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Smart Village Desa Perlis: Improving Prima Village Services Based on Digital Applications

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Abstract

This community service aims to realize a smart village in Perlis Village through a digital application. This study uses a participatory and collaborative approach. The activeness of participants and all stakeholders is needed from the planning stage to the evaluation. This community service is in Perlis Village, Berandan Barat District, Langkat Regency. The techniques for collecting and analyzing community service data are: 1) Smart Village Application and 2) Training using Smart Village Application software. The result of this service is an increase in the effectiveness of village services by 66% after using the smart village application. This shows the effectiveness of the training used significantly in providing knowledge to the community regarding administrative services for correspondence at the Perlis village office, which can be carried out online. Through the Perlis Village office, the village government is an agent of change for the self-reform process in empowering agents for the community to realize Smart Governance.

Keywords Application; Perlis Village; Prime Village Service; Smart Village

1. INTRODUCTION

Perlis Village is one of the villages in Langkat Regency, West Brandan subdistrict, in the "Disadvantaged" category (IDM, 2023). This village is in West Brandan District, Langkat Regency, North Sumatra Province. The sea surrounds this village and its edges or surroundings are a "forest" area. There are 1,518 heads of families in this village. Transportation access to Perlis Village requires a boat or getek as crossing transportation. However, the Telecommunications and Cell Phone availability in Perlis Village is quite adequate because four types of communication service operators reach Perlis Village. The availability of a strong signal in Perlis Village also reinforces this.

The existence of these technological facilities and infrastructure should be able to form fast, easy and transparent village governance (Nurselly, 2022). The location of Perlis Village, where it is difficult to access information and village services directly, can be overcome using an application that can be accessed anywhere and anytime via people's smartphones. Technological changes will bring socio-cultural changes (Ngafifi, (2014), Rachmawaty (2018). Smart Village-based digital applications are expected to change the lifestyle of the people of Perlis Village into an independent and sophisticated intelligent society (Prayogi, 2022). So this change is expected to lead to a change in the status of the Perlis Village category from a village in the "Disadvantaged" category to a village in the "Developing" category and even a village in the "Advanced" category. How does the Smart Village digital application improve excellent village services? This service is very important so that the people of Perlis Village can get out of the Disadvantaged Zone, increase the community's income, and avoid poverty.

Several factors prevent Perlis Village from developing, including Inadequate infrastructure and road access. Perlis Village uses a sanpam or boat in this case. This is a means of daily transportation for residents to travel from the village. There is Limited accessibility, in addition to the difficulty of transportation where, when it rains, no boats operate, and the economy in the village is sluggish. For internet network access in this village, four networks can already be accessed, but access tends to be slow.

In terms of village services, the village service system used is still manual. Based on the problems presented, the service raised the title "Smart Village Perlis Village: Improving Excellent Village Services Based on Digital Applications."

2. METHODS

Implementing this Community Service activity uses a qualitative Participatory Action Research (PAR) approach. The activity of participants and all stakeholders is needed from the planning to the evaluation stages. Fifty participants in this service comprised the community and Perlis village employees. Through this participation, the community not only becomes an object but also a subject who has a role in determining the direction and results of the success of this program. Participatory and collaborative means recognizing and respecting knowledge, experience, and community needs and designing and implementing service programs. The community has a deep understanding of the problems and potential that exist in its environment. So, community involvement is needed to make this service more relevant, useful, and sustainable. Through service technology, available programs and resources can be accessed more easily by the community so that this service has long-term benefits.

This community service is in Perlis Village, West Brandan District, Langkat Regency. Training on using the Smart Village application in Perlis Village was held on October 29, 2024. Stakeholders working together in this community service include the Community and Officials of Perlis Village, West Brandan District, Langkat Regency. The techniques for collecting and analyzing community service data are: 1) Focus Group Discussion (FGD), 2) Application Development, and 3) Training in using the Smart Village Application software. The indicators for the success of this community service activity were carried out by pre-survey and post-survey.

