Case Study: Central Medical distribution uses AutoO2 to optimize multi-stop loads

A large, centrally located distribution center replenishes warehouses in major metropolitan areas all around the country. Central planners convert distribution requirements from their DRP system into very full truckloads using Automatic Order Optimization (AutoO2). Because these loads are approaching the capacity for the trucks and legal weight limits the warehouse needed AutoO2 to provide detailed instructions tell how to pick the pallets and sequence the product in the trailer. In addition to more than $30,000 per month freight cost savings AutoO2 has increased warehouse productivity all while creating damage-free, well cubed loads that don't come back from the scale.


The journey started elsewhere
While the AutoO2 journey began at a manufacturing plant, it was the number of SKU's, the many and varied cases sizes and the complexity of multi-stop loads and managing cross-dock shipments that drove management to seek savings here using AutoO2. Installing functionality was performed in stages the first of which was to perform planning to increase shipment size. This required:

- Obtaining and cleaning up the item master
- Training the planners and their backups
- Lane-by lane introducing order optimization
- Implementing rules for shipping cross dock

This last issue—cross-dock product that simple "must go" and also must never be broken down or orders, consisting of as few as one pallet to as many as 40 pallets must all ride together on the same truck.

The next stage was to provide the plant with case picking and truck loading instructions. But, as is usual in most
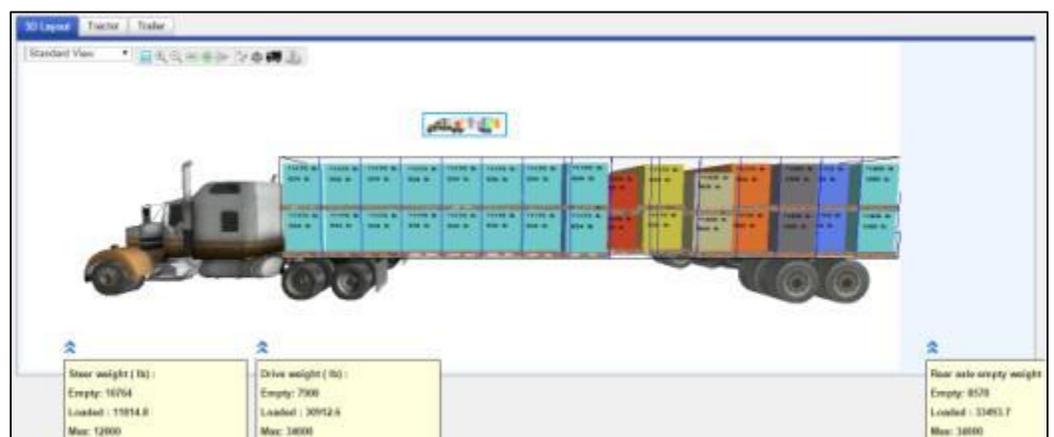
companies, what is planned is not exactly what is shipped. Rather, during the time between order creation and execution, there are cuts and substitutions and product may have been moved. Before picking is to take place, but after the WMS performs allocation, the WMS data is fed the AutoO2. Using its clever integrated palletization and truck loading logic the software provides detailed instructions that guide the pickers to s selection route that maximizes pallet quality while attempting to minimize travel. Most importantly, these case-pick pallets fit neatly into the load that the forklift operators assemble inside the trailer.

The next stage was to have AutoO2 optimize multi-stop (some with three stops) loads that contain all the complexity mentioned above including cross-dock. Each stop is optimized in the context of the other to fully utilize the truck while maintaining stop segregation