

What IF?

Intelligent Order Fulfillment Systems



Transform Your Warehouse Into a Strategic Weapon

“When written in Chinese, the word ‘crisis’ is composed of two characters. One represents danger and the other represents opportunity.”

John Fitzgerald Kennedy

Introduction

Executive warehouse managers today must develop a strategic response to meet the challenges facing their warehouse and distribution center operations. Automation projects have delivered desired business results through a disciplined process, careful planning, research, comprehensive analysis, and perseverance. Is it worthwhile? Many industry leaders say a resounding yes.

A 2004 study found that “companies with exceptional order-fulfillment...are 20% more profitable and grow top-line sales 25% faster.”¹

In a 2010 AMR/Gartner report about the world’s top 25 supply chains, Dr. Alex Ellinger and a team of colleagues from the University of Alabama and Texas A&M said that “... the leading supply chain performers... are more financially successful than their competitors.” The same report noted some common attributes among the world’s top 25 supply chains:

- “... transformation (supply chain), from basic cost center to essential competitive weapon...”
- “... rise in rate of productivity improvement across industries that promises to change the world economy”
- “...embedding product and process innovation in supply chain operations and consciously managing and shaping demand from a customer, production and fulfillment standpoint...”²

This eBook is intended to offer insight and ideas to help you evaluate the strategic value of an innovative, market-focused automated order fulfillment system in your operation. Following these ideas should help increase the probability of cross-functional consensus and, if merited, financial support for a warehouse automation project, especially if it promises to reduce costs and increase revenue.

¹“Strategic Supply Chain Management,” McGraw-Hill, 2004

²“The AMR Supply Chain Top 25 for 2010,” AMR Research/Gartner Pub date June 2, 2010, ID No. G00201212

The first step is to assess your warehouse operation to determine if it's a viable candidate for automation. The thresholds for further consideration are operations that handle over 200,000 pallets and turns inventory monthly. A valuable tool, available

at http://www.activ.com/feasibility_calculator, can help you determine if your operation could be filling orders more profitably and will assess various scenarios such as warehouse consolidation or automation of only high-volume, fast-moving inventory.

Having the Right Approach

[UNDERSTANDING THE PROBLEM WITHIN THE CONTEXT OF YOUR COMPANY]

Understand the Obstacles

The overwhelming majority of distribution center initiatives have focused on cost reduction, even in firms where revenue growth is the prime objective of corporate strategy. This misalignment is a challenge to warehouse managers who are also being asked to manage more complex order fulfillment, control costs, and meet corporate social responsibility objectives.

Getting distribution projects financed is very difficult because most strategic efforts focus on top-line revenue growth, product development, strategic partnerships, or mergers and acquisitions. Profit is the goal. You can cut costs to increase profits, but only so much. Ultimately, real profits come from top-line growth; hence the strategic focus on headline initiatives.

Your firm has devoted millions of dollars to create and maintain distribution operations that are not perceived as having the potential to create strategic value. In fact, it's viewed as just the opposite. Distribution equals overhead — something to be trimmed, managed, reduced and made to be as inexpensive and efficient as possible. Because it's easier to measure cost, warehouse automation financial ROI analysis includes assumptions on cost savings but not customer value attributes that, if provided, would drive higher margin revenue growth.

[[Back to Contents](#)]

The overwhelming majority of distribution center initiatives have focused on cost reduction, even in firms where revenue growth is the prime objective of corporate strategy.



EXPLORING THE GAP



Explore the Gap

First we should quantify the cost of problems facing distribution by bridging the gap between strategic intent and operational reality. That means take the “reality” of distribution, all its operational issues, and align them with the strategic needs of your company. On one hand you have quicker turns, environmental impact, increased SKUs, increased order complexity

and rising costs. On the other hand you have a corporate strategy focused on top-line growth and increased competitive advantage. When we explore the gap between these two realities, so distribution contributes to corporate strategy, we begin to solve a key problem that increases the likelihood of corporate support and financing.

Problem Statement

[BEFORE SOLVING A PROBLEM, WE NEED TO UNDERSTAND IT]

Understanding Leads to Solving

Without understanding we can do a lot of work, but the odds will be quite low that problems will be solved sufficiently. This may sound obvious until you consider how many companies, departments, governments and groups work day and night, but can't seem to solve the problems before them.

There are many reasons, but the lack of a common understanding with regard to the nature of the problem stands out. You can have lots of people in an organization who think they're working on a solution together when in fact, they're all solving a problem as they see it, which often can

mean they're all solving different problems. To have a good understanding of our problem before going any further, we must develop a universal problem statement.

Create a Universal Problem Statement

The universal problem statement is defined as a statement of the problem that all stakeholders can agree on. Get the universal problem statement right and it will be much easier to develop a solution that everyone agrees is right for the business. Universal problem statements lead to universal solutions and universal solutions create strategic advantages.

