The Key to Successful Automation Initiatives

Mighty Guides

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Mighty Guides

Meet Our Experts

Advanced automation is enhancing warehouse efficiency and reliability, but implementing these systems can be challenging. We interviewed nine experts about why a strong business case, the right team, and supportive vendor partnerships are essential for success.

We hope you enjoy their insights!

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Introduction

As e-commerce and global supply chains expand, the demand for efficient and reliable parcel handling has never been higher. Automation has long been an attractive solution for warehouses that handle high volumes. Modern robots are highly capable and can streamline operations and reduce errors. However, robots find identifying and processing parcels of widely varied shapes and sizes difficult. Among the leaders in this space is Plus One Robotics, a company that delivers robotic systems designed for parcel handling and emphasizes the role of the "human-in-the-loop."

Plus One Robotics integrates advanced machine vision and AI with human workers to cope with the variation of the constantly evolving logistics industry. Unlike fully autonomous systems, their robots are supported by human-in-the-loop supervised autonomy software to handle unpredictable or complex tasks, ensuring maximum efficiency and adaptability. This model addresses robotics' limitations by enabling humans to intervene remotely when the robot gets confused, often caused by anomalies such as irregularly shaped packages or damaged labels. As warehouses face labor shortages and rising consumer expectations, Plus One Robotics' approach enables automation to complement human workers, creating a more resilient workplace.

This ebook investigates the key steps in successfully installing and commissioning the human-in-the-loop concept. It considers how advanced warehouse automation can be adopted, including vital planning steps and overcoming common challenges. It also shows how effective automation complements and enhances the capabilities of a talented workforce rather than replacing them.

Foreword

By **Eric Nieves**, Founder and CEO, Plus One Robotics

We named our company Plus One Robotics to communicate the proper hierarchy of importance when it comes to warehouse automation: humans first, robots second. (Or, in more casual terms and how I prefer it: *Robots work. People rule.*)

Today, it's easy to get excited by the promise of automation. We're making advancements in AI vision software every day. Our robotic helpers are becoming smarter and more autonomous. It's not difficult to understand why warehouse workers often view automation with a degree of skepticism.

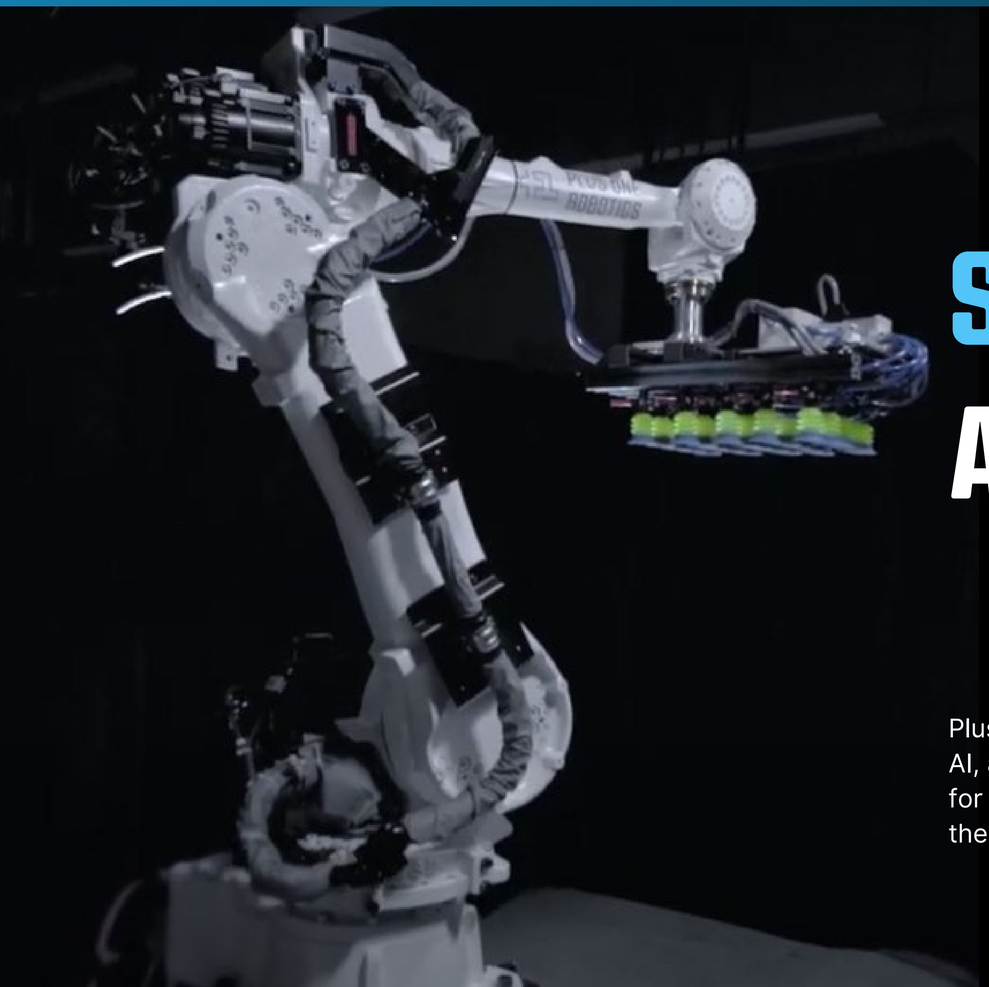
I'm here to tell you that it doesn't need to be that way. With the right approach to automation rollout, including a dedication to labor upskilling and a transparency-first mindset, you can adopt systems that work for your organization and its people. Never the other way around.

