ABSTRACT

The Archives have an important role as a memory center and as an indispensable monitoring tool in every organization in the context of planning, analyzing, developing, formulating policies, making decisions, making reports, accountability, assessment, and precise control. The development of information technology in today's archives is very important for an organization. Because in organizational activities, information is needed to support the process of activities to carry out the functions of management, one of the sources that can support the process of activities is archives. Every of these activities, both in government and private organizations, is always related to archive issues. Archives have an important role in the process of presenting information for leaders to make decisions and formulate policies, therefore to be able to present complete, fast and correct information, there must be a good system and work procedures in the field of archives. This research was carried out at the Public Works and Public Housing Office (PUPR) of Jambi Province. This research is entitled "Designing a Website-Based Archiving Information System at the Public Works and Public Housing Office (PUPR) of Jambi Province". The purpose of this study is to document the process of designing an information system that functions to provide information to the Jambi Provincial PUPR Office. This research was carried out qualitatively by conducting interviews and observations with the Jambi Provincial PUPR Office to complete the research. As a result of the analysis and observations carried out, it can be concluded that one of the effective ways to make it easier for employees to find documents is to build a web-based archiving information system. This system is expected to produce information quickly, precisely, and accurately without reducing the value of the information itself.

Keywords: Archives; Prototype; Website; Design; Information Systems

1. INTRODUCTION

At this time in Indonesia, it has experienced a very advanced development and has begun to enter the digital era which is characterized by the development of information technology that is increasing and moving fast. Almost all fields in people's lives are influenced by technology that uses computers and internet networks. Currently, the internet has become the main reference and is the center of all information needed by humans. The development of computer and internet technology that occurs, indirectly affects the community in meeting the increasing information needs. The need for information in society is something that cannot be ignored and has become part of daily activities. Information that is in the middle of people's lives is available in various kinds of printed and electronic documents known as archives (Fajar Nyfantoro, 2019).

Archives in Indonesia are not only textual archives, but can also be in the form of special forms of archives, namely cartography, architecture, audio-visual archives, and electronic archives. In fact, archives are data with unique characteristics that must be guaranteed authenticity, validity, trustworthiness, completeness, and usefulness which must be managed intact and complete. Every human activity will definitely produce archives. Archives are more than just containing data and information but are evidence of actions and decisions that have been made (Erlangga Andi Sukma, 2022).

Archives have an important role as a memory center and as an indispensable monitoring tool in every organization in the context of planning, analyzing, developing, formulating policies, making decisions, making reports, accountability, assessment, and control activities as precisely as possible. The development of information technology in today's archives is very important for an organization. Because in organizational activities, information is needed
to support the activity process of implementing the functions of management, one of the sources that can support the activity process is archives. Every activity, both in government and private organizations, is always related to archival issues. Archives have an important role in the process of presenting information for leaders to make decisions and formulate policies, therefore to be able to present complete, fast and correct information there must be a good system and work procedures in the field of archives.

E-Archives, namely Archives in electronic form used by staff and agency employees to review and organize all matters relating to the archive system in the form of files, folders, audio, and visuals. Researchers concluded that e-archives is archival governance from conventional to electronic in the form of files, folders, audio, visual (media) (Era Octafiona, 2020).

According to Law 43 of 2009 on Archives, to ensure the availability of authentic and reliable archives, to protect the interests of the state and the civil rights of the people, and to dynamize the archive system, it is necessary to organize archives in accordance with the principles, rules and standards of archiving as required by a reliable national archive organization system (source: BPK Regulations Database).

Jambi Province PUPR Office is a government agency that has the task of infrastructure development, infrastructure maintenance in Jambi Province. The PUPR Office of Jambi Province has several fields: Secretariat, Personnel, Cipta Karya, Bina Marga, Water Resources, Bina Program and spatial planning. Each field has its own tasks. Some time ago, the PUPR Office of Jambi Province in managing the archiving of documents and correspondence of the PUPR Office still used a manual method, namely inputting in a ledger, this manual archiving was not neatly organized and easily lost as had been experienced several years earlier, namely the occurrence of a fire in the archiving warehouse which caused the loss of all existing documents. this is very unfortunate because the existing documents have not had time to be archived (head of the operation and maintenance section of DPUPR JAMBI (Lukman S.T, 2023).

