CHOOLS CONSULTING SERVICES

Warehouse Re-design

Chools Supply Chain Consultants Complete a Practical Warehouse Redesign for a Leading Building and Construction Material Distributor

Chools recommends a practical, implementable warehouse redesign and operational improvements with an ROI of 19 months that enables our client to store 33% more pallets than forecast and increases order fulfillment productivity up to 56%.

The Challenge

One of North America's leading building and construction material distributors was growing so quickly that its inventory had outgrown the existing warehousing infrastructure necessary to support it. Chools was given the task to optimize the warehouse layout in a cost-effective and practical manner to support the operation for the next four years as well as to improve the operation's productivity levels to be used as a blueprint for improving the company's 17 other distribution centers across North America.

Initial Steps And Discovery Process

To accomplish this goal, Chools logistics consultants first became a presence in the facility learning the existing operation in great detail and accurately discerning the needs of the operation. Also, gathered the necessary data and collaborated with the client's project team to determine the ideal inventory level of the warehouse and how to plan for it using pallet quantities.

Once Chools verified its knowledge of the operation with the client's project team, it was time to take a step back and use our previous experience and internally collaborate on the best way to revolutionize our client's operation.

Our Warehouse Redesign Expertise Leads To The Solution

Firstly, the pallets and crates in the existing operation could easily be floor-stacked and, therefore, the significant investment necessary for pallet racks had little to no ROI. However, after analyzing the order and transaction log, we recommended to set-up a forward pick area using few, used selective pallet racks with one location for every SKU in the facility since many lines were picked in less-than-pallet quantities. In addition, to dramatically reduce the picking time, the supply chain consultants developed the specifications for order pickers to be used in the forward pick area.

For the rest of the facility, the floor-stacked pallets needed to be organized to increase productivity. Establish designed a location scheme utilizing striped lanes and scannable location labels. Using a detailed quantitative analysis of the four-year-out inventory levels, we created a layout using CAD and slotted the pallets into each location by product family and pallet quantity. The logistics consultants also redesigned the entire shipping and receiving area and recommended the break room to be relocated closer to the front offices of the facility.

Lastly, Chools came to the conclusion that the operation's warehouse management (WMS) system support had to be improved.
created a matrix of critical functionalities that the new WMS had to fulfill and brought in several vendors to demonstrate those capabilities. After a detailed cost-benefit analysis of whether to implement an out-of-the-box WMS or program it in-house, our client decided to program their own WMS in-house based on the functional support requirements determined by   Chools The supply chain and logistics consultants did extensive time trials to determine the time savings that the new WMS functionalities and redesigned processes would result in.

The Result

The implementation of **Chools** recommendations for a warehouse redesign and operational improvements achieve an estimated ROI of 19 months, taking into account an order fulfillment efficiency increase of up to 56% and 33% more pallet capacity than forecast.

Chools is a supply chain consulting firm focusing on supply chain strategy (/transportation-consulting-services-2), transportation consulting services (/transportation-consulting-services), warehouse design & improvements (/warehouse-improvements) and supply chain audits & analytics (/supply-chain-audits-analytics).