I hope the information in this ebook helps you reconceptualize what robots can do for your operations. Because in 2025, the key to successful automation remains your top asset: your people.

52%
Logistics and Fulfillment Companies

46%
Retail and Consumer Goods Companies

are investing over $25M in automation before 2027



Stay ahead of your competition.
Automate with confidence.

Plus One Robotics' intelligent solutions combine computer vision, AI, and supervised autonomy (human-in-the-loop) to pick parcels for leading logistic, retailer, and e-commerce organizations among the Global 100.

PLUS ONE ROBOTICS

Robots Work. People Rule.

Chapter 1

FORMING THE BUSINESS CASE

Operators considering investing in automation will have a specific goal in mind. Automated solutions are typically up to 30% more cost-effective[1] than manual picking, create safer working environments, and result in more predictable productivity. The desired outcome of installing automation must be identified and quantified.

Plus One Robotics' automation systems are adaptable and resilient solutions that improve throughput, accuracy, and costs. However, when identifying objectives, it is important to clearly understand what they can and cannot achieve.

The Role of Automation

Plus One Robotics systems perform specific tasks as part of a larger process. Induction systems are used in high-volume warehouses. They are responsible for picking and placing mixed parcels, bags, or products into a sorting system, ready to be routed to the correct shipping lane. Depalletization systems break down the contents of an incoming pallet and route them accordingly into your warehouse and beyond. Palletizing systems build pallets back up for shipment to the next destination.

Without the benefit of technology, both tasks rely on human workers. Many operators struggle to find enough staff for their facilities. Sorting parcels manually is physically demanding, and the working environment is challenging, sometimes described as the 3 Ds—dirty, dull, and dangerous. Long periods of

> ***To ensure the chosen technology addresses operational challenges effectively, it is essential to define the purpose of automation, set clear success metrics, and simulate various scenarios. These steps minimize risks and align the solution with business needs."***

Boris Contreras

Sr. Manager II Automation Engineer MFC, Walmart

Be a champion for the technology. Confidence is contagious—the more assured you are when presenting your automation solution, the more confidence your partners will have in the project. Inspire others to see the value of your vision so they can rally around its success."

Zaiq Karim

Manager of Supply Chain Management, Southwest Airlines

lifting, walking, and repetitive tasks make this work unappealing, all of which contribute to a high staff turnover of up to 46% annually[2]. At the same time, operators whose facilities do not include automation have traditionally hired additional workers to manage seasonal variations in demand. When combined with a reduced labor pool, changes in demand can make it difficult for operators to respond quickly.

These challenges directly affect operating costs. The need to provide training for a rapidly changing workforce and the cost of hiring seasonal staff considerably impact overall efficiency. In addition, the physical demands placed on workers can cause injury or illness.

Ensuring Effectiveness

Therefore, the change to an automated process creates significant savings that operators can quantify. Automated systems relieve workers from the physical task of sorting parcels, enabling them to take on more complex and/or customer-facing roles. Each worker oversees a section of the automation process instead of sorting parcels by hand. With training and engagement leading to greater staff

retention, more can be achieved with the existing headcount, and ongoing costs caused by high staff turnover are reduced.

