

Optimizing Distribution Fleet to Improve Delivery Efficiency at Harum Jaya Bangunan

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ABSTRACT: This community service program was conducted at Harum Jaya Bangunan, located in Gianyar, with the aim of improving distribution efficiency through the optimization of delivery fleet management. The main problem faced by the company was the limited capacity of its internal fleet, which was unable to keep up with the increasing number of orders, resulting in delivery delays. The implementation methods included direct observation, problem identification, solution design through hybrid logistic integration, and route optimization. The results of the program indicate improvements in operational efficiency, faster delivery times, and increased customer satisfaction. These findings support previous studies emphasizing the importance of operational efficiency and logistics optimization in distribution systems (Yuesti, 2020). Therefore, the application of fleet optimization strategies has proven effective in enhancing distribution performance and supporting business sustainability.

KEYWORDS: fleet optimization, distribution system, hybrid logistics, operational efficiency

INTRODUCTION

The distribution system plays a crucial role in ensuring timely delivery and maintaining customer satisfaction, particularly in the construction materials sector where demand is highly time-sensitive. Harum Jaya Bangunan, located in Gianyar, has established itself as a reliable distributor serving contractors and retail customers in eastern Bali.

However, increasing demand has created operational challenges, particularly in fleet capacity and delivery efficiency. The mismatch between demand and available resources has resulted in delays and increased operational costs. Efficient resource allocation and operational flexibility are essential factors in maintaining business performance (Yuesti, 2020).

This program aims to address these issues through fleet optimization and hybrid logistics integration. Such approaches are aligned with modern logistics strategies that emphasize flexibility and efficiency in supply chain management.

SITUATION ANALYSIS

Harum Jaya Bangunan plays a strategic role in supporting construction activities in the Gianyar region. Despite its strong market position, the company faces operational inefficiencies due to limited fleet capacity and suboptimal route management.

The internal fleet operates at maximum capacity but remains insufficient to handle increasing order volumes, resulting in delayed deliveries. In addition, inefficient routing contributes to higher fuel consumption and longer delivery times. This condition reflects the importance of operational efficiency in logistics systems (Yuesti, 2020).

Without improvement, these issues may reduce customer satisfaction and competitiveness. Therefore, strategic intervention is necessary to optimize fleet utilization and improve operational efficiency.

METHODOLOGY

This program employed a participatory approach involving observation, interviews, and problem identification. The analysis focused on identifying inefficiencies in fleet utilization and delivery processes.

A solution was developed through the implementation of **hybrid logistics integration**, combining internal fleet resources with third-party logistics providers. This approach increases flexibility and capacity without requiring significant capital investment.

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Additionally, route optimization strategies were applied to improve efficiency by reorganizing delivery paths based on distance and location clustering. This method emphasizes systematic planning in logistics operations (Yuesti, 2020).

RESULTS AND DISCUSSION

The implementation of fleet optimization combined with hybrid logistics integration has led to substantial improvements in overall operational performance at Harum Jaya Bangunan. By incorporating third-party logistics providers into the distribution system, the company was able to effectively address the limitations of its internal fleet capacity. This strategic approach increased delivery flexibility and scalability, allowing the company to accommodate a higher volume of orders without requiring significant capital investment in additional vehicles.

From an operational perspective, the optimization of delivery routes played a critical role in enhancing efficiency. The restructuring of routes based on distance, delivery clusters, and time considerations significantly reduced travel time and minimized unnecessary mileage. As a result, fuel consumption and vehicle utilization costs were notably decreased. In addition, drivers were able to complete more delivery cycles within the same working hours, thereby improving overall productivity and resource utilization. The reduction in delivery time also had a direct impact on service quality. Faster and more reliable deliveries improved customer satisfaction, particularly for time-sensitive orders in the construction sector. Customers experienced fewer delays and greater consistency in delivery schedules, which strengthened trust and loyalty toward the company. This improvement in service reliability is a key factor in maintaining competitive advantage in distribution-based businesses.

Moreover, the integration of internal and external logistics resources enhanced the company's ability to respond to fluctuations in demand. During peak periods, third-party logistics providers acted as a buffer, ensuring that service levels were maintained despite increased workload. This adaptive capability reflects the importance of flexibility in modern supply chain management. These findings are consistent with previous research emphasizing that logistics efficiency and operational flexibility are critical determinants of organizational performance (Yuesti, 2020). Efficient distribution systems not only reduce operational costs but also improve service delivery and customer satisfaction, ultimately contributing to business sustainability.

Overall, the results confirm that the integration of fleet optimization strategies with hybrid logistics management provides a practical and effective solution for improving distribution performance. This approach enables companies to maximize existing resources, enhance operational efficiency, and maintain high service standards in a dynamic and competitive environment.

CONCLUSION

This community service program successfully improved distribution efficiency at Harum Jaya Bangunan through fleet optimization and hybrid logistics integration. The implementation reduced delivery delays, improved operational efficiency, and enhanced customer satisfaction. The findings highlight the importance of adaptive logistics strategies in addressing operational challenges. By optimizing existing resources and integrating external support, companies can improve performance without substantial investment. This is consistent with studies emphasizing operational efficiency as a key driver of business performance (Yuesti, 2020).

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