ABDIMAS: Jurnal Pengabdian Masyarakat Universitas Merdeka Malang
Vol.8(1) February 2023, 113-131
p-ISSN: 2721-138X e-ISSN: 2548-7159
http://jurnal.unmer.ac.id/index.php/jpkm

LPPM
UNMER
MALANG

The community participation on infrastructures and facilities updating data of Teratak Village, Rumbio Jaya

Agus Ika Putra[1], Soewignjo Agus Nugroho[1], Fajar Restuhadi[3], Ari Sandhyavitri[1], Febrizal Febrizal[2], Iswadi Hasyim Rosma[2]

[1]Department of Civil Engineering, Faculty of Engineering, [2]Department of Electrical Engineering, Faculty of Engineering, [3]Department of Agribusiness, Faculty of Agriculture, Universitas Riau
Kampus Bina Widya KM. 12.5, Pekanbaru, Riau, 28293, Indonesia

ARTICLE INFO:

Received: 2022-10-03
Revised: 2022-11-18
Accepted: 2023-01-07

Keywords:

E-government, Updating data, Village information system

ABSTRACT

Village Information System (SID) is an implementation of e-government by the village government. The right of village communities to get real-time information can be hampered due to the skills and abilities of human resources and out of date information. The activity is focused on updating Village data and facilities through survey primary data collection. The results of the survey are up-to-date data, are integrated and can be accessed online. The process of entering data into the SID will be continued by the Village Government Officials who manage the SID, for this reason, there is a need for a special briefing for Village Government Officials in a training activity in updating data on village facilities and infrastructure. Workshops in the form of training, practice and question and answer were carried out with feedback in the form of questionnaires before and after the workshop to assess the success of the program. The survey data that is input to the SID includes health facilities, religious facilities, agriculture, animal husbandry, plantations, educational facilities, village tourism potential, and potential disasters along with their evacuation points. This updated data is expected to be a reference for compiling the Teratak Village Development and workshop activities have been able to improve the ability of village government.

How to cite: Putra, A. I., Nugroho, S. A., Restuhadi, F., Sandhyavitri, A., Febrizal, F., & Rosma, I. H. (2023). The community participation on infrastructures and facilities updating data of Teratak Village, Rumbio Jaya. *Abdimas: Jurnal Pengabdian Masyarakat Universitas Merdeka Malang, 8*(1), 113-131. https://doi.org/10.26905/abdimas.v8i1.8688

1. INTRODUCTION

The former President of the United States, Barack Obama, once made a speech about "administrative strategy for government openness with the aim of fostering public trust", namely: (1) Transparency; (2) Participation; and (3) Collaboration (Obama, 2009). These three points will open, strengthen, and improve government efficiency and effectiveness. The term Open Government Data was adopted by various other countries, with various terms and names. Open Government Data is a reference point, both technically and in terms of policy. Disclosure of government data is very important because in the era

✉ Corresponding Author: **Soewignjo Agus Nugroho:** Tel. +62 761 63266 | E-mail: nugroho.sa@eng.unri.ac.id

of globalization it opens opportunities to develop good government and clean government (clean and good governance).

An activity that provides the basic needs of citizens and residents for goods and services and or administrative services that have been provided by public service providers, which are related to the interests of the community/public is called public service. Public services are organized by local governments or BUMN/BUMD. Public service users are individuals or groups of people and even legal entities that have rights to public services (Hardiansyah, 2011). Theoretically, there are three service functions that must be carried out by the government, namely environmental services, development services, and protective services. Public services according to Law No. 25 of 2009, there are four things that must be done by the village government, including: (1) Organize and set service standards; (2) Compiling, stipulating and notification of service announcements; (3) Placing expert executors; (4) Provide facilities, infrastructure, and/or provide public service facilities that support the implementation of good and adequate services (Apriyansyah et al., 2018; Aristanto et al., 2021).

The development of information technology globally raises the need for information that must be available quickly and accurately. This is an important requirement for people in all sectors, because the development of information technology is a necessity for all aspects of human life. Communities in villages need information systems/technology that are fast and precise so that they are not left behind. An information system is a series of instruments grouped within an organization consisting of a set of components, both computer-based and manual, designed to collect and prepare data that contains information for users, or a set of hardware and software connected to create and process information. data into useful information. The application of information technology in the management of government administration is an urgent need and is widely used in the context of providing accurate and accelerated information. The government in the village must create a village information system for residents, with advances in technology that can be used in developing villages or villagers from an unfavorable condition to a better condition. Village development in it, requires the role of communication and information in a development project. Information systems in a village (SID) are an integral part of village development and development of rural areas. Things that need to be prepared by the village government as the responsibility for implementing public functions and services, in accordance with Law Number 25 of 2009.

In Law Number 06 of 2014, article 86: states "Regency/City Regional Governments are required to develop a Village Information System (SID) which must contain Village development information, Village data, Village development data, development planning and others. SID is managed by the village government and accessible to the village community. SID facilities in the form of hardware, software, network and human resources are provided by the local government." Law No. 6 of 2014 concerning villages is an opportunity for villages to develop all data processing in the village to the fullest and is a breath of fresh air for village governments to be able to autonomously manage data in the village. The development of an ICT-based Village Information System (SID) to become one of the tools for village officials in serving villagers is part of the implementation of e-government, as stipulated in the Presidential Decree No. 6 of 2001 concerning telematics in government and Presidential Decree No. 3 of 2003 concerning the implementation of electronic governance in Indonesia.

