Utilization Visibility Order Management In Trucking Module Orchestration

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Abstract. The Transport Module can help you track your vehicle and its distance so that you have less administration, optimized driving, and better customer service. Are you familiar with the problem of tracking your vehicle and its existence? This problem often occurs, when you want to notify customers about the time of arrival or inaccurate information about means of transportation. Not only that, but there are also problems that can be found, such as the difficulty in knowing the condition of the goods being transported. Using truck modules can provide convenience such as faster response times on assignments, you can also easily help your customers when they request arrival time or shipping status. The purpose of ordering orders is to be able to quickly and easily enter the origin and destination needed, delivery, and details of the pickup and delivery with several possible clicks. This study aims to look for optimization of the performance of trucking company performance and analyze and provide information regarding the position of an item in real-time. This paper describes the Utility Management of Utility Visibility in the Trucking Orchestration Module.

1. Introduction

The process of shipping goods is very closely related to human life. At present, many need to process goods shipments starting from companies or business sectors but general needs ranging from entrepreneurs, housewives, students, offices, government, and so on. Many items are sent in different ways and destinations so they need a special shipping method. Two types of shipments often used namely expeditions (relatively few items) and cargo (goods in large quantities). Services like this provide convenience in human work because it can save energy, time and even costs. Delivery of goods can be by land, sea, and air. Delivery of goods that are often offered by companies is trucking. Delivery of trucks is a delivery service by land with a fleet of trucks and cars, where distance starts between cities and even between islands where shipping is put together in a box or suitcase. That way the price of trucks is much cheaper when compared to other services such as air using certain planes and ships. The advantage of using a land shipping system with trucks, one of which is an affordable shipping process. Trucks can also receive a variety of logistics even weighing up to 30 tons more. Because it uses land routes, the existence of a fleet is easily monitored with online tracking technology. Although later it will take a long time truck transportation can serve local shipping. Meanwhile, several types of fleets are used such as ordinary box cars, food trucks, trailers, and other truck models.
Problem Identifications
In this rapidly developing technology era, a lot of shipping is done in people's lives. Lots of community needs that can be purchased online. So that the shipment of goods ordered can be done through land mode transportation, namely the Trucking service company. Trucking companies are chosen because they have many advantages including costs that are more affordable and can receive and can accept various types of logistics. But behind the advantages there are also some weaknesses that we can encounter such as the problem in determining "the estimated arrival of transport facilities", not the exact location of the carrier position, it is difficult to know the condition of the goods being transported whether it is safe or unsafe, and many more. This problem is often experienced by trucking companies in the process of shipping goods. The above problem is an important concern for Trucking service companies to overcome to optimize the performance of Trucking companies and analyze and provide information regarding the position of an item in real-time.

2. Literature Review
In the journal SENTIKA2014 tracking the system is a search activity, where the activity is not separated from the world of logistics [1]. But according to experts, the definition of tracking and tracking has different meanings. Tracking is the activity of collecting and processing information relating to the current delivery location. Whereas search is the storage and acquisition of the manufacturing process of a product.

In this era, track and trace systems are interesting to study. This system has many advantages including being able to track the location of a vehicle so that it can be used as an anti-theft module. The tracking device installed in the vehicle becomes a place to collect data for the current vehicle location and send it to the hosting server [2].

GPS is used to track the route of a vehicle that continues to move by calculating the coordinates of the position of the vehicle [3]. This tracking and tracking system provides an advantage for a logistics service because it provides services to people who can track their shipments. Shamsuzzoha & Helo, [4] the concept of a chassis exchange terminal (CET) is Build container storage areas outside for crowded terminals, thereby increasing gate capacity and spreading peak traffic out of peak times [5].

There are 2 types of tracking devices [6]
1. Passive Tracking
That is a tool for storing data such as location, direction and so on. Data will be stored in a device that is installed and can be downloaded to the computer.
2. Active Tracking
Namely a tool to obtain data in the form of speed, direction, the location where the data will be sent to the server computer in real-time via satellite.
Active Tracking was chosen because the company and consumers can monitor the existence of the expedition vehicle.

3. Research Method
In this journal, the method that will be used is the quantitative method. Quantitative research is a research method that uses the process of data in the form of numbers as a tool to analyze and conduct research studies, especially regarding what has been studied (Kasiram 2008).

That quantitative research is research that uses numbers in the process of calculating and identifying research results. Members obtained in this type of research by determining the population and sample.

The object of research is a Trucking service company. And for data sources are primary data collected through observations and field surveys to trucking companies conducted by the researchers themselves. This is data that has not been collected before, either in a certain way or for a certain time and data collection is done by distributing questionnaires. While secondary data through existing research results such as literature, articles.
4. Result and Discussion
In this era, smartphones are common and very popular as technology, ranging from young people to adults where smartphones are a must-have tool. With the development of technology, today can be a reference for developments in information systems in transportation and logistics. In the development of logistics and transportation, many systems can help and one of them is GPS Tracking. GPS Tracking provides position information, so the information flow will continue to run well, in Logistics there are 3 currents that always move between upstream to downstream:
1. Goods flow
2. Money flow
3. Information flow

![Figure 1. Problem in communication without GPS make delay information](image1)

GPS Tracking is a tool that can be used to find out the whereabouts of a vehicle / moving object in the form of coordinate points pinned to a map easier to understand. The GPS Tracking system makes it easy to track the system, because when GPS is not developed, there are many problems in finding or asking about the position of transport vehicles, in this case, many parties are worried about the condition of goods and transport vehicles that are uncertain on the way. This GPS tracking system provides a service that can inform about the location and position of the goods to come. Not only that, but there are also benefits that we can get from using GPS Tracking, which can reduce mobile phone costs as well as SMS costs because we have provided facilities in the form of GSM / GPRS so there is no need to text to ask for the position of the vehicle or the goods sent. At this time GPS can provide accuracy about location in real-time by utilizing an Android-based smartphone.

