

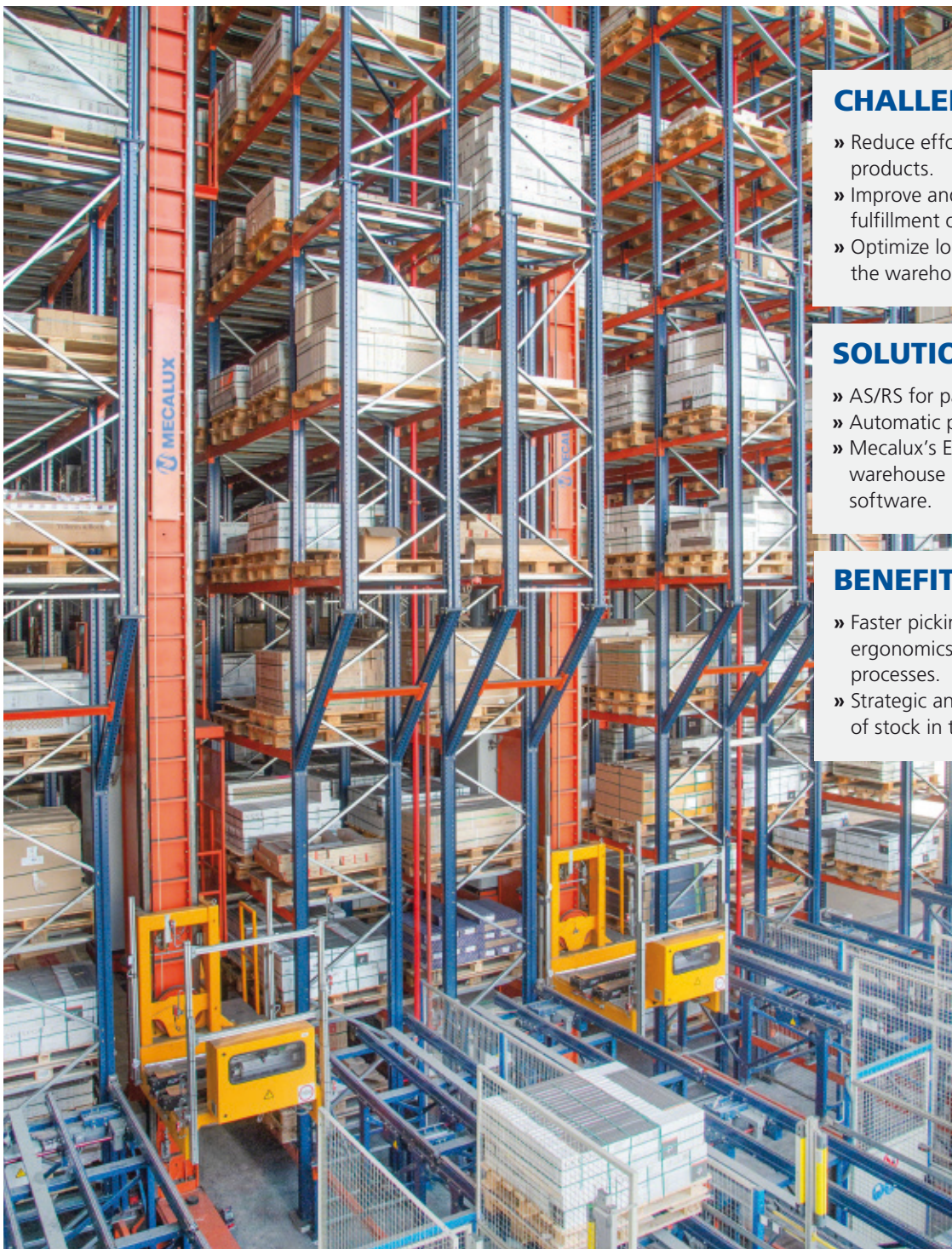


Construire demain
Construire durable

Case study: VM Matériaux AS/RS for continuous throughput

Country: France

VM Matériaux, a subsidiary of the HERIGE Group, has automated its logistics operations to deftly handle annual sales of nearly 22 million ft² of tiles.



