

Merck & Co., Inc.

Client Overview

Merck & Co., Inc. is a global, research-driven pharmaceutical company that discovers, develops, manufactures, and markets a broad range of human and animal health products directly and through joint ventures. The company also provides pharmaceutical benefit services through Merck-Medco Managed Care.

The Challenge

Merck wanted to consolidate 14 United States distribution centers (DCs) into three existing centers in Atlanta, Georgia; Los Angeles, California; and Somerset, New Jersey, without expansion. The company planned to triple the order volume at each DC.

Within a six-month implementation schedule, Merck required an improved picking system to meet increased volume, and a Warehouse Management System (WMS) to insure labor efficiency and inventory control. The goal was to operate on a single shift within all FDA guidelines.

Tompkins Associates was charged with reconfiguring the three selected centers and adding the required material handling equipment, systems, and procedures to meet the aggressive six-month implementation schedule.

The Solution

Tompkins began by developing a Strategic Master Plan that would define the system functionality. Next, Tompkins formulated a pick-to-light and WMS for bid specification. The WMS would qualitatively and quantitatively evaluate all bids, select software, and train personnel on the new system and equipment. Tompkins also served as the Merck Project Manager during the system development and installation phases of the project.

The focus was not only on meeting the aggressive timeline, but also on anticipating future customer needs. Tompkins recommended installation of a pick-to-light system, a WMS, relocation and upgrades to the existing pickline, an additional conveyor, and addition to and density storage. These recommendations offered both increased pick capacity to meet peak periods and the flexibility to further expand storage capacity.

Pick-to-light and WMS bid specifications included:

- Analyzing all Merck order profiles, volumes, and projected growth for each facility

continued...

- Defining and identifying all Merck-specific product tracking requirements, product storage and picking requirements, customer order and packing requirements, and system operational parameters
- Identifying and contacting all qualified vendors, evaluating all bids, negotiating system functionality and price, and recommending the most qualified vendor

Facility layout and equipment modifications included:

- Analyzing product sales and inventory by piece and case volume for all finished goods to determine product slotting on the pick line and bulk-pick warehouse locations
- Maximizing the storage capacity and improving the material flow
- Identifying existing warehouse capacity, material handling methods, and storage equipment, including carton flow rack, pallet rack, accumulation conveyors, and stand-up reach trucks.

The Results

Tompkins helped Merck meet its goals in a cost-effective, time-efficient manner. Major outcomes from the project were:

- WMSs and pick-to-light systems improved throughput capacity by 400 percent and increased order-picking accuracy from 94 percent to over 99 percent.
- Storage capacity increased by 50 percent.
- Material flow and inventory accuracy improved.

Tompkins' solutions also enabled Merck to close 11 DCs around the U.S. without building any additional space. Furthermore, customer satisfaction improved and Merck now fills over 90 percent of all orders the same day they are placed.