Hy-Tek INTRALOGISTICS | **Automation Insider** BLOG

ORCHESTRATING THE FRICTIONLESS BROWNFIELD | PART 2

Navigating the Integration Minefield

How to Strategically Orchestrate Multi-Vendor Hardware to Improve Your Operations Through Decision Intelligence



By Corey Peruffo, Senior Product Manager | Software

Once you commit to optimizing a brownfield facility and you've done the work to uncover your opportunities, the next hurdle appears. For most organizations, that hurdle is integration complexity. In fact, industry data from a recent Interact Analysis Voice of Market survey confirms that integration complexity is stated as the **number one barrier to automation adoption (42.6%),** outranking even raw budget limitations.

Why? Because traditional brownfield expansions can often result in an "Automation Frankenstack"—disparate and isolated islands of hardware and antiquated manual processes that aren't organized and cannot talk to one another, creating work imbalances, localized bottlenecks, and data silos that prevent real-time uncovering and resolution of the issues impacting utilization and productivity. Reconfiguring and upgrading this network of systems can be costly, which also flies in the face of brownfield expansions, often selected due to hopes of reduced financial burden and more efficient timelines.





A MANAGEABLE APPROACH TO REMOVING TECHNOLOGY SILOS

The typical brownfield tech scenario is often a common one — operators find and select standalone hardware that promises tangible benefits, they bolt it onto their system, and then they realize their software stack cannot handle the latency or communication. Productivity drops, throughput decreases and labor is underutilized.

"The solution is a functional shift from hardware-first to software-first engineering," said Peruffo. "Our clients want and need true system resilience, and that resilience comes from an intelligent Warehouse Execution System (WES) layer acting as the central brain." Peruffo added that while fixed automation hardware is rapidly commoditizing, automation-related execution software is surging at a 19.5% CAGR through 2030. "We work with our clients to start where they are," he added. "The goal of brownfields is not to keep the four walls but replace everything inside. It's a strategic mix of improving, replacing and adding over time. We often begin with gaining an understanding of the data our clients already own and then automating and integrating processes and ways of working that are already inherent to their operations. We then manage it all through real data intelligence, testing and refining the software solution to reduce error and improve outcomes. Finally, we optimize to ensure lasting ROI."

This phased approach that both embraces the reality of existing operations while integrating new software, hardware, and data capabilities can confidently move clients toward improved labor utilization, better decision making, and real-time pivots that drive measurable growth.

“Brownfield projects often gain momentum because they are seen as the option with potentially less risk,” said Corey Peruffo, senior product manager, software, Hy-Tek Intralogistics. “And this can be true. You have existing infrastructure, a work force already immeshed in the facility and its processes, and no need for the approvals and legal protocols that come with new builds.”

But that doesn't mean that brownfields don’t require sophisticated approaches and improvements to ensure you’re receiving the ROI that is possible with this type of endeavor.

Hy-Tek’s IntraOne™ Software Platform

IntraOne™ delivers this exact full-stack orchestration. By unifying WMS, WES, and WCS capabilities into one system that scales as you do, clients have a solution that connects your operations, empowers your teams, and delivers the results that matter to your business. Whether you are running robotic palletizing tunnels or advanced Goods-to-Person (G2P) mobile fleets, IntraOne™ balances task allocation based on real-time system constraints.

“For brownfields, IntraOne™ offers the flexibility and scalability to grow when you grow and perform within the existing realities of your operations,” Peruffo said. “We configure what is needed for immediate results and can adapt for the future without reimplementation.”

And this move toward software-empowered proactive decision making is happening across the industry, whether you’re exploring a greenfield or brownfield project. In fact, recent industry evaluations from supply chain technology directors highlight that warehouse software is transitioning from reactive visibility tools to proactive decision intelligence engines. Rather than requiring managers to interpret historical reports or static dashboards, advanced execution systems leverage real-time data to efficiently adjust inventory slotting, predict pick-zone congestion, and reallocate labor during peak shift swings.

“This is important because understanding where a bottleneck occurred 20 minutes ago provides zero protection for operating margins in a high-velocity fulfillment environment, “Peruffo said. “Our goal is to work with our clients, no matter what type of facility, to achieve true scalability and adaptability through software that serves as an active execution brain. IntraOne™ allows facilities to convert massive data streams into immediate, automated labor and fleet routing adjustments before congestion can disrupt your operations. The bottom line is that you don’t need a new build to do this — it can happen within your existing facility with the right partner and the right solution.”

The bottom line is that a brownfield doesn’t need to mean manual processes, scattered data points and disconnected hardware. With small pivots that ultimately turn into true data-driven insight, organizations can maximize every movement and decision that happens within their four walls.



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Learn more about IntraOne™ and reach out to request a demo and start a conversation.