![Figure 2. GPS can help in the flow of communication as the main pillar of information supported by transport facilities](image2)

In today's technological development, drivers are required to be able to keep up with technological developments to compete and transparency in the movement of goods. Because the development of
technology is currently undergoing a very rapid change and is experiencing rapid technological progress. The development of technology in this era must be used and used as well as possible so that it can help and facilitate doing a job. By doing so, accessing information needed will be easier and can shorten the time to obtain the information needed. Imagine if the technological developments that can be felt at this time are not utilized as well as possible, surely we will be very difficult to find or receive the information needed at that time. Therefore drivers must be willing to learn about the current technological developments to be able to use the GPS tracking system which is very helpful in their work.

Table 1. Respondents’ results about the benefits of implementing the track and trace application

| Respondents | Benefits Track n Trace |
|-------------|------------------------|
|             | 3                      |
|             | 2                      |
|             | 3                      |
|             | 2                      |
|             | 2                      |
|             | 3                      |
|             | 3                      |
|             | 3                      |
|             | 3                      |

*(Source above from questioner)*

From these results it provides information that the use of applications for tracking is very necessary because of the obstacles in the transfer of information between the carrier and the owner of the goods, this becomes a waste because no information in the live time is easy to use. Because of these obstacles, the amount of time wasted and the integration between the transporter and the owner of the goods is not wasted. In other words, the trucking business needs the accuracy of information about the position of the position. Very accurate information will be needed by the owner of the goods because they are related to their preparation in demolition and other things in the warehouse. So from that information related to the location of the carrier is very necessary for the estimated arrival of the hauling facilities.

In this case, the development of technology has made it easy to solve the problem by making GPS where it can find the position of the carrier in real-time, not only if it is well developed, many manual things can be digitalized properly and minimize paper use. This application can be a bridge of information between transporters who act as Third Party Logistics with goods owners.

The use of this application can develop by adding detailed information such as:
1. Invoice number
2. Delivery order
3. Packing list
4. Bill Of Landing

The information above can be an addition to helping the owner of the goods because they will know which items will arrive first. This is done so that there is no miscommunication between the carrier and the owner of the goods in the case of the arrival of the carrier and the arrival of goods.
Table 2. Respondents about the benefits of information in preparing parking areas

![Bar chart for Area Parking](image)

*(Source above from Questioner)*

This result provides information about the parking area in warehousing, where if there is information regarding the arrival of transport facilities and the time of loading and unloading, the warehousing will prepare an area for parking for transporting facilities. In this case the information that moves well will have a good effect also on the preparation of the warehouse, on the other hand also the carrier does not need to wait long or wait on the side of the road because there is no parking area, with information that keeps moving also the warehouse can prepare loading dock, where there is no time wasted because all information related to arrival greatly affects the performance of warehousing. Available information becomes the starting point for being able to move and be well integrated.

Table 3. Respondents about material handling preparation so that there is no waiting time

![Bar chart for Material Handling](image)

*(Source above from questioner)*

The results of the respondents of trucking company owners are that Man Power is required to carry out loading and material handling equipment, this is very necessary to speed up the loading and unloading process of a container and to keep moving, for example, if a trucking company travels without giving certain information, then a lot of time will be wasted because there is no information that provides certainty when the transport facilities will come, on the other hand, if the trucking
company can provide information regarding the arrival of transport facilities, the warehousing will always prepare everything needed, with readiness manpower and material handling equipment will have a good and efficient impact on loading and unloading, where there is no time to wait and time to prepare. Manpower here and Material Handling Equipment play an important role in the preparation of loading and unloading, but to be able to provide fast loading and unloading time, we need definite information and information about the arrival time of transporting facilities.

In this case, our group provides solutions and prototypes that can be an overview of the preparation of information flow movements. In this prototype, we provide information related to location, container information and some additional information to be used as a reference in the delivery of goods, the prototype that we made in the form of android and iOS-based mobile phones. This application is used as an integration between the means of transport and the owner of the goods and to eliminate the worry about the position of the goods.

5. Conclusion

In the current era, technological developments are developing very rapidly. Where the role of technology has an important role in helping work become easier. The rapid development of technology must be utilized as well as possible. One form of technology that can help in the trucking business is GPS tracking. Here GPS tracking has a role that can help launch trucking business activities. The existence of GPS tracking can help in the flow of information. With a smooth flow of information, it can make it easier to confirm with various parties involved. GPS tracking can also provide vehicle locations in the form of important points that are implemented in the form of maps in real-time, so that information can be detected at that time. In this way, the work will be more helpful and delays in the flow of information can be minimized.

6. References
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