

Why RAJA Group chose to modernize its logistics with the Movu atlas automated pallet storage solution

How the European leader in packaging distribution, RAJA Group, showcases the significance of innovation and adaptability in a constantly evolving logistics environment.

RAJA Group, a French family business with 70 years of existence, is the leading European distributor of packaging and a major supplier of office supplies and equipment. Operating in 19 countries, it employs 4,500 people and achieved a turnover of 1,675 million euros in 2023.

RAJA is committed to maintaining fast delivery times in France, ranging from 24 to 48 hours. Achieving this requires efficient logistics to manage service quality and keep 12,000 catalog references in stock. In winter 2020, amidst growth, RAJA faced capacity challenges at its main warehouse in Paris Nord (48,500 m2), necessitating an overflow storage solution. This led to the design of a new master plan, with a key pillar being the densification of storage at the site due to expansion limitations near the airport.

To address this, RAJA opted for the Movu atlas 2D automated solution from Movu Robotics and Ceratec, which best suited its catalog and stock depth needs. The project aimed to modernize logistics while enhancing competitiveness and corporate social responsibility (CSR) commitments.



Project Nature

The project involved implementing the Movu atlas automated pallet storage system, developed by Movu Robotics in collaboration with Ceratec. This modular and scalable solution allowed for densified storage at the Paris Nord site without physical expansion. Integration required close coordination among RAJA, Movu Robotics, Ceratec, and stow teams. This partnership enabled RAJA to incorporate mechanized equipment and an advanced WCS (Warehouse Control System), leveraging stow Group's expertise for racking and shuttles through Movu Robotics. Ceratec handled the integration of mechanized equipment (elevators and conveyors) and the WCS tool.

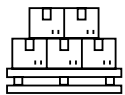
Autonomous shuttles transport pallets to and from 14,800 storage positions across 6 stow racking levels via 3 elevators (2 for entry and 1 for exit). This system allows shuttles to move between aisles without operator intervention. Twelve shuttles operate continuously, performing over 160 pallet movements per hour, with additional shuttles deployable if RAJA's business develops further, enhancing system flexibility. The system uses only two-thirds of the 6,000 sqm cell, allowing RAJA room for future storage expansion: 13 m high for 15 m under the ceiling on a 4,200 sqm floor area, including 3 elevators and conveyors for pallet reception and dispatch. This installation increased RAJA's storage capacity by 85% while modernizing logistics operations.

"We chose the Movu atlas system offered by our partner Movu Robotics because it optimally met the criteria of densification, automation, and productivity."

Laurence Papeil
RAJA France Supply Chain Director



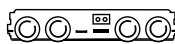
FACTS & FIGURES



14,800
pallet positions



+85%
storage capacity



12
shuttles over 6 levels



160
pallet movements / h



Solution Scope

The automated solution impacted various aspects of **RAJA's** logistics chain, including **purchasing, inventory management, and supply functions**. It also transformed the role of logistics operators, with four forklift operators specially **trained to oversee the automated system**, replacing traditional manual handling.

Project Timeline

The project was carefully planned, starting with an **in-depth reflection phase in 2020**, followed by strategic negotiations with partners in March 2021, and the actual commencement of work in June/July 2021. After a phased deployment, the system **became operational in September 2022**, with **performance ramping up throughout 2023**, involving continuous adjustments and improvements.

Challenges and Solutions

The project faced obstacles, including **raw material shortages, change management** within operational teams, and **maintaining logistics operations** during system installation to meet client requirements. This included phased installation, adhering to schedules for the entry and exit of materials, and starting the system in September before Raja's peak activity in October. However, thanks to **proactive management and transparent communication** these challenges were successfully overcome.

Achieved Results

The results were significant:

- **insourcing of the stock** with a **85% increase in storage capacity**
- Improved **inventory reliability**
- Increased productivity with **160 pallet movements per hour**
- **Enhanced pallet quality** meeting customer needs
- **Strengthened operational team skills**

The return on investment is estimated at **6 years**, demonstrating the long-term profitability of this initiative.

Supply Chain Innovation

This project stands out for its **innovative nature**, including cutting-edge technology integration, **maximum storage density**, and **solution adaptability to the existing building**, making RAJA the first group in France to adopt this technology. Additionally, intelligent integration between WMS and WCS **enabled automated and optimized logistics operations** (automatic ABC classification and lane optimization).

Impact on Company Performance

The impact on RAJA Group's performance was significant, both **economically** (internal densification = avoided overflow) and in terms of **quality** (standardized pallets), **technology**, and **logistics** (product reference maintenance and stock depth to meet customer promises). This initiative reinforced the company's position **as a major industry player and contributed to sustainable growth**.

Sustainable Development Dimension

Beyond operational benefits, this solution positively impacted the environment **by reducing CO₂ emissions** through **better inter-warehouse flow management, consolidating customer orders, optimizing processes with higher fill rates, and reducing travel distances**.

Future Prospects

Thanks to its **scalable nature**, this solution offers RAJA Group the flexibility to continuously **adjust and optimize logistics operations** based on changing market needs, with the potential to **add more storage positions or increase the number of shuttles** in case of increased flow.

Continuous improvements and **solution extensions** are feasible in the medium and long term, such as **duplicating the solution in subsidiaries** based on future needs, allowing RAJA to **maintain its leadership position in the sector**.

Vertical Market	Packaging
Pallet locations	14,800
Shuttles	12 on 6 levels
Throughput / Performance	160 pallets movements / h
DC's Footprint	4,200 sqm

- Provide a dense and productive storage system that also adapt to the ever-changing logistics requirements of customer (scalable and modular).
- Increase the storage capacity on the same surface area : storage of 14,800 pallets, compared with 8,000 pallets previously, representing an 85% increase in the equipped area.
- WCS : Automatic management of ABC classifications and optimisation of fills per lane

WCS Software	Included
Height	13 m
Elevators	3 (shuttles can change level)
Application	Ambient staging warehouse for packaging and office supplies
Location	France

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