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The "SIKAWAN" Cloud Mail System Application in Rural Indonesia

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Abstract

As new technologies are developed, nearly every sector in Indonesia have decided to migrate from manual to digital service delivery. Using an electronic-based governance system is one of them. The Office System Application in the Cloud (SIKAWAN) is developed by this electronic government system. Banyuwangi Regency has implemented SIKAWAN in rural areas. This study's objective is to learn more about the design and operation of the SIKAWAN application. A descriptive methodology and qualitative research techniques are used in this study. The findings of this study indicate that a skilled operator is needed to implement the SIKAWAN application. On the other hand, regular assessments of the effectiveness of the system's implementation by the village government apparatus also contribute to the system's success.

Keywords: SIKAWAN, Cloud Computing, Rural Government

1. INTRODUCTION

The term of cloud computing has grown as computer science and the internet have developed along with the expansion of information systems. A group of software technologies collectively known as "cloud computing" allow users to share configurable computer resources (such as networks, servers, storage, applications, and services) and connect to any network from anywhere with ease. Increased productivity, easier operation completion, and the provision of high-quality services are just a few of the ways that the usage of cloud computing in e-government benefits the public sector. The contributions of cloud computing to how computer infrastructure and services are delivered have been discussed by several scientists and researchers. For example, in 2019, "Cloud computing: present status and future implications" is the title of an article written by Sasikala, P. The author presents a future and present view of cloud computing in this article. Their attention has been drawn to the managerial, consultative, and participatory models of e-Government. With a sophisticated approach that reflected the citizen-centric perspective of e-Governance, Grant and Chau's evaluation report from the year 2005 advocated a strong integration

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between IT and management aspects of e-Governance. Coursey and Norris [4] stated in their 2008 evaluation report that web technology is necessary for e-Government in order to combine the various government information and services, such as e-participation and e-democracy. Once more, the work that is now being done in web service performance is focused on the newest technology and standards. P. Ciancarini, D. Montesi, S. Adreozzi, and R. A straightforward method for modeling certain web service management attributes is presented by D. Gouscos, M. Kalikakis, and P. Georgiadis. By simulating the flow of messages and methods in a web service transaction, J.P. Thomas, M. Thomas, and G. Ghinea describe distributed web services [1,6].

Infrastructure as a Service, Platform as a Service, and Software as a Service are just a few of the many types of cloud services that cloud service providers offer to diverse companies. The phrase "Software as a Service" (SAAS) describes a way for businesses to rent out application software, such as word processors, databases, and business-related tools, over the internet for a predetermined amount of time without having to install it locally. One of the well-known examples is the use of Google Apps. Organizations who use cloud services, such as Microsoft's Windows Azure, as a platform for data storage and maintaining big databases on virtual servers from which data can be accessed in real-time refer to this as "Software as a Platform" (PAAS). Using the open and adaptable cloud platform Windows Azure, anybody can easily create, deploy, and manage programs across a network of data centers maintained by Microsoft around the world. The concept of leveraging cloud computing as a complete infrastructure, including the utilization of hardware components, networking duties, and programming responsibilities, is referred to as "Infrastructure as a Service" (IAAS). Cloud infrastructure is provided by a number of businesses, including Amazon. Some of the four primary deployment strategies utilized in cloud computing include public, private, community, and hybrid clouds. Anyone can use cloud services in a public cloud, regardless of location. [7,9]

The term "private cloud" describes cloud services that are only used by organizations and are not available to the public. Community clouds are those that allow members of a specific community to share cloud infrastructure or services. Hybrid clouds combine all the previously mentioned cloud categories. The administration and provision of applications, data, and information as a service delivered through the internet is now made possible by clouds. The use of computer memory, shared network storage, and computation services using connected servers are provided by the cloud. Cloud computing is the next great thing in the era of electronic communication and the Internet. The transition to cloud computing technology will have an influence on people, businesses, and governments. One of the greatest technologies for offering information technology services and finding solutions to numerous issues is cloud computing. Utilizing virtualization technologies, cloud computing offers users several services, including hardware resources and application levels. Many services, including hardware resources and application levels, are offered to end users through the usage of cloud computing and virtualization technologies [10,12].

This paper describes the application of cloud computing in the administration of email services in rural areas. Research on the implementation of email applications that use the cloud is rarely ever done.

2. LITERATUR REVIEW

To complete tasks without worrying about who owns and manages the network's resources and applications, cloud computing can be defined as the simple sharing and usage of those resources. With cloud computing, work-related computer resources and their associated data are no longer kept on an individual's own computer but are instead hosted

elsewhere and are thus available at any time and from any location. Cloud computing is quickly turning into a technology that businesses may adopt due to its dynamic scalability and utilization of virtualized resources offered as a service over the Internet [15] [16] offers almost the same description of cloud computing, which he characterizes as a "new style of computing in which dynamically scalable and frequently virtualized resources are provided as a service over the internet, While cloud computing is a type of computing that uses virtualized resources that can be shared by users and is extremely scalable. No prior understanding of the services is necessary for users. A user of the internet can converse with a number of servers at once, and these servers share information with one another." In the beginning, the industry had access to cloud computing. cloud computing is a new type of computing that is widely used in today's economy and society. On the other hand, the National Institute of Technology Standards (NIST) [12], cloud computing has the following five crucial features:

