

14 May 2024 | News

# L'Oreal's SMART Fulfillment Center And The Future Of Robots In Warehouse Automation

by [Ryan Nelson](#)

The Clinchy, France-based cosmetics giant is deploying Hai Robotics solutions in its 46,000-square-meter SMART fulfillment center, located inside Suzhou Industrial Park. According to Hai, robots are the future of warehousing, and that shouldn't threaten human workers or companies' sustainability plans.

More than three-dozen autonomous case-handling robots (ACR) may right now be gliding about L'Oreal SA's first SMART Fulfillment Center in Suzhou, China, navigating narrow aisles to store and retrieve items efficiently, cost-effectively and sustainably, according to Hai Robotics.

The HaiPick A42 Multi-Layer Autonomous Case-handling Mobile Robots in the L'Oreal facility perform picking, sorting and transporting functions and are compact while reaching more than 30 feet high, which can reduce a facility's storage footprint by up to 74%, Shenzhen, China-based Hai says.

The ACR are integrated with loader and conveyor workstations and HaiQ software as HaiPick System 1, Hai's "essential goods-to-person solution that offers superior flexibility and scalability to improve warehouse operational efficiency and reduce unused storage space."

The firm says the system reduces overhead costs, centralizes and digitizes data analysis, and optimizes existing storage density by up to 400%.

Founded in 2016, Hai says its ACR system is the world's first, adding to a rapidly growing host of robotics solutions for warehouse picking/delivery needs, and an even greater number of automated

## Key Takeaways

storage and retrieval systems, since the start of the e-commerce boom in the late 1990s.

The COVID-19 pandemic only accelerated those advances.

L’Oreal’s SMART Fulfillment Center, located inside Suzhou Industrial Park, covers 46,000 square meters. With the HaiPick System, L’Oreal will be better positioned to support commercial clients including e-commerce platforms, offline retailers, and beauty salons.

Further, “L’Oréal is now able to handle D2C (direct-to-consumer) orders with elevated flexibility, efficiency and scalability ... without compromising on intelligence and sustainability for its supply chain operations,” Hai says.

Hai addresses the sustainability piece in a [white paper](#), “The Warehouse of the Future,” noting the widely held conviction that robotics and automation benefit sustainability primarily by increasing efficiencies.

It gives the example of a Shanghai warehouse where workers took an average of 40,000 steps a day before deploying Hai’s automation technology, which reduced daily steps to around 10,000. Meanwhile, digitizing its operations, so that paper delivery orders were no longer required, saved the facility more than 1.1m sheets of paper – “equivalent to saving 55 trees,” Hai says.

At the same time, it notes a lack of consensus on how to measure the sustainability of warehouse automation, including impact on carbon footprint.

Hai notes research at the Massachusetts Institute of Technology that determined automation an energy-efficient option for e-commerce fulfillment when considering the carbon footprint of workers that otherwise would be required and their daily commute to the job.

### Humans Still Needed, But Roles Will Change

Hai notes that “automation can reduce some need for electricity, with certain sections of a warehouse handed over to robotic solutions – becoming dark zones void of the need for light or heat, save for periods where repairs need to be made.”

- It is believed that robotics and automation will benefit sustainability by increasing efficiencies, but there’s a lack of consensus on how to measure automation impacts, including on carbon footprint.
- Robots won’t replace human workers, but human roles in the warehouse will change.
- Costs of robotic solutions are softening, and agile approaches, including alternative payment models, should help to melt resistance among companies large and small.

However, it stresses that the “Warehouse of the Future will not be fully ‘dark,’ there will always be a role for humans.”

Hai aims to dispel the “dystopian vision” of the future of warehousing that has impeded progress and created unnecessary angst among workers, it says.

In reality, humans working in partnership with robots (or “cobots”) will be spared dangerous and uncomfortable jobs, workplace injuries will be less common, and shortages of young workers to handle physically demanding tasks – currently an issue impacting the US, UK and China alike – will be felt less acutely, according to Hai.

“With the help of robots, warehouse work is no longer a young person’s game,” it says.

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Hai acknowledges that human roles in the warehouse will change, with supervision of operations becoming “more technical and grounded in the more mentally stimulating work of discerning and fixing problems in warehouse processes.” That means higher demand for the likes of project managers, project engineers, software engineers, and controls engineers.

On the other hand, experts agree there will be less demand for unskilled, assembly line-type human power.

Amazon.com, Inc. says it operates more than 520,000 robotic drive units and has added more than a million jobs worldwide since acquiring Massachusetts-based robotics company Kiva Systems, Inc. in 2012 for around \$775m.

“From the early days of the Kiva acquisition, our vision was never tied to a binary decision of people or technology. Instead, it was about people and technology working safely and harmoniously together to deliver for our customers. That vision remains today,” Amazon says.

### **‘The Agile Approach’**

Hai recognizes that not everyone has the resources of an Amazon or other elite player “to invest in bespoke custom solutions in gigantic purpose-built compounds. To these lucky few, with almost endless resources, designing and implementing an entirely automated warehouse – from the ground up – is a feasible endeavor.”

For everyone else, the future will not be warehouses designed from scratch to accommodate robots, but rather robots blended seamlessly into existing operations. “Agility is essential,” Hai says.

According to the firm, costs of robotic solutions have dropped in recent years, affording opportunity to SMEs in addition to larger companies. Hai touts its flexible approach that enables warehouse operators to select a robotic solution that fits their existing operations.

“It targets components of operations, rather than an entire system overhaul. This approach means companies reluctant to invest vast sums of money into an entirely automated warehouse can test the water by deploying a few robots to automate a specific process,” Hai says.

Further, the firm notes the emergence of alternative payment schemes, such as subscription models where customers pay for Robot as a Service (RaaS) on an in-demand basis, expanding use as confidence in the technology and its benefits grows.

“With any new technology, there will always be some who have an aversion to the unknown. There is a psychological barrier that individuals and even companies as a whole need to get past before adopting automation. The agile approach will help to ease this transition,” Hai says.

According to Hai, China has a dominant position in the booming robotics market. The country installed 268,200 robots in 2021 across a wide range of industries, and 52% of all newly deployed robots in 2021 were installed in China.

Japan was second with close to 50,000 annual installations, followed by the United States (33,300) and Germany (20,500).