LOCUS
ROBOTICS

The New Blueprint for Warehouse Automation

Executive Perspectives on the Future of Fulfillment

Inside the Future of Warehouse Automation

Warehouse automation is entering a decisive phase.

Demand volatility has compressed planning cycles. Labor markets remain unpredictable. Service expectations continue to accelerate. In this environment, efficiency alone is no longer enough. Adaptability has become the defining requirement.

To understand how leading organizations are navigating this shift, we gathered perspectives from global logistics and supply chain executives across retail, 3PL, publishing, and contract logistics. Their insights reveal a common thread: automation is evolving from fixed infrastructure to intelligent systems designed to learn, integrate, and adjust in real time.

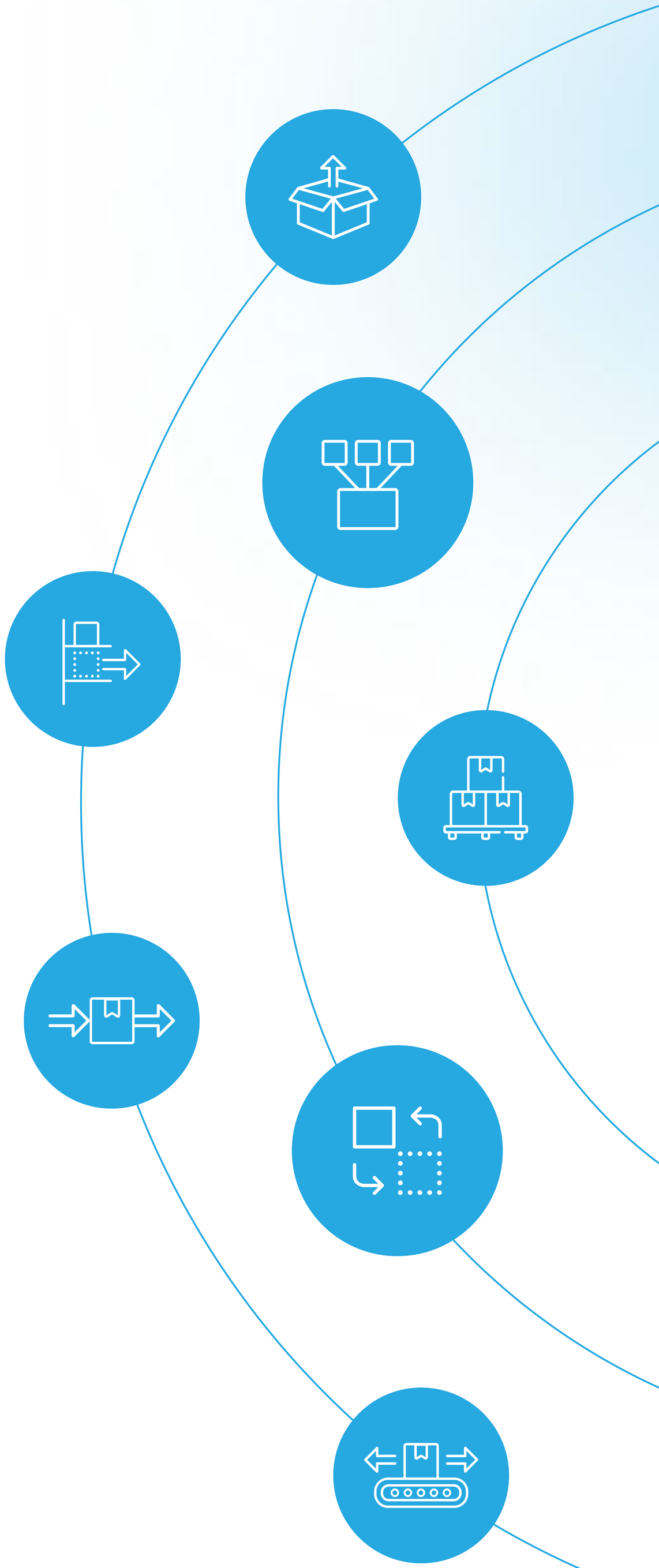
Across every conversation, three themes consistently emerged:

- Intelligence embedded directly into operational systems
- Integration across robotics, software, and people
- Flexibility engineered into the physical and digital footprint

The future warehouse is not defined by a single technology. It is defined by how seamlessly technology, data, and human expertise work together to create resilient, responsive operations.

This transformation aligns with Locus Robotics' vision of intelligent, adaptable fulfillment powered by autonomous mobile robots (AMRs) and the LocusONE platform.

What follows is a cross-section of how industry leaders are thinking about that future — and the decisions shaping it today.



Automation Is Becoming Self-Directed

Warehouse automation was once defined by fixed workflows and predefined logic. Systems followed instructions. Optimization meant improving performance within those boundaries.

That model is giving way to something far more adaptive.