1. Self-service available on demand. By employing a web portal and management interface, for instance, users can order and manage services without interacting with service providers directly. The provider automatically purchases and makes available connected services and resources.
2. Broad access to networks. The usage of numerous technology platforms, such as cell phones, laptops, and PDAs, is made possible by the capabilities that are accessible through a network and accessed using common protocols.
3. Pooling of resources. Utilizing a multi-tenant approach with various physical and virtual resources that are dynamically allotted based on customer demand, the provider's computer resources are combined in order to serve many clients. Although the customer typically has no control or knowledge of the locations of the resources given, it is still feasible to identify a place in a more practical location (for instance, a country or data center). Storage, computation, memory, network bandwidth, and virtual machines are a few examples of resources.
4. Rapid elasticity. The cloud system has the capacity to react rapidly and flexibly. The system is always on, so users can make modifications to the type and capacity of service they desire at any moment.
5. Measured service. Utilizing the measuring capabilities of numerous levels suitable to the type of service (such as storage, processing, bandwidth, and active user accounts), cloud computing systems automatically monitor and optimize resource utilization. In an effort to increase transparency for service providers and users, resource utilization can be tracked, managed, and reported.

Data and programs are readily available for download for users that save their data in the cloud. This will have a positive impact on both the Cloud service providers and their clients. As a result, look at cloud computing as an information technology solution that is suitable for the society of the present. The village office's use of an E-Village system powered by cloud computing could enhance the management of the community. With the help of this solution, village governments are no longer worrying about issues relating to data storage, data processing software, system maintenance, or qualified IT people. The cloud-based E-Village technology allows the village government to enter data and use administrative tools to work more efficiently. Online consultation and administrative service requests have been made possible for the community using the cloud-based village administration form application [13-18].

2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a theory developed by Fred Davis in 1989 to understand the acceptance and adoption of information technology by users. This model

focuses on the attitudes and intentions of users towards the use of technology, if these attitudes and intentions will influence user behavior in adopting the technology.

According to TAM, technology acceptance is influenced by two main factors: Perceived Ease of Use and Perceived Usefulness. Perceived Ease of Use reflects the extent to which users perceive the technology as easy to learn and use, while Perceived Usefulness reflects the extent to which users believe that using the technology will enhance their performance or effectiveness.

TAM also states that user attitudes and intentions to use technology are influenced by other factors such as prior experience, subjective beliefs, social norms, and demographic factors. This model has been widely used in research to examine the acceptance and adoption of technology in various contexts.

18 The DeLone and McLean Model: The DeLone and McLean Model, also known as the Information Systems Success Model, is a model developed by DeLone and McLean in 1992 and has undergone further revisions and developments. This model aims to understand the factors that contribute to the success of information systems in organizations.

The model identifies six dimensions of information system success, namely:

1. System Quality: The extent to which the information system provides good features and functions, as well as high reliability and performance.
2. Information Quality: The extent to which the information generated by the information system has high accuracy, usefulness, and relevance.
3. Service Quality: The extent to which the services provided by the information system to users, such as technical support and responsiveness, meet user expectations.
4. System Use: The extent to which users use the information system in performing their tasks and jobs.
5. User Satisfaction: The level of satisfaction users have with the use of the information system.
6. Individual Impact and Organizational Impact: The extent to which the use of the information system contributes to individual and organizational outcomes, such as increased productivity, service quality, or operational efficiency.

The model acknowledges that these factors are interrelated and have complex causal relationships. By understanding these factors, organizations can identify and manage important aspects of their information system success [19-23].

2.2 E-Village Government

E-government is defined in a variety of ways, including "The delivery of government information and services online through the Internet or other digital means". Furthermore, [2:1] defines e-Government as the delivery of government information and services to citizens, businesses, and other government agencies via the internet and the world wide web. Using information and communication technology (ICT) to improve relations between the government, citizens, businesses, and other government institutions is another description offered by [3]. The use of information and communication technology (ICT), primarily the Internet, as a tool to provide residents, businesses, and employees with better government services is what [4] refer to as e-government. The actors in e-government are people and organizations that interact either directly or indirectly with the governance. These interactions can be named as G2G (Government to Government), G2C (Government to Customer), G2B (Government to Business), and G2E (Government to Employee). Government to Customer (G2C).

G2C is an information and communication technology-based method of providing services to the public, or customers. To increase services' transparency, efficacy, and efficiency, this facilitates both the public's ability to access government information and the government's ability to provide services or information to the public. The most popular e-

government model is this one. Government to Business (G2B). The government's attempt to foster a business-friendly environment is the Government to Business model. For a business to operate safely and comfortably, good connections between the government and businesspeople are necessary. Through government portals or other information technologies, the government is attempting to provide information and services to businesspeople in this situation. Government to Employee The government uses the G2E e-government paradigm in addition to providing services to the public and business persons. The goal of G2E is to give employees a sense of security and comfort by offering assurances or services. Government to Government, or G2G, is an initiative to make it easier for the government to share information with other government agencies. This G2G model will also make it easier and develop international connections.

