MAKING THE MOVE FROM MANUAL TO AUTOMATED

WHAT IS AUTOMATION, AND HOW DO YOU KNOW WHEN IT'S TIME TO MAKE THE SWITCH?

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With today's ever-changing landscape, it is imperative that companies and their supply chains keep adapting and constantly pushing the boundaries to ensure they provide the best customer experience possible.

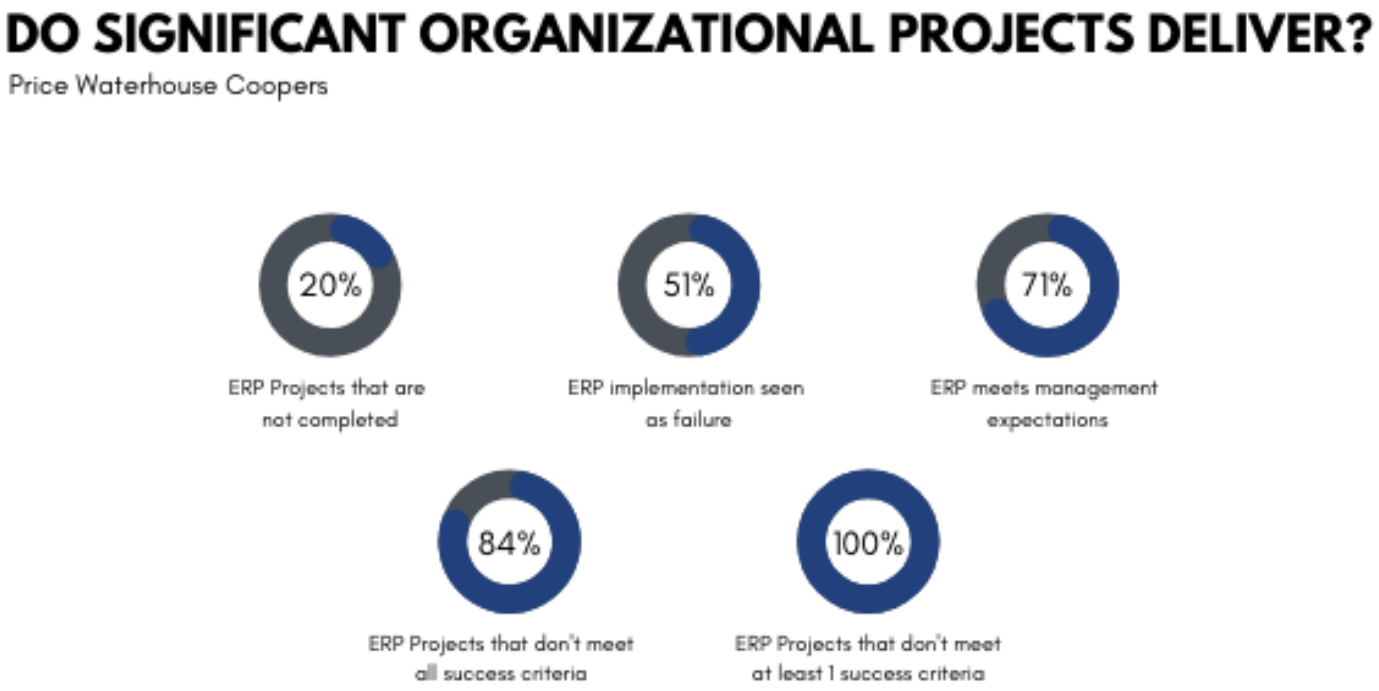
WHAT DOES AUTOMATION MEAN IN THE SUPPLY CHAIN?

Throughout my career, I've been fortunate enough to be exposed to many different industries and operations. This exposure has allowed me to gain a great deal of perspective and understanding of what drives successful business models, and long-term sustainability in an operation. With today's ever-changing landscape, it is imperative that companies and their supply chains keep adapting and constantly pushing the boundaries to ensure they provide the best customer experience possible.

One of the best ways a company can achieve this is by leveraging digital technologies. Automation and Technology when implemented correctly, can have a profound impact on taking an operation from good to great. These improvements not only improve the obvious deficiencies like pick rate, operational processes, and so on, but can also improve employee morale, reduce employee attrition rates, and most importantly optimize one's supply chain to meet the voice of the customer (VOC). Another vital factor that automation and technology allow is for a company to expand into markets they normally would not have 20 to 30 years ago, which we are now watching happen in the grocery retail sector.

