

# INFORMATION SYSTEM DESIGN OF VILLAGE-OWNED ENTERPRISES IN PEKON SINAR PETIR, BASED ON WEB AS A PROMOTIONAL MEDIA FOR VILLAGE SUPERIOR PRODUCTS

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## Article history:

Received March 11, 2022

Revised March 23, 2022

Accepted April 29, 2022

## Keywords:

design;

information systems;

village-owned enterprises.

## Abstract

The development of this era in the field of information technology is very fast. This phenomenon will certainly change and become a tool for business competition between companies and organizations. A village-owned enterprise is a business entity formed based on Law No. 6 of 2014 concerning villages. With the formation of village-owned enterprises, it is hoped that villages will become independent and be able to improve the economic level of the community. In this case, the village-owned enterprise "Karya Abadi" in Pekon Sinar Petir, Talang Padang District, Tanggamus Regency, Lampung Province, has been formed since 2016 and only started in 2021. This village-owned enterprise is engaged in the following business sectors: animal husbandry, agriculture, plantations, financial services, equipment and supplies, waste management, and savings and loans. Until now, the business entity has not had a website to promote products or facilitate the dissemination of information. This research was conducted to solve this problem. This research is in the form of a website framework design for village-owned enterprise "Karya Abadi", which in the future will build a website-based information system. This research was conducted using the waterfall method, which will make it easier to develop and build an information system for the village-owned enterprise.

## 1.0 INTRODUCTION

The development of this era in the field of information technology is very fast. The use of the internet among people has become part of everyday life. Information technology is a tool for business competition between one company and another. The developments that occur on the internet are an event that is very interesting in terms of the technological progress that is happening at this time. The business sector is the sector most affected by developments in

information technology and telecommunications [1]. In this case, the existence of a website speeds up the process of distributing information to all corners of the world [2]. All agencies, such as companies, universities, schools, villages, and village-owned enterprises, have websites as a medium for disseminating information to the public that is more up-to-date.

The information system is a combination of users, hardware, communication network software, and data sources that are collected and converted into information in an organization. The quality of information related to technology plays a role in decision-making so that it can achieve the goals of an organization. Therefore, it is expected to be able to improve the control of an organization or business. At this time, information can be obtained anywhere by using the internet. Many of the organizations are already using information technology systems to make it easier to complete a job. One of them is a technology information system developed through a website.

A village-owned enterprise is a business entity formed based on Law No. 6 of 2014 concerning villages [3]. With the formation of village-owned enterprises, it is hoped that villages will become self-sufficient and be able to improve the economic level of their communities. In this case, the village-owned enterprise "Karya Abadi," in Pekon Sinar Petir, Talang Padang District, Tanggamus Regency, Lampung Province, has been formed since 2016 and run in 2021. This village-owned enterprise is engaged in the following business sectors: animal husbandry, agriculture, plantation, financial services, tools and equipment, waste management, and savings and loans.

In general, people use the internet to find the goods or services they need. Village-owned enterprises will get more value from having a website. The village-owned enterprise "Karya Abadi" in Pekon Sinar Petir currently does not have a website. In the absence of a website, the public will judge that the village-owned enterprise is not up-to-date in the use of electronic media, especially in the field of information technology. Apart from that, there is limited media promotion for the sale of products in the village-owned enterprise and also limited information media that will be conveyed to the general public who need information about this village-owned enterprise.

With the existence of an information system design for this web-based village-owned enterprise, it is hoped that it will provide solutions to existing problems. This design was created to build a web-based information system where, in the future, a village-owned enterprise website will be built with the aim of facilitating the promotion of existing products, facilitating Village-Owned Enterprises "Karya Abadi" in disseminating information that will be conveyed to the general public, and assisting in facilitating the work of employees of this village-owned enterprise.

This article discusses improving the information system of village-owned enterprises, both in the form of information or promotion of superior village products to the general public, where this village-owned enterprise has not been able to maximize information or promotion of existing village superior products. Because of this, the authors carried out a problem formulation to support the improvement of this village-owned enterprise, how to develop a website as a medium of information and promotion of superior village products in the village-owned enterprise. How to improve the website to facilitate the dissemination of existing information

## 2.0 LITERATURE REVIEW

No	Titles and Authors	Methods	Results	Lack of research
1.	Development of Leading Products from Village-Owned Enterprises Based on E-Marketing (Chairatun	Surveys and trials/ direct practice carried out through	Logo or brand product of Village Owned Enterprises, sticker or label	The assistance has not been maximized in developing superior products