Our Indonesian government is putting in a lot of effort towards using applications of e-Governance using ICT and making the government services more useful and simpler for citizens equally in urban and rural areas. One of the districts, Banyuwangi Regency, implements the idea of e-government into its village administration through a program called smart *kampong* in order to digitize public services. As a brand-new mailing tool, the SIKAWAN program was also introduced. With the SIKAWAN application, managing correspondence administration can now be done through an app that can be downloaded through the Play Store on an Android mobile phone which is expected to streamline and accelerate public services in the field of correspondence in the Banyuwangi district. To make it easier for the government to carry out the performance of government officials, or to put it another way, to maximize the government's performance, the correspondence service that was formerly performed manually has now been turned into digital correspondence. With one SIKAWAN application, a signature can now be provided electronically as proof of legality or written approval [24,28].

2.3 The SIKAWAN

Since the adoption of Law Number 6 of 2014 concerning Villages (Village Law), Indonesia has experienced a change in its political landscape. Since that time, Indonesia's government has been divided into four levels: the central government, first- and second-level local governments, sub-district governments, and village governments. Indonesia is regarded as the nation with the most levels of government globally because most nations only have a central government and local governments. Therefore, the office system in the cloud has been used from the center to the village government level. In relation to this system, there are two policies: the first is the Minister of Communication and Informatics' Regulation No. 2 of 2015, which governs the Procedures for Registration of Electronic Systems for State Administration Institutions. The second, is Government Regulation Number 95 of 2018 which related to electronic-based government systems.

The office system in the cloud which called as SIKAWAN, has been implemented in several villages in Banyuwangi district while at the same time, those villages also implementing the Smart Kampong. A mobile device running Android can access the SIKAWAN application by first downloading it from the Play Store. Due to the ability to track incoming and outgoing correspondence, make dispositions, and electronically sign papers through a single application on each user's cellphone. This program will also regulate the administration and operation of regional apparatus in the Banyuwangi district [32].

3. RESEARCH METHODS

This research used qualitative method with a descriptive approach, in which researchers made an understanding of what was happening to the research subjects by clarifying in depth based on the data obtained in the field. The research was conducted at the Karetan Village

Office. Researchers collected data by observing at the Karetan Village Office and interviewing the Head of Karetan Village, the Secretary of the Karetan Village, the Admin of the SIKAWAN Application to obtain primary data. Researchers also searched data via the internet, articles, laws and regulations, and other documentation as secondary data. The research data were then broken down and evaluated in stages, starting with data collection through observation, interviews, and documentation, moving on to data reduction to concentrate on the research data's findings, followed by data presentation and description, and finally ending with conclusions. Additionally, tests for trustworthiness, outside data validation, reliability, and objectivity will be used to determine the validity of the data.

4. FINDINGS AND DISCUSSION

SIKAWAN is an application form of implementing e-government in Banyuwangi district. This application is a digital transformation of correspondence that was previously done manually. The SIKAWAN application is a new breakthrough in Banyuwangi Regency which will simplify and speed up mail administration services because this application is equipped with several letter features and also electronic signatures. This application was released on July 11 2021, but this application began to be implemented and is mandatory in every government agency starting September 27 2022 in accordance with Banyuwangi Regent Instruction Number: 188/01/Inst/429.011/2022 regarding the use of the SIKAWAN application.

The use of the SIKAWAN application, which aims to speed up mail administration services in Banyuwangi Regency, can be accessed via an Android-based mobile phone by first downloading the application via the Play Store. Apart from supporting operation via Android, this application also supports running on a website-based PC. This application will regulate the administration and performance of regional apparatus in Banyuwangi district because they will know incoming letters, outgoing letters, dispositions and can also sign documents electronically through one application on their respective cellphones.

In the year of 2021 this application won a TOP Digital Awards as a digital innovation solution for Banyuwangi district. Security and privacy in this application are strengthened by first registering an account and logging in after confirmation. However, not all people can access the application, because only government agencies have access. This is enforced to prevent leakage of important documents in the SIKAWAN application. The SIKAWAN application in Karetan Village itself have implemented in early 2020, prior to the Banyuwangi regent's instructions operating this application as a trial stage. This application besides helping work more effectively and efficiently, of course, has many disadvantages from the beginning of its application. [34]

The use of outgoing letters signed electronically and packed into a single SIKAWAN application. The community and employees can manage specific letters with the use of this program without having to wait around for the village chief's signature, which is obviously quite helpful. The process flow for sending mail in the village of Karetan utilizing an electronic signature and the SIKAWAN program is shown below.

