



The Warehouse Efficiency Playbook

How Leading Warehouse Operations
Build Resilience and Speed

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Introduction

Turning Efficiency into a Leadership Strategy

Across warehouses worldwide, the conversation has changed. Efficiency has become a leadership priority and a strategic responsibility that determines whether a business can meet expectations, scale operations, and retain talent in a rapidly shifting market.

Leaders face a perfect storm of pressures in labor shortages, volatile order volumes, and rising customer expectations that demand near-perfect accuracy and speed. Legacy systems slow down decision-making and training new hires takes too long. And some versions of warehouse automation, while promising, can feel complex and difficult to scale across multiple sites.

Every warehouse executive wants to improve performance, but many still wrestle with the same question: [Where do we start?](#)

The good news is that there are proven answers. Across conversations with executives on Warehouse Automation Matters — from Staples Canada, Radial, and KSP Fulfillment to North Bay Distribution, Motivational Fulfillment, Datex, and Ranpak — a common theme has emerged that the most effective leaders combine operational discipline with innovation. They invest in technology that complements people, and they measure success in both productivity and adaptability.

This playbook gathers those lessons into a practical roadmap for warehouse executives and operators. Each section focuses on a critical area of performance — from foundational systems and scalable automation to workforce enablement, data visibility, packaging optimization, and partnership strategy.

[The goal is to help you turn warehouse complexity into clarity with one decision at a time.](#)

Before automation reshapes how a warehouse operates, the foundation must be ready. The journey begins with strong systems, accurate data, and alignment across every team that will depend on them.

Build Your Foundation Before You Automate

For many warehouse leaders, the first impulse when facing labor shortages or throughput challenges is to jump straight into automation. Robots, sensors, and AI systems all promise speed, but without the right foundation, those investments often create more complexity than clarity.

Too often, operations still rely on outdated Warehouse Management Systems (WMS), patchwork spreadsheets, and manual workarounds that obscure the data needed to make automation successful. This results in misdirected inventory, unpredictable throughput, and decision-making based on guesswork instead of insight.

Before automation can deliver efficiency, visibility must come first. Mert Selcuk, Senior Manager of Supply Chain Strategy & Capabilities at Staples Canada, learned that lesson early in their automation journey.

“We went from pen and paper to a very robust WMS,” Selcuk said. “That allowed us to ask, ‘What’s next?’”

By focusing first on a system upgrade, Staples created the operational backbone for automation in digitized workflows, real-time data, and reliable process control. Only then did they begin layering on robotics, which now enhances flexibility and throughput without overwhelming the team.

Amit Levy, EVP of Sales and Strategy at Made4net, echoed that sentiment, noting that the most sophisticated automation won’t save a broken process.

“A WMS alone won’t solve inefficient processes,” Levy explained. “Every successful implementation starts with understanding where the real problems lie.”

For warehouses rushing to automate, the temptation to treat software as a silver bullet is real. But lasting efficiency depends on first getting your data, workflows, and cross-functional alignment right. The best technology amplifies strong fundamentals and doesn’t replace them.



Warehouse Actions to Take

- **Audit your systems and data integrity.** Identify gaps in visibility, accuracy, and real-time tracking. If you're still using spreadsheets or legacy tools, modernization should be your first step.
- **Bring IT and operations together early.** A foundation that scales require collaboration between those who manage systems and those who live the workflows every day.
- **Define success before automation begins.** Set measurable goals — accuracy, labor efficiency, ROI timelines — before choosing tools. This clarity prevents scope creep and ensures alignment at every level.
- **Design for adaptability.** Select a WMS or integration platform that evolves with your business model, not one that locks you into rigid workflows.
- **Pilot before you proliferate.** Test data flow, reporting, and user adoption in a single site before scaling automation network wide.

Automation built on shaky foundations may deliver temporary speed, but it won't sustain long-term performance. Warehouses that start small, learn fast, and scale deliberately — as we'll explore next — are the ones that turn those foundational investments into measurable, repeatable success.