Explore the Gap:

First we should quantify the cost of problems facing distribution by bridging the gap between strategic intent and operational reality.

The only way to create a true universal problem statement is to talk to all stakeholders and poll them on their view of the problem. Let them tell you what they think on a high level. Go to the finance team and ask how they view the company's overall strategic initiatives and commitments, divorced from distribution. The goal is to develop a cross-functional picture of the company and issues from various perspectives. This is not an invitation to criticize you or your department. Rather, it's a fact-finding mission to understand their needs and requirements.

Ask about their objectives, strategies, metrics, issues that frustrate them and challenges they face. Then ask how distribution affects them and impacts their responsibilities and decision-making. What do they wish it could do, change, modify? Have this discussion with as many stakeholders in the organization as you can, including sales, customer service, IT, marketing, engineering, etc.

What's the Corporate Strategy?

It will become clear, as you talk to stakeholders, how important it is to understand corporate strategy. Your company's strategic plan should outline organizational goals and describe where resources have been allocated over the next three to five years. In a publicly traded company this information is often part of the CEO Letter to Shareholders in the Annual Report. However, many companies may keep that information restricted or not documented in a plan, but there are multiple ways to discover strategic initiatives including discussions with the executive team. Discussions with the executive team will also reveal variations in how each one sees and interprets the company strategy. Documenting this in a gap analysis will help you prepare a proposal that's more likely to win funding. Understanding corporate strategy will help develop solutions that meet organizational needs, align departmental efforts, and deploy resources more efficiently.

Identify New Strategic Challenges

A key step at this time is to identify any new or emerging strategic challenges. These would be things that have created a challenge for your company strategically and that are not addressed in your company's plan. For instance, maybe the last six months has seen a major shift in technology usage. Or, maybe a competitor has come out with a new capability to out-flank your company, allowing it to steal away accounts. Make sure you've identified these issues. They don't necessarily show up in corporate strategy, but you can bet they are high on your company's list of urgent issues to deal with.

It will become clear, as you talk to stakeholders, how important it is to understand corporate strategy.

Your company's strategic plan should outline organizational goals and describe where resources have been allocated over the next three to five years.

OPERATIONAL PRESSURES



Determine Operational Pressures

In addition to new strategic challenges are operational pressures. These include issues like scarcity of credit, loss of an important supplier, energy cost fluctuations, labor availability, or unexpected changes in executive leadership. Like new strategic challenges, these operational pressures are

rarely addressed in corporate strategy, but they're urgent in nature and demand the company's attention. Take these into account as you gather information towards bridging the gap between operational reality and strategic intent.

Distribution Center Challenges

[LOOKING CLOSELY AT YOUR CURRENT CHALLENGES]

Key Distribution-Specific Issues

The next step is to outline issues specific to distribution. These are things that you are regularly trying to deal with that present challenges beyond the daily routine of loading trucks and shipping goods. It's likely that one or all of the following five issues pushed you to consider automation.

Rising Costs

All distribution center managers deal with rising costs. These costs come from a number of places, such as labor, insurance, power, maintenance, breakage, errors and downtime, to list a few. These costs are not static and often are not controllable by you, yet they always trend upwards.

Environmental Impact

Another area of operational pressure is the impact your distribution center has on the environment. Companies all over the world are increasingly being held more accountable for how they impact the environment. This pressure can come from inside and outside your organization. Internally, companies are developing sustainability initiatives as part of their brand message and as part of their equity formula. There is a desire to show shareholders how their company is taking the lead in developing business models that are more sustainable. Externally, new legislation, customer demands, industry standards and social

Operational pressures are rarely addressed in corporate strategy, but they're urgent in nature and demand the company's attention.



The next step is to outline issues specific to distribution. These are things that you are regularly trying to deal with that present challenges beyond the daily routine.

pressure make it increasingly important that your distribution center is measuring environmental impact or, at least, energy consumption.