Leading operators are now building environments that respond to live data, adjust capacity in real time, and recalibrate as demand patterns shift. Intelligence is moving from the control room into the system itself. In a market where volatility is constant, the ability to adapt automatically is becoming a strategic requirement.

"Warehouse automation is rapidly shifting from static, predefined systems to dynamic, intelligent ecosystems that learn, adapt and optimize in real-time. The future isn't about machines simply following commands — it's about systems that anticipate demand, reconfigure themselves, and make data driven decisions to maximize efficiency and resilience. All leaders need to embrace change and adopt quickly."

Rohit Ageer
Global Head of Automation, Innovation and AI
DP World Logistics

AI Is Moving into the Core

Artificial intelligence in warehousing has long been discussed in theory — modeled in simulations and highlighted in strategy decks. What's changing now is where that intelligence lives.

AI and machine learning are embedding directly into warehouse management and control systems, influencing decisions about what moves, when it moves, and how resources are deployed. The shift is from analysis to action — from insight to execution inside the operation itself.

"Automation technologies in the next 3 to 5 years will be hugely impacted by the introduction and embedding of augmented systems aiding the decisions of what, when and where processes are enacted. As AI and ML capabilities seep through the hype cycle and into our warehouse control and communication systems proper, some of the potential shown in the simulation and sales cycles can be truly realized. Unfortunately in the highly competitive supply chain business, competency and compliance are not enough to secure a profit, we must be productive and remove waste in process where possible — AI technologies enable this with insight, taught experiences and the ability to enact tasks autonomously, when properly embedded into WMS and control systems."

James Casey
Global Director – Engineering Solutions
DP World Contract Logistics

The Role of the Associate Is Evolving

As automation expands across warehouse operations, the conversation often centers on technology. Yet the more meaningful shift is happening in the role of the workforce.

Repetitive, physically demanding tasks are increasingly handled by machines, while associates move into positions that require oversight, judgment, and problem-solving. The impact goes beyond productivity. It changes how work feels on the floor and how leaders must think about communication and change management.

"As automation increases in warehousing, the need for human workers doesn't disappear — it transforms. Instead of unloading trailers in extreme heat, associates now oversee the technology that performs those tasks. It's critical for warehousing leaders to have change management programs in place to help associates understand they're still essential — just in a different role than before."

Casimira (Casey) Federspiel
Director, Accelerated Digitalization, CoE
DHL Supply Chain

The Warehouse Footprint Is Being Reimagined

Automation is no longer layered onto existing layouts. It is reshaping how space is planned, allocated, and scaled.

As volume patterns fluctuate and service expectations accelerate, facilities must expand and contract capacity without costly redesigns. The next phase of automation is less about adding equipment and more about creating environments that adjust as operational needs shift.

"Over the next few years automation will completely redefine the warehouse floor space. Intense and repetitive manual labor processes will be replaced by intelligent, flexible and adaptable automation solutions capable of both upscaling and downscaling in capacity. It will unlock the full potential of end-to-end supply chain performance."

Bram Groothuijse
Automation and Innovation Manager Europe
Maersk Contract Logistics, A.P. Moller – Maersk

Retail Fulfillment Is Becoming Fluid

Retail supply chains are no longer linear. Stores, distribution centers, and digital channels are increasingly interconnected, requiring operations that flex across formats.

As consumer expectations tighten around speed and availability, retail networks must shift inventory, capacity, and labor dynamically. Automation and AI are becoming essential to balancing service levels with operational control.

"The future of warehouse automation is about people and technology working together – AI, machine learning and robotics enhancing the work of our associates. At Ulta Beauty, we're leveraging AI and automation to transform stores into flexible fulfillment hubs, expand capacity and improve quality, while giving our teams the ability to focus on high-value work that delivers a better experience for our guests."

Heather Lane
Vice President, Supply Chain Strategy and Systems
Ulta Beauty

Flexibility Is Replacing Fixed Infrastructure

For years, large-scale automation projects were defined by permanence — extensive conveyor networks, heavy installations, and long implementation cycles. These systems delivered throughput, but often at the cost of agility.

Today, operators are reconsidering that tradeoff.

Faster deployments, modular design, and subscription-based models are lowering risk while allowing facilities to scale capacity up or down as business needs evolve. The emphasis is shifting toward solutions that can adapt without locking operations into rigid layouts.

"Warehouse automation is moving away from heavy, fixed systems and toward flexible, modular setups with robots-as-a-service. It's all about faster installs, easier scaling, and keeping things agile without locking into miles of conveyor."

Austin Myers
Sr. Manager DC Engineering
Carhartt

Integration Is Becoming the Standard

Early automation initiatives often focused on solving individual bottlenecks. A picking solution here. A sortation system there. Over time, those point solutions created fragmented environments that required constant coordination.

That approach is giving way to something more connected.

Operators are now prioritizing interoperability — ensuring machines, software platforms, and teams operate as a cohesive system rather than isolated components. The value of automation increasingly depends on how well it communicates across the broader operation.

