

Innovation Analysis of Digital-Based Community Service Information System in Dayurejo Village Office

Radiatul Husni¹

¹Universitas Islam Malang, Indonesia

E-mail: 22101091087@unisma.ac.id

Hani Febrianti²

²Universitas Islam Malang, Indonesia

E-mail: 22101091079@unisma.ac.id

Arinda Reihansyah Achsanti³

³Universitas Islam Malang, Indonesia

E-mail: 22101091089@unisma.ac.id

Hasan⁴

⁴Universitas Islam Malang, Indonesia

E-mail: 22101091082@unisma.ac.id

Mohammad Fasikhul Lisan Ahmad⁵

⁵Universitas Islam Malang, Indonesia

E-mail: 22101091085@unisma.ac.id

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Abstract: *In Indonesia, the use of data and communication technology (ICT) capabilities to support the government's efforts to improve the quality of services for rural residents is still very rare. In the current era of globalization, technology will become a necessity for everyone to explore the growth of the era. So that this matter requires each country to be able to explore the growth of the era so that it does not lag behind other countries, especially in the field of technological knowledge. The village government must think and understand because in general there is no data and information management in the village, especially when it comes to service conditions that must be fast, precise, effective, and efficient. Population, secretarial, information, and publication data, as well as data related to the development and profile of the Village, including data that must be maintained properly. Digital innovation with the application of information technology in the public service information system at Dayurejo village office is the government's effort to improve the quality of public services in Dayurejo village such as online-based services. This study uses a qualitative method, namely by describing what is the focus of the researcher's discussion. The findings from the*

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researchers are that the Dayurejo village government has realized various innovations in public service information systems such as E-KIOS PAK LADI, KIM INDROKILO and online-based services as a form of information disclosure to the Dayurejo village community.

INTRODUCTION

In recent years, the Indonesian government system has faced increasing pressure from various parties to improve the quality of public services, enhance transparency, and encourage citizens' participation in data provision. The government is also required to operate more efficiently to realize a system of good governance. However, the implementation of public services in Indonesia—ranging from the central to the village level—has not yet run optimally. Bureaucratic inefficiencies, limited technological utilization, and the lack of integration between data management systems remain major obstacles in achieving high-quality public services.

According to Kurniawan (2016), Indonesia has established a legal foundation for public services since the enactment of Law No. 25 of 2009 concerning Public Services, which serves as a normative guideline for service delivery. The law defines public service as a series of activities aimed at meeting the community's service needs in accordance with prevailing regulations. Article 1 paragraph (7) of the law further stipulates that service standards function as benchmarks for both service implementation and evaluation—ensuring that services are delivered with quality, speed, affordability, and measurable outcomes. The ratification of this law signifies the government's commitment to continuously improve the quality of public services across all administrative levels.

One of the critical areas that must be addressed in this improvement process is the information system. The government, as a policymaker and implementer, manages vast amounts of data that are often disorganized and difficult to utilize effectively. Meanwhile, data itself holds high strategic value in supporting decision-making and policy formulation. The integration of technology in the form of Management Information Systems (MIS) allows this data to be processed, accessed, and distributed more efficiently—enhancing transparency, accountability, and effectiveness in governance. As Beltahmamero (2017) points out, the use of Information and Communication Technology (ICT) in Indonesia's local governance remains relatively limited, despite its potential to significantly improve service delivery and administrative coordination.

In the current era of globalization and digital transformation, technology has become a necessity rather than an option. The implementation of e-government is one of the government's strategic efforts to optimize technology use in public administration. Through digital innovation, government services can become more transparent, responsive, and accessible to citizens regardless of time and place. This aligns with Regulation of the Minister of Administrative and Bureaucratic Reform (Permenpan RB) No. 30 of 2014 concerning *Guidelines for Public Service Innovation*, which mandates that

all ministries, agencies, and local governments continuously develop innovations in public service delivery through competition, information systems, capacity building, and ongoing evaluation.

In this regard, villages as the smallest administrative units play a crucial role in realizing quality public services. The use of information systems at the village level not only facilitates administrative efficiency but also enhances community engagement in local governance. The Dayurejo Village Office, located in Prigen District, Pasuruan Regency, East Java, represents a relevant example of how local governments are attempting to adopt information technology to improve service quality. Currently, Dayurejo Village has introduced several digital innovation programs such as E-KIOS PAK LADI, KIM INDROKILO, and other online-based services. These programs reflect the village government's initiative to improve service accessibility, data processing, and citizen interaction.

