records play a fundamental role in enabling effective audit processes and serving as a basis for policymaking (Permana, 2024). Research by Ramadayanti et al., (2025) emphasized that suboptimal management of vital records not only hinders organizational development but also significantly affects the efficiency of public services. Therefore, modernizing vital records management through a centralized Electronic Records Management System (ERMS) has become a priority to ensure strict governance, restricted access, and high availability during critical situations.

The need for digital transformation in archives management is increasingly reflected in the government's push to abandon fragmented conventional systems (Lolytasari & Dirsanala, 2023). A concrete example of this inefficiency is seen at the Madiun Regency Manpower and Industry Office. Currently, vital records management across several departments is carried out

manually without a single, unified repository. Archives are scattered across physical filing cabinets and employees' personal digital devices. This challenge is consistent with broader international public sector trends; for instance, [Matlala & Maphoto \(2023\)](#) found that reliance on fragmented storage and inadequate technological tools severely impedes accountability and delays service delivery in local governance. This fragmentation disrupts the theoretical concept of the archives life cycle, particularly during the collection and retrieval phases, creating barriers to cross-sector vital records retrieval, increasing the risk of records duplication, and causing significant delays in the delivery of public services.

Based on initial observations, searching for a specific vital record takes an average of 10–15 minutes due to the lack of a centralized digital index. This indicates that digitizing vital records through website-based media transfer is an urgent need to ensure more accurate, rapid, and efficient documentation, data access, and service accountability. Digitizing archives management is a key strategy to overcome the limitations of analog archiving systems, which are often slow, inefficient, and difficult to quickly retrieve. Digital transformation enables information system-based data integration, making archive retrieval processes faster, more accurate, and well-documented ([Syahidan, 2024](#)).

The transition of archives management from manual to digital formats requires a shift in theoretical paradigms. Traditional manual archives management generally adheres to the linear Archives Life Cycle theory, an approach considered vulnerable to physical fragmentation and delays in information access ([Atherton, 1985](#)). This model emphasizes that digital archives management must be continuous and not limited by physical location, from the creation phase to their pluralization ([Johnston & Bowen, 2005](#)). Designing a system that integrates various operational areas, the website architecture must strictly adhere to the Principle of Provenance. This fundamental archival principle ensures that archives produced by different work units remain separate, thereby maintaining the authenticity, integrity, and reliability of the data audit trail ([Millar, 2002](#)). Based on this theoretical framework, the Arsipinaker system development strategy was conceptualized using the Rapid Application Development (RAD) approach ([Nalendra, 2021](#)).

Research by ([Caroline et al., 2022](#)) shows that implementing a Dynamic Archiving Information System (SIKD) in local governments can accelerate archive audit trails and minimize service queues compared to manual methods. Research by ([Ong et al., 2025](#)) at the sub-district level confirms that a web-based archives system can overcome service bottlenecks and minimize the risk of archive loss through centralized database storage. Thus, archive digitization not only represents a shift from physical to digital media but also contributes to optimizing work processes, reducing inefficiencies, improving document audit trails, and strengthening the quality of public services in the era of electronic government.

The system development strategy in this study used the Rapid Application Development (RAD) approach because this model has proven effective in accelerating the design process and validating end-user requirements compared to traditional development methods, such as the waterfall approach ([Nalendra, 2021](#)). RAD is a system development approach that emphasizes rapid iteration, intensive user involvement, and iterative prototyping, allowing for changes in user needs to be accommodated throughout the system development process, particularly in web-based system development ([Sommerville, 2020](#)).

This RAD approach offers shorter development times for web-based systems compared to the linear and sequential waterfall method ([Dewi et al., 2024](#)). RAD is also more effective in public sector information system projects due to the dynamic nature of the problems, the

constantly changing user needs, and the need for iterative evaluation with stakeholders (Nalendra, 2021).

Despite the global push for digital transformation, there remains a significant research gap regarding the governance of critical records across sectors within a single local government agency. Previous studies have largely focused on general archival digitization or broad e-government architecture, often overlooking specific governance challenges in ensuring records integrity, tracking access audits, and reducing archive retrieval wait times among interconnected agencies (OPDs). The uniqueness of this research lies not only in the technical development of the Archives platform but also in evaluating how a centralized Electronic Records Management System (ERMS) model impacts operational governance and the efficiency of retrieving critical records.