CHALLENGES

- » Reduce effort in handling heavy products.
- » Improve and facilitate the fulfillment of orders involving tiles.
- » Optimize location management in the warehouse.

SOLUTIONS

- » AS/RS for pallets.
- » Automatic pallet conveyors.
- » Mecalux's Easy WMS warehouse management software.

BENEFITS

- » Faster picking, improved ergonomics, and reliability of processes.
- » Strategic and digitized distribution of stock in the AS/RS.

VM Matériaux is a company of the HERIGE Group devoted to marketing construction materials. VM Matériaux distributes building and renovation materials to professionals and private individuals through its 79 points of sale in western France. To meet new environmental challenges relating to energy regulations, VM Matériaux has developed a wide range of products and technical solutions via its ecoSOLUTIONS program.

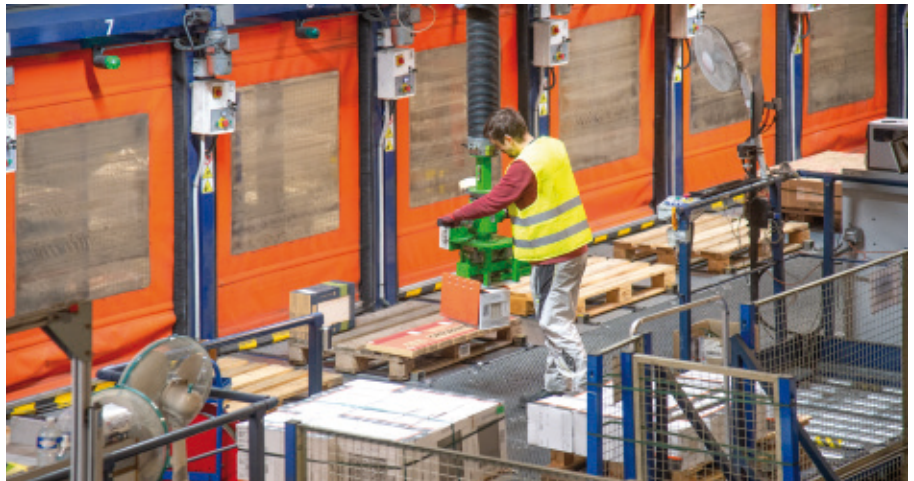
Founded in: **1907**

Points of sale: **79**

Showrooms: **35**

No. of employees: **1,150+**

Yearly distribution: **22 million ft²**
of tiles



VM Matériaux has a logistics center in the town of L'Herbergement, western France, which supplies the company's points of sale throughout the country. "Every year, we sell nearly 22 million square feet of ceramic tile surface area," says Céline Marchand, Supply Chain Manager at VM Matériaux.

modernize our logistics operations with an automated storage system that would enable us to satisfy the growing demand of our customers. But most importantly, we wanted to reduce the effort exerted by our operators in handling heavy materials," says Marchand.

VM Matériaux, a subsidiary of the HERIGE Group specializing in building materials, has modernized its logistics processes to respond to the growth it has seen in recent years. In 2021, the business recorded a turnover of over \$445 million.

To manage such a large number of orders, VM Matériaux replaced the pallet racks that stored its finished products with an automated storage and retrieval system (AS/RS), which ensures the availability of all the goods. "We knew we needed to

When implementing the AS/RS, VM Matériaux was looking to streamline picking, as ceramic tiles are heavy, bulky materials. In the face of this challenge, Mecalux set up an order picking area consisting of conveyors, transfer cars, and pick stations





with handling equipment that facilitates operator tasks.

In addition to scaling up VM Matériaux's logistics throughput, automation has also improved operator ergonomics and minimized errors arising from manual order picking.

At the pick stations, operators fill orders in line with the goods-to-person method. In other words, they remain at their stations as the automatic handling equipment brings them the tiles they need. The advantage of this way of working lies in the fact that operators do not have to walk around

the facility; now, they are more productive when picking orders. VM Matériaux has also deployed Mecalux's Easy WMS warehouse management software to strictly control all its stock. The program monitors the products that enter and exit the facility and keeps a real-time record of the status of the goods.