However, despite these efforts, the utilization of technology in supporting public service innovation in Dayurejo Village still requires further optimization. Several obstacles remain, such as limited infrastructure, lack of technical capacity among employees, and low digital literacy within the community. Therefore, this study aims to explore how the Dayurejo Village Government utilizes information technology to enhance the quality of its public services. Specifically, the research seeks to examine the operational mechanisms, challenges, and impacts of digital public service innovations implemented in Dayurejo Village.

This research is also significant because, unlike previous studies that mostly focused on urban or institutional contexts, the present study examines innovation at the village level, particularly in a rural setting. Previous studies, such as those by Rukayat (2017), Eprilianto et al. (2019), Abbas and Sutrisno (2022), and Hadi et al. (2020), have discussed innovation in digital governance and public service quality. However, few have focused on village-level digital transformation programs like those initiated in Dayurejo Village. Thus, this study provides new insights into the practice of public service innovation in rural Indonesia and contributes to the broader discourse on e-government implementation and public sector reform.

METHOD

Basically, a research method is a systematic step undertaken by researchers to collect data or information and analyze it in order to answer research questions or verify hypotheses. This study employs a qualitative research method, which emphasizes the quality and depth of understanding toward the phenomena being studied rather than numerical measurement. Qualitative research aims to explore and describe social phenomena based on descriptive data in the form of spoken or written words from individuals and observable behaviors within their natural context. In this study, the qualitative approach was chosen because it enables the researcher to interact directly with the research subject, observe real conditions, and obtain in-depth information about

public service innovations at the Dayurejo Village Office, Prigen District, Pasuruan Regency.

This qualitative research involves four main stages: (1) Information collection, (2) Information reduction and categorization, (3) Information display, and (4) Drawing conclusions. In the first stage, *information collection*, data were obtained directly from the field through observation, interviews, and documentation. This step aims to gather as much relevant information as possible related to the management of public service innovations. The second stage, *information reduction and categorization*, involves filtering the raw data to select only the most relevant information that supports the research objectives. The selected data are then categorized based on the type or theme to facilitate analysis. The third stage, *information display*, presents the processed qualitative data in the form of narratives, matrices, or charts to make it easier to identify patterns and relationships among the variables studied. Finally, the fourth stage, *drawing conclusions*, summarizes all significant findings obtained from the data. The conclusions must reflect the real conditions observed in the field and be expressed in clear and comprehensible language.

The choice of the qualitative approach in this research is based on the need to obtain comprehensive, detailed, and contextual insights from direct interaction with informants. The researcher acts as the main research instrument, collecting and interpreting data firsthand. Data collection in this study was conducted through three primary techniques, namely interviews, observation, and documentation, supported by data triangulation to ensure validity and reliability.

The first technique is interview. According to Yusuf (2014), an interview is a process of interaction between the interviewer and the interviewee conducted face-to-face to obtain information relevant to the research objectives. In this study, interviews were conducted both individually and in groups with informants from the Dayurejo Village Office to obtain qualitative insights related to public service innovations.

The second technique is observation. Observation is one of the most common data collection techniques in qualitative research. According to Semiawan (2010), observation involves collecting data directly from the field, while Zainal Arifin (in Kristanto, 2018) defines it as a systematic, logical, and objective process of recording phenomena occurring in real situations. In this study, observations were carried out at the Dayurejo Village Office in Prigen District, Pasuruan Regency, by observing public service activities and the use of digital innovations implemented by the village government.

The third technique is documentation. Documents can be in various forms, ranging from written texts, reports, and archives to visual documentation such as photographs. In this study, researchers reviewed documents related to the innovation programs implemented by the Dayurejo Village Government—such as reports, service records, and photographic documentation—to support data obtained from interviews and observations.

The final component of this research method is data validation. Validity in

qualitative research refers to the degree to which research findings accurately represent the real-world phenomena being studied. According to qualitative methodological principles, validity emphasizes the truthfulness, credibility, and honesty of the data description, interpretation, and conclusion. Therefore, in this research, data triangulation was applied by comparing information obtained from interviews, observations, and documents to ensure consistency and strengthen the validity of findings.

