

# HOW TO MAKE SURE YOUR WAREHOUSE AUTOMATION GIVES A HIGH ROI

proVision

Warehouse Management Systems

By Ahearn & Soper Inc.



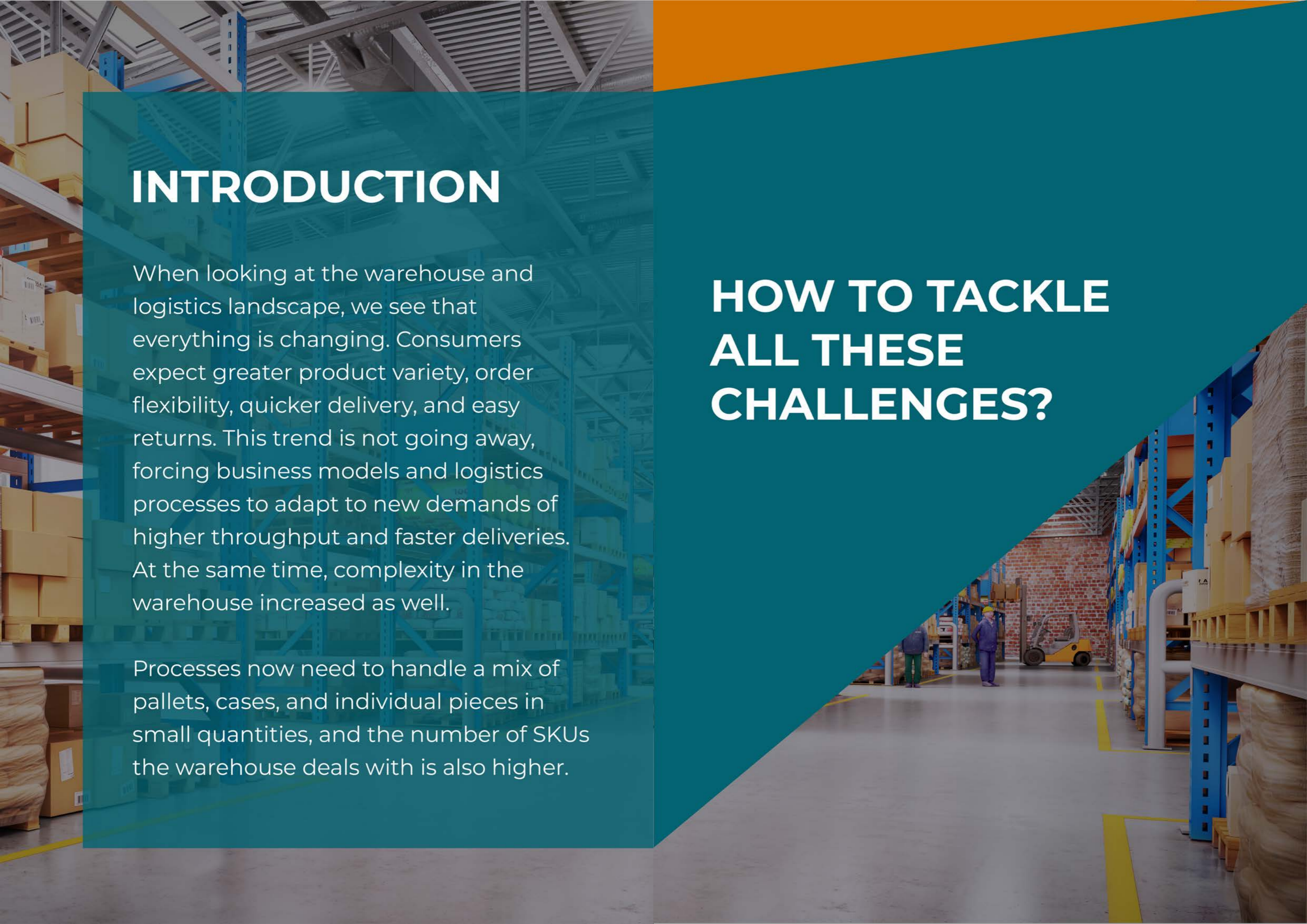
**E-BOOK**

# INTRODUCTION

When looking at the warehouse and logistics landscape, we see that everything is changing. Consumers expect greater product variety, order flexibility, quicker delivery, and easy returns. This trend is not going away, forcing business models and logistics processes to adapt to new demands of higher throughput and faster deliveries. At the same time, complexity in the warehouse increased as well.

Processes now need to handle a mix of pallets, cases, and individual pieces in small quantities, and the number of SKUs the warehouse deals with is also higher.

## HOW TO TACKLE ALL THESE CHALLENGES?



Warehouse and logistics companies must create a competitive advantage through their warehouse and logistics management processes to succeed in this ever-changing environment.

