Thirsty for Efficiency:

7 Ways Beverage Companies Use Warehouse Automation to Improve Operations

- The beverage landscape is shifting.
- Distribution is more complex.
- Smart storage and fulfillment is the new competitive edge.

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Contents

04 SKU Proliferation & Inventory Complexity

05 Labor Shortages & Workforce Pressures

06 Order Fulfillment Speed & Accuracy

07 Space Utilization & Facility Constraints

08 Demand Volatility & Seasonal Spikes

09 Sustainability Pressures

10 Inventory Handling & Breakage

With thousands of SKUs and new beverage trends hitting shelves every week, manufacturers and distributors alike are racing to keep up.

Seasonal hits, limited-time promotions, and emerging categories — from no- and low-alcohol beverages to functional drinks and micro-brands — **add complexity that's pushing traditional distribution models to their limits.**

Inside the DC, labor shortages, rising fulfillment expectations, and crowded facilities compound the challenge. Success is no longer just about moving pallets — it's about managing complexity, protecting margins, and delivering on service promises in a rapidly evolving market. **Warehouse automation is becoming an essential tool to streamline operations and scale with demand.**

This guide breaks down 7 key challenges in beverage distribution — and explores how automation, specifically Automated Storage and Retrieval Systems (ASRS) powered by smart Warehouse Execution Software (WES), can solve each one to help you identify the right system for your organization's needs.



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1 SKU Proliferation & Inventory Complexity

The sheer number of beverage SKUs continues to grow at a pace most warehouses were never designed to handle. Much of this complexity stems from consumer shifts and health trends: no- and low-alcohol offerings, functional beverages promising gut health or immunity boosts, CBD- and THC-infused drinks, and more.

At the same time, **market fragmentation is accelerating,** as private label beverages and micro-brands carve into shelf space once dominated by national players. According to the Private Label Manufacturers Association (PLMA), store brand sales rose 3.9% in 2024 — outpacing the 1% growth of national brands — with beverages the fastest-growing category in unit sales.

Overlay that with more eco-friendly packaging choices, seasonal SKUs, and frequently rotating promotions, and the result is **a flood of inventory variation.** In the warehouse, that translates into more products crammed into the same footprint — straining storage, picking, and accuracy in every aisle.

HOW DOES AUTOMATION HELP?



Smart, Scalable Storage for Growing SKUs

High-density Automated Storage and Retrieval Systems (ASRS) are transforming how beverage DCs manage their ever-expanding SKU mix. These robotic picking and fulfillment systems can **shrink storage footprints by up to 75% while more than doubling capacity, enabling facilities to stock more inventory without adding new real estate.**

How it works: Mobile robots, guided by smart Warehouse Execution Software (WES), pick and replenish cases, multipacks, kegs, pallets, or even single units — then deliver them directly to human-operated picking stations, eliminating the complexity of manual searching and picking.

Real-time inventory visibility within the system enables **faster response times, fewer stockouts, and more efficient picking with minimized travel.**

2 | Labor Shortages & Workflow Pressures

Recruiting and retaining warehouse workers is one of the biggest pressure points in beverage distribution, and multi-shift operations for inbound and outbound only magnify staffing demands. High turnover drives up training costs and leaves constant gaps in experience on the floor.

The work itself adds risk. Beverage handling is heavy, repetitive, and physically taxing, leading to higher rates of injury and product damage — two of the costliest issues in the industry. Building stable rainbow pallets requires skill and judgment that often comes from tribal knowledge. With today's **mix of container sizes, packaging materials, and specialty SKUs,** that expertise is harder to replace when employees leave.

For operators, this adds up to **inconsistent performance, elevated costs, and a labor model that becomes harder to sustain as product complexity and throughput requirements increase.**

HOW DOES AUTOMATION HELP?



