



The Ultimate Guide
to Warehouse
Automation Success:
**3-Step
Preparation Plan**

E-BOOK



Introduction

As more supply chains are increasingly driven by technology, many organizations are investigating the benefits of an automated warehouse. Warehouse automation can make your operations far more accurate, productive and responsive, however, it is not a one-size-fits-all proposition. In fact, it's a far cry from a system that you can simply buy, plug in and watch the magic happen. But as the old saying goes, "Nothing worth having comes easy."

If automation is something you are considering for your warehouse, you will need to do some careful research and planning to make sure you're making the right decision. All this hard work will help make the transition to automation as smooth as possible for your business. To get you started on your journey, Tecsys is reviewing the three stages of warehouse automation success: preparation, evaluation and implementation.

In this e-book, we will examine the three steps you need to take in the preparation stage of warehouse automation. In this stage, you will be analyzing your products, services, needs and current capabilities in order to be successful. After reviewing the preparation stage, you can read our next two e-books on the evaluation stage and the implementation stage of your automation project.

Feeling the Pressure?

Your company may be facing shortages of reliable warehouse labor and space constraints due to wider varieties of products being requested in smaller amounts and in more frequent orders. Then your customers most likely want the fastest shipping possible. Adding to these burdens is the stress of increasing costs and frustration of order and data inaccuracies.

Warehouse automation can reduce these pressures and help you enhance existing processes by improving efficiency, speed, reliability and accuracy. To prepare for warehouse automation success, follow these three steps to help you get started on the right foot.



1.

Get Your Warehouse Data Right

In real estate, the three most important factors when buying a home are location, location and location. In supply chain, the three most important factors when automating a warehouse are data, data and data. Your warehouse requires reliable data that can be available anytime, anywhere to those who need to make better decisions. Automating without having your data in order is a step toward project failure.

Here are the specific data areas you need to focus on:

Products

Get accurate information about the sizes, weights, handling characteristics, environmental considerations and time-based restrictions that influence how products need to be moved and stored. When new types of products enter the warehouse, you should already have this data in hand to avoid delays. Successful warehouse automation starts with highly reliable core master data about products and a strong integration between your ERP-like system and your warehouse management system (WMS). If you are a 3PL, you have less control over this data, but you should make contracts require it. A few “surprises” of non-standard or unexpected product types hurt automation productivity. Include consumables and maintenance, repair or operations materials to avoid significant, poorly tracked delays for the goods required for the upkeep of the facility.

Locations

You need to know every location in your warehouse in terms of size and weight capacities, plus restrictions about what can or can't be placed within them. This includes every place that products might be kept, such as dock areas, staging areas and overflow floor locations. Take into consideration processing stations where assembly, packaging or value-added activities take place. You'll also need to know the locations for in-transit resources such as carts, forklifts, pickers, conveyors and bots.

Resources

Every person and each piece of equipment has a location, status, capabilities, limitations and capacities that can be allocated and reallocated as needed to adjust to demands. Make sure you have a deep understanding of these resources to greatly reduce the time and effort of accurately and realistically responding to customer needs.

Transactions

Every physical change in product, location and resource status requires a data transaction that tells you what items did what, when and where. An accurate recording of transactions is the lifeblood of successful warehouse automation. Modern data analytics and application of machine learning aren't possible without accurate and timely transactional data to spot patterns, flag problems and opportunities, plus provide situational awareness and options to well-trained industry professionals.



2.

Understand Your Needs

Good automation preparation shines a light on what products are handled more often and which ones may be candidates to eliminate. Product variety and volume numbers as part of an ABC analysis are fundamental. You absolutely must develop detailed order and item profiles for your project. Average percentages over time can be misleading, so also look at how variable (growth/decline rates, peaks and valleys, seasonality, etc.) each of those products can be.

Additionally, everyone from warehouse pickers to C-level executives should understand what delights (and frustrates) the customer. Gather and analyze reliable data about order patterns and eventual customer satisfaction. Segment and perform discovery analysis to determine where the most issues arise and what kinds of conditions lead to customer satisfaction and dissatisfaction. Know what customers cost you and what you are charging. This is where product, location, resource and transaction data become valuable. You can analyze incoming product and data flows from your suppliers to determine where you are satisfied/dissatisfied and under what kinds of conditions. Lower total cost of acquisition is typically possible by using highly data-capable suppliers.



3.

Know Where You Are vs. Where You Want to Be

After you have deep knowledge of your warehouse and customer data, now you are ready to plan for growth. Along the way of collecting all this data, you've likely had many "are you kidding me?!" moments where you found process holes and wasted actions. This necessary step of discovery helps you rightsize your products and your procedures.

Here are three questions you'll want to discuss in the final step of your warehouse automation preparation stage:

What are your project motivations?

Most warehouse automation projects focus on doing more with less. This means more orders, customers, product variety, channels, volume and revenue growth – but in less time with minimal investment in additional resources and space. Automation enables you to be more responsive so you can scale up or scale down your operations. If there are product mixes in very different stages of growth and use, then you may be looking at a variety of projects within a project. Targeting a part of the warehouse for automation within the larger warehouse facility might be the answer rather than a sweeping automation of the whole facility. That's why it's critical for your business to have a firm consensus on what you're trying to achieve so you implement the right solution for your needs.

What do your forecasts look like?

During the preparation stage, make sure you are regularly evaluating forecast accuracy across the supply chain and within facilities to better understand how stable or unstable demand patterns really turn out to be. Segment the data and understand what inaccuracies in forecasts cause the greatest grief, then plan for them. Your warehouse is like a player in a game that must react to the other players' actions and tendencies. You can't be perfect, just less wrong.

Where do you want to be?

How much more needs to flow through your facility? You must have performed steps one and two above to truly determine your current capabilities and customer needs before determining a realistic direction of where you want to be. A thorough self-assessment of future direction and needs is a must for warehouse automation projects. This information will be critical as you move into the evaluation stage for warehouse automation where you will review a wide variety of automation types and investigate possible consulting and integration partners.

Conclusion

The preparation stage of warehouse automation is about obtaining your data and defining the fundamentals of what problem needs to be solved. While each stage is of equal importance and contributes to the overall success of your warehouse automation project, taking your time and putting extra focus in this preparation stage is going to help your business in the end. If you don't, you'll run the risk of wasting time and money by creating a solution that doesn't do what you need it to do.

If you're ready to learn more, read our next two e-books on the **evaluation stage** and the **implementation stage** of your automation project.



Speak to a supply chain expert



About **Tecsys**

Since our founding in 1983, so much has changed in supply chain technology. But one thing has remained consistent across industries, geographies and decades – by transforming their supply chains, good organizations can become great.

Our solutions and services create clarity from operational complexity with end-to-end supply chain visibility. Our customers reduce operating costs, improve customer service and uncover optimization opportunities.

We believe that visionary organizations should have the opportunity to thrive. And they should not have to sacrifice their core values and principles as they grow. Our approach to supply chain transformation enables growing organizations to realize their aspirations.



www.tecsys.com

info@tecsys.com

Phone: 514-866-0001

Toll Free: 1-800-922-8649

Copyright © Tecsys Inc. 2021

All names, trademarks, products, and services mentioned are registered or unregistered trademarks of their respective owners.