

Reimagining logistics at ODTH with scalable automation from Movu Robotics

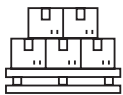
ODTH has transformed its Rumst warehouse into a high-performance, automated logistics hub. By combining scalable shuttle technology with intelligent software orchestration, the project sets a new standard for sustainable and future-ready warehousing.

ODTH First Class Logistics is a family-owned logistics service provider based in Belgium, known for its people-first culture, tailored solutions, and environmentally conscious operations. With over 40 years of experience, ODTH serves a diverse range of customers with a strong focus on multimodal transport and value-added services. Innovation and collaboration are central to ODTH's DNA, making it a natural partner for scalable automation initiatives.

Located in central Flanders, ODTH's Rumst site is a vital logistics hub serving one of the world's leading producers of fast-moving consumer goods (FMCGs). The site handles a complex mix of palletized goods, batch numbers, and SKU statuses, all under strict service level requirements. Historically operated using manual forklift transport and 1D shuttle lanes, the warehouse had reached a point where modernization was no longer optional... it was essential for growth, efficiency, and sustainability.



FACTS & FIGURES



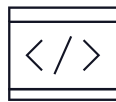
31,000

pallet positions



680

tonnes
CO₂ savings



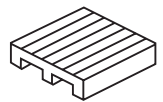
SAP ERP

integrated with
Movu OPS



20

shuttles over
4 levels



6,000

pallet
movements/day



A strategic shift toward smart automation

Faced with increasing throughput demands, limited ceiling height, and an ever-growing SKU base, ODTH sought to optimize both space and operational flow. Their objectives were clear:

- Improve storage density within the constraints of a low-bay facility
- Minimize manual pallet handling and internal transport distance
- Increase safety and reduce operational costs
- Introduce automation without disrupting service
- Align with long-term environmental goals

To achieve this, ODTH partnered with Movu Robotics, part of stow Group, to design and deploy a scalable, phased automation solution centered around the Movu atlas pallet shuttle system and Movu OPS Movu's proprietary warehouse execution software.

"We saw an opportunity to increase our storage density and reduce handling costs by upgrading the traditional 1D system," explains Wim Van Leuven, Project Manager at ODTH. "Reusing existing infrastructure had a big impact on both investment cost and sustainability."

Wim Van Leuven
ODTH Project Manager

A customized, phased approach for the solution implementation

At the heart of the solution is Movu atlas, an advanced ASRS (Automated Storage and Retrieval System) designed for high-density pallet storage using autonomous shuttles. The system features 20 Movu Atlas shuttles operating seamlessly across 4 vertical levels, maximized within the existing building height, and will ultimately support a total of 31,000 pallet positions across 14,000 square meters.

The system also includes 5 elevators, 5 inbound, and 7 outbound stations, enabling synchronized, high-throughput pallet movement, with a total flow capacity of up to 6,000 pallets per day.

Movu OPS, Movu Robotics' proprietary warehouse execution software, orchestrates the entire system. Fully integrated with ODTH's existing SAP ERP, Movu OPS directs shuttle operations, manages location logic, optimizes elevators, and coordinates staging based on real-time demand and priorities.

The architecture is modular and phased over six stages, allowing for continuous operation during implementation. Each phase builds on the previous one, gradually expanding capacity while maintaining live operations, a critical factor for ODTH's 24/7 service model.

Sustainable design through smart reuse

A standout feature of the project is its sustainable engineering. Rather than replacing the entire storage infrastructure, ODTH and Movu reused the existing racking uprights, significantly cutting material costs and environmental impact, saving over 680 tonnes of CO₂.





The system is also designed to accommodate both Euro and industrial pallet formats up to 2400 mm high, within the same storage lanes, offering high flexibility and optimized use of space. Automated pallet staging and expedition buffer creation are executed during off-peak periods - like nighttime - further maximizing throughput without requiring extra resources.

Intelligent orchestration through software

While Movu atlas handles physical operations, it's Movu OPS that enables intelligent orchestration. The software dynamically directs shuttles based on real-time needs, supports chaotic storage logic (where the best location is chosen based on availability and priority), and ensures that pallets are retrieved just-in-time for outbound logistics.

Movu OPS features:

- Seamless integration with SAP ERP
- Direct communication with Movu Conveyor Control (MCC) and Movu Tower (traffic controller)
- Intelligent routing and elevator usage optimization
- Configurable buffer and location strategies
- A modern, user-friendly interface for operators

"The SAP integration was a technical challenge, but it allowed us to solidify Movu OPS as a robust, reliable control layer," notes Thomas De Rudder, Integration Manager at Movu Robotics. "The system now operates across multiple levels and with multiple shuttles simultaneously, unlocking a new level of responsiveness."

Results of phase 1: a future in motion

The successful completion of Phase 1 marks a major milestone in ODT's automation journey. The key benefits already realized include:

- Significant reduction in forklift traffic, improving safety and lowering energy usage
- Enhanced storage density across all available vertical space

- Seamless SAP-WES integration, enabling real-time orchestration and decision-making
- Intelligent, chaotic storage model, where goods are stored dynamically to minimize pallet handling, reducing damage and increasing throughput
- Automated nighttime buffering, preparing orders proactively for next-day shipping

The system now supports 24/7 operations with greater flow capacity, less manual work, and better use of available space, laying the groundwork for the next implementation phases.

Next steps: scalable growth with minimal disruption

ODTH and Movu are preparing for the rollout of the next five phases. With each stage, the system will scale further, adding capacity, shuttles, and software sophistication, while maintaining operational continuity.

The project not only validates ODT's automation strategy but demonstrates how a modular, software-driven approach can deliver measurable value quickly, even in complex logistics environments.

Conclusion: setting a benchmark in smart, sustainable logistics

The ODT Rumst project showcases how logistics companies can modernize existing infrastructure without the need for full reconstruction. By combining intelligent software, modular robotics, and sustainable design principles, ODT and Movu Robotics have built a logistics ecosystem that's not only scalable, but also smarter, greener, and more responsive.

This initiative sets a new industry standard for future-ready warehouse automation, where strategic collaboration, technical excellence, and environmental impact all converge to redefine what "first class logistics" looks like.





Movu No Warehouse left behind

Vertical Market	3PL
Pallet locations	31,000
Shuttles	20 on 4 levels
DC's Footprint	14,000 sqm
Elevators & stations	5 elevators 5 inbound stations 7 outbound stations
Throughput / Performance	Up to 6,000 pallet movements/day (3,000 inbound, 3,000 outbound)
CO ₂ savings	Over 680 tonnes avoided through rack reuse
Custom request	- Phased implementation to avoid disrupting daily operations - Reuse of existing racking uprights to reduce cost and waste - Support for both Euro and industrial pallets in the same channels - Adaptation to 4-level storage due to building height limitations - Custom integration with ODTB's SAP ERP system - Chaotic storage logic for complex SKU, batch, and status handling - Nighttime buffering automation to prep pallets near expedition - Scalable shuttle setup starting with 20 Movu Atlas shuttles
WCS Software	Included - Seamless SAP ERP - Movu OPS WES integration
Loading Equipment	Euro and industrial pallet formats (up to 2400 mm in height)
Application	Logistics hub serving one of the world's leading producers of fast-moving consumer goods (FMCGs)
Location	Belgium

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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