

WHITE PAPER

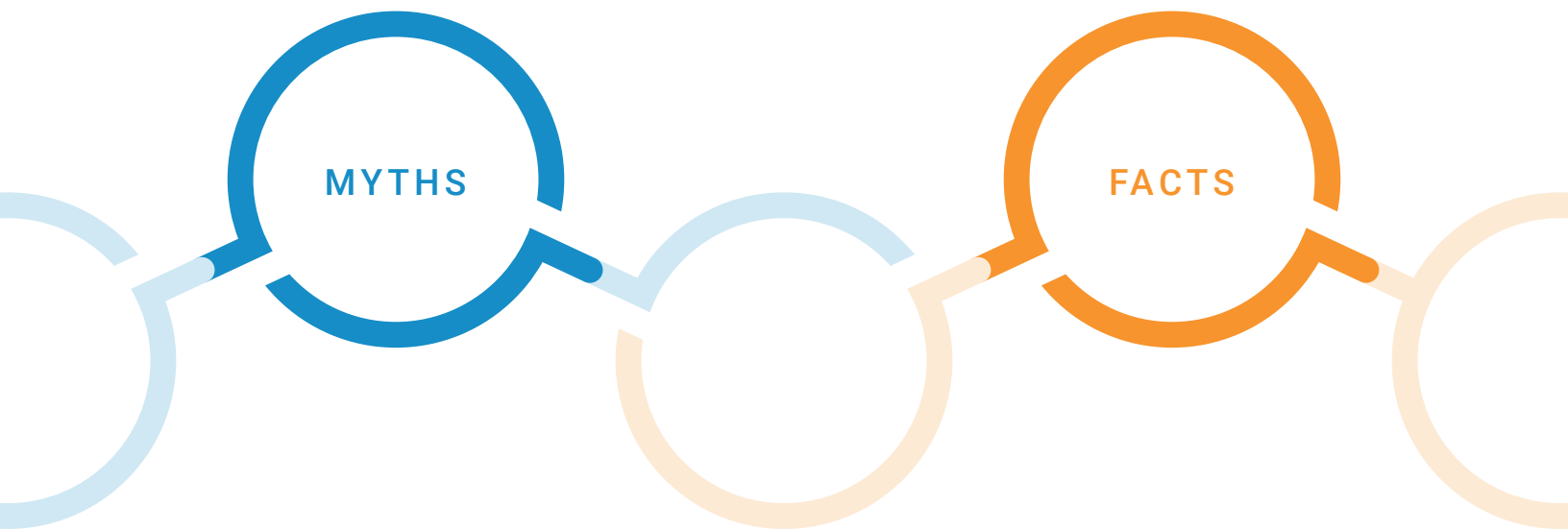
Debunking 5 Labor-Related Robotic Automation Myths





IN THIS WHITEPAPER,

We'll debunk five frequently heard labor-related automation **myths** with **facts** from leading industry experts, researchers, and publications.



INTRODUCTION

Deploying automation in warehousing and distribution has become much more commonplace in the past few years, as companies strive to increase agility and resilience in the face of supply chain disruptions. Indeed, according to MHI, 74% of respondents to the association's *2023 Annual Industry Report* are increasing their planned investments in innovative technologies. This includes spending in robotics and automation—solutions that the report says have become “table stakes for operations to remain competitive.”

Just how many operations have invested in automation, such as autonomous mobile robots (AMRs)? A survey of the readers of *Modern Materials Handling*, *Logistics Management*, and *Supply Chain Management Review* found that 52% either already use robotic automation or plan to do so within 36 months, while 48% have no plans for robotic investment.

If robotics and automation truly are a “table stakes” competitive advantage, why do 48% of companies hesitate to invest in these solutions?

Recent economic uncertainty could be a contributor. However, there are also numerous misconceptions about the impact of a robotics or automation implementation as it relates to workers.

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FACT

Automation, like AMRs, won't replace workers. Instead, it takes over the redundant, repetitive tasks that workers find boring and opens up more creative and strategic work.

