

MovU

No warehouse
left behind.



MovUTM
robotics

We are bringing **easier automation** to the world's warehouses.

We are here to make warehouse automation easier, helping more companies make storage, retrieval, picking and fulfilment faster, smoother, smarter and more efficient.

Movu provides flexible and scalable solutions for easier automation with a range of perfectly integrated key technologies, so our customers can make better use of every corner of their warehouse: pallet shuttles, bin shuttles, Autonomous Mobile Robots (AMRs), and picking robots. We have also built a market-leading, integrated operating system that seamlessly plugs into all known warehouse management systems.

It's as easy as that.

Because we want every warehouse to be more productive, more efficient and more successful with automation.



Movu is part of the stow Group.

The stow Group is a global leader in the design, manufacturing, and implementation of advanced storage solutions and automated warehouse systems. stow is headquartered in Belgium and employs more than 2,000 people worldwide. The Group has an extensive pan-European manufacturing presence with ten production sites and a global distribution network.

Due to the increasing importance of warehouse automation and robotics solutions, Movu was born out of stow's "What if" spirit that is always pushing for better. We benefit from stow's 40 years' experience in the warehouse market and their understanding of customer needs and can draw on stow's local resources for engineering, commissioning and customer service all around the globe. Additionally, Movu is resilient towards supply chain uncertainty regarding integrated racking and robotics solutions.

Thanks to stow's financial strengths and stability, Movu is able to grant long term reliability and project safety to their customers.



Your benefits with Movu solutions.

- More independence from a shrinking labour market.
- High flexibility for seasonal fluctuations and peak times.
- Increased productivity.
- Best possible use of space.
- More energy efficiency.
- Perfect integration into your processes.
- Efficient project management by experienced teams.
- Fast installation, short ROI time.

Why Movu?

Automation drives profitable growth, but many companies still think it is too costly and difficult. Movu automation solutions are specifically designed to help warehouse operators overcome these concerns. Movu systems do not require costly reconstruction measures in your warehouse. Instead, they can be easily and seamlessly integrated into existing operations.

This is achieved through our solutions' high level of integration:

- There is only one interface for hardware and software respectively, making integration into your existing systems and structures effortless.
- Thanks to their modular design, Movu solutions can be installed quickly and easily, then optimally adapted to the conditions in your warehouse.

Warehouse automation with Movu is the easy, fast and safe way to begin automating and robotising your warehouse processes.



Plug & Play: Easy automation of warehouse processes.

Movu automation solutions are quick and easy to install thanks to their plug & play design. They do not require costly warehouse modifications or complex engineering. Instead, they can be easily and seamlessly integrated into existing processes.



Modularity: The right solution for every warehouse.

Movu solutions have to adapt to our customers' needs and not the other way around. That is why we focus on modularity and scalability when developing our storage systems. This enables us to create individual solutions and flexibly adapt these at any time should conditions change.



Energy efficiency: Less energy consumption in the warehouse.

With Movu automation solutions, you can significantly increase the energy efficiency in your warehouse. In particular, the innovative Movu escala and Movu atlas storage systems reduce your energy consumption, as they do not require classic storage and retrieval machines.



Space optimisation: Up to 50 percent more storage space.

No matter how your warehouse is designed, our modular storage solutions enable you to use space that would remain unused with other systems. You need neither aisles between the racks nor heavy stacker cranes.



Fast installation: Save time and money.

Movu systems can be installed much faster than conventional automation systems. This results in significantly fewer disruptions to your on-going warehouse operations, and you can make productive use of your new system more quickly.

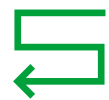


Human-machine collaboration: Leveraging human and robot strengths.

Movu storage and picking systems make the picking process faster and more efficient. The human-machine interaction during order picking enables the strengths of both sides to be used optimally.

From staging to storage: We'll find the right solution for your warehouse.

Movu solutions make your warehouse more flexible, more productive and more profitable: from goods receiving to the loading zone, from storage to order picking, from pallets to bins. Our intelligent robotic systems adapt perfectly to your warehouse structure and budget.



Picking: Your new assistants.

Accurate, flexible and rapid order picking is increasingly becoming a critical factor for a successful warehouse. As a leader in robotic solutions, Movu can help you to significantly boost your picking productivity through automation. With shuttle systems and autonomous mobile robots from Movu, you gain picking flexibility, precision and productivity, and have the right answer to a shrinking labour market.