To address this gap, this study focuses on explaining the extent to which a centralized digital system can improve the efficiency of vital records retrieval compared to traditional manual methods. Additionally, this research addresses the issue of system implementation by evaluating the functional reliability and user acceptance of the developed platform within a real-world government setting.

2. METHODS

This study employed a Research and Development (R&D) approach using the Rapid Application Development (RAD) model. RAD was selected because it is well-suited for web-based system development that requires rapid iteration and continuous validation of user requirements throughout the development process (Sommerville, 2020). In addition, this model supports a flexible and adaptive development cycle, enabling the system to respond effectively to dynamic operational needs in the field (Dewi et al., 2024).

This research was conducted at the Manpower and Industry Office of Madiun Regency, East Java, Indonesia. This institution was chosen as the research location because it manages various important archives, including personnel archives, cooperation agreements, official decisions, and other administrative archives that require systematic storage and retrieval processes. A total of 5 civil servants participated in the evaluation process. Respondents were selected using a purposive sampling method based on their responsibilities in managing and accessing organizational archives.

The RAD process in this study consisted of four main stages:

- A. Requirements Planning: This stage involved preliminary observations and problem identification related to the management of vital records in several units of the Madiun Regency Manpower and Industry Office. The activities included analyzing user needs, defining system objectives, and determining the core functionalities required in the Arsipinaker system.
- B. User Design: At this stage, the system's user interface (UI) and database structure were designed. This process included developing mock-ups and wire frames for the PHP-based interface and designing the relational schema of the MySQL database. Limited consultations with prospective users were conducted to ensure that the design aligned with operational requirements.
- C. Construction: This stage focused on system development, including coding, database configuration, feature integration, and the creation of functional system modules using

PHP and MySQL. System prototypes were developed iteratively and subjected to internal testing before user-based testing.

- D. Implementation: The implementation stage involved deploying the system within the agency's operational environment. The Arsipinaker system is used directly by end users to support vital records storage, management, and retrieval activities within the agency. This stage was carried out optimally through a clear understanding of user needs and the defined scope of system development.

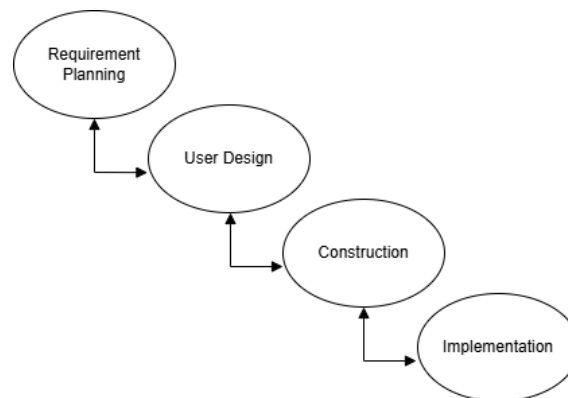


Figure 1. Flow RAD

System Evaluation

Following the system development and implementation stages, a comprehensive evaluation was conducted to assess the functionality, effectiveness, efficiency, and usability of the Arsipinaker system. This evaluation aimed to determine not only whether the system operated according to its specifications but also whether it contributed to improving vital records management practices within the agency. Four evaluation methods were employed, namely Black-Box Testing, Task Success Rate (TSR), Task Completion Time (TCT), and System Usability Scale (SUS).

Functional and Performance Evaluation

Black-Box Testing

Black-box testing is performed to verify that all functional components of the Arsipinaker system operate according to predetermined requirements. This testing focuses on validating the system's output based on various input scenarios without examining the internal program code. This approach aligns with the characteristics of web-based system development, where functional behavioral testing is prioritized over evaluating the program's internal logic. Black-box testing is the most commonly used technique to ensure that each system feature produces output according to specifications and aligns with RAD development (Mahzuro et al., 2022). Testing was conducted on all core modules of the Arsipinaker system, including login, archive upload, archive search, field filtering, and archive list display. Each function was tested using specific input scenarios to determine whether the system produces correct results, in accordance with the Equivalence Partitioning principle in web-based software testing (Amrulloh et al., 2023).

