

IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT STRATEGIES IN THE COAL MAZZURY INDUSTRY

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ABSTRACT

Coconut oil processing Virgin Coconut Oil (VCO) is oil that is processed in a simple way without involving synthetic chemicals. Production methods that are commonly carried out on a household scale or micro, small and medium enterprises (MSMEs) include the method of fishing, salting, and fermentation, the Coal Mazzuri industry in Ujung Kubu village produces coconut oil processing Virgin Coconut Oil (VCO). in terms of suppliers to sales so that the raw materials needed do not experience shortages and can facilitate customers in ordering, from the problems faced by researchers implementing Supply Chain Management (SCM) strategies are supply chain management, manufacturing, warehouse/storage, and shops or traders retail, so that the results of this research can help the Coal Mazzuri industry, both in the production and distribution of products that are ready for consumption.

Keywords:

Information Systems, Supply Chain Management, Virgin Coconut Oil (VCO)



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INTRODUCTION

In the current era of globalization, almost all entrepreneurs have opened their eyes by paying attention to the development of information technology so that it is very important for product sales and the existence of the internet makes it easier for businesses in marketing management. Technology has been designed to support human work towards efficiency, practicality and appropriateness. Technology that initially supported the fulfillment of production needs, now information technology helps in managing company data and makes it easier to input sales transaction data.

Entrepreneurs must follow the development of technology and information including Virgin Coconut Oil (VCO) entrepreneurs. This premium oil is extracted from fresh coconut meat, crystal clear in color, and has a distinctive coconut aroma that contains high antioxidants and Medium Chain Fatty Acids (MCFA), including lauric acid so that it is beneficial for health, including increasing body metabolism, maintaining immunity, protecting against cardiovascular disease and atherosclerosis, as a therapy for Alzheimer's, cancer, obesity, and stress and as an anti-virus and bacteria.

So this coconut oil is in great demand by consumers because of its properties, therefore business actors including the Mazzuri Batu Bara Industry are in Dusun I Kolom Delapan,

Ujung Kubu Village, Tanjung Tiram District, Batu Bara Regency. engaged in the processing of virgin coconut oil Virgin Coconut Oil (VCO) for 5 years, technology is developing so rapidly that business competition is very tight to increase productivity and follow the market competition of the Virgin Coconut Oil (VCO) business. The main ingredient for making VCO is coconut, which contains water, protein and fat. in making VCO oil, coconut itself is obtained from suppliers, suppliers often do not have coconuts because coconuts are always sent to the capital, therefore the Mazzuri Batu Bara Industry often lacks raw materials in coconut oil production while demand from distributors is increasing day by day, while distributors themselves always have difficulty providing VCO oil products to consumers because the stock provided is always sold out. Because of this problem, the author wants to conduct a study entitled "Implementation of Supply Chain Management Strategy in the Mazzuri Batu Bara Industry."

METHODS

The work steps used in this study are:

1. Problem Identification

After the researcher identifies the problem in the study, the problem must be analyzed so that the process that is carried out can solve the problem that occurs. This time the researcher found a problem that occurred, namely difficulties in raw material inventory management and distribution management.

2. Data Collection

Data collection is very important to solve the problems faced, the data obtained must be correct and from the correct source. This data collection is carried out using three methods, namely observation or called observation, interviews and literature studies.

3. Data Analysis

Data analysis is a way of processing data taken by sorting and selecting important or unimportant data so that it becomes useful information for researchers with the aim of answering the formulation of the problem and making decisions in the study. conclusions can be drawn from estimates of the results and analysis carried out.

4. System Design

There are several stages in system design that a researcher must go through, namely:

- a. Input design is carried out using an information system to start system design and can describe the next stage.
- b. Using the Unified Modeling Language UML to design the running system and the proposed system starting from the use Chase diagram, activity diagram, class diagram, sequence diagram and development diagram.
- c. With the existence of a system design model and data input, the last step to create a system is to design a flowchart as a way to run the process and procedures that will be created by programming so that the system runs well and smoothly.

5. System Testing

After the system has been created, system testing needs to be carried out as a process to find out how feasible and how good the system that has been created is or is not in accordance with the purpose of creating the system, if there are errors and mistakes in the system, improvements will be made according to the objectives and planning of the system to be created.

6. System Implementation

System Implementation is the use of a system that has been created so that it is useful for the Mazzuri Batu Bara Industry, before being implemented, the system that has been created must be tested for its feasibility and has been repaired so that the system is perfect according to expectations, then the system can be used.

