Internet-Based Port Management Information System

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Abstract:- This research is an attempt to make continuous improvements to the main performance of maritime logistics stakeholders. The approach is carried out by way of a field survey with the aim of finding out the existing problems, then the data is analysed and managed, then a solution is given in the form of a management information system application. In the era of digital industrialization 4.0, the use of the internet is absolutely essential. Therefore, to manage a port service, an internet-based management information system (Simportnet) is needed, in which case the researcher makes the Sislogmar application. In the early stages of this technology application it was used for ports that did not yet have an information system. While the expected results with this application are increased port management performance so that it can carry out guidance, supervision and law enforcement against stakeholders at ports who violate the rules

Keywords:- Information System; Port Management; Internet Based; Sislogmar Application

I. INTRODUCTION

The goal of making Indonesia a maritime axis one of them is to build maritime connectivity and logistics. The focus of building maritime connectivity through the sea highway is to minimize price disparities and ensure availability of basic goods. Cost of maritime logistics The manuscript must be written in Bahasa Indonesia with a length of no more than 10 pages. the length of the manuscript is not expected to exceed 10 pages. Authors are required to,to follow these writing instructions and the template can be found at because there are several inefficiencies in the port that still need to be addressed. Improving the logistics system logistics system has not received adequate attention tocan increase efficiency and productivity. The main problem in the field of maritime logistics system logistics system is the existence of policies that tend to overlap, conflicts between actors, lack of field data, and low efforts to improve maritime logistics performance. maritime logistics. The need for an effort to be able to identify key performance indicators of the maritime logistics system and a way to integrate various stakeholders to make continuous improvements. continuous improvement. Issues and Improvement of the Port Management Information System. The problem is that port operations are not Inefficient port operations, ports are often a bottleneck in Indonesia's logistics chain, due to limited infrastructure, minimal regulation or limited infrastructure, minimal or overlapping regulations, inter-sectoral conflicts and overlapping regulations, conflicts between sectors, and low productivity. Then the issue of the logistics service market services market that is not competitive, and long trade procedures. While the improvement approach taken is to strengthen port governance and operations, foster a competitive business environment for logistics service providers to increase the entry of operators in the port. fostering a competitive business environment for logistics service providers to increase the entry of operators in the logistics market, making the trade process more efficient and transparent to improve the efficiency of the logistics market. the trade process to be more efficient and transparent to reduce the time and cost of the trade process. [3]

System This internet-based Port Information System is a system designed to provide information on monitoring sea transportation distances and port offices through an application or website as an information system that can be accessed daily.

Accessed on a daily basis. This system aims to monitor the movement of ships and cargo with accuracy and precision. The information system developed By using a programming language specifically for the Android platform. platform, the information system can be run and accessed through Android devices such as information system can be run and accessed through Android devices such as smartphone or tablet. In the case of the internet-based Port Information System information system that is built using a programming language for the Android platform, a mobile application can be developed a mobile application that allows users to access information and monitoring of the port through Android devices. can provide features such as ship monitoring, cargo monitoring, sea transportation distance, port office information.

II. RESEARCH METHOD

This research has several stages arranged systematically. This stage uses the SBI (Internet Based Software) method analysis [1]. A system to provide information on monitoring the distance of sea transportation and port offices that use applications or websites as information systems for daily needs. The information system is built using a programming language for client applications, while the development of server applications uses the PHP programming language and MySQL database [9]. This research discusses information systems at the port (BRT) and kesyabaandaran using modules that will be stored and processed by the data base, port staff can access web applications both on mobile phones and on other gadgets, a web application makes it easier and helps infrastructure in the port workplace, especially as an archipelago country as one of the countries with the longest coast in the world.[4]

➤ Research Type.

The form of this research is descriptive, which is research intended to investigate circumstances, conditions or other things that have been mentioned, the results of which are presented in the form of a research report ". In descriptive research, phenomena exist in the form of forms, activities, characteristics, changes, relationships, similarities and differences between one phenomenon and another. [2] This descriptive research is conducted by collecting data through observation, interviews, questionnaires, or document analysis. The data collected is then analyzed and interpreted statistically or qualitatively to describe the phenomenon under study.

