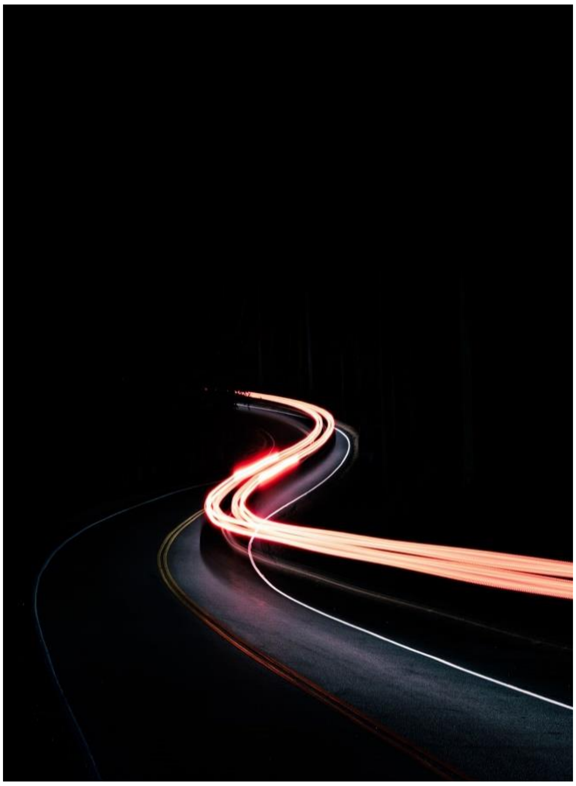
How will autonomous trucks transform the commercial vehicle industry?



How will autonomous trucks transform the commercial vehicle industry?

Autonomous trucks have the potential to bring disruptive change to the commercial vehicle industry. Exactly how such disruptive change will affect incumbent original equipment manufacturers (OEMs) is yet to be seen, but we can conclude that incumbent OEMs are facing challenges related to keeping their incumbent business profitable while addressing new technologies, demand for new business models, partnerships and new actors entering the industry.

The race is on to commercialize self-driving (SAE Level 4) vehicles with incumbent OEMs and new entrants (such as tech companies and new OEMs) going head-to-head to win first-mover advantages. While autonomous trucks have the potential to bring disruptive change to the commercial vehicle industry, they also represent an opportunity for incumbents to adapt and grow, as both incumbents and new entrants are afforded the chance to innovate in light of the potential disruption

Autonomous vehicles' impact on the competitive landscape

- Autonomous vehicles bring increased complexity to competition in the commercial vehicle industry as incumbent OEMs are challenged by multiple new actors, such as emerging OEMs, mobility providers and non-automotive companies, such as tech conglomerates.
- Accordingly, vehicle automation technologies will contribute to a more complex industry landscape in which conventional boundaries are moved and the traditional industry value chain is reconfigured.
- Moreover, several OEMs are focusing on autonomous transport solutions, replacing both traditional dealers and logistic companies.

To provide insights into the potential changes that autonomous vehicles might bring to the commercial vehicle industry, we have devised four possible future scenarios.

The role of OEMs in the autonomous vehicles industry - Four possible future scenarios

- **OEM vertical integration** – Incumbent OEMs manage to acquire the technical capabilities needed to develop and commercialize autonomous vehicles themselves, selling transport solutions to end customers and thereby controlling large parts of the reconfigured value chain through vertical integration.

- **OEMs remain competitive through strategic partnerships** – Incumbent OEMs formalize strategic partnerships with tech companies to gain access to the critical automation technology necessary to commercialize and sell transport solutions to end customers. The need to share capabilities in software and simulation, validation and verification outweighs the value of independence and autonomy, which incentivizes OEMs and tech companies to form strategic partnerships.

- **OEMs disrupted by new entrants** – Incumbent OEMs are struggling to gain access to critical automation technology while at the same time being locked into their current customers and business models, challenged by new emerging OEMs and high-tech companies that master the new emerging technologies such as electrification, automation and connectivity. Consequently, the incumbent OEMs are challenged by both tech companies such as Waymo and TuSimple, with competitive advantages in software, and other actors such as Einride, acting as system integrators of supplier deliveries, striving to claim market shares, resulting in increased competition from many different directions.