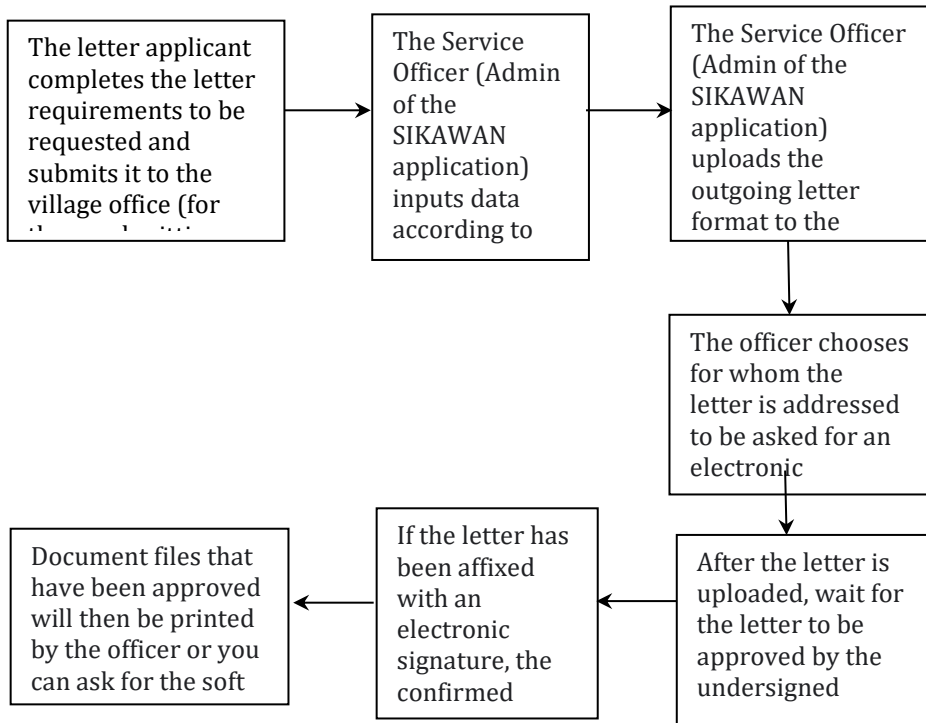


Fig 1. Process flow for outgoing mail with an electronic signature
 Source: Primary Data, 2023

From the description above, the process flow for outgoing letters with electronic signatures in the village of Karetan has been systematically arranged. There are two models of outgoing letters issued by Karetan Village, namely outgoing letters to the public and outgoing letters to other agencies.

The initial process of the letter applicant completes the letter requirements to be requested and submits it to the officer (particular letter applicant), then the SIKAWAN application admin will check the file and enter data according to the type of letter to be issued and upload the letter format as requested which has been filled in with the applicant's data to the SIKAWAN application letter that will be sent to be asked for an electronic signature will be sent to the person concerned, namely the village head asked for his signature. if the letter has been uploaded by the SIKAWAN application admin, all that remains is to wait for the letter to be confirmed by the electronic signature by the person concerned. Letters with confirmed electronic signatures will appear on the menu on the SIKAWAN application admin device, after which the letter will be printed by the officer or requested for a soft file in the form of a Portable Document Format (PDF).

The flow described above shows that the use of the SIKAWAN application for outgoing letters with electronic signatures implemented in Karetan village has been effective and efficient, but actually the implementation is not optimal because the letters at the end still use other applications in distribution to other State's Organization. This fact makes the implementation of the SIKAWAN application for outgoing letters in Karetan village not maximized. Preliminary data obtained in 2022 in October, researchers found problems with the application, namely servers that were often down and the network was less supportive in Karetan village. The data obtained is used as a comparison for data collection at a later stage. Constraints that occur make the service of course be hampered because it requires waiting time for the application to run normally. In February 2023 the researchers conducted

observations of research sites and simple interviews with the admin of the application in Karetan village and the problems or obstacles faced by the application were still the same, namely internet connection problems and servers sometimes down. In March 2023 the researchers conducted documentation and interviews regarding the implementation of the sikawan application in Karetan village and got the result that server down problems have never occurred because the local government of Banyuwangi district has made improvements to the application and the Karetan village government has upgraded the application to a better version, it's just that the network the internet is sometimes slow which makes sending letters a little longer. Here's the process for submitting outgoing letters until they are affixed with electronic signatures and ready to be distributed [33,36].

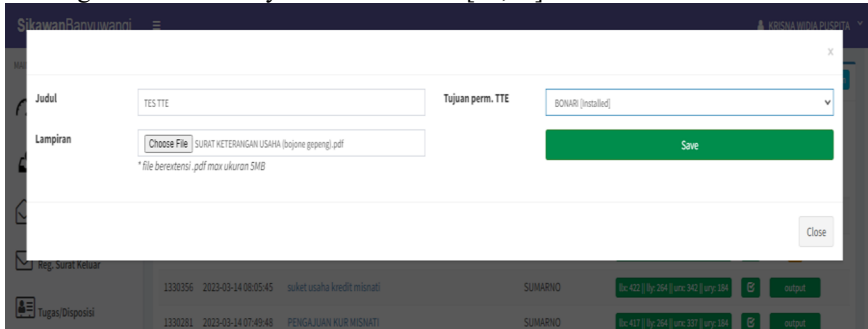


Fig 2. The process of uploading a letter

Source: Karetan Village 2023

The picture above is a page where you can upload a letter that will be given an electronic signature. There is a title column to provide the name of the letter, an attachment option to select the letter file to be uploaded, and the destination for the recipient of the electronic signature.