Data Mining

Data requirements in the implementation of Supply Chain Management in the Mazzuri Batu Bara Industry are knowledge acquisition. Knowledge acquisition is a process to collect knowledge data about a problem from the owner (interviews from an owner, employees, from books, articles from the internet and so on). The data used in raw materials and Virgin Coconut Oil (VCO) are from the Mazzuri Batu Bara Industry.

Table 1. VCO Production Data

No	Prduksi VCO	Tahun				
		2017	2018	2019	2020	2021
1	Januari	5,7	21,5	29	28	39
2	Februari	4,9	18,75	30,92	25,25	35,5
3	Maret	8	16,25	24,5	22,5	51,5
4	April	15	20,05	17,53	19,7	23,75
5	Mei	9,4	23	25,49	17	42,5
6	Juni	17,5	21,9	37,19	15,25	33,62
7	Juli	16	17,85	29,2	24,5	25,95
8	Agustus	14,9	19,25	23,85	18,65	36,27
9	September	19,75	22,87	30,21	16,83	14,6
10	Oktober	17	20,36	37,23	23,25	38,25
11	Nopember	20,4	12,77	31,22	20,5	23,25
12	Desember	12,25	25,75	38,44	19,25	34,57
Total		160,8	240,3	354,78	250,68	398,76

Source: Mazzuri Coal Industry, 2021

Table 2. Customer Data in the Mazzuri Coal Industry

No	E-mail	Nama Pelanggan	Alamat
1	xxxxxxx@gmail.com	Idar	Jln.Manunggal V Desa Bagan Baru
2	dwxxxx@gmail.com	Dewi Usman	Jln.Nelayan Tanjung Tiram
3	marixxxxx@gmail.com	Mariatun	Jln.Bogak Sebrang Lima Puluh Kota
4	nurhxxxx@gmail.com	Nur Halizah	Jln.Pesisir Desa Gambus Laut
5	akmxxxx@gmail.com	Akmaliyah	Jln.niat Lima Laras desa ujung kubu
6	abuxxxx@gmail.com	Abu Tholib	Jln.Tanjung Muliya desa sei mantaram
7	rosyxxx@gmail.com	Rosyidah	Jln.Lintas Bandar Sono
8	ahmaxxxx@gmail.com	Ahmad Sayuti	Jln.Simpang KR Desa Ujung Kubu
9	aldaxxxx@gmail.com	Alda Novia	Jln.Simpang Dolok Desa Telawih
10	arifpirxxx@gmail.com	Arif Pirmansa	Jln.Kota Ujung Kubu
11	nepihaxxxxx@gmail.com	Nepi Handayani	Jln.Simpang Sianam Desa Guntung

12	saadahtxxxx@gmail.com	Saadah Turahma	Jln.damargetah desa ujung kubu
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Source: Mazzuri Coal Industry, 2021

Table 3. Supplier Data in the Mazzuri Coal Industry

No	E-mail	Nama Supplier	Alamat
1	amaxxxx@gmail.com	Amat Ume	Jln.pesisir Desa Ujung Kubu
2	yuswaxxxx@gmail.com	Yuswan Hnfi	Jln.Tanjung Muliya desa sei mantaram
3	abduxxxx@gmail.com	Abdul Amid	Jln.Simpang Sianam Desa Guntung
4	ijulaxx@gmail.com	Ijul Aris	Jln.damargetah desa ujung kubu
5	wawaxxxx@gmail.com	Wawan Hasrun	Jln.Lintas Bandar Sono

Source: Mazzuri Coal Industry, 2021

User Analysis

This system explains who uses the system, namely the leader, Admin/Head of Production and suppliers:

Table 4. Access Rights

No	Aktor	Deskripsi
1	Admin	Admin is the one who is responsible and has access rights to manage all data, namely raw material categories, raw materials, orders, shipping costs, payments and reports.
2	Supplier	Suppliers can enter/login to the Supplier page to confirm the purchase of raw materials, view, send messages and see details of total purchases.
3	Customer	Customers can view product categories, all products, transactions, send messages, and register customers.