Your Workforce, Elevated

Beverage DCs face high turnover and heavy reliance on temp or seasonal labor, especially during peak periods. Employees tasked with moving heavy loads and walking miles each shift are at greater risk of personal injury, as well as accidental product damage or loss.

Goods-to-person automation like ASRS changes that dynamic. Instead of walking to pick cases, operators work at ergonomic, user-friendly stations where **robots deliver inventory directly to them.** This creates a **safer, more comfortable environment, speeds onboarding — training can take as little as 2 hours — and improves retention.**

Smart WES replaces tribal knowledge with intelligent pallet-building logic, enabling facilities to **sequence items so they arrive at the workstation in the correct order for palletizing or truck loading.**

The result: reduced breakage, less rework, and a more streamlined workflow for order staging or buffering.

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3 | Order Fulfillment Speed & Accuracy

Customer expectations around service levels are rising across both retail and direct-to-consumer channels. For distributors, that means orders must be picked, packed, and shipped faster than ever while maintaining accuracy. **Errors are especially costly in beverages: a mis-picked order doesn't just risk customer dissatisfaction, but can also lead to spoilage, lost revenue, and compliance penalties for regulated products like alcohol.**

At the same time, the **growing number of SKUs makes order assembly more complex.** Workers must navigate crowded aisles, select from a wider variety of items, and build mixed pallets or shipments that won't fail during transport. Manual processes often slow under this pressure, and accuracy rates suffer.

Whether serving retailers, restaurants, or end consumers, **fulfillment speed and accuracy directly impact customer loyalty and brand competitiveness** — leaving little margin for error.

HOW DOES AUTOMATION HELP?





Faster, Error-Free Fulfillment

A goods-to-person ASRS **streamlines picking by minimizing touches and boosting throughput by up to 300%**, all while handling inventory with predictable, precise movements that **reduce the risk of breakage.**

Picking workstations equipped with **Auto Tray & De-Tray functionality** automatically scan, tray, and move inventory into or out of the system — full case in, full case out — for order fulfillment and replenishment. **This setup is ideal for beverage operations** managing medium-sized, irregular, or full-case inventory.

When it's time to fulfill orders, inventory is delivered directly to the workstation at an ergonomic height — no lifting, twisting, or guesswork required.

Guided picking interfaces ensure 99%+ order accuracy and virtually eliminate mis-picks that lead to customer dissatisfaction, spoilage, or lost revenue.

4 | Space Utilization & Facility Constraints

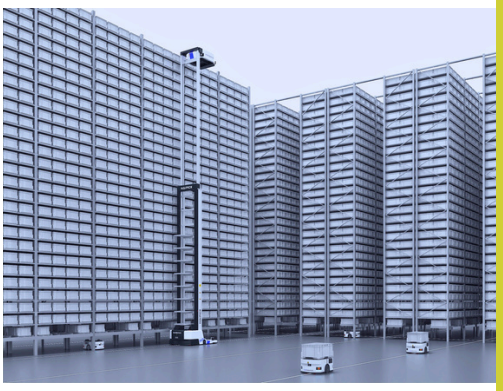
As SKU counts grow, inventory levels climb, and seasonal products rotate in and out, facilities built even a decade ago are straining to keep pace.

Operators face two options: expand square footage with costly real estate or do more within their existing walls.

The latter often means stacking products higher, reorganizing frequently, and squeezing more cases into already dense racking. The result? Inefficient workflows, bottlenecks in picking and replenishment, and increased safety risks as workers and forklifts navigate tighter spaces.

Without a scalable approach to space utilization, distributors risk rising costs and declining efficiency — a combination that puts both service levels and profitability under pressure.

HOW DOES AUTOMATION HELP?





More Storage, Smaller Footprint

ASRS solutions optimize every inch. Narrow-aisle layouts and vertical racks **reaching nearly 40 ft (12 m)** maximize storage, while smart WES ensures fast- and slow-moving items are strategically positioned for efficiency — including in temperature-controlled environments.

