

The logistics future driven by drones: uses and limitations.

The evolution of this technology has allowed it to be applied in different industries with an infinite number of uses, and the logistics sector is relying on them to process information more efficiently and deliver faster. Below we share the uses and limitations of this technology and what it offers to meet customer expectations.



Today they are a support solution for internal and external logistics processes, with highly versatile applications for the industry.

- Its application in intralogistics is very useful due to the reduction of transport times for goods, parts and spare parts within a Distribution Center.
- Support for inventory control; operated by traffic systems that automate activities, reducing operating times considerably from days to hours.
- Implementation of solutions for the exact location and identification of pallets and available spaces within the Distribution Center.
- Optimization of times and movements in the Distribution Centers' maneuvering yard through constant and real-time monitoring.
- For industrial security, they are an important ally in warehouses' surveillance, infrastructure and perimeter monitoring, covering more territory in less time, with access to areas that are a risk to the staff.
- In areas with a high population index, this technology is perfect for last mile deliveries. Configured with established, fast and safe routes, they can be operated from a Distribution Center or directly in the store, reducing delivery times from hours to minutes

During the past decade, the largest logistics and retail companies in the world have focused their efforts on the development of these technologies, optimizing their automatic navigation systems to facilitate takeoff and landing, increasing their height and travel range, covering distances of 12 km, moving packages of up to 2 kg. It is important to mention that these tests were carried out in areas with a low population index and in adverse weather conditions, averaging a flight time of 20 minutes from takeoff until reaching the customer's hands.

These tests are intended to anticipate the new consumers' needs and evaluate their application within urban areas with a high population index to adapt their needs and perfect them for the purposes that best suit the market.



There are many advantages of its implementation within the logistics industry, unfortunately they still have many limitations.

- Technological development, since we depend on its evolution to increase the list of goods that can be transported considering the volume, weight and type of product.
- They are currently limited by the time of flight hours and perimeter range. Few companies currently have successful tests of product delivery over long distances.
- These devices require constant maintenance since they are exposed to different frequencies, climates and temperatures, which reduces the useful life of their components.
- Unfortunately, its high cost of implementation and the hours of human supervision required by this technology are beyond the reach of most national companies.
- The laws and new safety regulations of these air vehicles are becoming more stringent, being United States the country where the most restrictions have been established and the Federal Aviation Agency (FAA) has decided that this technology should not be used for commercial purposes, limiting its use in certain areas and flight schedules, since within urban centers, a human error or damage is a great risk to the safety of the population.

The king of logistics and e-commerce: AMAZON affirms that the regulations imposed by the FAA for the drone industry are preventing North American companies from developing such technology and are being overcome in the innovation race by companies from other countries, which threatens a possible economic benefit

Public opinion in the United States remains in controversy over AMAZON's plan to make deliveries with this technology, since approximately 30% of the population is not in favor of its implementation, generating reactions ranging from the creation of accounts and content on social media under the slogan «terrorizing the skies with tiny packages» to hearings in the senate to assess the impact of drones in civilian life, focused on the security and privacy of citizens.

Currently this technology is a solution that supports the logistics industry, but it has not yet replaced the activities carried out by human talent and its development will mark the future of logistics processes and the customer's shopping experience.

Do you think this solution will be a standard in product delivery someday?

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