

User Perspective on the Transition to Alternative Truck Drive Technologies in Long-distance Road Freight Transport

Charging network for e-trucks in Europe still inadequate.
(DVZ, November 2024)

Number of public truck loading stations in Germany: 67
(NOW, April 2025)

Milence will install 284 Megawatt Charging System and 264 Combined Charging System points across 71 locations in 10 EU countries. (electricdrives.tv, February 2025)

20,000 truck charging station locations for Amazon's long-haul truck transport necessary.
(Frauenhofer ISI, July 2024)

Volvo receives order for 300 electric trucks from DSV.
(Volvo, August 2024)

The new electric trucks will be used for medium-distance trips between logistics centers and distribution centers in urban areas. (Amazon, January 2025)

Research Questions:

- How do user requirements differ across European countries?
- Which of the alternative truck drive technologies are possible for cross-border truck deployment scenarios, now and in the future?
- How do users proceed when switching to alternative truck drive technologies?
- How can users switch to alternative drive technologies while the charging infrastructure is being expanded?
- How can the switch to alternative truck drive technologies in Europe be promoted?

Project Description:

Development of a European collaboration between vehicle manufacturers, transport companies, charging infrastructure manufacturers, science and politics to promote the transition to alternative truck drive technologies by transport companies.



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The Head of the Institute: Prof. Eva Kaßens-Noor, Ph.D.

The Institute for Transport Planning and Traffic Engineering (IVV) focuses its research on transport planning and traffic management. With the ELISA project “Electrified, Innovative Heavy-Duty Vehicles on Motorways”, the IVV has been involved in research into climate-friendly road freight transport since 2017. A particular research focus is on evaluating the ability to integrate O-trucks into the daily operations of transport companies, analyzing the energy consumption of O-trucks and the associated reduction in greenhouse gas emissions. In addition, the IVV is investigating the acceptance of various stakeholders involved in the eHighway system, as well as society as a whole, and evaluating the resilience of the eHighway system.

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