

Optimizing Village Potential through the Utilization of Prodeskel Application Technology in Keper Village, Krembung District, Sidoarjo Regency

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ABSTRACT

Objective: This study aims to identify strategies that can be implemented by the village government to maximize the utilization of the Prodeskel application technology. **Method:** This research is a descriptive qualitative study. The informant in this study is the Secretary of Keper Village. Data collection techniques were carried out through interviews, observation, and documentation. The focus of this research is the optimization of village potential through the utilization of the Prodeskel application technology using three indicators: goals, decision alternatives, and limited resource. The data analysis by Miles & Huberman. **Results:** The optimization of the Prodeskel application in Keper Village demonstrates clear objectives in improving the digital data system, transparency, and the development of village potential, particularly in the agricultural sectors of rice and melon. The chosen alternative strategy, namely training, has not been implemented consistently, with a significant time gap since 2022-2023, thus requiring evaluation and strategic adjustments. Despite limited resources in terms of human resources, time, and constantly changing regulations, the village government has shown organizational resilience by continuing to optimize the use of Prodeskel in accordance with the local context and capacity. **Novelty:** The study highlights the resilience and adaptive capacity of a village government in optimizing digital application technology (Prodeskel) for local development, particularly under constraints of limited resources and evolving regulations, which has not been extensively documented in prior research.

INTRODUCTION

The use of technology is currently growing rapidly, bringing significant impacts across various aspects of life, including in the management and development of villages. In today's digital era, the utilization of information and communication technology (ICT) has become a key factor in improving the efficiency and effectiveness of village governance [1]. Along with technological advancements, many villages in Indonesia have begun adopting digital applications to enhance administrative efficiency and promote transparency in village administration [2].

As the smallest unit of government, the village plays a crucial role in national development. However, many villages still face challenges in recognizing and utilizing the local potential available to them. Local economic development and community empowerment are often hindered by limitations in data collection and analysis of potential. The optimization of village potential plays a significant role in improving the local economy and the well-being of the village community [3]. To support village development and provide a comprehensive view of the characteristics of villages and subdistricts, including basic family data, natural resource potential, human resources, institutions, infrastructure, and facilities, the Directorate General of Village Government Development (Ditjen Bina Pemdes) of the Ministry of Home Affairs (Kemendagri) developed an application called Prodeskel, or Village and Subdistrict Profile. Prodeskel

is a software that functions as a data warehouse for villages and subdistricts throughout Indonesia. This application was created in accordance with Article 86 of Law Number 6 of 2014 concerning Villages, which states that “Villages have the right to access information through a village information system developed by the District or City Government” [4].

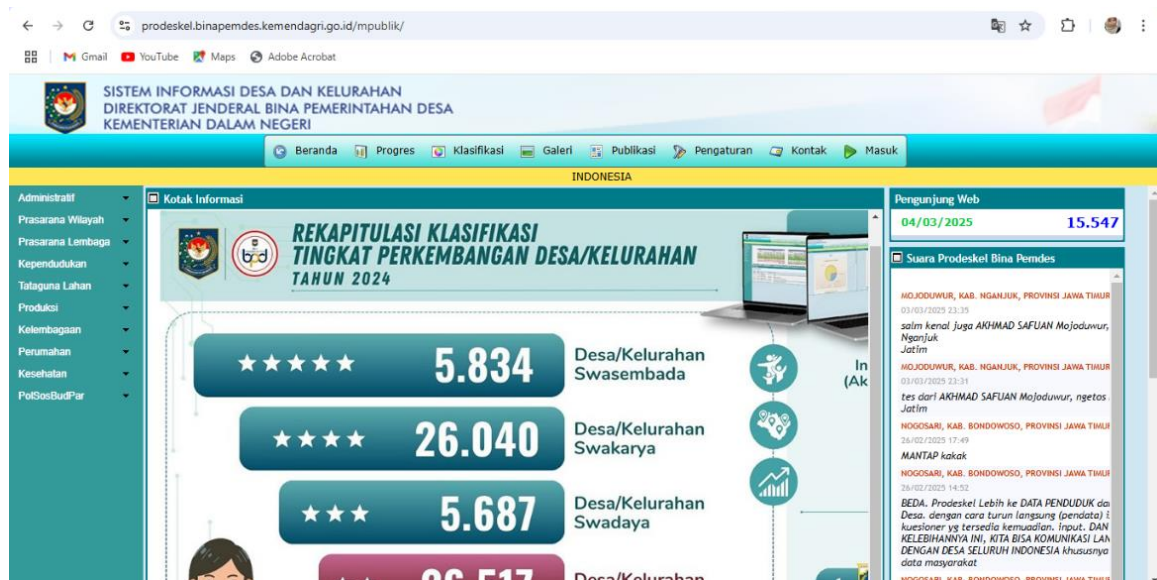


Figure 1. Prodeskel Application Homepage.

