

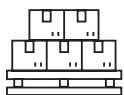
ABBOTT ZWOLLE: Flexible High-density automation with Movu atlas

Abbott's logistics operations in the Netherlands have reached a new level of efficiency with the installation of the Movu atlas ASRS pallet shuttle system at its Zwolle site. The automated warehouse, covering more than 20,000 m², consolidates pallet storage previously handled in Breda while ensuring reliable, rule-compliant deliveries to production lines. Movu's solution delivers high-density storage, operational flexibility, and precise handling of pharmaceutical and nutritional products.

Abbott is a global healthcare leader with a strong Dutch presence, operating eight sites with roughly 1,950 employees. The Zwolle facility is central to Abbott's nutrition division, producing well-known brands such as PediaSure, Isomil, and Ensure. Abbott's operations in the Netherlands span diagnostics, nutrition, diabetes care, vascular, and pharmaceuticals, emphasizing safety, quality, and innovation.



FACTS & FIGURES



8,690

pallet positions



2 lifts

and 2 inbound/outbound stations



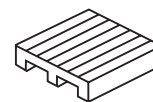
WCS

integrated with AS400 ERP of Abbott



5

shuttles over 5 levels



Up to 50

pallet movements/hour



Project context and objectives

Abbott needed a solution that would centralize storage, streamline warehouse operations, and maintain strict pharmaceutical and nutrition-grade storage standards, including controlled handling of allergens and IBCs. Integration with the existing AS400 ERP and compliance with strict cybersecurity requirements added complexity to the project.

The project was executed in a single phase, with flexibility built in for future expansion if throughput demands grow. A key challenge was ensuring seamless integration between WCS+ and the AS400 ERP while meeting Abbott's rigorous cybersecurity standards.

"We needed an automation partner who could deliver not only capacity and efficiency, but also full compliance with our nutritional-product and allergen-handling standards. Movu atlas solution met that need."

Bas Schrauwen
Engineering Manager at Abbott

The Movu atlas solution

The system provides 8,690 pallet positions for industrial pallets across 5 rack levels, with 5 Movu shuttles, 2 lifts, and 2 inbound/outbound stations. The solution is designed for steady throughput — approximately 25 pallets inbound and 25 pallets outbound per hour — with an emphasis on reliability, compliance, and traceability rather than maximum speed. Movu's flexible system can be adapted to both new and existing facilities, demonstrating its versatility in different warehouse layouts.

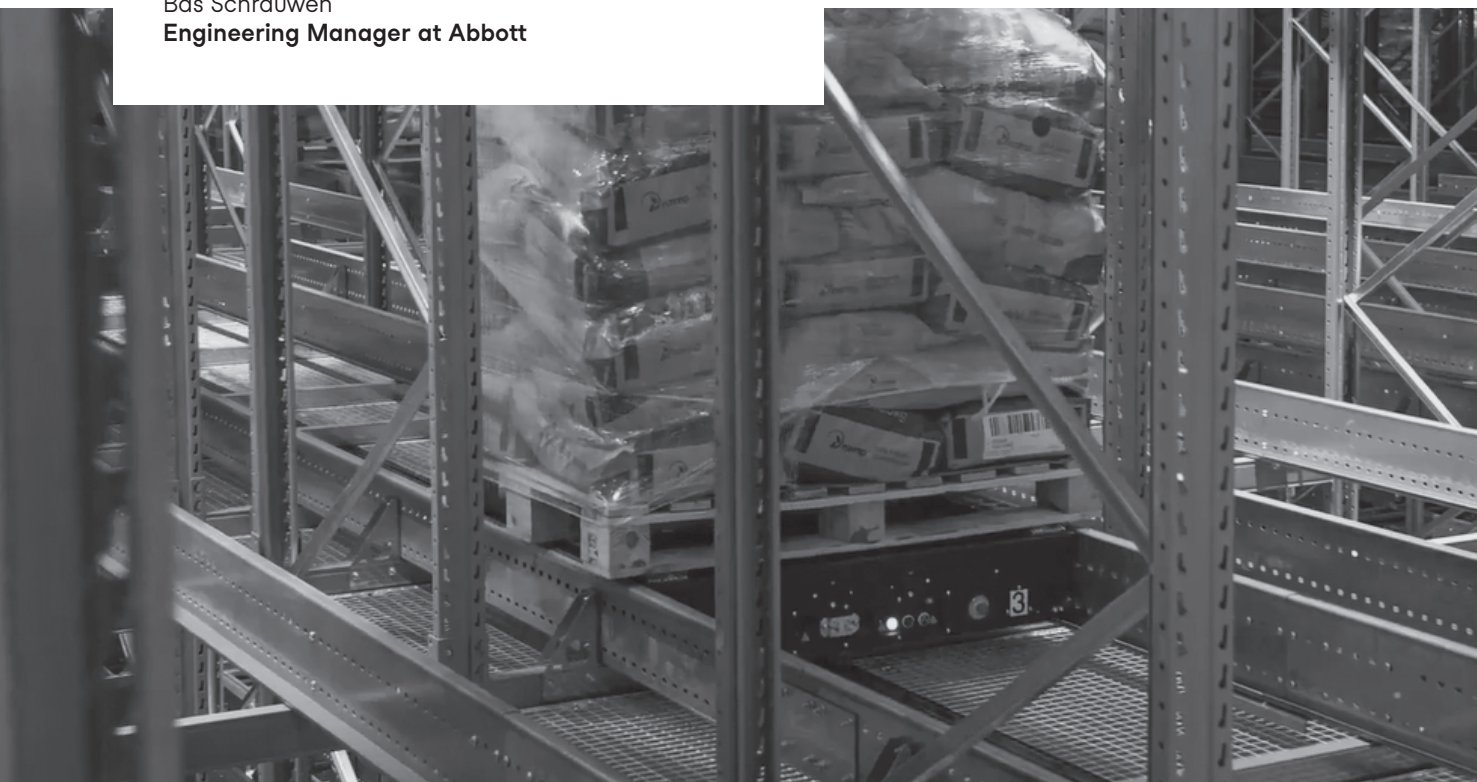
Installation, integration, and commissioning