Performance Evaluation

Performance evaluations were conducted to assess the effectiveness and efficiency of the Arsipinaker system in supporting the management and retrieval of critical records. Unlike functional testing, which focuses on verifying whether system features operate correctly, performance evaluations measure how well users can complete records management tasks using the system. This assessment is particularly important in Electronic Records Management Systems (ERMS), where efficient access to records and successful task completion are key indicators of effective records governance.

In this study, performance evaluations were conducted using two metrics: Task Success Rate (TSR) and Task Completion Time (TCT). TSR is used to evaluate system effectiveness by measuring the proportion of tasks that users can successfully complete. Meanwhile, TCT is used to measure the efficiency required to complete tasks in the Arsipinaker system. These metrics provide empirical evidence regarding the system's ability to improve accessibility and operational efficiency in managing critical records.

System Usability Scale

This evaluation utilized the System Usability Scale (SUS) (Brooke, 1996). To ensure accurate understanding by local government employees, this study employed a validated adaptation of the Indonesian version of the SUS questionnaire (Sharfina & Santoso, 2016). The questionnaire, consisting of 10 standard items rated on a 5-point Likert scale, was distributed to purposively selected civil servant respondents representing five distinct organizational units (Lattas, HI, Penta, Secretariat, and Industry).

Table 1. SUS Questionnaire Questions

No	Statement	Answer Choices				
		1	2	3	4	5
1	I plan to use the Arsipinaker system regularly again.					
2	I find the Arsipinaker system complicated to use.					
3	I find the Arsipinaker system easy to use.					
4	I need help from others or a technician to use the Arsipinaker system.					
5	I feel that the features of the Arsipinaker system work well.					
6	I feel there are many inconsistencies in the Arsipinaker system.					
7	I feel that others will quickly understand how to use the Arsipinaker system.					
8	I find the Arsipinaker system confusing or cumbersome to use.					
9	I feel there are no obstacles and I am very confident in using the Arsipinaker system.					
10	I need to get used to it first and learn a lot before using the Arsipinaker system.					

Based on Table 1, it can be explained that the questions for the SUS questionnaire were developed through communication with users of the Arsipinaker system in order to obtain data on issues related to the system's usability.

3. RESULTS AND DISCUSSION

Use Case Diagram

The Use Case Diagram illustrates the interaction between two primary actors, namely the Administrator and ASN users, within the Arsipinaker system. The Administrator is granted full access rights, including login authentication, archive upload, archive management based on organizational fields, archive searching, and system logout. ASN users are provided with limited access rights, focusing on archive viewing and searching functions. This role-based access control reflects an essential principle of information system security and accountability in government archive management, ensuring that sensitive archival data is protected from unauthorized modification. The separation of user roles also aligns with archival governance standards that emphasize data integrity and access authorization in digital records systems (Sukamto & Shalahuddin, 2018).

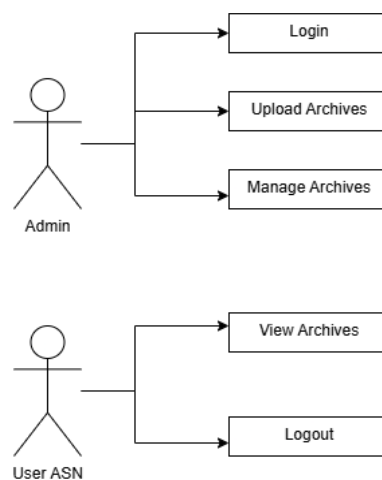


Figure 2. Use Case Diagram

Table 2. User Case Activity Diagram

No	Actor	Activity
1	Admin	Login, upload archives, manage archives for each field, and logout.
2	User ASN	Login, search archives, view archives, and logout.

