Autonomous technology will not only transform how fleets operate, but it also will offer huge efficiency and productivity boosts for shippers as well.

As autonomous technology continues to mature for trucking applications, the focus naturally has been on fleets, which will be the first to acquire autonomous technology and deploy it in field operations. Fleets will bear the brunt of the burden when it comes to assessing and proving the viability of autonomous trucks in real-world operations.

But what about shippers? What about the companies that contract with fleets to haul their goods to their end customers? I’m a technology optimist. Autonomous technology will clearly offer game-changing efficiency and productivity enhancements for those businesses. But, as with any new technology, there will be challenges to contend with, as well.

The main advantages for shippers ultimately will be faster delivery times for their goods. Obviously, when fully autonomous vehicles are deployed there will no longer be the need to stick to Hours of Service regulations based on the need for drivers to rest. As I often point out, computers don’t need to sleep, so autonomous trucks will be free to run pretty much 24/7, stopping only for inspections, fuel, oil and scheduled maintenance. The massive implications for this tremendous boost in productivity cannot be overstated.

In many instances, autonomous technology will cut delivery times dramatically. Truckloads of cargo that used to take two or three days to cross the United States could very easily reach their destination in half the time it takes today. And the human element alone won’t be the only new productivity boost in play. Studies show that as more and more connected vehicles under autonomous control hit our highways, urban congestion will likely drop off significantly — perhaps even disappearing completely in some areas. As a result, overnight deliveries will likewise receive a productivity boost as more companies realize that thanks to autonomous technology, same-day, or overnight delivery capabilities are within their grasp, without investing in a dedicated fleet of specialized delivery vehicles and a cadre of drivers to operate them.

Obviously, there will be significant risks for the first carriers and shippers that elect to use autonomous vehicles to deliver their goods as well. There will be the usual problems and issues to iron out — as is always the case with any new technology, disruptive or not. As a consequence, there will be problems and delays as fleets and shippers alike learn to use autonomous vehicle systems.

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Perhaps the most prominent concern for shippers in the early days will be cargo security. Shippers transporting truckloads of valuable goods, like Pappy Van Winkle whiskey or brand-new iPhones,
for example, will have legitimate concerns as to the security of their cargo — particularly on long-haul truck routes.

Autonomous vehicle systems developers will need to develop robust security systems to thwart high-tech threats such as cargo hackers seeking to divert a truck to a safe, remote location where the cargo can be looted away from prying electronic eyes. But they also will have to deal with low-tech attacks — criminals flattening the tires on a truck, or otherwise forcing it to stop, in order to engage in a quick hit-and-run grab of goods and fleeing before law enforcement officials can respond. Then there may be ordinary vandalism or protests. These are serious concerns — and issues that autonomous technology developers insist they are paying rapt attention to as we come ever closer to real-world autonomous delivery operations.

Additionally, at least in the early days of autonomous delivery vehicles, it seems likely the cost of hauling goods on a fully autonomous truck will be higher for shippers — as is always the case for newer, faster, and more efficient means of transporting goods. It’s worth noting that initially, autonomous equipment will be more expensive in terms of acquisition costs. (Although the business case argument is that vastly lower operating and maintenance costs will offset higher purchase prices relatively quickly.) And it seems logical to assume that fleets will charge more money for the faster and more efficient delivery times their new autonomous trucks will be capable of delivering. It will remain to be seen if shippers will be able to pass most of these costs off to their own customers. Customers seem to want both fast and free in today’s e-commerce world.

Autonomous trucks will offer shippers great opportunities to get their products in the hands of customers faster than ever before. And it seems logical to assume that in today’s hyper-paced, global economy, this will supercharge productivity and profits for both individual companies, and the country as a whole.

About the Author: Jack Roberts is a transportation journalist who has been covering North American commercial vehicles for 25 years and has developed a reputation as a leading authority/futurist concentrating on new trucking technology, including autonomous vehicles, battery-electric trucks and emerging blockchain technology.