SID is an implementation of e-government development in villages, an application that assists village governments in managing village data archives. In a broad sense, SID is a series of systems that aim to manage existing resources in the community (Jahja et al., 2012). SID combines hardware, software, and human resources to be able to achieve the goals of transparent and accountable village governance as well as increase accessibility and participation (Shomad, 2018; Nilawati, 2019). SID is part

of a management information system (MIS). The existence of SID will provide convenience in service and availability of data for villagers so that they can empower villagers through data-based development. E-government services in the village scope are activities that are directly related to village residents, in the form of village administrative service activities. Village administrative service activities are routine activities carried out by village officials for every citizen in need. Forms of village administrative services such as making various letters of introduction to sub-districts, districts or even provinces, are activities that must be uniform for each village within the scope of one sub-district, and the sub-district keeps all population data. Likewise in the public service sector, the development of information technology has given birth to a form of public service that can be accessed by the public quickly and on time (Anggraeni, 2019; Kumala et al., 2020; Riskiono & Reginal, 2018; Shodik et al., 2019; Suri & Puspaningrum, 2020).

Rural development has now undergone major changes in its concepts and processes. The concept of development is not only in the agricultural sector and basic physical infrastructure but also leads to the development of Information and Communication Technology (ICT). ICT in general is all technology related to the collection, collection (acquisition), processing, storage, dissemination, and presentation of information (Kementerian Negara Riset dan Teknologi, 2006). Information technology is also used to process data including obtaining, compiling, storing, manipulating data in various ways to produce relevant, accurate, and timely information that is used for individual, economic and government needs and is strategic information for decision making. Information systems can be interpreted as an optimally integrated and computer-based system that can collect and present various types of accurate data for various needs. The information system can also be accessed in real time by all mobile and computer users connected to the internet network which makes it easier for the public to obtain detailed and direct data and information, including village information services. The existence of information systems in several villages is used as a solution to improve public services and present information and potential in a village (Ahdan & Setiawansyah, 2020; Apriyansyah et al., 2018; Setiawansyah et al., 2020a; Setiawansyah et al., 2020b; Tarigan et al., 2020)

Communication is very important in describing something, as an intermediary, to present something to the public. As an effort to facilitate communication between village officials and residents, communication media is needed in the form of a Village Information System website (Salim, 2013). On the other hand, there is Law No. 32 of 2004 and Government Regulation No. 72 of 2005 which requires village administration to be strong and active. There is also Law No. 26 of 2007 concerning Spatial Planning which focuses on regional and economic aspects. Then came the Minister of Home Affairs Regulation No. 51 of 2007 which gave a new understanding to Community-Based Rural Area Development, namely the development of rural areas carried out on community initiatives including participatory spatial planning, development of integrated growth centers between villages, and strengthening community capacity, institutions and partnerships. This Permendagri confirms the previously issued policy, namely Permendagri Number 12 of 2007, concerning Guidelines for the Compilation and Utilization of Village and *Kelurahan* Profile Data (*Data Profil Desa dan Kelurahan secara Nasional*) which requires the development of a National Village and *Kelurahan* Profile Data base.

Technical assistance from external parties is intended to increase the management, organizational and information capacity of community members through various programs that have been designed in the form of various services (Trohanis, 1980). Technical assistance (TA) involves para-trainers (planners) who will develop standard operating procedures (SOPs) to facilitate capacity building to achieve certain target changes. TA implementers can take the form of universities, consulting institutions or community organizations (organizations, NGOs) that have advantages in certain fields. They will utilize their understanding of theory and practice to translate into mentoring programs. TA implementers will provide intervention services in the form of training, internships, and comparative studies, to encourage

capacity building of the target group. TA can build strong synergy between institutional personnel and supporting organizations by fostering mutual trust. Program implementation in the TA scheme can help overcome various problems faced by institutions/communities such as the need to increase human resource capacity, prepare adaptive capacity to face challenges of social change, and prepare various elements of members to achieve a better condition.

Teratak Village, Rumbio Jaya District, Kampar Regency, Riau Province, is a village resulting from the division of a village which was previously a Teratak Village itself divided into two Villages namely Teratak Village and Simpang Petai Village. The location of Teratak Village is shown in Figure 1. As a village resulting from a division village, it is very necessary to update all village data which can be done more effectively with a global Village Information System (SID) connected to an Internet connection. The process of filling in information content is carried out through several stages starting from data collection to the process of entering data into the system which of course can be done in stages and integrated. In the data input process, it is also possible that various problems will arise, such as village data administration and population data, management of correspondence data, management of parcel data and other data. But the most important thing is that village officials' decision-making as well as input into village development planning can be completed using SID. For this reason, villages that have not yet developed this system and have not been supported by skilled village officials really need assistance with technical and non-technical support. This system is expected to realize open government data and be used as good governance of the village.

As a manifestation of the Tri Dharma of Higher Education, the community service team at the University of Riau felt compelled to provide support to village officials, namely village officials, to act as Technical Assistance (TA), to be provided with data processing skills as well as to prepare an up-to-date SID. In the previous year's community service (PKM) activities, the Riau University PKM Team had created a Village Information System (SID) for Teratak Village. This SID is managed by the Teratak Village Government which has received training facilitated in PKM activities. SID can be accessed online with an internet connection through the Teratak Village website.

Figure 1. Teratak Village location

2. METHODS

The Teratak Village information system which has been made by the TA/PKM Team and the PKM focus on updating data is carried out at the Teratak Village Government Office because data access and village officials are more dominant in this location. The activity of updating data on village facilities and infrastructure in the SID to support the preparation of the RPJM in Teratak Village which will be carried out by the PKM Team will be carried out in two stages of activity.