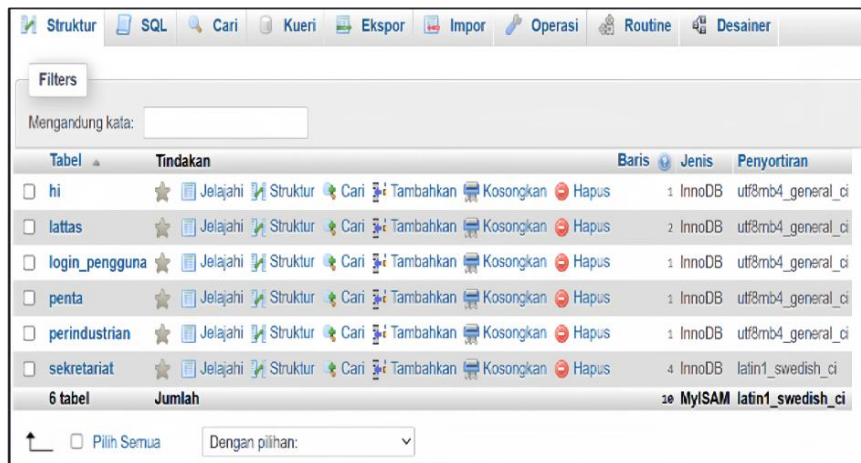
System Design

The system design of Arsipinaker integrates a structured database schema to support the Arsipinaker system, which was designed as a centralized Electronic Records Management System (ERMS) to support the storage, organization, and retrieval of vital records within the Madiun Regency Manpower and Industry Office. The system employs a structured relational database that integrates archive metadata, user roles, and access permissions into a single repository. This centralized architecture facilitates consistent records management practices across organizational units, improves archive accessibility, and reduces the risk of record duplication or loss. Furthermore, the implementation of standardized metadata and role-based access control supports records traceability, accountability, and integrity, which are

fundamental principles of digital records governance. These findings are consistent with previous studies indicating that ERMS implementation can improve retrieval performance, information accessibility, and organizational control over records in public sector institutions (Johnston & Bowen, 2005).

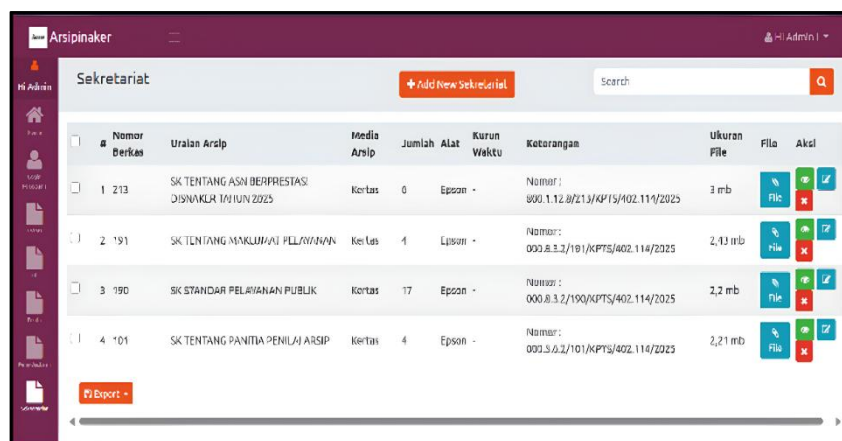
Development

This development stage focuses on the implementation of the Arsipinaker system through database construction, interface integration, and feature deployment to support centralized vital archive management.



Tabel	Tindakan	Baris	Jenis	Penyortiran
hi	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	1	InnoDB	utf8mb4_general_ci
lattas	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	2	InnoDB	utf8mb4_general_ci
login_pengguna	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	1	InnoDB	utf8mb4_general_ci
penta	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	1	InnoDB	utf8mb4_general_ci
perindustrian	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	1	InnoDB	utf8mb4_general_ci
sekretariat	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	4	InnoDB	latin1_swedish_ci
6 tabel	Jumlah	20	MyISAM	latin1_swedish_ci

