

Building a Digital Village to Improve Services and Independence of Village Communities After the Covid-19 Pandemic

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Abstract

Bakalan Village is one of the villages initiated by the government of Pasuruan Regency to become a digital village. To build a digital-based village, it is necessary to have a system that can help and facilitate this work. One of the team's dedication efforts in realizing this digital village is to provide assistance fund training to the community and Bakalan village government employees regarding online marketplace management, service systems, and village administration systems. The purpose of this activity is to increase community knowledge and skills in managing online marketplaces, service systems, and village administration systems through an Android application. This service activity is carried out through the stages of planning, implementing, and evaluating activities. From this activity the service team develops and builds an Android-based mail service application, a village website application, and an online buying and selling system application as a media promotion Village-Owned Enterprise products.

Keywords: Digital Village; Mail Service; Online Marketplace

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Introduction

The concept of a Smart City is how to connect physical infrastructure, social infrastructure, and economic infrastructure using ICT technology, which can integrate all elements in those aspects and make the city more efficient and livable (Fajrillah et al., 2018). This concept is widely used by major cities around the world to overcome various problems faced (Mursalim, 2017). However, village government agencies are also not free from various problems. So also formed the concept of a Smart Village (Zavratnik et al., 2018) and the use of Information Communication and Technology in rural development and the development of application needs (Degada et al., 2021).

Bakalan Village is one of the villages located in Purwosari District, Pasuruan Regency. An area of Bakalan Village is 427 ha population of 4.707 people was targeted for the

implementation of mentoring or assisted villages under Universitas Yudharta Pasuruan using the Smart Village concept (Alamanda et al., 2019) that utilizes technology so that it can also be called a Digital Village.

Bakalan Village has various potential resources that can be utilized properly to improve the quality and standard of life of its people. The first is that Village-Owned Enterprises (BUMDES) are village business institutions managed by the community and village government, as an institution formed to strengthen the village economy and formed based on the needs and potential of the village (Cvar et al., 2020). Bakalan Village is one of the villages that develops Village-Owned Enterprises. The potential managed is very diverse and others (Farida & A'yunin, 2021; Faxon, 2022; Zhao et al., 2022), the potential for cultivating vegetables and ornamental plants by utilizing home yard land, potential in the field of animal husbandry, namely maggot cultivation which has high economic value, and Bakalan Connecting Village products (Faujiah, 2018), which are wifi installation services to increase community literacy in various fields such as education by utilizing digital technology (Li et al., 2022). However, in its implementation, several problems arise, such as problems in the economic sector that are not optimal in utilizing the potential that exists in the village. The second is that in the village service system such as dissemination of service information, provision of certificates, community services, and community complaints still occur manually. As a digital village, this needs to be made digital by using blended mode by not deleting services offline so that people who stutter technology will be able to use village services, and can make it easier for people to access services (Aulia, 2021). The third is the village administration system which has been carried out conventionally such as the village budget. As a digital village, these aspects must be made digital by using a blended mode, to make it easier for the community to access the village financial system.

During a COVID-19 pandemic like this, it is very necessary to minimize the spread of COVID-19. By looking at the potential and situation that exist in Bakalan Village, the development process of digital village implementation including in the economic and community service sectors through the development of the Smart Village concept can be realized with the cooperation of the Village and the Yudharta Pasuruan University assistance team.

The success of building a digital village during the COVID-19 pandemic, along the way, also leaves serious problems, including; 1) The marketing system and product management

administration of Village-Owned Enterprises are still manual, so the products are less known and less salable. 2) The system of service is still carried out manually, making it difficult for the community, especially in correspondence. And 3) The financial information system of this diving village is still not open to the community.

These limitations are certainly an obstacle to development in building digital villages amid the COVID-19 pandemic. For this reason, there is a need for system design efforts that further encourage professionalism, productivity, innovation, and accountability so that the role of the government and Village-Owned Enterprises is more qualified, impactful, and visible results. One of them is by utilizing the development of information and communication technology in terms of marketing and management of Village-Owned Enterprise products, village services, and village administration management. This program is expected to have a positive impact on the development of des a digital as well as become a pilot village and inspire other villages in the Pasuruan Regency area.