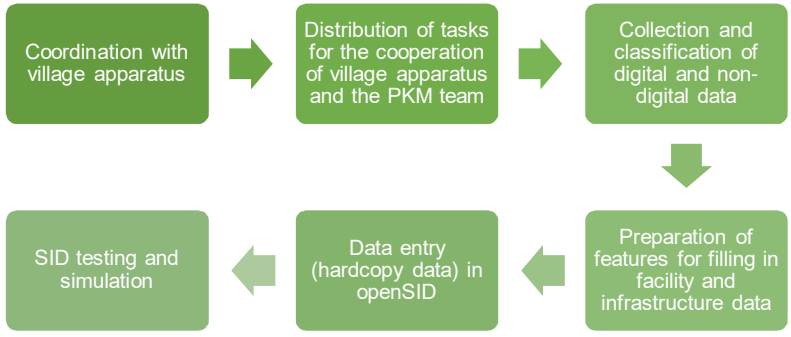

Figure 2. Activity preparation stage

The first step in the preparation stage begins with coordinating with the village head, village officials, and community leaders. This coordination is intended to convey the objectives of the activity and make some preparations for the implementation of the activity. Some of the next preparatory activities are the division of tasks for cooperation between village officials and the PKM Team, collection and classification of digital and non-digital data, preparation of features for filling in facilities and infrastructure data, existing data entry (hardcopy data) and trial and simulation of Information Systems Village (SID). The PKM team, supported by students in the Integrated Kukerta Program, met directly with village government officials to coordinate.

The second step is the division of tasks for cooperation between the village apparatus and the PKM team. In carrying out the second step, collaboration between village officials and the PKM team is required. Based on the authority and potential of each party, job descriptions and responsibilities are determined. For example, data collection is handed over to Kukerta students in coordination with village officials, while system preparation is carried out by PKM Team personnel with the support of Kukerta students.

The third step is the collection and grouping of digital and non-digital data. Until now, the data available at the village office is divided into three forms, one in a printed version, one in sheets or filing cabinet, and the other in the form of a digital file, which can only be accessed via a computer device stored on a computer storage media. All of this data will be transferred to an integrated system (SID) connected to the internet which can later be accessed globally.

The fourth step is the preparation of features for filling in data on facilities and infrastructure. This activity is carried out directly in the village's OpenSID, in the form of determining features, types of village facilities and infrastructure as input. This activity involved village officials in Teratak Village who understood the conditions and situation in the field.

The fifth step is to enter existing data that has been obtained from the field to be entered into the SID. At this stage the village officials who will be on duty will also be given training and debriefing. The village apparatus on duty will continue to update data according to village developments.

The sixth step is the information system trial. Information system trial will be carried out after a small portion of the data is entered into the system. Several potential village information systems will try to be utilized for public services. If the trial is considered successful, then the data input will be continued by the system operator. This activity cannot be carried out because the Data Entry stage has not yet started.

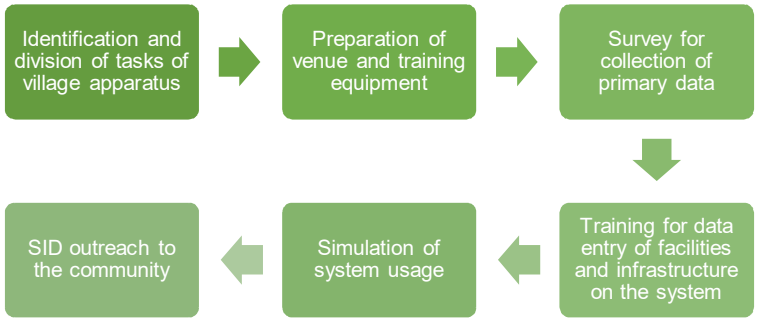

Figure 3. PKM implementation stage

After all the steps of the preparation stage have been carried out, then the activity implementation phase can begin. As shown in Figure 3, the preparation stage consists of these six steps as explained: (1) Identify and divide the tasks of the officers who will be on duty. In this step, there are personnel who serve as surveyors and there are personnel who serve as operators, it is even necessary that there are personnel who serve as supervisors. Each of these roles needs to be defined so that data development responsibilities can run well after the community service activities have been completed; (2) Preparation of venue and equipment for the second step of the workshop needs to be done so that the event runs smoothly. The number of training participants is related to the area and conducive room conditions. Implementation of the training requires training equipment in the form of a computer/laptop, LCD projector, good internet connection, and a power supply. The training takes place in the village office where access to digital and non-digital data is easier to obtain; (3) Data entry training and filling in data on facilities and infrastructure in the assigned village government apparatus system will receive training and knowledge on how to manage data on facilities and infrastructure through SID. Management includes maintaining data that has been entered into the system. Training activities will be divided into several stages based on the stages of filling in data input and utilizing data for public services. The data entry stage on the system is carried out in order to complete the data that has been input into the system. This activity was carried out after the system was considered established and the village officials assigned had understood the management of SID. Village officials on duty will be given special access to enter the system by being given a special username and password. With this access, they can directly enter the system. After entering the system, the officer can enter data on village facilities and infrastructure into the SID; (4) System utilization simulation. After all data has been inputted into the system, simulations of data management of village facilities and infrastructure will be carried out. Some of the data includes: Village information, economic & business facilities, educational facilities, health facilities' village tourism potential, houses of worship, potential disaster areas, irrigation networks, village roads, public street lighting (PJU), clean water sources, sports facilities, and other data that can be adjusted to the needs of the Village; (5) Socialization of SID to the community, is an activity that introduces SID to the community. Community participation in village development can be increased if the community has access to data on village facilities and infrastructure. The public can provide information if there is a need for fast handling from the authorities. Setting development priorities can involve the community if the community knows the direction of village development; (6) Field survey for primary data collection. The field survey aims to obtain data on existing conditions in the field. The stages carried out during the implementation of PKM activities used several methods such as workshops/training, OpenSID application practice, surveys, and evaluations.