HOW DO YOU KNOW WHAT TECHNOLOGY TO USE AND WHEN TO LEVERAGE IT?

There are many factors one must consider when deciding if and what technology route to take. But by far the most critical factor is market/operational analysis. Success and failure hinge on precise analytics for ensuring all critical variables have been evaluated for determining which technology is right for your business. Without accurate data, you run many risks of not only selecting the wrong path but more importantly not understanding if making the switch to leverage technology is even the right one. This could not only have a detrimental impact on one's ability to compete in the market they operate in but could negatively drive their ability to grab and secure market share in that industry. When deciding on what, why, and how, to automate its supply chain, a company needs to understand the breadth of its landscape and the critical environmental factors that are driving its specific market at that time. Recent studies show that large-scale enterprise resource planning (ERP) implementation projects are seen as a failure 51% of the time, and 20% do not even make it to completion.



This is because typically only some of the critical inputs are considered when performing the analysis and this often leads to gaps in understanding the true scope of what these changes require. Therefore, before the execution of any plan begins, leadership must ensure that all aspects that make up their business model are aligned to their market strategy. By aligning your strategy and business model you will have greater visibility of aggressive changes on the horizon (i.e., e-Commerce growth, labor constraints, market changes, etc.), a better understanding of the scope of the project, and will have set clear objectives to determine what success is. today, same-day delivery.

Take the grocery industry for example. Historically this industry is a low-profit margin business (2% on a great year) and traditionally operated within a brick-and-mortar model. However, once e-Commerce and Omni-Channel exploded onto the scene and became viable options for consumers, many in the industry had to quickly evolve and adapt their strategies or risk losing a large percentage of their customer base. This quick need to change led to many companies finding themselves in a fragile state. If they reacted too quickly and just rolled out typical operational supply chain practices, then the cost to serve would be unmanageable and the overall health of the business would suffer. And if they moved too slow, then many in the industry knew they would get left behind and would never be able to recover to compete on a large scale.

This sudden change forced the grocery industry to completely change and move away from its traditional models, which relied heavily on excessive assortment profiles, high inventory levels, and a customer base that was required to come to them for their goods. They are now forced to think outside their traditional ways of working, and the industry as a whole is required to think smarter and move to more innovative solutions like goods-to-person robotics, artificial intelligent fleet, and multifaced integrated platforms to manage dynamic order profiles to meet this new market demand where serving the customer now stretched across multiple modality platforms.

What was once a conservative industry that avoided risk and was slow to change, got thrust into an environment where risk now had to be taken. Traditional ways of working were no longer going to be able to serve the new landscape where the customer base expects and wants their groceries to be picked, packed, and even shipped to them on demand.

WHO SHOULD CONSIDER MAKING THE MOVE TO AUTOMATED?

Working in a manufacturing (MFG) environment versus a distribution center (DC)/fulfillment center (FC) can have similar considerations, but are overall extremely different. As a manufacturing leader, you know you are adding value as a profit center to the business you serve. However, as a distribution/fulfillment center leader, you know you are not providing value to the business you serve, since you are at a burden/cost to the business you serve. So as a cost center, you must frame your operational approach and ideology as a profit center, to allow you and your team to as much value to the business as you can.

In a manufacturing environment, you have to manage people, products, and processes. The first two are relatively easy to manage and understand. The last one is the most important but also the hardest to change or improve. A DC/FC environment is completely different in that you only have to worry about managing people and product; the process is not as big of a concern. So, if you can find a way to optimize and streamline your processes in a DC/FC, it will go a long way toward making you more profitable.

The biggest difference between working in a manufacturing environment versus a DC/FC is the amount of time spent on the phone and computer. In a manufacturing environment, you are expected to be on the phone with customers and vendors, managing the production process, and ensuring that products are being made to specifications. In a DC/FC environment, you are expected to be on the computer, managing inventory levels, placing orders, and ensuring that products are being shipped out on time. The biggest difference between these two environments is the people management aspect. In a manufacturing environment, you have to manage both direct and indirect labor. Direct labor is the people who are making the product. Indirect labor is the people who support the direct labor but don't make the product. In a DC/FC environment, you only have to worry about managing direct labor; there is no need to worry about indirect labor.

