CHAPTER 1
INTRODUCTION

1.1 Background

Faster and more effective logistics procedures are required in this digital age, particularly to meet the distribution requirements of big businesses with numerous clients. Distribution is an essential component of a supply chain network in corporate operations, making sure that goods move efficiently from manufacturers to consumers to satisfy consumer demand and quicken capital turnover. In addition to receiving and distributing goods, contemporary shipping companies must use technology to track shipments in real time, optimize routes for time savings, and minimize expenses.

Wajira Jagratara Corps is one of distribution service companies focusing on automotive trading and transportation service. This company, located in Yogyakarta, has become our object of of this thesis. The company has several subsidiaries, including PT. Wajira Jagratara Yanotama, PT. WA Wajira Jagratara Transindo, PT. Wajira Jagratara Morindo, and PT. Wajira Internasional. Each subsidiary of this company has different focus and different business line, however, the overall administration and monitoring are carried out under the auspices of Wajira Jagratara Corps, so that the administrative process is not individually carried out by each subsidiary but is carried out simultaneously. The study focuses on PT Wajira Jagratara Transindo.

PT Wajira Jagratara Transindo, one of the subsidiaries of Wajira Jagratara Corps located in Yogyakarta, focuses on providing freight and transportation services such as fleet leasing and freight forwarding. The company was established on June 8, 2019, and has partnerships with several motor vehicle manufacturers across Indonesia. Its services include vehicle distribution, vehicle sales, and vehicle document management. The company provides a pick-up and delivery service using trucks that can transport motor vehicles from the factory to resellers or between resellers.

The company currently has established partnerships with motor vehicle ATPMs across Indonesia, providing vehicle sales service, distribution service, as well as vehicle document management. The company was founded by Mr. Zaifudin Yukhri, who also acts as its Chief Executive Officer (CEO). Together with his spouse, Mrs. Risti Nata Rahayu, who is the Chief Operating Officer (COO), he started this business. Under their leadership, PT. Wajira Jagratara Corps has a number of employees working in administration, accounting, warehouse operations, and driver management. The company structure of PT. Wajira Jagratara Corps is depicted in figure 1.1 below.

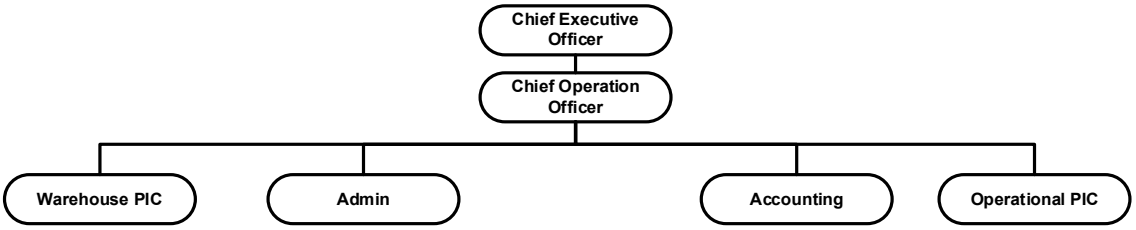


Figure 1.1 PT Wajira Company Structure (2024)

The operational fleet includes 18 units of CDD trucks and 2 units of Fuso trucks, which are used for distribution across various regions in Indonesia, such as Palembang, Jambi, Padang, Medan, and many cities across Java. The truck utilized as an expeditionary fleet to deliver items from manufacturers to dealers is seen in Figure 1.2 below.



Figure 1.2 Expeditionary Fleet

1.2 Problem Exploration

Exploration of the problems at PT Wajira Jagratara Transindo was conducted through direct observation and two weeks of interviews with several key stakeholders, including the CEO, operational manager, administrative staff, and accounting staff. Based on this initial data collection, several recurring operational issues that significantly affect the company's efficiency and service quality were identified. To provide a clearer understanding of the operational challenges, Table 1.1 outlines the issues reported by different stakeholders during the data collection process.