Understanding how induction or depalletization systems interface with the rest of the process is also important. **Equipment must be effectively used to provide the best return on investment**. Induction or depalletization requires that the volume of parcels be appropriate for the robotic systems installed. Suppose the installation cannot deliver the throughput predicted by the business case due to other factors. In that case, the robot will not perform at peak efficiency, and the robot is not to blame. Despite this, the real reason may be misidentified, and the robot itself may be seen as the bottleneck.

Therefore, the business case must clearly communicate the expectations and value of robotic systems within the context of the operator's facility. It must also identify the role that automation can play in seasonal or other variations in demand.

Summary

The robust automation capabilities within a warehouse application create attractive arguments for its adoption. A compelling business case will identify how automation will benefit capacity, quality, and employee engagement. To do so, the role that automation will play, its limitations, and its capabilities must be understood. Using this information to develop a well-defined business case, a cohesive team can be built to ensure the successful implementation of automation.

"A sophisticated system is only as valuable as its place in your unique environment. While automation might promise 200% efficiency, poor layout and flow issues can turn it into an expensive bottleneck instead of a solution."

Michael Pace

Systems and Warehouse Manager, Niagara Bottling

References:
[1] Interact Analysis report; "Robotic Picking 2023"
[2] Ibid.

A great automation vendor helps build a strong business case by integrating tailored solutions, providing a clear implementation plan, fostering proactive collaboration, and offering reliable support during peak seasons like Black Friday.”

Ricardo Ugas

Sr. Solutions Consultant, Dematic

Key Highlights

- **Identify and quantify the goals for automation and determine how it fits within your process.**
- **Evaluate how automation can enhance workplace safety and achieve more predictable productivity.**
- **Build a strong business case that highlights automation's benefits to secure team support.**