These systems **shrink storage footprints by up to 75% while boosting SKU storage capacity up to 450%,** allowing facilities to stock more inventory without costly real estate expansions. Flexible ASRS solutions use industry-standard racking and **handle almost any container — totes, trays, pallets, or even uncontained goods** — making them easy to deploy in existing facilities with minimal preparation and accommodate products of all shapes, sizes, and materials.

Some ASRS solutions **also support sanitary compliance,** allowing totes and other components to be easily removed for cleaning and sanitization, so facilities can maintain hygiene without disrupting operations.

5 | Demand Volatility & Seasonal Spikes

Seasonal SKUs — especially in beer — and limited-time promotions constantly move in and out of beverage DCs, **creating bursts of volume that can strain operations.** A single hit SKU can send demand surging, pressuring distributors to flex capacity.

At the same time, many consumers are spending more cautiously amid economic and global trade uncertainty. Alcohol and specialty beverages are often the first categories shoppers cut back on when budgets tighten, leaving distributors with unpredictable peaks and valleys in order flow.

In the warehouse, that means walking a tightrope: **preparing for spikes without carrying excess labor or inventory during slower periods — a difficult equation without flexible processes and systems in place.**

HOW DOES AUTOMATION HELP?





Agility When Demand Spikes

Automation brings the flexibility that manual operations often lack when demand swings.

Modular ASRS solutions let beverage DCs scale quickly — adding robots, storage locations, or picking workstations — to respond to demand without disrupting ongoing workflows. Just as importantly, **they support phased implementation, allowing facilities to test, adapt, and avoid heavy upfront capital investment** while scaling in line with business needs.

Smart WES provides **real-time inventory insight, enabling faster response times, fewer stockouts, and more efficient operations.**

By combining modular automation with intelligent software, facilities can navigate unpredictable peaks, optimize labor, and support business growth without compromising performance.

6 | Sustainability Pressures

Shoppers are increasingly demanding greener products — and regulators are following with stricter environmental standards. Beverage brands are responding with recyclable packaging and lighter materials, **which adds complexity to storage and fulfillment operations.**

For instance: More glass bottles — especially thinner, lighter versions — **increase the risk of breakage** without proper handling. Greater variety in packaging formats and materials makes storage, picking, and pallet-building more complicated.

Facilities must ensure that eco-friendly initiatives don't inadvertently slow fulfillment, increase product damage, or compromise service levels. Doing so requires a strategic approach to storing and handling products that accounts for both the physical properties of new packaging and the challenges of more diverse SKUs in an already crowded warehouse.

HOW DOES AUTOMATION HELP?



Sustainability Without the Slowdown

Automation helps beverage facilities support sustainability goals by **streamlining workflows and reducing waste.** Goods-to-person ASRS ensure eco-friendly packaging — such as lighter bottles, thinner cans, or recyclable materials — is handled with consistent, precise movements that **minimize breakage and protect product integrity.**

By sequencing inventory for pallet-building or truck loading and automatically directing items to ergonomic picking stations, these systems reduce the number of touches required to fulfill orders.

Fewer touches mean fewer opportunities for damage, less rework, and less waste from spoiled or broken product.

Ultimately, **automation enables distributors to embrace lighter, greener packaging without sacrificing speed or customer satisfaction**.

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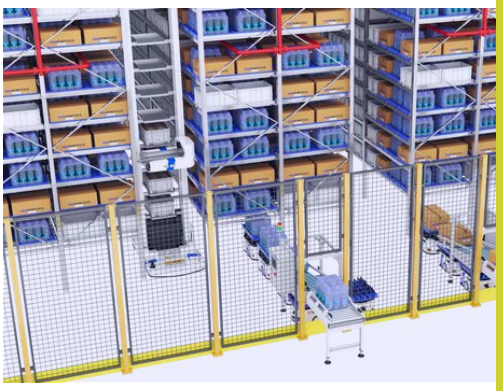
7 | Inventory Handling & Breakage

Beverages are among the most fragile and costly products to mishandle. Glass bottles and aluminum cans are vulnerable to breakage, leaks, or crushing — whether on the warehouse floor, during palletization, or in transit. Each damaged case means not only direct product loss but also cleanup, safety risks, and potential claims from downstream customers.