Figure 4. Archive Database



Nomor Berkas	Uraian Arsip	Media Arsip	Jumlah Alat	Kurun Waktu	Keterangan	Ukuran File	File	Aksi
1 213	SK TENTANG ASN BERPRESTASI DISINAKUR 14 JUN 2025	Kertas	0	Epson	Nomor: 000.1.12.0/213/KPTS/402.114/2025	3 mb	File	Aksi
2 191	SK TENTANG MAJUKAN PELAYANAN	Kertas	1	Epson	Nomor: 000.8.3.2/191/KPTS/402.114/2025	2,43 mb	File	Aksi
3 190	SK STANDAR PELAYANAN PUBLIK	Kertas	17	Epson	Nomor: 000.8.3.2/190/KPTS/402.114/2025	2,2 mb	File	Aksi
4 101	SK TENTANG PANITIA PENILAI ARSIP	Kertas	4	Epson	Nomor: 000.5.6.2/101/KPTS/402.114/2025	2,21 mb	File	Aksi

Figure 3. Field Menu Page

In the implementation phase of the Arsipinaker digitalization process, which is now a complete website, the website implementation and its features are shown below. The main homepage of the Arsipinaker system presents a structured navigation menu that categorizes archives based on organizational fields, including Lattas, HI, Penta, Secretariat, and Industry. This menu-based classification supports standardized archive organization and enables users to access documents according to institutional functions. Such an interface structure improves usability and reduces cognitive load for ASN users, particularly in environments where cross-sector archive retrieval is frequently required. Centralized field-based navigation has been shown to enhance retrieval efficiency and consistency in public sector digital archive systems.

The Fields menu page displays a structured list of archived records, including metadata such as file number, archive description, media type, quantity, time period, and file size. The inclusion of standardized metadata fields supports archive traceability, accountability, and audit readiness, which are essential components of vital records management in government institutions. By applying consistent metadata attributes, the system facilitates more accurate searching and filtering processes, thereby improving retrieval performance and reducing the risk of archive duplication or misclassification.

The menu display complies with Regulation of the Head of the National Archives of the Republic of Indonesia Number 49 of 2015 concerning Guidelines for the Vital Archives Program within the National Archives of the Republic of Indonesia (ANRI, 2025). On this page, users can also add archives, edit them, view archives, search for archives, and delete archives that have already been entered.

System Testing

Software testing is the process of ensuring that the developed software meets the goals and needs of users (Sahyudi & Voutama, 2025). Testing is also conducted to ensure the quality of the software (Mustaqbal et al., 2015). This system testing utilizes black-box testing, which involves entering data into each system form to determine whether the system is operating according to the agency's needs (Wahyudi et al., 2018).

The results of Black-Box Testing using the Equivalence Partitioning technique indicate that all core system functions operated according to predefined specifications. The system successfully processed valid inputs and appropriately rejected invalid inputs across all tested scenarios, including login authentication, archive upload, file format validation, and keyword-based searching (Khan & Khan, 2012). These results demonstrate that the Arsipinaker system meets functional reliability requirements for web-based archival systems. The use of Equivalence Partitioning effectively reduced testing complexity while ensuring comprehensive coverage of input data classes, which is consistent with best practices in software quality assurance for RAD-based development.

Table 3. Testing Table

No	Test Scenario	Input	Data Class	Result
EP-1	Valid username & password	Registered username, correct password	Valid	Login successful, access to admin dashboard
EP-2	Valid username, incorrect password	Registered username, incorrect password	Invalid	Login failed, Initial observations "Incorrect password" message appears
EP-3	Empty field	Empty username / Empty password	Invalid	System rejected, "Field required" message appears
EP-4	All fields are valid	Archive name, category, PDF file	Valid	Archive saved
EP-5	Invalid file format	file: .jpg, .png, .exe	Invalid	System rejected, format error message appears
EP-6	Category not selected	Empty category	Invalid	System failed to save and display message appears
EP-7	Valid keyword	"Surat Keputusan"	Valid	Archive appears according to keyword
EP-8	Missing keyword	"xyz666"	Invalid	System displays "No record found" message appears

Performance Evaluation

Researchers evaluated user performance in completing task scenarios. The effectiveness of the intervention was assessed based on user achievement in completing the task scenarios. User performance in the task scenarios was evaluated, with a binary score of "1" awarded for successful completion. Conversely, a binary score of "0" was awarded for unsuccessful completion of the task. During the task scenarios, failures were caused by actions, system errors, user negligence, and internet network disruptions. Table 3 shows the results of the task scenarios completed by five users.

