

# Designing market systems with content management system (CMS) WordPress

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**Abstract.** The era of industrial revolution 4.0 was marked by the application of information technology in running industrial activities, the application of information technology needed was the development of a website-based business application model to increase competitive advantage. Duta Dharma is one of the medium enterprises that produce various types of processed soap. The sales system at CV Duta Dharma uses a manual system. This is still not fallen enough to change a significant increase in development. Therefore, need to design an e-commerce website-based online marketing information system. System modeling in the e-commerce website design system CV Duta Dharma is designing a context diagram to find out the stakeholders, designing decomposition to find out the inputs, processes, and outputs. Then design a data flow diagram to find out the data flow in the sales system, e-commerce website Duta Dharma enterprises have been designed and created with Wordpress. This e-commerce website has bank transfer payment facilities and can be run well and is expected to be able to make them more known and make it easier in product marketing.

## 1. Introduction

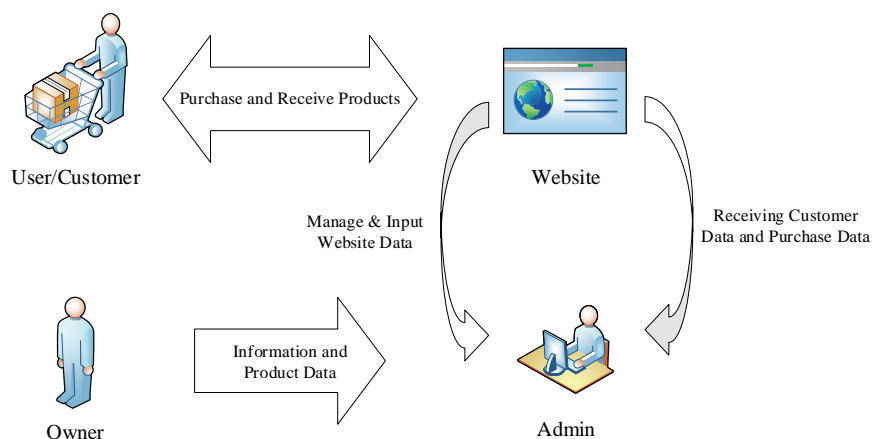
R. Shipsey said that the growth of the Internet and the evolution of technology over the last 20 or so years has revolutionized how organizations use information systems in every part of their business. The current era of globalization is also known as the Industrial Revolution 4.0 was marked by the application of information technology in running industrial activities. [1] Ali R. Explained that social media networks are tools in marketing products to customers. In the world of technology, the use of running a business are often referred to as e-commerce can provide flexibility in production, allowing delivery to customers more quickly and efficiently. E-Commerce itself is the process of buying and selling goods and services electronically with computerized business transactions using the internet, networks, and other digital technologies. The development of information technology today can be utilized in the business world. Among other things, namely making e-commerce to reach consumers at close and far distances. Marketing is an important thing for companies because from the marketing of an item or service can be known by the wider community so that sales and productivity are expected to increase. With the use of technology now besides having the ease and speed in obtaining market information. CV Duta Dharma is one of the small and medium-sized enterprises (SMEs) that produce various types of processed soaps such as car and motorcycle shampoo, dishwashing, hand soap, floor cleaner, carboic, lubricant, softener, liquid detergent, tire polish, glass cleaner, etc. The sales system for Duta Dharma it still uses a manual system or comes to pay on the spot. By relying on a manual system and coming to pay, this is still not fallen enough to change a significant increase in development.



Therefore, need to design an e-commerce website-based online marketing information system, with the existence of e-commerce-based marketing information systems, the flow of data and promotion of companies can be accessed from anywhere and anytime, with access to information that is faster, cheaper and better and able to increase business both in terms of income and also from the development of the business itself. cv duta dharm produces soap products that are used for daily activities. Five products made by the company are dishwashing, liquid detergent, hand soap, floor cleaner, and car shampoo.