Increased Turns/Velocity

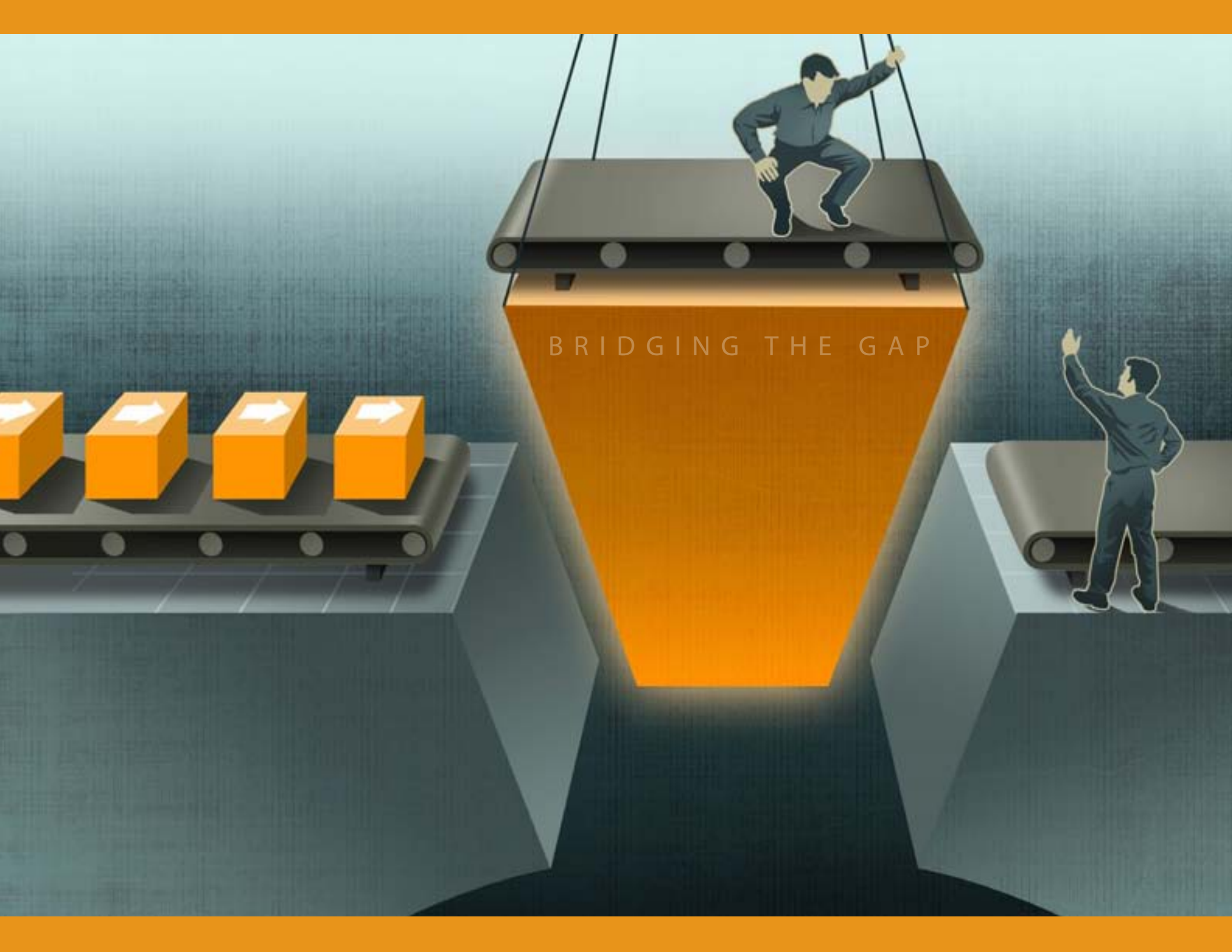
Another pressure on distribution is increased velocity. That is the pressure created when customer demand for your product spikes. It can happen for a number of reasons, retail price wars and seasonal demand spikes being just two. You can respond in a number of ways. You can ignore it and just keep shipping on a regular schedule. However, retail shelves will be empty, jeopardizing your relationships externally and internally due to lost revenues. You can divert resources set aside for other customers or start to pull from your warehoused product, if you have a store set aside. Or, you can pump up production and go straight from the manufacturing line to distribution, which may be difficult. Some manufacturers stockpile inventory, but that costs money in square footage to erect, to maintain or lease a facility, in added utility costs, staffing, and redundant software. And, what about the financial implications of revenue being tied-up in static stocks or the tax implications that the inventory can represent?

Increased Order Complexity

Another challenge for distribution is increased order complexity. Orders are getting more and more complex and thus harder and harder to fulfill. Distribution has to absorb this pressure often with an existing system that was built for simpler orders. This puts increasing pressure on distribution to the point where it can hamper the company's ability to stay competitive due to distribution's limitations.

Increased SKUs

As anyone in consumer goods knows, brands are continually adding products in an effort to remain competitive and control shelf space. These new product offerings, line extensions, sub brands and product variations all add up to an increase in the SKUs that distribution must handle. This can strain warehouse resources, increase order processing costs, delay delivery time and cause accuracy issues.



BRIDGING THE GAP

It's now time to innovate solutions – solutions that bridge the gap between operational reality and strategic intent.



Solving the Problem

[NOW THAT THE PROBLEM HAS BEEN DEFINED, IT'S TIME TO DEVELOP A SOLUTION]

Innovate to Bridge the Gap

At this point you should have explored the following: a universal problem statement, a corporate strategy, any new strategic challenges, operational pressures and distribution-specific challenges. You now have a great perspective of the macro goals and issues facing the company, as well as department-specific issues. You have defined the issues that pertain to distribution and you can view everything in the context of the company's strategic initiatives. It's now time to innovate solutions – solutions that bridge the gap between operational reality and strategic intent.

