

Zebra Robotics Automation™



SUMMARY



Customer

Dorman Products

Industry

Manufacturing and Distribution

Challenge

Eliminate travel waste and enable contributors to dedicate more time to valued tasks such as stock picking

Workflows

- Shipping Lane Delivery
 - Freight1500 Pallet
- Outbound Production/Picking
 - CartConnect100

Business Outcomes

- Accelerated material movement workflows
- 16% reduction in the distance contributors travel within the warehouse
- 16% improvement in pick rate and in revenue per labor hour
- Enhanced warehouse delivery accuracy
- Improved product delivery times
- Easily created and customized workflows in-house and in real time with drag and drop software

Dorman Products Reduces Travel Waste by 16% with Autonomous Mobile Robots (AMRs)

Since 1918, Dorman Products has served as one of the automotive aftermarket's top pioneering problem solvers. The company has released thousands of parts and components that repair professionals, auto enthusiasts and owners could once only buy from original equipment manufacturers. Always innovating, Dorman provides new and advanced solutions to individuals and businesses for their automotive maintenance needs.

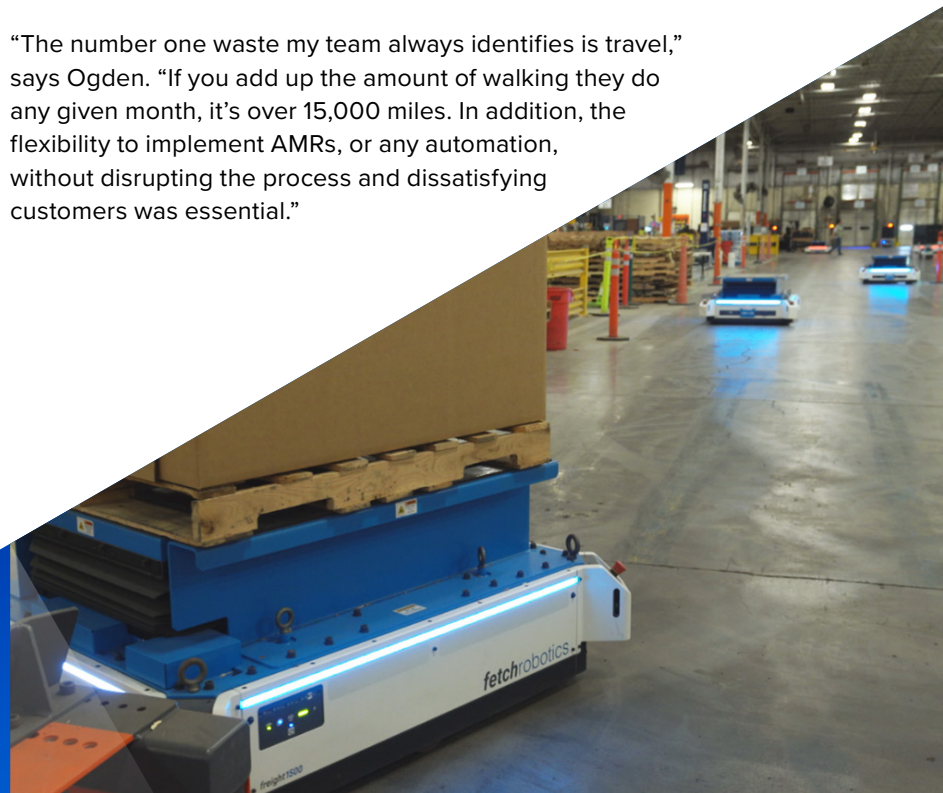
In the same way, Dorman has forged efficiencies at its multiple manufacturing and distribution sites in the United States; it prides itself on the innovations it has brought to its facilities with a spirit of continuous improvement, often inspired by its employees, which the company celebrates as its “contributors.”

Motivation: Getting Auto Parts to Customers Even Faster while Enhancing Productivity

“Getting products to our customers on time is key to our entire business model,” says Ryan Ogden, Operational Excellence (OpEx) Manager at Dorman Products. “If we can’t get parts to them on time, the probability they’re going to look for Dorman again is low.”

Meeting customer needs meant Dorman had to look for ways to become more efficient and Zebra’s AMRs helped improve product movement, decrease order cycle times and reduce time contributors spent walking within the warehouse or using material handling equipment.

“The number one waste my team always identifies is travel,” says Ogden. “If you add up the amount of walking they do any given month, it’s over 15,000 miles. In addition, the flexibility to implement AMRs, or any automation, without disrupting the process and dissatisfying customers was essential.”



Robots to the Rescue

To automate material movement in its 750,000-square-foot Warsaw, Kentucky facility, Dorman deployed both the Freight1500 and CartConnect100 AMRs.

The Freight1500 handles full pallet moves. Pickers build pallet orders and when an order is complete, they drop them on a transfer station where the AMR picks up the pallet and delivers it to the shipping dock for trailer loading.

Dorman's production department also benefits. "The 1500 will come to production with a payload and leave production with a payload, saving travel time on both sides of the process," says Ogden.

For smaller e-commerce orders, contributors use the CartConnect 100. Pickers offload orders to the AMR which head directly to Dorman's rush processing area for shipment.

Less Wasted Travel and Increased Pick Rates

Implementation happened in a phased approach, and deployment was simple. "We uncrated the robots, mapped the facility, loaded them into the map and they were ready to go," added Sandra Grogg, an OPEX team member. "The software is very easy to use, it's literally drag and drop anytime you want to build or change a workflow."

Dorman started small. It showed its contributors how AMRs could eliminate travel and that went a long way. When something needs to be moved, contributors call the robot. "We have already reduced travel waste by 16%, and we plan on going after the rest by creating new workflows for our AMRs," says Ogden.

With contributors walking and driving less, they can pick more, boosting pick rates and revenue per hour.

"Our AMRs eliminated almost 112 miles per day of travel waste," Grogg says. "We've seen a 16% improvement in our pick rates and a 16% improvement in our revenue per labor hour. We've seen benefits on all levels of our key performance indicators (KPIs)."



Greater Accuracy and Less Waiting

Another benefit has been greater accuracy in loading dock deliveries. While inaccurate deliveries were an uncommon problem for Dorman, they occasionally did occur, and all savings are important.

"We have seen a decrease in misplaced product on the dock," Grogg affirms. "Prior to our AMRs, which drop precisely where directed, an operator on a piece of material handling equipment (MHE), might forget the exact delivery location, or they might see that a stage is overflowed and drop it one or two stages over. This doesn't happen with our AMR deliveries."

Contributors add their productivity has increased. Previously, they had to wait for skids to arrive with product, but with AMRs, they have a dependable constant flow of materials, all of which benefit Dorman customers.

An Exciting Future

With its culture of innovation and unrelenting focus on continuous improvement, Dorman Products demonstrates there are few limits to how AMRs can be integrated into workflows to boost productivity and value.

"When we looked for an automation partner, we selected Zebra because of the ability to rapidly deploy," Ogden comments. "We analyzed the inefficiencies within our existing process and said if we can improve that, we'll see massive improvement overall. Start small and scale. The only thing limiting what you can make these AMRs do is your imagination."



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