

How a Global Building Materials Manufacturer Optimized Warehouse Storage and Improved Operational Efficiency

1 Introduction

A global manufacturer of building materials and industrial products operates an extensive international supply chain focused on delivering high-performance solutions across multiple markets. As the organization continued to grow, it identified opportunities to improve warehouse efficiency, optimize storage utilization, and reduce operating costs within one of its distribution facilities.

To address these challenges and develop a scalable warehouse strategy, the company partnered with Alpine Supply Chain Solutions to evaluate its current operation and identify opportunities for optimization.

2 Challenges

This company was operating within an oversized warehouse that resulted in underutilized space, excessive travel distances, and higher operating costs. Existing storage configurations did not align with SKU demand, leading to inefficient space utilization, longer picking routes, and unnecessary labor requirements.

These operational inefficiencies limited productivity, increased facility costs, and reduced the warehouse's ability to adapt to future business growth.



3

Solutions

Alpine Supply Chain Solutions conducted a comprehensive operational assessment, evaluating inbound and outbound material flow, inventory profiles, item master data, storage utilization, and labor performance. The team then completed a detailed Storage Type Analysis (STA) to identify the optimal storage configurations for the facility, improving both storage density and product accessibility.

To support long-term operational improvements, Alpine also evaluated multiple warehouse automation strategies, including goods-to-person technology and Automated Storage and Retrieval Systems (AS/RS). Each option was analyzed based on operational impact, projected labor savings, implementation costs, and return on investment, allowing leadership to compare automation alternatives and identify the solution best aligned with its operational goals and budget.

4

Implementation

Using the findings from the operational assessment and Storage Type Analysis, Alpine developed recommendations to improve warehouse layout, inventory positioning, and material flow throughout the facility. By optimizing storage configurations and aligning inventory locations with demand, the proposed design reduced travel distances, improved picking efficiency, and increased storage utilization.

The automation assessment further provided a strategic roadmap for future investments by evaluating multiple technology solutions and their expected financial and operational benefits. This enabled the organization to prioritize initiatives that balanced near-term operational improvements with long-term scalability.



5

Results

Alpine's recommendations positioned the organization to significantly improve warehouse productivity, space utilization, and operational efficiency. By right-sizing warehouse operations, optimizing storage layouts, and streamlining material flow, the company can reduce unnecessary travel, improve inventory management, and increase throughput while lowering overall operating costs.

The evaluation also established a clear path toward future warehouse automation by identifying technologies capable of delivering measurable productivity gains and long-term return on investment. With a more flexible warehouse layout and scalable operational strategy, the organization is well positioned to support future growth while improving customer service, operational performance, and overall supply chain efficiency.