Movu solutions:

Movu atlas, Movu ifollow, Movu escala, Movu eligo



Staging: Always ready.

By automating your staging areas, you achieve greater flexibility and productivity, while also optimising space utilisation: from receiving to loading. This ranges from the use of autonomous mobile robots (AMR) in the goods receipt area to completely automated loading docks in the shipping area.

Movu solutions:

Movu atlas, Movu ifollow



Dense storage: More space in the same area.

With Movu, it's easy to gain additional storage space in your existing warehouse, without making any structural changes. At the same time you also increase your productivity with our high-density warehouse solutions.

Movu solutions:

Movu atlas, Movu escala



Cold storage: Stay cool.

Movu systems are ideal for cold storage and cold chain logistics. You gain storage capacity, save energy costs and relieve your employees even in challenging working environments.

Movu solutions:

Movu atlas, Movu ifollow, Movu escala



Movu solutions: simple, faster and future-proof.

The Movu solutions portfolio is built around a range of innovative sub-systems, which are designed to provide easier, scalable, flexible and energy-efficient solutions that are both accessible for all kinds of warehouses and quick to roll out.

Warehouse automation with Movu is the easy, fast and safe way to begin automating and robotising your warehouse processes.

- **Flexible.**
Whether working alone or together, our robots are designed to fit your existing space, processes and systems. It's this flexibility that lets us live up to our core promise: to make warehouse automation easier.
- **Scalable.**
Movu solutions are modular in design, acting as a set of building blocks to minimise the complexity and cost of upgrading. Installations can start small and then expand or, if needed, they can downsize just as easily. Our solutions are designed with scalability in mind.
- **Smart.**
Our Warehouse Execution System (WES) software integrates the operation of all our robots for maximum efficiency. It interfaces seamlessly with your existing management system for fast implementation and minimal worker training.

Movu eligo

The best choice for picking the right products quickly and getting them to customers.

Movu ifollow

The versatile Autonomous Mobile Robot (AMR) solution for collaborative picking or transport of pallets or other load carriers.

Movu escala

The solution for multi-order picking with goods-to-person.

Movu atlas

The state-of-the-art solution to maximise pallet storage space by minimising the number and width of driving aisles.

Movu software

The Warehouse Execution System (WES) for automated warehouse management.


Movu atlas: Helping you to maximise storage space.


The Movu atlas pallet shuttle sub-system is a high density, multi-pallet Automated Storage and Retrieval System (AS/RS). Without the need for lift truck aisles, or manual handling, the system is modular, adapting to your space and offering the flexibility to add shuttles as required.


With its design flexibility, Movu atlas is a straightforward concept that can easily be integrated as a sub-system of a project; racks and robotics from a single source give access to a standalone storage system with a standard interface.


Made to measure.


Whatever the shape or size of your warehouse, the Movu atlas shuttle rack system is specially designed to be integrated seamlessly into the layouts of all warehouse spaces, letting you make use of existing brownfield sites. Even ones with odd shapes.


 **1,500 kg**
max. load


 **1.4 m/sec**
max. speed


 **+45°C**
max. temp.

 **-25°C**
min. temp.

 **0.5 m/s²**
Deceleration

 **0.4 m/s²**
Acceleration

 **5x**
more energy-efficient than traditional solutions

 **100%**
performance with automatic charging



Movu ifollow: Autonomous Mobile Robot for pallets and more.


Movu ifollow is the versatile Autonomous Mobile Robot (AMR) solution for collaborative picking or pallet transport. Rapidly deployed and powered by smart, plug-in software, Movu ifollow lets you independently map and modify tasks to your own unique requirements.


Designed to run in environments from -25°C, ifollow AMRs don't just carry the loads, they achieve efficiency and improve working conditions. Clever sensory technology makes them safer than forklifts; travelling complex routes and navigating narrower gaps, they automatically avoid – and even overtake – obstacles and people.


Cases, pallets, trolleys, roll cages – Movu ifollow robots handle them all. Providing autonomous internal transport to and from load zones while operators pick. Taking goods to packing areas or bringing returned items back to racks.


Turning on their own footprint, Movu ifollow robots need far less room to manoeuvre than an AGV, giving you more storage and less empty space. Plus: There is no need to change your floor. Whatever the size, shape or layout of your warehouse, Movu ifollow is ready to go.




 **1,200 kg**
payload capacity

 **8 hours**
battery life

 **24 hours**
setup time

 **50%**
reduction in picking errors

 **2 hours**
charging

Movu escala: Fast and simple robotic goods-to-person system.