The challenge intensifies with SKU proliferation. **Different container sizes, weights, and materials require varied handling in a manual fulfillment setup.** Building uniform, stable pallet loads or staging shipments for multi-stop deliveries demands precise planning to avoid damage in transport.

Many facilities **still rely heavily on experienced workers with tribal knowledge** of how to stack and arrange cases for shipment. As turnover rises and product variety increases, that knowledge becomes harder to preserve, putting both efficiency and profitability at risk.

HOW DOES AUTOMATION HELP?





Minimized Loss at Every Step

Robotics and smart WES bring consistency to beverage handling, ensuring products are stored and moved with care. Automated retrieval minimizes human contact, **picking and transporting items through controlled, precise, and repeated movements** — including gentle acceleration and deceleration — reducing drops, crushing, or other accidental damage.

ASRS solutions store goods in **secure, enclosed zones that limit access to designated workstations,** so only authorized personnel can retrieve inventory. This controlled access enhances safety and protects high-value or regulated products like alcohol.

At fulfillment, intelligent software can apply **pallet-building logic to sequence items so they arrive at the workstation in the correct order** for palletizing or truck loading, ensuring products are packed and transported safely.

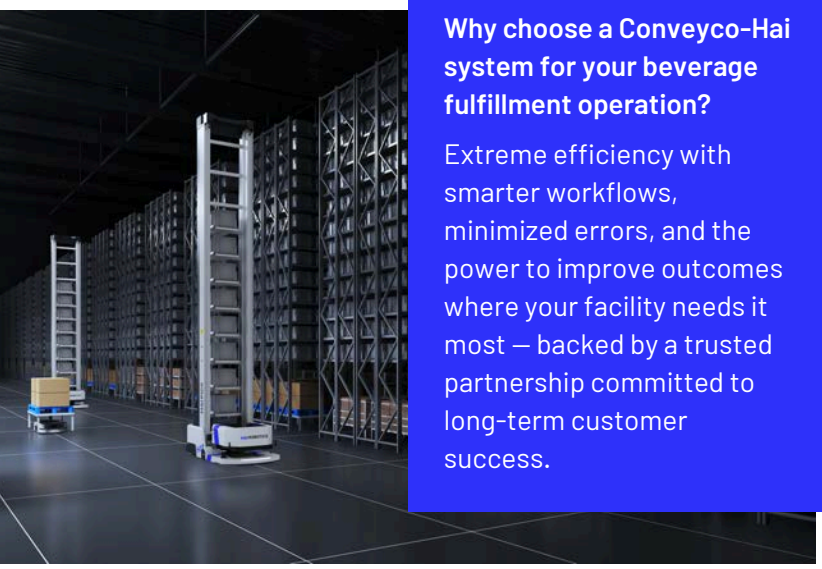
HaiPick Systems + New Dawn WES: The Smart Approach to Automated Beverage Distribution

The family of HaiPick Systems are advanced Automated Storage and Retrieval Systems (ASRS) that **streamline inventory management and order fulfillment** while supporting evolving operational demands and business growth.

Built on a modular framework, these robotic goods-to-person systems **automatically store, retrieve, and deliver both contained and non-contained items with high efficiency, high throughput, and 99%+ accuracy.**

Whether you need to handle totes, trays, cases, multipacks, kegs, pallets — the list goes on — HaiPick Systems offer a flexible and scalable solution to meet your growing business needs. The modular design allows easy reconfiguration, expansion, or even relocation, making them future-proof for long-term success.

Unlike older generations of automation, **today's ASRS are flexible, modular, and scalable:** They can be deployed in existing facilities with minimal preparation and scale easily as business needs evolve.



