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Technological Innovation for Population Administration: Web-Based System in Cisontrol Village, Ciamis

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ABSTRACT

The rapid development of information technology has profoundly influenced various sectors, including government operations and economic frameworks. This research specifically examines Cisontrol Village in Ciamis, West Java, which encounters numerous challenges in promoting its regional potential and efficiently managing population administration. The inefficiencies in the administration of population data and business permits have particularly hindered the growth of Micro, Small, and Medium Enterprises (MSMEs) within the village. To tackle these challenges, this research proposes a comprehensive web-based population administration information system designed to streamline the application process for the Business Permit for Trade (SIUP) specifically for MSME operators. The implementation of this system is aimed at enhancing the efficiency and accuracy of administrative tasks, allowing residents easy access to the information they need. By providing a user-friendly platform, local entrepreneurs can navigate the complexities of the permitting process with greater ease, thereby reducing the bureaucratic burden often associated with starting and running a business. Preliminary results indicate that good archiving practices within the system will support the delivery of precise and accurate information, ultimately improving the quality of administrative services in Cisontrol Village. This enhancement is expected to expedite various administrative processes, which will not only save time for residents but will also contribute to a more favorable business environment. Furthermore, by facilitating local economic development through better administrative practices, the web-based system encourages entrepreneurship and supports the establishment of new businesses. In conclusion, the introduction of this innovative information system holds the potential to significantly improve administrative efficiency and promote sustainable economic growth, positively impacting the overall quality of life for the residents of Cisontrol Village.

INTRODUCTION

The development of information technology is perceived to be very effective in almost all fields, both in government, offices, education and in society in general. The existence of technological innovation is the main driver of economic growth in a region, because it can open up new opportunities and exchange information more effectively and efficiently, it can also be used as a place to promote the advantages of the region. (H. A. Fatta, 2007)

One of the technological innovations that can help the economy is the e-commerce application. The existence of the COVID pandemic in last 2019 has accelerated the leap of digital adaptation and innovation in Indonesia. Before creating an e-commerce, of course, we have to collect or archive related documents in advance (Kerangka Ekonomi Makro dan Pokok – Pokok Kebijakan Fiskal , 2023)

Document archiving itself can be done by grouping documents based on the type of report being archived or monthly transaction reports. In general, the documents are archived in a certain location according to the document catalog. According to the laws which is meant by company or organization documents is data, records and/or information made and/or received on the paper or in other forms or recorded in any form that can be seen, read or heard (Kerangka Ekonomi Makro dan Pokok – Pokok Kebijakan Fiskal, 2025)

Cisontrol Village which is located in Ciamis, West Java Province, handles matters related to the village information system in carrying out its activities. Currently, the Cisontrol Village Sub-district office still has limitations in terms of technological innovation related to the promotion of Cisontrol Village, so that information related to the potential of the village is not published out. Nevertheless, this village has the interesting potential because it has MSME products such as agricultural products and snacks. Of course, the first thing needed to start a business is to have a Business Permit for Trade (SIUP). To obtain a SIUP, of course, the community will contact the village office and arrange of the administration of the permit. (Efri Yandani, Juni 2024)

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Related to those problems, to simplify the administration process, this research will design a population administration process which in the future will be used as the basis for an information system to obtain a SIUP. The system built in Cisontrol Village is web-based. (Lulu Luciana Putri, Januari 2019)

LITERATURE REVIEW

Digital archiving is essential at present to facilitate data retrieval for information and various administrative purposes. (Sutirman, 2015) Generally, the design of this information system is web-based (Medi Suhartanto, 2012) to ease access and employs an object-oriented methodology. (A. Nugroho, 2005) In addition to managing population data, the information system can also assist the community in processing business permits (SIUP) and e-commerce in the future. (S. Informasi and E. B. Web, 2023)

The preceding research aims to develop a mobile web-based public service that allows people to access data through the system via various internet-connected devices, including cell phones, computers, and other communication devices. The result of this study is the system has been tested by programmers and users using mobile devices and personal computers (PCs). Based on these tests, the system can be used and optimized for the population administration data management. (F. Noviyanto, T. Setiyadi, and I. Wahyuningsih, Januari 2014)

The research conducted by (Fauziah Latif, Aditya Wirangga Pratama., 2015) show the implementation of the Rational Unified Process in the design of a web-based earth products sales information system at CV Aneka Mandiri Lestari aims to create an efficient and structured system, facilitating the management of earth products sales. Through the use of this method, it is expected able to increase business productivity and effectiveness. In addition to that, (Adi, Putranto Widiatmoko, 2017) discusses the importance for archival institutions to understand the social dimensions involved in the challenges and opportunities of archive management in the digital era. The article raises awareness of how the user perspective should be considered in modern records management practices. This document discusses the implementation of e-archive at the Regional Office of the Ministry of Religious Affairs of Bengkulu Province, highlighting the importance of the archiving digitalization to improve efficiency and document accessibility.