“The biggest shift is the move from isolated automation systems to fully integrated, data-driven operations. Companies are no longer just automating single tasks — they’re connecting machines, software, and people into one intelligent ecosystem.”

Julian-Patrick Schuller
Key Account Manager
LGI Logistics Group International GmbH

Orchestration Is the Differentiator

As automation matures, the conversation is shifting from individual technologies to how those technologies work together. Hardware alone no longer defines performance. Coordination does.

Facilities are moving toward modular architectures that can flex with changing volumes, inventory profiles, and service demands. The advantage lies in how effectively robotics, real-time data, and human oversight operate as a unified system.

"Warehouse automation is shifting from fixed, monolithic systems to modular, interoperable architectures that can flex with changing volume, inventory profiles, and service expectations. The next era will be defined by how well organizations orchestrate people, robotics, and real-time data as one coordinated system — not as disconnected assets."

Mert Selcuk,
Director, Supply Chain Strategy & Solutions Design
Staples Canada

Adaptability Is Becoming the Advantage

Warehouse performance was once measured primarily in throughput and cost per unit. Today, service expectations, market volatility, and compressed timelines are reshaping those priorities.

Design decisions are increasingly driven by flexibility — the ability to shift workflows, absorb demand swings, and respond to changing customer expectations without redesigning the operation. Data analytics and robotics are no longer incremental tools; they are central to maintaining control in unpredictable markets.

“Warehouse design is evolving to meet changing customer expectations, shifting the focus from pure productivity to service and flexibility. The integration of data analytics and robotics is driving this transformation, enabling real-time adaptability to operational needs. This capability is becoming critical for businesses operating in increasingly unpredictable markets.”

Martí Torra
Director de Logística y Distribución España
Penguin Random House Grupo Editorial Group International GmbH

Scalability Is Replacing Permanence

For many years, warehouse automation investments were designed to last decades. Large conveyance systems and fixed sortation infrastructure delivered reliability, but they limited how quickly operations could pivot when volumes or business models changed.

That permanence is now being reconsidered.

Operators are gravitating toward solutions that can scale incrementally, redeploy across sites, and evolve as workflows shift. Adaptability and reusability are becoming as important as throughput itself.

"Automation will continue to play a growing role in warehouse operations. As solutions become more accessible, businesses will explore and adopt technologies that streamline workflows. I think we'll see a rise in goods-to-person systems and collaborative robots with ongoing innovation in these areas. At the same time, reliance on traditional conveyance and sortation systems, which offer limited flexibility and reusability, is likely to decline as the industry shifts toward more adaptable and scalable approaches."

David Welsh
Vice President of Operations
Radial

The Next Wave Is Mobile Manipulation

Automation is advancing beyond movement alone. The next frontier combines mobility with increasingly sophisticated manipulation, enabling robots to handle more complex workflows inside the warehouse.

As robotic capabilities expand, the distinction between transport and task execution continues to narrow. Systems that once focused on moving inventory are now evolving to pick, position, and interact with goods in more precise ways. This convergence opens the door to higher levels of automation without sacrificing flexibility.

"Breakthroughs in AI, particularly in robotic manipulation and mobile robotics will catalyze a paradigm shift, unlocking a new wave of mobile manipulation applications within warehouses and driving the next generation of flexible fulfilment automation solutions. Robots like Locus Array, along with emerging mobile manipulation form factors, will integrate seamlessly with existing mobile robotics, creating an ecosystem of synergistic automation solutions. This convergence will enable warehouses to operate at an entirely new level of efficiency, precision, and scalability - unlocking significant cost savings and operational flexibility."

Gina Chung
Chief Strategy Officer
Locus Robotics

What Industry Leaders Are Telling Us

Taken together, these perspectives point to a clear industry direction.

Automation is no longer evaluated solely on throughput or labor reduction. It is measured by how well it adapts. The next generation of warehouse operations will be built around systems that integrate intelligence, scale without disruption, and elevate the role of the workforce.

Flexibility is emerging as the common denominator. Not flexibility as a feature, but flexibility as architecture — the ability to reconfigure capacity, connect technologies, and respond to change without redesigning the entire operation.

Leaders consistently emphasize that people remain central. Automation is absorbing repetitive movement and low-complexity tasks, while associates shift toward oversight, exception management, and continuous improvement. The organizations that thrive will design for collaboration between human judgment and machine execution.

The blueprint is becoming clear: intelligent orchestration, modular design, integrated data, and adaptable infrastructure.

The warehouse of the future is not static.
It is built to evolve.

At Locus Robotics, we call this Flexibility-First Automation — an approach designed to deliver operational confidence in any market condition. Through the LocusONE™ platform and a coordinated fleet of autonomous mobile robots, Locus Origin, Locus Vector, and Locus Array, organizations can scale intelligently, integrate seamlessly, and adapt continuously as their business changes.

LOCUS