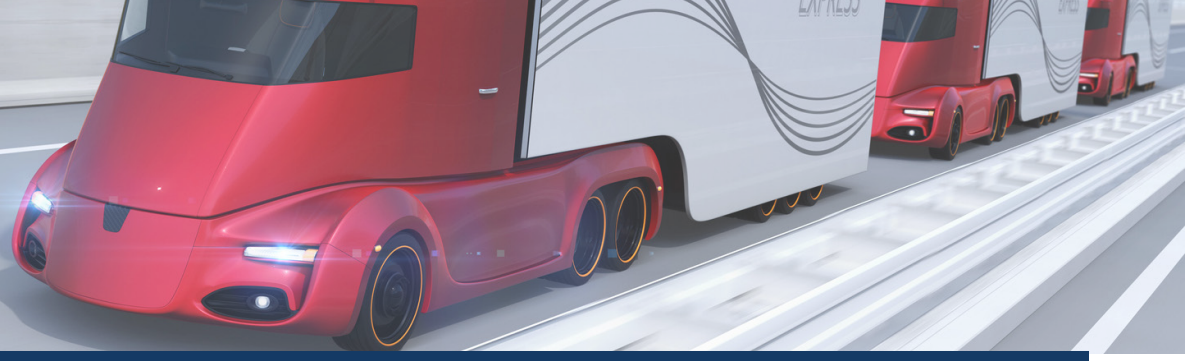
NACFE
NORTH AMERICAN COUNCIL FOR FREIGHT EFFICIENCY

PERSPECTIVE ON AUTONOMOUS TRUCKING



THE AUTONOMOUS AGE IN TRUCKING IS ABOUT TO BEGIN

A slow, sober and measured introduction to autonomous technology looks to be in the offing.

Flash back in time to 2015 when the first hints of an autonomous future for trucking appeared, and it seemed as if an undreamt of future was right around the corner. I remember writing stories predicting robot trucks faithfully and methodically rolling through lonely nights with nary a human on board to guide them.

And I wrote about convoys of two to 10 trucks — maybe with a single human convoy commander behind the wheel of the lead truck — hauling freight down highways. There was even talk about massive construction "printing machines" building land bridges and superhighways connecting the continents in order to better serve a whole new generation of trucks that — thanks to autonomous control systems — would be able to go anywhere on the planet without worrying about the wellbeing of human drivers.

It was heady stuff. And so far, none of it has come to pass.

And that's OK. Looking back on it, just seeing and riding in a truck that was driving itself down a congested freeway without any human interaction at all was pretty mind-blowing stuff. I mean — up to that point — the story of the decade in trucking had been the massive take-rate on then-new automated manual transmissions. So, you can't blame me (and other writers) for getting a bit carried away at the time.

For what it's worth, I still think many of those predictions could one day come true. It's just going to take a lot longer to reach that gilded future than we initially thought. And that's because we've learned a lot about autonomous trucks over the last seven years. For starters, we now know the technical aspects of designing and deploying safe autonomous trucks for daily use are on par with landing a man on the Moon and returning him safely to the Earth. Which is saying something.

And we know what something as mundane as weather — namely snow, fog, ice and dust — present major problems for autonomous sensor systems. These problems aren't insurmountable. They eventually will be solved. But it does severely limit the number of geographic locations in which autonomous trucks can safely operate today.

> "Looking back on it, just seeing and riding in a truck that was driving itself down a congested freeway without any human interaction at all was pretty mind-blowing stuff.

But this past year, we saw signs that autonomous technology seems to have found a new path to market. Increasingly, it's looking like most fleets and drivers will first experience and become familiar with autonomous control systems on trucks as serious enhancements to advanced driver assistance systems (ADAS). And this makes a lot of sense: Obviously we're not ready to deploy autonomous trucks without human drivers on board. And we're

not ready to deploy them in areas where weather is an issue.

But, using existing autonomous technology to act as an extra set of eyes and ears can help a driver stay alert and informed about driving and traffic conditions. Better still, these are also systems that can take 99% of the driving work away from a driver and deliver serious benefits to both fleets and drivers. And even better yet, these two benefits can assist drivers on the road anywhere at any time (although weather and blinded sensors remain a problem).

In hindsight, the idea that the global trucking industry would just wake up one morning and seamlessly switch over to self-driving trucks is pretty silly. Of course, there has to be an introductory and an evaluation period — a time to understand the new capabilities offered by a new technology and adjust to them. And it's only natural that this process is undertaken in slow, measured and methodical steps.

And that's where I think we are with autonomous technology today. OEMs, tech developers and fleets seem to have settled on an agreeable path forward for getting this technology in the hands of drivers and out on the road. And, best of all, it's a way forward that offers very real benefits for fleets and drivers alike in terms of safety and productivity. There's still a lot to learn about autonomous trucks. But it appears that the journey toward those robot trucks rolling on through the night is finally about to commence.

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.*