There are a couple of things for every operations leader and their team to consider, no matter the sector they operate in:

1. Meet customer demand (i.e., get products shipped on time)
2. Continually drive down operational costs.

In today's economic environment where consumers expect to get their items cheaper and faster, operational leaders must explore all viable options to operate more efficiently. Statistics show that by simply streamlining operations (i.e., improving inventory management, reducing manual processes, eliminating indirect labor hours, etc.) one can expect to see a 50-60% reduction in non-value-added activities by simply investing in the right technology. Therefore, it is crucial before beginning a continuous improvement plan for investing in technology, that one must conduct a thorough GAP analysis of each process to identify all potential waste streams. This will allow the team to not only know where to focus their attention but will also help them better understand the full end-to-end cost of the technology they're investing in.

WHERE DOES ONE BEGIN?

Considering labor is the largest controllable expense (some industries have as high as 80% of operational cost allocated to labor) are in the distribution center (DC)/fulfillment center (FC), it is only natural that operational leaders gravitate to the most labor-intense areas in their operation when trying to reduce operational cost. However, research (and personal experience) shows that there are underlying factors and or processes that drive higher warehousing costs, and it may not always be labor-driven. We've all heard the adage… "space and time are money", which are both key to the success (or failure) of DC/FC operations.

Research shows that billions of dollars are lost annually due to poor inventory management practices (i.e., inaccurate forecasting, cycle counting, damaged/ lost, theft, etc.), and if one doesn't have the proper inventory management tools (i.e., enterprise resource planning or warehouse management system) and or practices, then the operations will continue to have higher operating costs because they have failed to build the proper foundation for maximizing their space and inventory. Any company or operation can implement the latest technology or automation, but that may not be the actual solution needed. Therefore, it's crucial that a full end-to-end operations analysis is completed before committing to a specific area in the operations to add automation or technology.

I've seen it time and time again throughout my career where operational leaders automatically go and allocate all their resources to improving their picking and replenishment operations without establishing sound operational benchmarks like inventory standards. There is no ASRS or Autonomous robotics system smart enough or fast to combat lost and or missing inventory, which will lead to an operation that is never fully optimized.

This was a critical lesson that my team and I learned when standing up an e-Commerce operation out west. Traditionally our team would conduct a thorough end-to-end market and operational analysis whenever entering a new market. But since this was technically our fourth time starting up an operation, we hedge our bets more on subjective analysis and our experience to save time. However, this was a vital mistake that ultimately had a detrimental impact on the overall success of the project.

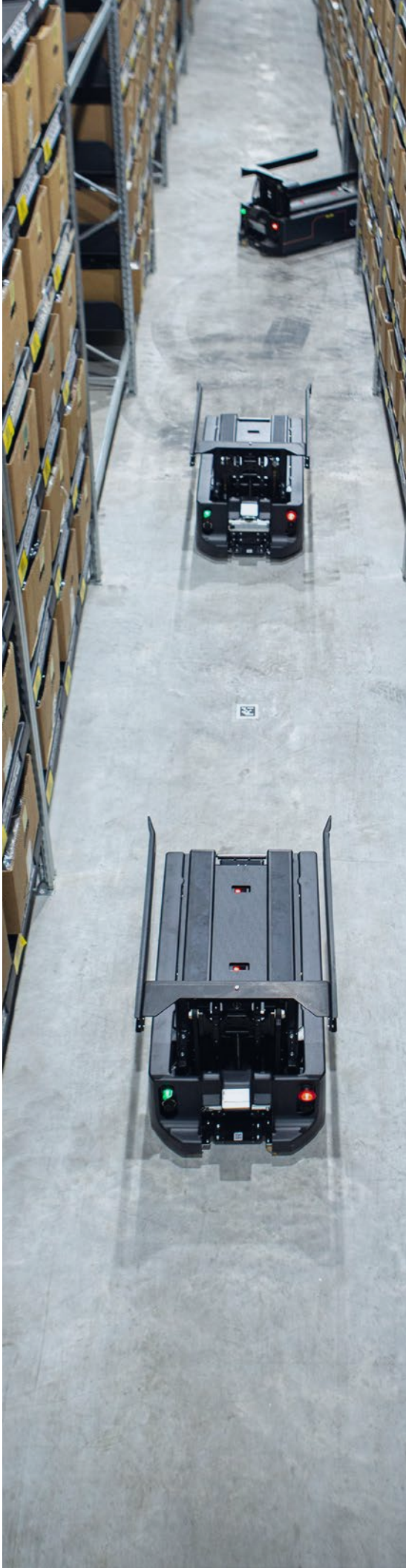
By skimping on the analysis, we quickly ran into a litany of problems that include the assortment profile not matching customer purchasing behavior in that market, the goods-to-person system not having the proper inventory and replenishment rules set, the delivery schedule wasn't properly vetted with each retail location before establishing our route plans in our system. Unfortunately, these were just some of the failure modes we came across for this project that resulted in project delays and unnecessary rework. All of which could've been avoided if we simply didn't allow ourselves to get complacent and skimp out on the market analysis. Therefore, no matter how mature one's operation may be, you must conduct the proper analysis to ensure you establish sound foundational inventory practices to achieve maxim efficiencies in your operation.

