



## Optimizing Warehouse Slotting for Increased Productivity at Kwik Trip



### 1 Introduction

Kwik Trip is a family-owned company based in La Crosse, WI. As a prominent convenience store chain with more than 35,000 co-workers and 800+ stores, they were growing fast. Intent on continuing to deliver on their mission to serve their communities effectively, they needed help. With increased volumes and orders, they were looking for a new warehouse to accommodate their growth. Enter, Alpine Supply Chain Solutions.

### 2 The Challenge

Kwik Trip engaged Alpine Supply Chain Solutions to conduct a comprehensive Storage Type Analysis (STA) and improve slotting. The project aimed to develop the ideal racking mix and optimize slotting for productivity, ensuring the warehouse design could meet both current and future needs across various temperature-controlled environments.

### 3 The Process

The project, conducted at Kwik Trip's new facility in DeForest, WI, focused on optimizing storage and handling processes for various product categories within three temperature zones: ambient, cooler, and freezer. The objectives included identifying high-movement SKUs, optimizing storage for different value categories, and improving slotting strategies to enhance operational efficiency.

Alpine conducted a thorough review and analysis of item master dimensions, inventory on hand, and one year's worth of order velocity data to identify high-movement SKUs and peak periods. This data provided insights into current storage utilization and drove the optimization strategies.

An ABC analysis revealed that 29% of SKUs accounted for 80% of the volume, indicating that a small number of SKUs were responsible for the majority of inbound activity. The outbound analysis showed that 80% of the lines were generated by 18% of the items. Alpine conducted a detailed Storage Type Analysis (STA) specifically for the new building to identify the ideal racking mix for ambient, cooler, and freezer environments. Alpine also provided Kwik Trip with slotting optimization recommendations aimed at enhancing productivity and reducing operational inefficiencies in the new warehouse across all temperature zones.

### 4 The Outcome

Based on Alpine's recommendations, once the new warehouse is fully operational, Kwik Trip is expected to achieve:

- 20% Increase in picking productivity
- 15% Reduction in replenishment costs
- 55% Reduction in travel time

The optimization of storage strategies will allow Kwik Trip to streamline warehouse operations, reducing logistical complexities and improving inventory management across ambient, cooler, and freezer environments. These strategies promise to deliver cost savings, enhanced efficiency, and more importantly, a scalable framework to accommodate future growth.

Through comprehensive analysis and strategic planning, Alpine Supply Chain Solutions has provided Kwik Trip with the tools and strategies needed to optimize their new warehouse operations. By leveraging industry best practices and innovative technologies, Kwik Trip is well-positioned to achieve greater efficiency and operational excellence across all temperature zones once the warehouse is fully operational.