3. FINDINGS AND DISCUSSION

3.1. Findings

3.1.1 Smart Village Application

The Smart Village application will display menus related to Perlis Village services, namely correspondence according to the needs of the Perlis Village community. The users of this application are divided into: 1) Admin/Operator, as a verifier of incoming and outgoing letters; 2) Village Head as ratifier, namely signature; 3) User, as a user, in this case, the community. The following is the menu display for each application user:

3.1.1.1 Admin/operator

To access the Perlis Village Smart Village Application, it can be uploaded via https://desaperlis.com/login-admin. Then, enter the User and Password.

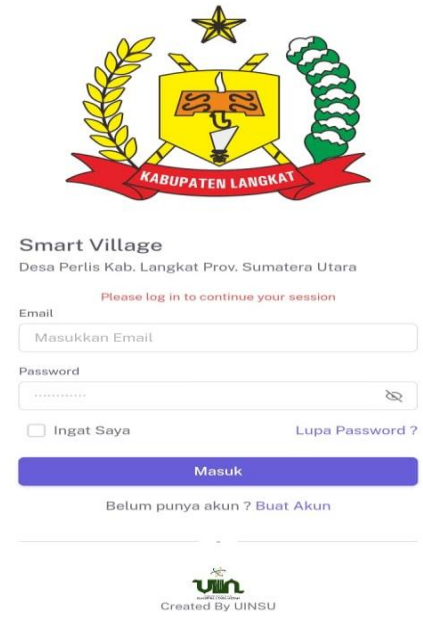

Figure 1. Smart Village Application

The Smart Village application menu is based on the "admin" application user:

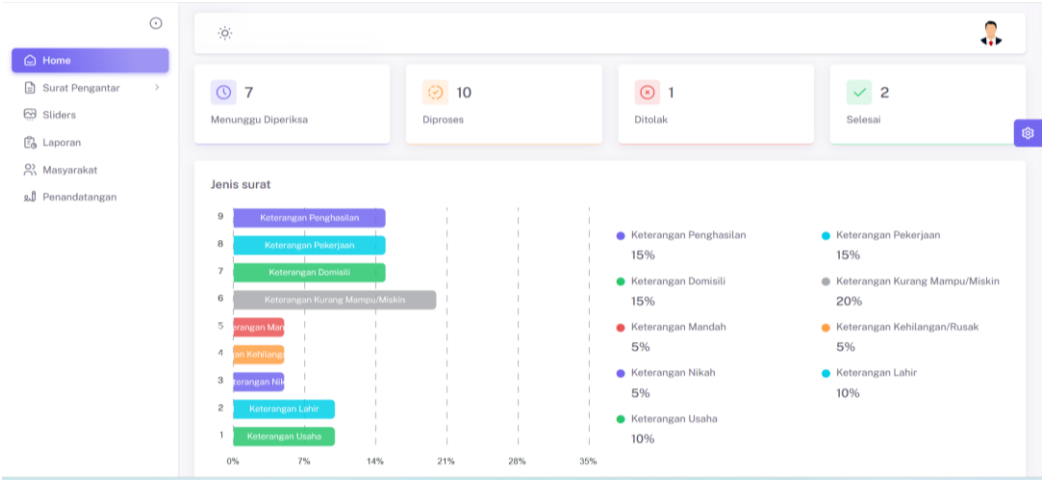

Figure 2. Smart Village Application Home Menu

In order to improve excellent village services, this application consists of menu tabs based on the status of letters processed. Namely, the letter's status is "Waiting to be checked, processed, rejected, and completed." Apart from that, the letter status menu display also displays statistics on incoming and outgoing correspondence based on the type of letter.