Table 4. Task Completeness Arsipinaker

Task Scenario	Task Complete				
	P1	P2	P3	P4	P5
TS 1	1	1	1	1	1
TS 2	1	1	1	1	1
TS 3	1	1	1	1	1
TS 4	1	1	1	1	1
TS 5	1	1	1	1	1
TS 6	1	1	1	1	1
TS 7	1	1	1	1	1
TS 8	1	1	1	1	1
TS 9	1	1	1	1	1
TS 10	1	1	0	0	1
TS 11	1	1	0	1	1
TS 12	1	1	1	1	1
TS 13	1	1	1	1	1
TS 14	1	1	1	1	1
TS 15	1	1	1	1	1
TS 16	1	1	1	1	1
TS 17	1	1	1	1	1
Amount	17	17	15	16	17
Total	82				

Description: 1 (Success), 0 (Failure)

Next, calculate the effectiveness and completeness scores for the core tasks of the Arsipinaker Website using the following equation:

$$\text{Effectiveness Score} = \frac{82}{100} \times 100\% = 82\%$$

The effectiveness score of the Arsipinaker System is 82%. Efficiency is measured based on the average time it takes participants to complete a task scenario in seconds. The time it took five users to complete the task scenario is shown in Table 5 below.

Tabel 5. Execution Time Arsipinaker

Task Scenario	Participant Code					Average
	P1	P2	P3	P4	P5	
TS 1	56	50	52	55	51	52,8
TS 2	5	5	6	7	6	5,8
TS 3	124	140	160	157	146	145,4
TS 4	126	117	136	124	156	131,8
TS 5	20	19	18	17	22	19,2
TS 6	29	24	22	26	23	24,8
TS 7	8	10	9	7	8	8,4
TS 8	17	20	22	18	12	17,8

TS 9	8	6	5	8	7	6,8
TS 10	64	58	76	69	81	69,6
TS 11	28	17	35	15	29	24,8
TS 12	18	17	15	23	25	19,6
TS 13	23	35	46	45	57	41,2
TS 14	27	45	38	29	56	39
TS 15	28	47	40	32	59	41,2
TS 16	10	13	9	10	9	10,2
TS 17	11	14	10	11	10	11,2
Average						39,39

System Usability Scale (SUS) Questionnaire

Based on the questionnaires that have been distributed and the calculations that have been carried out, the results of the SUS scores for each respondent and the average SUS scores of all respondents are obtained as in Table 6 below.

Table 6. SUS Arsipinaker Score Results

Respondents	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total	Results
1	4	2	3	2	3	2	3	2	3	3	27	67,5
2	4	2	5	2	5	2	5	2	4	2	33	82,5
3	5	5	5	5	5	5	5	5	5	5	50	125
4	5	2	4	4	4	2	4	2	4	4	35	87,5
5	3	2	4	3	3	3	4	2	3	4	31	77,5
6	4	2	4	3	4	3	4	3	4	3	34	85
7	4	3	3	4	3	3	4	3	3	4	34	85
8	4	4	3	5	3	3	3	3	3	4	35	87,5
9	4	2	5	3	4	2	4	2	4	3	33	82,5
10	4	2	5	4	5	5	4	2	4	3	38	95
Average Score											87,5	

Average SUS Score	Category
87,5	Excellent

Some studies require a score above 68 to obtain a system usability score, while a score below 68 indicates that there are still deficiencies in the system and that improvements need to be made.

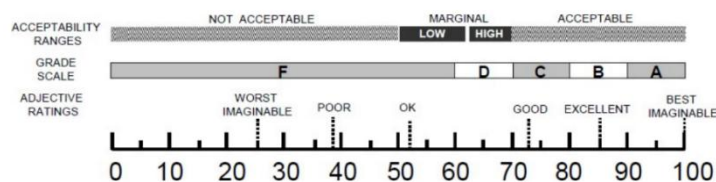


Figure 5. Grade of SUS Results

The SUS score yielded an average score of 87.5, exceeding the standard SUS average. The Arsipinaker system received a B rating with an "Excellent" rating. Furthermore, the acceptance range fell into the "Acceptable" category, indicating that the Arsipinaker system

received excellent feedback from its users. This indicates that the Arsipinaker system is valued and considered highly useful by its users.

