

Case Study - 4 Easy Ways to Optimize Warehouse Efficiency

When Monster Moto opted to shift its assembly of minibikes and go-karts from China to Ruston, La., the company moved into a new 100,000-square-foot factory.

After the move - which included 22 UPS semitrailers packed with equipment, an inventory of spare parts and 5,000 finished bikes - UPS and Monster Moto sat down to figure out how to best set up an assembly line, prepare for distribution, and arrange parts and equipment in their new location. "We wanted a seamless transition, and UPS's involvement meant our customers and vendors did not even notice that the move took place," says Rick Sukkar, president and COO.

Part of that transition was setting up the new warehouse, which can be like painting a blank canvas, albeit in an organized and efficient way. Most warehouse reorganizations are more like partially painted canvases. "We rarely come into situations like Monster Moto," says Greg Gonzales, an engineer and specialist in warehouse design with the UPS Customer Solutions Group. "More often, companies are typically growing organically and find themselves cramped for space."

Whether your warehouse is brand new or decades old, consider these layout techniques.

1. Change aisle width

UPS evaluated Monster Moto's previous warehouse layout and found a number of barriers, such as aisle widths, to a seamless flow. It's commonly believed that aisles 11 feet wide are safest for forklift operation, but Gonzales disagrees. "Forklifts come in different styles, and sit-down, counterbalanced forklifts are built to handle 3,500 pounds or more," he says. Newer generation, wire-guided vehicles allow you to safely cut aisle widths to 5 feet.

2. Look at product velocity

A common organizational misstep is to group similar products together. "That's not necessarily best practice," Gonzales says. "You want to lay out your warehouse based on product velocity. Put your fast movers - your A, B and C products - as close to the shipping lanes as possible to eliminate steps and move products faster."

3. Measure travel time

Some companies believe that more space means better storage, but that's not always the case. Gonzales points to another customer that moved from a 25,000- to a 100,000-square-foot warehouse. "They had six employees in the warehouse and planned to use the added space to store more products. On average, 55 percent of an employee's time is spent traveling on foot or by forklift, so they were doubling or even tripling their travel time," he says. Depending on the size of the warehouse, the work performed and the way items are found, managers should consider instituting a method of measuring travel within the warehouse, which will identify areas for improvement. Reducing travel time leads to improved productivity in getting orders out faster and more efficiently without overtaxing your labor force.

4. Watch for dust and honeycombs

Cut excess space by identifying products that are gathering dust. "Some companies feel like they must have one of everything on hand, even if it doesn't sell," Gonzales says. "It would be cheaper to take the outdated or unsold stuff out back and light it on fire than to keep it in the warehouse as inventory." Also look for "honeycombs," or the gaps and empty spaces on the shelves behind, above or alongside products. Gonzales advises that businesses move smaller products to 12- or 18-inch bin shelves.

Consider the payoff

Rethinking racking layouts, aisle space and honeycombs can help businesses find 15 to 18 percent more space. Positioning products according to velocity and getting rid of slow movers not only will lead to more storage capacity but will also improve a company's productivity and bottom line.

At Monster Moto's new factory, they focus on manufacturing at one end of the building and distribution at the other. "You want seamless flow in any warehouse, regardless of size or industry," Gonzales says. In more than one instance, warehouse redesigns that optimize efficiency have allowed UPS customers who were prepared to incur an additional cost of expansion to put off capital investment for three years or more, just through simple solutions.