



Global Electronics Manufacturer Improves Worker Safety and Output with Autonomous Mobile Robotics (AMR)

A leading global electronics manufacturer has built a reputation of customer obsessed thinking, elegant design, and consistent excellence across every product line. Feeling the need to create a safer workspace and lessening the load on workers by having them lift, carry, and walk less, a continuous improvement engineering team began evaluating automation systems in earnest.

Business Challenge

The production facility consisted of ten pickup and dropoff stations in a large assembly zone. Each technician was making thousands of trips and lifting totes manually. The safety risks, labor costs, margins of error, and environmental impacts were worth reexamination. In addition to its broader employee safety goals, the electronics manufacturer wished to improve worker efficiency. Rather than picking up totes and bringing these to the conveyor belt, skilled workers could focus on other ways of adding value.

“Sustainability, employee safety, and efficiency were desired outcomes. Our team committed to eliminating redundancy and reliance on human technicians anywhere possible,” the VP of Process Improvement shared.

“Even with limitless resources and ingenuity, there is a ceiling to how much you can refine and optimize existing assembly processes. Integrated automation was the logical next step.”

Industry: Manufacturing

Capability: Automation with Vision & Robotics

Application: Parts disassembly, organization, and transport

Challenge: Create a safer, more efficient work environment less reliant on manual human labor

Featured Solution: Integrated AMR, interoperable with existing conveyor belt system

Key Benefits: Safety, efficiency, and production output goals met within six months, with future plans to expand to other facilities

The Solution

The company determined that a proper automation pilot was necessary to achieve improved safety and production output with minimal environmental impact. While the potential for automation was obvious, the actual integration and implementation of such technology raised more questions than answers.

After hearing of successful automation pilots in competitor facilities, the VP spoke to their partners for further guidance. Thanks to a proven track record with autonomous mobile robotics (AMR), Levata's dedicated team of Pre-Sales Engineers, Solution Architects and Account Managers was recommended to oversee the AMR pilot program. Levata's Pre-Sales Engineer began with an onsite visit for a better understanding of the operation, as well as to collect key data points for improvement. Goals were set based on the number of pounds transported and the difference in delivery time of robots versus humans.

Other key metrics included how much product was being moved, which pallet applications were in use, how well each conveyor system performed, and how many pallets per hour were being shipped out.

With this data, the Solution Architect at Levata created a facility map, built out workflows, and modeled different scenarios that would not only ensure a safer workplace and improved efficiency, but also operate seamlessly with existing WMS and ERP software.

Levata recommended a lineside delivery AMR to supplement its existing workforce.

The AMR was the ideal automation vessel. With seamless plug-and-play installation, it addressed the safety, sustainability, and workflow challenges, fit the totes used by the manufacturer, and served as a perfect support tool for the entire production line.

Most of all, the mobile robot provided interoperability between existing software, pickup/dropoff stations, technicians, conveyor systems, construction machinery, and palletizers.

Benefits and Results

Within six months, the solution had already met goals set on the basis of worker efficiency. The AMR pilot led by Barcodes, Inc. also demonstrated scalability in other locations due to a simple integration process and quick setup. The electronics manufacturer plans to implement automation in similar production facilities worldwide.

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The Levata approach to automation was transformative. Not only did they design the right solution for our needs, they also managed the onsite deployment and integration. After achieving our desired outcomes, they continued to support the AMR solution long after project completion.

– VP of Process Improvement,
Global Electronics Manufacturer

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