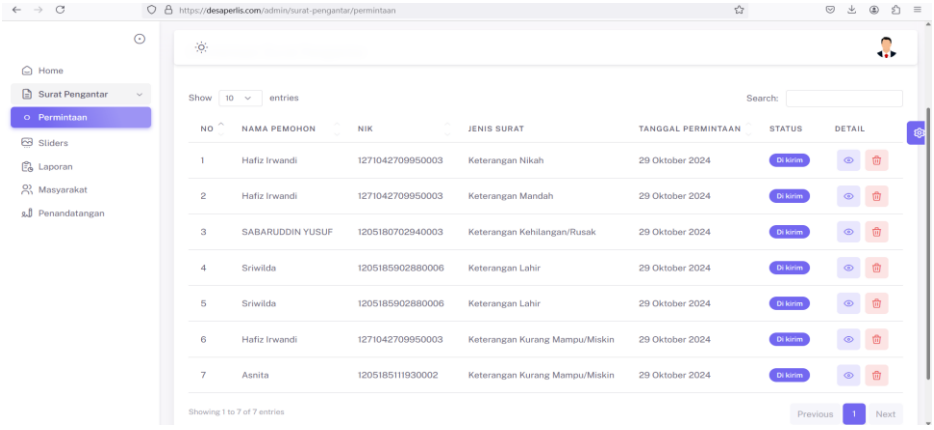

Figure 3. Request for Incoming Letter

The image above shows requests for incoming letters in the Perlis Village Smart Village Application based on letter type. These include marriage certificates, mandah certificates, loss/damage certificates, birth certificates, and indigent certificates. In this case, the Perlis Village office admin verified data related to identity data, including name, nickname, cellphone number, place of birth, date of birth, and other data.

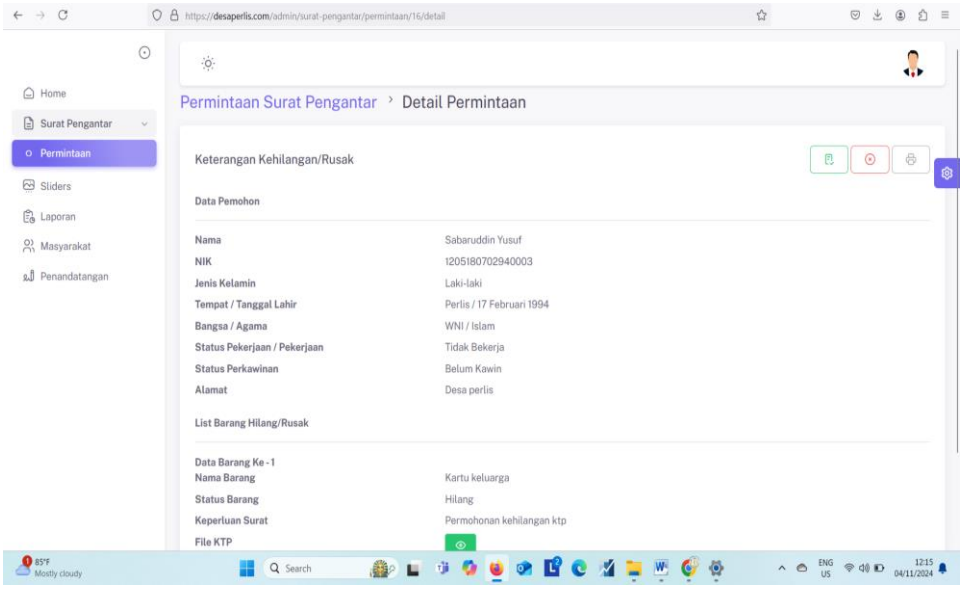

Figure 4. Request Details

The image above is a more detailed verification of the letter applicant's data, such as name, NIK, gender, place/date of birth, nation/country, employment status/marital status, etc. Apart from identity details, supporting file attachments, including KTP, KK, and so on, are also included. In this case, each type of letter has different details and document attachments according to the letter request provisions from the Perlis Village office.

