



15 Myths About

Warehouse Automation Debunked



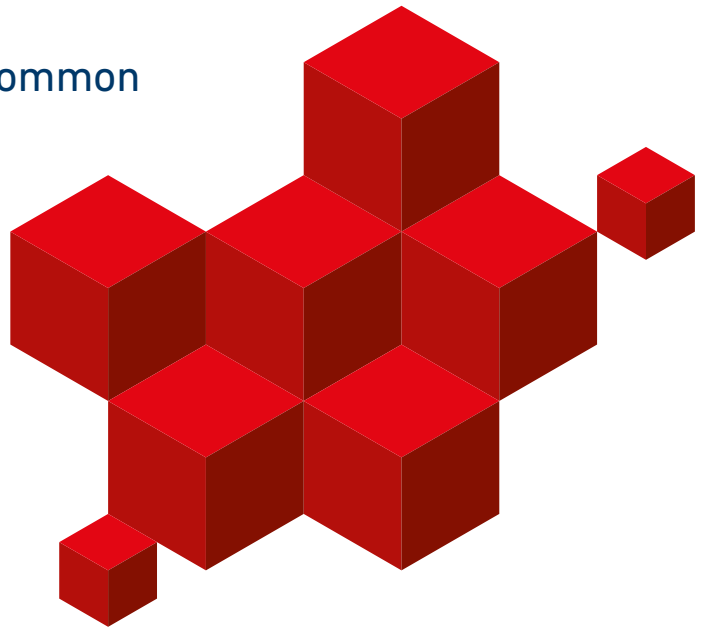
Introduction

Sure, you've thought about automating your warehouse, but...

Perhaps you've heard of someone else's installation that was an epic disaster. Or, you're not sure how you could ever justify such an "enormous" investment. Or, you think your inventory profiles, handling processes and customer demands are just too variable to manage with anything other than manual labor.

Sound familiar? You've been duped.

Here is a compilation of the 15 most common myths about warehouse automation, debunked with facts. Read on and become a believer in what an automated warehouse truly can do for you.





Myth #1

Warehouse automation means only complicated, “lights out” technologies.

FACT: There’s more than just one level of automation, and most are not “lights out.” Consider automation as having four levels of increasing complexity:

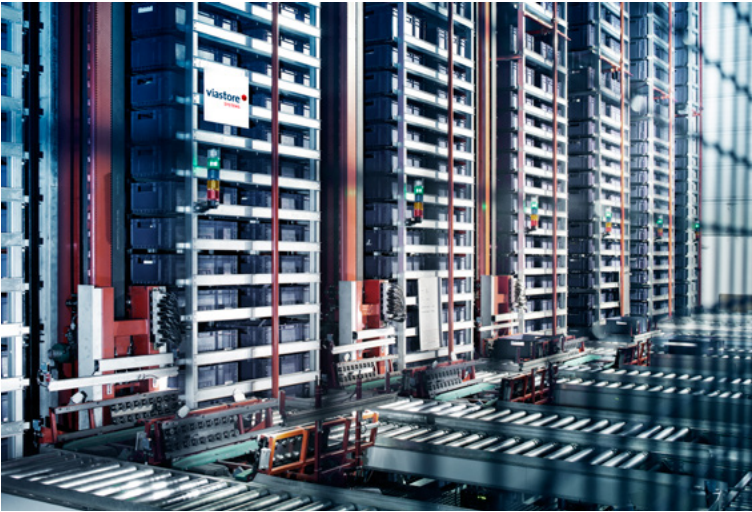
Level 1: Conventional picking with productivity and accuracy improvements delivered via [warehouse management system \(WMS\)](#), [radio-frequency \(RF\) or voice-directed picking](#), and/or a labor management system (LMS).

Level 2: Mechanized solutions that automate horizontal movement and reduce staffing, such as [conveyor](#), [pick modules](#), stretch wrap applicators, label print-and-apply, and layer picking equipment.

Level 3: Semi-automated installations that boost storage efficiency and minimize travel and manual handling operations with [automated storage and retrieval systems \(AS/RS\)](#), [conveyor](#) and [sortation](#), and [warehouse control software \(WCS\)](#) to direct equipment operation in line with the [WMS](#).

Level 4: Fully-automated, high-speed (and yes, potentially “lights out”), greenfield installations that include a combination of high-density [AS/RS](#), extensive [conveyor](#) and [sortation](#), automated layer picking, case palletizing, [WCS](#) and [WMS](#).

You can learn more about the different levels of warehouse automation [here](#).



Myth #2

**Warehouse automation is too expensive;
our operation can't afford it.**

FACT: Just as there are a variety of [material handling automation technologies](#), there are a range of costs associated with each.