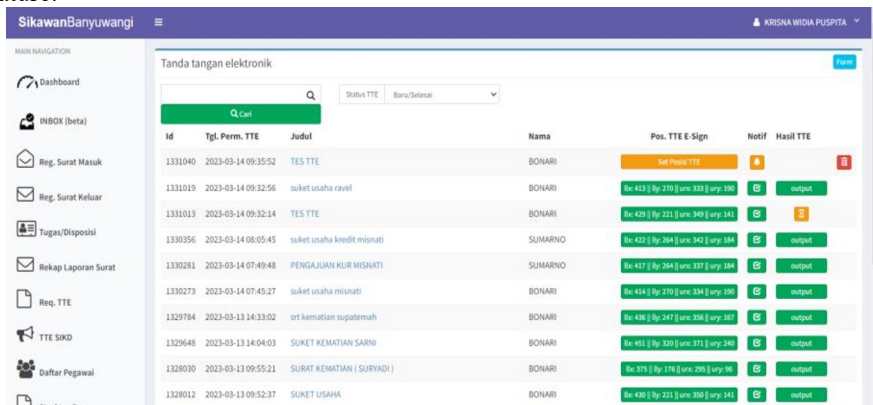


Fig 3. The process of waiting for the Electronic Signature to be confirmed

Source: Karetan Village 2023

Figure 3 is a page image showing the upload status of a letter. There is a description of the ID of the letter, the date of requesting the electronic signature, the title of the uploaded letter, the name of the destination for which the electronic signature will be requested, and the status of the electronic signature. Letters that have been uploaded on the pos. TTE status E-sign and bell notifications will be orange, if there is an upload error it can still be corrected by selecting the red trash can icon to the right of the notification. Furthermore, for letters that have confirmed the electronic signature status is pos. TTE E-sign and the bell notification will turn green, the results of the electronic signature can be downloaded and the letter cannot be repaired if there is an error, it must be re-uploaded.

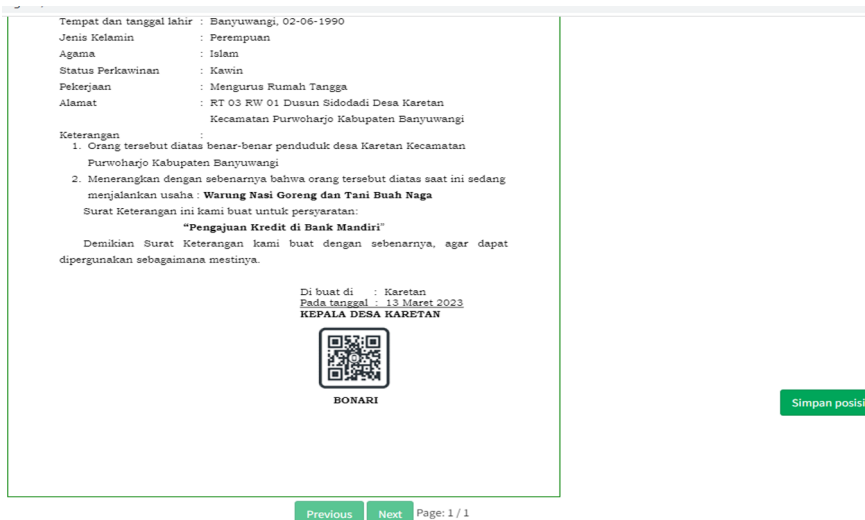


Fig 4.

The letter has been confirmed and is ready to be distributed

Source : Karetan Village 2023

The image above is a page from the display of a letter whose electronic signature has been confirmed. Furthermore, the letter will be downloaded and distributed. Letters to be sent to the public can be in print-out or PDF form, depending on the public's request. Meanwhile, letters that will be sent to agencies will be sent via the Smart Village application.

We can see from some of the pictures described above that the outgoing mail process using the SIKAWAN application in Karetan village only reached the stage of giving an electronic signature. This process can be considered effective and efficient, but this is also a fact that the application is not maximized. Even though the application can send letters to other OPDs directly through the application and it will be faster and more economical. Sending letters that still use manual will result in additional time and costs, making it less effective and efficient [35].

The author analyzes the implementation of the SIKAWAN application on outgoing letters with electronic signature facilities in Karetan Village, Purwoharjo District using the theory of Rippley and Franklin (1980), by reviewing 3 (three) factors: the apparatus compliance, smooth implementation, and performance.

1. The Apparatus Compliance

The policy that will be implemented will of course have an implementer, the officials who will implement are the SIKAWAN application admin as the implementor who manages and runs each process of operating the application, the Village Secretary who oversees correspondence activities using the application, and the village head as the implementor who provides confirmation of the electronic signature on the letter in the SIKAWAN application.

Apparatus compliance is a factor that shows the mental readiness and compliance of the apparatus in implementing a policy. According to Rippley and Franklin, indications of apparatus readiness in implementing the SIKAWAN application in this outgoing letter are the readiness of the implementer's HR in implementing the SIKAWAN application, and the work discipline of the apparatus. Banyuwangi Regent's Instruction Number: 188/01/Inst/429.011/2022 instructs each installation to use the SIKAWAN application to be implemented in Karetan Village, even before the instruction was issued it had already become a trial village for the application. Judging from the apparatus compliance factor with the apparatus compliance indicator, namely the readiness of the implementor HR in implementing the SIKAWAN application and the discipline of the implementor in Karetan Village is ready and the readiness of the apparatus can be maximized.