## 2. Method

According to S.V. Mkhitarian, made a modern marketing information system based on object design, statistical information processing, management concepts, and integrated marketing. Designing an e-commerce website-based online marketing information system, with the existence of e-commerce-based marketing information systems, the flow of data and promotion of companies can be accessed from anywhere and anytime, with access to information that is faster, cheaper and better and able to increase business both in terms of income and also from the development of the business itself. Knowing the e-commerce website design system modeling at duta darma enterprises. Produce e-commerce website-based marketing system designed at duta darma enterprises. The research was conducted at duta darma enterprises, products that are marketed are soap products for vehicles and households with packaging containing one liter. The process of designing an e-commerce website system uses several components as support in creating a website. Besides that, it is useful for admin in carrying out their duties, namely controlling the running of the e-commerce system. The components used in the design process of this system are as follows *Domain, Hosting, Wordpress, Plugin Woocommerce, MySQL, OS Windows 10, Microsoft Office (Visio, Word), Mozilla Firefox, Google Chrome browser*. This research uses the method of observation and interviews with those who work in the store and through journals that were previously still related to the object of research. Designing information flows for companies and consumers. Namely, the user or website visitor enters the product by becoming a member, then the server here is the website and if the user has chosen the product to be purchased, the server gives the purchase form to be filled by the user as the product purchased, address, transaction used and also product delivery. (See Figure.1)



**Figure 1.** Process Flow

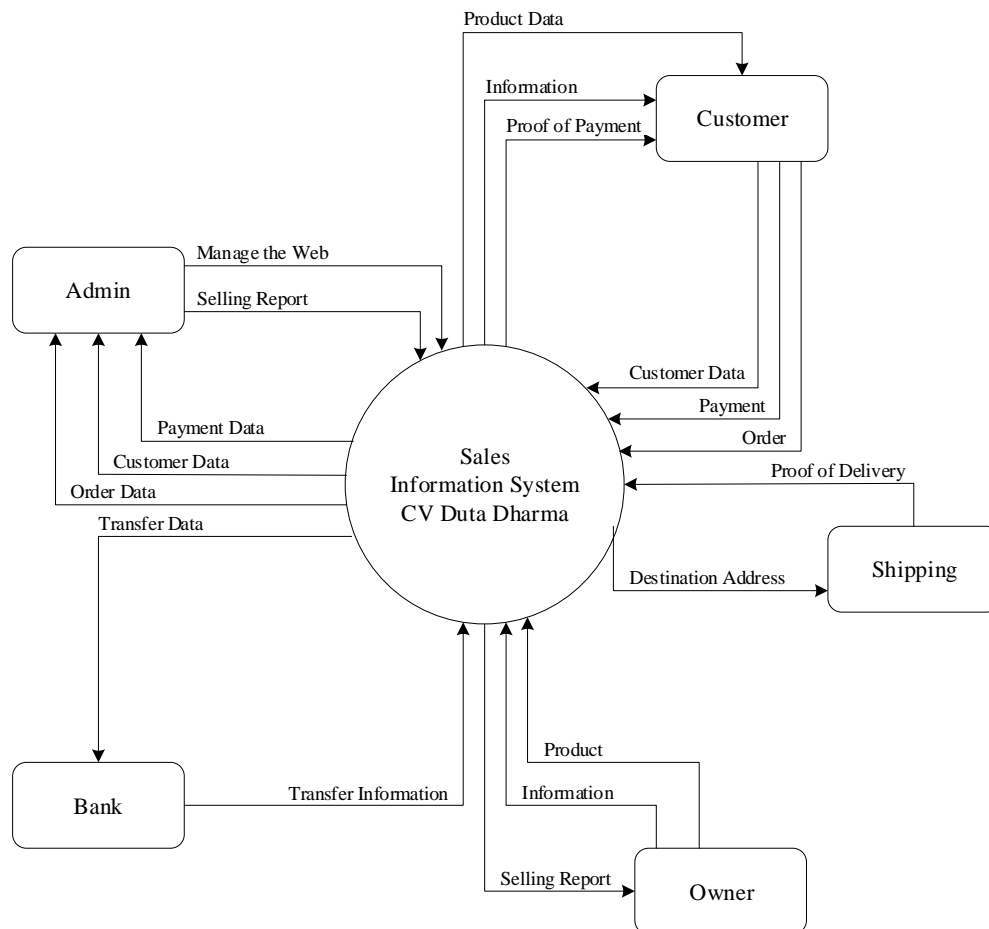
### 2.1 Marketing system

After designing the information system needed, a marketing system is formed, here are the steps in designing a marketing system. G. Churchill stated that the basis for the design of information marketing systems is an analysis of responsibilities, opportunities, abilities, decision-makers and users. Analysis in the marketing information system framework focuses on types of