Workshop: Review of the OpenSID Application Module in Teratak Village

This activity provides the OpenSID manual and stationery needed before the training or workshop begins. Participants read the books provided beforehand to understand the outline of the training being carried out. Introduction of OpenSID applications and features to facilitate implementation of information systems. The material for the first training/workshop contains an introduction to website features, and how to use these features. OpenSID is intended to facilitate administration.

The material presented in the last training/second day of the workshop was about village administration, which was like correspondence. Then, there is also material regarding village articles which are divided into dynamic and static articles. The presentation method is used to explain the method of implementing the program in each workshop so that the participants can find out about the management of the activities which are included with an introduction to the activity implementing team to the workshop participants. Presentations are also needed to explain various matters related to practice that will be carried out at the end of each meeting. The question-and-answer method is carried out as a form of interaction or communication between the implementation team and participants (Amalia & Uswatun, 2019). The question-and-answer method is not only carried out in the room, it is intended to respond to the participants' curiosity about the practice being carried out. The question-and-answer method can develop into a practical method if the implementation team feels the need to show participants the practice that is being carried out. This is so that the participants get maximum information and application (Hernawati & Amin, 2017).

Practicing SID

The practical method was implemented so that participants from the workshop could directly apply the understanding gained from the PKM Team presentation and debriefing with the TA. Practice and mentoring are carried out by the participants and the TA by practicing the explanations that have been presented on the participants' laptops. As a way to help participants deepen their knowledge, the instructor will also display a number of examples that have been implemented. According to Muhsinin et al. (2019), practice methods with direct guidance can show the detailed process of practice.

Evaluation Design

Evaluation by giving questioners to participants before the workshop and after all workshop activities, including practice, are completed. The use of the module regarding the guide to using OpenSID in Teratak Village is also used so that the workshop participants can study independently before the workshop is held. Things that are not understood in the module can be asked during the workshop and practiced later. The module is also intended to be used as reference reading for participants to find out how the Teratak Village website looks like. The module used contains material which is a summary of the results of writings deemed necessary by the implementing team (Amin & Arafat, 2022).

Infrastructure Data Survey

The primary data collection survey aims to obtain data on existing conditions in the field. To speed up the survey, the survey groups were divided based on the government area (*Dusun*). Recording is done by filling out the form that has been determined and carried out together with the PKM Team, village officials and the community. The results of this survey will then be compiled and classified by type, for

example irrigation systems, and Level of Farming Business and Irrigation Networks (JI-TUT) or Village Irrigation Networks (JIDes), Roads (Regional Government/Village/Environmental Roads) and bridges, public street lighting (PJU), clean water sources, health facilities (Puskesmas, pharmacies, practicing doctors, practicing midwives) business facilities (BUMDes, UMKM, shops, workshops, culinary), village markets, places of worship, educational facilities (schools, village libraries, Kindergartens/ Playground), sports facilities (GOR, futsal field, volleyball field) public cemetery (TPU), garbage TPA, security post, and public facilities.

3. RESULTS AND DISCUSSION

Preparation Stage

The active participation of stakeholders, namely the village head, other village apparatus is very high. Their active role can be seen in their presence when coordinating the updating of facility and infrastructure data. Coordination went well with the readiness of village officials to become field survey coordinators for their administrative areas. The PKM team together with University Integration Kukerta students carry out coordination with stakeholders at the Teratak Village office (Figure 4).

Figure 4. Coordination of the community service team and village officials
Figure 5. Distribution of field survey tasks

The distribution of field survey tasks, after coordination with the village head, divided the survey tasks into 3 (three) groups. Each group is coordinated by the head of the hamlet (*kepala dusun*) according to the area where the data collection survey will be carried out. Village officials are tasked with searching for digital and non-digital data archives from office files. The division of tasks is shown in Figure 5

The data collected by the village officials consists of data stored in softcopy and hardcopy form. Softcopy data in the form of data stored on laptops, computers, and data stored on storage disks (flash disks, external hard disks). Hardcopy data comes from printed versions (handbooks, text books, modules) and from sheets in stop maps as well as those put together in a binder. The guest book is also a source of data to see the interests of residents, administratively, visiting the village office. Collecting non-digital data (hardcopy) requires a long time and high accuracy because we have to divide the data into groups that will be input on the village website. For example, the distribution of data groups is the number of households, the population by gender; profession; last education; current education and so on. Groups of non-digital data are made into digital data, by rewriting it in a worksheet format (Ms Excel). Then the data is converted into a bar chart or pie chart form. Then the diagrams/graphs will be given clear information for information to residents. The group tasked with collecting non-digital data is separated from 3 (three) groups that collect data from the field to update information. The team tasked with collecting and separating non-digital data has the most members (Figure 6).

Figure 6. Grouping of non-digital data

Implementation Stage

The Workshop material provided by the TA Team for the implementation of Community Service was adjusted to the material contained in the open-source manual (OpenSID) and adapted to the Teratak Village website that the TA team had created for Teratak village (http://desa-teratak.id) as well as the number of meetings from implementation. The workshop schedule is also based on discussions with the TA in coordination with the Apparatus regarding the implementation time and location. The material presented in the workshop "Updating data on facilities and infrastructure" is summarized in Table 1.