Generally, the more complex and holistic a solution is, the more equipment and integration will be required and the higher the cost will be. The higher costs will be offset by increased efficiency, increased order accuracy, and/or space savings based on the solutions implemented.

Level 1: Systems that improve conventional picking cost range: \$500,000 - \$1 million

Level 2: Mechanized solutions cost range: \$1 million - \$5 million

Level 3: Semi-automated installations cost range: \$5 million - \$15 million

Level 4: Fully-automated solutions cost range: \$25 million (or more)

You can learn more about the costs of different levels of automated material handling systems [here](#).



Myth #3

An investment in warehouse automation will take way too long to pay off.

FACT: Depending on the type of automated system installed—and the specific circumstances surrounding a facility's current mode of operation—an investment in automated material handling systems and technologies could take as little as 6 months to as long as 10 years for an effective ROI.

- 📦 Systems that improve conventional picking payback: 6 – 12 months
- 📦 Mechanized solutions payback: 1 – 2 years
- 📦 Semi-automated installations payback: 3 – 4 years
- 📦 Fully-automated solutions payback: 5 – 10 years (or more)

You can learn more about the factors that impact ROI payoff time [here](#).



Myth #4

Our operation is too small to automate.

FACT: Incremental levels of automation are more cost-effective than you might think.

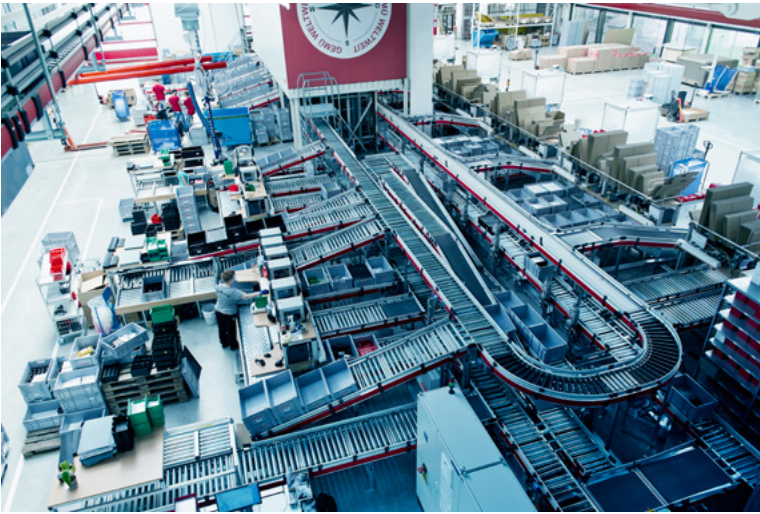
While many people think “hardware” when they think automation, adding software—such as a warehouse management system (WMS)—to an operation of any size can yield significant warehouse optimization benefits. At a minimum, software integrates a manual handling operation’s process, people and equipment to increase labor efficiency, system accuracy and overall productivity.

Increasingly critical to order fulfillment success, intelligent, flexible software also allows for real time sharing and utilization of information with trading partners across your distribution network.

The result? Lowered costs, increased throughput, reduced headcounts, a boost in your workforce’s output, and better leverage of either current or future automation investments.

Hear a [presentation](#) from MHI’s [Automation Solutions Group](#) (formerly called the Integrated Systems and Controls Council) at [ProMat 2015](#) on “Using Software to Maximize Your Order Fulfillment Performance.”





Myth #5

Automated material handling systems are not flexible enough to accommodate the variability in my business and its operations.

FACT: Continuously adapting, changing and prioritizing orders in real time—while still optimizing operations—is something only automation can do.

Manual operations, particularly those deploying wave-based picking, simply can't accommodate spikes in workload, overcome bottlenecks, or accommodate the later order cut off times demanded by the same-day shipping trend.

Conversely, sophisticated algorithms within the automation control system allow an order fulfillment process to maximize throughput as needed. Automation flexibly supports waveless picking with a high level of communication between the systems so that changes and adjustments can occur on the fly.

Learn more about how automation supports flexible, waveless picking [here](#).



Myth #6

Every product in our inventory will have to be accounted for by the automation system.

FACT: An automated equipment solution can be applied to only the specific processes within an operation that will result in the biggest bang for your buck.

For some operations, like [Phoenix Contact](#), that might mean splitting inventory into two facilities: one conventional and automated. Some items are simply better suited to conventional storage; as long as both the automated and conventional facilities (or sides of the same facility) utilize the same [warehouse management system \(WMS\)](#), combined reporting can take place.