Limit Scope, Learn Fast, & Scale Smart

For most warehouse executives, the question isn't whether to automate — it's how to scale it across multiple facilities without losing control. The complexity of multi-site fulfillment introduces new risks: inconsistent processes, uneven workforce adoption, and duplication of mistakes that drain ROI instead of amplifying it.

The truth is, scaling automation is less about adding robots and more about learning what works, and what doesn't, at each stage. Many organizations rush to replicate a pilot before the lessons are fully absorbed, only to find themselves managing silos of technology that don't communicate. Others over plan, waiting years to deploy while competitors are already reaping efficiency gains.

Radial, a global 3PL serving top retail brands, found the sweet spot between those extremes. Rather than attempting to automate every site at once, the company built a framework designed for learning and replication.

"First-pass quality through the door on your first attempt is key for us," said David Welsh, VP of Fulfillment Services Delivery at Radial. "Once quality was in place, we turned to improving speed and scaling capacity."

By focusing first on pick accuracy and order visibility, Radial created a strong foundation that could scale efficiently. Each subsequent site built on the success of the last — a model that balanced standardization with site-specific flexibility.

Mike Geiger, VP of IT at KSP Fulfillment, took a similar approach when scaling his robotics program. After crossing 10 million picks in just over a year, he credited success to pacing and patience.

"It helps us to stabilize our labor and our labor spend," Geiger said. "And it helps make things easier for the workers that are here."

Instead of chasing an immediate network-wide rollout, KSP focused on one facility at a time — refining training, analyzing labor impact, and optimizing performance before expanding. This phased approach delivered consistent throughput while keeping the workforce engaged and confident.



Scaling smart also means building in flexibility. David Green, Executive Chairman of Peak Technologies, noted that 3PLs in particular benefit from modular deployment strategies that can flex with customer needs. Short-term robot leases or Robots-as-a-Service (RaaS) models let warehouses match automation investment to demand spikes without long-term strain.

The lesson is clear that automation maturity isn't measured by speed of rollout, but by the quality of learning at each stage.

Warehouse Actions to Take

- **Start with a limited scope project that proves the model.** Use one site or process as your learning lab, capturing data on accuracy, throughput, and training time.
- **Document lessons and standardize them.** Create a repeatable implementation framework that includes workflows, KPIs, and feedback loops for future sites.
- **Treat automation as an iterative investment.** Adjust robot fleets, workflows, and labor planning based on real-world performance and not assumptions.
- **Balance machine uptime with labor planning.** Incorporate robot utilization into your scheduling to ensure optimal productivity across humans and machines.
- **Choose a provider that scales quickly.** Consider all of the areas around automation that have to scale with it.

Scaling efficiently is about machines and the people who run them. The next step in building a high-performance operation is empowering employees to see automation as an ally, not a replacement. That's where efficiency turns into lasting cultural change.

Empower People, Not Just Processes

Even the best automation strategy fails without people who believe in it. Many warehouse leaders underestimate just how much change management defines the success of their technology investments. Robots can move products, but only people can move a culture forward.

For operators on the floor, warehouse automation can initially spark fears of replacement, of disruption, and of losing the sense of mastery they've built over years. For leaders, it's easy to focus on throughput and overlook morale, but morale is the multiplier. If teams don't understand how automation benefits them personally, even the most sophisticated system will underperform.

Warehouses also face a persistent workforce challenge in turnover rates that exceed 40%, injury rates that remain high, and training programs that stretch weeks before new hires are fully productive. When warehouse automation is introduced thoughtfully, it can directly improve each of those pain points to shorten training curves, reduce strain, and create safer, more predictable workflows.

That's the philosophy Tony Altman, President and CEO of Motivational Fulfillment & Logistics Services, built his operation around. His company views technology not as a replacement for people but as a means to elevate them.

"We see automation as a way to improve the employee experience," Altman said. "It improves morale, lowers injuries, and helps employees pursue new skills and advancement opportunities."

Motivational's results underscore a simple truth that when people feel supported, performance follows. Automation doesn't have to erode the human connection on the warehouse floor; instead, it can strengthen it by removing physical strain and repetitive work so employees can focus on quality and growth.