Likewise, Easy WMS is connected bidirectionally with VM Matériaux's ERP (enterprise resource management) software to optimize warehouse operations. For example, the minute a point of sale requires products, the ERP system informs

Easy WMS, which organizes order fulfillment straightaway. "The interfacing of the two software programs provides our customers with real-time information on stock availability and order status. Our operators follow instructions from Easy WMS to fill orders reliably and according to priorities established in line with vehicle departure times," says Marchand.

Automated logistics processes

"Automation has been essential in minimizing effort in material handling and ramping up throughput in our logistics operations. We've also become more efficient by avoiding errors in storage and order fulfillment processes," says Marchand. Operations in VM Matériaux's new AS/RS are completely automatic: three stacker cranes insert and remove products from their locations with full autonomy.

The AS/RS has a capacity for over 5,700 pallets and stands out for the length of its aisles: 312.7'. The stacker cranes cover this distance adeptly at high speed to expedite material handling. Moreover, the racks have been personalized to store pallets weighing up to 1.65 tons and containing items of different heights.



Céline Marchand
Supply Chain Manager, VM Matériaux

"We're really happy with our AS/RS for pallets because it's enabled us to boost the efficiency of all our logistics operations, particularly the picking of tiles. We've improved working conditions for our operators, fostering ergonomics in the warehouse."



The warehouse management system distributes the goods in the AS/RS and assigns a specific location to each pallet. Easy WMS incorporates rules and algorithms that organize the items based on their characteristics and demand level. The aisles are divided into zones according

to product turnover rates: type A, B, or C. For instance, A items (with the highest demand level) are placed on the ends of the aisles to make goods-in/goods-out operations more agile.

The warehouse design takes into account VM Matériaux's future growth prospects. For this reason, space has been set aside where the company can enable two additional aisles should its logistics needs call for that.

Order processing

"Picking is a fundamental operation in our facility. Every day, we prepare 300 lines of orders, which are distributed to our points of sale all over France. To absorb the increased demand, we've set up a picking area with three workstations where operators access the goods automatically via a conveyor," says Marchand.

The operation itself is very simple: the workers remove the tiles from the pallets brought to them from the AS/RS. They then sort these materials on pallets located behind them, each corresponding to a different order.

At the pick stations, operators can fill up to four orders simultaneously. To facilitate



their work and step up the operation, Mecalux equipped these stations with three critical devices:

Monitors. Here, Easy WMS tells operators which pallet to remove the goods from and the number of items required. By following the software's instructions step by step, operators prepare orders without making mistakes.

Put-to-light. These electronic devices show operators which pallet to place the materials on. The main objective is to sort the goods quickly and without error.

Manipulator arms. These help to lift very heavy tiles so that operators can handle these materials more ergonomically and effectively.

Easy WMS has also been configured for operators to perform inverse picking. In

this case, instead of collecting from the pallets the tiles required to fill the order, these workers remove the tiles that are not needed. The advantage of this work system is that it optimizes operator movements and speeds up order fulfillment.

Order dispatch

Operators notify the WMS that they have finished picking by pressing a button on the put-to-light system. Next, a transfer car picks up the order and transports it to a stretch wrapper and labeler.

Then, the orders are moved to the loading docks. "We group shipments to optimize truck loading, thus lowering transportation costs and ensuring delivery times," says Marchand.

Orders are assigned to the corresponding loading dock following the sequence defined by Easy WMS.

The last step consists of ensuring that the trucks are loaded in the correct order. Aided by RF scanners, operators read the materials' barcodes and labels to ensure that the right goods are loaded onto each truck.

Commitment to automation

VM Matériaux has automated and digitized its logistics operations to successfully cope with yearly sales of nearly 22 million ft² of tiles. The AS/RS installed by Mecalux brings agility to goods storage and dispatch flows.

Thanks to the automatic handling equipment and the way in which Easy WMS organizes the work, order fulfillment is performed quickly, reliably, and ergonomically for operators. VM Matériaux now has the logistics efficiency its customers require.

Automation has also improved operator ergonomics and minimized errors arising from manual order picking