Alternately, only the medium- and slow-moving stock keeping units (SKUs) currently stored in static shelving could be placed into an [automated storage and retrieval system \(AS/RS\)](#), while fast-moving SKUs are housed in flow rack. Utilizing dynamic slotting software to group like orders for release at the same time, slower velocity products stored in a highly dense AS/RS can be automatically delivered as needed to a designated forward pick zone. This allows multiple orders containing slower moving items to be filled simultaneously for higher throughput. In addition to saving space and minimizing worker travel, the system can raise pick rates from 100 to as high as 400 lines-per-hour.

Learn how [dynamic slotting](#) works in conjunction with an AS/RS to create high performance picking of medium- and slow-moving items.



Myth #7

When our business grows, we can just add on to our current building.

FACT: That indeed may be true. But with today's modular systems it may also be possible to fit automated storage into an existing structure, even those with ceiling heights as low as 20 feet.

Depending on an operation's stock keeping unit (SKU) velocities and the number of fast-, medium- and slow-movers, a high-density, low-bay automated warehouse system can optimize even standard-height warehouses. Adding automation increases inventory density by maximizing the cube of a building and freeing up floor space for more product storage or other handling activities.

For other companies landlocked in an established location, or that can't afford to purchase more property to expand or add on, building up may be the only option. When [Americold](#)—the leading global third-party logistics (3PL) provider of temperature-controlled warehousing—ran out of real estate space at its Indianapolis location, the company elected to design and build a 110-foot-tall, rack-supported building with a conveyor-fed pallet handling AS/RS. This installation allows them to utilize the vertical space for automated pallet storage as a means to handle slow- to medium-moving products.

Learn more about high density storage [here](#).



Myth #8

If we automate our warehouse, our associates will lose their jobs.

FACT: Automation allows companies to increase their productivity without increasing their headcount.

That's because adding automation systems supports workers in their tasks while removing the monotonous, non-productive, low to no value, fatiguing or mistake-prone aspects of their jobs.

As the number of qualified workers dwindles—due to age and lack of interest in warehousing as a career—finding and keeping skilled employees is already challenging, and will continue to be so. Adding automation allows your current associates to take on new tasks, such as value added services, while mitigating some of the high turnover commonly experienced in the warehousing field.

Read how deploying material handling automation can address the talent shortage [here](#).



Myth #9

My current workforce will need time-consuming and expensive training to operate the automation systems.

FACT: Because automated systems are engineered to support people as they go about their tasks, they are designed to be intuitive and easy to use.

For example, most include a human machine interface (HMI) of some sort, typically a display, to prompt, then query a worker to complete and verify a directed task.

Replacing paper pick lists with a [warehouse management system \(WMS\)](#) to consolidate orders, plan picking routes and track inventory boosts the speed and accuracy of your current workforce. Hands-free devices, such as light- and voice-directed picking, increase productivity and overcome potential language barriers. In most cases, training on these highly-intuitive systems is fast for end-users, frequently taking 20 minutes or less.

Having easy-to-learn automation systems in place also helps companies that rely on temporary labor to help with seasonal peaks. The ability to quickly bring temporary workers up to speed on a process and a system allows them to be that more productive, faster, and with fewer mistakes.

Read about how automation enables the worker-centric warehouse [here](#).



Myth #10

When our business grows, we can just hire more associates.

FACT: Operations looking to boost throughput often assume that “adding more bodies” to process and fulfill more orders faster in order to keep up with seasonal peaks or promotional demands is the way to go.

In reality, however, doing so often leads to congestion and a loss of throughput.

Additionally, the warehousing and logistics industry is suffering from a workforce drought. In a recent [survey](#) of warehouse managers by Peerless Research Group for *Logistics Management* magazine, 62% of respondents said that their toughest operational challenge was “finding and keeping qualified/skilled/dependable workers.” Further, the same report cites MHI’s assertion that the warehousing and logistics industry will need to fill 1.4 million jobs (approximately 270,000 per year) by 2018, so yours won’t be the only facility looking to fill openings.

Read more about the future of material handling and logistics [here](#).



Myth #11

Another operation's warehousing automation installation failed, so they all fail.

FACT: Failure happens. Whether the failure results from budget overruns, unadopted change, untrained personnel or an installation that doesn't deliver the promised throughput, the cause can usually be traced back to a lack of communication between the operation and the supplier/integrator.

Regardless of the type or level of automation you intend to add to your operation, it's imperative to thoroughly evaluate your supplier options. Be sure to ask as many [questions](#) as you answer, if not more. Consider more than just budget. Key factors should also include delivery date, openness to ideas from both sides, other successful installations, performance accountability, and post-install support.

And, if an installation isn't delivering the numbers as promised, what is the supplier willing to do to fix the problem? At cold storage 3PL Americold's Indianapolis installation, within six months of opening the new AS/RS facility, the system became overwhelmed by the new requirements of a new customer and productivity stalled. [Americold](#) worked closely with its supplier to better communicate its operational needs so the system could be modified and upgraded to increase flexibility, eliminate congestion and speed throughput. The right supplier should always be willing to work with a customer to ensure that all the objectives of an automated system installation are met.