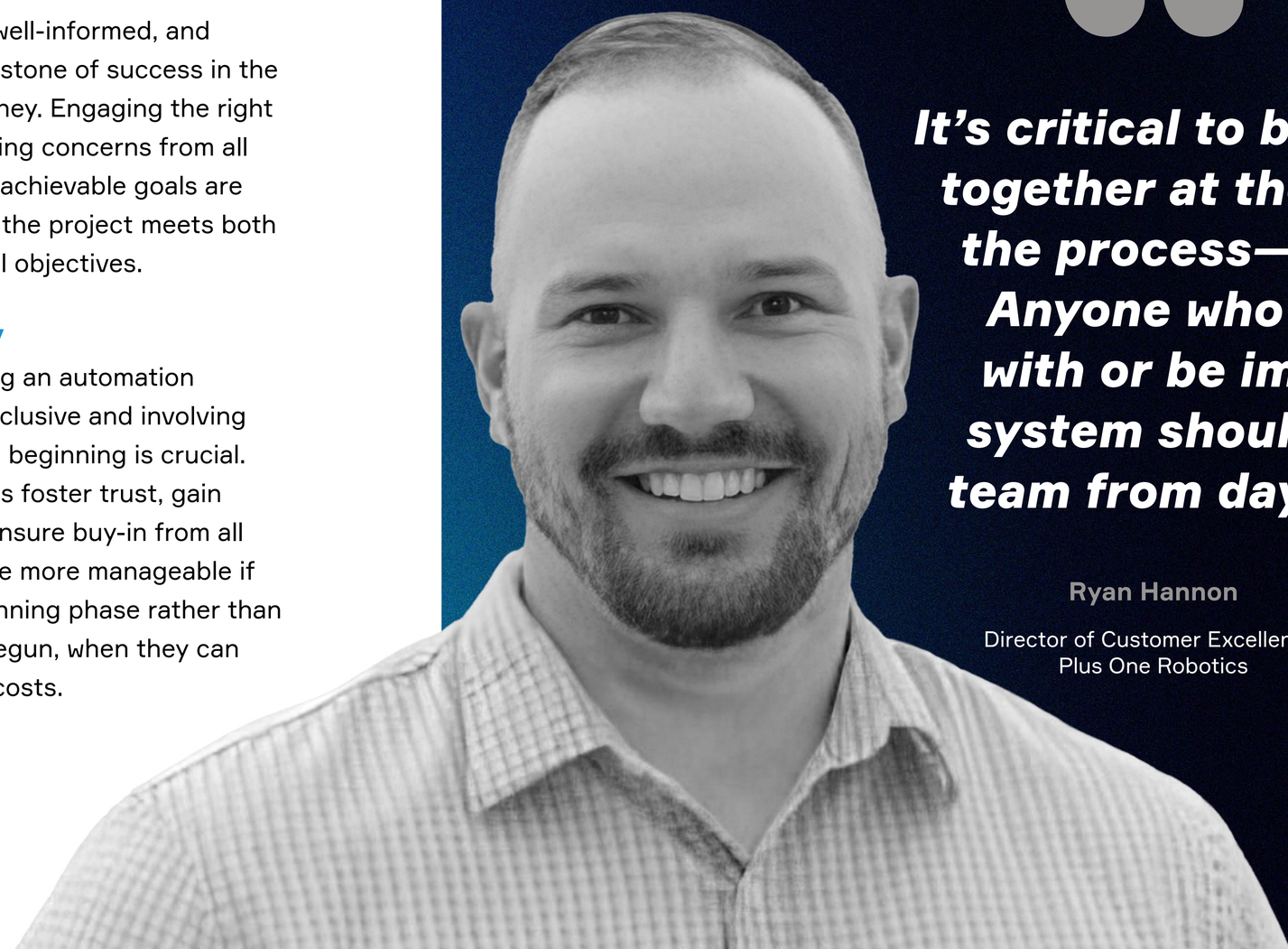
Chapter 2

BUILDING THE TEAM

Building a comprehensive, well-informed, and engaged team is the cornerstone of success in the warehouse automation journey. Engaging the right stakeholders early, addressing concerns from all quarters, and setting clear, achievable goals are essential steps that ensure the project meets both technical and organizational objectives.

Build the Team Early

The initial stages of planning an automation project are pivotal. Being inclusive and involving all relevant parties from the beginning is crucial. This early engagement helps foster trust, gain diverse perspectives, and ensure buy-in from all departments. Objections are more manageable if they emerge during the planning phase rather than once implementation has begun, when they can cause delays and increase costs.



> ***“It’s critical to bring everyone together at the beginning of the process—not at the end. Anyone who will interact with or be impacted by the system should be part of the team from day one.”***

Ryan Hannon

Director of Customer Excellence,
Plus One Robotics

> ***To align teams like Finance, Management, and Maintenance when implementing automation technologies, highlight the tangible benefits—cost savings, productivity gains, and long-term ROI. These are the keys to securing buy-in and driving collaboration."***

Daniel Garza

Category Manager, Supply Chain and Logistics,
Neiman Marcus Group

Automation projects affect all parts of the business, from operations and IT to sales and HR. It cannot be assumed that the initiative will gain universal support, so ensuring that departments are represented ensures that their concerns are addressed and that they are part of the process.

Begin with a strong business case to obtain support from management and finance personnel. This should include precise financial analysis and projections, along with operational benefits, to garner support from senior management and ensure alignment with the organization's strategic goals.

However, other departments play important roles in the success of automation initiatives:

1: The Technical Team

Maintenance and IT teams are critical to the success of any automation project. Their input is invaluable in assessing the technical feasibility and integration of the new systems with existing infrastructure. However, experience has shown that many operators do not involve these teams until too late, leading to a lack of engagement and support for the initiative throughout the deployment. Addressing any concerns early can prevent potential technical issues and ensure that the technical teams understand the value of new automation and their role in ensuring that systems are sustainable and scalable.

2: Sales and HR

While sales and human resources (HR) personnel may not seem directly connected to an automation project, their support can be highly beneficial. Your sales teams are directly responsible for customer relationships. They are ideally placed to provide insights into customer needs and can help align the automation project with customer service goals. On

the other hand, HR plays a crucial role in addressing internal stakeholders and employee concerns while adopting and implementing new technology. They will be important in managing training and upskilling programs.

3: Engagement with Staff

Automation can significantly enhance productivity by streamlining operations and reducing manual tasks. However, it is essential to communicate these benefits directly to the workforce. The new technology will create a need for new roles, from robot mechanics responsible for keeping the new equipment running to exception operators directing packages and personnel sorting packages. Automation is not a threat to their jobs but an opportunity for retraining, upskilling, and focusing on more strategic tasks. This approach alleviates fears and encourages a positive attitude toward the new systems.