From the problems found in the village and Bakalan Village-Owned Enterprises, Purwosari District, Pasuruan Regency, namely: 1) Marketing and administrative management of Village-Owned Enterprise products are still carried out manually. 2) The village service system is still carried out manually, that is, everyone must go to the Village Hall for correspondence purposes. 3) The village financial information system is still not open to the community and access is still relatively difficult. Of the 3 fundamental problems, the solutions that will be carried out in this program are:

1. Program Initiation Workshop

This activity is in the form of socialization about the service program that will be carried out. In addition, a focus group discussion was also conducted on the findings related to potency and problems that exist in Bakalan Village and Village-Owned Enterprises. Through this workshop, it is hoped that the same understanding or perception will emerge between the service team and assisted partners in making changes to the marketing system and product administration management of Village-Owned Enterprises, the village service system that is still manual, and the village financial information system.

2. Capacity building

This activity is oriented to improve the knowledge and skills of the target group program through training which includes:

- 1) Training on introduction to Pasradesa application system, SIBADI application, and

village financial information system

2) Training on the use of applications to run the Pasradesa application, SIBADI application, and financial information system for admins and those concerned

3. Website partnership design and construction

This activity is in the form of designing and making applications that will later be used as a promotional medium for Village-Owned Enterprise products so that the sales reach is wider, designing and making applications that facilitate the civil service system for correspondence. Even in conditions outside the city and during the pandemic, as well as the design and creation of a financial information system that makes the village government work according to the program and does not blame the authority for being monitored by the village community

4. Design and Assistance in the Operationalization of IT-based application systems

This activity is oriented to ensure the ability of program partners in the operation and utilization of application systems used in supporting the quality of the target group program.

5. Networking and Partnership

Forming networks and strategic partnerships between program partners and various related parties such as local governments and institutions of the Universitas Yudharta Pasuruan.

6. Monitoring and Evaluation

This activity is oriented to ensure that the program journey runs by the expectations and targets to be achieved. Monitoring and evaluation are carried out periodically both during the program process, at the end of the program, and after the program. This monitoring and evaluation are carried out to observe the program journey, and obstacles faced and find solutions to existing problems.

Method

This community service activity begins with conducting research related to the potential problems faced by program partners. This research was conducted in September 2022 through a focus group discussion involving government employees of Bakalan Village.

1. Start:

The initial stage is in the form of preparation stages for the mentoring program which

includes the management of licensing for mentoring activities, communication, and coordination with related program partners, and cooperation agreements in the implementation of the mentoring program.

2. Input:

The input stage is the initiation stage of program implementation in the form of a focus group discussion that tries to discuss the results of research data as a baseline which will later be used as input to design the mentoring program implemented.

3. Process:

This stage is the implementation stage of solutions that have been determined to solve problems or potentials owned by partners through the Smart Village program by designing the Pasradesa application system, SIBADI application, and the village financial information system. Where the application is an introduction to Bakalan Village-Owned Enterprise products with a marketplace system, facilitating the correspondence service system, monitoring the government and working according to the program, and not blaming the authorities. The system can build a multi-stakeholder network to succeed in the village assistance program.

4. Output:

This stage is the final stage of the mentoring program which is carried out with the achievement of implementation of innovation in the economic sector with production, distribution, and consumption using the application of technology, namely the Pasradesa application. Which application can introduce as a promotional medium for products of Bakalan Village-Owned Enterprise. Meanwhile, innovation in the field of community services using the application of technology, namely the SIBADI application and village financial information systems. Which application facilitates the correspondence service system, monitors the government and works according to the program, and does not blame the authorities.