III. DATA COLLECTION TECHNIQUE

In this research, data collection techniques are used, namely observation techniques carried out on logistics services with a door to door system at the company PT. SPIL interview techniques were carried out with several employees. [5]

A. Data Reduction

Reducing data means summarizing data, selecting key things, focusing on important things, looking for themes and patterns. Thus the data that has been reduced will provide a clearer picture, and make it easier for researchers to carry out further data collection, and search for it when needed. In this study, data reduction was carried out regarding the improvement of internet-based port management information systems in shipping goods in order to achieve customer satisfaction. Data Presentation. [6]

B. Presentation Data

After the data has been reduced, the in data analysis data analysis is data presentation. In this study, data presentation was carried out in the form of a brief description, charts, relationships between flowchart categories and the like. [6]

C. Drawing Conclucion And Verifying

In writing this research, the conclusion is drawn by comparing the suitability of the conclusion statement to find out how efforts to improve the internet-based port management information system in shipping goods to achieve customer satisfaction. [6]

D. Data Analysis

In this research, qualitative data analysis is used to describe and explain in detail the results of data processing obtained from previous research objects and the field. In addition, information regarding the improvement of the internet-based port management information system will be obtained from the analysis in order to increase customer satisfaction. [10]

E. Main functions and supporting activities of maritime logistics

Table 1. Main functions and supporting activities of maritime logistics

Functions and Activities	Shipping	Port/Terminal operation	Cargo Traceability
Main function	Moving cargo from port to port	Receiving shipments; loading/unloading cargo; unloading; connecting to ground transportation.	Booking of vessels; and preparing necessary documents for sea transportation and trade, on behalf of the shipper.
Support activities	Documentation relating to sea trade; container tracking and information; intermodal services intermodal	Warehousing; offering distribution centers; testing; assemblies; repairing.	Inventory management; packaging; warehousing

IV. RESULTS AND ANALYSIS

Logistics is part of the supply chain that handles the flow of goods, the flow of information, and the flow of money through the process of procurement, warehousing, transportation, distribution, and delivery services in accordance with the type, quality, quantity, time, and place desired by consumers, safely, effectively and efficiently, from the point of origin to the point of destination.[4]
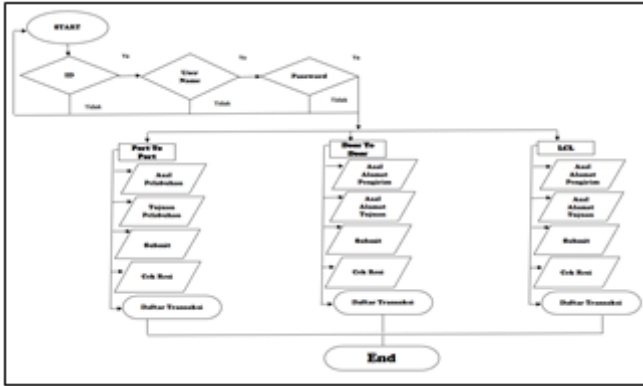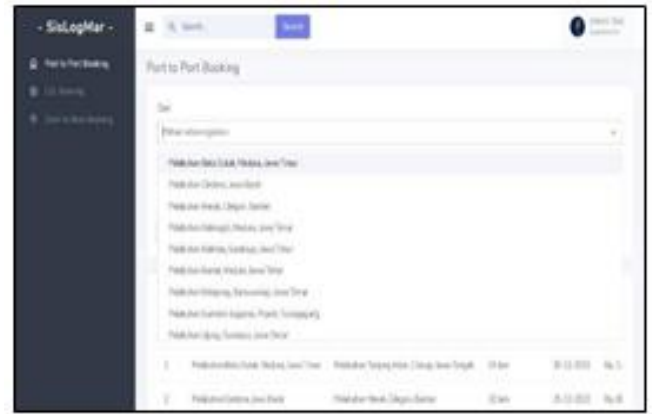

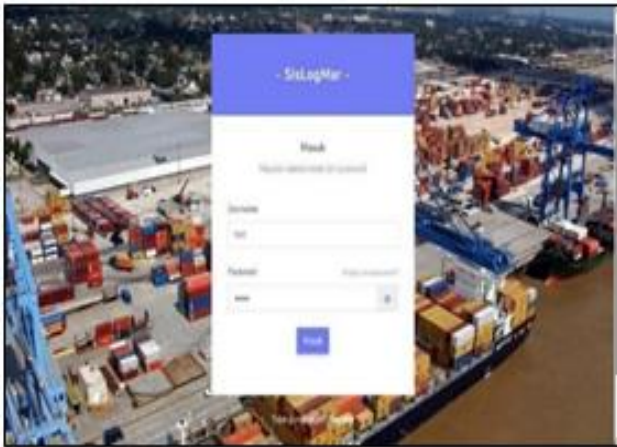Fig 1. Flowchart of Data Presentation Flo

