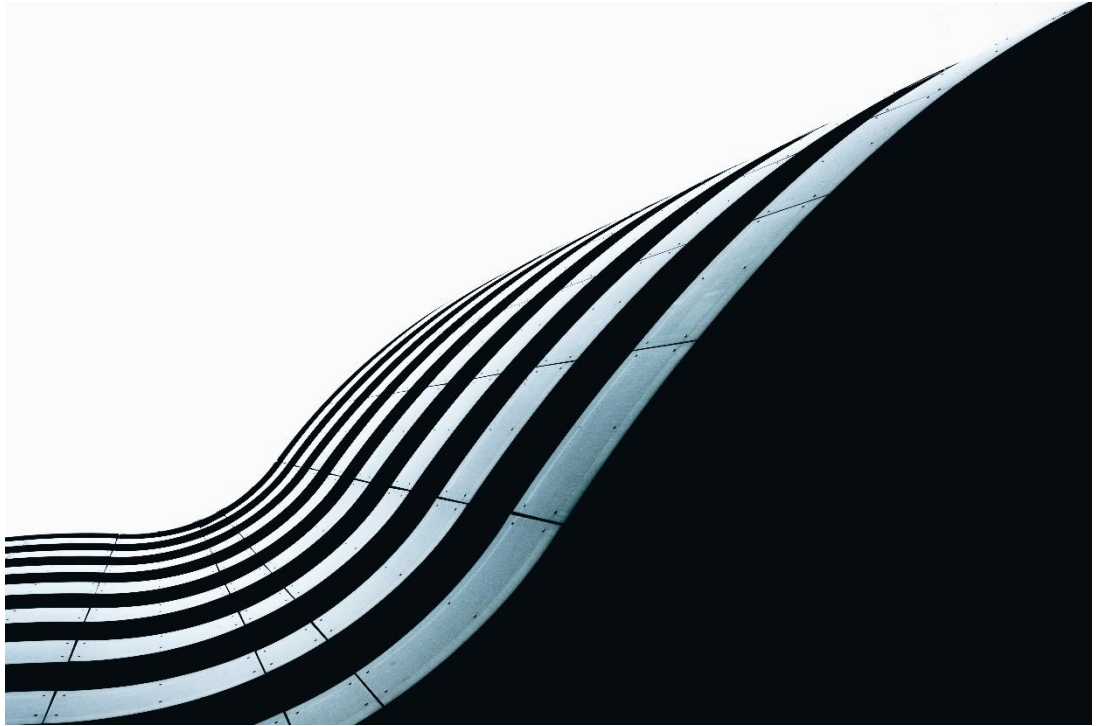




Is self-driving hype?





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The development of self-driving vehicles has intensified over the last few years. Huge efforts and capital being invested by traditional OEMs, tech giants and start-ups to solve the extremely complex problems of Automated Driving System (ADS) operated vehicles on public roads. The question is whether automation is hype or not? We believe the answer is both yes and no.

Yes, in the sense that the general belief that fully self-driving vehicles that do not need a driver will be a reality and replace traditional cars in a few years. But, we cannot see this happening in the near future. It is simply too complex a problem to solve considering the technology, safety, legal aspects and acceptance in society. It will also require cheaper hardware to make the technology applicable to the mass market. Operating automated vehicles in more complicated scenarios and conditions will require the next generation of sensors, which are currently unavailable. However, in all probability greater competition between self-driving and conventional cars will exist in about 10 years' time. We believe the transformation will start with robo-taxis, as an on-demand service in limited areas, for specific routes. This type of business setup can absorb the initial high costs of the systems required for self-driving that comes on top of the cost for the base car. Over time, when costs decrease, the systems will also be more applicable for passenger cars. Some car manufacturers are already offering advanced, well-functioning driver assistance systems that perhaps seem to be self-driving cars. However, it is still an enormous step, for the industry and society, to shift the responsibility from a human driver to a virtual driver.

No, in the sense that there are so many benefits with automation that the market pull, to make it happen, is very strong. Safety is a key driver and the vast majority of all traffic accidents, today, are related to the human driver. For passenger cars, the value is also about convenience and an opportunity to better use personal time, e.g. work, sleep or entertainment. It will also provide opportunities for greater utilization of vehicles since operations can be optimized and shared by many; which in turn, will ease the traffic burden on roads and parking.

When it comes to commercial vehicles the business case is simply excellent and tangible. Imagine being able to directly remove the cost of a driver and save around 30% of the total cost. However, a few percent of the savings will be absorbed by the additional overhead required to monitor and operate a fleet of autonomous vehicles. On top of these savings, you will also get higher utilization since the virtual driver never requires rest periods (think of how many trucks you see parked along our highways). Moreover, in many countries, there is a shortage of qualified drivers since, for a variety of reasons, it can be considered an inconvenient profession, with a lot of time spent away from family and friends. In the beginning, the additional cost of the Automated Driving System will be rather considerable per vehicle; but nevertheless, payback will be relatively short. Over time, the technology will become more and more commoditized and the cost of a virtual driver (ADS) will decrease.

Automation is already in use in confined areas such as mines, harbors and agriculture areas. The problem is much easier to solve in these environments since they are controllable from a safety perspective, flows are repeatable, and speeds are slow. In many applications, the efficiency gains are impressive since it is possible to take the driver out of the equation and increase the load (no cab required) and utilization of the vehicles.

Conclusion – looking forward

To conclude, the key question of: Is self-driving hype? Our view is that it could be if the expectation is self-driving cars for the general public in the near future. No, if considering commercial applications, especially in confined areas where it already exists. We also expect to see automatized vehicles transporting goods on public roads along dedicated routes in the not too distant future.



This article was written by Fortos Autonomous Transport Solution practice. Please feel welcome to contact us to discuss the topic in greater detail or challenge our views.

WANT TO KNOW MORE?

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