- **OEMs as base vehicle providers** – Instead of breaking new ground, OEMs will focus on their core strengths, those related to the development and manufacture of base vehicles. Tech companies entering the industry will also focus on their core strengths, those related to software development, meaning that they will more or less replace OEMs as sellers of autonomous transport solutions – including vehicles (delivered by incumbent OEMs), self-driving software and related systems – to end customers as the software is the major differentiating component.

More detailed descriptions of each of the above scenarios and their impact on OEMs and other actors in the value chain will be presented in future articles in this series. Stay tuned.

This article was written by Fortos Autonomous Transport Solution practice together with students from Gothenburg School of Business, Economics and Law. Please feel welcome to contact us to discuss this topic in greater detail or challenge our views.

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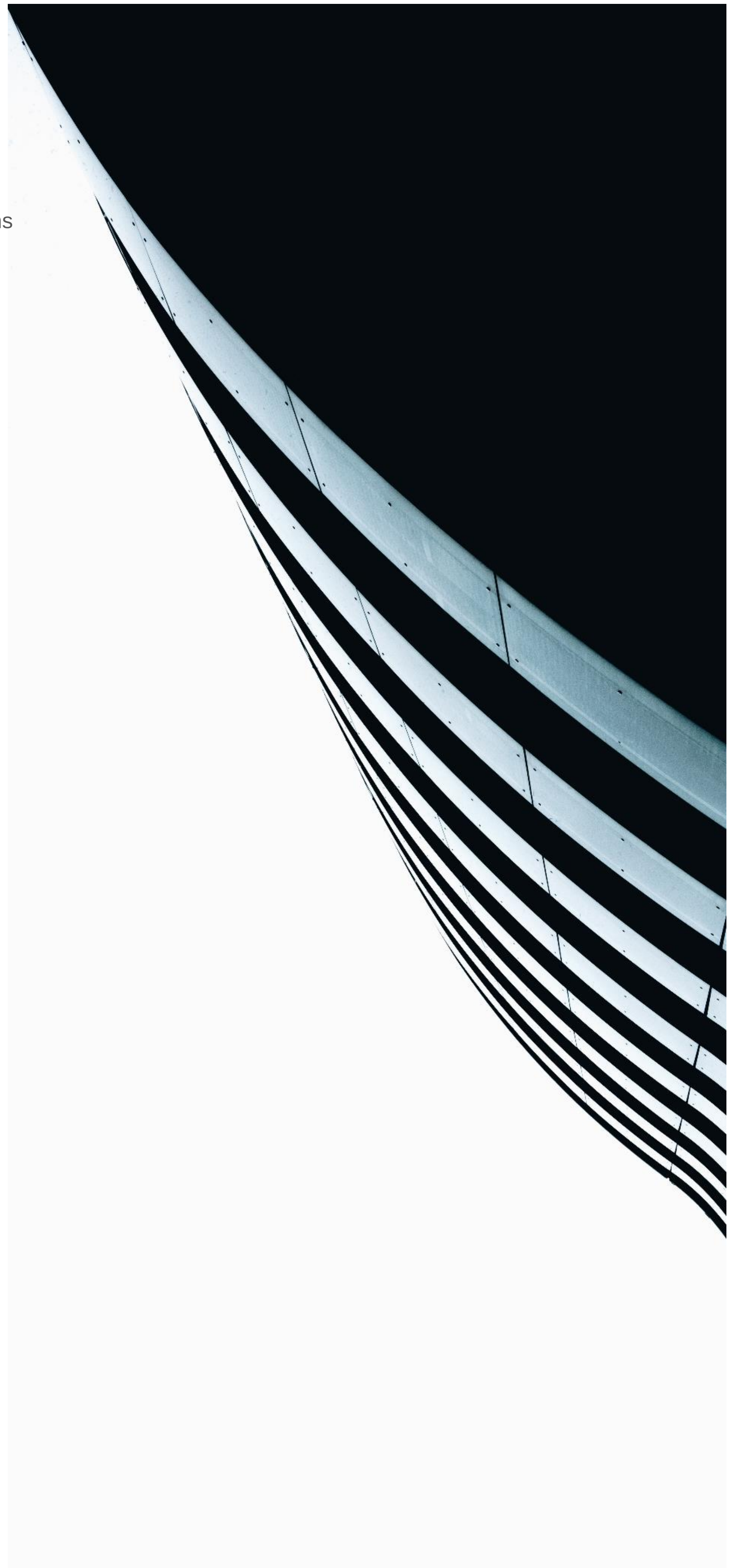

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