Results and Discussion

The community of Bakalan Village is the main partner or target group program which will later be increased knowledge and ability in terms of management online marketplace, system service, and village administration system through Android application. In addition, this program will also involve other stakeholders in their respective roles

The second is that the program of digitizing correspondence services has an output to make it easier for villagers to access village services, especially in the field of correspondence, with the SIBADI (Bakalan Village Information System) application, people no longer need to come to the village office to ask for a letter of introduction Or another because there is already a signature in the form of a barcode in the letter as the legality of the letter, with this application also ease the task of village operators in serving correspondence.

The third is the village financial system to access the village budget, to see the village budget and the programs implemented with the budget.

Application Design

1. Pasradesa Application

The digitalization program in the economic sector with production, distribution, and consumption uses the application of technology, namely the Pasradesa application. The application facilitates the online buying and selling system as well as a medium for promoting products of Village-Owned Enterprises.

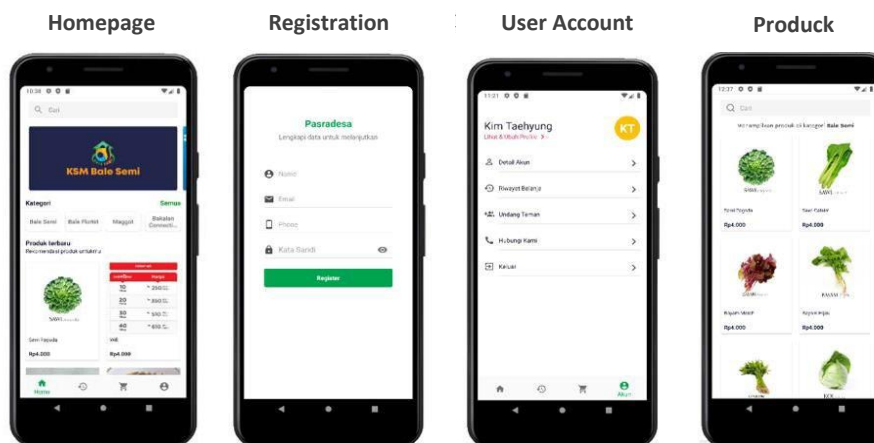


Figure 1. Pasradesa Application Design

The potential products of the village are managed by Village-Owned Enterprises. Village-Owned Enterprise is a village business institution managed by the community and village government, as an institution formed to strengthen the village economy and formed based on the needs and potential of the village. However, in practice, some problems arise, namely product distribution only to residents and waiting for orders from outside the village, usually known as the Pre-Order system. So, product sales are erratic and slow. this resulted in less-than-optimal product sales and affected the village's economic sector. So that with this Village building program, it aims to build an e-

commerce application system as a means of marketing village products to enable reaching a wider target market and increase the productivity of Village-Owned Enterprises and support the economic infrastructure of the surrounding community.

2. SIBADI Application (Bakalan Village Information System)

Starting from the ideals of villages that want to build villages through digital village programs or smart villages which is the concept of applying technology in rural areas as a complex interaction among various systems in it.

