



SYMBIOTIC PRODUCTIVITY: AUTOMATED LIFT TRUCKS AND THE NEW MANUFACTURING WORKFORCE

By January of 2024, investment in building or expanding manufacturing facilities in the US had reached a record high of \$225 billion, up 37% year over year. But a major obstacle to continued industry growth is labor. While manufacturers could need as many as 3.8 million new workers by 2033, half of those jobs, around 1.9 million, could go unfilled if the current labor gap remains unresolved. Workforces are rapidly reaching the limit of what they can accomplish through hard work alone. As a result, industrial automation, like automated lift trucks, is rapidly moving from “nice to have” to an “integral component of the workforce.”

Fortunately, automation technology has become increasingly capable, straightforward and scalable. Automated lift trucks have become a practical, cost-effective way to augment the labor pool, boost productivity and improve retention by automating repetitive, non-value-added tasks and focusing employees on more engaging, satisfying work. But taking this step requires a basic understanding of how automated lift trucks interact with a team, how human and automated workforces can leverage their complementary strengths to create a more productive work environment, and how automated lift trucks integrate into their environment.

SYMBIOTIC PRODUCTIVITY: AUTOMATED LIFT TRUCKS AND THE NEW MANUFACTURING WORKFORCE

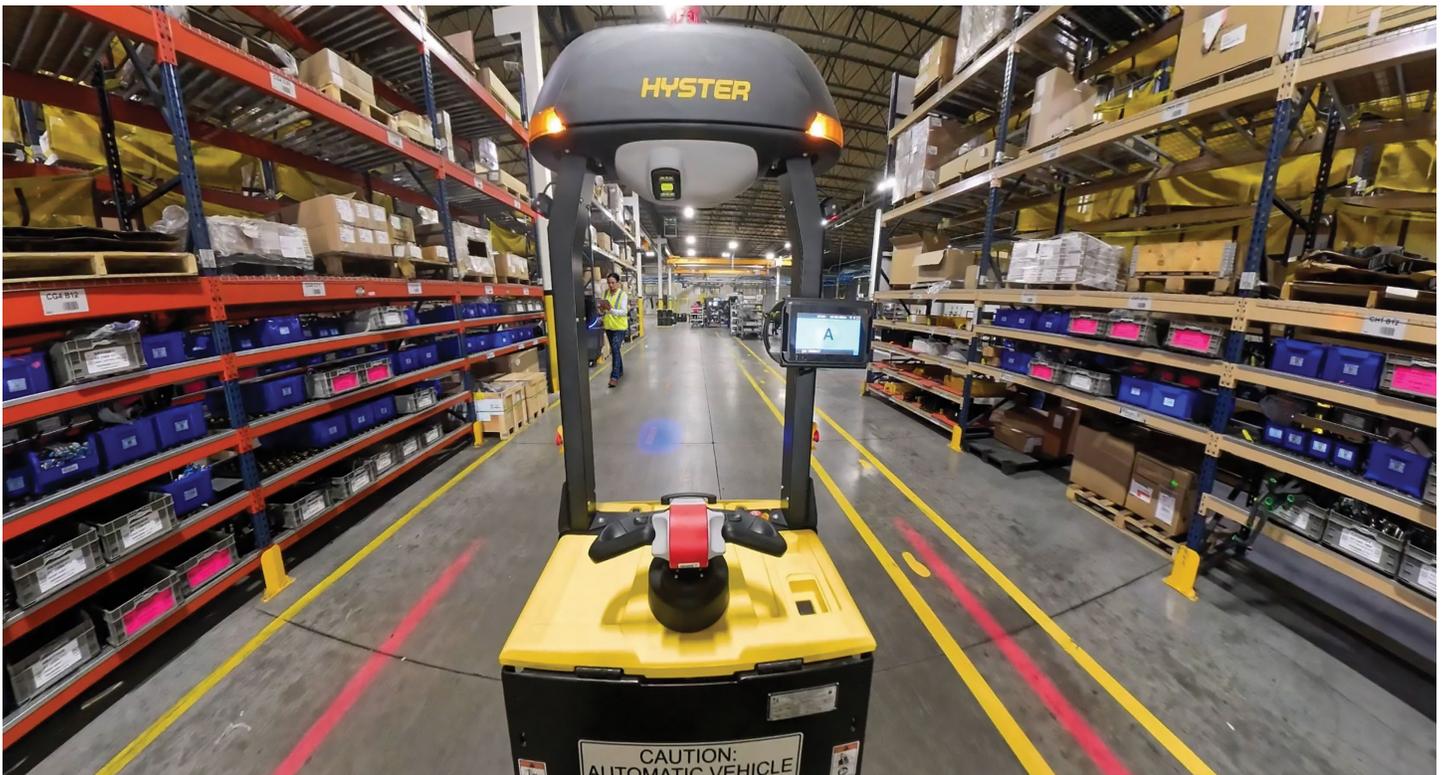
THE EFFECT OF AUTOMATION ON SAFETY AND SATISFACTION

For some, the thought of automation might conjure a bleak or even dystopian scene for modern workers as they picture themselves being replaced by robots. However, the goal of introducing automated lift trucks into an operation is not to replace the workforce – it is to amplify the work that they do. And, when examined in that light, it is clear that automation affects workers in a number of positive ways, some of which might not be immediately obvious.