Through this qualitative research process, the study aims to provide an in-depth understanding of how the Dayurejo Village Government utilizes information technology to enhance public service quality and implement innovative programs that support the realization of effective, transparent, and accountable village governance.

FINDINGS AND DISCUSSION

Findings

Dayurejo Village is administratively located in Prigen District, Pasuruan Regency, East Java. Geographically, this settlement is located on the northern slope of Mount Ringgit. In to the east are the villages of Jatiarjo and Gunting Pajajaran in the district. Skolejo; Next to west is Leduc village. To the north is the village of Burkandan. And in the south is Perftani and sanctuary. Klataan Hamlet, Lebaksari Hamlet, Gotean Hamlet, Dayu Hamlet, Hamlet Talunongko and Hamlet Gamoh is one of the six hamlets in the village the Dayurejo village has a population of 9,680 people and 2,791 families. Includes the following information: The population of Dayurejo village is known.

Table 1 Population of Dayurejo Villagers, Prigen District, Pasuruan Regency, East Java

Dayurejo Desa Village Population		
Number of Boys	Number of Women	Total
4.793 Souls	4.887 Souls	9.680 Souls

Located on the slopes of Mount Ringgit, the Indro Kilo Hermitage has a legacy history and culture. This place is still used for meditation (Relak) and praying for Thirakat to achieve certain goals (the story of Wayan Arjunawiwaha). Indro This Kiro left a lot of cultural heritage. But the history and story of Indro Kiro closely related to the cultural development of the Dayurejo community. The village office, as a government agency responsible for providing public services, mainly develops two main tasks in terms of: operations: technical services and administrative services.

The Dayurejo Village Office in Prigen District, Pasuruan Regency, offers a variety of services, including population registration, family cards, birth and death certificates, identity cards, and child relocation. The service process flow starts from residents arrived

at the kelurahan and provided the needed items. The public services provided by the Dayurejo Village Office are in accordance with the Regent's program Pasuruan. The government provides all kinds of administrative administration without fee or no charge. Marriage administration services, as well as other services such as paying taxes, can be obtained at the village hall. Dayurejo Village Office provides excellent service. because it has achieved good service standards general public, such as the officers' caution in serving the people of Dayurejo Village, facilities, and buildings, and because the Dayurejo Village Office already has innovations latest digitization based.

The Dayurejo Village Government has produced new innovations in order to better serve the community by creating a village website or service digital-based public company named "Kim Indrokilo". Digital portal that has been operating since 2017 to serve the residents of Dayurejo Village, it was built with a system information. The Dayurejo Village Office provides fast and effective public services, as well as information technology (IT) and data processing services, which can be found at Village website (Kim Indrokilo). From history to village maps, there's something for everyone person. There is also information about local government. Both on a global and personal level.

There is also information about local institutions such as LPMD, TP-PKK, and Karang Taruna, among others. The public can also directly access information regarding the APBDes (Village Revenue and Expenditure Budget), including the allocation and the realization of the Village Fund every year, as well as administrative area data, citizen data, and local government staple food recipients, through the kim website of the village of indokilo. Villagers Dayurejo can provide comments and suggestions regarding public services at the office Dayurejo Village uses Kim Indrokilo's website. In addition to the kim indokilo website, there are also other digital-based innovations such as Idios Pak Ladi, and other digital-based services. other online services which of course aim to make it easier for the people of Dayurejo village to access information related to the management of population administration.

Discussion

Public Service System at Dayurejo Village Office, Prigen District, Pasuruan Regency

Today, public services are an important aspect of every community need. Every member of the community must try to provide high-quality services to the community who take advantage of government public services, such as the Dayurejo Village office which is currently considered to still need to be improved, especially in the current era. Efforts to improve the quality of public services must immediately carried out in order to provide services that are more efficient, effective, and coordinated with the needs and ambitions of the community.

If there are good and bad, Dayurejo village services are still lacking, but try to provide the best for the community. In order to improve the effectiveness and efficiency

of public services. We have to coordinate the plan first between Innovation and the vision and mission of the village head, as well as the Regent's vision and mission Pasuruan. Dayurejo Village continues to provide public services to the community even though under the conditions of Covid-19. Services will continue to be provided as usual during the pandemic which is very vital for the citizens, and all the equipment can follow the protocol health. First, we have prepared a hand washing area, masks, and distance safe.