Currently, the Jambi Province PUPR Office has used computerized input of all documents, namely input in the form of an EXCEL document format, but there are still frequent obstacles in the process of inputting these documents, namely frequent difficulties in searching for documents due to the large amount of document data stored and the input format is still in the form of Excel. This makes the process of searching for document data seem slow and long, it is difficult to know which documents will expire and which need to be taken care of so that the management is unscheduled because there is no reminder of the documents that must be taken care of, documents are still often found not neatly arranged per year / month making employees often accumulate documents and delayed work to result in inefficient employee performance, often found double data and not verified properly and clearly. In this study, the research focus is only on the maintenance and storage of documents such as accountability letters (SPJ), project report documents, auction procurement documents, cooperation documents between companies and others.

Therefore, it is necessary to raise the thesis title "Design of a Website-Based Archiving Information System at the Jambi Province Public Works and Public Housing Office" so that these documents can be managed properly, where the document archive information can be published and managed in advance to avoid confusion in information management, with the archiving website can support the process of activities carried out by the PUPR Office of Jambi Province, making it easier for employees to manage archived documents from year to year easily and avoid archive damage.

2. LITERATURE REVIEW

In developing a web-based archiving information system at the Ministry of Public Works and Housing Province, several key considerations and best practices from existing literature can be integrated. The design of the system can draw upon the concept of a national archival platform system, incorporating factors from electronic-based government systems (SPBE) and the open archival information system (OAIS) standard (Ramdhani, 2023). This approach ensures a robust and standardized framework for data preservation and management within the system. To enhance efficiency and accessibility, digital archives should leverage technology for expedient information retrieval, aligning with the digital era's requirements for good governance and clean operations (Elvira, 2024). Implementing interactive information retrieval systems can address the challenges faced by institutions like museums in managing the increasing volume of online information (Zhou et al., 2019). Furthermore, the value and innovative pricing strategies of digital archives can be explored, emphasizing collaborative efforts across government agencies and organizations for successful archiving initiatives (Wang et al., 2014). Additionally, frameworks for managing digital records on the

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cloud, especially in the public sector, can provide insights into overcoming challenges such as missing files and damaged records (Shibambu & Marutha, 2021). In the context of digital archiving, considerations for post-custodial realities and the management of digital repositories are crucial components to ensure effective preservation and access to records (Ngoepe, 2017). Moreover, the emergence of COVID-19 community archives highlights the importance of platformization in preserving digital cultural memory and the strategies employed to maintain these archives (Acker & Flamm, 2021). Incorporating Indigenous perspectives and protocols in sharing and storing digital cultural records can inform the development of culturally sensitive digital archives within Central Australian Indigenous communities (Vaarzon-Morel et al., 2021). Additionally, evaluating the implementation of electronic archive management systems can provide valuable insights into best practices for electronic archive management (Sari, 2018). To address challenges such as reference rot in scholarly statements, strategies for ensuring the longevity of web-based references should be considered in the design of the archiving information system (Burnhill et al., 2015). Furthermore, adopting participatory archiving approaches can empower marginalized communities to contribute to knowledge creation and community mobilization through digital archives (Allard & Ferris, 2015).

3. METHOD

This research was conducted using a qualitative approach, namely collecting data and information through related sources either orally (interviews) or in writing (text messages) or making direct observations to the field and then summarized so that it becomes a subjective conclusion based on the situation in the field. The qualitative approach aims to find information in as much detail as possible, understanding how a community or individual as the object of research, the deeper the information obtained, the better the quality of the research.

System Development Method

In this study the authors used the prototype method to design a document filing system for the PUPR Jambi Province office. prototype is a widely used system development technique and this technique also provides facilities for developers and users to interact with each other during the manufacturing process, so that developers can easily model the software to be created. The Prototyping model goes through five processes, namely:

![Fig 1. Prototype method](image)

These processes can be explained as below:

a. Communication, at this stage the developer and client meet and determine the general objectives, desired needs and an overview of the parts that will be needed next.

