

Remember when you would pass a semi-truck on the expressway during a road-trip and signal with your fist in an up and down motion with the hopes that its driver would pull the loud, billowing air horn? Maybe you still make a habit of the practice to this day, and if that's the case, it may soon be a truly wasted gesture; considering the fact that no one is in the driver's seat.

Whether by land, air or sea, the use of self-driving vehicles has become more and more prevalent. <u>Testing</u> for such technologies is already well under way and there are of course both advantages and disadvantages. Perhaps the most impactful application will come in logistics and shipping.



Sailing with Captain Computer

The Vikings are thought to be the first Europeans to have discovered North America in the early 10th century. Now in the 21st century, the world's first automated container ship is set to launch from the same region in Norway in 2018. In fact, it's likely that autonomous ships will be widely implemented even sooner than their car counterparts.

While the vessel. "Yara Birkeland." will be partially crew-operated in the early phase, it is expected to be fully autonomous within two years.

At that point it's estimated that will save on costs by 90 percent (that's right, nine-zero) through salary savings and energy efficiency due to the battery-operated engines.

This has vast implications for the global economy and an industry that transports more than \$4 trillion worth of goods annually.

As such an instrumental component of trade, there are obvious ramifications that come with ships that no longer need sailors. According to the Bureau of Labor Statistics, the industry employs nearly 89,000 people in the US alone. And while many of these positions could be transitioned into new, safer positions designed to facilitate these new systems, the full veracity of the transition has yet to be determined.



Keep on Truckin'...

Seriously, Keep Going, There's No Need to Rest

Chances are the package that was delivered to your doorstep spent at least part of its journey in the back of a big rig. According to the <u>American Trucking Association</u> (ATA), 70 percent of the nation's freight is moved via this method. The industry is a huge component of how business gets done and therefore has huge appeal in being at the forefront of what could be a massive shift.

There are a number of companies that are leading the charge toward developing fully-autonomous trucks for commercial use. From Ford to Tesla and Freightliner, tech companies are looking to take advantage of what they view as a game-changer by putting these driverless vehicles on public highways.

These developments could have drastic effects on an industry that employs around 1 in 16 people in the United States. The ATA also notes that the profession ranks as a top occupation in 29 states. That's more than half the states in the country - and with over 3 million drivers - a significant portion of the workforce. Of course, as automation increases in the field, so lessens the need for the truck driving profession. It remains to be seen just how quickly and how extensively these changes will take place.

It's a Bird, It's a Plane... Nope, It's Just Another Drone Delivery

You may have already heard someone droning on about drone delivery once upon a time but the applications for the technology remains fresh, especially in the minds of retailers. They've already delivered chicken pizza in New Zealand, dropped-off packages in the UK and transported medical supplies in Rwanda. They're seriously even <u>developing</u> drones that deliver to other drones.

Perhaps the most immediate utility commercially comes in bridging the gap of what's called "the last mile" of delivery. This is the final leg between freight shipping and an item's destination, and is among the most problematic links of the supply chain. It may not be long before localized fulfillment hubs – like this moderately terrifying beehive type structure – begin dispatching packages through the air to your doorstep.

One thing is certain, both commercial and personal drone use is growing rapidly. In 2017, production in both sectors will see more than three million units shipped, according to <u>Gartner projections</u>. The study also finds that, as a result, revenue is expected to increase by 34 percent, topping \$6 billion and more than \$11 billion by 2020. With preliminary tests already underway in the US and FAA rules set to soon establish guidelines for extending them beyond simply line-of-sight testing, the future of e-commerce fulfillment could be here sooner than you might think.



Whoop Dee Doo, What Does it All Mean?

It's entirely possible that in the not too distant future, a computer that you order from another computer is delivered to you entirely by - you guessed it - computers. While humans are still necessary to complement and run these technologies, the time may come where the goods themselves aren't touched by human hands until they finally reach the consumer. As these initiatives advance and evolve, so will their capabilities and issues. And in the interim, as technology continues to move quicker, so will the world of shipping.

