

GOODSMATE: A CENTRALIZED PLATFORM FOR EFFICIENT TRANSPORT COORDINATION BETWEEN WHOLESALERS AND TRANSPORTERS

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ABSTRACT

GoodsMate is a centralized web-based platform designed to enhance transport coordination between wholesalers and transporters. This project addresses significant challenges stemming from manual coordination, which often leads to inefficiencies and communication barriers. Wholesalers frequently struggle to find suitable transport options that meet their specific requirements, such as vehicle capacity, rates, and availability.

To solve these issues, GoodsMate connects wholesalers with transporters, allowing transporters to publish their vehicle availability, routes, and rates. Wholesalers can then select appropriate transport services tailored to their needs. The platform streamlines the entire process by managing bookings, assigning vehicles, and facilitating payment transactions. Additionally, dedicated mobile applications for both wholesalers and transporters ensure real-time updates through notifications regarding trip details and successful deliveries.

Ultimately, GoodsMate simplifies and centralizes the goods transportation process, enhancing transparency and reducing manual errors. By improving operational efficiency for all stakeholders involved in the logistics chain, GoodsMate aims to transform how goods transportation is managed in the industry.

Keywords: Centralized Platform, Transport Coordination, Vehicle Availability, Booking Management.

I. INTRODUCTION

The logistics and transportation industry is vital to the global economy, as it ensures the smooth flow of goods from producers to consumers. However, traditional methods of coordinating transport between wholesalers and transporters often result in significant inefficiencies. Wholesalers frequently face challenges in sourcing suitable transport options that meet their specific needs, such as vehicle capacity, rates, and availability. The lack of a unified platform for communication and management exacerbates these issues, leading to delays and increased operational costs.

Current research emphasizes the need for innovative digital solutions to streamline logistics processes. GoodsMate addresses these challenges by offering a centralized web-based platform that connects wholesalers with transporters. This platform allows transporters to publish their vehicle availability, routes, and rates, enabling wholesalers to select services tailored to their requirements. GoodsMate also manages bookings, vehicle assignments, and payment transactions efficiently. With dedicated mobile applications for both parties, real-time notifications ensure that all stakeholders remain informed about trip details and successful deliveries. By simplifying and centralizing the goods transportation process, GoodsMate enhances transparency, reduces manual errors, and significantly improves operational efficiency in the logistics sector.

II. METHODOLOGY

Problem Identification: The initial phase focuses on identifying the core issues faced by wholesalers and transporters, such as inefficiencies in manual coordination, difficulties in finding appropriate transport options, and the lack of a unified communication platform. Surveys and interviews with industry stakeholders were conducted to gather insights into their experiences and needs.

Platform Development: Based on the findings, GoodsMate was designed as a web-based platform that enables transporters to publish their vehicle availability, routes, and rates. Wholesalers can then select transport services tailored to their specific requirements. The development process involved iterative design and user feedback to ensure functionality meets user needs.

Implementation of Mobile Applications: Dedicated mobile applications for both wholesalers and transporters were developed to facilitate real-time communication and updates. These applications provide notifications regarding trip details and successful deliveries, enhancing user engagement.

Evaluation of Efficiency:

The effectiveness of GoodsMate was assessed through metrics such as booking speed, user satisfaction, and operational efficiency improvements. Data analysis techniques were employed to evaluate the impact of the platform on reducing manual errors and streamlining logistics processes.

III. COMPARATIVE

Aspect	IRJET-V5I1237 (Android-Based Porter Application)	Transportation Research Procedia (Transport Services Management)	Wholesaler to Retailer Goods Forwarding Controlling
Purpose	Develops an Android app to connect porters with customers for easier and faster service access.	Examines methods to optimize transport logistics and service management within the Russian Railways context.	Focuses on controlling the logistics of goods forwarding from wholesalers to retailers, aiming to reduce costs and improve service efficiency.
Scope	Focuses on user-friendly application for porter services in Indonesia, addressing the search and booking inefficiencies.	Broad look at transport logistics management, primarily aimed at freight optimization and improving the efficiency of railway cargo services.	Specifically targets the logistics process of goods transport from wholesaler to retailer, emphasizing control and tracking for better resource management.
Methodology	Uses SWOT analysis, UML, and SDLC Waterfall model to design and build the application.	Applies strategic functions and criteria modeling, as well as typology of criteria for efficiency in transport logistics. ↓	Develops a mathematical model for tracking information flows and uses AWS Forwarder software for simulation of logistics operations.

IV. CONCLUSION

The GoodsMate project presents a significant advancement in the logistics and transportation sector by establishing a centralized platform that enhances coordination between wholesalers and transporters. The study identifies critical challenges faced by wholesalers in sourcing suitable transport options, such as inefficiencies in manual coordination and communication barriers. By leveraging a web-based platform, GoodsMate allows transporters to publish their vehicle availability, routes, and rates, enabling wholesalers to select appropriate services tailored to their needs.

The methodology employed in this research includes a mixed-methods approach that combines qualitative insights from industry stakeholders with quantitative data analysis to evaluate the platform's effectiveness. The findings indicate that GoodsMate streamlines the booking process, manages vehicle assignments, and facilitates payment transactions, thereby improving operational efficiency.

In conclusion, GoodsMate addresses the complexities of modern logistics by optimizing information flows and fostering collaboration among stakeholders. The platform not only enhances transparency and reduces manual errors but also significantly improves the overall efficiency of goods transportation. This research underscores the importance of innovative digital solutions in transforming logistics management and provides practical recommendations for implementing effective strategies in the wholesale industry.

V. REFERENCES

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