2. Smooth Implementation

The smoothness of implementation is a factor that indicates whether or not there are obstacles in implementing policies and the implementor is expected to be a problem solver or problem solver by minimizing if there are obstacles in implementing the policy. An indication of the smooth implementation of the SIKAWAN application in this outgoing letter is whether or not there are obstacles encountered in the implementation, and the role of the implementor as a problem solver for these obstacles.

The smoothness of the implementation with indications of whether or not there were obstacles encountered in the implementation, and the role of the implementor as a problem solver for these constraints. From the data obtained, the researchers concluded that the implementation of outgoing letters using the SIKAWAN application with electronic signature facilities in Karetan Village had no problems, because the constraints that ever existed was able to be overcome by the implementor, but in Karetan Village this did not maximize the use of the SIKAWAN application when distributing letters even though the application was equipped with features to facilitate the distribution of letters. Karetan Village still uses another method with the smart village application for the process of distributing outgoing letters. This causes less efficient correspondence process.

3. Performance

Performance is a form of the success of the policy implementation process which ultimately determines the success of all policy implementations. Effectiveness and optimization are indicators of successful performance in implementing a policy. An effective policy implementation process will certainly give birth to optimal performance.

The outgoing mail service in Karetan village before the SIKAWAN application was still done manually. Submission of signatures is also still done manually, thus hampering service when the person being asked for his signature is not in the office. Performance success with indicators of effectiveness and optimization in the implementation of the SIKAWAN application for outgoing letters with electronic signature facilities in the village of Karetan based on the data obtained by researchers can draw conclusions that the performance of apparatus has become better, more effective, and efficient

The implementation of TAM in the context of e-government and public service delivery through SIKAWAN can contribute to the improvement of the aspects of usefulness, ease of use, and efficiency in administrative services for the community. Here are some ways in which this can be achieved:

1. **Increased Usefulness:** By utilizing TAM, the service providers can identify and address any shortcomings in the SIKAWAN system that may diminish its usefulness. For example, through evaluating existing features, the providers can ensure that the system provides clear benefits to users, such as faster and easier access to administrative information, increased transparency, and process efficiency.
2. **Enhanced Ease of Use:** TAM emphasizes the perception of ease of use of technology. In the context of e-government and SIKAWAN, the service providers can ensure that the system is user-friendly for the community. They can simplify the user interface, provide clear and straightforward guidance, and offer training or support for users who need it. This will boost users' confidence and motivation to utilize the SIKAWAN system.
3. **Improved Efficiency:** E-government through SIKAWAN can enhance the efficiency of public administrative services. By adopting this technology, administrative processes can be conducted electronically, reducing reliance on slow and error-prone manual processes. Users can submit applications, upload documents, and interact with administrative officials online, without the need to physically visit service centers. This saves time and effort for the community and reduces unnecessary bureaucracy.

4. **Enhanced Accessibility:** Cloud-integrated e-government SIKAWAN enables easier and broader access for the community. Users can access administrative services from various devices with an internet connection, including mobile devices like smartphones. This provides flexibility for the community to access public administrative services without being bound by specific times and locations.
5. **Increased Public Participation:** By improving the aspects of usefulness, ease of use, and efficiency, e-government SIKAWAN can encourage active participation of the community in the public administrative processes. With easy access and effective utilization, the community can be more motivated to participate in submitting applications, providing feedback, or expressing their aspirations to the government. This can enhance the interaction between the government and the community, leading to more responsive and high-quality administrative services.

By implementing TAM in the context of SIKAWAN e-government, the service providers can improve the impact and benefits of the system, making administrative services more effective, user-friendly, and efficient for the community.

5.CONCLUSION

The SIKAWAN application is a form of e-government development in the form of a mailing application. The SIKAWAN application was officially launched by the Banyuwangi Regency government in July 2021 and must be used by each agency in September 2022 after the Banyuwangi regent's instruction Number: 188/01/Inst/429.011/2022 regarding the use of the SIKAWAN application in Banyuwangi Regency.

The Technology Acceptance Model (TAM) is a framework used to understand and explain the acceptance of technology by users. The model encompasses aspects that influence the adoption and use of technology by individuals or groups. On the other hand, e-government refers to the use of information and communication technology (ICT) to provide electronic public services to the community.

The implementation of TAM in the context of e-government and public service delivery through SIKAWAN (Cloud-based Information System) in administrative services can provide an understanding of how this technology is accepted and used by stakeholders, including administrative officers and service users.

