



Navigating Warehouse Automation Projects: **Avoid Common Failures to Achieve Warehouse Efficiency**

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Introduction

Warehousing is constantly evolving in the face of growing consumer expectations and a volatile labor market. Robotic automation is a solution to labor shortages, productivity losses, and rising costs. With the right approach, integrating warehouse automation enables operational efficiency and scalability like never before. However, success is not guaranteed.

According to an [Ernst & Young study](#), 30% to 50% of robotic process automation projects fail globally. But why do so many automation projects fall apart? This whitepaper examines common mistakes warehouse operators make that contribute to failure and provides recommendations on how to overcome these obstacles.





Promising Automation Projections and Common Downfalls

Despite implementation challenges, automation is on the rise. [According to McKinsey](#), robot purchases are expected to increase by up to 50% per year through 2030, with investments in warehouse automation growing more than 10% each year. These statistics show the increasing need for warehouses to automate operations to stay competitive and meet consumer expectations. However, automation projects must be tied to specific business needs. Automating for the sake of automating will deliver disappointing business results.

Understanding common challenges and preparing your operations is key to not becoming another failure statistic. The ultimate cause behind a failed automation program often goes beyond a break in hardware or software. Deep-rooted factors such as a lack of clear objectives, misunderstood business processes, and failure to automate the bottlenecks make it difficult to achieve a successful automation project.

As you read on, we will give you actionable insights to avoid these common failures, set your automation program up for success, and achieve a more efficient and profitable warehouse operation.

Why it Fails

FAILURE #1: OBJECTIVES ARE UNCLEAR

A lack of direction and unclear goals are among the top reasons any project fails. [According to Harvard Business Review](#), 37% of transformation projects fail because the vision and objectives aren't clear. When employees don't understand the project goals or why a major change is happening, productive alignment between leadership and those impacted by the automation will not exist. This disconnect leads to resistance, confusion, and decreased morale among employees, ultimately hindering the project's success. Clear objectives help guide the project's direction and ensure that warehouse staff understand the purpose behind the changes. This allows staff to move more quickly and autonomously to achieve the desired outcome. They can effectively communicate, set expectations, and report on project status to leadership because they understand what is important.

Without clear definition and continuous communication of desired project outcomes, poor information dissemination leads to poor decision-making. Businesses may select the wrong automation partner or type of solution(s) because it's unclear why they're automating in the first place. To make informed decisions and the right investments, supporting teams must reflect the objectives back to leaders with a compelling business case and clearly defined goals, expectations, and milestones. Misalignment between leadership and the working teams may hinder future growth and lead to ineffective spending in the future.



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How to Succeed

FAILURE #1: OBJECTIVES ARE UNCLEAR

Establishing prioritized goals or objectives, clarifying when and how they will be measured, and defining business needs are essential steps for success. Once the project plan and objectives are defined, they need to be communicated across the organization, especially to those impacted by the automation. The goals should be framed as the “north star” that all teams are collectively driving toward.

For example, an objective may be to “increase order fulfillment by 3X” or “reduce operational costs by 30%”. The actions required may evolve or change along the way due to unforeseen factors, and that’s okay. Frequently checking progress against the objective and adjusting as needed will help with organizational alignment and awareness. It’s essential to schedule regular meetings with key stakeholders and leadership to discuss project progress, updates, and roadblocks. This ensures actions, expectations, and objectives remain aligned.

Oftentimes, automation partners work with various teams within your organization to help maintain alignment. Choosing a robotics provider that partners with you throughout the entirety of the project, and beyond, is critical to meeting objectives and ensuring everyone is making progress toward that common goal. This also includes providing training and education to employees upfront to enable a collective understanding of the desired outcomes.



Why it Fails

FAILURE #2: EXISTING PROCESSES ARE MISUNDERSTOOD

In a warehouse operation, employees often execute their day-to-day tasks within their part of the process and do not understand what's happening outside of their immediate workflow. Workflows are almost always interconnected and involve various teams, stakeholders, and regulators. This makes it difficult for one person to fully understand all the connection points. When one part of the process is automated—without an understanding of the surrounding workflows—it may cause problems in other parts of the warehouse.

Before starting an automation project, businesses should evaluate their workflows and processes to determine which solution(s) and process(es) are right for the change. Adding robotic systems will not improve the warehouse operation if they're not integrated in the right way. Operators must understand what they're trying to automate and be able to measure progress and success. Otherwise, it will never be clear if the expenditure added value.