Movu's team installed the racking, shuttles, lifts, and communication infrastructure without constraints, highlighting the system's adaptability. WCS+ was configured to manage shuttle movements, lift sequencing, and station operations while enforcing complex storage rules. Integration with Abbott's AS400 ERP was achieved through middleware, enabling real-time inventory updates, task orders, and outbound confirmations.

Commissioning included shuttle and lift testing, network validation, and full user acceptance testing. A staged cutover ensured smooth transition to live operations, minimizing disruption to warehouse workflows.

Storage rules and allergen handling

Abbott's nutritional business places exacting demands on storage rules, especially regarding allergens and IBCs. In this project, the WCS+ was configured with a detailed set of rule sets to enforce these constraints automatically.





For instance, IBCs are restricted to storage on the first level only, ensuring accessibility and safety. Allergen segregation rules are embedded such that non allergen pallets cannot be placed under allergen pallets and different allergens may neither be stacked above nor below each other. Only identical allergens or non allergens may be stored above an allergen pallet.

Exception management and workflow

A structured exception management workflow is in place to manage non standard events. When putaway rules are violated, WCS+ displays alternative storage suggestions at the operator console. Quarantine or damaged goods tasks are created with manual confirmation required. In the case of shuttle or lift faults, WCS+ isolates the affected module and dynamically redistributes tasks to maintain operational continuity. Integration errors between WCS+ and AS400 are logged and reconciled using middleware reprocessing and inventory parity reports.

Performance and impact

Since its go live, the Movu atlas system has brought measurable benefits to Abbott's Zwolle operations.

The consolidation of inventory from the previous Breda location into a single, denser storage facility has reduced cross site logistics, improved production line replenishment and enhanced traceability throughout the supply chain. Although throughput is moderate, the system delivers consistent performance, high availability and full regulatory compliance.

Abbott commented that the move to automation has resulted in reduced reliance on manual putaway, lower error rates in allergen segregation, and more predictable inventory flows to the production lines. The traceability and rule enforcement built into the system give Abbott greater confidence in storage correctness.

From the project the key lessons were clear: early alignment between ERP, WCS and cybersecurity stakeholders is critical; testing real SKU data against storage rules significantly reduces start up exceptions; and thorough operator training on exception workflows pays dividends in smooth operations. Furthermore, the modular design of the Movu atlas solution means Abbott retains flexibility to add shuttles or expand stations if future throughput demands increase.





Vertical Market	Pharmaceutical
Pallet locations	8,690
Shuttles	5 on 5 levels
DC's Footprint	> 20,000 sqm
Elevators & stations	2 elevators 2 inbound stations 2 outbound stations
Throughput / Performance	Up to 50 pallet movements/hour (25 inbound, 25 outbound)
WCS Software	Included
Custom request	- Integration between WCS+ and AS400 ERP. - Compliance with strict cybersecurity requirements. - Allergen segregation rules in storage (different allergens, non-allergens). - IBC placement rules (first level only). - Low but steady throughput design (~25 pallets IN/OUT per hour). - Modular setup allowing future expansion or second phase. - Real-time exception handling workflows (operator alerts for rule violations, quarantine, faults). - Compliance with pharmaceutical/ nutritional storage standards.
WCS Software	Included
Application	Logistics hub serving one of the world's leading producers of nutritional and healthcare products.
Location	Netherlands

Movu. No warehouse left behind.

CONTACT US

To discover how we can help you find the best automated solution for your warehouse, **get in touch with us today!**

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