The connections between TAM and e-government in the use of SIKAWAN application on public service:

1. **Perceived Ease of Use:** One aspect of TAM is the perception of ease of use of technology. In the context of SIKAWAN e-government, users can evaluate the extent to which the system is easy to use in obtaining public administrative services. If users perceive the SIKAWAN system as easy to use, they are more likely to accept and use the services.
2. **Perceived Usefulness:** TAM also highlights the perception of the usefulness of technology. In this aspect, users must believe that using e-government SIKAWAN will provide tangible benefits in public administrative services. If they believe that this technology will improve efficiency, accessibility, and service quality, they are more likely to adopt it.
3. **Intention to Use:** TAM also considers the intention to use technology as a significant factor in adoption. In the context of SIKAWAN e-government, the intention to use reflects users' willingness to use this system in administrative services. If users have a strong intention to use SIKAWAN, they are more likely to adopt and utilize it in their interactions with the government.
4. **Social and Organizational Factors:** TAM also recognizes the influence of social and organizational factors in technology acceptance. In the context of SIKAWAN e-

government, factors such as social support from relevant parties, organizational policies that promote technology adoption, and the availability of necessary resources and infrastructure can influence the acceptance and use of this system.

By implementing TAM in the context of e-government and SIKAWAN public service, the organizers can gain a better understanding of the factors that influence technology adoption and can take appropriate steps to promote broader and successful utilization of this system in public administrative services. The implementation of the SIKAWAN application on outgoing letters with electronic signature facilities in Karetan Village, Purwoharjo sub-district, Banyuwangi Regency has provided a change in service for the better. Based on the indicators of implementation success according to Rippley and Franklin (1980) which measure success with the factors of apparatus readiness, smooth implementation, and performance, it is obtained data that the Karetan Village Office has succeeded in implementing this policy. However, the implementation is less than optimal. The following is an overview using indicators of the successful implementation of Rippley and Franklin on outgoing letters using the SIKAWAN application in Karetan Village:

1. Apparatus Compliance

The outcomes confirmed that the Karetan Village office was already in accordance with applying electronic signature utilizing the SIKAWAN application on outgoing mail. However, Rippley and Franklin did not mention that there must be readiness of supporting media or tools for implementation. This compliance can be seen from the readiness of the implementing apparatus and the discipline of the implementers who implement the policy. These two indicators have been implemented in the implementation of the SIKAWAN application in Karetan village. Field facts found by the apparatus can be an indication of apparatus compliance in implementing policies.

2. Smooth Implementations

The research's findings indicate that the implementation can proceed without incident; there are some challenges, but they can be overcome. This demonstrates the success of the SIKAWAN application's implementation as a means of electronic signature capability for outgoing mail. However, Karetan Village did not completely utilize the SIKAWAN program's functions, which complicated its implementation. To send letters, they had to use various applications because there were a number of instances where the SIKAWAN application was not fully functional. According to Rippley and Franklin's idea, smooth implementation calls for the implementor to minimize any emerging constraints.

3. Performance

The performance of village government officials has been able to be improved, as evidenced by Rippley and Franklin's measurement of performance. However, the findings highlight that effective village government personnel are also a result of periodic assessments of measures performed by the village head. This assessing aspect contributes in the effectiveness and optimization of the SIKAWAN application's operation. Rippley and Franklin's theory does not mention this further component.

REFERENCES

- [1] P. Sasikala, "Cloud computing: present status and future implications," *International Journal of Advanced Research in Computer Science and Software Engineering*, vol. 9, no. 9, pp. 345-352, Sep. 2019.
- [2] D. Grant and D. Chau, "Evaluation report on the integration of IT and management aspects of e-Governance," *Journal of Electronic Government Research*, vol. 2, no. 3, pp. 45-62, Dec. 2005.