Not every process is suitable for automation—those that are too simple, infrequent, highly variable, or reliant on human judgment tend to be poor candidates for automation. Businesses should prioritize automating processes that are creating bottlenecks in the flow through the warehouse. Automating “low-hanging fruit” or easy-to-automate areas might not produce any improvement. It might even create new problems. Overlooking the complexity of business processes often leads to islands of automation that lack sufficient integration with the business. Buying robots doesn't guarantee automation success. Instead, invest in a robotic system comprised of hardware and software that integrates with existing business systems and processes.



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How to Succeed

FAILURE #2: EXISTING PROCESSES ARE MISUNDERSTOOD

The transformation team needs to gain a thorough understanding of existing workflows and processes. It's also critical that they spend time in the warehouse with the people actually doing the work. This will help confirm that what they think is happening is the reality and that they understand the end-to-end process. Taking the time to account for all the steps in the process and tasks that need to be completed is crucial.

The project objectives should guide the automation process; however, a thorough analysis of the warehouse workflows will identify suitable candidates for automation. Choosing workflows with routine and repetitive steps, high volumes, and adequate systems support is imperative. Routine warehouse processes such as unloading, receiving, put away, storage, picking, packing, and shipping are well-suited for automation.

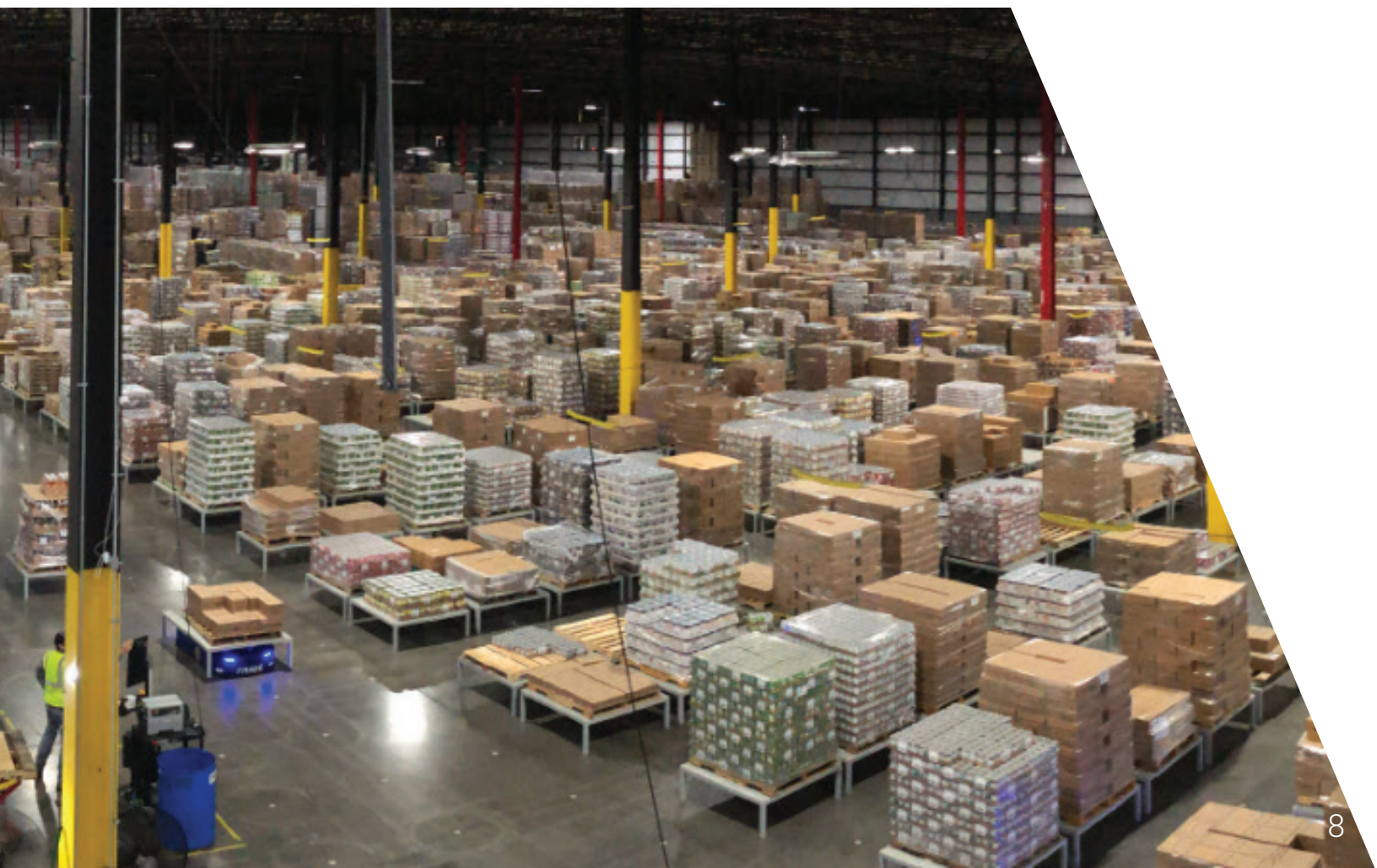
Analysis of the time and resources engaged in each step of the flow through the warehouse, as well as any special handling at each step, will help you find the bottlenecks. While detailed analysis may produce robust, well-reasoned next steps, sometimes it is as simple as looking across the warehouse and figuring out where there are piles of work to be done, or where the work is always falling behind.

