



New Age

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— New ways —

THE FUTURE OF LOGISTICS

AUTONOMOUS TRUCKS CAN TAKE UP TO 90% OF LONG-DISTANCE TRIPS

The logistics sector will be completely changed with the entry of autonomous trucks on the market. Is this trend here to stay?

With the digitization of processes and other major technology changes, the logistics industry is undergoing profound transformations around the world. For example, in the short term, autonomous trucks should gain more space on highways, taking the place of truck drivers.

A recent University of Michigan study showed that self-driving trucks can capture around 90% of the long-haul transport market. Believing it to be a less complicated challenge, driving engineers point out that autonomous trucks should be focused on long-distance journeys.



MODERN TENDENCIES



Short journeys by autonomous trucks are much more complex

As long-distance journeys don't have many curves or extra complexities, experts point out that it's much easier to design an autonomous truck for this purpose. On the other hand, short trips in cities are another story, as there are thousands of curves, pedestrians and parked cars for the autonomous system to handle.

To accelerate the use of autonomous trucks, one of the solutions would be the assembly of stations between the stages.

Drivers could handle the first step, which is much more complex. Long and time-consuming trips can be made by artificial intelligence.

"When we talked to truck drivers, literally everyone said, 'Yes, this part of the job can be automated,'" said Aniruddh Mohan, who has done a study on the topic at the University of Michigan in the US.

replace up to 90% of human driving

The study highlights that if autonomous trucks overcome these initial barriers, they could replace up to 90% of human driving in the long-distance transport market.

Several countries are stepping up testing with autonomous heavy vehicles. And there are already vehicles in operation.

In the United States, the first autonomous trucks are expected to be on the roads by 2024. Cities in Europe and Asia also already have vehicles that carry out small and controlled journeys without the need for a driver.



Next: 5 proofs of driverless efficiency



1) TECHNOLOGY EVOLVES WITH GREAT STEPS

Several countries are stepping up testing with autonomous heavy vehicles. And there are already vehicles in operation.

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In Brazil, Volvo and Mercedes-Benz already offer trucks with autonomous technology. For the time being, these models are aimed at operations in sugarcane plantations. They are guided through coordinates provided by a high-precision GPS system, which works together with the autopilot to keep the vehicle on the desired trajectory.



2) FASTER TRIPS



Autonomous driving can bring important time savings for carriers.

A study carried out by the consultancy KPMG in 2017 found that autonomous vehicles used in public transport can reduce travel time by 40%.

The gain comes from the use of GPS technology to map routes and organize traffic - buses and other cars will exchange information, avoiding bottlenecks such as those that occur at major intersections.

Recently, a test conducted by TuSimple, a startup specializing in the development of autonomous trucks, indicated that a trip of 1,529 km was completed in just 14 hours and six minutes.

According to the company, the driver, who is there to take control in case of an emergency, had to act on only 20% of the journey. It is estimated that a truck driver usually completes the same route in almost 24 hours.

The secret to the 10-hour gain is in US law. There, a truck driver can work shifts of up to 14 hours. Of this time, the limit behind the wheel is 11 consecutive hours, with the remaining three hours allocated to a rest stop.

3) COST SAVINGS

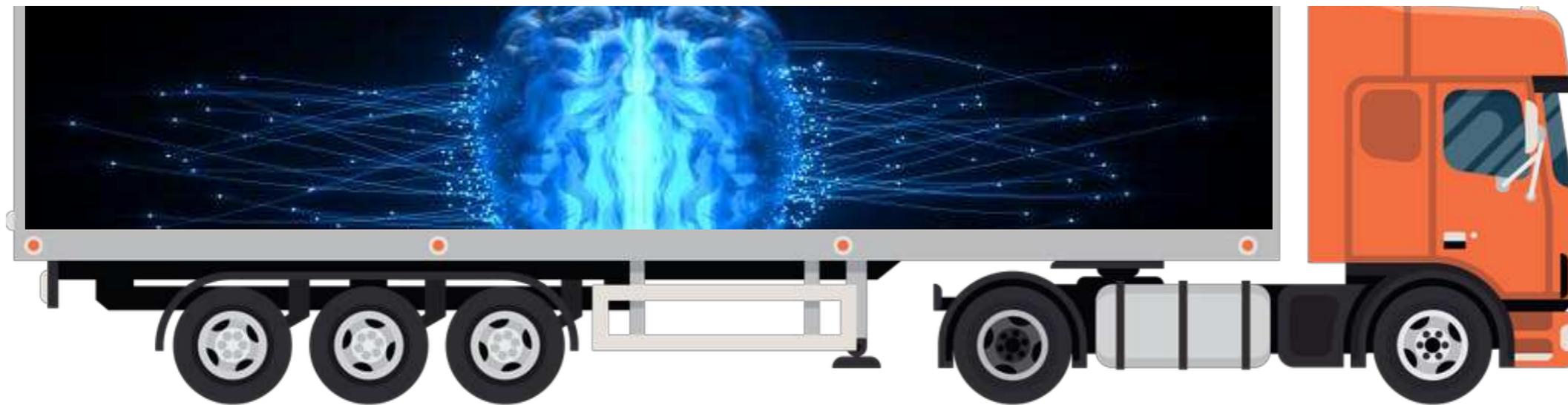
It is estimated that the cost reduction can be significant due to lower fuel consumption and less wear on parts. These factors occur because the autonomous vehicle can be configured to run according to the same pattern, without unnecessary acceleration and incorrect use of the equipment.



4) LESS ACCIDENTS

One of the biggest advantages of autonomous vehicles is safety. Thus, manufacturers and technology companies estimate that the number of traffic accidents will plummet.

Because they are controlled by computers, vehicles can communicate with each other and receive information through the technology of the internet of things. This is how an autonomous truck can be guided by a traffic light to stop at an intersection or give way to an automobile.



5) BETTER CONTROL OF THE FLEET

A fleet composed of autonomous vehicles is much easier to manage.

Just as they can follow GPS coordinates or avoid collisions, sensors scattered around the truck or bus also collect thousands of data about each journey.

The information can be compiled into reports so that a company has full control of its vehicles. It is this data that allows monitoring the progress of each trip and identifying possible failures that could not be pointed out or even noticed by drivers.