Decisions and information needed. Designing the context diagram in this step designing information between stakeholders in a system. Among them is observation the owners of duta darma enterprises, admin, and customer. Designing decomposition, this step is useful for knowing the input and output that occurs in a system. Designing data flow diagrams (DFD). In this step to design the sales process that occurs in a system.

### 3. Result and Discussion

The information system design involves designing context diagrams, designing decomposition, and designing data flow diagrams. (See Figure 2)

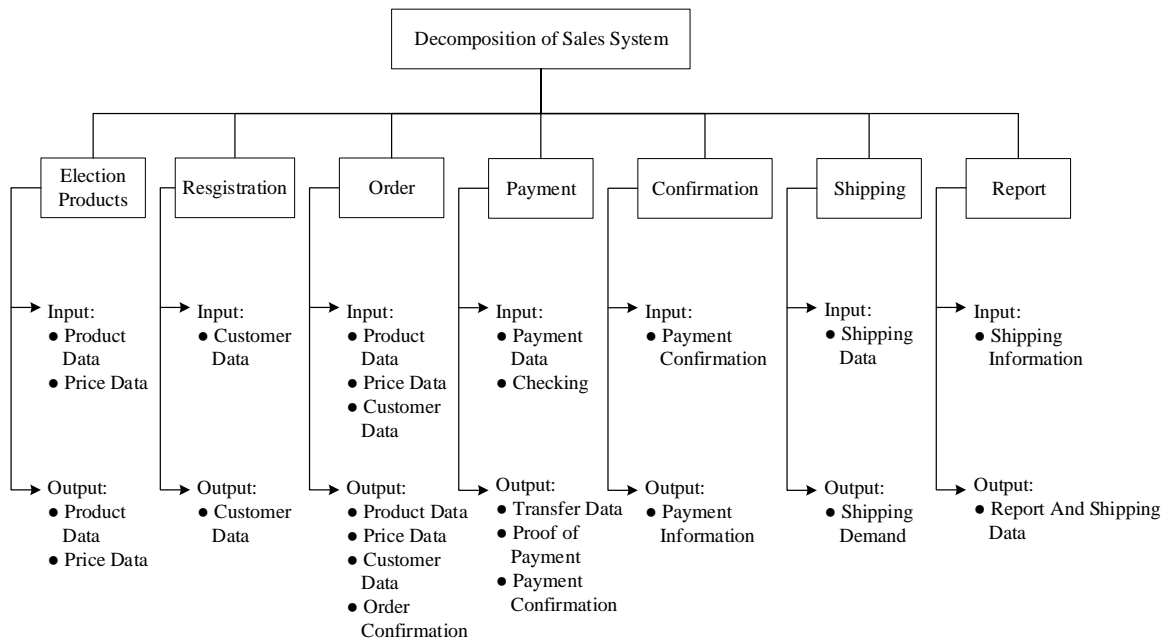


**Figure 2.** Sales System Context Diagram

The picture above is a draft context diagram that shows the duta darma enterprises information system. Where the admin as the web manager of product data, sales report information, payment data, and consumer data to be processed and then shown to consumers, banks, company owners and shipping, if consumers have received information, consumers can choose products and buy, fill in their personal data, and provide order confirmation and payment confirmation. Then the data is processed in the process received from the admin and the admin provides information to the shipping party to send the goods and also gives a sales report to the owner of duta darma enterprises.