Source: official website of prodeskel.binapemdes.kemendagri.go.id.

One of the villages in Sidoarjo Regency that has implemented the Prodeskel application is the Keper Village Government, located in Krembung District, Sidoarjo Regency. Keper Village, as a socio-economic entity with significant potential, faces various challenges in optimizing the utilization of its existing resources. Based on an observation conducted with the Secretary of Keper Village, it was stated that the village government encounters several obstacles related to data entry in the Prodeskel application. One of the main barriers in the implementation of Prodeskel data collection is the frequent occurrence of technical issues or errors when trying to access the application, such as being unable to log in or save data [5].

Keper Village itself possesses abundant natural potential, particularly in rice and melon farming. With these assets, the community, through the Keper Village Government, can play a role in maximizing their utilization. One of the strategic steps taken by the village government to optimize the existing potential is the use of the Prodeskel application. This application is designed to assist in the data collection and analysis of village potential in a more efficient and accurate manner. By following the guidelines set by the central government, villages are expected to conduct village and sub-district profiling in a more organized way. Through the use of the Prodeskel application, the village government can identify the appropriate resources and enhance community participation, allowing local potential to be fully optimized [6].

A previous study conducted by Salman Alfarizhi and Yayan Nuryanto (2022) highlighted the importance of village development through accurate information

systems, such as Prodeskel (Village and Sub-District Profile), in supporting village development planning. Prodeskel is designed to establish an integrated and sustainable data center for villages and sub-districts across Indonesia, aiming to reduce the gap between rural and urban life and improve community welfare. The study found that the data collection program for village industrial production still faces several shortcomings based on Dunn's five evaluation indicators. Nevertheless, the Gunungmanik Village Government was able to conduct evaluations by identifying supporting and inhibiting factors in the implementation of Prodeskel, thus enabling them to find concrete solutions to optimize the use of this system in village development planning [7].

Another study conducted by Shintya Kurniawati and Lailul Mursyidah emphasized the effectiveness of information systems in public services in Kalidawir Village, Tanggulangin District, Sidoarjo Regency, in accordance with Law Number 6 of 2014 concerning the use of information technology and electronic-based governance. This law mandates that every village must have a Village Information System (SID) to facilitate public access to information. However, the research findings indicate that the implementation of information systems in public services still faces various obstacles, such as the inactivity of the SID application, lack of socialization from village officials to the community, and the heavy workload of village apparatus managing multiple applications simultaneously. These issues have hindered the effective implementation of electronic-based public service systems in achieving their intended goals [8].

A subsequent study conducted by Ummu Latifah Habibah discussed the effectiveness of the Palapa Mojo application in improving public services in Mojokerto City. This information technology-based application was developed by the local government with the aim of enhancing transparency and efficiency in the delivery of public services, particularly in the areas of licensing, civil administration, and public complaints. With its user-friendly interface, the application can be accessed via both desktop and mobile devices, making it easier for the public to obtain information and submit complaints in real time. The implementation of this application has shown significant improvements in response times to service requests and public complaints, as well as increased transparency in service processes through status tracking features. Further development of the Palapa Mojo application is expected to include additional public services and serve as a model for other cities in maximizing the use of technology in governance systems [9].

The research on "Optimizing Village Potential through the Utilization of the Prodeskel Application Technology in Keper Village, Krembung District, Sidoarjo Regency" focuses on how the use of village information systems can assist in identifying and developing local potential to support development. This approach differs from previous studies, which mostly emphasized evaluating the implementation of village information systems in the context of administration and public services. For example, earlier research highlighted various challenges in implementing information systems, such as lack of public outreach, technical limitations, and service effectiveness. However, this study not only assesses the success of system implementation, but also emphasizes how the Prodeskel application can be used more strategically to explore village potential and promote sustainable development [10].

Another difference that constitutes the research gap lies in the scope of information system utilization. While previous studies have mostly focused on the effectiveness of information systems in public service delivery and administrative transparency, this study places greater emphasis on the use of technology as a tool for economic and social development in rural areas. Therefore, the focus is not only on how the information system functions in village governance, but also on how technology can contribute to improving the welfare of rural communities through the optimization of local potential. This indicates that there remains a research gap in understanding how village information systems can be utilized not only for administrative services, but also as a strategic instrument for resource management and more effective village development planning [11].