	Nisail Firdausi Madjid, Jannatul Firdaus, Agung Winarno, Agus Hermawan) [4].	training and guidance		based on e-marketing.
2.	Digitalization of Main Products in Suka Maju Village, Pekan Baru, based on QR Codes and Facebook Marketplace (Hanum Choirina, Ahmad Reinold) [5]	The method used is Waterfall	The creation of a QR Code for Products and Marketplace Sales at a Village-Owned Enterprise in Suka Maju Village, Pekan Baru	The use of the QR Code still requires optimization in digitizing village superior products.
3.	Information System Development Design for Web-Based Village-Featured Products (Raden Erwin Gunadhi Rahayu, Muhamad Resa Agustina) [6]	The method used is the Rational Unified Process (RUP).	Information System Design for Web-Based Village Products has been formed.	The design of the message feature and rating feature has not yet been formed.
4.	Strengthening the potential of village superior products through digital-based Sharia marketing strategies in Rombia village, Sumenep Regency (A'rasy Fahrullah, Tony Seno Aji, Prayudi Setiawan Prabowo, Ahmad Ajib Ridlwan) [7]	This research uses the approach method.	A digital platform has been created for marketing superior village products	There is still a lack of assistance in marketing strategies by means of digital marketing.
5.	Administrative Management Information System for Client-Server Based Village Owned Enterprises: A Case Study in Sindangasih Village, Karangtengah District (Tarmin Abdulghani, Tedi Solehudin) [8]	Waterfall method	An administrative management information system for client-server-based village-owned enterprises has been created.	There is no archive management module in village-owned enterprises, and it is not responsive enough.

## 2.1. The Definition of System

Kurnia Cahya Lestari and Arni Muarifah (2020: 7) argue that a system is composed of two or more components that are interconnected and connected to form a unified group to create a goal. For Jogiyanto Hartono (2005: 2), the system is a collection of related elements to achieve something with a specific purpose. The system is made up of interrelated parts that operate together to achieve certain goals or objectives [9]. The developed system has the goal of fulfilling a user need in order to be able to provide a clear picture of the system's design to programmers and other experts.

## **2.2. Definition of information**

For expert explanations, there are several interpretations of the information. For McLeod (2004 in Jacob 2012), data is information that is processed into a more useful and meaningful form for those who receive it [10]. Conversely, for Carlos Coronel and Steven Morris (2016: 4), data is the result of raw information that has been processed to share the results in it. From some of the definitions above, it can be concluded that information is the result of unfinished or raw data that has been processed through a certain system so that it has something of value or meaning.

## **2.3. Internet definition**

The internet comes from the Latin "inter", which means "between". In general, the internet is a network of connections. The internet can connect various kinds of networks that are not interdependent with one another in such a way that they can communicate. The internet is a computer network that is connected to each other throughout the world without regional boundaries, certain laws, or certain cultures. According to Ahmadi and Herman (2013: 68), the internet is a global communication network that connects all computers in the world, even though they have different operating systems and machines. According to Sarwono (2012: 17), the internet is a collection of networks on a global scale.

A "website" is a specific address on the World Wide Web that provides certain data [11]. In order to be able to access a website, we must use a certain browser. According to the explanation of Sebok, Vermat, and Regu (2018: 70), the web is a collection of interconnected parks in which there are several items, such as documents and photos, stored on the web server. Then, according to Muhyidin et al. (2020) the Web is a data presentation service that uses the hyperlink concept, which makes it easier for users.

MySQL is also known as a storage database management system that uses the basic commands of the very popular SQL (Structured Query Language). MySQL is an open-source DBMS with two licenses: free software and shareware (limited proprietary software). So, MySQL is a database server that is free to use by anyone with a GNU General Public License (GPU) license, so it can be used for both personal and commercial needs without having to pay for an existing license.

## **2.4. Village-owned enterprises**

Village-owned enterprises are business entities established or formed by the local village government, and all or most of the capital comes from the village government. The allocation of capital is through direct equity participation. The establishment of this village-owned enterprise aims for the welfare of the village community and to support village development so that the village is an independent village.

## **3.0 RESEARCH METHODS**

### **Data Collection**

In data collection research, the method of data collection is a very important and necessary part of fulfilling a required data requirement. There are several data collection methods in this writing, including: [13]

#### **Observation**

Observation is a data collection technique with activities to find out phenomena or events that are currently happening based on knowledge or ideas that aim to get information by making direct observations.

### 2.4.1. Interview

Interviewing is a technique used in data collection and is widely used in qualitative descriptive research or quantitative descriptive research. Interviews can be conducted directly in the form of questions and answers. Interviews in this study were conducted with the chairmen, heads of departments, and members of the village-owned enterprise "Karya Abadi" in Pekon Sinar Petir. The questions asked are as follows:

1. Profile of the village-owned enterprise "Karya Abadi" Pekon Sinar Petir
2. Organizational Structure of the Village-Owned Enterprise "Karya Abadi" Pekon Sinar Petir
3. Process of Reporting and Publication of Village-Owned Enterprise "Karya Abadi" Pekon Sinar Petir

### 3.1.3 Literature review

Literature review is a theoretical data collection technique where the author can collect data from several sources, such as reading books, journals, or papers, and from various other sources according to the problem discussed [14].