Table 1. Teratak Village PKM meeting activities

	Workshops/practices/surveys/evaluations	Goals
1st Meeting	Field Survey for updating data on facilities and infrastructure	Update data by adding documentation and global coordinates
2nd Meeting	Facilities and infrastructure on the Teratak Village Map	Grouping digital and non-digital data
3rd Meeting	Creating an e-mail to login to the openstreetmap.org website	Citizens' active participation in data updating
4th Meeting	Login to the website: desa-teratak.id	Increased knowledge and understanding of village officials
5th Meeting	Get acquainted with the features of the Teratak Village SID	Socialization of the desa-teratak.id website
6th Meeting	Workshop on plotting building objects on a village map	Upgrading skills
	Workshop on plotting road sections on the village map	Upgrading skills
	Workshop on storing plotted data at openstreetmap.org	Upgrading skills
	SID simulation practice	Upgrading skills
	Discussion	Upgrading skills

The implementation of the first meeting was a common perception regarding data entry for field surveys for data collection in all areas of Teratak Village. Plotting is done using GPS, meter, drone, and documentation as shown in Figure 7. Next, for a certain distance, we use PGS to see the global coordinates of the location that is documented.

Figure 7. Equipment for surveying infrastructure and area boundaries: (a) GPS; (b) Digital camera; (c) Meter; (d) Drone

Survey data is inputted into an excel table which provides information on road/bridge names, road section lengths, GPS coordinates and others, as shown in Table 2.

Table 2. Table of Teratak Village infrastructure survey

Facilities	Type of infrastructure	Description	
Transportation	Road	Average daily traffic (ADT)	Number of vehicles passing in 1 day
		Road geometry	Road Type: District/village/hamlet
			Road width (m) Lane width (m) Roadside width (m)
			Medians (available/not available) Median width (m)
			Curb (available/not available) Curb width (m)
		Pavement type	Asphalt/rigid/cement/soil
		Condition	
Transportation	Bridge	Type bridge	Concrete/steel truss/wood/bamboo
		Dimension	Length (m) Width (m) Abutments Ramp Buffer zone available/not available)
Drainage	Canal	Condition	
		Dimension	Depth (m) Width (m) Length (m)
Drainage	Sewer/Box culvert	Condition	
		Dimension	Shape (round/rectangle) Diameter (m) Width (m) Height (m) Length (m)

Several road sections are access roads between hamlets within one village. The road managed by the Regency Government is relatively wide so that cars can pass easily and paved with asphalt (hot mix). The roads between hamlets are still in the form of cement (cast cement), soil, or a stretch of stone. Hamlet roads are 4-6 m wide, so cars are relatively difficult to pass by. An example of road segment resulting from the survey is shown in Figure 8.

Figure 8. Road infrastructure survey results: (a) Asphalt pavement; (b) Soil pavement; (c) Cement pavement

Teratak Village has quite complete health facilities, because it is a village located in the center of Rumbio Jaya District. Health facilities that can be found in Teratak Village include the Rumbio Jaya Health Center, UPTD Health Center, general practitioners, midwives, and drugstores/pharmacies. The façade of health facilities in Teratak Village is shown in Figure 9.

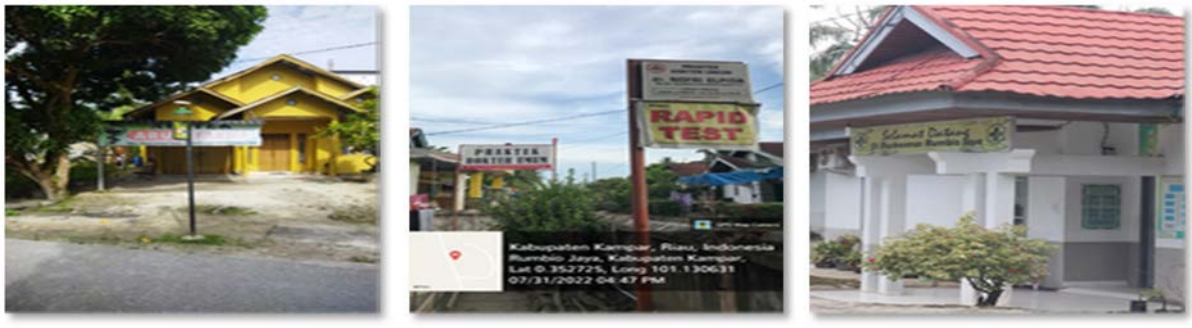

Figure 9. Health facility survey results: (a) Drugstores/pharmacies; (b) General practitioners; (c) Health center

Figure 10. Educational facilities survey results: (a) Elementary school; (b) Kindergarten; (c) Preschool

Teratak Village is located on the banks of the Kampar River, relatively close to Bangkinang which is the capital of Kampar Regency. Residents of the village prefer to study in the nearest town. The educational facilities in the new Teratak Village area are Teratak Public Elementary School, 3 private Madrasah Aliyah, 1 private Madrasah Tsanawiyah, 1 private Kindergarten, and PAUD managed by Posyandu. Educational facilities in the Teratak village can be seen in Figure 10. State and private high schools (SMA) are located in the city of Bangkinang.

Figure 11. Worship facilities survey results

There are quite a lot of houses of worship in Teratak Village, all of which are places of worship for Muslims, namely 5 mosques (Baiturrohman, At-Toyyibah, Al-Hidayah, At-Taqwa, Zaid bin Al-Karam), 2 prayer rooms (Amal- Ikhlas, Al-Fatah 2), and 3 *surau* (Dusun 1, Radatul Jannah). Teratak Village worship facilities can be seen in Figure 11.

FIgure 12. Economic/business facility survey results:
(a) Motorcycle repair shop; (b) Traditional market; (c) All-in-one shop

The economy in Teratak village is not well organized, because there are only 2 (two) types of MSMEs, namely motorcycle repair shops and one mini market business (Setia Mart). There is 1 (one) traditional market (see Figure 12), and it is only busy on certain days (market days) in the morning.

