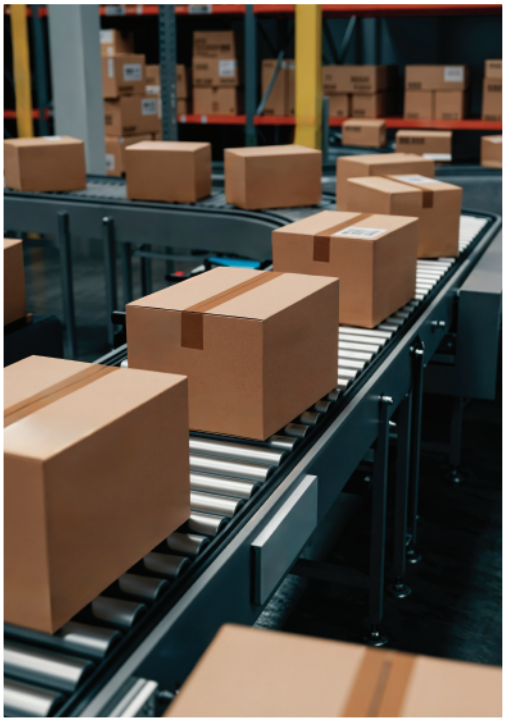
Improving Network-Wide Inventory Visibility with a Unified WMS Strategy for a U.S. Federal Agency

1 Introduction

A U.S. federal agency responsible for delivering benefits, healthcare support, and memorial services to military veterans and their families operates a critical distribution network that must meet exceptionally high standards for reliability, transparency, and service responsiveness. This network plays a direct role in supporting veterans by ensuring timely access to essential products and materials across the country. As demand increased and facility infrastructure aged, the agency recognized the need to modernize its distribution operations to reduce risk and improve scalability. Two distribution centers located in Illinois and Colorado supported high-volume fulfillment activity but operated independently with separate system environments. To strengthen network-wide coordination, improve inventory visibility, and establish a long-term modernization roadmap, the agency partnered with Alpine Supply Chain Solutions.

2 Challenge

The agency faced growing operational risk driven by aging facilities, limited scalability, and a lack of network-level system integration. The two distribution centers operated with separate warehouse system environments and did not share a unified Warehouse Management System (WMS), limiting visibility into inventory across sites and reducing the ability to manage the network as a coordinated operation. This created friction for internal teams and reduced transparency for end users seeking shipment status and order visibility.

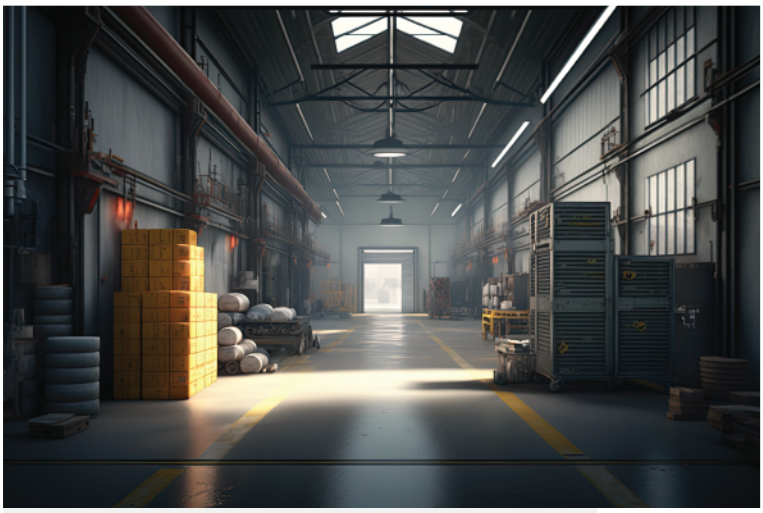


Facility limitations also constrained operational flexibility, including restricted building height, dock limitations, and racking constraints at the Illinois site. Meanwhile, the Colorado distribution center supported a high-volume fulfillment environment processing nearly 8 million lines, creating pressure to optimize space utilization and throughput. Leadership needed an actionable plan that could drive measurable improvement in the near term while aligning modernization efforts with federal budget cycles and long-term infrastructure readiness.

