

WMS & the delineation of execution



**“ The automation is the instrument.
The Warehouse Management System a conductor.**

Warehouses across Australia and New Zealand are adding robotics faster than they are adding the software discipline to coordinate it. The movements becomes automated. The decisions stay disconnected.

The problem was never the robots

Most automation business cases are built on the throughput of a single technology — a shuttle, a goods-to-person cell, a fleet of AMRs. The gain is real, but it is localised.

Warehouses don't ship totes. They ship orders. When each vendor's controller optimises its own island, the operation gets faster in silo but not faster overall.

Bottlenecks don't disappear under automation — they move to the pack wall, to dispatch staging, to the yard, to the carrier.

A connected approach doesn't mean more technology. It is structuring to decide what the work is and when it happens, across robotics, materials handling equipment and people.

Dissect the order, don't hand it over

An order is not a unit of work an automated system can act on. It is a promise — a customer, a carrier cut-off, a service level, a set of constraints.

The Warehouse Management System (WMS) should break that promise into discrete tasks: pick, decant, replenish, consolidate, pack, stage, load. Each with a location, a resource type, a sequence and a due time.

Tasks — not orders — are the only unit robotics can meaningfully execute against.

Release timing is the real decision

The highest-leverage decision in an automated warehouse is not how fast a machine moves. It is when work is released to it.

Release too early and inventory banks up at the pack wall, buffers fill and the equipment starves itself. Release too late and the truck waits.

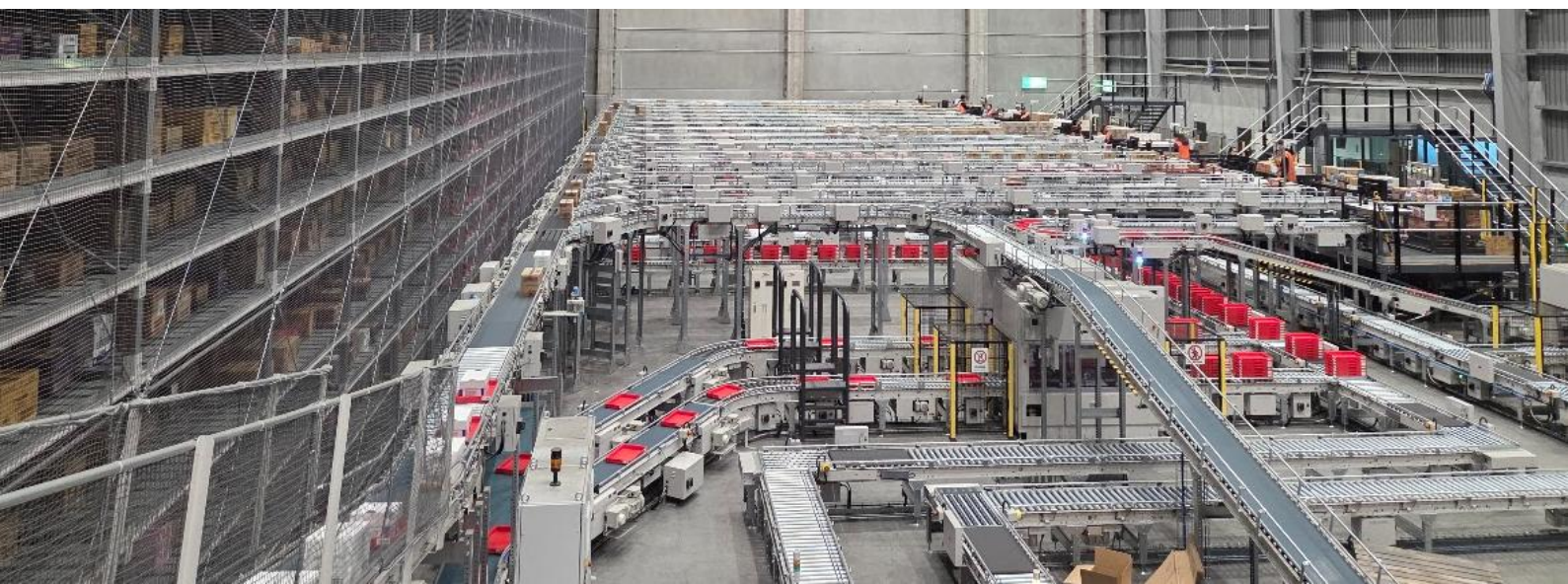
The WMS is the platform holding the context that the decision needs: order profile and wave shape, carrier cut-offs, labour availability, and what is happening downstream in the wider logistics operation.

Demarcate at the execution level

The WMS decides what work exists, what it is worth, in what order and when it should happen. It owns inventory truth and the customer promise.

The Warehouse Control System (WCS) decides how a machine performs it — motion, routing, arbitration, interlocks, safety and recovery.

One clean line. The WMS never tries to drive a conveyor. The controller never tries to decide which customer ships next.



Warehouse Execution Framework

ERP · sales, demand, orders, ownership, the customer promise

WMS

Dissects every order into discrete tasks // Optimises release timing across the warehouse and the wider logistics operation
Holds one inventory truth // Plans manual and automated work in a single wave.

EXECUTION DEMARCATION

WCS / PLC / MACHINE CONTROL

Executes the task. Motion, routing, arbitration, interlocks, safety, recovery.

ASRS

GTP

AMR / AGV

SORTATION

VOICE

MANUAL PICK

A single logistics solution

Very few sites will ever run a single automation brand. Most end up with a shuttle from one vendor, a sorter from another, AMRs from a third, print-and-apply from a fourth — and manual pick faces alongside all of it.

Vendors arrive in cycles, over years, at different points in each technology's life. Every one of them brings its own controller and its own view of the warehouse.

If the WMS gives up the coordination role, the most capable vendor's controller quietly becomes the master system — and every decision after that gets made in that vendor's interest, not yours. A WMS should instead be the thing that lets multiple automation vendors operate in the same building without competing for control of the order.

What that protects

- Vendor choice at every refresh — replace the AMR fleet without re-platforming the warehouse.
- Manual and automated flows in one plan, which matters because automation is almost always partial.
- One record of truth for inventory and traceability, in every zone.

Questions to consider

- Who dissects orders into tasks — and can we see the task model?
- Who decides release timing, and against which constraints?
- If we add a second automation vendor in 24 months time, what has to change?
- Can automated zones and manual zones be planned in a single wave?
- What does the operation do on the day the automation is down?

Interlogic designs logistics execution systems that combine its MultiPick® warehouse management software with technology, automation and advanced materials handling equipment. The company blends warehousing know-how with practical innovation to deliver measurable operational savings, and supports customers directly from design, build and ongoing. Interlogic works with businesses large and small across New Zealand & Australia.

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