The purpose of the study on “Optimizing Village Potential through the Utilization of the Prodeskel Application Technology in Keper Village, Krembung District, Sidoarjo Regency” is to analyze how the Prodeskel application can be effectively used to identify, manage, and develop village potential to support sustainable development. In the digital era, information technology has become an essential tool in decision-making, particularly at the village government level. Therefore, this research aims to explore the extent to which the Prodeskel application can provide benefits in managing village data accurately, thus serving as a foundation for creating more targeted development programs based on local potential. Furthermore, this study also seeks to uncover the factors that support or hinder the optimization of this application in the village development process [12].

In addition, this study aims to identify strategies that can be applied by the village government to maximize the utilization of the Prodeskel application technology. By understanding the various challenges faced in its implementation, this research seeks to provide recommendations that can enhance the effectiveness of the village information system, from technical aspects, policies, and community involvement. It is hoped that the results of this study will contribute to the development of more modern, transparent, and data-driven village governance systems, allowing the full potential of the village to be optimized for the welfare of the community [13].

RESEARCH METHOD

This study employs a descriptive qualitative method. Qualitative research is a method used to study the natural conditions of objects [14]. The informant for this study is the Secretary of Keper Village. The selected informant meets the criteria as the party most knowledgeable about the issues to be researched. The focus of this study is the optimization of village potential through the utilization of the Prodeskel application technology in the Keper Village government, using the theory by Hotniar Siringoringo with three indicators: goals, decision alternatives, and limited resources [15].

The data sources used in this study consist of primary and secondary data. Primary data is obtained directly from informants through interviews, while secondary data is gathered from various references such as documents, reports, or literature that support this research. This study uses three data collection methods: observation, interviews, and

documentation. In managing the research, qualitative data analysis techniques are employed through the interactive model of Miles & Huberman, which includes data collection, data reduction, data presentation, and drawing conclusions [16].

RESULTS AND DISCUSSION

The focus of this study is the optimization of village potential through the utilization of the Prodeskel application technology in the Keper Village government, using the theory of Hotniar Siringoringo, which employs three indicators: goals, decision alternatives, and limited resources. Below is an explanation of each of these indicators:

Goals

The goal in the context of utilizing the Prodeskel application is to achieve more accurate, transparent, and effective village data management, so that village potential can be identified and developed optimally. This goal is not only focused on data collection but also on improving the quality of village development planning based on valid and up-to-date data. With clear objectives, the village government can direct all its resources and activities to support the achievement of maximum results from the use of the Prodeskel application. This goal also includes empowering the community to become more actively involved in the data collection and management of village potential, creating synergy between technology and local wisdom. In an interview with the Secretary of Keper Village, it was stated that:

"In Keper Village, we have several main goals in implementing Prodeskel. First, we want to improve the village data system, which was previously manual and often faced difficulties when reporting data to the sub-district or district level. With Prodeskel, we hope that all data on village potential, village profiles, and village administration will be well-organized and structured. Secondly, we aim to increase transparency in village governance. The community is becoming more critical and always wants to know how the village budget is being used. With this application, we can present valid data that is accessible. In fact, we also aim to identify village potential that has not yet been fully developed, especially in the agricultural sector, particularly rice and melons, which are Keper Village's flagship products. Well-organized data will help us in developing targeted development programs."

Based on the explanation above, it can be concluded that these goals align with the spirit of village digitalization and aim to create better village governance through information technology. Hotniar Siringoringo explains that goals are what one aims to achieve through decisions made. In the context of Keper Village, the village government has clear objectives in implementing Prodeskel, namely to improve the village data system from manual to digital for better structure, increase transparency in village governance, and identify underdeveloped village potential, particularly in the rice and melon agricultural sectors. These formulated goals align with research on village development that emphasizes the importance of good data management as the foundation for village development [17]. In the case of Keper Village, the village government has understood well that information technology is not just an administrative tool but also a strategic instrument for identifying and managing village potential. This shows that the decision to implement Prodeskel is a meaningful strategic decision, not just an operational one.

Based on the interview with the Secretary of Keper Village, the purpose of implementing Prodeskel is not limited to administrative management, but also directed towards enhancing the digital data system, transparency, and identification of village potential. This can be observed in the following table, which illustrates a comparison of conditions before and after the utilization of Prodeskel.