Table 1.1 Stakeholder Issues in Current Operations

Stakeholder	Complaints
CEO/Operational Manager	• Difficulty in monitoring delivery processes and locating driver in real-time. • Frequent delays in invoice creation due to late collection of delivery orders (DO) documents. • Absence of a system that can comprehensively monitor overall operational performance. • Working overtime is caused by unpredictable coordination that can change at any time. • The process of plotting drivers and vehicles is still manual, making it time-consuming.
Admin	• Compilation and verification of physical delivery orders (DO) documents are done manually before creating invoices. • Difficult to track which drivers have or have not submitted their DO documents. • Difficult to track which order have or have not created invoice & send billing • Manually input data order via Microsoft Excel, repeatedly checking different database to determine travel allowance, claim deduction.
Accounting	• Delays in invoice creation due to not yet receiving delivery orders (DO) documents cause delays in the billing process and disrupt the company's cash flow.
Driver	• Need to complete the physical delivery order documents submission each time a task is completed.
Manufacturer	• Limited visibility into shipment progress • Can not track the real-time status and location of fleet during deliveries.

One of the main problems lies in the process of submitting delivery orders. Currently, drivers are required to submit the physical DO documents to the office so that invoices can be issued. A delivery order is an official document issued by the customer, such as a factory or a goods-receiving company, as proof that the goods have been delivered and received according to the order. With this circumstance, an invoice can only be generated once the physical delivery order already received by the office. Meanwhile, the return of the physical delivery order documents itself usually exceeding the given deadline, this is due to the lack of driver's discipline in sending physical delivery orders documents according to the time limit. Thus, the invoice generation and billing process is also facing delay, alongside with the delay of physical delivery order documents return.

Delays in invoice generation directly impacts the billing process. An invoice can only be created after the physical delivery order is received. Therefore, any delay causes the billing process to be postponed. These invoice and billing process problem create serious impact to the company’s finance, which negatively affects the company's

incoming cash flow, increases the administrative workload, and raises the potential error for document tracking and archiving. The Table 1.1 below presents delivery order return delay, indicating that the goods have already been received, but the invoice cannot be issued yet because the physical delivery note has not been received. According to PT Wajira's policy, the DO documents return should be made within seven days of the completed DO documents or when a driver unloads the goods in destination. However, it is evident from the data in the table that the DO documents return date is excessively distant from the initial goal, This data is observed per December 2025 until January 2026, so that the delay is calculated based on the deadline that driver is supposed to return the physical DO documents, but still haven't send it until January 20.

Table 1.2 Delivery Order Return Delay

Fleet Number	Driver	Delivery Date	Unload Destination	Supposed Due Date	Actual DO Return Date	Delay (days)
AB 8072 BG	Topan	20/12/2025	Cirebon	27/12/2025	05/01/2026	9
AB 8072 BG	Topan	05/01/2026	Balaraja	12/01/2026	21/01/2026	9
AB 8072 BG	Topan	07/01/2026	Indramayu	14/01/2026	21/01/2026	7
AB 8072 BG	Topan	10/01/2026	Banjarsari	17/01/2026	24/01/2026	7
AB 8184 ZS	Koko	30/12/2025	Brebes	06/01/2026	20/01/2026	14
AB 8184 ZS	Koko	03/01/2026	Indramayu	10/01/2026	20/01/2026	10
AB 8184 ZS	Koko	06/01/2026	Lumajang	13/01/2026	23/01/2026	10
AB 8317 NA	Edi	29/12/2025	Banjarsari	05/01/2026	17/01/2026	12
AB 8317 NA	Edi	08/01/2026	Bekasi	15/01/2026	27/01/2026	12
AB 8184 JN	Dwi	29/12/2025	Banjarsari	05/01/2026	11/01/2026	6
AB 8184 JN	Dwi	14/01/2026	Karawang	21/01/2026	27/01/2026	6
AB 8184 XA	Jarwo	30/12/2025	Surabaya	06/01/2026	23/01/2026	17
AB 8184 XA	Jarwo	02/01/2026	Cikarang	09/01/2026	26/01/2026	17
AB 8180 ZR	Agus	30/12/2025	Bandung	06/01/2026	16/01/2026	10
AB 8366 NA	Slamet	12/01/2026	Yogyakarta	19/01/2026	25/01/2026	6

The second problem faced is the ineffectiveness of the fleet and driver allocation process. In order to meet the delivery target, this driver allocation procedure often needs to be completed quickly in the event of an unexpected order or if a backup driver is required. When there is a rush order or a DO that cannot be fulfilled by the driver on duty due to technical reasons, the CEO must find available vehicles and drivers who are closest to the dealer issuing the DO. This process often takes a long time in the DO pickup plotting process. The absence of a system that can monitor and display vehicle availability in real-time results in an inefficient allocation process. Figure 1.4 below show how the owner manually plots each driver to load and unload products within a specific time frame, as well as allocate drivers to pick up delivery orders.



