

# CooperTools

## Client Overview

CooperTools is a global manufacturer of hand tools, joining products, power tool accessories, and chain products. CooperTools distributes a large percentage of its products, including its well-known Lufkin, Crescent, Nicholson, and Weller lines, through a centralized distribution center (DC) located in Raleigh, North Carolina.

## The Challenge

Although CooperTools' manual, paper-based systems were operational, management recognized that they would not meet the future needs of customers. Such services as same-day order turn-around, vendor-managed inventories, electronic data interchange, advanced shipping notices, and bar coding were becoming a common part of customer expectations but were not possible with the paper-based systems. Additionally, the DC was out of space and needed an upgrade to meet future needs.

CooperTools' main objectives in the upgrade project were clear:

- Utilize the current warehouse
- Accommodate up to 30 percent of growth in five years
- Meet customer order, inventory, and shipment expectations
- Become more efficient and reduce costs

Tompkins Associates was involved from concept through implementation with the warehouse layout and distribution plan. The project consisted of three phases. Tompkins' engineering team worked with CooperTools to:

- Determine storage, throughput, and central requirements for the DC
- Identify, analyze, and evaluate alternative material handling, storage, layout, staffing, and operational flows, and determine the best methods
- Identify, analyze, and evaluate order picking methods
- Quantify benefits of a Warehouse Management System (WMS)
- Develop functional bid specifications, evaluate bids, and recommend vendors for all equipment types
- Develop an implementation plan
- Perform post-implementation audits and follow through with recommendations for further productivity enhancements

## The Solution

The CooperTools project was all encompassing. As a result of observations made by Tompkins, the following recommendations for improvement were made:

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- Consolidate selected, remote centers into a central DC
- Retrofit the high rise with very narrow aisle vehicles
- Receive product at the high rise
- Install narrow aisle pallet rack for fixture storage requirements
- Implement 20 foot high shelving and decked pallet racks for picking slow moving items
- Implement a pick-to-light system for fast moving items
- Implement a conveyor system for case handling throughout the facility
- Implement a WMS with radio frequency capabilities, task interleaving, workforce direct log, and storage and material handling system interfacing

## **The Results**

Combining state-of-the-art warehousing technology and developing a training program for its DC staff, CooperTools was able to see the following improvements:

- An increase in storage capacity by 30 percent while consolidating several DCs into one
- More efficient utilization of shipping and receiving dock doors, which translated into increased customer satisfaction
- Improved inventory accuracy through the WMS, real-time inventory control that resulted in reduced back orders
- Elimination of extraneous areas including back order, overflow, packaging, and export order picking