Your goal here is to get as close as possible to solving all the problems you've identified. Gather a team of content experts. This option is often overlooked or

skipped because the assumption is it's your job to figure this out on your own. But, the truth is, it's your job to manage the process of figuring this out.

What do we mean by content experts? Content experts can include internal experts, like product managers, engineers and finance people, but it can and should include external people, such as consultants, distribution experts, transportation experts, package engineers and LEED building experts. The idea here is to get a wide group of expertise represented at the table and to avoid a myopic view. Sure, you're in distribution, but why not have an environmental impact expert at the table? Or why not include your local zoning expert?

Once you've gathered your team of experts it's time to brainstorm solutions. We won't cover the brainstorming or ideation process in this document because there are a lot of resources out there to help you with that. We would like to point out that the innovation process is iterative and focusing on functionality is useful. You will most likely come up with ideas, develop them, redefine them, test them and further develop and refine them. It's rare to solve a problem perfectly out of the gate. But, by using your universal problem statement as your guide and leveraging a team of content experts, you can arrive at a powerful solution.

The Problem-Solving Dilemma

You will not be able to solve every aspect of every problem that stakeholders want solved. So, how do you choose what to cut and what to fix? This is where understanding the corporate strategy comes in handy. Use it as a yardstick. If a problem can be directly tied to a strategic initiative, then you need to fix it if you can. If it's something that is not easily tied to delivering on a strategic goal and you can't easily solve it, then it's a good candidate for being left by the wayside. The nice thing about this approach is you can easily defend your choices. You're making decisions based on the company's commitment to its strategic initiatives.

Develop Model Solutions

After the innovation process has run its course you will have decided on a solution that you think is best. It's tempting at that point to begin to promote that solution and try to get support. Resist that urge.

Put your solution to the test by creating a model. Modeling is critical. Current technology makes it accessible and cost effective.

You're developing a solution for a very complex problem, a problem that not only addresses the needs of your distribution system, but also encompasses finances, engineering, product development, sales and information technologies.

Modeling allows you to take your automation solution out for a test spin, see what works and what does not, identify possible issues before you actually run into them and refine your solution. Once you've modeled your solution and identified its strengths and weaknesses you can then make changes and get the solution as sound as possible. This will make your numbers and projections as close to real as possible.

Modeling allows you to take your automation solution out for a test spin, see what works and what does not, identify possible issues before you actually run into them and refine your solution.



CORNER
OFFICE

If you can sell the solution, you'll have an approved project and perhaps a new corner office in the near future.

Selling the Solution

[GETTING YOUR ORGANIZATION BEHIND THE SOLUTION]

Now, it's time to gain consensus and financial support for your automation project. We won't cover a step-by-step account of how to sell your solution, but we want to give you the right framework to approach your executive team.

First, don't forget strategy. Always start there. Demonstrate that your eye is on the same ball as theirs: strategic goals. Second, share your process. Make sure they understand how you made your decisions and arrived at your solutions. Your executive team will appreciate sound process and sound thinking. Third, share the universal

problem statement. Show how it ties into the strategic goals, as well as the issues that each department is dealing with. And finally provide the solution. Present it in relation to the company's strategic goals, universal problems and the issues that you, distribution, are dealing with. Show how your solution not only solves your problem and reduces costs, but also bridges the gap and shows how your solution will drive revenue. If you can do that, you'll have an approved project and perhaps a new corner office in the near future.



Conclusion

[THE EFFORT IS WORTH IT]

Warehouse automation is a complex and vast topic. There is no one technology or process that will guarantee success. As you now understand, the decision to automate a warehouse should be made only after a careful and comprehensive business process review and evaluation is completed. This process can take a long time. But it's worth it. The optimization of warehousing activities can lead to drastic reductions in structural costs that can propel your firm's distribution center front and center as a potential key to organizational success.

There are a lot of resources and experts that can help you through this process. You should seek technically qualified, unbiased support when considering automated warehouse solutions for your order fulfillment operations. Independent system integrators, like Retrotech, Inc., can collaborate with you in a process to identify

appropriate warehouse automation technologies, develop solutions that align with business requirements, and create plans for implementation that mitigate risks.

Desired operational and financial results can both be achieved through proper analyses, system engineering/integration, delivery to requirements, planning, and well-executed project management during installation, testing and training.

Thank you for considering automation. We hope you found this information useful. While no document can address every issue or anticipate every contingency, we trust you are now armed with a process and an approach that will help get distribution in alignment with strategic intent. That's the first step towards larger initiatives that can be launched to transform your warehouse into a competitive weapon.



Transform your
warehouse into a
strategic weapon.