This is where automation can help.

In this eBook, we will cover:

- The basics of automation and what it can do for your warehouse.
- How you and your customers can benefit from automation.
- Why WMS is essential for effective automation.
- Hardware that works best when automating your warehouse.
- How automation gives ROI.

# WHAT IS WAREHOUSE AUTOMATION?



Warehouse automation combines mechanics and software to make your operations smarter, take up less space, and produce more with fewer resources.

It provides the range, agility, and speed necessary to fulfill customer expectations and handle an omnichannel approach.

The history of warehouse automation dates back to the 60s. After rapid transformation, the 80s already saw fully automated warehouses with stacker cranes and pallet conveyors. But as the Warehouse and Logistics industry evolved warehouse automation has moved far beyond just simple storage and retrieval.

When we take a closer look, we see that two main areas can be automated in the Warehouse, they are:

- The decision-making process;
- The material handling process

### **The decision-making process:**

How we handle the information in the warehouse to achieve the most effective operations.

Selecting the shortest picking run or the right size of box for shipping. Through automation, it is possible to set up systems and software that will make the best decisions for us. This can range from a simple staging process to larger more complex flows.

Removing the potential for human error increases warehouse efficiency and also improves the customer experience through a faster shipping process.

### **The material handling process:**

This is about how you move goods within the warehouse, all the way from inbound through storage, picking, packing, and outbound. These processes often still involve significant human input, but most of them can now be automated with WMS technology. Automation in this area increases efficiency, reduces workforce injuries, and improves warehouse productivity. Depending on the extent of automation, it can significantly improve any warehouse operation.

# TYPICAL SETTINGS BASED ON THESE DIMENSIONS?

Four automation levels



- **No or low Automation**

A warehouse primarily driven by manual processes for using tasks and decision making.

- **System Automation**

A warehouse and logistics company that uses some sort of warehouse management system (WMS) for automated decision-making and maybe some basic automation hardware, leading to a more efficient operation.

- **Mechanized Automation**

A system that is more focused on equipment and hardware involved in warehouse processes. This level includes conveyor systems and automated storage and retrieval systems. It needs a WMS, but the full functionality is not utilized.

- **Sophisticated Automation**

This is the highest level of automation, that covers the whole logistics and warehouse processes. An extensive WMS that allows for complex decision-making functionality.

# HARDWARE CHOSEN WITH CARE



ProVisionWMS has a close collaboration with Zebra Technologies. Making sure our solutions work well together, all for the benefit of our customers.

Whether ProVisionWMS is running your distribution center or managing inventory in your retail backroom, being well-connected and always having visibility into all your assets, people and processes always are crucial to having an integrated, productive, profitable, and compliant supply chain.

ProVisionWMS authorised hardware solutions are an idea, not a product. Zebra Technologies and ProVisionWMS together create a well-connected warehouse.



# MC9300

Today's demanding customers require you to ship more orders every day, faster than ever. We know the MC9300 can get it done. It's the industry's reliable Android enterprise mobile computer.



# MC3300X

Improve workforce productivity and efficiency from the manufacturing shop to the warehouse.



# TC52X



Rugged design, performance, productivity, and ease of use. The TC52X with Wi-Fi 5 is designed to do more with new hardware and software innovations that redefine mobile computing performance.



# TC21X

Cost-effective mobile computer built for healthcare with a wearable solution.





# VC80X

Cost-effective mobile computer built for warehouse vehicle solution which absorbs all the shocks and vibration while driving.



# WT6300



Industrial wearable computer for hands-free mobility. Offering new features, including an optional keypad, and a faster processor that helps drive productivity and order accuracy to the next level.



# ZT610

The next-generation series printer with more intelligence and industrial brawn. This printer combines rugged durability and exceptional performance on a user-friendly, future-ready platform.



# ZT411



Rugged durability, designed to grow with your evolving business needs. Zebra's user-friendly barcode and RFID printer provides 24/7 reliability.



# WHAT CAN BE AUTOMATED IN THE WAREHOUSE?



Now that we have an overview of the different levels, let's look at some examples of automated warehouse processes.

We believe that every part of the warehouse can be automated, from how goods are sorted to how they are logged in a WMS system to picking and packing.

## **Processes and practices that can benefit from automation.**

### **Stock Tracking:**

This function provides access to the most up-to-date information about what is in stock and where it is in the warehouse.

### **Storage Optimization:**

Based on sales volumes and frequency, this function recommends where to place the stock in the warehouse.

E.G. The stock that sells most should be placed closer to where it is shipped, and these smart decisions can be automated.