For goods-to-person picking from bins, Movu escala offers the most flexible AS/RS and order fulfilment solution. Movu escala eliminates manual handling in the delivery of goods in bins to picker work stations. And, with its modular design, you can simply add additional storage modules and robots when needed.

Movu escala robots move bins in three dimensions within a dense storage and retrieval system based on stow racking. Robots move along a rail track connecting every storage location point, and between levels via car park-like ramps. Eliminating the need for maintenance-intensive conveyors, lifts, service aisle access and sequencers.

Movu escala offers an easy and simple entry point into automation. Providing both racking and robots, it's quick to install and can be scaled to your business. It also has the flexibility to handle a greater mix of SKUs offered by other automated storage systems.



Up to 6
containers
deep



10 dB
sound level



Up to
12.5 m
height



50 kg
payload
capacity



24/7
charging



Up to
650x450
Euro bins
handled

Movu eligo: A self-learning robot for piece picking.

The Movu eligo robot picking arm automatically picks from a single-SKU source bin and places items into multiple mixed-SKU destination bins. Bridging manual and fully automatic picking, it can address labour shortages, and work inconvenient work hours with higher pick accuracy.

Seamlessly integrating with Movu escala bin shuttles, Movu eligo's advanced software, intelligent grippers and machine vision ensures reliable throughput.

For speed in the warehouse nothing can compare to Movu eligo. It can pick 600 items per hour and work 24 hours a day and 7 days a week. Its unrivalled efficiency when it comes to picking will effortlessly increase the productivity of your business.



600
items/hr
pick rate



Up to
30 cm
pick item
dimensions



-25°C to
+40°C
operating
temperature
range



2 kg
max. load



>99%
pick accuracy



24/7
runtime



AI
intelligent
handling

Movu Warehouse Execution System for automated warehouse management.

Software for managing shuttles and autonomous mobile robots (AMRs) in warehouses is a crucial tool for optimising the operation and control of these systems. It facilitates the efficient management, coordination and monitoring of shuttles and robots, ensuring a smooth flow of materials.

Movu follows a clear philosophy with its software: you should be able to work with it immediately and without any problems. That's why we only have one software interface for integration into your system; the rest is handled internally by our modular software.

- **Movu ops:** Software for managing all operations. Movu ops takes the orders from the higher-level customer system and prepares them for Movu tower.
- **Movu tower:** Checks the available resources, selects the most suitable shuttle or AMR, and then sends the order to Movu pilot.
- **Movu pilot:** Ensures the execution of the order at the level of the individual shuttle or AMRs.

Together, these three pillars make up the Movu warehouse execution system (WES) for shuttles and AMRs.

Unsurpassed know-how.

Movu ops, the higher-level control centre of the Movu WES, was developed by ourselves. This not only ensures smooth operation, but also guarantees that the capabilities of our shuttles and robots are fully utilised. After all, no one knows Movu's products and systems as well as we do.

Data analysis for predictive maintenance.

The Movu WES records data from all shuttles and robots and enables predictive maintenance of the Movu systems through appropriate data analysis. This reduces downtime due to malfunctions and ensures the smooth and uninterrupted functioning of the shuttles and robots.



Comprehensive customer care.

Our service principle is simple: we know that technical problems can stop your production, which is why we do our utmost to prevent this.

Our customer service responds rapidly to any service issue. We offer comprehensive service solutions to support you along every step of the way, from commissioning your equipment, robot inspection and preventive maintenance, to on-site repairs, relocation support or upgrading your products and systems.

Engineering:

Movu project engineers will develop a design tailored to your exact requirements.

On-site assembly:

We install and commission your systems quickly and with the highest quality thanks to specially qualified installation teams.

Training:

We provide your staff with technical training, enabling them to operate our solutions correctly and carry out certain maintenance tasks themselves. We can train your staff at your premises or offer an eLearning option.

Maintenance:

We maintain your storage systems and perform any necessary repairs directly. Our service specialists can also connect to your system via VPN, and thus solve problems very quickly.

Inspection:

Our experts perform the mandatory inspections and tests on your racking systems and your robots.