Table 1. Comparison before and after the implementation of prodeskel.

Aspect of Objective	Condition Before Prodeskel	Condition After Prodeskel	Remarks
Data System	Manual, scattered data, difficult to compile for sub-district/district reports	Digital, structured, easily retrievable	Accelerates reporting process
Governance Transparency	Data was difficult for the public to access, stored only in archives	More accessible data, can be presented in valid report formats	Enhances public trust
Village Potential Identification	Not well-documented, only based on verbal information	Neatly stored in Prodeskel, records include land area	

Source: Interview with Secretary of Keper Village 2025

From the table above, it is evident that the primary objectives of utilizing Prodeskel in Keper Village have begun to be achieved. The data system, which was previously manual and often complicated the reporting process, is now more organized due to its digital basis. This transition has made data compilation faster and easier. In terms of transparency, the village government has also benefited, as data entered into the application can be presented in report form, making it more accessible to the public. Additionally, village potential—particularly in rice and melon farming—has become more identifiable, as it is now properly documented in the application rather than merely estimated. As a result, the village government has a clearer foundation for designing development programs. This indicates that the purpose of implementing Prodeskel in Keper Village goes beyond administrative functions and actively supports the development of local potential.

A similar study was conducted by Sampetoding, Uksi, and Pongtambing (2024), which discussed digital transformation in village accounting information systems. The study emphasized the importance of digitalization in improving the accuracy and efficiency of village data management. In line with the findings in Keper Village, the main goal of digitalization is to establish a transparent and structured data system. However, while previous research focused more on the accounting aspect, this study takes a broader approach by incorporating data-based mapping of village potential through Prodeskel.

Decision Alternatives

Decision alternatives refer to various strategic options that the village government can take to optimize the use of the Prodeskel application, considering the existing conditions and limitations. In this case, the village government may choose to organize intensive training for village operators so they can effectively operate the application, or develop easier learning methods such as visual guides and video tutorials. Additionally, the village government may decide to form a special team tasked with regularly validating data to ensure the quality and accuracy of the information stored in the application. Each of these decision alternatives must be carefully considered to align with the village's needs and capacity. In an interview with the Secretary of Keper Village, it was stated that:

"We realize that no matter how advanced the application is, it will not be useful if it is not managed properly. However, there are no regular training sessions. Typically, there is training at least once a year. But the last training session was conducted around 2022-2023."

Based on the explanation, it provides a concrete picture of one of the decision alternatives that has been taken by the Keper Village government in an effort to optimize the use of the Prodeskel application. Periodic training is one of the strategic decision alternatives chosen by the Keper Village government to improve human resource capacity in operating the Prodeskel application. However, the fact that the last training session was held around 2022-2023 indicates a significant time gap until the research was conducted in 2025.

Empirical data obtained from interview results indicate that training related to the use of Prodeskel has not been conducted consistently on an annual basis. Since the initial training in 2020 and a follow-up socialization in 2022, no further training has been held up to the time this research was conducted in 2025. This information strengthens the argument that training strategies as an alternative decision-making measure remain suboptimal. The following table presents the training history of Prodeskel in Keper Village:

Table 2. Training history of prodeskel in Keper Village.

Year	Frequency	Partisipants	Organizer	Remarks/Constraints
2022	Once	Prodeskel Application Operator	Sidoarjo Departement of Village Community Empowerment	Training in progress
2023	Once	Prodeskel Application Operator	Sidoarjo Departement of Village Community Empowerment	Training in progress
2024-2025	-	-	-	No further training conducted, possibly due to system or policy changes

Source: Interview with the Secretary of Keper Village 2025

This finding also highlights the importance of periodic evaluation of the decision alternatives that have been chosen. In the context of optimizing village potential through technology, irregular training can reduce the effectiveness of the Prodeskel application as a village development tool. This aligns with Siringoringo's theory, which emphasizes that decision alternatives need to be continuously evaluated and adjusted to evolving dynamics and needs [18].

One indication of the suboptimal utilization of Prodeskel in Keper Village can be seen from the low data entry index in the system, as shown in Figure 2. This suggests that without regular training and technical assistance, the data input process becomes ineffective, even though the application is systematically available.

