

Level 4, high automation, in which the driver turns on automatic driving when safe to do so and then he/she is no longer needed; this is still in the testing process for experienced drivers as the participant subjects. Level 5 will be implemented in the future when a vehicle is able to handle all driving tasks. Test runs of autonomous trucks are already being carried out today. The trucks can be programmed to travel from point A to point B without drivers, under limited conditions. However, human drivers still are in the trucks for safety reasons and can take over the car controls (steering wheel and floor pedals) in case of emergency.

What are the benefits that autonomous truck tech brings us?

In everyday life more and more cargo companies are needed to deliver goods. Autonomous trucks will bring greater efficiency to the trucking market. With the same number of drivers or even fewer, self-driving car technology allows for moving more freight. Today the self-driving car system is more suitable for the highway as long as for the first and the last mile, human drivers are in charge. Labor regulations for professional truckers are different in each country. When taking into consideration 10 hours of work followed by 8 hours of rest, the labor costs for a company can be high while some companies may put 2 drivers on the road for a non-stop run. The self-driving car technology system can make deliveries 24/7 and avoid the busiest traffic time by going out at night instead of early morning. Working on the highway is difficult, stressful, including long hours without sleep. However, it is much simpler than

driving in city streets, where one has to deal with pedestrians, complex traffic, pets on the road and other factors that make autonomous driving technology hard to analyze and navigate. Autonomous driving technology brings big benefits to safety. Every year, trucks are involved in hundreds of thousands of collisions, resulting in thousands of deaths and tens of thousands of injuries. Out of 100 fatal accidents on the road, an average of 35 are caused by heavy vehicles. Traveling during off-peak hours helps to reduce accidents during the busiest time of the day. Besides, the autonomous truck doesn't need to take a break and rest like a human driver, avoiding the human factors that cause accidents. Reducing costs is another advantage of self-driving systems. For example, fuel costs are a huge part of the overall maintenance of cargo companies, and the customer pays a high price, depending on these costs. A trucker drives with emotion and every time he pushes on the gas and brake pedals, this consumes extra fuel. The autonomous system automatically chooses the optimal route to take. Trucks that are equipped with features for vehicle platooning -the linking of two or more trucks in convoy, using connectivity technology and automated driving support systems - will be able to decrease fuel consumption and reduce CO2 emissions. Platooning allows heavy vehicles to travel closely and safely together following a lead vehicle that controls speed and direction through wireless communication, - a kind of mechanical coupling, similar to "road trains".