3 Solutions

Alpine developed a Strategic Master Plan and modernization roadmap focused on unlocking foundational capabilities that would enable long-term operational improvement and future automation. A primary recommendation was initiating a WMS RFP and selection process to establish a unified platform across both distribution centers, enabling consistent execution, shared inventory visibility, and standardized processes. Alpine also recommended launching a network-wide cubing program to capture accurate dimensions for approximately 2,000 items, strengthening item master data and enabling more effective storage planning and WMS configuration.

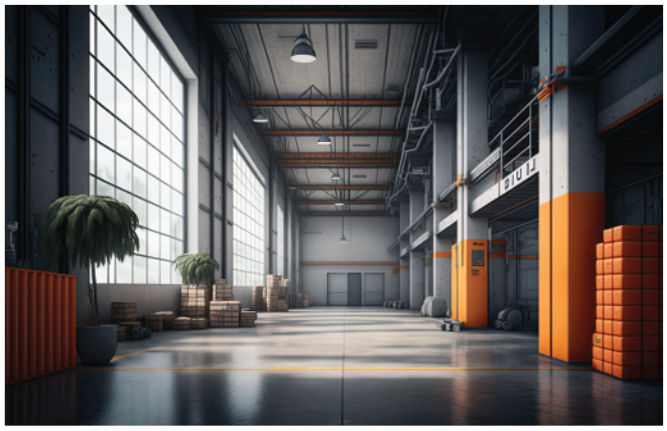
To improve space utilization and prepare the facilities for modernization, Alpine proposed facility-specific Storage Type Analysis (STA), slotting, and layout design work to maximize storage density and improve material flow within each site's constraints. These initiatives were positioned as near-term enablers that would reduce operational risk, unlock capacity, and support future automation opportunities in a structured and ROI-driven manner.



4 Implementation

Alpine conducted on-site evaluations, engineering studies, and process assessments across core warehousing workflows at both facilities. Findings were translated into a phased modernization plan with clear prioritization based on risk reduction, feasibility, and return on investment. Immediate-start initiatives included launching the cubing program, initiating the WMS RFP process, and beginning STA and slotting analysis to improve storage methods and throughput performance. Alpine developed facility-specific recommendations for both Illinois and Colorado, recognizing that each site required a tailored strategy based on unique physical constraints, throughput demands, and long-term facility planning.

For Illinois, Alpine focused on maximizing the existing footprint through STA-driven racking optimization and layout redesign, while also identifying automation options that could work within the building's height and infrastructure limitations. For Colorado, Alpine supported a strategy that included STA, automation evaluation, layout design, and move planning aligned to leased facility requirements and forecasted growth. A structured 3–5 year roadmap was created with governance roles defined across operations leadership, the PMO, and procurement to ensure execution could align with budget cycles and program timelines.



5 Results

The engagement delivered a clear modernization roadmap that balanced immediate operational improvements with long-term scalability and mission readiness. The agency gained a prioritized plan anchored around foundational initiatives—including a unified WMS selection process, a network cubing program to strengthen item master accuracy, and engineering-driven storage optimization efforts through STA, slotting, and facility design. These recommendations positioned the distribution network to unlock near-term capacity, reduce risk, and create the operational discipline needed to support future automation integration.

The phased roadmap provided leadership with a practical 0–18 month execution plan while establishing a structured modernization strategy for the next 3–5 years aligned to facility readiness and federal funding cycles. Most importantly, the Strategic Master Plan created a shared blueprint across sites, enabling improved coordination, stronger visibility, and a scalable path forward to support veteran service outcomes with greater reliability and transparency.