KABUPATEN/KOTA	KECAMATAN	STATUS PEMERINTAHAN	DESA/KELURAHAN	INDEKS	KLASIFIKASI	TIPOLOGI
KAB. SIDOARJO	PRAMBON	DESA	GAMPANG	0,71	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	JATIKALANG	0,77	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	JATIALUN-ALUN	0,75	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	PEJANGKUNGAN	0,73	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	KEDUNGSUGO	0,79	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	KEDUNGWONOKERTO	0,72	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	BENDOTRETEK	0,73	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	WONOPLINTAHAN	0,75	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	KEDUNGKEMBAR	0,75	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	JEDONGCANGKRING	0,74	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	CANGKRINTURI	0,67	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	SIMOGIRANG	0,74	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	PRAMBON	DESA	TEMU	0,75	SWAKARYA	PERINDUSTRIAN/JASA
KAB. SIDOARJO	PRAMBON	DESA	WATUTULIS	0,79	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	KREMBUNG	DESA	TAMBAKREJO	0,76	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	KREMBUNG	DESA	KEPER	0,75	SWAKARYA	PERSAWAHAN
KAB. SIDOARJO	KREMBUNG	DESA	KEDUNGSUMUR	0,73	SWAKARYA	PERSAWAHAN

Figure 2. Data entry index of Keper Village.

Source : website resmi prodeskel .binapemdes.kemendagri.go.id

Therefore, the Keper Village government needs to reconsider the frequency and consistency of training implementation as a crucial decision alternative in optimizing the use of the Prodeskel application. This requires evaluation and strategy adjustments to

ensure the effectiveness of the Prodeskel application in optimizing the potential of Keper Village in the future.

The study by Alfariizhi and Nuryanto (2024) highlights the evaluation of the Prodeskel system in Gunungmanik Village, Sumedang. The findings indicate that although the system has been implemented, its successful utilization highly depends on implementation strategies such as regular training and supervision. This supports the findings in Keper Village, where the lack of consistent training has been a barrier to optimization. Both studies emphasize the need for ongoing evaluation and strategic adjustments to ensure that the implementation of village information systems can be effective and sustainable.

Limited Resources

Limited resources refer to the constraints faced by the village government in implementing the Prodeskel application, whether in terms of budget, infrastructure, or human resources. The limited village budget often becomes a major obstacle in providing adequate technology facilities and training. Therefore, the village government needs to allocate funds efficiently and seek additional funding sources, such as through central government grant programs or partnerships with third parties. Technological infrastructure, such as stable internet access and adequate hardware, is also an important factor that must be met for the application to run optimally. Additionally, the limitation of human resources with the technical skills to operate the application must be addressed with continuous training and development strategies, as well as involving the younger generation of the village as technology operators. By understanding and managing these resource limitations effectively, the village government can maximize the use of the Prodeskel application, even in a limited-resource environment. In an interview with the Secretary of Keper Village, it was stated that:

"Well, when it comes to limitations, we face quite a few challenges. The most noticeable is the limitation in human resources. Out of the 10 village officials, only 5 truly understand information technology. The rest still need intensive guidance. Even I, as the village secretary, sometimes struggle with some of the more complex features in Prodeskel. Another limitation is time. Our village officials are already very busy with daily routine services, so the task of inputting data into Prodeskel often gets delayed. Not to mention, the regulations from the central government keep changing, making us constantly adapt and learn again. But we remain optimistic that we can optimize the use of Prodeskel for the progress of Keper Village."

With consideration of the three indicators from Hotniar Siringoringo's theory, the strategy for optimizing Prodeskel in Keper Village needs to be designed comprehensively, taking into account the balance between the goals to be achieved, the available decision alternatives, and the limitations of existing resources. A phased approach and prioritization of activities are key to ensuring effective implementation.

The third indicator is limited resources, which refers to the constraints faced during the implementation process. Desa Keper faces limitations in human resources (only 5 out of 10 village officials are knowledgeable about technology), time (village officials are busy with routine services), and constantly changing regulations. This situation illustrates that the success of an organization is determined by its ability to effectively manage limited

resources. Despite facing various limitations, the optimistic attitude shown by the Secretary of Desa Keper reflects the resilience of the organization in facing challenges. The ability to stay optimistic and seek solutions amidst limitations is a crucial asset in implementing technology in environments with various obstacles.

The understanding of information technology among village officials in Keper Village shows varying levels of proficiency. Some officials possess the ability to operate computers and use the Prodeskel application due to job demands that are directly related to data management and administrative tasks. However, there are also village officials who lack information technology skills, primarily because their roles and responsibilities focus more on coordination, decision-making, or manual record-keeping, which do not require frequent use of technological tools.