RESULTS AND DISCUSSION

1. Application Main Page
2. Admin Login Page

Figure 1. Admin Login Form

3. Owner's Home Page View

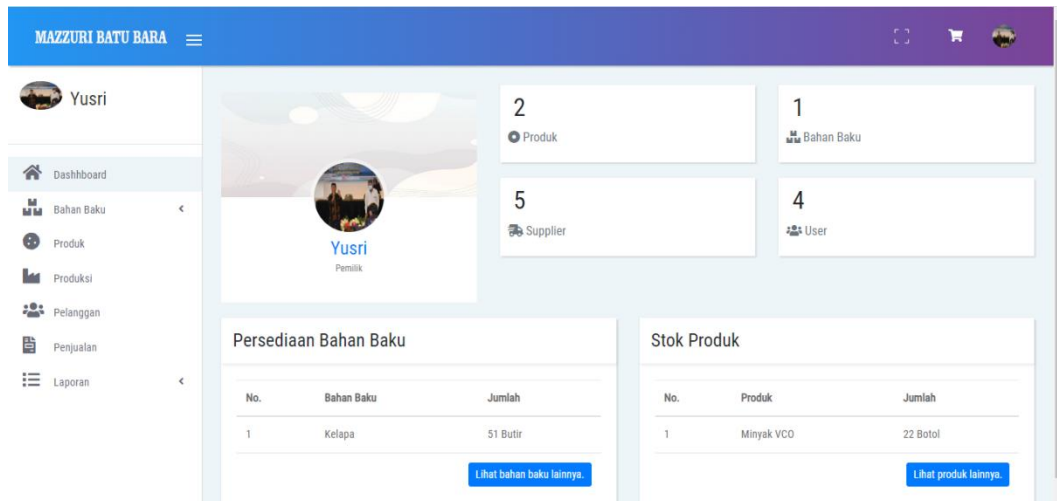


Figure 2. Owner's Home Page View

4. Supplier Home Page View

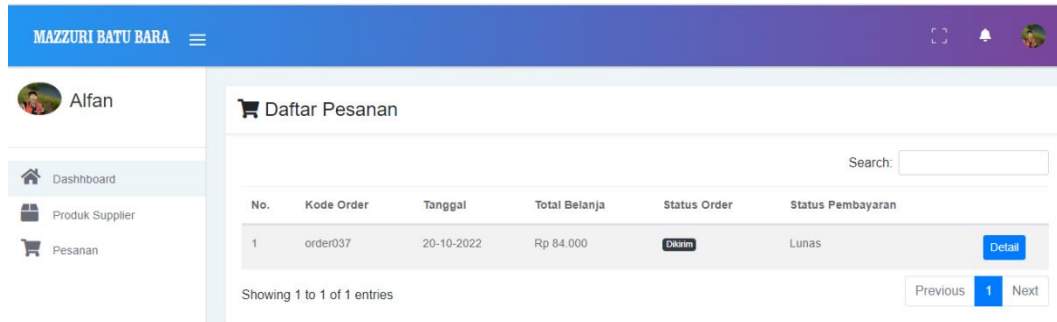


Figure 3. Supplier Main Page View

5. Head of Production Home Page View

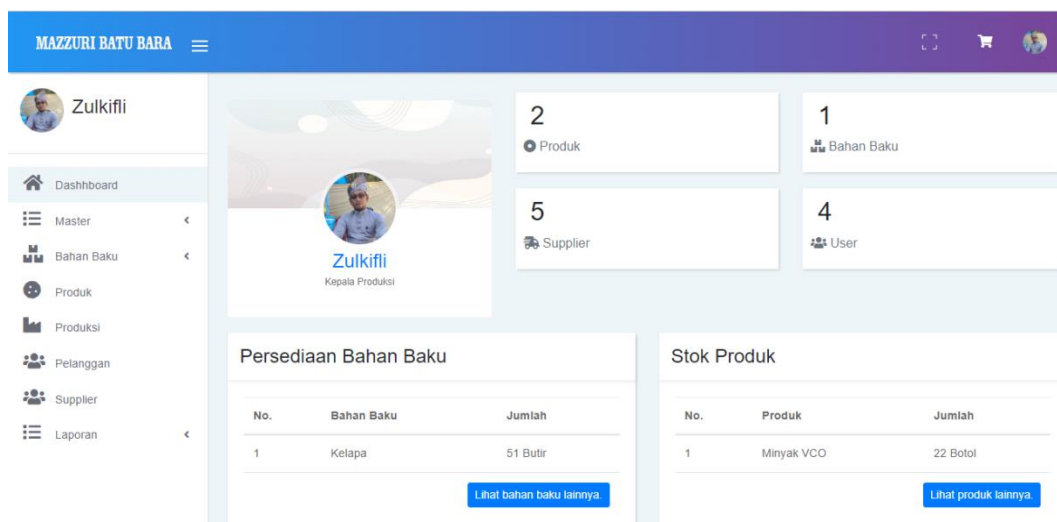


Figure 4. Main Page View of Production Manager

6. Sales Admin Main Page View

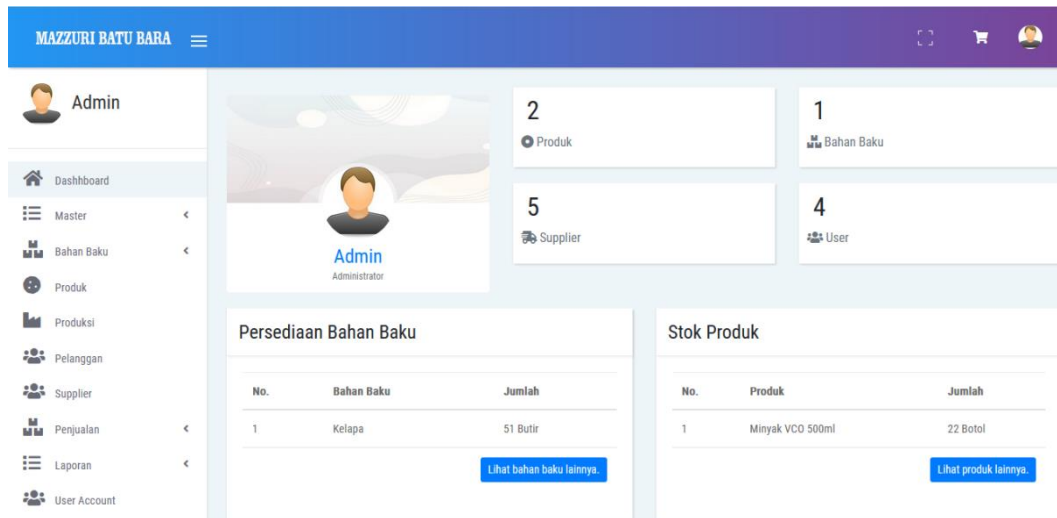


Figure 5. Sales Admin Main Page View

CONCLUSION

From the description and explanation of the previous chapters, the conclusions that can be drawn are as follows: The design of this web-based Supply Chain Management system was built to coordinate the relationship between suppliers and the Head of Production at the Mazzuri Batu Bara Industry. This web-based Supply Chain Management system was built so that the Mazzuri Batu Bara Industry can place orders with suppliers who are committed to providing raw materials on time. The web-based Supply Chain Management software has been successfully built as an information system that can assist in managing raw material stock and printing results at the Mazzuri Batu Bara Industry.

REFERENCES

- [1] W. S. Ristiyaningsih, F. Ekonomika, D. A. N. Bisnis, and U. Diponegoro, "ANALISIS Pengaruh Long-Term Relationship , Information Sharing , Trust , Dan Cooperation Terhadap," 2018.
