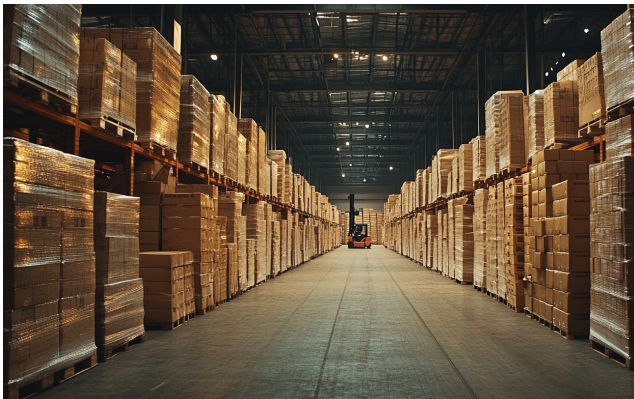


Optimizing Warehouse Slotting for Increased Productivity at a Leading Convenience Store Chain



1 Introduction

A rapidly growing family-owned convenience store chain in the Midwest, with thousands of employees and hundreds of locations, was facing increasing order volumes that challenged their current distribution capabilities. To continue effectively serving their customers and support ongoing growth, they sought to develop a new warehouse facility designed to accommodate expanding operational demands. To guide this transformation, they partnered with Alpine Supply Chain Solutions.



2 Challenge

The client engaged Alpine to perform a comprehensive Storage Type Analysis (STA) and develop optimized slotting strategies. The goal was to determine the ideal mix of racking and storage types to maximize productivity while meeting the unique needs of multiple temperature-controlled zones within the new facility. The project needed to ensure the warehouse design would support current operational demands and scale efficiently with future growth across ambient, cooler, and freezer environments.



3 Implementation

Alpine's project team focused on optimizing storage and handling processes for the client's diverse product categories within the three temperature zones. They conducted an in-depth review of item master data, inventory levels, and a full year of order velocity information to identify high-movement SKUs and seasonal peaks. An ABC analysis revealed that a relatively small percentage of SKUs accounted for the majority of volume and outbound activity, highlighting opportunities for targeted slotting improvements.

Using these insights, Alpine performed a detailed Storage Type Analysis tailored to the new facility's footprint and temperature requirements. Based on this, Alpine developed racking mix recommendations and slotting optimization strategies designed to enhance picking productivity, reduce replenishment costs, and minimize travel times for warehouse personnel. These recommendations aimed to balance efficiency, ergonomics, and scalability in the warehouse layout and processes.

4 Results

Once fully implemented, the client is expected to realize significant operational improvements based on Alpine's recommendations. These include a projected 20% increase in picking productivity, a 15% reduction in replenishment costs, and an impressive 55% reduction in travel time within the warehouse. The optimized slotting and storage strategies will streamline daily operations, reduce logistical complexities, and improve inventory management across all temperature zones.

This comprehensive approach provides the client with a scalable warehouse framework designed to accommodate ongoing growth while delivering measurable cost savings and efficiency gains. Through strategic analysis and best-practice implementation, Alpine Supply Chain Solutions has equipped the client with the tools and insights necessary to achieve operational excellence in their new distribution facility.