Belief in Success

Therefore, all involved need a clear vision of the ultimate benefits of adopting automation and a belief that these are achievable. The value of improved customer satisfaction, greater throughput, and enhanced quality should be communicated to all stakeholders. Just as important are the opportunities for personal development and career advancement. This understanding will enable efforts to align toward a common goal and ensure the project's success.

Strong engagement also includes knowledge of how success will be measured. Key performance indicators (KPIs) are essential for monitoring the automation project's performance. They should include expectations for throughput, efficiency, accuracy, and quality, along with expected periods for return on investment and cost savings. Setting realistic KPIs simplifies engagement across the company. Equally

> ***Getting operators on board is critical. A failed automation project doesn't just waste resources—it can reduce operational efficiency and damage morale, leading to a lack of trust in leadership and future initiatives."***

Jatin Mayekar

Robotics Applications Engineer, FANUC America

Involve your partners from the very beginning. Engage them early and consistently throughout the project to foster a sense of ownership. This builds trust and ensures the automation solution effectively addresses their unique challenges."

Zaiq Karim

Manager of Supply Chain Management, Southwest Airlines

important is a framework for enabling feedback and monitoring.

While existing management systems can often support new automation technologies, any upgrades or modifications must ensure seamless integration and effective management of the automated processes.

As with all major programs, regular reviews are essential to ensure the project stays on track and delivers the expected benefits. These reviews should be conducted at defined intervals and include the entire team and the vendor. Only this level of collaboration will maintain engagement from all business elements, enabling potential problems to be identified early enough to take effective action.

Summary

Implementing a successful automation project means creating a team that includes all the relevant stakeholders, ensuring their concerns and objections are addressed. Setting clear and realistic goals and engaging the whole team in their review will create a unified strategy. Ultimately, the project's success depends on the collaboration of all departments to create a feeling of shared goals and a positive attitude toward change.

“A clear roadmap is essential, detailing timelines, deliverables, ownership, and stakeholder roles. While automation challenges are inevitable, proper planning, training, and risk mitigation can minimize disruptions and ensure a seamless integration into operations.”

Boris Contreras

Sr. Manager II Automation Engineer MFC, Walmart

Key Highlights

- **Include all departments early in the process—nothing is worse than a roadblock that is only identified once machines are running.**
- **Integrate your vendor at each stage of the process.**
- **Do not assume that everyone understands the benefits as you do—communicate clearly to all.**

Chapter 3

WORKING WITH THE RIGHT PARTNER

Choosing the right vendor for warehouse automation requires more than simply choosing the right technology. While different vendors' equipment might provide a marginal advantage in speed or performance over their competition, the support that comes with the technology truly sets potential partners apart.

Building a relationship with your automation vendor will provide immeasurable long-term benefits. Operators who have chosen the vendor based on the level of service see more successful outcomes for their automation. These benefits come during the installation and commissioning phase and during day-to-day operation.

The value of this relationship in action becomes clear when things go wrong. A piece of equipment failing in the middle of the night shift could cause a delay of hours, by which time all the trucks will have left. At this critical moment, it is imperative to know that the vendor is ready to respond immediately and can provide the right support at the right time. One operator described the ideal relationship as the ability to call on the vendor for help at 2 a.m. in December when Christmas is three days away.

The Value of Training

The training process should start at the earliest possible point in the project. Warehouse automation equipment is

> ***Though we had a strong understanding of our requirements, our partner's expertise provided valuable insights into the best solutions for our challenges. Their experience in testing and implementing the project on-site made a significant difference, proving that involving an automation expert truly paid off."***

Shriddha Arpan Jain

Consultant

New technologies provide opportunities to automate labor-intensive tasks. However, without a great automation provider who thinks of the upstream and downstream impacts of the new technology, these solutions can have costly consequences."

Ricardo Ugas

Sr. Solutions Consultant, Dematic

complex and needs different levels of support. Operators need training to run the machines day-to-day, as well as resolve immediate issues as they arise. To use the equipment efficiently, your staff must be familiar with conducting routine maintenance. Problems must be resolved quickly as every minute of downtime means lost revenue and missed deadlines.

Successful implementation, therefore, depends on developing a robust attitude to training. All levels of the operations team need to understand their role, and this also requires them to believe in automation as something that will empower them. Automation is not in competition for their jobs. Instead, automation enables the operations team to be upskilled.