### **Expiry and Best Date Optimization:**

An inventory control optimization that triggers product expiration date. The WMS provides the ability to automatically calculate an expiration by product category, based on the actual manufacturing date, or often the received date as a proxy. The WMS would then enforce the different rules customers have defined relative to the product shelf life in the inventory allocation process.

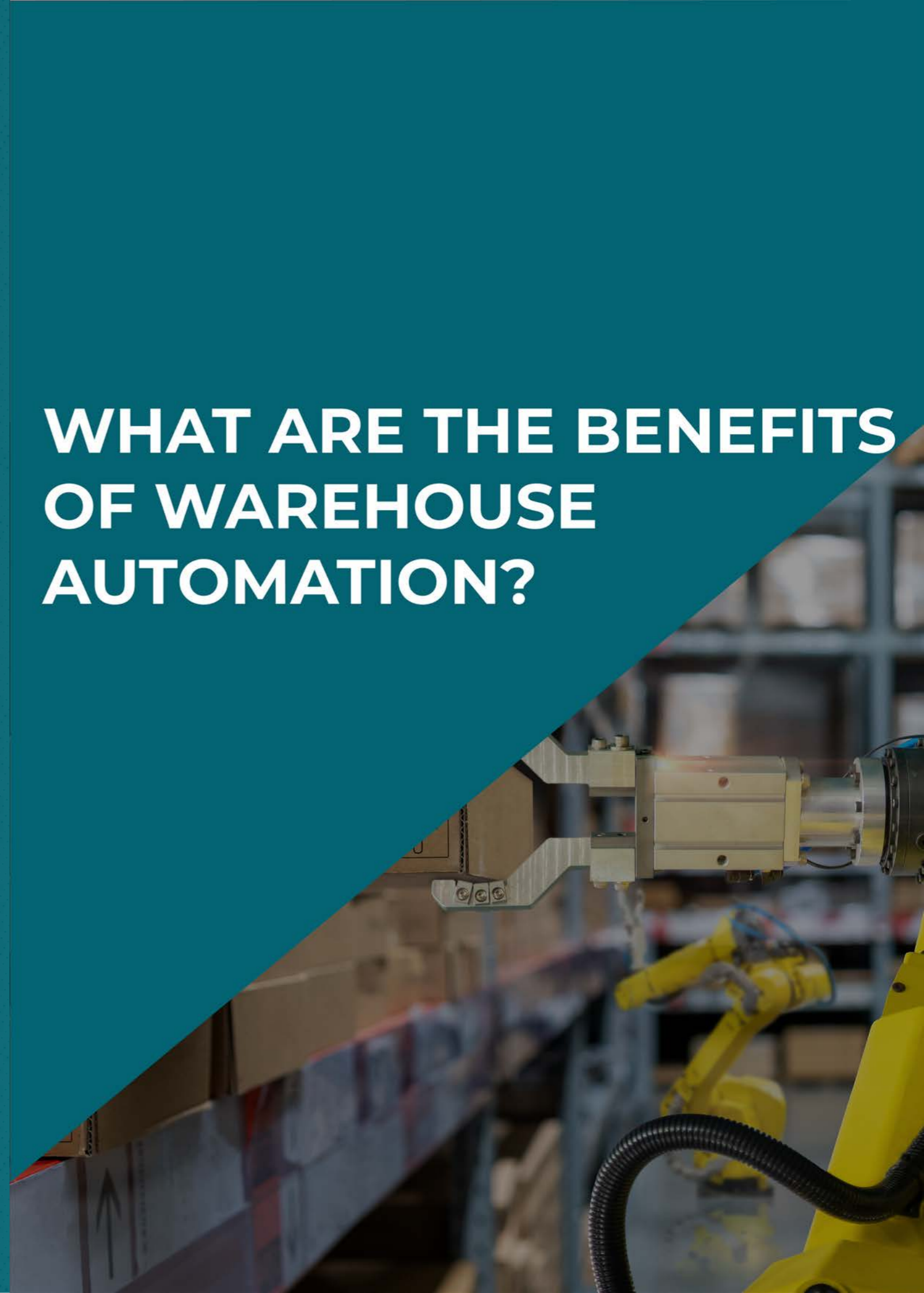
### **Real-Time Data:**

To make informed business decisions you must have access to real-time data. WMS automation gives you the tools at your fingertips, enabling you to analyze key information if you want customers to receive their products as quickly as possible. You would be able to leverage real-time data at every stage to improve your supply chain. A robust WMS will make this data available in real time providing you with critical insights. You can use these insights to adapt processes and react faster.

### **Packing Calculation:**

This WMS automation can select the right packaging for goods. It speeds up the process, as well as potentially reduces shipping costs.