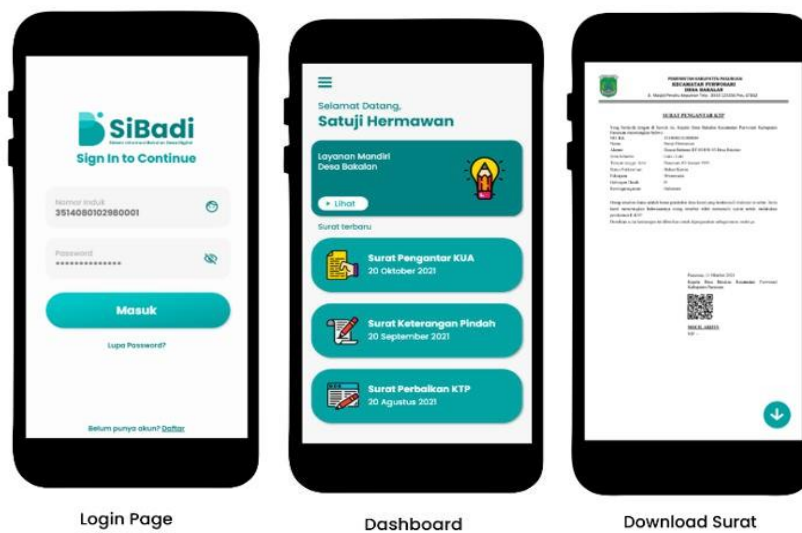


Figure 2. SIBADI Application Design

The correspondence service digitization program has an output to make it easier for villagers to access village services, especially in the field of correspondence, with this application the community no longer needs to come to the village office to ask for a cover letter or others because there is already a signature in the form of a barcode in the letter as the legality of the letter, with this application also eases the task of village operators in serving correspondence.

3. Village Financial System

SistraDes is a web-based information system created to make it easier to provide information on village financial fund administration services, users can directly see village fund financial data transparently and informatively. This application answers one of the problems of digital villages. The display of SistraDes is as follows:

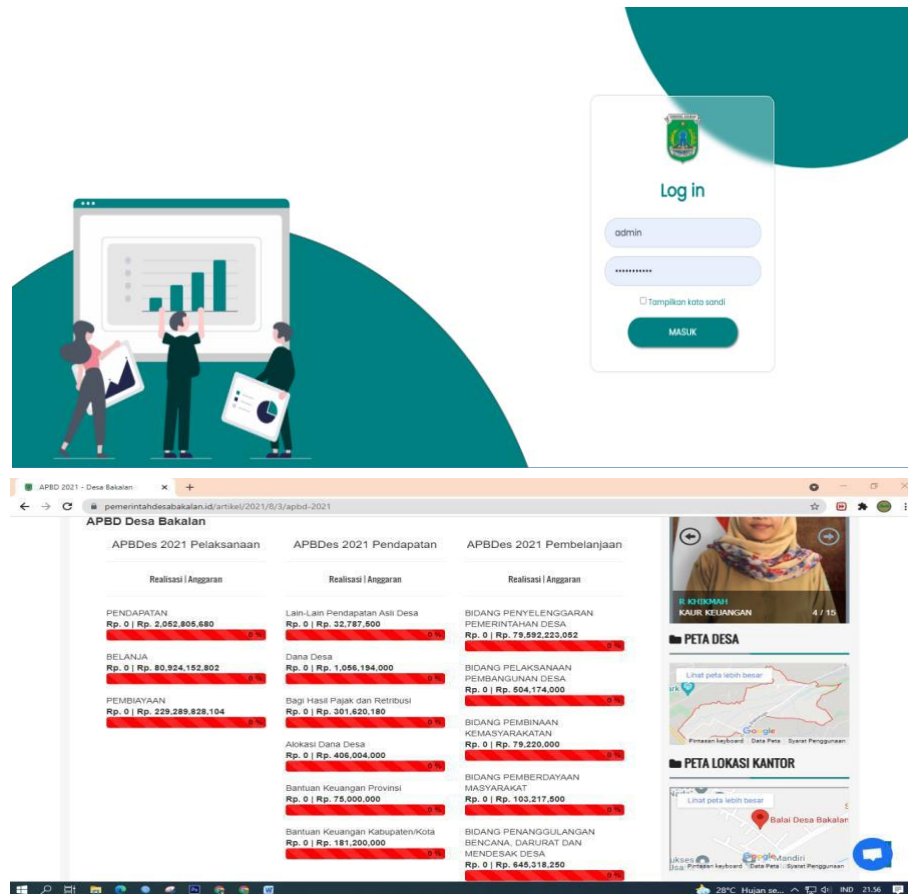


Figure 3. Village Financial System Design

The village fund transparency web information system program has outputs to make it easier for the community to provide information related to village funds transparently and systematically by the data managed by the village government.

Conclusion

Based on the results of activities in mentoring and making applications developed by the service team, it turns out that it can improve the community's economy and market village-owned enterprise products through the Pasradesa application. In the SIBADI application, the community can enjoy correspondence services without having to come to the local village hall and a village website application developed to display information related to activities in the village.

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