Figure 1.3 Manual Process of Allocating Drivers

The third issue is related to estimating delivery deadline fulfilment. In some cases, drivers are unable to meet the loading and unloading times specified in the schedule provided to customers. This situation becomes even more complex when a driver receives two delivery orders at the same time. Travel time and loading and unloading processes that do not go according to plan cause delays in the second delivery. As a result, when the driver arrives at the next dealer location, it is already closed, so the delivery must be postponed to the next day. This situation results in additional driver travel expenses and

inefficient working hours. In addition, these delays can also reduce customer satisfaction because of the late delivery.

Based on the identified issues, it can be concluded that the three problems are interrelated rather than independent. An inefficient driver allocation process contributes to delivery delays. These delays are caused by the CEO responsible for finding the nearest and available driver, which affects scheduling and results in delivery times that are not aligned with the estimated schedule. This situation subsequently leads to late DO submissions. These delays then postpone the invoicing process and ultimately disrupt the company's cash flow. Figure 1.4 illustrates the relationships among these issues, showing the cause and effect chain from one problem to another and how they impact the company's operational processes.

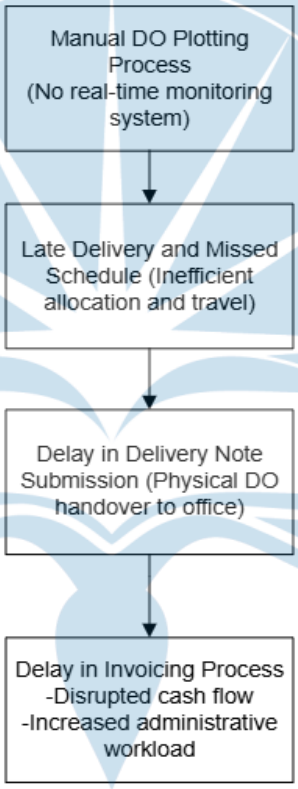


Figure 1.4 Relationship Between Issues

Based on the issues that have been identified, it is known that the main problem lies in operational delay. Operational delay refers to any delay that occur within the company's delivery to billing process, including driver and vehicle allocation, delivery order return, invoice creation, and billing process. In PT Wajira Jagratara Transindo, operational delay not only caused single activity, but by several interconnected problems within the current business process. The first delay occurs in driver allocation process that require manual check of driver locations and confirm driver availability through WhatsApp of phone calls

before assigning driver to pick up a delivery order. This creates waiting time because the order cannot be received and picked up immediately. The dependencies of physical delivery order return also causing a great delay in waiting time, where administrative cannot create invoice before the physical DO is received, therefore the billing process can not proceed.

According to the company's policy, the delivery order documents should return to the office within seven days after the delivery is completed and the goods arrive at the destination. The company has established seven days time limit for DO document to return to the office, as the basis to create invoice, and proceed billing process. However, Table 1.1 shows the current condition, the DO return often exceeds this limit. This situation causes invoice creation and billing process to be postponed. Therefore, the seven day period is used as the critical success factor for this project, where the redesigned process is expected to allow DO verification and invoice preparation to be completed within the company's acceptable time limit.

1.3 Problem Statement

The main problem faced by PT Wajira Jagratara Transindo is delays in its operational processes, which occurs in billing, delivery scheduling, and vehicle allocation, which have led to decreased efficiency and cashflow delay.

1.4 Objective

The objective of this project is to improve the system of delivery process in order to reduce the billing process time to less than seven days.

1.5 Scope and Limitation

This study aims to improve the operational performance of PT Wajira Jagratara Transindo by emphasizing the practicality and feasibility of implementation:

a. This project focuses on the internal operational processes of PT Wajira Jagratara Transindo, particularly on the management of Delivery Orders (DO), invoice creation, driver allocation, and the delivery scheduling process, which contribute to operational delays.
b. The observation process was conducted from August 2025 through the completion of the project to gain a more comprehensive understanding of operational workflows.
c. Operational coverage: the company operates 18 CDD trucks and 2 Fuso trucks used for distribution activities to various regions in Indonesia. This study focuses on domestic shipping activities managed by PT Wajira Jagratara Transindo.
d. It is assumed that all operators involved in the administration and delivery process have relatively the same level of competence and experience.

e. This study is limited to the redesign of business processes and the design of the proposed digital system, including workflow design and user interface prototyping. The actual coding, development, and deployment of the web-based and mobile applications were carried out by an external IT vendor and are therefore outside the scope of this study.