

ENTER THE AGE OF ROBOTICS IN LOGISTICS



E-commerce may be booming, but are freight and logistics companies ready to handle the growth? The e-commerce market is expected to grow to \$4.9 trillion worldwide by 2021 compared to \$2.8 trillion in 2018.¹ The knock-on effect means that the global volume of packages is expected to soar.

These dramatic rises are accompanied by shifts in consumer behavior and expectations for speedy, same-day delivery. With the volume of packages coming, human workers simply won't be able to keep up. They need helpers—robotic helpers—to operate at scale and meet customer expectations with a new service model.

Robotics as a Service (RaaS) presents a path forward in acquiring robotics expertise while keeping focus on the core business and day-to-day operations.

Rise of the robots

With such rapid changes, the benefits of automating the storage and movement of goods throughout the supply chain are clear—lower cost to serve, increased efficiency, improved service levels and 24/7 service. Today, however, few are using robotics extensively or at scale.

The slow uptake of robotics adoption in warehouses, sorting centers and last-mile delivery is about to change. Spurred on by retail demand, demographic pressures and Industry 4.0, the global logistics robotics market is expected to grow from \$3.9 billion in 2018 to \$18.6 billion by 2026, a 21.4 percent compound annual growth rate.²

To adopt robotics at a faster rate, freight and logistics companies will need to figure out how to scale. Doing so is not without challenges: creating new operating and service models, reskilling employees, hiring roboticists to set up and install a robotics infrastructure, and monitoring and servicing the assets all require specialist knowledge and skills. In an already capital-intensive industry, buying and servicing robots—depreciable assets—also means acquiring additional expenses.

A new model: Robotics as a Service

How can freight and logistics companies rotate to robotics—and the new operating model it entails—quickly and efficiently? Robotics as a Service (RaaS) presents a path forward in acquiring robotics expertise while keeping the company focused on the core business and day-to-day operations.

RaaS allows companies to easily, cost-effectively and quickly access a range of robotics features and functionalities across the organization to gain full automation and cutting-edge capabilities. In a RaaS model, the robotics partner installs, maintains and services the robots, providing end-to-end life cycle services.

This service model shifts what would normally be a costly up-front capital expense to a periodic operational expense, paid only for

the services required; there are even emerging granular RaaS pricing models, such as charging by the hour or by the robotic action performed. Similar to leasing fleets, robotics services can be flexed according to seasonal needs. With robotics experts on tap, companies can also benefit from the latest capabilities and upgrades as they become available to retain a competitive edge.

The potential benefits are significant. For instance, Rakuten Super Logistics is automating its U.S. warehouses by deploying robots using an opex model and leveraging a cloud-based RaaS management system. Rakuten Super Logistics expects to increase its e-commerce fulfillment and warehouse productivity by more than 300 percent as the solution scales.³

The road to rewards

As you embark on your robotics journey, there are four important areas to consider:



ASSESS THE OPERATIONAL IMPACT

Looking at business needs and challenges, where will robotics have the biggest initial impact on operations? How can robots drive key performance indicators to increase quality, speed and consistency?



CREATE AN ADOPTION ROAD MAP

Develop your robotics service model to invest in the right places. What is your mix vs buy strategy? Look at areas where it makes sense to invest in fixed assets and where partners could provide them.



HUMAN + MACHINE SYNERGY DESIGN

Robotics have been positive for employment, productivity and income growth.⁴ But workers will need to be reskilled and upskilled to contribute more value and work side-by-side with robot colleagues.



TEST AND LEARN

There are many different robot manufacturers, but which robots are right for your business? You will need to assess the market and create a plan to pilot and test capabilities within the enterprise.

Scaling robotics throughout your business is no longer an option—it's a competitive necessity. But achieving it can prove daunting. With RaaS, you don't need to go it alone. Those who can adopt new models quickly and at scale will have first-mover advantage and reap significant rewards.

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