How to Succeed

FAILURE #2: EXISTING PROCESSES ARE MISUNDERSTOOD

Consider the receiving and put away processes. Unloading inbound shipments from trucks, sorting items, and then storing them in designated locations within the warehouse is repetitive and time consuming. Integrating a pallet-moving robot removes workers from this task and streamlines the receiving and put away process. The robot autonomously transports pallets from the receiving area to the appropriate storage locations, updating the Warehouse Management System (WMS) without human intervention. This not only speeds up the process but also increases accuracy of inventory tracking and ensures efficient space utilization in the warehouse.

It's important to choose an automation partner that will be involved in the initial stages of the project. They will help you map out and understand existing processes to ensure proper application and implementation. Your partner can then design a robotic system with you that will automate the right workflows and allow you to achieve end-to-end automation over time.



Why it Fails

FAILURE #3: ADOPTING AUTOMATION WITHOUT PROCESS ENGINEERING

Before introducing robots into a warehouse operation, reengineering of business processes is likely necessary. If you haven't taken the time to evaluate and fully understand existing processes, this step may be missed. Adding a robotic system over an outdated process may not produce the desired results or add value to the operation. For example, it may be necessary to reconfigure warehouse space or reallocate human workers to different areas to accommodate robotic systems. Failing to do this creates redundancy and wastes time and money.

This point can be compared to the "paving the goat path" anecdote. Just because the path exists already does not mean it is the best or right way to get to the destination. Doing the same thing you are doing today with robots may not produce the optimal results. In many cases, automation changes the game and there are new approaches to consider.

A robotic system on top of inefficient processes and without the proper tools may not improve warehouse operations. Without addressing the foundational issues, the automation efforts will not achieve optimal results. For example, if a warehouse doesn't have a WMS, a robotic system cannot be implemented because there will be no way to coordinate tasks, manage inventory, and so on and so forth. It's important to first ensure that the foundation is solid before investing in automation initiatives.





How to Succeed

FAILURE #3: ADOPTING AUTOMATION WITHOUT PROCESS ENGINEERING

After taking a full assessment of existing processes, reengineering some or all processes may be necessary to successfully integrate a robotic system. When reengineering, it's important to identify any dependencies on interconnected processes to understand how automation will impact each one and how to deal with those repercussions.

According to [HGS Digital](#), process reengineering initiatives require the following steps. Let's consider a scenario where a warehouse wants to automate the storage process, and how they may go about reengineering the existing process first.

How to Succeed

FAILURE #3: ADOPTING AUTOMATION WITHOUT PROCESS ENGINEERING

1. EXAMINE THE PROCESS

Begin by analyzing the current storing process. Map out each step, from receiving goods to placing them on pallets or shelves, to understand the workflow and identify areas for improvement.

3. ENGAGE KEY STAKEHOLDERS

Consult with warehouse managers, staff, and other stakeholders to understand their objectives, challenges, and desired outcomes for automation. They may prioritize faster storage times, improved inventory accuracy, or reduced labor costs.

5. SEEK SUBJECT MATTER EXPERTISE

Work with an automation partner who has experience with similar projects. They'll provide insights and best practices to optimize the storing process for automation.

2. CONDUCT A GAP ANALYSIS

Identify any non-value-added steps in the process, such as unnecessary handling or inefficient storage methods. If goods are often lost or stored in inaccessible locations, these inefficiencies should be addressed.

4. INCORPORATE FEEDBACK

Use stakeholder input to refine the reengineering plan. If warehouse staff express concerns about unfamiliarity with new technology, training and education will be necessary to ensure buy-in and alignment of project goals.