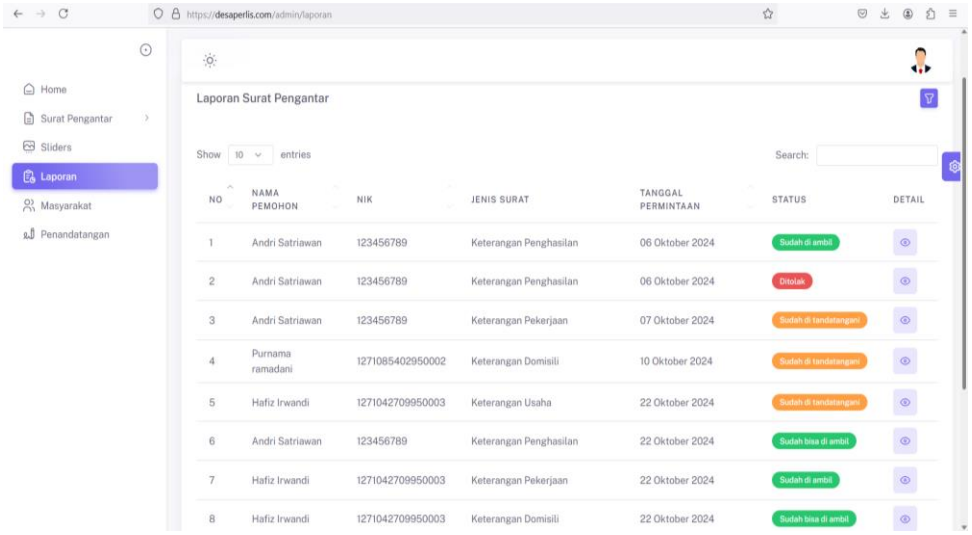

Figure 5. Cover Letter Report

After the admin checks the suitability of the data and document attachments, including KTP, KK, and so on, the admin can take the next action, namely whether it can be processed further, namely by providing complete letter numbers or forwarding it to the Head of Perlis Village for signature or rejection due to data discrepancies.

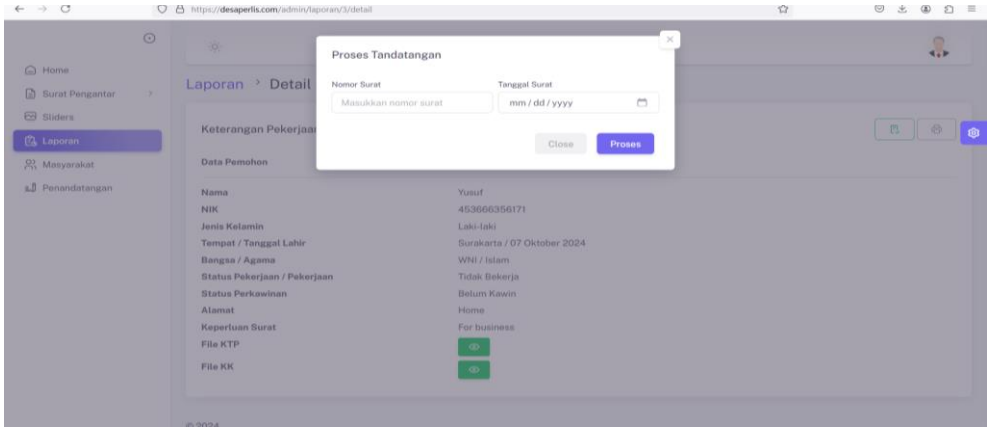

Figure 6. Signature Process

In the signature process, the letter number and date of the letter are first filled in according to the provisions. Next, after filling in the letter number and date of the letter, continue the signing process.

3.1.1.2 Head of Perlis Village

The Perlis Village Head is the leader who will validate the outgoing letter process at the Perlis Village office. In this case, we present two endorsements: via direct signature and the market.

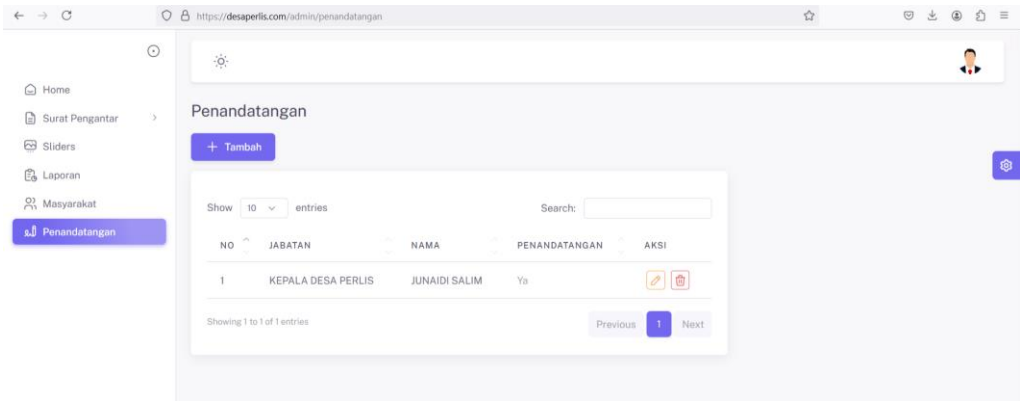

Figure 7. Signing of the Head of Perlis Village

In this signing, there is the Position and Name of the Official, in this case, the Head of Perlis Village, namely Mr Junaidi Salim; if in the future the Head of Perlis Village is replaced by another official, then the admin can replace the official concerned directly. Furthermore, if the official signing the letter is not at the Village Office, the Head of Perlis Village can process the letter by giving a barkot for the signature. So people do not need to go directly to the village office and can wait for the letter to be processed from anywhere.