Spare parts:

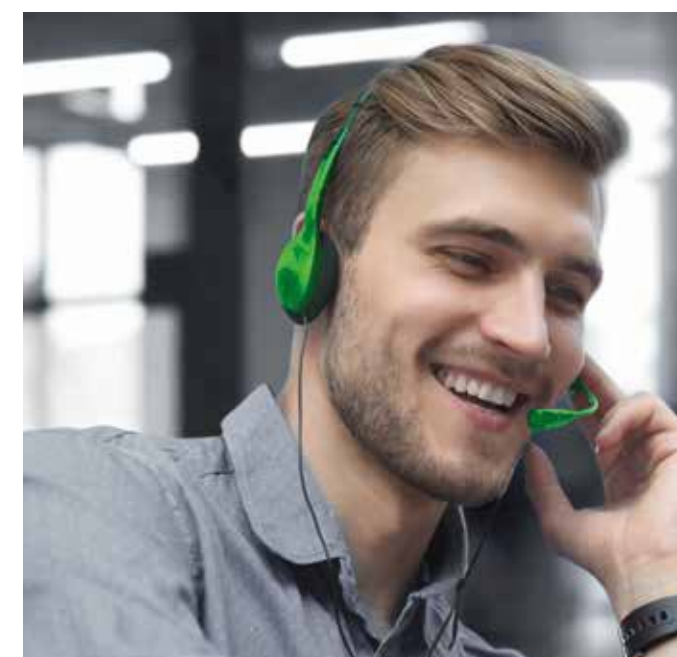
We stock spare parts for all our products and for the entire service life of your system.

Support line:

We are always there for you, 24/7 on request.

Short-term rental of shuttles.

We also offer our customers the option to rent Movu atlas shuttles temporarily for a maximum period of 6 months. In this way, additional capacity can be provided during peak periods without having to purchase additional shuttles.



Our biggest innovation is called Movu.

The foundation of Movu is based on one fundamental idea: we want to make it as easy as possible for every warehouse operator to automate their warehouse with automation and robotics solutions. To this end, we have developed a fully integrated ecosystem of flexible plug-and-play automation solutions for pallets and bins that do not require any new infrastructure to be installed.



We work hard to make it easier for you.

Our development team made up of industry veterans and experts has the comprehensive knowledge and necessary experience to develop racking, robots and software from a single source. The results are systems that can be easily integrated into our customers' warehouse environments via just one hardware and one software interface. What's more, these are perfectly coordinated because they all come from the same Group.

The whole is greater than the sum of its parts.

We follow a strict modular approach. With just a few individual components, we are able to realise customised solutions that are not only quickly installed, but can also be flexibly adapted to changing circumstances at any time.

We don't reach for the stars, but into your containers.

Our R&D is focused on the wishes and needs of our customers. One example of this is our new development Movu eligo, a robot module for Movu esca. Movu eligo combines advanced AI software with intelligent grippers and machine vision for picking from bins and pallets. With up to 600 picks per hour, Movu eligo significantly increases the productivity of your order picking.

The Movu Campus: Home of innovative ideas

At the beginning of 2023, the Movu Campus in Lokeren, Belgium, was put into operation. There is an R&D centre, a Technology & Experience Centre, training rooms and offices. Movu's software department is also based here. In addition, there are further R&D centres in Paris and Chicago.

A framework for sustainability.



The UN has set 17 Sustainable Development Goals (SDGs). From these goals, Movu has identified those that are particularly relevant to the company:

- Healthy lives for all.
- Combat climate change and its impacts.
- Sustainable and modern energy for all.

Applied to Movu's business, this means that we focus primarily on occupational health and safety and reducing CO₂ emissions. This is set out in a framework programme that serves as a guideline for all activities in these areas:

- **Minimise consumption:** We are committed to continuously minimise the consumption of resources within the limits set for us; avoiding environmental pollution and using renewable energy wherever possible.
- **Systematic recording:** All types of energy are recorded at all sites and analysed with regard to operational energy use. Energy indicators are defined in order to identify potential energy savings.
- **Lower temperatures:** Our ovens are optimally adjusted and the temperatures during painting lowered. Chemicals and water are heated significantly less than before.
- **Energy-saving equipment:** The switch to LED lighting, the purchase of efficient compressors and frequency-controlled pumps, as well as other measures, will lead to a further reduction in electricity consumption.
- **Waste disposal:** In terms of waste disposal, one hundred percent of the chips produced during steel processing are recycled. The chemical residues can also be disposed of well, as they are not complex compounds and no solvents are used.