6. DESIGN THE NEW PROCESS

Design a streamlined storing process that leverages robotic systems. This may involve implementing an automated storage and retrieval system (AS/RS) with a pallet shuttle to transport goods to and from storage. The AS/RS will reduce the need for manual labor and minimize the risk of errors.



Why it Fails

FAILURE #4: NOT ELIMINATING THE BOTTLENECKS

Implementing automation that is not addressing a major system bottleneck will not increase throughput or efficiency. You may have heard the saying, “You’re only as fast as your slowest team member”—or in this case, you’re only as fast as your slowest process. When introducing warehouse automation, it’s essential to focus on your slowest processes first. Automating a faster process might seem like a logical choice initially, but if there are downstream processes that cannot keep up with the increased output, the overall efficiency gains will be limited.

For example, imagine you have a bottleneck downstream in your warehouse operation where only 100 cases per hour can be staged for shipping. Northbound of it, you add a robotic arm that picks 900 cases per hour. While your picking rates have increased immensely, you now have a backlog of cases ready for staging. If you don’t evaluate and understand where automation will impact the flow of goods through the system, the investment in automation will not only be wasted, but may even slow your operations more. It will also be nearly impossible to clearly articulate the benefits achieved through automation, which is important for calculating ROI and justifying future investments.



How to Succeed

FAILURE #4: NOT ELIMINATING THE BOTTLENECKS

When considering automation, it's important to take a strategic approach that's aligned with business needs and grounded in a real understanding of the system constraints and bottlenecks.

The [theory of constraints](#) is helpful when thinking about how to improve the operational flow. First, review an existing process and identify the most important limiting factor (i.e., the bottleneck) that stands in the way of achieving a larger goal. Then, take steps to systematically improve that constraint until it is no longer the limiting factor. Every process has a bottleneck, but focusing automation efforts on the right constraint is the key to increasing efficiency, throughput, and profitability.

For example, let's say a warehouse identifies the packing process as the bottleneck in their operation. Despite having efficient picking and sorting processes, the manual packing process slows down their overall throughput. Before investing in automation in other areas, they decide to focus on automating the packing process as the first step. They review the existing packing process and find that the manual packing of goods takes a lot of effort and produces a high rate of errors. To address this bottleneck, they integrate pallet-moving robots that automate the transport of picked orders to automated packing stations. The packing stations are equipped with integrated scales, barcode scanners, and label printers to optimize the packing process and reduce errors.

As a result, orders are processed and packed more quickly, safely, and accurately, reducing the backlog of orders waiting for shipment. By automating the correct bottleneck, the warehouse increases throughput by 3X.



Conclusion

A successful warehouse automation deployment improves productivity, reduces operational costs, increases throughput, enhances customer experience, and creates a better working environment. Realizing these benefits, however, comes with challenges and requires thoughtful planning and preparation. It's key to establish and communicate clear objectives up, down, and throughout your organization. Your transformation team must understand existing processes to then fully integrate the automation with the business systems. Collaborating with a robotics partner who understands your business and helps you achieve your transformation goals will ensure success.

Prime Robotics offers a transformative path for warehousing. Our team learns your unique business processes and addresses bottlenecks to maximize efficiency. Prime seamlessly combines advanced hardware and software to ensure fully integrated automation success and higher returns for your warehouse operation.

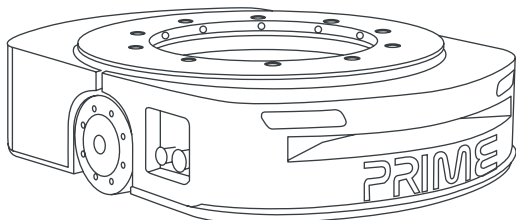
ABOUT PRIME ROBOTICS

Prime Robotics is a premier provider of end-to-end automation solutions tailored for distribution centers and warehouses. Prime's suite of robot and execution software solutions transform fragmented workflows, empowering clients to unlock operational productivity and efficiency. Committed to revolutionizing warehouse, supply chain, and factory operations, Prime strives to elevate businesses through best-in-class automation solutions and services. Prime manufactures and supports its products and solutions from its headquarters in Denver, Colorado.

Contact Prime Robotics to schedule your workflow assessment.

We'll work with you to:

- Take a deep dive on your business processes
- Make recommendations for process reengineering
- Set and communicate objectives
- Maximize the value of your investment



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