3.1.1.3 Users/community

To become a user/community, the community must first create an account on the Perlis Village Smart Village application by accessing https://desaperlis.com. The public can process this letter request via laptop or smartphone.

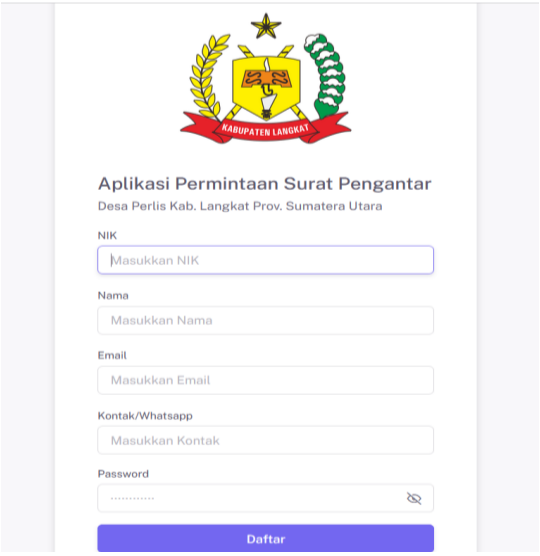

Figure 8. Create an Account for Users/Community

New users must create an account in the application by filling in their NIK, name, email, contact/Whatsapp, and password and clicking register. After the registration is complete, the user logs in using the email and password that has been registered.

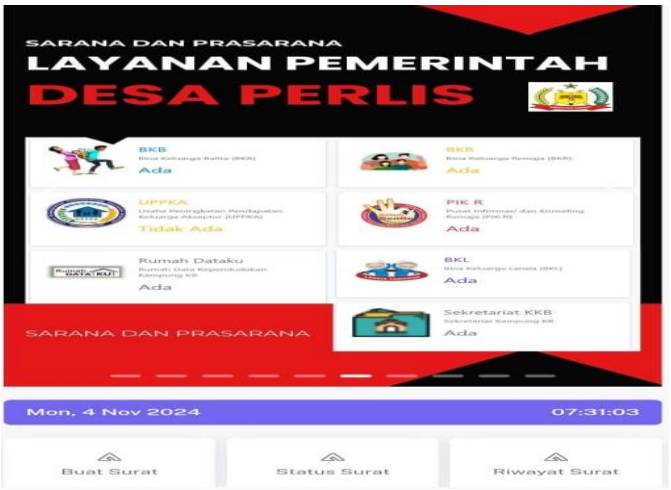

Figure 9. Application of Correspondence for the Community

This application has three menus: Home, Letters, and History. The home menu contains information in the form of moving sliders containing Perlis Village government services, APBDes info, info on Perlis Village activities, and Featured Perlis Village Products.