Table 3. Information technology proficiency of Keper Village officials.

Category	Number of People	Positions included
IT Proficient	5	Village Secretary, Head of Welfare Affairs, Head of Public Services, Head of General Administration, Public Services Staff
Not IT Proficient	5	Village Head, Head of Planning, Head of Finance, Head of Keper Hamlet, Head of Bogem Hamlet

Source: Keper Village Government, Krembung Subdistrict, Sidoarjo Regency

From the table, it can be seen that only five village officials demonstrate a solid proficiency in information technology: the Village Secretary, Head of Welfare Affairs, Head of Public Services, Head of General Administration, and a Public Services Staff member. Their technological skills are attributed to their routine tasks involving population data entry, document administration, and the management of Prodeskel data. The frequency of computer use in their daily work has significantly contributed to their improved ability to operate information technology.

Conversely, the officials who do not possess IT skills include the Village Head, Head of Planning, Head of Finance, and two other supporting staff members. Their lack of technological proficiency does not imply that their roles are unimportant, but rather reflects a difference in job focus. The Village Head, for instance, primarily engages in coordination and decision-making functions, while the Head of Planning focuses on preparing planning documents, and the Head of Finance is responsible for recording and compiling financial reports. Therefore, the limited mastery of information technology among these officials is largely influenced by the nature of their tasks, which do not require technical skills in using computer-based applications.

The success of optimizing Prodeskel in Desa Keper, despite various limitations, highlights the importance of an adaptive and solution-oriented management approach. Hotniar Siringoringo's theory provides an appropriate analytical framework because it

recognizes that decision-making is not just about selecting the best option, but also about considering the context, objectives, and existing constraints. In the context of rural development in the digital era, this approach is highly relevant because digitalization cannot be implemented with a "one size fits all" approach; instead, it must be tailored to local conditions and capacities.

The utilization of the Prodeskel technology in Desa Keper is theoretically supported as it demonstrates how a village with limited capabilities can optimize available resources to achieve digital transformation. The collaborative approach involving various stakeholders (village government and the community) aligns with the principles of modern governance, which emphasize multi-stakeholder participation. On the other hand, the awareness of the limitations faced reflects the application of good risk management principles, where the organization identifies potential barriers early on and develops mitigation strategies.

This research reinforces the argument that the success of technology implementation at the village level does not solely depend on the sophistication of the technology itself, but rather on how the technology is managed and tailored to the local context. In this case, Desa Keper has demonstrated good practices by adapting the use of Prodeskel according to their capacities and needs.

The study by Kurniawati and Mursyidah (2023), conducted in Kalidawir Village, Sidoarjo, found that challenges in the implementation of the Village Information System (SID) often stem from limited human resources and the workload of village officials. Village apparatus experience difficulties managing multiple applications simultaneously, resulting in suboptimal functioning of the information system. These findings are highly relevant to the situation in Keper Village, where only a small number of officials are proficient in technology, and daily work demands hinder regular data entry. Thus, limitations in human resources and time appear to be common issues in the implementation of village information systems across various regions.

CONCLUSION

Fundamental Finding : Based on the research findings and discussion on "Optimization of Village Potential through the Utilization of Prodeskel Application Technology in Desa Keper," it can be concluded that the implementation of Prodeskel in Desa Keper has been analyzed using Hotniar Siringoringo's theory through three main indicators. In terms of goals, the village government has a clear direction to improve the digital data system, transparency in governance, and the development of village potential in the rice and melon agricultural sectors. In terms of alternative decisions, it was found that although training was chosen as a strategy, its implementation was inconsistent with a significant gap since the last training in 2022-2023, which requires evaluation and strategy adjustment. Meanwhile, in the indicator of limited resources, there are constraints in human resources, time, and fluctuating regulations. However, the village government has shown organizational resilience by remaining optimistic and adaptive in optimizing the use of Prodeskel, even under limited conditions. **Implication :** This indicates that the success of technology implementation at the village level depends not only on the sophistication of the technology itself but more on how the technology is

managed and adapted to the local context and capacity. **Limitation** : The study found constraints in human resources, time, and fluctuating regulations, which may affect the effectiveness of Prodeskel implementation. Additionally, the gap in training between 2022-2023 suggests a lack of consistent strategy and requires further evaluation. **Future Research** : Future research could explore the impact of consistent training programs on the successful implementation of technology in village governance, as well as investigate ways to address the challenges posed by limited resources and fluctuating regulations in rural areas.

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