WILL SUPPLY CHAIN STRESSES SUPERCHARGE AUTONOMOUS TRUCK DEVELOPMENT?

To date, safety and efficiency have been the main drivers of autonomous truck technology. But new supply chain problems may add extra urgency to those efforts.

Way back in the 1990s, an historian named Frances Fukuyama famously declared that we had reached "the end of history." His premise was simple; the world was largely civilized and at a point where major wars and other great events of massive disruption and upheaval would be avoided because it was simply in the best interest of nation states to resolve those issues peacefully and logically.

Boy, was he wrong.

In our modern age, there's a tendency to think of history like a dignified old queen, moving along at a stately pace, making a few minor changes here and there as she passes by. In reality, history is a lot more like your crazy, bi-polar cousin. Everything is fairly normal and fine for long periods of time. And then — BAM! — out of nowhere, things go completely and utterly insane with ripple effects extending far out and away from the initial detination point.

And that's where we find ourselves today, in this slowly emerging, post-COVID world we now live in. The onset of the pandemic was one of the great disruptions Americans have experienced since Word War II. Now, with the disease slowly coming under control, the assumption is that it's just about over and things can start returning to normal.

But that's not what's happening. COVID may be beginning to wane, but the ripple-effect disruptions it has detonated across our globe are still reverberating. And in many cases, we're just

starting to see and understand the problems those shockwaves are causing.

There's no better case in point than the rapidly evolving supply chain issues that are now sweeping the U.S. and Canada. Suddenly, thanks to the massive shifts in consumer purchasing as well as unforeseen social and economic forces unleashed by the pandemic, it's difficult to find things as varied as food items like pork, medical supplies, clothing and household goods. Add to this a sudden new onslaught of disruption in the labor force that has container ships stacked up waiting to get into U.S. ports and unload cargo. Of course, these supply

> 66 The current supply chain crisis has demonstrated that new methods of moving freight in the future are going to be needed. Autonomous technology seems to be one of the most promising options.

chain issues aren't just relegated to consumer goods. A shortage of automotive components from replacement parts to critical manufacturing components such as microchips and sensors is starting to complicate fleet operations even more.

And it appears these problems will likely get worse before they get better.

And if all that weren't bad enough, there are new signs that truck drivers and delivery drivers, who have done an heroic job keeping store shelves stocked and supplied at the height of the pandemic, are facing burn-out and feeling exploited by the hectic pace they've been running for months on end. And, oh yeah, Christmas is coming. So, they're probably going to get even busier.

Obviously, there are a lot of moving parts to this ongoing supply chain crisis. And there's no, simple, easy, one-size-fits-all fix for these problems. But it does seem obvious that if at least a portion of the trucks hauling goods on the road were under autonomous control and able to legally run around the clock hauling freight, our current supply problems would be mitigated somewhat.

It's a compelling argument — and one that may gain steam, depending on how this crisis unfolds over the next few months. The pandemic placed unprecedented strain on a national and a continental supply system that was envied worldwide. As the Chinese economy began booming in the early 2000s and the need for a highway freight network

became obvious, they emulated the U.S. system because it has worked so well for so long. But COVID -19 has shown us that there are weak links in our supply chain. And many of those links are directly related to the limits of human endurance. Not only can human drivers not operate vehicles around the clock, they also can't work for days and weeks and months on end without any kind of break or normal life. And, it goes without saying, in a world of autonomous trucks, they wouldn't have to.

Will this current supply chain crisis add a sense of new urgency to the development of autonomous trucks? Only time will tell. But it seems increasingly apparent that new ideas and methods are going to be needed in the future to keep ever-growing volumes of freight moving. And right now, autonomous technology appears to be the most promising technology on our collective horizon.

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