### 2.5. Design Models

The research process on the design of an information system for village-owned enterprises in Sinar Petir Village based on mobile web as a promotional medium for Superior Village products uses the waterfall method. The following are the stages of the waterfall method: [15]

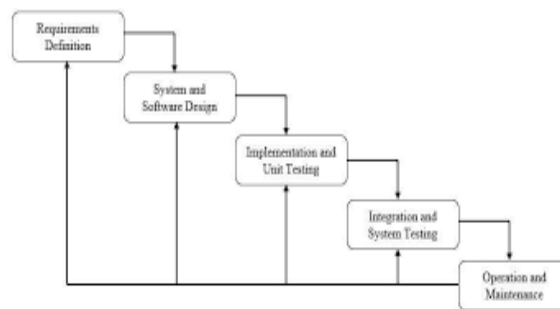


Figure 1: Schematic of the Waterfall Method

The following is an explanation of the waterfall method scheme:

#### a) Requirement

At the analysis stage, this need is identified with the aim of finding out what is needed for the development of a village-owned enterprise information system in Pekon Sinar Petir. At this stage, an analysis of the running system and an analysis of the system that is needed are carried out.

#### b) Design

At this stage, a system design is carried out that will provide a solution to a problem that existed at the analysis stage. The information framework prepared as a guideline for the development and implementation stages includes a flowchart, database table design, and story board.

#### c) Implementation

At this stage, the system is implemented in hardware and code.

#### d) Verification

In this stage, the system that has been created will be tested in accordance with what has been previously designed, including whether or not an error occurs in a running system. The testing phase is carried out by testing the website-based Village-Owned Enterprise Information System on users. This trial was conducted to determine the response of users to the website-based Village Owned Enterprise Information System.

### e) Maintenance

This is the stage where maintenance is carried out on the website-based village-owned enterprise information system.

### 2.6. Data analysis

This research was conducted at the village-owned enterprise "Karya Abadi," located in Dusun 1, Pekon Sinar Petir, Talang Padang District, Tanggamus Regency. This research was conducted using a descriptive method. The descriptive method itself has the following meaning: According to Sugiono (2018), descriptive research is research that is used to recognize the value of an independent variable, either one variable or more (independent), without making comparisons or linking it with other variables.

## 3. DISCUSSION

### 3.1. Design

#### 3.1.1. System Design

At this stage, the system will be designed where the page display of a website that will be made displays the main menu, profile, product, information, and login pages. The following is an overview of the flowchart flowchart that will be used.

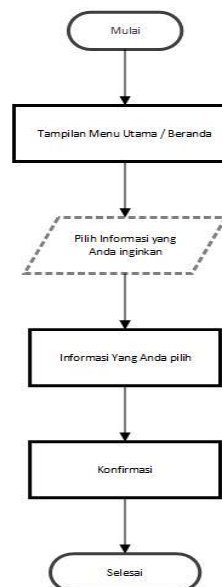
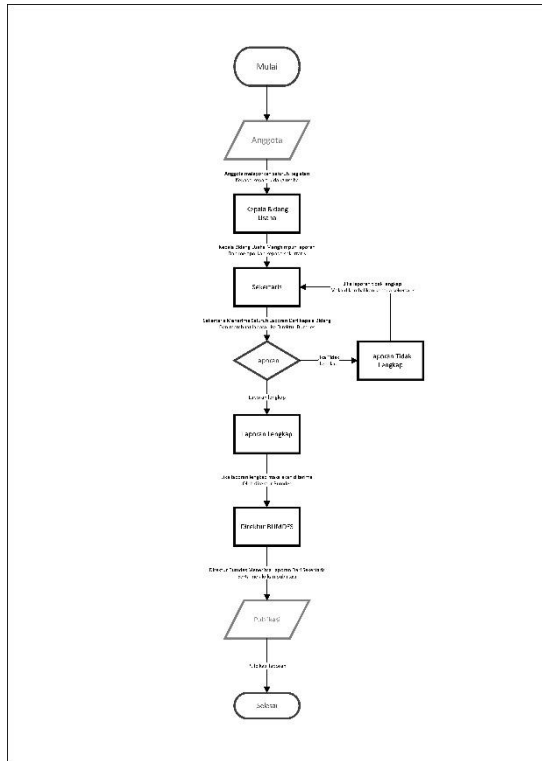


Figure 2: Flowchart Design

#### 3.1.2. The system currently running

The system that runs on the village-owned enterprise "Karya Abadi," located in Dusun 1, Pekon Sinar Petir, is as follows:

