

A Federal Logistics Network Improves Efficiency with a Comprehensive Warehouse Modernization Plan

1 Introduction

A large federal agency overseeing a complex logistics and distribution network delivers medical and non-medical supplies across its facilities. With three distribution centers in Colorado and Illinois, the agency sought to make improvements and modernize its operations to keep up with demand.

2 The Challenge

The agency faced two major challenges: limited storage capacity and a lack of automation. Rapidly running out of space, they needed expert guidance on whether to relocate or optimize their current facility to extend its usability. Manual picking processes were also making it increasingly difficult to keep up with rising demand and evolving industry standards. The agency contracted Alpine Supply Chain Solutions for a comprehensive assessment of their operations to guide their decision-making process.



3 The Process

Alpine conducted an extensive onsite assessment to evaluate existing warehouse operations, focusing on key areas such as data analysis, space utilization, equipment upgrades, labor allocation, and return on investment (ROI).

- **Volume Analysis:** Alpine analyzed inbound and outbound pallet volumes at multiple warehouses to identify peak periods, helping optimize resource allocation.
- **Space Utilization:** Inefficiencies in storage methods were identified, highlighting areas for improvement.
- **Equipment Assessment:** Existing equipment, including forklifts and other machinery, was evaluated for performance and upgrade opportunities.
- **Labor Allocation:** Labor data was reviewed to optimize workforce deployment during peak periods.
- **Automation Evaluation:** Automation solutions were assessed based on investment costs and potential ROI.

With this information, Alpine provided the agency with a series of recommendations to modernize its warehouse. The primary objective was to improve warehouse productivity while reducing costs and ensuring better service.

4 The Outcome

Alpine developed a road map for success to guide the agency's decision-making, featuring a 3-5 year phased modernization plan focused on ROI and operational improvements. Key recommendations included:

- **Warehouse Management System (WMS):** Implementing a WMS to streamline workflows and reduce manual labor.
- **Pick-to-Light System:** Installing a pick-to-light system to increase order accuracy and picking speed with visual indicators directing workers to the correct locations.
- **OPEX Automation:** Incorporating OPEX Perfect Pick and OPEX Sure Sort for high-speed picking and sorting tasks.
- **Vertical Lift Module (VLM):** Adding a VLM to maximize vertical storage space, improving storage efficiency and reducing picking time.
- **Carton Erectors and Auto Tapers:** Utilizing these tools to reduce manual labor and increase packing efficiency.

The warehouse modernization plan provides the agency with multiple paths to achieve operational efficiency through automation, better space utilization, and improved labor management. By investing in these technologies and a carefully structured modernization approach, the logistics network can enhance operations, reduce costs, and improve overall service quality.