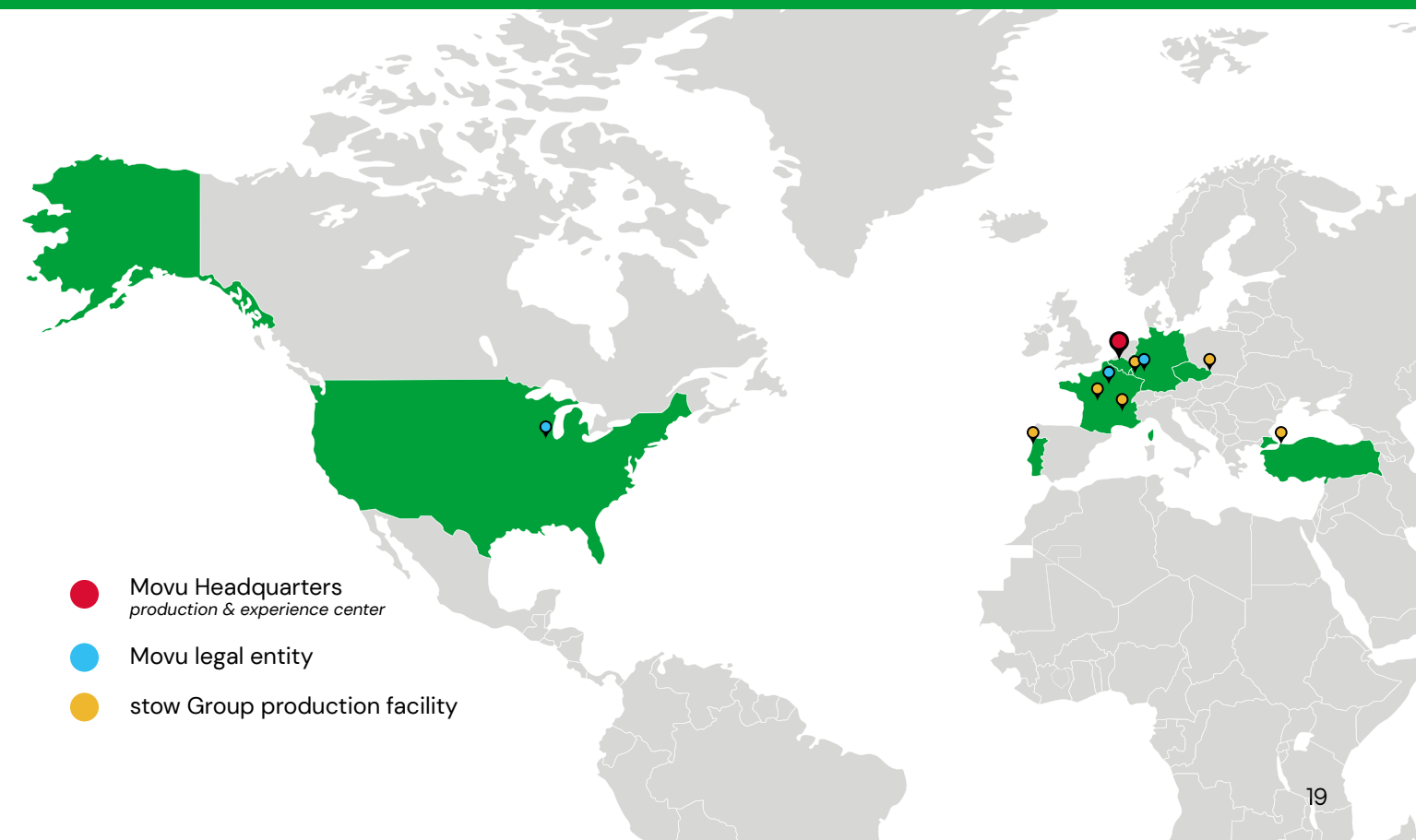
Regarding the health and safety of our employees, we work continuously through a variety of targeted measures to optimise occupational safety, and also offer a comprehensive health programme.

Global presence and customer proximity.

With offices in many European countries and a worldwide network of partners and sales offices, most notably in Scandinavia, the Middle East, Eastern Europe, Australia, North and South Africa, Movu Robotics ensures a local presence close to its customers.

With the launch of a new North American Technology Campus in Romeoville, IL (Greater Chicago Area), we have recently strengthened our presence in North America. The innovative

campus is a technology and experience center along with departments for sales, engineering & design, project management, aftermarket sales, and service & support.



- Movu Headquarters
production & experience center
- Movu legal entity
- stow Group production facility

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