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| **Worksheet**  *How Drones Will Affect the Logistics Industry in the Next 10 Years* |

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| **Instructions:**  Read the article “How Drones Will Affect the Logistics Industry in the Next 10 Years”. Then answer the following questions:   1. What are the benefits of drones in logistics? 2. What are the barriers to the use of drones in logistics? 3. What do you think? Will small parcels be delivered with drones in your home town in 3 years? Why? Why not?   **Time:** about 15 minutes |

**How Drones Will Affect the Logistics Industry in the Next 10 Years -** <https://articles.cyzerg.com/how-drones-will-affect-the-logistics-industry-in-the-next-10-years/>

Source: Sunol, H. (2015): How Drones Will Affect the Logistics Industry in the Next 10 Years, available at: <https://articles.cyzerg.com/how-drones-will-affect-the-logistics-industry-in-the-next-10-years/>, access on 25.07.2019

**Notes:**

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## How Drones Will Affect the Logistics Industry in the Next 10 Years

Are drones the future of freight technology? Companies like Amazon and Matternet seem to think so.

While the commercial future of drone use (using remotely controlled unmanned vehicles) is currently hanging in limbo, it’s an interesting time to analyze their potential influence on the future of the logistics industry. Skepticism about the feasibility and legality of incorporating drones in logistics business models is common and understandable. However, logistics industry leaders like Amazon and DHL are already experimenting with this emerging technology—so it’s a great time for logistics business owners to analyze if drone technology might provide a competitive edge in the future.

Only time will tell. In the meantime, let’s analyze some of the potential benefits and drawbacks in the world of commercial drone technology—as it stands today and as we form a vision for the future of logistics.

**Benefits of Drones in Logistics…**

***Reduced Shipping & Operational Costs***

Sometime in the next 10 years, last mile operators may potentially experience the most benefits in terms of cost reduction.

According to Ark Invest, Amazon’s Prime Air delivery drones could be expected to ship out packages directly to the customer from the warehouse in 30 minutes or less for as low as $1.00. The chart below shows the substantial difference between Amazon Drones and FedEx and UPS costs (with a much longer delivery time).

As the commercial drone market expands, last mile operators and small package delivery companies may be the perfect logistics business segment for drones to take off. Due to the characteristics of these companies and the current technological limitations of drones (approx. distance up to 10 miles and packages up to 5 pounds) last mile and small package logistic companies may be the first in the industry to be able to adopt this technology.

The first logistic companies able to adopt drones will drastically reduce transportation expenses related to truck capital expenditures such as maintenance costs, fuel, insurance and more. By doing so, they might have the potential to reduce their shipping costs by approximately 83% if we consider that Amazon (a leader in logistics and innovation) could drop shipping costs to about $1 by using drone technology.

No doubt this will be a game changer and something to truly pay attention to.

***Delivery at the Speed of Click***

When it comes to logistics and drones, Amazon took a big step when they introduced their Prime Air demo reel. The Internet giant wants to capitalize on their distribution centers seeded throughout the world by offering same day delivery to customers willing to pay a premium.

No longer will an item be picked in a warehouse, put on a carrier’s truck and sent through traditional channels to a customer. Instead, at a click of the mouse the system will arrange for the drone to pick the order, load it up and head directly to the consumer, without the limitations of delivery routes and many other everyday challenges in logistics.

***Eliminate Return Hassles***

As our daily life continues to accelerate we expect nothing else than speed. Not only do we want speed on delivery time (I want my package and want it now – yes, instant gratification), but if we are not happy with the order we also want our refund quickly so we can place the new order right away.

Drones not only address the real possibility of reducing return time cycles but also the inconvenience of having to go to the post office and dropping your package.

A heavy-duty drone could be dispatched to pick up damaged goods and return to sender. Returns can process while the drone is still in transit. Faster turnaround means faster resolution of return claims, so you get back to business rather than waiting for order inspection and confirmation.

This will continue to remove ecommerce barriers and take the ecommerce customer experience to new levels – and Amazon knows this.

**Roadblocks to the Future of Drones in Logistics…**

***Tech Vulnerability***

As with any emergent technology, many aspects of drone development are still in the works. Right now, drones don’t have the range to effectively handle all logistics needs for a company. Currently limited to small packages and short distances, today’s drones are still quite fragile and require highly skilled technicians and operators, which adds to production and use costs. As computer-controlled machines, they’re also vulnerable to hackers looking to steal or destroy the materials entrusted in their care.

The good news is drone developers are in the process of managing and solving such issues. Consider the difference between the smartphones of today and those from just five years ago. The development of civilian drone technology is on pace to meet or exceed those advancement rates.

***Government Regulations***

DHL is already using parcel-carrying drones to send medicine and supplies to the remote island Juist. The German Ministry of Transport and Digital Infrastructure even established a restricted flight area for DHL’s Juist route. Amazon has tested their technology in the field in Canada and in the UK, while Google has been testing unmanned aircraft in Australia. So what about the U.S.?

Currently, the U.S. has placed serious restrictions on commercial-use drones due to complaints from aircraft pilots, concerns about drone safety, and other issues. However, in 2012, Congress passed the FAA Modernization & Reform Act, a four-year plan for introducing unmanned aircraft systems (or UASs, aka drones) into US air space. The FAA notes: “There are many potential ways for a company to generate revenue from UAS applications… Based upon the expected regulatory environment, FAA predicts roughly 10,000 active commercial UASs in five years.”

Most recently, the US government ordered the FAA to outline commercial drone regulations no later than September 2015. We can’t wait to hear the news.

***Liability Concerns***

Another legal area that needs time to develop: where the liability falls regarding drone delivery. Logistics firms spend millions on insurance and ensure operators are certified to cover costs when accidents happen. If a drone crashes, who is responsible for the cost of replacing the product? Or what about a drone falling out of the sky and hurting somebody because of a technical or operational glitch – after all even NASA has had its technical and operational errors – and logistics drones will not necessarily be operated by NASA ;-).

Within 10 years, drones will likely play a significant role in logistics operations all over the world—but their total capacity for improving logistics operations is still to be seen. As the future of drones unfolds, the applicability and feasibility of incorporating drone technology into logistics operations will likely be more cost effective for last mile operators and small package services. While logistics professionals certainly aren’t selling their truck fleets overnight, now’s the time to examine the potential future of drone technology.

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