- [3] K. Coursey and D. Norris, "Web technology for e-Government: Combining government information and services," *Government Information Quarterly*, vol. 25, no. 3, pp. 477-494, Jul. 2008.
- [4] P. Ciancarini, D. Montesi, S. Adreozzi, and R. [Year], "A straightforward method for modeling certain web service management attributes," *Journal of Web Services Research*, vol. 6, no. 2, pp. 78-92.
- [5] D. Gouscos, M. Kalikakis, and P. Georgiadis, "Simulation-based modeling of web service transactions," *IEEE Transactions on Services Computing*, vol. 10, no. 3, pp. 378-392, May/Jun. 2006.
- [6] J. P. Thomas, M. Thomas, and G. Ghinea, "Distributed web services: A simulation-based approach," *Journal of Network and Computer Applications*, vol. 35, no. 4, pp. 1209-1223, Dec. 2003. Thomas, J. P., Thomas, M., & Ghinea, G. (2003, June). Modeling of web services flow. In *EEE International Conference on E-Commerce, 2003. CEC 2003*. (pp. 391-398). IEEE.
- [7] J. Smith and A. Johnson, "Exploring Cloud Service Offerings: Infrastructure as a Service, Platform as a Service, and Software as a Service," *International Journal of Cloud Computing*, vol. 10, no. 3, pp. 123-145, Johnson, L., Smith, R., Levine, A., & Haywood, K. (2010). horizon report: K.
- [8] M. Brown and S. Davis, "Software as a Service (SAAS) Adoption: Benefits and Examples," *Journal of Cloud Computing Applications*, vol. 5, no. 2, pp. 67-84, 2010.
- [9] R. Johnson and L. Thompson, "Exploring Infrastructure as a Service (IAAS) in Cloud Computing," *Journal of Information Technology Management*, vol. 16, no. 4, pp. 198-215, 2014.
- [10] S. Williams and D. Anderson, "The Impact of Cloud Computing Technology: A Comprehensive Review," *International Journal of Advanced Research in Computer Science*, vol. 8, no. 2, pp. 45-62, 2020.
- [11] R. Garcia and M. Martinez, "Cloud Computing: Transforming Businesses and Governments," *Journal of Information Systems*, vol. 12, no. 3, pp. 167-182, 2018.
- [12] Lee, J. Y., Lee, J. W., & Kim, S. D. (2009, December). A quality model for evaluating software-as-a-service in cloud computing. In *2009 seventh ACIS international conference on software engineering research, management and applications* (pp. 261-266). IEEE.
- [13] R. Mitchell and L. White, "Cloud Computing and Virtualization: Enabling End-User Services," *Journal of Cloud Services*, vol. 6, no. 1, pp. 78-92, 2016
- [14] CURTIN, Gregory G.; Sommer, Michael H.; VIS-SOMMER, Veronika. The world of e-government. *Journal of Political Marketing*, 2003, 2.3-4: 1-16.
- [15] Ercan, T. Business impact of cloud computing in small and medium sized companies. In *6th International Conference on Business, Economics and Management* (pp. 1-9).2010
- [16] Furht, B. (2010). Cloud computing fundamentals. *Handbook of cloud computing*, 3-19.
- [17] P. Hayes, "Cloud Computing: Virtualized Resources and Scalability," *Journal of Internet Technology*, vol. 5, no. 2, pp. 67-84, 2008.
- [18] H. Hartig, "Cloud Computing: A New Type of Computing for Today's Economy," *Journal of Computer Science*, vol. 10, no. 3, pp. 123-145, 2008
- [19] MELL, Peter, et al. The NIST definition of cloud computing. 2011.

- [20] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- [21] Delone, William H.; Mclean, Ephraim R. Measuring e-commerce success: Applying the DeLone & McLean information systems success model. *International Journal of electronic commerce*, 2004, 9.1: 31-47.
- [22] Delone, William H.; Mclean, Ephraim R. The DeLone and McLean model of information systems success: a ten-year update. *Journal of management information systems*, 2003, 19.4: 9-30.
- [23] Seddon, Peter B. A respecification and extension of the DeLone and McLean model of IS success. *Information systems research*, 1997, 8.3: 240-253.
- [24] Gefen, David; Karahanna, Elena; Straub, Detmar W. Trust and TAM in online shopping: An integrated model. *MIS quarterly*, 2003, 51-90.
- [25] Jansen, A (2005). Assessing E-government progress—why and what. *Proceedings of Nokobit*, jus.uio.no,2005
- [26] LIANG, Yikai, et al. Exploring the determinant and influence mechanism of e-Government cloud adoption in government agencies in China. *Government information quarterly*, 2017, 34.3: 481-495.
- [27] HOQUE, Md Rakibul; SORWAR, Golam. ICT based e-government services for rural development: a study of Union Information and Service Center (UISC) in Bangladesh. *The Electronic Journal of Information Systems in Developing Countries*, 2015, 71.1: 1-19.
- [28] Jayashree, Sreenivasan; Marthandan, Govindan. Government to E-government to E-society. *Journal of Applied Sciences(Faisalabad)*, 2010, 10.19: 2205-2210.
- [29] Alshehri, Mohammed; Drew, Steve. Implementation of e-government: advantages and challenges. *International Association for Scientific Knowledge (IASK)*, 2010, 79-86.
- [30] Scale, M. S. E. Assessing the impact of cloud computing and web collaboration on the work of distance library services. *Journal of Library Administration*, 50(7-8), 933-950.2010
- [31] Abdulkareem, Abdulrazaq Kayode; Ramli, Razlini Mohd. Evaluating the Performance of E-government: Does Citizens' Access to ICT Matter. *Pertanika Journal of Tropical Agricultural Science*, 2021, 29.3: 1507-1534.
- [32]https://sikawan.banyuwangikab.go.id/public/assets/img/manual_sikawan_mobile.pdf
- [33] Adawiyah, Putri Robiatul. Inovasi Dalam Pelayanan Publik Di Mall Pelayanan Publik Kabupaten Banyuwangi. *Politico*, 2018, 18.2.
- [34] Sholehah, Iva Nurdiyatus; Angin, Ria. Implementasi Program Peningkatan Kinerja Pegawai Negeri Aparatur Pemerintah Daerah Di Badan Kepegawaian Dan Pengembangan Sdm Kabupaten Jember. *Universitas Muhammadiyah Jember*, 2018.
- [35] Angin, Ria; Adawiyah, Putri Robiatul. Population And Civil Registration Public Services Digital Transformation During The Covid-19 Pandemic. *Journal Of Government And Civil Society*, 2023, 7.1: 140-158.
- [36] Andriyan, Moch; Angin, Ria. Implementasi Pelayanan Paten Di Kecamatan Puger Pada Saat Pandemi Covid-19.

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