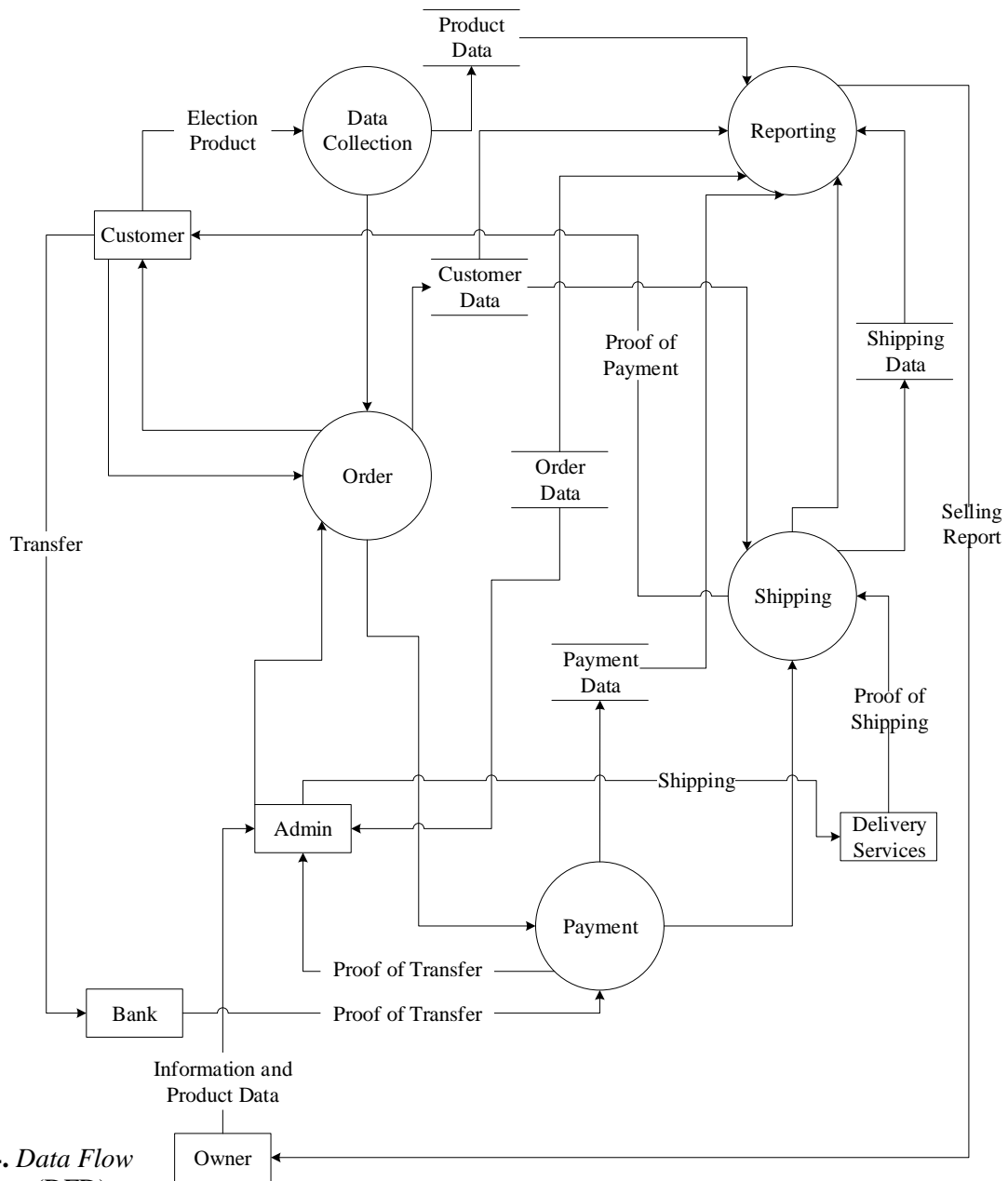
Sales system decomposition at duta darma enterprises. The function of this decomposition is to show the decomposition of a system in a process to plan a data flow diagram (DFD). The process contained in this decomposition is the selection of products that have input to consumers is the product data and the price then output is product data and prices for consumers. Registration has input registration data

from consumers or buyers and the output is consumer data, the ordering of data input is product data, prices, and consumer data while the output is order confirmation and consumer data. Payments have payment data input, checking then output is transferred, proof of payment and payment confirmation. Confirmation has a payment confirmation input and payment information output. Delivery of the input is the product delivery data and the output is the delivery request and, and the report has the sending data input and the delivery data report output. (See Figure 3)