One of these is safety. High employee turnover is common in manufacturing and logistics, and with inexperience among roles like forklift operators comes increased risk. OSHA estimates that approximately 70% of forklift accidents could be avoided through better adherence to standardized training and safety procedures. Automated lift trucks adhere without exception to the facility's "rules of the road," such as maximum speed or minimum distance from pedestrians, other equipment,

facility infrastructure and more. Whereas human operators can be distracted by what they're carrying, co-workers or environmental factors, automated lift trucks are not prone to such diversions. Automated lift trucks also perform according to their programming from day one, without the extensive onboarding and training required to bring new operators to a satisfactory level of skill and experience.

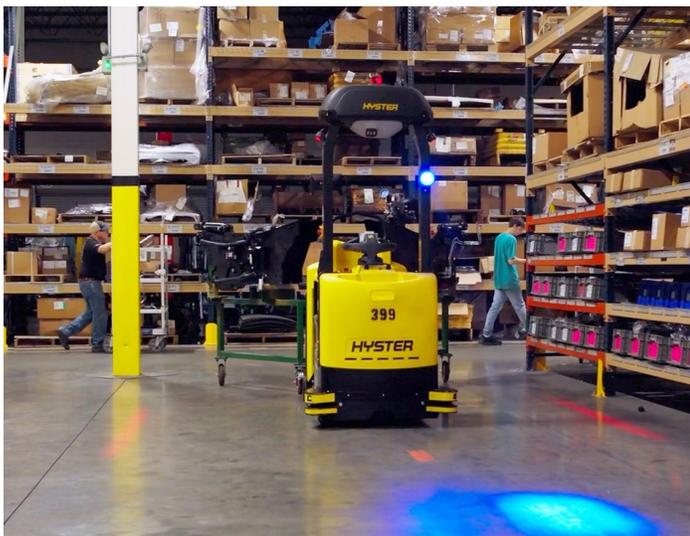
Approximately 70% of forklift accidents could be avoided through better adherence to standardized training and safety procedures.



SYMBIOTIC PRODUCTIVITY: AUTOMATED LIFT TRUCKS AND THE NEW MANUFACTURING WORKFORCE

There are also psychological advantages to automation. Specifically, automation technology can actually make work more “human” and increase workforce satisfaction. Automated lift trucks can relieve workers of the grind and monotony of repetitive tasks that are abundant in manufacturing and supply chain environments, and give them time to focus on more rewarding, high-responsibility work that leverages their skills and experience. Enabling personnel to concentrate on more strategic work better equips them to remain focused and practice good judgment – both major advantages for facility safety and overall productivity. For most workers, risk-assessment, focus and judgment are a matter of performance. But for workers who spend their shifts supervising machinery, maneuvering heavy loads and operating in a fast-paced environment, those factors are also fundamental to safe – and effective – operation.