The identity of children moving from one place to another throughout the Pasuruan Regency can already be presented at the village hall whose name is the regent program, e-kiosk lak ladi, which is free of charge, for making achievement records, starting from the KK KTP or birth or death, the identity of the child moves from one place to another in all Pasuruan Regency can already be served at the village hall whose name is regent program, the village hall can also provide services related to marriage administration. Taxes and other fees, such as land tax and motor vehicle tax, can be paid in installments or through vehicle rental, as well as bank transfers. Dayurejo Village also has a forum for community information, Kim Indrokilo, who discussed other topics related to public service.

This is still done manually for public services such as ID cards and credit cards identity or population records, therefore those who are interested must first come to the village hall office. The minimum time to generate this ID, depending on requirements, is 30 minutes. At least one week. Government Village Dayurejo has also carried out socialization regarding the methods and processes of service management public. Every time there is a meeting, whether it is an official meeting or a meeting that is held in people's homes, there are always opportunities to socialize. For provide excellent public services.

Citizen Data Management Using Software

One of the benefits of technological advances, especially computers, is the management of data into information. Computers have moved from one organization to another next organization. Every organization needs a system to collect, manage, store, review, and distribute data. Everything in an agency can be computerized and fully integrated with computers as data management tools, and results from computerized information systems can have more value than systems handled manually.

The Dayurejo Village Office is the most basic government institution in hierarchies of government, and serve the people directly. Of course as government that directly serves the community, manages village population data every day. The required population data, such as the age composition of the population in an area, is intended to produce appropriate development policies. This information is provided in the form of residence documents, such as: population data, birth certificates, death certificates, transfer certificates, and migrant certificates. The most crucial aspect is complete and up to date population data.

Digital Technology-Based Public Service Information System Innovation Dayurejo Village Office

Every local government strives to provide public services that are excellent and superior. Local governments are currently competing to implement and take advantage of advances in information technology to help achieve goals. Data and information processing, as well as management systems, are all interrelated in the use of information technology. Advances in information technology and the integration of internet connectivity into governance is projected to solve various problems through increasing Efficiency, innovation, productivity, expanding reach, and reducing costs.

Excellent and superior public service is in realizing good governance, which includes good governance, openness, and accountability in public services governance processes, not just following global trends. Technology utilization information is expected to be able to provide effective public services, which is certainly a strategic step. However, in practice, it is almost possible will not result in a rotated palm; there must be a process, time, and steps involved.

Utilization of information technology to improve public services opens up great opportunities for the development of a region. Where regions can utilize information technology to streamline service delivery, promote regional potential, and increase community and corporate involvement.

The village government must think and understand because in general there is no data and information management in the village, especially when it comes to conditions services that must be fast, precise, effective, and efficient. Population, secretarial, information, and publication data, as well as data related to Village developments and profiles, including data that must be properly maintained. The Dayurejo Village Government, Prigen District, Pasuruan Regency, continues to evaluate computer hardware and purchase two computers for use improve services to the community.

Dayurejo Village is administratively located in Prigen District, Paslun, East Java. Geographically, this settlement is on the northern slope of Mt ringgit. To the east is the village of Jatiargio, and one of the public institutions that borne by the people's tax is the Department of Communication and Information of Pasul Regency. As a public institution, the Pasuruan Regency Communication and Information Office must disseminating public information in the form of public information in accordance with established rules.

The Paslun Regency Public Relations Service has been operating since early 2013. The Pasuruan Regency Communication and Information Office has made important preparations in terms of buildings and infrastructure before providing public information services. The White House Communications Director confirmed that as a service organization public, it seeks to provide excellent socialization and service. The implementation of public information services in Paslun Regency is dominated by uploading documents or information related to public performances and activities carried out by the Public Data and Information Service.

Planning, or planning, is a process that involves efforts to anticipate future events and determine appropriate strategies and tactics to achieve organizational goals and objectives. Public Dialog, which is below jurisdiction of the Department of Public Communication and Information Technology, is a program. In Pasluan Regency, the public relations service also fulfills the requirements of the administrator's role. Planning is the first step in implementing the three the next phase of a program or activity, including:

1. Selection of HR, including jobdes from Information Management Officers and Documentation (PPID) of Pasuruan Regency;
2. preparation of publication media (website and service area handbook);
3. Set service quality goals.