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b. Quick Plan, at this stage the design is done quickly and represents all known aspects of the software, and this design becomes the basis for making prototypes.

c. Modeling Quick Design, at this stage focuses on representing aspects of the software that can be seen by customers/users. Modeling Quick Design tends to create prototypes.

d. Construction of Prototype, build a framework or prototype design of the software to be built.

e. Delivery & Feedback, the prototype that has been made by the developer will be distributed to the user/client to be evaluated, then the client will provide feedback which will be used to revise the software requirements to be built.

4. RESULT

Login Page Design

The login page design is a form used by the admin or head of service to enter the main page by filling in the staff name and password correctly. The design of the login page can be seen in Figure 2.

![Login Page Design](image1)

Fig 2. Login Page Design

Home Page Design

The home page design is the first page that can be accessed by the admin or head of service where the home page displays information and there is also a sub menu to open other pages. For more details can be seen in Figure 3.

![Home Page Design](image2)

Fig 3. Homepage Design

Document Input Page Design

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The design of the document input page is a page that displays columns that can be filled in by system users to add new documents to the system. The data required to input documents is section, document type, third party, requirement, SMP number, contract value, quantity, development level, box number, archive access, folder, document date, expiration date and the file can be in PDF or Word form. For more clarity, see figure 4.

![Document Input Page Design](image1)

**Fig 4. Document Input Page Design**

**Loan Input Page Design**

The design of the loan input page is a page that displays columns that can be filled in by system users to add new loan documents to the system. The data required to borrow documents is the name of the staff borrowing, information or need for borrowing, date of borrowing and searching for the document you want to borrow. For more clarity, see Figure 5.

![Design of Loan Input Page](image2)

**Fig. 5 Design of Loan Input Page.**

5. DISCUSSIONS

**Ongoing System Analysis**

The Jambi Province Public Works and Public Housing Office in carrying out document archiving management activities is still inputted into Microsoft Excel. Management is carried out by administrative staff of...
the Jambi Province Public Works and Public Housing Office. For the document archiving process that is currently running, namely:
1. Documents received by administrative staff or admin
2. Original or copy documents are stored in boxes according to the field and number that has been determined
3. Then based on the document data received, the staff will input the data into Microsoft Excel to create a report that will be submitted to the Head of Service.

Judging from the business process or the current system for archiving documents, several obstacles were found at the Jambi Province Public Works and Public Housing Office, namely:
1. There are often difficulties in searching for documents due to the large amount of document data stored and the input format is still in excel.
2. Difficulty knowing which documents will expire and which need to be taken care of so that the management is not scheduled because there is no reminder of documents that must be taken care of.
3. Documents are still often found not neatly arranged, causing accumulation of documents and delayed work to result in inefficient staff performance, double data is often found and not verified properly and clearly.

From the analysis of the current system, several obstacles can be found that occur, therefore the authors design a solution that can solve existing problems by creating a web-based archiving information system at the Jambi Province Public Works and Public Housing Office using the PHP laravel framework and MySQL DBMS which has functions, among others:
1. The designed system can manage section data, document type data, document data and computerized document borrowing data making it easier to search for documents based on section, document type, box number, archive access and SPM number.
2. The system can provide notifications for documents that will expire on the home view so that system users will know which documents will expire soon.
3. The system can also automatically recap report data according to its needs such as staff reports, section reports, document reports and document loan reports.

System Analysis
Use case diagrams describe the new system designed according to the needs used to solve the problems that occur. Use case diagram has 2 actors, namely admin and head of service. For more details can be seen in Figure 6.
The activity diagram for adding document borrowing data depicts admin activities for adding new document borrowing data to the system. For more details, see Figure 9.
The logout activity diagram is the step by which the admin or department head exits the system. For more details, see Figure 10.

Data requirements analysis is described by a class diagram which is a diagram that describes the relationship between classes in a system. For more details can be seen in Figure 11.
6. CONCLUSION

The conclusion contains a summary of what is learned from the results obtained, what needs to be improved in further study. Other common features of the conclusions are the benefits and applications of the research, limitations, and recommendations based on the results obtained.
7. REFERENCES


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