Discussion

Digital and non-digital data, obtained by TA and the Integrated Kukerta of the University of Riau, have been inputted into the Teratak Village SID (desa-teratak.id). Introduction/socialization to Village Officials, as admin, was carried out by implementing the previous PKM Team workshop (Putra et al.,

2022). With this workshop, the admins are at least somewhat familiar with the features on their village website. The Teratak Village information system page (Teratak Village website) is shown in Figure 13.

The workshops that have been conducted by the PKM team, as technical assistants, focus on updating existing data on facilities and infrastructure in the Teratak Village area. Figure 14 is during the workshop.

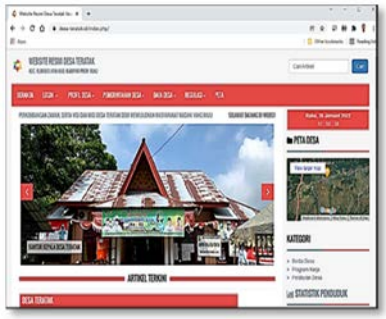

Figure 13. Teratak Village's SID (http://desa-tertak.id)
Figure 14. Workshop on upgrading infrastructure facilities:
(a) Presentation of Teratak Village website features; (b) Workshop speakers

Workshop material discusses the utilization of the system. Assuming that the data has been input into the system, simulations of data management of village facilities and infrastructure will be carried out. Some of the data that will be concentrated include: Farm Business Level Irrigation Network (JITUT) or Village Irrigation Network (JIDES), Neighborhood Roads, Village Roads, Public Street Lighting (PJU), Clean Water Sources, Village Kiosks/Culinary Centers, Village Markets, Houses of Worship, Schools, Public Cemeteries, Garbage Final Disposal Sites (TPA), Security Posts (Police, Army, Security Posts), Village Meeting Halls, BUMDes, Garbage Banks, Public Sports Facilities, Posyandu, KB Asceptors), and other data that can be adjusted to the needs of the Village.

In practice sessions, there are also opportunities for questions and answers and hands-on practice on using the website guided by Kukerta students. It explains how to change existing data, the difference between static data and dynamic data, how to manage administration from and by residents, and answer questions from users (citizens). Documentation of the practice of the Teratak village website can be seen in Figure 15

Figure 15. The practice of using Village OpenSID
Figure 16. PKM Team

The PKM team also provided the Standard Operation Procedure (SOP) module (Terintegrasi, 2022), in the form of how to operate the Teratak Village website to Village Officials who will later act as admin. The PKM Team, as Technical Assistance is shown in Figure 16.

The PKM team are experts in their respective fields, assigned by the University of Riau to conduct a workshop on updating data. The new data that was successfully collected by the Survey Team, among others, is presented in Table 3

Table 3. The latest (updated) infrastructure data for Teratak Village

Facilities and Infrastructure Data	Type	Category
Road Infrastructure		
Wowo street	Highway	District street
Dusun street III (a/b/c/d/e/f)	Village road	Village road
Trench III	Drainage	Trench
Dusun street IV (a/b/c/d/f/g)	Village road	Village road
Dusun street IV (h/i/j/k/l/m/n)	Village road	Village road
Trench IV (a/b/c/d)	Drainage	Trench
Water tunnel IV (a/b/c/d)	Drainage	Water tunnel
Water tunnel IV (e/f/g/h)	Drainage	Water tunnel
Government Offices		
Rumbio Jaya District Office	Administration	Government
Teratak Village Office	Administration	Government
Religious Affairs office	Administration	Government
KUD Market	Public facilities	Government
PAMSIMAS IV	Public facilities	Government
PAMSIMAS Simpang Petai	Public facilities	Government
Health Facilities		
Rumbio Jaya Health Center	Public facilities	Government
UPTD Puskesmas	Public facilities	Government
Rasiati Midwife Practice	Public facilities	Private
Posyandu Melati	Public facilities	Government
KB Counseling Center	Public facilities	Government
Pharmacy	Public facilities	Government
Educational Facilities		
SDN 001 Teratak	Public facilities	Government
MTS Teratak	Public facilities	Government
MA Teratak	Public facilities	Government
MDTA Muhammadiyah Sumpadang	Public facilities	Private
TK Aisyah Sumpadang	Public facilities	Private
Tafhiz Al Hidayah Foundation	Public facilities	Foundation

Facilities and Infrastructure Data	Type	Category
Religion Facilities		
Al Hidayah Mosque	Public facilities	Place of worship
Baiturrohman Mosque	Public facilities	Place of worship
At-Toyyibah Mosque	Public facilities	Place of worship
Zaid bin Arqam Mosque	Public facilities	Place of worship
At-Taqwa Mosque	Public facilities	Place of worship
Mushola Amal Ikhlas	Public facilities	Place of worship
Mushola Al Fatah	Public facilities	Place of worship
Surau Al Ikhlas	Public facilities	Place of worship
Surau Radatul Jannah	Public facilities	Place of worship
Sport Facilities		
Badminton center	Public facilities	Sports
Volleyball field-1	Public facilities	Sports
Volleyball field-2	Public facilities	Sports
Volleyball field-3	Public facilities	Sports
Futsal field	Public facilities	Sports
MSMEs		
Putra Motorcycle Workshop	Workshop	MSME
Sidiq Motorcycle Workshop	Workshop	MSME
Ade workshop	Workshop	MSME
Ajo workshop	Workshop	MSME
Body repair shop	Workshop	MSME
Setia Mart	Grocery shop	MSME
Telecommunications Tower -1	Business	Private
Telecommunications Tower -2	Business	Private

The Teratak Village admin team inputs this data into the desa-tertak.id website with the help of TA. TA also provides directions on how to provide information on maps, about new data (infrastructure) on village maps that can be viewed and accessed in real-time. The Village Information System at the village level is managed and implemented by the village officials.