Radial experienced a similar effect when automation simplified onboarding.

"The graphical user interface is very intuitive and easy to use," said David Welsh, VP of Fulfillment Services Delivery. "We were down to minutes and hours to train and onboard associates effectively."



By making technology accessible and user-friendly, Radial empowered a diverse workforce, improved safety, and increased engagement. What was once a weeks-long ramp-up became an exercise in inclusion and efficiency.

The cultural shift can't be overstated. Successful automation isn't just about machines working efficiently; it's about people feeling valued, capable, and confident working alongside them.

Warehouse Actions to Take

- **Lead with transparency.** Explain the “why” behind automation of how it reduces physical strain, expands skills, and strengthens job security through efficiency.
- **Design training for comprehension, not compliance.** Use intuitive interfaces, visual guides, and multilingual tools to make technology adoption inclusive.
- **Create continuous feedback loops.** Hold floor-level check-ins after rollout to capture what's working and what's frustrating and act on it quickly.
- **Track workforce metrics with the same rigor as throughput.** Monitor retention, injury rates, and job satisfaction to measure automation's real human impact.
- **Celebrate milestones.** Recognize early adopters and teams who hit productivity or safety goals; visible wins reinforce trust in the process.

With a strong, engaged workforce, warehouse automation becomes an accelerator rather than a disruption. The next step is turning that momentum into insight and using data and technology not just to move products, but to make smarter, faster decisions across the entire operation.

Harness Data & Technology for Smarter Decisions

In many warehouses, data exists, but it's fragmented, outdated, or inaccessible when it's needed most. Leaders often find themselves making critical operational calls based on instinct instead of insight, because their systems can't keep up. Legacy Warehouse Management Systems (WMS) were never designed for today's level of complexity where fulfillment spans multiple channels, SKUs multiply overnight, and automation must adapt to real-time demand shifts.

This lack of visibility becomes a silent bottleneck as manual data entry, disconnected systems, and slow IT response times can turn even a well-staffed facility into a guessing game that results in inventory blind spots, misrouted orders, and missed opportunities for optimization.

That's where modern technology, especially configurable, low-code systems, changes the equation. Instead of waiting months for IT to code and deploy updates, low-code tools allow warehouse leaders to build or adjust workflows in real time. They turn the warehouse from a reactive environment into a responsive one.

Bryan Batchelder, VP of Product at Datex, described it succinctly:

"With a low-code platform, you can implement a change, review it, and revise it, sometimes all in one meeting."

That ability to experiment fast and iterate even faster is what gives warehouse managers the flexibility to respond to new customers, SKUs, or fulfillment models without expensive downtime.

At EVERSANA, for example, the Datex team used its low-code platform to integrate with Locus Robotics and connect robotic systems for both case picking and pallet building without months of custom middleware or outside developers. The result was faster integration along with agility that was built directly into the organization's DNA.

Similarly, Amit Levy, EVP of Sales and Strategy at Made4net, emphasized that technology must adapt as fast as the business itself:

"Your WMS should strengthen your core processes, not weigh them down," Levy explained. "As your volumes climb or your network expands, your system should grow with you."



That scalability matters more than ever. As e-commerce surges and fulfillment models diversify, the warehouses thriving today are those that treat data as infrastructure and not as an afterthought. They invest in systems that connect people, robots, and analytics in one ecosystem.

Warehouse Actions to Take

- **Audit your current data flow.** Identify where information stalls between systems, teams, or sites, and prioritize integration points that eliminate redundancy.
- **Adopt modular, low-code platforms.** Choose technology that empowers operators, and not just IT, to configure workflows and dashboards quickly.
- **Build real-time visibility into your daily rhythm.** Use dashboards to display live metrics such as order accuracy, pick rates, and robot utilization on the floor.
- **Measure automation integrations with clear metrics.** Track time saved, error reduction, and speed-to-implementation to quantify ROI early.
- **Revisit your ROI model quarterly.** As low-code tools lower development costs, projects once “too expensive” to justify may now deliver faster payback.