Fig 2. Login Menu

The login page will be displayed for the first time before the user enters the system. Users with admin authority can enter the system using their username and password. The results of the login page implementation can be seen in the figure [5]

➤ *Dashboard*

After the user successfully logs into the system, the user will be shown the dashboard page. This page is the main page that displays menus (port to port, door to door, LCL-(List Container Load, tracking) that can be accessed by users. Results of the dashboard page implementation. figure [5]
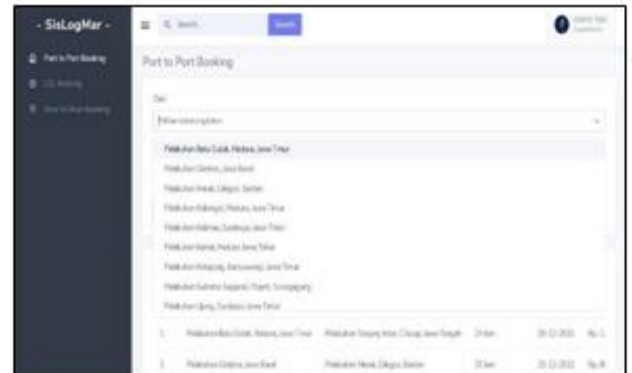

Fig 3. Dashboard page.

➤ *Port To Port Page*

The port to port page can be accessed by selecting, menu on the right side bar. The report page serves to display the delivery of the port of origin to the port of destination for each user who uses the menu (port to port) has been equipped with the estimated results of the arrival of goods and the nominal price ordered accurately. The results of the report page implementation figure [5]

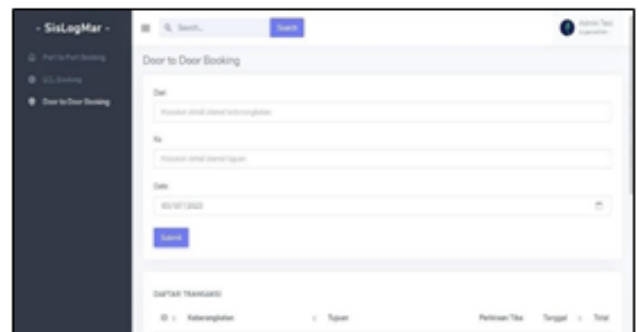
Fig 4. Port To Port Menu

Fig 5. Door To Door Menu

➤ *Door To Door Page*

The door to door page can be accessed by selecting, menu on the right side bar. The report page serves to display the delivery (using land transportation) of the original address to the destination address of each user who uses the menu (door to door) has been completed with the estimated results of the arrival of the goods and the nominal price ordered accurately. The results of the report page implementation can be seen figure [5]

➤ *LCL (Loading Container List) Page*

The LCL page can be accessed by selecting, menu on the right side bar. The report page serves to display the buildup of mixed goods that will be loaded by ships and land transportation from the origin address to the destination address of each. user who uses the menu (LCL) has been equipped with the estimated results of the arrival of goods and the nominal price ordered accurately. The results of the implementation of the report page, figure [5]
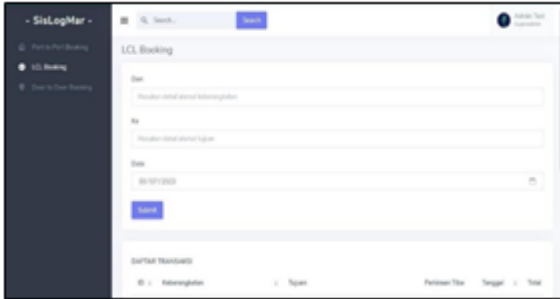

Fig 6. LCL (loadcontainer) Menu

V. CONCLUSIONS

From the research results of this thesis it can be concluded, as follows:

- The obstacles faced in logistics services with internet-based information systems are human resource factors, service factors, not yet adding time and cost accuracy. Solutions to overcome these obstacles include:Increase the frequency of briefing and socialization activities on Port Information Systems and Logistics. In addition, an increase in the discipline of knowledge in the world of information technology is carried out. Updating the old information system (Myspil) with a new information system (Sislogmar), so that it can expedite the delivery of goods.

- The roles and responsibilities of the Sail Logistics operator (in handling the system and minimizing claims from customers) are checking the website, ensuring that the shipping flow is organized and scheduled, making data as specific as possible, listening to customer complaints and apologizing if there is an error to the customer.

- To improve the quality of goods delivery, Sail Logistics operators must always update information on the Sislogmar application so that it can make it easier for customers to order logistics services.

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