Management of the Village Information System includes: (1) Hardware, namely computers, intranet networks and internet networks that have been implemented throughout the Village/*Kelurahan*. For the Village Information System domain, Dishubkominfo has provided it so that this system can be utilized online; (2) Software that includes the Village Information System application and other supporting applications that have been provided by the Regional Government; (3) Human resources which includes system administrators at the village level. All villages/*kelurahan* have appointed two people from elements of the village apparatus or the community as managers who are determined by a Village Head Decree. The admin who manages the Village Information System is in charge of: (1) Data input; (2) Updating data; (3) Publish data and information; 4) respond to opinions, questions,

suggestions and all forms of communication contained in the Village Information System; and 5) other tasks related to managing the Village Information System. All implementation of this management task is accountable to the village head.

Figure 16. Example of village map plotting by village officials:
(a) Online map plotting; (b) Online map plotting in Google Earth format

Before the workshop ended, the SID admin was given the task of creating articles (dynamic data) to be uploaded on the village website and providing additional infrastructure data on the village map via OpenStreetMap by providing complete information.

The results of unstructured interviews, as a form of evaluation, from the PKM team to the participants included by observing the activities of the participants directly during the activity. The implementation of PKM program activities by Technical Assistance from the University of Riau yielded the following results: (1) the implementation of PKM succeeded in increasing and adding to the knowledge of village officials in practice and filling in SID dynamic data. Increased understanding can be seen from unstructured evaluations, in the form of practical results, the admin can upload articles to the village website and add data. In addition, increased knowledge can be seen from the activeness of the participants from start to finish because at each meeting, it ends with hands-on practice; (2) Increased knowledge, skills and understanding of village officials about e-government, to create an open and clean village government. Village officials are familiar with information technology that can be accessed anywhere and from anywhere as long as it is connected to the internet network. Knowledge of participants (village officials) about information system technology, healthy internet use, and the process of using the internet network to convey information to the community.

4. CONCLUSION AND RECOMMENDATIONS

The preparation stage for new activities can be carried out five steps out of the six planned steps. This is because the data survey carried out is quite time-consuming. While the implementation phase can only be carried out after the entire series of activities in the preparatory stage have been completed. All stages of the activities that have been carried out received full support from village officials. It is hoped that all infrastructure data entered into the SID can become a reference for village government officials in preparing village development and development plans by involving the community by providing information. The impact of the activities in increasing the capacity and skills of village government officials has not been demonstrated up to this stage. The PKM team will continue until the entire series of activities can be carried out. The Village Information System through the village government website (desa-teratak.id) is expected to be fully utilized in improving services for the village community by the village government and to become a means of exchanging information between the community and the village government.

In an effort to prevent the village from becoming a backward village and increasing its economic population, the village government needs to explore its economic potential. With the existence of a village website, information about Teratak village can reach anywhere, so that product marketing can be done online. The potential of Teratak Village, as a village through which the Kampar River passes, can be developed into a tourist village with a "waterfront" concept. Furthermore, potential disasters (flood disasters) need to be informed through the website, including evacuation points and disaster mitigation.

ACKNOWLEDGEMENTS

Appreciation is conveyed to LPPM University of Riau for supporting the funding of this activity. Acknowledgment to Riau University Community Service Integration Kukerta Students 2022 who have been active in helping carry out this activity. In addition, to the Government of Teratak Village, Rumbio Jaya District, the Hamlet Heads and various parties who have participated in the implementation of this community service activity so that the authors put the results in the form of an article.

REFERENCES

Ahdan, S., & Setiawansyah, S. (2020). Pengembangan sistem informasi geografis untuk pendonor darah tetap di Bandar Lampung dengan Algoritma Dijkstra berbasis Android. *Jurnal Sains dan Informatika: Research of Science and Informatic*, *6*(2), 67–77. https://doi.org/10.22216/jsi.v6i2.5573

Amalia, A. R., & Uswatun, D. A. (2019). Analisis respon mahasiswa dalam penerapan group work rules pada metode presentasi di program studi pendidikan guru sekolah dasar. *Jurnal Holistika*, *3*(2), 81-88.

Amin, M. S., & Arafat, M. Y. (2022). Pemberdayaan aparatur Desa Pulorejo melalui perancangan open access web sistem informasi desa smart-village di Kecamatan Tembelang. *KALANDRA Jurnal Pengabdian Kepada Masyarakat*, *01*(02), 15–25. https://doi.org/10.55266/jurnalkalandra.v1i2.120

Anggraeni, D. F. (2019). Partisipasi masyarakat dalam program SIDEKEM (Sistem Informasi Desa Kawasan Pemalang) di Kabupaten Pemalang (Relawan TIK dan sistem informasi Desa Kawasan Pemalang). *Journal of Chemical Information and Modeling*, *53*(9), 1689-1699.

Apriyansyah, Maullidina, I., & Purnomo, E. P. (2018). Efektivitas Sistem Informasi Desa (SID) dalam pelayanan publik di Desa Dlingo, Kecamatan Dlingo, Kabupaten Bantul. *Jurnal Analisis Kebijakan & Pelayanan Publik*, *4*(1), 10–24. https://doi.org/10.31947/jakpp.v4i1.5901

Aristanto, E., Damayanti, I., & Aripin, Z. (2021). Pelatihan dan pendampingan penyusunan kebijakan dan standar pelayanan publik pada Balai Teknik Air Minum. *Abdimas: Jurnal Pengabdian Masyarakat Universitas Merdeka Malang*, *6*(2). https://doi.org/10.26905/abdimas.v6i2.5465

Government Regulation No. 72 of 2005 about Village.