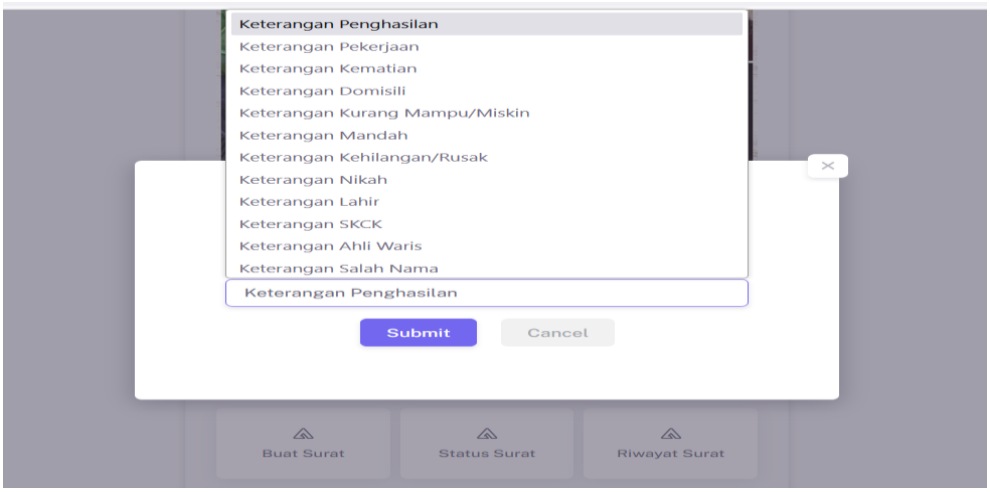

Figure 10. Letter Requests Based on Letter Type

Next, the user/community chooses the type of letter request based on the type of letter presented according to their needs.

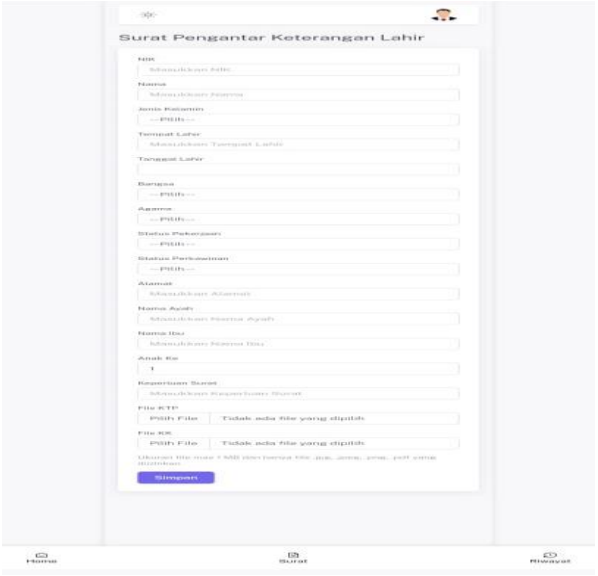

Figure 11. Birth Certificate

After selecting the type of letter required, as shown in the picture above, people must fill in the required identity data correctly and attach documents such as KTP and Family Card. After the data is filled in, click the save menu. Then, the request will be sent, and the letter's status will be sent. Then, the public waits for the letter process to see whether the letter is rejected or accepted. If it is rejected, the letter can be revised again; if accepted, the public can download it directly.

3.1.2 Training on Using the Smart Village Application in Perlis Village

In order to introduce and socialize the community regarding the Smart Village Application, the service team conducted training for the community. This training takes the form of training starting from creating an account on the Smart Village Application, logging in, requesting correspondence services, and marketing information on Perlis Village's superior products such as cerbung fish, shrimp paste, etc.

Figure 12. Smart Village Training in Perlis Village

The Perlis Village Smart Village training was attended by the community and Perlis Village officials totaling 50 people. The participants enthusiastically attended this activity. Where the people who take part in this activity are people who have an Android and can use a smart phone well. The community is happy with the presence of the PKM team and the Smart Village application because it helps the community manage correspondence at the Village Office. In this training, the public actively asks and discusses application services. It is hoped that the participants who attend can teach others about using this application. The community said that the correspondence most frequently used was a certificate of incapacity, a certificate of income and employment, where they usually used this letter to obtain social assistance and scholarships for students.

Before community service, the Perlis village community did not know about an application system that could be used to provide correspondence services at the Perlis village office. As many as 50 participants (100%) of the training experienced increased knowledge after the intervention. This shows the effectiveness of the training used significantly in providing knowledge to the community regarding the administration of correspondence services at the Perlis village office, which can be carried out online.

As many as 100% of participants were enthusiastic about participating in the training because this training was directly accompanied by technical guidance on how to submit a letter of application by the community and how to process letters for operators and village apparatus admins. In addition, this training also provides a technical guidebook for using digital applications that can be used as a guideline for application use procedures.

Description of Community and Village Apparatus Actions before and after training on the Perlis Village Smart Village Application.