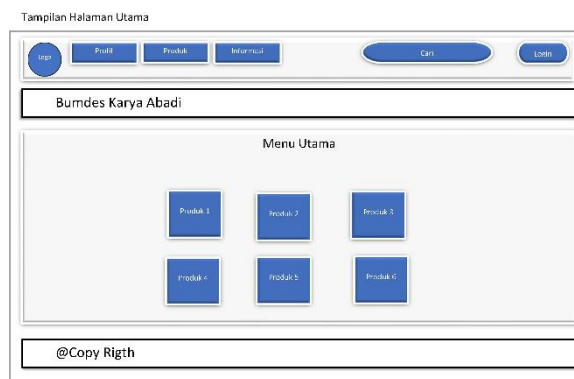


**Figure 3: Running System Design**

### 3.2. Implementation

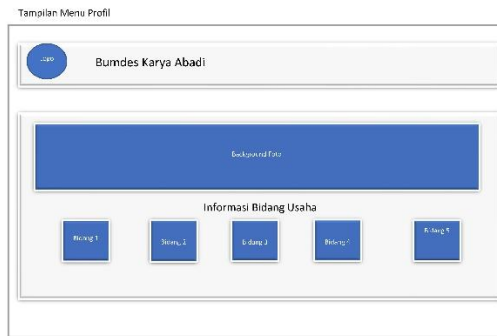
Implementation is the result of a system designed at the system design stage. The implementation of the website design scheme that will be created for village-owned enterprises in Pekon Sinar Petir is as follows:

In this menu, the main page on the village-owned enterprise website "Karya Abadi" will be displayed when the user opens the website.



**Figure 4: Schematic Display of the Main Menu Design**

The profile menu is a menu that is on the village-owned enterprise website "Karya Abadi". This profile menu displays a page that contains the profile and types of businesses that exist in the village-owned enterprise "Karya Abadi" in Pekon Sinar Petir.



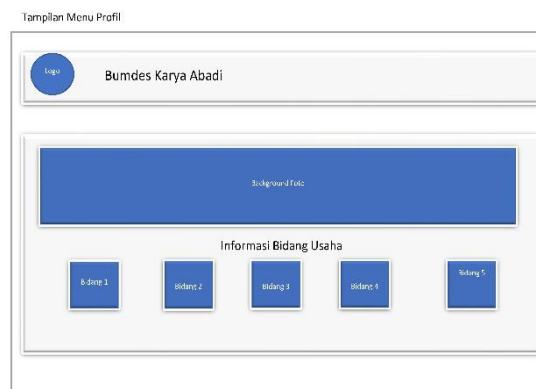
**Figure 5: Schematic Display of Profile Menu Design**

The product page displays all product information on the website of the village-owned enterprise "Karya Abadi".



**Figure 6: Schematic Display of Product Menu Design**

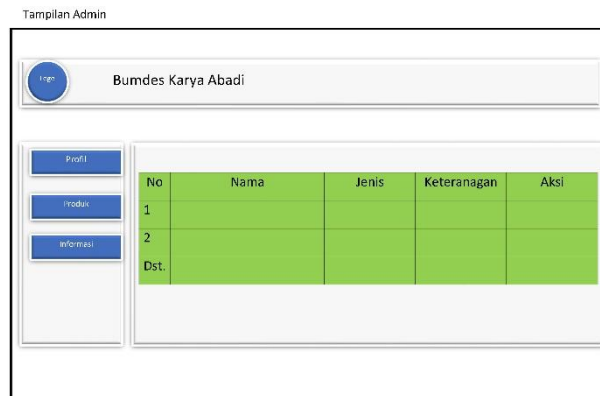
The information page displays all the information available on the website of the village-owned enterprise "Karya Abadi". The information provided is, of course, accurate and of high quality for readers who need information about the business entity.



**Figure 6: Schematic Display of Information Menu Design**

The admin page discusses filling in all the information that must be filled in by the admin and will be displayed on the main page of a website.





**Figure 6: Schematic Display of the Admin Menu Design**

The results of the design of the website above will be very helpful in making village-owned enterprise websites, and the website will help users find the information they want.

#### **4.0 CONCLUSION**

The website is one of the developments of technological advances, and the use of the website is very helpful for an organization in promoting products or disseminating information. In today's increasingly rapid developments, village-owned enterprises should have a website with the aim of supporting and assisting in the work of publishing existing information. This website will be built using the programming languages PHP, Java Script, MySQL, and a text editor. The website for the village-owned enterprise "Karya Abadi" in Sinar Petir Pekon, Talang Padang District, Tanggamus Regency, Lampung Province, will present an information publication and product promotion for the village-owned enterprise. The presentation of information on the website is needed by the public, who want to know about the development of the village-owned enterprise "Karya Abadi".

The suggestion from this research is that the village is serious about developing village-owned enterprises, which will assist in the development of the community's economy and can make the village an independent village.

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