The authors, (Rita Prima Bendriyanti dan Leni Natalia Zulita) explain the challenges faced in implementing this system as well as the expected benefits for records management, such as reduced paper use and improved document retrieval system.

METHOD

The research method used in this study used a descriptive qualitative research approach where the research location was at the Cisontrol Village office. Data collection uses interviews, observation, and documentation methods with research subjects including the village head, staff of village head office, and Cisontrol Village community figures. Data analysis uses an interactive model of data analysis which includes:

1. The function of archives plays an important role for a government agency. Therefore, archives must be managed properly in order to facilitate all office work and activities. Every employee in a government or private instituion must be ready to serve and provide precise and accurate information when needed.
2. Every archive employee must be able to manage archives with a good archive system and have to understand easily for every employee. (A.-B. b. Ladjamudin, 2005)
3. Management of MSME Archives: The study investigates how the archives and data related to the micro, small, and medium enterprises (MSMEs) within the Cisontrol village community are organized and maintained. This includes assessing current practices and identifying areas for improvement, particularly in relation to obtaining necessary permits like the Surat Izin Usaha Perdagangan (SIUP).
4. Initial stage
   At this stage, observations and questionnaires are carried out. The research will observe which villages have the potential to be developed in terms of archival information, especially in terms of helping to obtain a SIUP for MSME business doers. After the observation and questionnaire are carried out, a briefing will be held regarding digital archiving.
5. Advanced Stage
   a. Program simulation.Once the program is designed, a simulation will be conducted to demonstrate the procedures for entering information into the developed web platform. This practical application ensures that users are familiar with the system before full implementation.
   b. The process of developing and designing programs using the *waterfall* method, the process of developing and designing programs will begin through the process of identification, system analysis, implementation design and testing. This methodical approach ensures that each stage is completed before moving on to the next, allowing for comprehensive evaluation and refinement.
6. Multimedia interactive practice. To enhance understanding and engagement, interactive multimedia practices will be integrated into the training process. This will provide users with hands-on experience in utilizing the new archival system, reinforcing their learning and confidence in its application.

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7. Final stage (testing and evaluation). The last phase involves rigorous testing and evaluation of the system to ensure functionality and effectiveness. Feedback will be gathered from users to identify any issues or areas for improvement, ensuring that the archival system meets the needs of the Cisontrol Village community effectively.

RESULT

To effectively identify problem and address the challenges faced by the Cisontrol Village community in obtaining a Surat Izin Usaha Perdagangan (SIUP), it is crucial to conduct a comprehensive analysis focusing on several key aspects: Performance, Information, Economy, Control, Efficiency, and Services. This analytical framework, known as PIECES Analysis, allows for a structured evaluation of the systems currently in place and their efficacy in supporting the community's needs.

1. Performance: Evaluating the current performance of civil registration and archival systems is essential. It involves assessing how well these systems facilitate the timely issuance of necessary permits like the SIUP. Identifying bottlenecks and areas where delays occur can provide insights into necessary improvements.
2. Information: The quality and availability of information are vital for the SIUP acquisition process. An in-depth analysis will spotlight gaps in the information flow, such as outdated records or insufficient data management systems, which can hinder the progress of business applications.
3. Economy: Analyzing the economic implications of the current filing systems will help determine if resources are being utilized efficiently. This includes evaluating costs associated with manual processing and the potential savings that could be realized through digital solutions.
4. Control: The control mechanisms in place for managing civil registration data must be investigated. This includes ensuring that there are adequate security measures to protect sensitive information and that proper governance practices are being followed to maintain data integrity.
5. Efficiency: It is essential to assess the efficiency of existing workflows related to the civil registration filing system. Key indicators include the time taken to process applications and the human resources required. By identifying inefficiencies, targeted strategies can be implemented to streamline processes.
6. Services: Finally, evaluating the level of service provided to applicants is critical. This aspect focuses on user satisfaction and the accessibility of services offered. Understanding the community's experience and feedback will provide necessary insights into how services can be improved.

