



Long-haul & regional
road transport

Automation
(physical) and
robotics

Battery Electric Vehicle Automated Charging



Funded by the
European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101076810

Developed by :



AstaZero

Project by :



Operational fields

Technologies

Solutions



BATTERY ELECTRIC VEHICLE CHARGING

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Solution description

An automated charging solution for battery-electric freight vehicles, enabling driverless charging during depot layovers.

Using AI-driven computer vision, patented soft robotics, and remote services, the system manages scheduled energy transfers through automated docking.

Designed for smart charging networks and V2G integration, it streamlines operations by eliminating manual intervention and enabling seamless, safe, and efficient electrification of freight transport.



Benefits

- **Accelerates EV adoption in freight.** An automated system can increase overall EV usage by eliminating the need for a technician at each charge point.
- Importantly, **safety** is improved: by removing humans from the charging process, electrical hazards are mitigated.
- The result is a greener, more flexible freight operation.

Beneficiaries: Fleet operators, depot managers, charging infrastructure providers, energy grid operators, truck OEMs, drivers associations



Technology readiness level : **6-7**
Implementation stage : **Pilot**

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Demonstration:

- Electric HDVs perform “driverless charging” at a depot. The demo will use planned charging schedules and automated docking so that energy transfer happens seamlessly in a CCAM* chain.
- The charging solution combines AI-based computer vision, patented soft robotics, and remote services to optimize the charging operations in a reliable, safe, and cost-efficient way.

*CCAM: Connected, Cooperative, and Automated Mobility

Join our CCAM Logistics Task Force to know more on MODI solutions!



Would you like to know more?
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