# WHAT ARE THE BENEFITS OF WAREHOUSE AUTOMATION?



When warehouse automation is done the right way, it can improve efficiency, productivity, sustainability, and customer experience as well as offer employees more opportunities to develop broader skillsets. On the most basic level, it can improve revenue and facilitate omnichannel growth.

### **Key benefits**

#### **Higher Throughput:**

Automation can help with growing demands, ensuring that everything is tracked, and handled more efficiently. This can contribute to higher throughput and, ultimately increase your profit margins.

#### **Optimized space utilization:**

Space costs money. Space utilization should be as effective as possible. Automation can help optimize your warehouse and ensure that all shipments are processed quickly.

#### **Improved Workplace:**

Having fewer people carry out manual work with automated warehouse processes. This reduces labor costs. Automation also decreases the number of monotonous tasks and allows employees to focus on more meaningful work thus providing a better work environment.

#### **Better Planning:**

Through automation, your systems can gather data and make accurate predictions for the future, allowing you to prepare well in advance. This means you can maximize your potential and always be in a position where you can offer your customers what they need when they need it.

# FINDING AN OPTIMAL SETUP

Warehouse automation strategies vary for different companies and industries. Maximizing your ROI (Return on Investment) depends on selecting the right one for you. First, you need to understand how it works and for which purpose you will use it. It's not a strict rule that you can move from low automation to sophisticated automation. Still, the level you choose should be determined by the specific aspects of your operation, the challenges you want to overcome, and the gains you want to achieve.



# TAKING THE NEXT STEPS



Is automation new to you? Or are you looking to take your existing warehouse automation to the next level? Either way, you need to make sure that you invest in the right foundations, making it much easier to expand and evolve in the future. Your automated warehouse core should be an efficient, scalable system. For many that may be a WMS that can coordinate various processes. The WMS plays a crucial role in automation, as it dictates the logic and controls the flow of information. A good WMS will be the brains and heart of your warehouse and logistics operation, it will provide visibility into every part of your warehouse operation. The WMS will also need to integrate with the broadest possible range of technology easily. The way a modern warehouse looks is constantly changing, so you need software to keep up with these changes. With the proper WMS, you will benefit the most from automation because of the efficiency gains the WMS offers and the level of integration. You will be able to control everything through one central control system.

The future steps very much depend on your goals, what you already have in place and how much your warehouse will benefit from increased automation.

## **WHEN LOOKING TO IMPLEMENT OR INCREASE YOUR AUTOMATION YOU SHOULD ALWAYS CONSIDER THE FOLLOWING:**

Do you have the software to implement the technology involved easily?

- Will there be an immediate impact?
- What is the long-term ROI?
- How will it benefit the customer?
- How will it benefit the company?
- How will it impact the employees?



# WHAT ARE THE COSTS OF WAREHOUSE AUTOMATION?



The answer: It depends. There are a lot of impacting factors e.g. Your operations, challenges, or what your customers expect. Large automation projects require substantial financial investment and may have an ROI of 5-10 years. In the case of implementing a WMS, the return on investment (ROI) can be realized in 1-2 years or even less.

That is why it is essential to select the solution that can serve you best. You get a favorable ROI on warehouse automation by increasing volume or decreasing the number of full-time employees. There are other values and savings, such as better space utilization and pick quality improvements.

## MARKET SNAPSHOT

The North American warehouse automation market is expected to grow at a compound annual growth rate(CAGR) of 9.6% during the forecast period of 2022-2027.

By 2025 according to Bank of America, 45% of all manufacturing will be carried out using robotics technologies. According to supply chain leaders, automation initiatives should start with a well-optimized implementation of the warehouse management system(WMS).

# CONCLUSION

Global automation of warehouses worldwide is expected to accelerate over the next 5-10 years. The demands for speed, flexibility, and control will increase. Automation is the future of Warehouse and Logistics, and by making the right decisions now you put your warehouse in the optimal position for many years to come, ensuring a high ROI. There are many reasons why automation is good for the warehouse and logistics industry. If implemented correctly and with the right partner, the benefits can have a positive impact on your business. First, you can ensure your warehouse is always running at optimal capacity, with no wasted journeys or unnecessary space. Second, you can get a clear picture of operations and the best decisions based on the best possible information. Third, you can offer better customer service through faster picking, packing, and shipping, thus creating a better future for your business. This leads to improved efficiency everywhere, generating more income for you while enhancing your customer service.

When planning warehouse automation, you need to have a holistic approach. It's all about implementing systems and processes where you are confident that the result will be a tangible benefit.

In all cases, having a well automation solution is more beneficial to your warehouse now and in the future.

**proVision**  
Warehouse Management Systems  
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 **ZEBRA**

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