

# Drones - the Key to Unlocking the Skies?

**Autonomous drones are a fairly new technology in warehousing settings that have gained more attention recently. Given the constant search for better and more efficient operations, could this new technology be the key to unlocking the skies of future warehouses?**

Imagine warehouses filled with tiny robots in the form of autonomous unmanned aerial vehicles, UAVs, flying around in swarms performing all types of tasks in harmony. This might not be an imagination for much longer, since the technology already has started to take off in warehousing settings. With UAVs, companies have been able to automate tedious and repetitive tasks within inventory management. As pilot projects within the area are starting to show results and further improvements of the technology are made, the early adopters of warehousing drones can start to harvest the fruits from their successful implementations. In light of this, the question remains if more companies will follow and explore the heights together with drones.

Just like bees, flying around in swarms gathering pollen, drones are able to fly around and cooperatively capture and collect data. The use cases today are connected to inventory management where drones successfully can perform inventory checks, cycle counts, and find human errors. With current technology, it is possible to scan full pallets, but with the continuous developments being made, scanning loose boxes are expected as an additional feature being available soon. Other developments being investigated are those related to richer data collection, including data for allowing temperature and humidity checks or rack inspections. With these additional features, the

technology's usefulness could increase, allowing for more warehouses to find it beneficial.

Even though the technology does seem to have a relative advantage for inventory purposes and bring benefits to companies, it is still in its maturing phase. Besides the already mentioned limitations, activities related to inventory accuracy are not usually the most prioritized activity within warehouses and experts mean that companies might prioritize automating other activities. However, since no established competitor to the technology has been recognized yet, the technology is a good alternative for those that wish to increase time and cost efficiency while increasing their inventory accuracy.



As with all new technologies, the hype and expectations might be misleading, and this would not be the first time a promising innovation was shut down after the hype had passed. Even though experts in the area are positive toward the technology and expect it to become more widely adopted, one can never be certain. Only time will tell if unlocking the skies with the help of drones will be the next revolution for automating warehouses.

This popular scientific article is derived from the master thesis: *The Future of Warehouse Automation: Will Drones Ever Take Off?*, written by Filip Axén and Idun Jerlhagen Forsgren (2023).

Picture taken from David Amblings article published in *New Scientist* 2023 accessed 20th May 2023:

[<https://www.newscientist.com/article/2357548-us-military-plan-to-create-huge-autonomous-drone-swarms-sparks-concern/>]