For over a decade, labor issues have topped the list of leading supply chain challenges faced by respondents to the survey upon which MHI's *Annual Industry Report* is based. The most recent edition found that 57% report hiring and retaining qualified workers as their top supply chain challenge, followed closely by 56% who say the talent shortage is their biggest struggle.

It's no wonder operations managers cling to the myth—or, perhaps more accurately, the hope—that automation will replace all their labor (and solve this ongoing headache).

In reality, robotics and automation in warehousing and distribution can't replace workers. Instead, these technologies reduce the headcount required to perform redundant and repetitive tasks. However, associates are still needed to perform higher value, more complex work—such as exception handling or picking of items whose dimensions or weights exceed the limits of the automation. Personnel are also needed to implement, operate, maintain, and service automated systems.

In an interview with *The New York Times*, Rueben Scriven, Research Manager at Interact Analysis, forecasted a 25% jump in robotics and automation investment through 2023. Despite this growth, he was careful to point out that “robots won't replace

workers in the near term, but rather make them more efficient and productive. Humans will be crew chiefs, commanding and maintaining teams of robots.”

Further, despite the recent economic slowdowns prompted by current world events and rising inflation, low unemployment rates persist. That means it's more important than ever for warehouses to maximize the efficiency and productivity of the employees they do have, instead of perpetually engaging in the hiring cycle.

“...robots won't replace workers in the near term, but rather make them more **efficient** and **productive**.”



MYTH#2

My employees fear automation will take their jobs and will be reluctant to adopt it.

Researchers at Accenture tackled the topic, “How do warehouse workers feel about automation?” in the *Harvard Business Review*. In a series of in-person interviews with warehouse associates worldwide, they asked what automation technologies were being used, how associates felt about working alongside a robot, and what safety challenges they faced.

In the subsequent analysis, the Accenture researchers found sentiment toward robotics and automation was roughly 40% negative and 60% positive. Workers worry about potential job losses, inadequate training on the technologies, and downtime caused by equipment malfunctions.

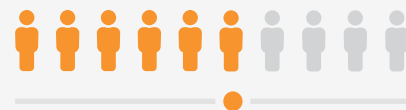
To help workers overcome their concerns and fully embrace automation, the Accenture team recommends several strategies. These include developing interactive training on the automation, as well as instituting upskilling to demonstrate career growth opportunities to warehouse associates. They also advise implementing continuous improvement programs around safety and ergonomics.

However, the majority believe that automation makes their jobs less dangerous and more ergonomic, as well as helps them attain **higher efficiency** and **quality**.

FACT

Workers are concerned about automation, but most believe these technologies make their jobs safer while helping them be more productive and accurate.

How do warehouse workers feel about automation?



60%
positive



40%
negative

Everyone in my operation will embrace automation without additional training or a comprehensive change management program.

FACT

Training and change management are crucial to gain automation acceptance from personnel at every level of an organization.

Adding automation to an existing warehousing operation is a significant change. Yet, unless change management is handled properly, a company will encounter resistance from upper management all the way down to front-line employees.

Researchers at Sweden's Jönköping University studied organizational resistance to warehouse automation and explored measures to overcome those challenges. They recommend the following best practices:

- ✓ Top management's commitment to the project is crucial. A culture that embraces risk, and leaders who understand that the transition from a manual to an automated process may not be smooth, are essential. In addition to continuously communicating confidence in the project, it is vital to establish evaluation criteria for monitoring the automation's success.
- ✓ Development of a formal automation implementation plan that is widely and repeatedly communicated and adhered to, step-by-step, is a must. This plan should include training, developing new job titles, skills development, incentives, motivations, and more to help the workforce adapt to the technology, as well as understand the career growth opportunities it brings.
- ✓ The automation's design should be human-centered. Its functioning and interface should address workers' needs by being intuitive, easy to operate and understand, and supportive of their assigned tasks.
- ✓ A conscious effort should be made to understand employees' reasons for resisting automation. The research team attributes resistance to change to staffers' lack of confidence, knowledge, or experience with the new system. Developing and implementing continuous training programs designed to help employees grow their skills and expertise in automation will help increase deployment success.