To facilitate the acquisition of the SIUP and to enhance overall service delivery, this research proposes the development of a web-based population application tailored for use by employees in Cisontrol Village. This application aims to address the issues identified through the PIECES analysis by streamlining data management and improving access to vital information.

1. User Interface: As illustrated in Figure 1, the application features a user-friendly main page for the population master database, which is to be managed by an appointed administrator.
2. Administrator Role: The administrator plays a pivotal role in managing the application, ensuring that it runs smoothly, and handling all transactions involving the database. Responsibilities include:
   a. Adding Records: Inputting new population information and ensuring that all data is up-to-date.
   b. Subtracting Records: Removing outdated or irrelevant records to maintain the integrity of the database.
   c. Modifying Records: Updating existing records as necessary to reflect any changes in citizens' status or information.
   d. Data Retrieval: Ensuring that information can be accessed quickly and easily by village employees to assist applicants in their quest for a SIUP.

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Figure 1. Population aster page

By implementing this web-based application, Cisontrol Village aims to achieve a refined civil registration filing system that supports precise, swift, and accurate information provision essential for facilitating the SIUP application process. This will ultimately enhance the village's capacity to support local entrepreneurs and contribute to the economic development of the community.

DISCUSSION

This research is the initial stage of digitalization of archiving that will be developed in Cisontrol Village. In this effort, the application created will utilize the identity number as the master data to obtain other relevant information. By using this system, it is hoped that the management of resident data will become more efficient and accurate.

The identity number will serve as a key to access and manage various types of data related to residents. Once the required data has been entered by the administrator, demographic statistics and other relevant information about Cisontrol Village will be available, as demonstrated in **Figure 2**. This data includes important information such as the population count, age distribution, gender, and employment status, all of which can be used for better planning and decision-making by the village government.

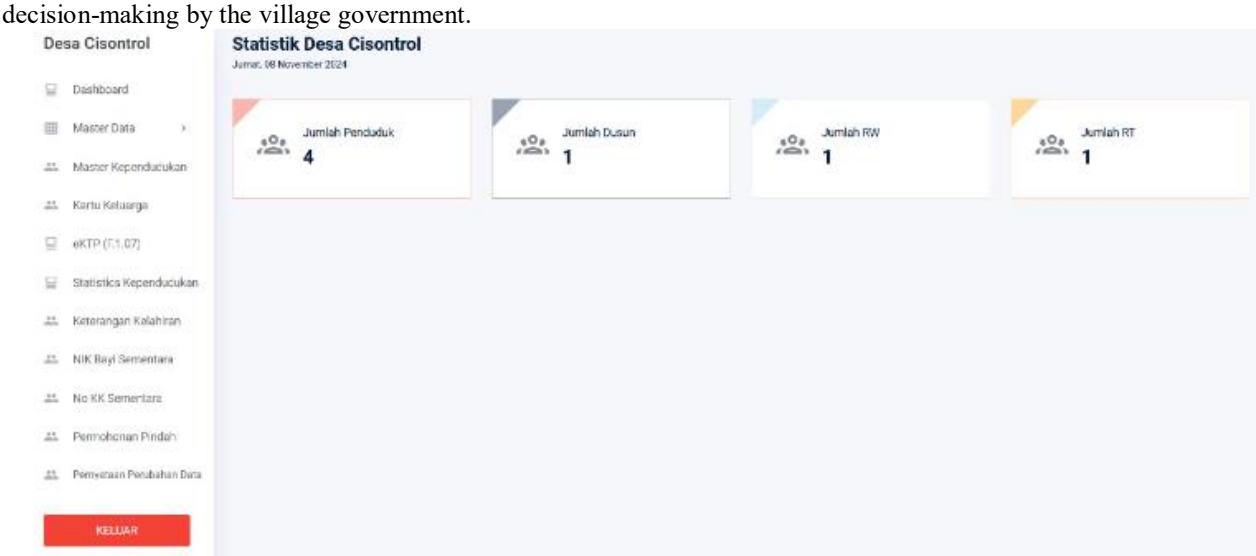

Figure 2. Population data statistics page

CONCLUSION

The conclusion of this research is that a good archiving process will help present information precisely, quickly and accurately. In order to assist the management of population administration and correspondence in Cisontrol Village, this research designs web-based digital archiving to support those needs.

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It is expected that this application is useful and in the future this application can be developed again in terms of business processes, so that the performance of Cisontrol Village officials will be better performance. In the next development that needs to be considered is: All menus displayed on the system must be equipped with data according to the menu. Update data regularly.

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