Organizing is the process of ensuring that the strategies and tactics developed in planning can be applied to the organization, systems, and organizational environment, as well as that of all stakeholders in the organization can work effectively and efficiently to achieve organizational goals. The efforts of Pasuruan Regency PPID organizers in the process of delivering public information include:

1. Training,
2. Meeting with the Office of Communication and Information Technology for internal coordination
3. Coordination with the Public Security Service.

The next stage in the management of the public information service program carried out by PPID Pasuruan Regency is its implementation, which includes the program implementation stage so that it can be carried out by all parties in the organization and the process of motivating all parties to carry out their responsibilities with high awareness and productivity, individual activities.

1. Gathering information from Regional Apparatus Organizations (OPD);
2. Presentation of public information on the website;
3. Public information dissemination;
4. Information services, both manual and online

Control is the final stage that must be done. Controlling is a process to ensure that the entire series of actions that have been planned, coordinated, and implemented can continue to run according to the desired target despite many changes in the real world. Control also includes the implementation of various alternative solutions to various problems defined with goals and objectives. In Pasuruan Regency, supervision is a supervisory step towards public information services. The purpose of this stage is to provide context for the material that will be (or has been) released publicly or directly to the information requester.

Smart Village is an idea that has recently gained traction in the world and has developed into a new phenomenon that is used to solve various problems in the village. Dayurejo Village in Prigen District is one of the villages in Pasuruan Regency that has

adopted this development strategy. The Dayurejo Village Government held a training with the theme of Utilizing ICT Towards a Digital Village at the Dayurejo Village hall to improve the quality of the Smart Village concept.

Various advances have been implemented in the public service system of Dayurejo Village. The community has been provided with services available both online and offline at the Dayurejo Village Hall office. The following are some improvements that have been carried out by the Dayurejo Village office.

1. E-KIOS PAK LADI

Family Card, Identity Card, Birth Certificate, Death Certificate, and Location of Pasuruan Regency are part of this scheme. Since this initiative is handed down directly from the district head, community participation is free of charge. Therefore, the Dayurejo Village Government facilitates and accelerates the management of various population services, such as Identity Cards, Birth Certificates, Death Certificates, Identity Cards (KIA), and other forms of population.

2. Services that must come to the Dayurejo Village hall office

There are still several services that must be carried out directly to the Dayu Rejo Village office as well as providing services to the community around the office. Such as marriage administration services, payment of property taxes, and motorcycle taxes.

3. KIM INDROKILO

Kim Drokilo is a Dayurejo Village office group that offers a public service system and online office work program information, both for individuals and globally.

4. Online Based Service

In 2019 the Dayurejo village government held an “openSID” Village Information System Socialization activity. This socialization aims to educate the public about online correspondence services available through the official website of Dayurejo village using the OpenSID application. The community is helped by the correspondence service. which can be accessed online without having to queue at the Village Hall, thanks to this OpenSID-based website. Participants are invited to launch a service using a mobile phone and immediately put it into practice, so that they can then transmit it to the community and participate in the development of Dayurejo using its technology. This technology can help in creating special data for Dayurejo development, which can be used in the fields of development, population development, and so on.

The Dayurejo office also offers online services such as managing or writing letters; The online mail service flow is shown below. The system, as shown in the diagram above, requires participants to first visit the village hall office. With the aim of getting a pin that will be inserted into the village website, allowing you to create a letter online.



Figure 1. Online mail service flow, Source: Dayurejo village office instagram

Conclusion

Great public service innovation is a new creative service technology that innovates, simplifies, or breaks through rules, procedures, methods, approaches, and organizational structures to improve the quality and quantity of services. At the core of innovation are three products and services, new ideas and initiatives for improvement, change and continuous improvement.

The Dayurejo Village Office provides fast and effective public services, as well as information technology (IT) and data processing services, which can be found on the Desa website (Kim Indrokilo), E-KIOS PAK LADI, and online-based services that can be easily accessed by villagers. Dayurejo. From history to village maps, there is something for everyone. There is also information about local government. Both on a global and personal level.

Based on the research results, digital-based public service programs in data management and information systems must be carried out as effectively and efficiently as possible to achieve community satisfaction. And also the government should always be alert and ready to follow the developments of this digital era. With this digital-based service innovation, it will certainly be very helpful in serving the Dayurejo village community.

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