

## **Drone Delivery Improvement**

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They have found that drones are the most helpful technology invented and that has not harmed the world. When a truck is delivering, it runs by gasoline, and it is polluting the planet. The world has had a big problem with climate change and so on. I pick to do drone delivery because I have found so many details on why drones flying is way cleaner than delivery trucks. The two main points that I found were how the drone will change the world and how they will help the environment and reduce greenhouse gas emissions in the United States. We will look at making the warehouse for the drones to charge and put up delivery packages.

The first thing is the reason how drone delivery will change the whole world. Humans have done so much experience; they have seen how the right technology used or employed in the right way can impact the world. For example, if you want to fly drones, you need a commercial drone delivery license. We have use automobiles, trucks, and trains to deliver things in days, weeks, months, but with drone delivery, it can get to these places that take days, weeks, months in just minutes tops. By humans using drone delivery goods, they are places that are remote and rural areas becoming instantly accessible and connected with everything around them. Let us say there is an emergency, where it would take minutes for them to get supplies for the injured people, but it could take seconds for the drones to deliver everything. If hospitals had commercial drone delivery work, it would take them seconds to deliver the supplies at the scene. There would be so many people who would survive the background if we had many drone delivery works shipping out the packages to them.

Over the last couple of years, drones have been used to deliver Amazon, UPS, Google, and some European delivery services to deliver packages to your front door. People have come to realize that drone delivery has had a significant impact on climate change. Humans have had a

destructive effect on climate change because of the diesel-burning delivery trucks that affect climate change. Researchers at Lawrence Livermore National Laboratory and Carnegie Mellon University found that drone delivery is better for the environment than truck delivery because drones do not run on diesel, but trucks do. The study also acknowledges that the pollution will go down with drone delivery under specific scenarios. Smog is created by driving cars and other things, but if humans use drone delivery, we might save the world longer than expected. The only thing that we would have to worry about would be temptation. The temptation to deliver heavier packages over a longer distance but the splendid side of things would be that we will increase the energy and reduce the environment with climate change. In the article How Delivery Drones can save the world, the author, Eric Mack, says, "The focus of drones should be on the light packages, with heavier packages left for ground vehicles." The author says that we should use drones for smaller packages and save the environment then use trucks to pollute the world. The drones are still facing some minor changes to how they deliver packages, but when they figure out how to have oversized packages, we will not need trucks to deliver parcels; instead, we will use the drones to our advantage. In the article drone deliveries help the environment, they said that 'technology enables this problem- and some will tell you that technology can help solve it'. Eric Mack says that drones can quickly help reduce climate change and greenhouse gas emissions. Nature Communications found that one pound package delivered by a small drone in California would reduce greenhouse gas emissions by 54% compare with the diesel truck. The same study was used in Missouri, which gets most of its electricity from coal; greenhouse gas emissions would be reduced to just 23% of greenhouse gas emissions. If we have low-carbon electricity and are moving small packages, the drones could have the lowest carbon footprint per package delivered. Costa Samaras, associate professor of civil and environmental engineering at

Carnegie Mellon University, says, "It's much greener to have a drone flying through the air to deliver you a set of headphones than for you to get your gasoline power car or even your electric car and drive to the store and get it." They are saying it is greener for drones to deliver than you to drive a truck or your car to go and get it or paid to your house.

Then there is the warehouse problem which is mainly caused by the drone's delivery. The longer the drone is in the air and delivers packages, the more valuable it is. But the thing is, drones have shorter ranges than trucks, and charging stations are far less common than gas stations. So, the company's need a vast network of charging stations for the drones. It is much easier for the business to put them in the warehouse, where the drones will come back to anyway to load up on new delivery packages. There were one billion square feet of warehouse space built nationwide over the last decade because of the desire for quick deliveries. Making all these warehouses accommodate drones will have severe environmental repercussions. If we build more warehouses, it means more lighting, heating, air conditioning systems, and the most important one is the energy required to charge all the drones in between flights.

Like all technology, there is a pro and con. The pro thing about having drone delivery is that we will be saving the environment, and human beings are helping because they are getting their packages on time rather than later on the week. The con about this is the warehouse problem. The warehouse would take up a lot of space globally and would take up a lot of energy because we have to charge the drones in between the flight.

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