We have seen more success in deployments when training begins as the system is installed and continues as commissioning and testing are carried out. However robust the maintenance planning may be, the operators who work with the machine every day are in the best position to identify issues quickly. When the operators are trained as the system arrives, they are more equipped with the skills to prevent small snags from evolving into major problems.

Training begins early in the process but does not, and should not, ever end. Long-term planning must include regular refresher training for operational staff, senior leaders, and maintainers.

Automation Benefits Humans

AI-enabled warehouse robots can handle much of the traffic (in given applications like induction, depalletizing, and palletizing) with more than 95% of throughput seamlessly flowing through the process. This enables the operators the time to employ their soft skills – the flexibility they need to solve problems and identify unusual situations, or

interpersonal skills that enables them to deliver superior customer service. The results are happy customers and improved service.

There will also be benefits for the welfare of the operators. The transition between manual parcel handling and automation dramatically changes the nature of the team's work. Workers no longer need to move parcels by hand; they are now the lead operators for a section of the automation. Initially responsible for thousands of packages a day, they are now responsible for an entire automation section that can handle their original remit many times. At the same time, physical demands on the operator decline, and operators become less tired and safer, with a better quality of life.

Operators who fully embrace this cultural shift have seen enormous benefits, including reduced physical workload and stress and improved well-being. Embracing automation is not a given, though. A complete training program helps this process by

"When we introduced a robotic singulation system in our distribution center, the supplier's team spent considerable time observing the manual sorting process, identifying bottlenecks, and collaborating with our operations staff. This hands-on approach was key to designing a system that met technical specifications while addressing the practical challenges faced by our workers."

Joan-Wilhelm Schwarze

Senior Global Innovation Manager, DHL

Engaging Your Team: A Real-World Example

Plus One Robotics installed four robots in a warehouse in the Eastern USA alongside sortation robots from another company. During the months after installation, the employee of the month was allowed to name one of the robots. The internal reporting system was changed to reflect the new names, which were kept secret until the day of the announcement. The staff adopted this initiative with pride and, as a result, this facility became the best service building in the operator's network, with the best throughput and lowest costs, illustrating that the combination of automation and change in culture have long-lasting, positive effects on productivity.

driving strategic alignment, winning their commitment, and delivering confidence in the automation. This is far better than the alternative of underutilized machines and operators' wariness or uncertainty.

Summary

The effective implementation of warehouse automation truly depends on selecting the right vendor. As stated by many of our experts throughout this ebook, the right vendor is not just a supplier but a partner to your business. That partnership will take shape at the start of the sales cycle and develop long past deployment. Training, being a crucial step towards success, will prove vital, beginning early in the process and continuing with frequency to equip staff with the skills to operate, maintain, and troubleshoot the systems in their care.

Automation enhances the welfare of human workers by reducing physical strain, improving safety, and enabling them to focus on problem-solving and customer service. However, success requires cultural acceptance, something that can be achieved by involving staff in the installation and commissioning process. Layer on a robust training program to grow employee engagement and maximize efficiency, improve morale, and drive long-term productivity improvements.

Companies that embrace automation see huge benefits—improved service metrics, higher culture and employee engagement scores, and reduced staff turnover. That's the real power of an automated system."

Ryan Hannon

Director of Customer Excellence,
Plus One Robotics

Key Highlights

- Developing a long-term relationship between the operator, workforce, and implementation partner will provide huge benefits—it is a partnership.
- Training needs to happen early and often, during installation and far beyond cell deployment.
- A trained workforce is a happy workforce, leading to higher engagement with the technology, enabling your investment in automation to reach its full potential.