As warehouses modernize their digital infrastructure, one area often remains overlooked in the final touchpoint of the fulfillment process, which is packaging. Yet packaging automation can be one of the fastest ways to reduce waste, control cost, and boost efficiency across the line.

Packaging & Beyond — Don't Overlook the Last Mile

When warehouse leaders talk about automation, the conversation usually centers on upstream processes of picking, replenishment, or inventory movement. Yet one of the biggest untapped opportunities for savings and efficiency sits at the end of the line in packaging.

In many operations, packaging remains stubbornly manual, and workers spend hours forming boxes, filling voids, and sealing cartons through repetitive, labor-intensive steps that often become bottlenecks. The inefficiencies compound as oversized boxes increase freight costs, excess filler inflates material spend, and poorly packed shipments drive up damage and return rates.

As labor markets tighten and sustainability targets rise, these “small inefficiencies” quickly add up to millions in preventable costs each year. Automating the packaging process doesn't just mean improving speed — it's about control, consistency, and measurable ROI.

Bryan Boatner, Global Managing Director of Automation at Ranpak, believes packaging should be the entry point for many warehouses beginning their automation journey.

“Packaging is the final touchpoint in your fulfillment process, which makes it a smart and often lower-risk place to begin automation,” Boatner said. “It can be implemented with minimal disruption and deliver immediate results.”

Ranpak's experience shows how much efficiency hides in those final steps. End-of-line automation doesn't interfere with upstream systems, but it surfaces valuable insights to reveal where upstream bottlenecks occur and how material usage impacts cost.

Right-sizing packaging is another overlooked game changer. By moving away from one-size-fits-all boxes and toward automation that creates tailored cartons, warehouses see measurable gains across cost, efficiency, and sustainability.

“Ranpak's Decision Tower uses machine vision to scan the contents of a carton and dispense precisely the right amount of fill, regardless of SKU data accuracy,” Boatner explained. “That ability to operate effectively in less-than-perfect data environments is a game changer for busy fulfillment centers.”

In other words, you don't need perfect data to achieve perfect warehouse efficiency as smart systems now adapt in real time to create tighter feedback loops that cut waste and streamline throughput.



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Warehouse Actions to Take

- **Start at the end of the line.** Audit your current packaging workflow for repetitive tasks, wasted materials, and labor-intensive steps. End-of-line automation often delivers the fastest ROI.
- **Prioritize right-sized packaging.** Eliminate one-size-fits-all cartons to reduce filler use, lower freight costs, and enhance the customer unboxing experience.
- **Track the right KPIs.** Monitor metrics such as material usage, shipping volume reduction, pack-time per order, and damage rates to quantify packaging automation's impact.
- **Leverage modular solutions.** Choose scalable systems, from automated carton forming to intelligent void-fill, that can expand as your business grows.
- **Don't wait for perfect data.** Deploy systems that adapt dynamically; modern AI and machine-vision technologies can operate even when SKU data is incomplete or inconsistent, although real data is the best.

Automation doesn't happen in isolation. To make all these systems, from WMS to packaging, perform as one; warehouse leaders must focus on partnership. The most efficient operations are well-equipped and well-connected.

Choose the Right Partners to Future-Proof Your Supply Chain

Even the most advanced warehouse technology can fail to deliver its promise if it's implemented in isolation. Automation, data analytics, and system design all depend on one constant, which is the strength of your partnerships.

Too often, companies treat their technology providers or 3PLs as vendors rather than strategic collaborators. The result is fragmented data, inconsistent workflows, and finger-pointing when operations falter. For warehouse executives, the real challenge is finding technology AND alignment.

In a fulfillment environment where order complexity, SKU volatility, and customer expectations are constantly rising, you need partners who can move with you and not just sell to you. The right relationship delivers both stability and scalability, ensuring that every new solution fits seamlessly into the broader operation.

That philosophy is central to Chris Caouette, Chief Revenue Officer at North Bay Distribution, who cautions brands against choosing partners on cost alone.

