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Thought Leadership Series

Overcoming the Myths of Autonomous Mobile Robots



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As warehouse operations continue to manage labor availability, rising customer demand, and the need for efficient and dependable fulfillment operations, autonomous mobile robots (AMRs) have created a variety of automated solutions that can help relieve these pressures. With any solution differing from traditional operations, myths and misconceptions creep into warehouses and board rooms, which can be used to dismiss mobile robot opportunities without any real data.

As the need for automation grows, operations will turn to supply chain partners to provide guidance and expert leadership when it comes to AMRs and other robotic solutions. For example, FORTNA recently announced a new partnership with a leader in mobile robotic solutions, Geek+, to transform how companies approach order fulfillment.

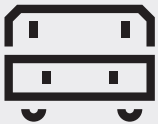
In this FORTNA Insight, we'll examine and dispel the top myths about AMRs and how they can be utilized in any operation, regardless of size and throughput.

Myth #1 – AMRs are only for large operations

This could be the biggest misconception when it comes to AMRs. As with many automated solutions, AMRs come in many sizes, types and functionalities that can be utilized in different environments and operations. Whether using an entire fleet of mobile robots or just a few, cost and labor savings can be realized across all types of industries, including retail, life sciences, industrial distribution and e-Commerce. AMRs can also be utilized in a smaller footprint, creating a more accurate and productive order fulfillment operation.

Myth #2 – AMRs replace workers

The main fear of any robotic program is that the organization is only automating to replace workers. Robots, especially AMRs, do not replace workers but replace physically straining and repetitive tasks. This allows organizations to reorganize their workforce, optimize current full-time employees and reduce the need for supplemental workers and overtime.



Automation, including the addition of AMRs to an operation, has often led to new technical roles, greater employee satisfaction and fewer safety incidents.

Myth #3 – AMRs have replaced AGVs

Autonomous guided vehicles, or AGVs, have long been the standard for mobile robots before AMRs started to populate warehouses. While unable to roam freely through an operation using sensors to recognize humans and obstacles, AGVs run on a specific path marked by magnetic tape, codes or RFID tags embedded or printed on the floor. The mobile action is typically closed off to traffic and done in a defined area or travel lane.

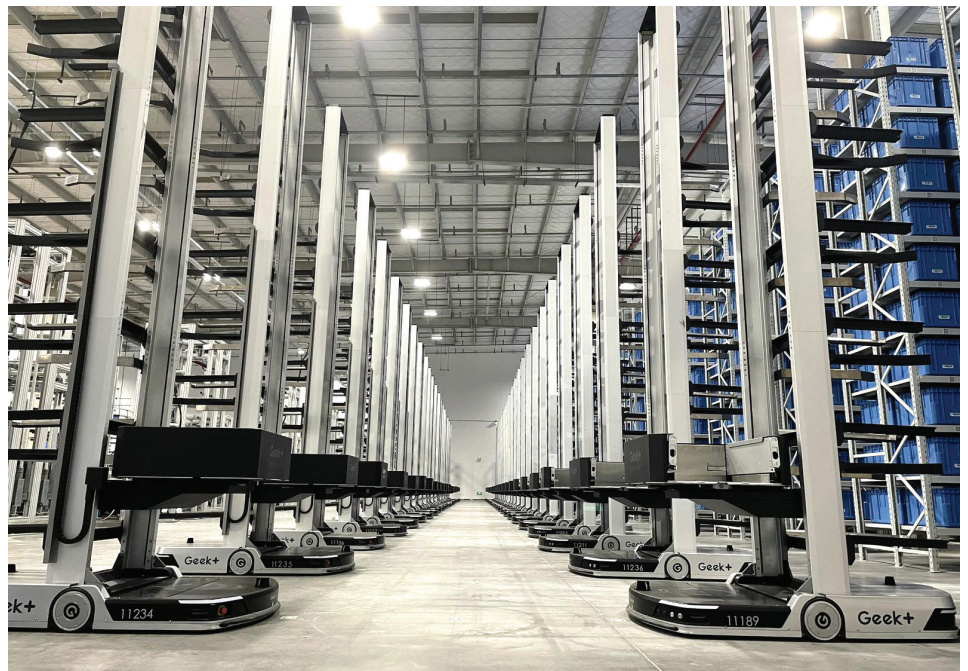
While AGVs are limited compared to their AMR counterparts, AGVs can offer a unique solution to operations at a lower budget point. It is also a proven technology that can ease management concerns for successful implementation and return on investment (ROI). Working with a supply chain partner can help an organization decide which technology best suits its needs now and in the future.

Myth #4 – AMRs are a challenge to implement

This myth may have been true 5 to 10 years ago; in fact, it was one of the main barriers to adoption. However, many AMR manufacturers have improved the process of programming and deploying AMRs, making them more straightforward and user-friendly, designed to be used by non-robotic experts. With the robot's advanced mapping and sensing capabilities, the time from purchase to utilization can be shortened.

Myth #5 – AMRs can be a safety concern

A free-roaming vehicle in a busy warehouse could raise concerns for any organization. Over the past few decades, significant advancements in sensing and safety sensors and advanced collision avoidance systems, like lidar, have made AMRs a safe investment. Many AMRs can now detect the difference between humans and physical objects and react appropriately. Utilizing mobile robots can reduce warehouse floor traffic, which in turn, reduces the number and potential of safety incidents.



Myth #6 – Warehouse worker interaction is difficult

This issue has dramatically shifted as new technology and automation have been introduced. The advent of collaborative robots, or cobots, has transformed this from a past concern into a new, exciting, automated solution. This is where a worker is working with a robot or robots on the warehouse floor. One solution gaining in popularity is using AMRs in zone picking; as a robot moves from zone to zone, pickers stationed in each zone move to the robot, make the pick, and then send the bot to the next pick location or zone, continuing until the order is complete and the AMR delivers the order to a packing station.

Myth #7 – AMRs are too expensive

As with any popular solution or product, AMRs can come in all shapes and sizes. They can be used to carry light or heavy loads, as well as carts and transport pallets. AMRs can also be fitted with several options, including tilt trays and displays for sortation and picking. With the numerous options and competition in the AMR market, prices have steadily declined over the past decade. Working with a supply chain partner can help you not only find the best-fit AMR for your operation but also find it at the right budget and ROI.

Autonomous mobile robots continue to transform fulfillment operations by increasing throughput, order accuracy, and reducing costs and dependency on labor. By gaining a better understanding of the capabilities and benefits of mobile robots, organizations can embrace automated opportunities and harness the potential to transform their distribution operations.

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FORTNA CAN HELP

Few supply chain partners have the breadth of experts and expertise that can help operations utilize and adopt AMR technology like FORTNA. Whether it is running a pilot program to verify a robotic solution or preparing a distribution center to fully employ an AMR solution, FORTNA can be the partner that helps design, plan and integrate a mobile robotic solution that is the best fit for your operation.

Contact us today at www.FORTNA.com