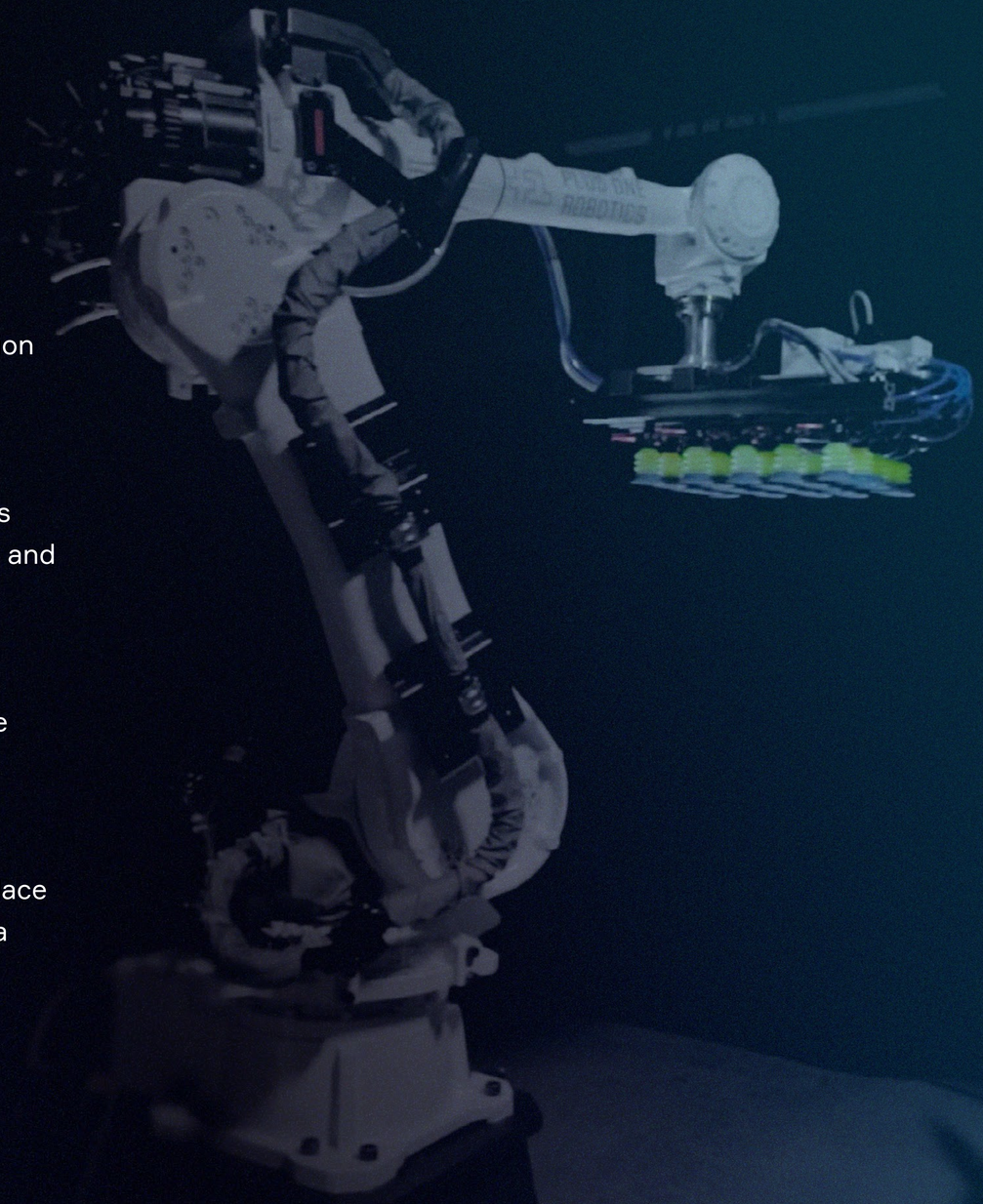
Conclusion

Successful warehouse automation balances advanced technology, human ingenuity, and strategic collaboration. In a logistics environment defined by high volume and variability, automation integration must be approached with a clear understanding of its role in the broader process.

Preparation, engagement, and cultural change impact the success of automation projects. Building a compelling business case to align automation with organizational goals ensures alignment, as does creating a team that believes in the project. Partnering with a vendor who provides robust technical and strategic support makes this process easier.

Your enabled employee lives at the heart of automation. Providing in-depth training and clearly communicating how technology leads to a safer and more efficient workplace will increase employee engagement and satisfaction.

At Plus One Robotics, humans are at the heart of collaboration with intelligent machines. With the motto “Robots Work. People Rule,” the organization develops technologies that enhance the workplace for people. This integration not only addresses the challenges of modern logistics but also creates a resilient and productive workplace that is well-equipped to meet the demands of the future.