"The lowest pick fee isn't your lowest cost," Caouette explained. "Accuracy and automation are what drive true savings."

Caouette's point resonates across the logistics world that a fulfillment partner's true value lies in their ability to safeguard the customer experience. North Bay's success is built on technology maturity and uses API-friendly WMS platforms, real-time dashboards, and automation-ready workflows that integrate seamlessly with clients' systems.

The same logic applies to technology partnerships. Mike Wills, Chief Revenue Officer at Peak Technologies, emphasized that true efficiency comes from integration rather than piecing together disconnected tools.

"Integration is where the optimization gains are unlocked," Wills said. "A solution provider should understand the entire operation, not just one piece."



Partnerships like these create ecosystems where data flows freely; decisions are informed by shared visibility, and growth becomes collaborative rather than reactive. Whether selecting a 3PL, a systems integrator, or an automation vendor, the long-term differentiator is agility and the ability to evolve together as customer expectations shift.

The future of fulfillment belongs to networks of connected partners working toward the same goal of operational excellence that scales.

Warehouse Actions to Take

- **Evaluate partners beyond cost.** Look at the total value of accuracy, uptime, data transparency, support/customer success, ongoing optimization, and flexibility, and not just pricing.
- **Ask about integration maturity.** Ensure your partners' platforms can connect through APIs, middleware, and shared analytics dashboards.
- **Seek collaboration, not transactions.** Prioritize partners who invest time in understanding your workflows before contracts are signed and continue to optimize over time, instead of a "set it and forget it" mentality.
- **Align success metrics.** Set shared KPIs for throughput, accuracy, and responsiveness to ensure goals stay synchronized.
- **Future-proof through flexibility.** Choose partners committed to continuous improvement, software updates, and scalability to match your growth trajectory.

Efficiency, scalability, and innovation don't happen in silos. They're the result of partnerships that combine technology, data, and people into one cohesive system. In the final section, we'll bring these lessons together to define what true operational excellence looks like and how to sustain it.

Conclusion

Efficiency Is the New Leadership Mandate

Efficiency in modern warehouse operations is no longer about short-term gains or one-time improvements. It's about building a system that adapts, learns, and grows stronger with every season.

The leaders featured throughout this playbook, from logistics providers to technology innovators, understand that sustainable efficiency comes from the right combination of structure, people, and insight and they strengthen foundational systems before automating. They expand with intention, turning each deployment into a model for the next. They empower teams to work confidently alongside technology and create cultures where improvement is constant.

True efficiency is measured not just in throughput or cost savings, but in reliability, workforce satisfaction, and the ability to scale with confidence. The warehouses succeeding today are those that stay agile, flexible, and focused on long-term resilience to be prepared for whatever challenges the next demand cycle brings.

At Locus Robotics, we see these principles in motion every day. Our customers are transforming operations through intelligent warehouse automation that enhances human capability and operational visibility. Together, they're setting new benchmarks for speed, accuracy, and adaptability across the fulfillment industry. To explore how these strategies can strengthen your own operation, contact Locus Robotics. We'll help you design a warehouse automation strategy that delivers efficiency today and the capacity to grow for years to come.

About Locus Robotics

Locus Robotics is a global leader in AI-enabled, mobile warehouse automation, delivering unmatched flexibility and unlimited throughput, and actionable intelligence to optimize operations. Powered by LocusONE™, an AI-driven platform that seamlessly integrates our flexible mobile robots into existing warehouse environments to dramatically enhance efficiency, reduce costs, and scale operations with ease.

Trusted by over 150 industry leading retail, healthcare, 3PL, and industrial brands in over 350 sites worldwide, Locus enables warehouse operators to achieve rapid ROI, minimize labor costs, and continuously improve productivity. Our industry-first Robots-as-a-Service (RaaS) model ensures ongoing innovation, scalability, and cost-effectiveness without the burden of significant capital investments. With proven capabilities in diverse workflows, from picking and replenishment to sorting and pack-out, Locus Robotics empowers businesses to meet peak demands and adapt to ever-changing operational needs.

For more information, visit www.locusrobotics.com.