Improved job satisfaction is significant for individual employees, but it’s also vital to operations. According to a [Gallup study](#), organizations with better employee engagement achieve higher performance, including substantially better retention, fewer accidents and increased productivity. Finding and training new hires can [cost thousands](#), so using automation to shift human workers toward responsibilities that help engage and retain them makes good business sense, too.



USING DIFFERENT STRENGTHS FOR THE SAME MISSION

When it comes down to it, automation should be a force multiplier that helps a team drive productivity beyond what they could achieve through manual tools and effort alone. For example, in an assembly line operation, assigning a single automated tow tractor with multiple carts can significantly cut material delivery time to and from the line compared to multiple manually operated lift trucks performing the same task. This has the added bonus of freeing those lift trucks and operators for tasks that require a manual touch. Strategic integration of automation can create a blended team of machine and manpower where automated lift trucks shoulder the burden of repetitive, time-intensive tasks while human teams concentrate their problem-solving and decision-making skills on the mission-critical tasks that bring value to the business.

Another potential strength to look for in automated lift trucks is the ability to follow predetermined routes, allowing them to avoid heavy traffic areas. Some driverless forklifts adjust routes on their own. While that might seem like a good idea in theory, in practice it can create inefficiency, with trucks rerouting to longer paths to avoid unexpected obstacles. Automated lift trucks that stop and notify supervisors of an obstacle also draw attention to potential hazards for employees and give workers the opportunity to address the problem at the source. For operations with multiple automated trucks in use, the ability to program routes to help avoid bottlenecks is especially valuable, for the efficiency of both the automated equipment and busy employees. The predictability and reduction in congestion resulting from automated lift trucks following pre-programmed routes can allow pedestrians and manually operated lift trucks to more easily navigate without delay or incident, improving productivity. That seamless traffic flow is especially valuable as businesses ramp up storage capacity and output during seasonal peaks and other demand fluctuations.

SYMBIOTIC PRODUCTIVITY: AUTOMATED LIFT TRUCKS AND THE NEW MANUFACTURING WORKFORCE

AUTOMATION THAT FITS INTO WORKFLOWS WITHOUT A FIGHT

Not long ago, integrating automated lift trucks into facilities meant heavy coding and complex, drawn-out installs. But more recently, initial implementation and ongoing adjustments have become far more streamlined. The breakthrough is a new style of software used to manage automated lift trucks. Older systems typically needed costly custom code and software engineers. Some newer versions use intuitive, drag-and-drop interfaces that allow for rapid setup and enable laymen to make changes without calling in specialists. For highly scheduled, time-sensitive operations like manufacturing where there is little tolerance for downtime and workflows are often changing, this new way of setting up and managing automation makes the technology a stronger fit for day-to-day demands.

A key component of automated lift trucks is Simultaneous Localization and Mapping (SLAM) technology. Generally, a digital map of the facility is created by navigating the truck around the space and setting waypoints in a portal application. Once that map is built, it can be shared across all units in the fleet, which use the maps to navigate. This process allows the autonomous lift truck solution to accurately and precisely self-locate, often without additional navigation infrastructure. When workflows evolve, facility layouts change, or additional trucks are needed, routes can be quickly updated, and new trucks easily paired to the network by an operator or supervisor.



INTRODUCING ROBOTICS TO YOUR OPERATION

Labor scarcity and rising demands have manufacturing operations facing the reality that hard work and grit alone are not always enough to get the job done to the cost and quality standard that is expected. Automation offers an alternative approach to the problem that supports both your business and your workforce. Advancements in dependability, simplicity and affordability have made automated lift trucks a more practical, accessible option that can deliver measurable advantages for safety, employee engagement and productivity.

To learn more about how Hyster Atlas™ automated lift trucks can support your operation, contact a solutions expert at your local [Hyster® dealer](#) or visit [Hyster.com](#).