



Tailoring Distribution Network Costs with a Strategic Master Plan

1 Introduction

A leading women's fashion brand known for its innovative approach to personalized styling and community-focused sales model, encountered increasing supply chain complexities driven by rapid growth and evolving customer demographics. The company embarked on a comprehensive distribution transformation project designed to enhance throughput, reduce costs, and improve service levels, positioning the fashion retailer for continued market expansion.

2 The Challenge

Faced with evolving customer demographics, the fashion brand focused on developing a distribution solution that can scale efficiently while maintaining their brand promise of connection, confidence, and convenience. Alpine kicked off the project by developing a Strategic Master Plan, a deliverable that provides a methodical roadmap to systematically address warehouse operations, storage configurations, and network optimization.

3 The Process

Alpine gained a thorough understanding of the entire operation, which included:

Full Data Analysis of Warehouse Operations and Throughput:

- Assessing SKU velocity, turnover rates, storage requirements, product cube, and inventory age
- Analyzing order profiles, including order size, line items per order, and peak order periods

Distribution Center (DC) Site Visit to Southern California

- Observing the current layout, workflows, and equipment
- Engaging with warehouse staff to understand operational pain points and gather insights
- Monitoring key processes such as receiving, storage, picking, packing, and shipping

High-Level Storage Type Analysis

- Evaluating the types and volumes of products stored and their picking frequency
- Storage options evaluation

High-Level Distribution Network Analysis

- Mapping customer locations and order volumes to identify demand hotspots
- Analyzing parcel shipping costs across different zones to understand cost implications
- Reviewing less-than-truckload (LTL) and air freight rates for cost and service considerations as origin points shift farther east

Return on Investment (ROI) Analysis

Each analyzed component was crucial for developing a comprehensive strategy to enhance efficiency and the company's day-to-day operations and future development plans.

4 The Outcome

The analysis identified several areas for improvement, including layout optimization, streamlining order-picking routes, simplifying and shortening the packing process, and minimizing touches throughout the outbound workflow. Alpine proposed four options for the apparel company to consider and they selected a self-operated single distribution center design, which is projected to deliver:

- **Improved Efficiency:** The warehouse layout redesign and technology upgrades is expected to lead to a 20% increase in picking efficiency, 15% reduction in labor costs, and a 20% reduction in square footage
- **Optimized Storage:** Implementing the hybrid storage solution is projected to improve space utilization by 25% and reduce picking errors along with a leaner packing process
- **Enhanced Customer Service:** The new network should reduce average delivery times to the central and eastern US by 2 days, improving customer satisfaction and saving over \$1 million in net transportation costs
- **Scalability:** The phased approach to the distribution network will allow the apparel company to manage costs effectively while preparing for future growth both locally and in their coast-to-coast operations

The Strategic Master Plan addressed both immediate operational inefficiencies and long-term strategic goals. By leveraging data-driven insights, on-site assessments, and robust analytical models, the project successfully positioned this Alpine client for continued growth and enhanced customer service in an increasingly competitive apparel market.