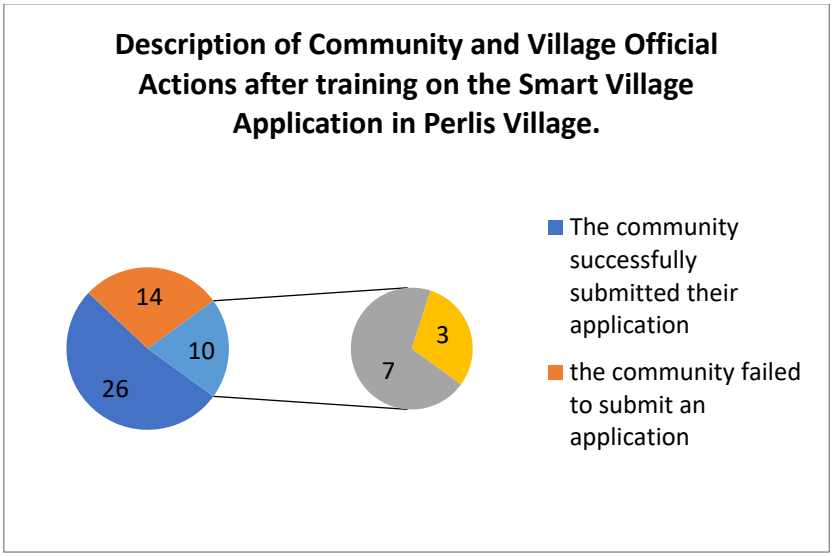

Figure 13. After Training on the Smart Village Application In Perlis Village

As many as 26 people from 40 (65%) of the community directly succeeded in conducting a trial of letter requests, both letters of application for lost goods, letters of poverty/underprivileged, letters of fishermen, and so on. As many as 7 out of 10 village officials (70%) succeeded in processing letters, both approval, letter approval, and letter numbering. So out of a total of 50 participants, 33 participants, namely 66%, succeeded in using the smart village application, and the remaining 17 participants, namely 34%, did not succeed in using the smart village application

3.2 Discussion

3.2.1 Improving Excellent Village Services Based on Digital Applications

The Smart Village application is designed as a smart village innovation by carrying out innovative social innovations based on digital platforms or information technology to improve excellent village services and the quality of life of village communities. This Smart Village application is not only limited to the use of information technology. However, it is an effort to increase economic value and improve the community's quality of life, which bridges the way to becoming a digital-based smart village community. Through Smart Village Perlis Village, this community service makes the village government, through the Perlis Village office, an agent for changing the process of self-reformation into an empowering agent for the community. The main indicator of the Perlis Village Smart Village is smart government, where village officials must be digitally literate as admins and verifiers of incoming data. Improving excellent village services in the Perlis Village Smart

Village application is focused on Perlis Village correspondence services, where previous correspondence services were carried out manually and offline through this application, so the Perlis Village correspondence service process can run quickly, precisely, transparently, and anywhere. This Smart Village application provides the latest information about Perlis Village, Population Services, Public services, village program activities, and others. Through the Smart Village Application, public services and activities carried out by Perlis Village officials can be published and reviewed by the community. This aligns with research by Prayogi et al., 2020 which states that Smart Village aims to provide services for residents in writing letters and providing important announcements for residents.

The need for correspondence for people who received their education outside the city of Brandan or the Langkat district can also be met, such as the need for letters from the underprivileged, usually used for the best sons and daughters of the city of Perlis to get scholarships so that every child's dream of receiving an education can be fulfilled. Health services related to posyandu, family planning programs, and so on can also be published through the Smart Village application to fulfill smart living.

4. CONCLUSION

The existence of the Smart Village application not only encourages smart government and smart living but with the existence of wifi, which can be used to speed up internet connections in Perlis Village, smart mobility can also be fulfilled well so that Perlis Village can move from the status of a "Disadvantaged" Village to a Developing Village. And Independent Village. Training on the use of Smart Village in Perlis Village helps the community use smartphones in a more positive direction, where through the Smart Village application, the community contributes to supporting smart governance. This community service has successfully introduced simple technology that supports efficient digital services. The activity results show that the Smart Village Application provides significant added value in service and economy—suggestions for further researchers to develop a more complete Smart Village application.

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