

Warehouse Control System (WCS)



Manage and optimize material flow through the warehouse

Modern warehouses rely on automation from multiple vendors, often at a substantial cost. But without a single source of management, these systems won't be operating at their full capacity. With WCS, there is a central point of control for managing your entire portfolio of Material Handling Equipment (MHE) rather than individually managing each system. This reduces time-consuming and tedious tasks—like tracing malfunctions through every vendor—while increasing throughput and maximizing the capacity of warehouse operations.

Reduce manual intervention while increasing end-to-end visibility

A multi-vendor MHE infrastructure is virtually impossible to run as a unified system, much less as an optimized system. Lack of visibility into the entirety of the automation chain can lead to reduced throughput via bottlenecks and make it more difficult to trace materials and items, if needed. Gaps between disparate systems can create more manual work, from tracing and remediating malfunctions to making adjustments based on these malfunctions.

Key benefits

Truly vendor-agnostic

Infios WCS provides one solution for managing automation equipment from multiple vendors, including mixed automation portfolios.

Supports all automation solutions

Seamless integration of virtually all automation technologies, including conveyors, shuttle systems, high-bay warehouses, automatic storage and retrieval systems (ASRS) and many others.

Seamless vertical integration

The WCS connects the processes from the WMS to the logic controllers, ensuring optimum control of the automation equipment.

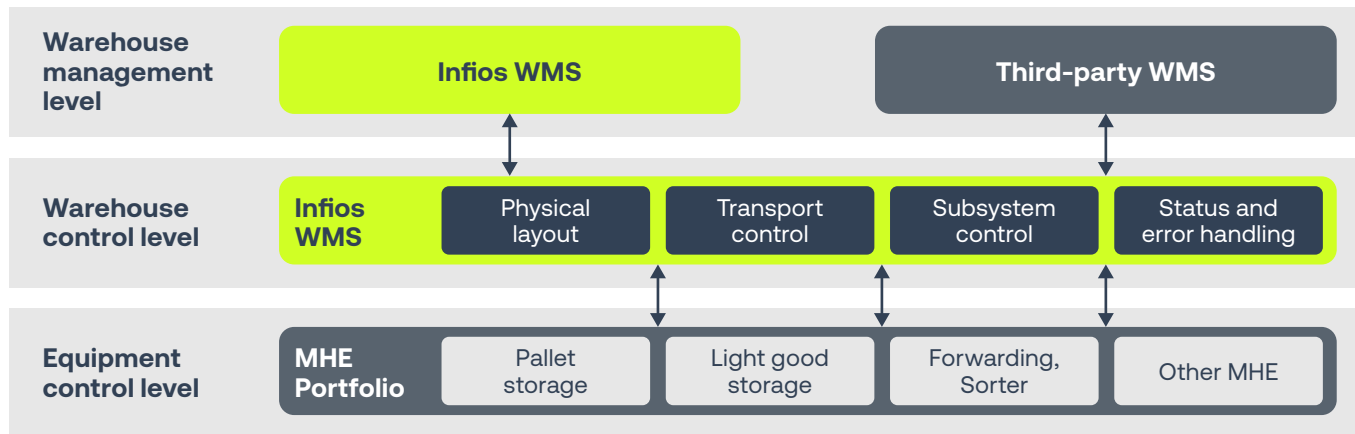
Highly scalable solution

The WCS scales to accommodate increasing transaction volumes, meeting the needs of any size warehouse.

End-to-end visibility of the entire material flow

An intuitive graphical dashboard present system data and allow for continual optimization of operations.

How it works



The WCS closes the gaps between the Warehouse Management System (WMS) and Material Handling Equipment (MHE) systems to optimize material flow, across the entire automation solution.

While the WMS determines the origin and destination for how the materials move, Infios's WCS:

- Determines the best routing from origin to destination
- Creates, manages and coordinates transportation tasks across different MHE systems
- Delivers items to destinations
- Selects storage locations based on physical attributes (i.e., item size, weight, load balancing)

WCS bridges the gap between the WMS and automation components

WCS is a vendor-agnostic control system that creates a single point of communication among the MHE and Warehouse Management System (WMS) while providing centralized control and management. It also ensures continued material flow if individual devices fail and provides:

- **Support for all common workflows:** basic automation, hybrid automation-workforce configurations and complex fully-automated operations.
- **Constraint-based algorithms,** which enable optimization strategies such as dynamically selecting the optimal transport route and adjusting routing in case of equipment failures.
- **Offline emulation mode,** to emulate behavior and throughput of the automation systems in a non-production environment.
- **Database-driven architecture,** which enables high scalability to support exponential growth of transactions.
- **Intuitive, graphical dashboards** that visualize data and provide actionable insights to continuously improve material flow, which can lead to higher equipment ROI.

The Infios difference

Infios's WCS has been available for decades—almost as long as automation has been employed in warehouses and distribution centers. We have continuously evolved our WCS to create a vendor-agnostic, best-of-breed software solution. Our experience extends beyond the software and includes an implementation and operating partnership to help unify the management of automation systems and maximize ROI.