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MYTH#4

Automation is not safe.

FACT

Mobile robots are loaded with sensors and software that enable them to safely navigate their environment and avoid collisions. Fixed automation incorporates protective guarding systems that prevent personnel from contact.

AMRs, notes *DC Velocity*, are not built for speed. Rather, they travel at a moderate pace—generally between 2 and 3 miles per hour. Onboard sensors, lasers, 3D cameras, and computers continuously monitor each AMR's surroundings and perform safety-critical calculations. This allows each vehicle to avoid collisions, navigate around obstacles, slow down or stop when a person crosses their path, and travel safely and efficiently from task to task.

Fixed robotic and automated systems can likewise be guarded by sensors and lasers that secure access points. They can also be protected by barriers, shields, and other systems that physically separate associates from moving machinery. To ensure the safety of personnel—regardless of the type of automation deployed—best practice is to perform a risk assessment to determine potential dangers and identify the optimal protective solution.



Automation is too complicated for my in-house technicians to support.

Operations with in-house technicians already familiar with conventional materials handling equipment—such as conveyors and forklifts—shouldn't shy away from the transition to servicing automation. Nearly all automation vendors offer comprehensive, hands-on training programs. These sessions help maintenance personnel become more adept at, and confident in, performing routine service and troubleshooting.

Additionally, outsourcing is an option for smaller operations that lack the internal staffing to service and maintain automated equipment, or for companies who prefer to use external resources.

Modern Materials Handling's most recent Warehouse and Distribution Center Equipment Survey saw a decline in the number of respondents using internal maintenance teams to service automation, from 67% in 2022 down to 54% in 2023. Survey participants reported increased reliance on outsourced

FACT

With additional, specialized training, in-house technicians can become highly proficient at servicing automated equipment.

maintenance, either entirely or as a collaborative effort. External resources included both automation vendors and independent third-party service providers. These outside resources are relied upon to provide upkeep and upgrade services (43%), consulting (43%), and maintenance (40%).

Thanks to the variety of available options for automation maintenance, companies can confidently invest in these technologies and select the level of internal and external support that best suits their operation.



SUMMARY

It's time to let go of the misconceptions associated with labor that surround robotics and automation. Operations that understand the role of these technologies and how they can fit into—and improve—existing processes will benefit in multiple ways.

By increasing the productivity of a current workforce, companies can step away from the infinite frustrations of a challenging hiring cycle. Through training, education, worker-centric design, and a proactive change management program, employees at all levels of an organization will embrace robotics and automation for the opportunities they present.

Further, today's automated solutions—both mobile and fixed—incorporate myriad safety features that minimize the risk of injuries to personnel working with and around these technologies. Moreover, current maintenance personnel can be trained to support robotics and automation, either independently of, or supported by outside resources.

Companies that have worked through these five labor misconceptions will continue investing in automation. According to the research firm Interact Analysis, the global warehouse automation market will grow from \$36 billion in 2021 to \$77 billion in 2027.

Notably, thanks to their inherent flexibility, scalability, ease of operation, and ability to address a variety of workforce-related challenges, Interact Analysis says AMRs “have become the most significant trend in the automation market in recent years. By 2027, they will account for 30% of total warehouse automation revenues, equating to around \$14 billion.”



Do you have other workforce-related automation myths you'd like to share?

Connect with Prime Robotics at info@primerobotics.com to speak with one of our warehousing and distribution efficiency experts. We'll be happy to discuss automation misconceptions—related to labor or any other issues—you've heard.



About Prime Robotics

Prime Robotics is a global provider of intelligent end-to-end automation solutions and autonomous mobile robots for the warehouse, distribution, e-commerce, and material handling industries. Prime's proven suite of robotic hardware and software solutions is designed and tailored to optimize the fulfillment ecosystem – providing greater efficiency, scalability, accuracy, and cost savings. Prime Robotics manufactures and supports its products from its headquarters in Denver, Colorado.

For more information, go to primerobotics.com.



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