WHAT IS THE BEST TECHNOLOGY?

There is a wide array of innovative technologies available on the market today, from collaborative mobile robots, electronic data interchange (EDI), goods-to-person systems, mobile sort solutions, and so much more. We are now also seeing the use of autonomous fleets and drones to combat the last mile. Since there is no one-stop-shop scenario, exploring the diversity in available technologies is vital for companies moving towards a digital transformation to ensure that the right innovative technology is selected.

Committing to technology requires not only a shift in culture and strategy, but it means a substantial financial commitment as well. Understanding the return on investment (ROI) is a critical indicator for ensuring a business team is making the right decision on which projects to invest in. Return on investment measures the overall effectiveness of management in using its assets to generate returns. Research has shown that >40% of projects fail to have an ROI baseline before approval, which leads to many investments/projects failing to achieve the financial gains that were originally budgeted.

So how do you achieve ROI for your project? ROI is a broad calculation that becomes fluid based on the situation it is being calculated for. For example, ROI calculation for investing in the stock market will vary slightly when calculating for a large-scale project.



When calculating ROI for projects it is important to focus on the following:

1. Cost of capital. This is the return a company needs to achieve to justify the cost of a capital project.
2. The initial cost of the project – Cash outflow
3. Cash In-flows – Future economic benefits
4. Cash Out-flows – Continual spending post-investment
5. Net present value (NPV) of your project = Cumulative Cash Inflow – Cumulative Cash Outflow
6. Internal rate of return (IRR) = Sum of Net cash flow + initial capital investment. IRR should zero out NPV to determine if a project is favorable.
7. ROI = NPV/Total cost of the project or (Investment Value – Investment Cost)/Investment Cost

ROI percentage will vary between industries, but historically analyst say projects with an expected 3–5-year payoff, and annual ROI greater than 7% is considered good. But as stated before, ROI is going to be a fluid calculation based on the industry and circumstances. Many projects carry what are called ancillary (hard and soft) savings that can be difficult to calculate because of blended business processes or lack of documented engineered labor standards. And this is where leveraging technology will have a profound impact on an operation. By leveraging technological tools (ERP, LMS, WMS, etc.) an operation will now have full visibility of its operations and will shed great light on the hidden factories that they were previously unaware of.

WHAT COMES NEXT?

As we look back across the landscape of time, we can all think of the companies that were booming one minute and were doomed the next. Blockbuster, Kodak, Sears- the list goes on and on. The one thing they all have in common is that they all failed to evolve. They stopped asking and challenging their "why".

By the time they realized their complacency it was too late. Companies like Netflix, HP, and others had quickly swooped in and provided offerings to customers that the old guard couldn't, and those companies were quickly left behind and unfortunately perished. So that's why it's of the utmost importance that a company never gets satisfied and or relies on "their old ways of working" since all it takes is a slight change (major or minor) to one's landscape to create catastrophic failures. It is extremely important that a company is always pushing the edge to be different and innovative in its industry.

That's where Hy-Tek Intralogistics comes in. Our expansive knowledge and experience extend across many different industries, giving our team a competitive edge for solving some complex problems for our clients.

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HOW DO I GET STARTED MAKING THE MOVE FROM MANUAL TO AUTOMATED?

Are you ready to start assessing improvement opportunities or ways to increase capacity within your distribution network? If yes, then contact us today. Our specialized team will work with you to understand your business targets, develop a customized plan specific to your company, and put the appropriate systems and technologies in place to help your facility optimize its processes.

Give us a call at **1-800-891-5504** or email us today at **info@hy-tek.com.**