Learn More About Our Experts

Boris Contreras

Sr. Manager II Automation Engineer MFC, Walmart

Boris Contreras is a seasoned retail professional and industrial engineer specializing in e-commerce, innovation, automation, and transformation. As a senior manager at Walmart, Boris leads the integration of Micro Fulfillment Centers (MFCs) to boost e-commerce efficiency and customer service. With an MBA and a professional certificate in Industry 4.0, Boris has a robust background in operations management. His dynamic leadership and dedication to innovation foster team growth and drive continuous improvements in retail operations.

Daniel Garza

Category Manager, Supply Chain and Logistics, Neiman Marcus Group

Daniel Garza, a category manager of supply chain and logistics at Neiman Marcus Group, has over 15 years of experience in manufacturing, consumer goods, and retail. Notably, Daniel led a FedEx alignment initiative that delivered $28 million in savings. Daniel holds a master's degree in integrated supply chain management and is a member of the Association for Supply Chain Management member and a United Way volunteer.

Ryan Hannon

Director of Customer Excellence, Plus One Robotics

Ryan Hannon is the Director of Customer Excellence at Plus One Robotics and has nearly 15 years of logistics experience in leadership roles at Pitney Bowes, UPS, and NFI. His experience includes collaborative innovation, continuous improvement, and industrial engineering. At Plus One, he focuses on optimizing client outcomes and driving operational success. Ryan holds a degree in industrial engineering from Elizabethtown College.

Learn More About Our Experts

Shriddha Arpan Jain

Consultant

Shriddha Arpan Jain is a skilled project manager specializing in cloud-based warehouse control systems. She excels in leading cross-functional teams to execute multimillion-dollar projects and has successfully delivered seamless integrations with major WMS platforms. Known for her exceptional communication, operational expertise, and risk management capabilities, Shriddha consistently drives operational efficiency and enhances client satisfaction through innovative, tailored solutions.

Zaiq Karim

Manager of Supply Chain Management, Southwest Airlines

Zaiq Karim is a manager of supply chain management at Southwest Airlines, specializing in inventory operations, process optimization, and automation technologies. He has spearheaded transformative initiatives, including the deployment of robotic process automation (RPA) and large-scale ERP migrations. With an MBA in strategic management and a deep commitment to innovation, Zaiq focuses on delivering data-driven solutions that improve efficiency, enhance collaboration, and ensure operational excellence.

Jatin Mayekar

Robotics Applications Engineer, FANUC America

Jatin Mayekar, a robotics application engineer at FANUC America, specializes in designing and integrating advanced robotic systems. With a master's in mechanical engineering from the University of Colorado Boulder, Jatin has contributed to cutting-edge research on soft electro-hydraulic actuators, including a publication in IEEE Transactions on Robotics. Jatin's expertise spans underwater exploration, adaptive gripping, and warehouse automation, combining design, programming, and sensor integration to drive innovation.

Learn More About Our Experts

Michael Pace

Systems and Warehouse Manager, Niagara Bottling

Michael is a Six Sigma Black Belt with extensive experience in continuous improvement and automation in manufacturing. Currently working at a water bottling facility, Michael oversees process optimization, lean initiatives, and supply chain operations. With a strong background in automated systems and operational excellence, Michael is passionate about driving efficiency, reducing waste, and fostering innovation in dynamic production environments.

Joan-Wilhelm Schwarze

Senior Global Innovation Manager, DHL

Joan-Wilhelm Schwarze is a senior global innovation manager at DHL's Center of Excellence (Automation of Operations) within the Corporate Development Department. With a wealth of expertise in logistics operations, robotics, and automation, Joan has a proven track record of leading transformative projects in supply chain management and warehousing. Joan's passion for pioneering technologies fuels his engagement with industry leaders as he actively shapes the future of robotics and logistics.

Ricardo Ugas

Sr. Solutions Consultant, Dematic

Ricardo Ugas is a senior solutions consultant at Dematic, where he leverages his expertise in warehouse automation, data analytics, and simulations to design solutions that deliver optimal ROI. With a background in engineering and business education from Harvard Business School and Alliance Manchester Business School, Ricardo has led multi-million-dollar warehouse automation projects. An award-winning innovator, he is passionate about delivering solutions that exceed customer expectations.

46%

Average Warehouse Worker Churn Rate

Empower your Team. Elevate your Business.

Upskill with ROBOTIC AUTOMATION.

Plus One Robotics' intelligent solutions combine computer vision, AI, and supervised autonomy (human-in-the-loop) to pick parcels for leading logistic, retailer, and e-commerce organizations among the Global 100.

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