Why choose a Conveyco-Hai system for your beverage fulfillment operation?

Extreme efficiency with smarter workflows, minimized errors, and the power to improve outcomes where your facility needs it most — backed by a trusted partnership committed to long-term customer success.

Conveyco's New Dawn Warehouse Execution Software (WES) is purpose-built with a modular structure that fills the gaps left by traditional WMS platforms. Where WMS capabilities are often costly and inflexible, **New Dawn delivers real-time decision-making at an affordable price — providing functionality that typically requires expensive add-on modules from WMS suppliers.**

As both a software developer and systems integrator, **Conveyco combines deep order fulfillment expertise with complete material handling solutions** inclusive of software, risk management, and controls best practices. New Dawn WES serves as the intelligent orchestration layer, seamlessly connecting robotics, conveyors, WMS platforms, and ergonomic work cells with systematic event tracking, traceability, accountability, and supervisory control and data acquisition.

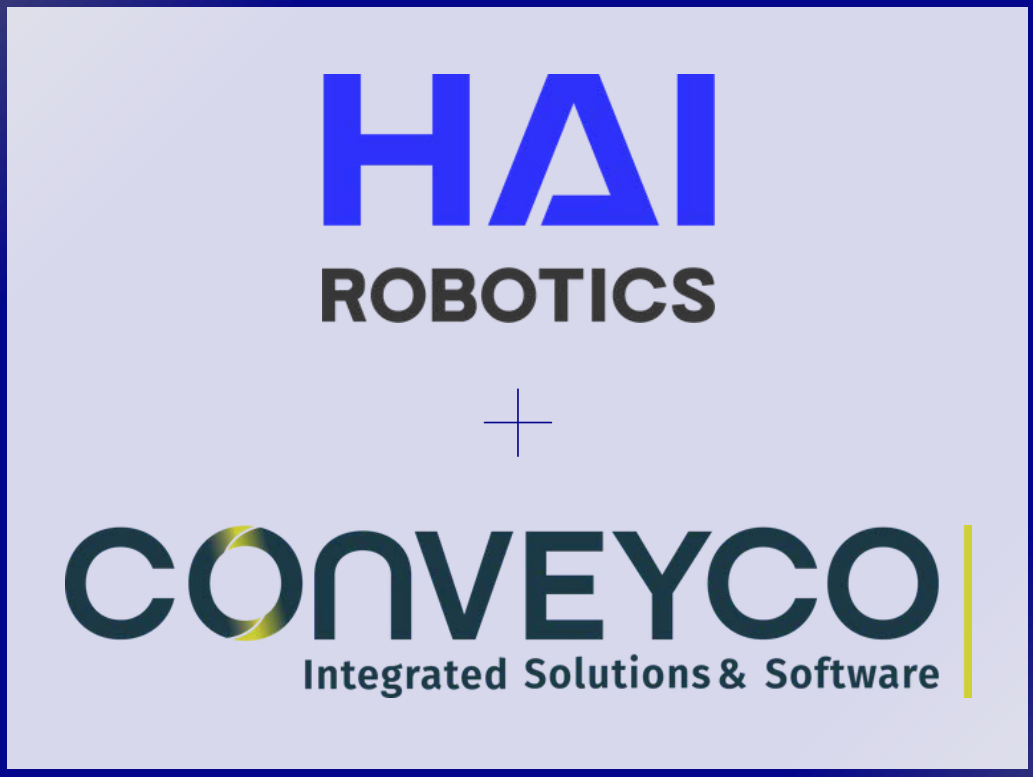
The result is a flexible, reliable, and future-ready system that integrates seamlessly across your operations, delivering measurable efficiency gains and long-term support.

Looking for more? Contact an automation adviser today for a personalized consultation on the best automation strategy for your beverage business:

> conveyco.com

> HaiRobotics.com

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