Read the latest independent research from Modern Materials Handling magazine about whom you should engage to design and implement your next automated system [here](#).



Myth #12

Our in-house service technicians won't be able to maintain and support sophisticated automation technology.

FACT: In-house technicians can be trained to support an installation, and different levels of service and support contracts can be negotiated with the original equipment manufacturer (OEM), or systems integration firm.

In a [study](#) conducted by Peerless Research Group for Modern Materials Handling magazine, "Reader Survey: Maintaining the Automated Warehouse," 46.3% of automation owners rely on internal staff to maintain the equipment, 17.9% outsource those tasks, and 34.7% deploy a "hybrid" approach—handling some maintenance internally and delegating the rest to a third party. For in-house staff training purposes, OEM contracts might include:

- Short-term commissioning plan, with an OEM technician on-site for installation, start-up and hands-on training of routine service and repair tasks.
- Long-term, OEM-supplied resident technician to help with preventive maintenance and repair, as well as to teach internal staff to handle those tasks on their own.
- Scheduled maintenance plan, where internal staff handles nearly all day-to-day tasks, and OEM technicians come in two- to four-times per year for preventive maintenance and to address concerns.

Also consider involving your staff in the installation and commissioning of the system to begin gaining familiarity with the system.

Learn more about evaluating your automated equipment maintenance options [here](#).



Myth #13

Automation won't work in a chilled or freezer storage environment.

FACT: Yes, it can, with some modifications to the mechanical components.

In fact, the punishing cold that requires personnel working in manual operations to take regular breaks to warm up makes automation ideal for chilled and frozen storage environments. Whether its conveyor that transports pallets and/or cases into and out of the area, or automated storage and retrieval systems (AS/RS) that handles pallets, mechanical components can be rated for extreme temperature use. These include:

- ❖ Drive motors, reducers and gear motors rated for the proper temperature
- ❖ Low temperature lubricants for bearings and chains
- ❖ Properly torqued critical fasteners, such as bearing and sprocket screws
- ❖ Interlocks, air curtains and limit switches to counteract condensation
- ❖ V-belts and timing belts rated for low temperatures
- ❖ Flexible, freezer rated cabling

Learn three reasons why you should consider automating your frozen pallet storage facility [here](#).



Myth #14

All of our company's facilities are different, so we can't use one automation solution for all of them.

FACT: This statement is, in fact, partially true! There is no “one-size-fits-all” automation solution, and rarely will the installation that optimizes one location duplicate those exact results at another.

That's because different facilities in different geographic locations—even those handling identical items—will always be subject to local variables, such as cost and availability of labor and land, regional demands for products, shipping carrier cutoff time per geographic zone, and more. While both facilities might deploy the same system, to maximize the benefits of automation, the configuration of each system will likely vary to meet the unique needs of the specific facility.

What's important is figuring out how to match the right automation technology to the specific challenges of a specific operation, whether its goals are labor savings, space savings, throughput and flexibility gains, or reduced maintenance and supervision. Applying different automation technologies, either individually or in combination, can alleviate a variety of different challenges. Key areas for evaluation are:

- 📦 Number of pallets received per day
- 📦 Number of cases picked or shipped per day
- 📦 Number of orders picked per shift
- 📦 Number of lines per order
- 📦 Inventory accuracy

Read the “*Four Reasons Why Material Handling Automation is a Good Investment for Your Operation*” [whitepaper](#).



Myth #15

Adopting automated warehousing means we will have to completely change every process in our current operation.

FACT: Not necessarily. When you choose a partner to help you plan a warehouse automation project, it's important to select a company that works with you—keeping in mind your current process, facility and equipment, along with your target objectives.

The ideal vendor brings comprehensive planning tools, including system simulation software that evaluates and compares several different possible operational automation designs in order to select the right one for your facility, whether it's a greenfield or retrofit application.

Additionally, your automation supplier should be available to answer all your questions, and walk you through every step of the process, from initial evaluation to design, installation, commissioning, operation, service, maintenance and support.

Read more about the top material handling solution provider characteristics sought by decision-makers [here](#).

Got a warehouse automation myth to add? Let us know and we'll be happy to debunk it.

To learn more about how viastore can help you plan and execute your next turnkey automated warehouse, logistics operation or distribution center, contact John Clark at viastore SYSTEMS today.



You can reach John by calling
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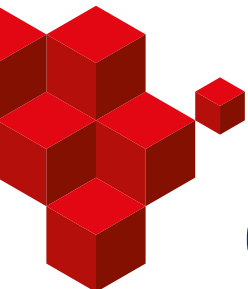
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