The research results indicate that the Arsipinaker system successfully met its functional requirements, as all Black-Box Testing scenarios revealed no fatal errors. These findings confirm the effectiveness of the Rapid Application Development (RAD) approach in producing a reliable web-based archiving system through iterative development and continuous user engagement. Similar findings were reported by [Nalendra \(2021\)](#), who found that RAD accelerated system development while maintaining functional quality and responsiveness to user needs. The successful implementation demonstrated that the selected development method was appropriate for addressing the dynamic archiving management needs of local government institutions.

The performance evaluation showed an effectiveness score of 82% and an average task completion time of 39.39 seconds. These results indicate that the system substantially improves users' ability to perform archiving tasks efficiently. Compared with initial observations, where manual retrieval of important records took approximately 10–15 minutes, the digital system significantly reduced retrieval time. These findings support previous studies showing that archive digitization improves information accessibility and operational efficiency in public organizations ([Caroline et al., 2022](#)). The unsuccessful task scenarios suggest that some features may still require refinement, highlighting that technology implementation alone is insufficient without adequate user adaptation and training.

In the current manual system, archives are scattered across various filing cabinets and personal storage devices, creating barriers to ongoing access and retrieval. The centralized repository implemented in Arsipinaker allows archives to remain accessible throughout their existence, reflecting the continuum principle that archives should be managed as an integrated and ongoing process rather than through isolated lifecycle stages ([Johnston & Bowen, 2005](#)). Consequently, this system not only improves efficiency but also strengthens the sustainability of digital records management practices.

Organizing archives by organizational unit maintains the contextual relationship between records and their creators, thus supporting authenticity, accountability, and auditability. These findings are consistent with [Millar \(2002\)](#), who emphasized that maintaining provenance is crucial to ensuring trust in a digital archives environment. Therefore, Arsipinaker contributes to technological modernization and the preservation of fundamental archival principles in electronic records management.

The usability evaluation yielded an average SUS score of 87.5, categorized as "Excellent," indicating a high level of user acceptance. This result exceeds the commonly accepted benchmark score of 68 and indicates that users find the system easy and effective to use ([Bangor et al., 2009](#)). Achieving this high level of usability is particularly critical in Indonesia, as [Ilmi & Mayesti \(2020\)](#) observed, ERMS implementations in Indonesian institutions frequently struggle with compliance and user adoption when systems fail to provide a simple, user-friendly interface that aligns with daily administrative tasks. These findings align with studies on digital governance, which argue that the success of archives digitization depends not only on system functionality but also on user acceptance and organizational readiness ([Lolytasari & Dirsanala, 2023](#)). The implementation of Arsipinaker has implications beyond operational efficiency, contributing to increased transparency,

accountability, and the implementation of Electronic-Based Government Systems (SPBE) within local government institutions.

4. CONCLUSION

This study successfully developed and implemented the Archives system as a web-based Electronic Records Management System (ERMS) for managing vital records at the Madiun Regency Manpower and Industry Office using the Rapid Application Development (RAD) approach. The results showed that all core system functions operated according to specifications based on Black-Box Testing. Performance evaluation indicated an effectiveness score of 82% and an average task completion time of 39.39 seconds, while the System Usability Scale (SUS) evaluation produced an average score of 87.5, categorized as "Excellent." These findings suggest that Archives improves the efficiency, accessibility, and usability of vital records management through a centralized digital repository. This study is limited by the small number of participants and its implementation within a single government institution. Future research is recommended to involve broader institutional settings, larger user populations, and longitudinal evaluations to assess the sustainability and governance impact of digital records management systems in supporting Electronic-Based Government Systems (SPBE).

AUTHORS' CONTRIBUTIONS

Krisna Nauval Priya Argian: Writing original draft preparation. Ideas; formulation or evolution of overarching research goals and aims. **Brilliant Rosy:** Ideas; formulation or evolution of overarching research goals and aims; Supervision. **Alviantoro:** Supervision.

CONFLICT OF INTERESTS

We state that there are no known conflicts of interest linked with this publication, and that there has been no significant financial assistance for this work that could have influenced its outcome.

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