- [2] K. de Groot, "BAB 2 TINJAUAN PUSTAKA," *World Dev.*, vol. 1, no. 1, pp. 1-15, 2018, [Online].
- [3] O. Pahlevi, A. Mulyani, and M. Khoir, "Sistem Informasi Inventori Barang Menggunakan Metode Object Oriented Di Pt . Livaza Teknologi Indonesia Jakarta," vol. 5, no. 1, 2018.
- [4] F. Dikriansyah, "Pengaruh Supply Chain Management (Scm) Terhadap Keunggulan Bersaing Dan Kinerja Perusahaan Pada Ukm Industri Kuliner Kabupaten Sleman," *Biomass Chem Eng*, vol. 3, no. 2, 2018
- [5] Yuliyani, "Analisis Pemilihan Supplier Bahan Baku Kertas Dengan Metode Analytical Hierarchy Process Menuju E- Supply Chain Management Pt Papertech Indonesia Di Unit II," p. 109, 2019.
- [6] R. C. Rizqi *et al.*, "Implementasi Supply Chain Management Pada Cv Halt Manufaktur Susu Kambing Etawa Di Desa Kedungbungkus Tarub Tegal Dalam Perspektif Mas } Lah } Ah Mursalah," 2019.
- [7] A. Isnaeni, "Implementasi Halal Supply Chain Management Pada Indsutri Pengolahan Makanan (Studi Kasus : Restoran Taman Pringsewu Yogyakarta)

Implementation of Halal Supply Chain Management In The Food Processing Industry (Case Study : Taman Pringsewu Yogyakarta Res," *Uii*, 2020.

- [8] "Analisis Supply Chain Management Dalam Upaya Meningkatkan Produksi Pada Pt Pp London Sumatra Indonesia, Tbk," 2019.
- [9] L. Pkl, P. Devisi, and H. Pt, "2) 1,2," vol. 2, no. 2, pp. 12-26, 2018.
- [10] P. Po and H. Berbasis, "1 , 2 1,2," vol. 3, no. 2, 2019.
- [11] M. Php and D. A. N. Mysql, "FST PSU Bekasi," vol. 6, no. 1, pp. 12-16, 2021.