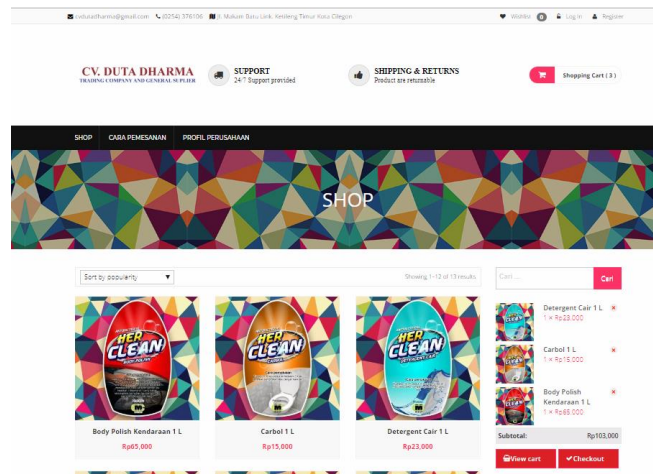
**Figure 3.** Decomposition of Systems

Describe the data flow through an interrelated process of the incoming product data then processed and stored.



**Figure 4.** Data Flow Diagram (DFD)

The domain is the address or also the unique name used to access a website. Niagahoster is one of the domain providers, here is the website domain page. The domain name registered by the researcher for this website is www.cv dutadharma.com. The results of the website design are intended to introduce and sell products for duta darma enterprises, namely household soap, and vehicle soap.



**Figure 5.** Home Page

The picture above is the home page on the duta darma enterprises website that contains products and details of the prices that consumers will buy. If you want to proceed to payment, you can click checkout. checkout page after purchasing a product that contains a personal data form and full address to find out the price of shipping costs and continue payment.

Checkout page after filling in your data and complete address to select the desired type of shipment and invoice page after confirming the order or product buyer, the invoice contains the account number of the destination to be transferred and the number of fees to be paid.

With the website [www.cvdutadharma.com](http://www.cvdutadharma.com), it is expected to be able to help in terms of marketing and other reports. With e-commerce services, it is also expected to increase sales, which in turn can increase the income of duta darma enterprises. Many social media are available now, this can be used as a medium to introduce the website because with this website, buyers can find out what products from duta darma enterprises without having to come to the location to reduce transportation costs. This information system may still have many shortcomings both in terms of benefits and needs as well as the presentation of monthly and annual reports. Where this marketing information system is not able to service payments online such as payment via PayPal and internet banking

#### 4. Conclusion

The marketing information system design has its advantages, below is a table comparing the advantages of the new system with the old system in general in terms of ease of transaction, promotion and marketing, and economy. Comparison transaction manual new system : transaction manual, In the old system, the payment transaction must be done directly, knowing that it can be done by bank transfer, but previously had to meet with the owner of the company. And new system Transactions can be done easily, without having to meet in person. Also, users can trade without time limits. Promotion and Marketing manual, Promotion and marketing of products in the old system is still manual, this certainly makes it difficult for the promotion of the latest products. And new system Promotion and marketing of products can be done easily and quickly because it can be connected to the internet so that the arrival of information to consumers does not require a long time. Economically, the use of an offline sales system certainly costs a lot. One example, requires space to sell and In terms of the economy, of course, the new system provides high economic value advantages. Costs that should be spent on marketing can be minimized.

Based on the design of e-commerce-based marketing information systems at duta darma enterprises, the conclusions are as follows: System modeling in the e-commerce website design system is designing a context diagram to find out stakeholders, designing decomposition to find out the inputs, processes, and outputs. Then design a data flow diagram (DFD) to find out the data flow in the sales system at duta darma enterprises. An e-commerce website has been designed and created with Wordpress. This e-commerce website has bank transfer payment facilities and can be run well and is expected to be able to make more known and make it easier in product marketing

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