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Supply Chain Solutions

Preventing Costly Inventory Consolidation: Network Optimization Analysis for an Aftermarket Auto Parts Distributor

1 Introduction

A leading distributor of aftermarket collision repair parts operates a nationwide network of more than 50 locations across the United States, primarily serving collision repair centers. The company offers a broad product portfolio including bumper covers, lamps, hoods, fenders, and door mirrors, supported by a strong focus on quality control and a return rate significantly below industry averages. Using a hub-and-spoke distribution model, the organization provides same-day or next-day delivery to customers through its own fleet of vehicles. As the company continued to grow and refine its distribution strategy, leadership explored opportunities to consolidate inventory into facilities with available capacity. To evaluate the cost and service impact of this approach in the Northeast, the organization partnered with Alpine Supply Chain Solutions for network analysis and strategic decision support.

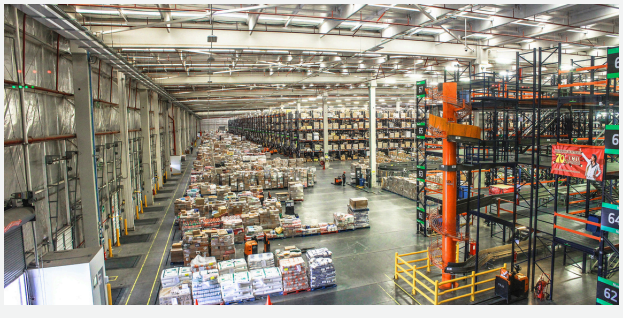
2 Challenges

The company was considering consolidating inventory into fewer facilities that had available warehouse space, with the goal of simplifying operations and improving overall efficiency. However, leadership needed to understand the full impact this strategy would have on transportation costs and customer service levels in the Northeast region. Because the company's value proposition is built on rapid delivery, even small increases in travel distance or delivery time could negatively affect customer satisfaction and competitive performance. There was also concern that consolidation could increase fleet utilization demands, create delivery route inefficiencies, and reduce the ability to maintain same-day service commitments. Before making a major network change, the organization needed a data-driven assessment to confirm whether the consolidation strategy would deliver real benefits or introduce avoidable risk.

3 Solutions

Alpine conducted a structured analysis of the proposed inventory consolidation plan, focusing on tradeoffs between warehouse capacity utilization, transportation cost, and delivery service performance. The assessment evaluated how inventory repositioning would affect hub-and-spoke routing efficiency, delivery coverage, and lead time expectations for collision repair customers.

Alpine's analysis found that the consolidation strategy would negatively impact both cost and service, with increased transportation expense and reduced delivery responsiveness. Importantly, the analysis also showed there was no meaningful operational benefit that would offset these impacts. Alpine provided leadership with clear findings and a defensible recommendation to avoid executing the consolidation plan.



4 Implementation

This engagement was completed as a strategic evaluation project rather than an operational implementation. Alpine reviewed the proposed consolidation approach and modeled its projected impact on transportation cost and service levels based on network positioning and delivery requirements. Findings were documented and presented to leadership with a clear summary of the expected tradeoffs and operational consequences.

Alpine ensured that conclusions were grounded in the company's real-world operating model, including fleet-based delivery and customer expectations for same-day and next-day service. With this analysis in hand, leadership was able to make an informed decision before committing resources or disrupting inventory positioning. The outcome provided clarity, alignment, and confidence in the recommended path forward.

5 Results

Although no physical network changes were implemented, the analysis delivered significant projected value by preventing a high-risk decision. Alpine's findings indicated that inventory consolidation in the Northeast would likely increase transportation costs and reduce delivery service performance, putting the company's customer experience commitments at risk.

By identifying the negative cost and service impact in advance, Alpine helped leadership avoid unnecessary disruption and operational strain. The projected benefit of this engagement was the prevention of increased fleet costs, inefficiencies in delivery routing, and potential erosion of same-day and next-day service capability.

Ultimately, the company protected its service model and avoided a network change that offered no measurable operational advantage.