Scope of robotics in the logistics sector

Given the constant consumer demand to have products in the shortest possible time, the logistics sector has had to implement new tools that facilitate operational work, robots being an excellent ally.



According to a study by Roland Berger, by 2025, the impact of robotics on logistics will reduce logistics costs by 20% to 40%, while productivity can increase by 25% to 70%.

Let's analyze the scope that robotics has had in the industry and everything that is projected for the future.

Robotics in logistics is already a fact.

Let's start from the base, which will be to classify what robotics represents. According to Ferrovial, the objective of robotics is "to design machines programmed to perform tasks automatically or to simulate human behavior. Broadly speaking, and without going into much detail, a robot could be seen as a computer with the capacity for movement."



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These tools are causing a stir in logistics, as they are highly functional for repetitive processes, which require a lot of investment of resources and time. Just to give an example of the projection that is foreseen, Data Bridge Market Research assures that the warehouse robotics market will have a growth of 21,430 million dollars by 2030, with an annual growth rate of 13.36% between 2023 and 2030.

Let's learn about some examples of robotics in logistics that are currently in real operation.

• Robots in storage process. This allows automating storage processes, as the software makes warehouse movements more efficient and dictates storage sequences to the robot, thereby reducing work time, errors and costs. In addition to the fact that thanks to its analysis capacity, the software will always be optimizing processes and movements within the warehouse.

Amazon is a clear example of how warehouse robotics are revolutionizing the sector; since today, 75% of its delivered orders are processed by a robotic system and it is expected that 100% will be reach within the in the next 5 years. This is achieved through the use of the "Robot Sparrow", which is designed to pick up products that are on shelves or containers, thus packaging them for shipment to the customer. To identify the items, the robot uses cameras to recognize them. This is an example of how warehouse robotics helps automate the picking process.

Another robot that is causing a stir on Amazon is the "Proteus Robot", which is the first fully autonomous mobile robot. This will serve to transport products or shelves autonomously, which use sensors to navigate and avoid obstacles

- Within the assortment of orders, we find various robot applications focused on picking solutions such as **arms and/or anthropomorphic robots**.
- Another example that we see in the sector is the Delta Robot, ultra-high speed. This robot is used for companies that require better time control and efficiency. According to Kawasaki Robotics, the pick & place robot has a maximum payload capacity of 3 kg and offers the widest range of motion. It is used in handling applications for materials in various industries, such as: the electronics industry, food, cosmetics, machinery, pharmaceutical and solar panels.
- On the other hand DHL Supply Chain will deploy 5,000 autonomous mobile robots (AMR) in its
 warehouse networks in order to optimize its operations and improve operator productivity. Markus
 Voss, Director of Operations at DHL Supply Chain, assures that this robotic integration will bring
 incredible results and will "efficiently meet growing order volumes, labor shortages and rising
 consumer expectations."

¿What will be the evolution of jobs due to robotics?

As we previously mentioned, robotics in logistics will bring with it an increase in productivity, a decrease in errors and costs, since there will be less human interaction, compared to the manual processes that are currently handled. And here we will mention a concern that is increasingly exposed by current



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operators every day: will I lose my job when robotics reaches 100% in the Distribution Center? The reality is no, but it is true that the work of operators will have to evolve. It will be very important for operators to strengthen their expertise and become professional in new technologies, because robots will perform the repetitive work, but the strategy and supervision will continue to be the responsibility of people.

Finally, at **G.I.EICOM** we want to recommend that you embrace innovation as soon as possible, heading towards the coexistence of "technology - humans" will be (sooner or later) part of reality, so it is a priority to get ahead and enthusiastically embrace the advantages that are glimpsed.

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