Hardiansyah, H. (2011). *Kualitas pelayanan publik*. Yogyakarta: Gava Media.

Hernawati, D., & Amin, M. (2017). Analisis self efficacy mahasiswa melalui kemampuan presentasi di kelas. *Education and Human Development Journal*, *2*(1). https://doi.org/10.33086/ehdj.v2i1.379

Jahja, R., Haryana, M. D., & Rendra, M. (2012). *Sistem informasi desa: Sistem informasi dan data untuk pembaruan desa*. Yogyakarta: COMBINE Resource Institution (CRI).

Kementerian Negara Riset dan Teknologi. (2006). *Buku putih*. Jakarta: Kementerian Negara Riset dan Teknologi, Republik Indonesia.

Kumala, N. K. R., Puspaningrum, A. S., & Setiawansyah, S. (2020). E-delivery makanan berbasis mobile (Studi kasus: Okonomix Kedaton Bandar Lampung). *Jurnal Teknologi dan Sistem Informasi*, *1*(2), 105–110. https://doi.org/10.33365/jtsi.v1i2.607

Law Number 06 of 2014 concerning Village Government.

Law Number 25 of 2009 concerning Public and Civil Servants.

Law Number 32 of 2004 concerning Regional Government.

Muhsinin, S., Dinata, D. I., Andriansyah, I., & Asnawi, A. (2019). Peningkatan potensi ibu rumah tangga dalam mengolah sampah organik rumah tangga menggunakan Metode Takakura di Desa Cibiru Wetan, Kabupaten Bandung. *Jurnal Pengabdian Pada Masyarakat*, *4*(2), 179–186. https://doi.org/10.30653/002.201942.110

Nilawati, E. (2019). Kecenderungan isi sistem informasi desa di Kabupaten Gunungkidul. *Jurnal IPTEK-KOM*, *21*(2), 169–184. https://doi.org/10.33164/iptekkom.21.2.2019.169-184

Obama, B. (2009). *Transparency and Open Government.* The White House Office.

Permendagri Number 12 of 2007 about Guidelines for the Compilation and Utilization of Village and *Kelurahan* Profile Data

Presidential Decree No. 3 of 2003 concerning the Implementation of Electronic Governance in Indonesia.

Presidential Decree No. 6 of 2001 concerning Telematics in Government.

Putra, A. I., Nugroho, S. A., Restuhadi, F., Sandhyavitri, A., Febrizal, & Iswadi HR. (2022). Pemberdayaan masyarakat dan mahasiswa dalam optimasi sistem informasi desa menggunakan aplikasi OpenSID (Studi kasus: KKN Tematik Desa Teratak, Kec. Rumbio Jaya, Kab. Kampar). *Jurnal Pengabdian Pada Masyarakat*, *4*(in-press), 1–15.

Regulation No. 51 of 2007 concerning the Minister of Home Affairs.

Riskiono, S. D., & Reginal, U. (2018). Sistem informasi pelayanan jasa tour dan travel berbasis web (Studi kasus: Smart Tour). *Jurnal Informasi dan Komputer*, *6*(2), 51–62. https://doi.org/10.35959/jik.v6i2.112

Salim, H. S. (2013). *Penerapan teori hukum pada penelitian tesis dan disertasi*. Jakarta: Rajawali Pers.

Setiawansyah, S., Sulistiani, H., & Saputra, V. H. (2020a). Penerapan codeigniter dalam pengembangan sistem pembelajaran dalam jaringan di SMK 7 Bandar Lampung. *Jurnal Hasil Penelitian Ilmu Komputer dan Teknologi Informasi*, *6*(2), 89–95. http://dx.doi.org/10.24014/coreit.v6i2.10679

Setiawansyah, Sulistiani, H., & Darwis, D. (2020b). Penerapan Metode Agile untuk pengembangan Online Analytical Processing (OLAP) pada data penjualan (Studi kasus/ : CV Adilia Lestari). *Jurnal CorelT*, *6*(1), 50–56. http://dx.doi.org/10.24014/coreit.v6i1.9307

Shodik, N., Neneng, N., & Ahmad, I. (2019). Sistem rekomendasi pemilihan smartphone Snapdragon 636 menggunakan metode Simple Multi Atribute Rating Technique (SMART). *Jurnal Nasional Pendidikan Teknik Informatika (JANAPATI)*, *7*(3), 219. https://doi.org/10.23887/janapati.v7i3.15727

Shomad, A. (2018). Implementasi sistem informasi desa di Kabupaten Bekasi. *Jurnal Administrasi dan Kebijakan Publik*, *8*(2), 62-80. https://doi.org/10.33558/akp.v8i2.1622

Suri, M. I., & Puspaningrum, A. S. (2020). Sistem informasi manajemen berita berbasis web. *Jurnal Teknologi dan Sistem Informasi*, *1*(1), 8–14.

Tarigan, D. P., Wantoro, A., & Setiawansyah, S. (2020). Sistem pendukung keputusan pemberian kredit mobil dengan Fuzzy Tsukamoto (Studi kasus: PT Clipan Finance). *TELEFORTECH: Journal of Telematics and Information Technology*, *1*(1), 32-37. https://doi.org/10.33365/tft.v1i1.870

Terintegrasi, K. (2022). *Pemutakhiran Peta Desa pada OpenSID: Buku Panduan* (T. P. D. Teratak (ed.); 1st ed.).

Trohanis, P. L. (1980). Technical assistance: An innovative approach to building new partnerships in continuing and in-service education. *Educational Technology*, *20*(8), 30-36.