

ArcBest | Vaux

Transforming
**High-Variability
Warehouse Operations**
with Vaux Smart Autonomy



Scaling Automation

WHILE MAINTAINING FLEXIBILITY



HIGH VOLUME

This global distributor operates large-scale distribution centers with high-volume throughput and a wide range of product types.



PRODUCT VARIABILITY

Their environments involve a range of pallet configurations, product dimensions and loading scenarios.



OPERATIONAL PRECISION

These conditions demand a level of precision and accuracy that many automation solutions struggle to support.



THE CHALLENGE:

Scaling in a high variability environment

For this distributor, traditional automation solutions created more friction than value. Their large-scale distribution centers handle thousands of moves daily, but the existing systems couldn't keep pace.

Rigid Automation Systems

Previous automation solutions struggled whenever they encountered non-standard or complex scenarios, creating delays and requiring manual intervention. At the same time, they didn't have the internal bandwidth to take on the heavy technical lift of adapting and integrating these systems.

This inflexibility led to:



Reduced throughput capacity caused by repeated bottlenecks during peak demand



Manual intervention for oversized items, double-stacked pallets, and tight trailer spaces



Operational risk when automation broke down under real-world variability

The customer needed a solution that could deliver autonomy at scale while seamlessly managing complex, non-standard tasks.



THE ARCBEST SOLUTION: Adaptable Autonomy

ArcBest integrated Vaux Smart Autonomy with the customer's warehouse management system via real-time APIs. This enabled continuous communication between systems for move requests, execution status and completion updates.



Key workflow improvements included:



Inbound

Accelerated put-away by autonomously moving pallets from receiving docks



Outbound

Retrieved and staged outbound loads based on real-time order data, reducing bottlenecks



Trailer Loading

Managed oversized or double-stacked pallets and tight spaces without delays, thanks to teleoperation support

THE RESULTS:

Greater efficiency, flexibility, and confidence

Vaux demonstrated the ability to handle more workflows than originally expected. Machines completed more autonomous moves, increasing overall throughput. Fewer limitations and disruptions meant less operational friction, which led to smoother warehouse flow and early performance gains.

Throughout the process, the customer experienced:



Dedicated Support

There was strong account-level and executive engagement during implementation.



Smooth Deployment

Vaux absorbed most of the technical and integration work, enabling collaboration even with limited internal IT resources.



Strong Partnership

The team welcomed customer feedback and incorporated insights into ongoing product development.



KPIs

Achieved All Pilot KPIs



3YR

Committed to 36 Month Multi-Site Multi-Vehicle Deployment



19%

Boost in Vaux Productivity Post-Pilot

Design Your Operation For **REAL WORLD** Complexity

Ready to scale automation without sacrificing flexibility?

Discover how Vaux Smart Autonomy can transform your operations. Connect with our experts today!

Learn more at arcb.com/vaux

