

Zero Emission, flexible vehicle platforms with modular powertrains serving the long-haul Freight EcoSystem

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Zero Emission, serving the long-haul Freight EcoSystem



Taking Zero-Emission Long-Haul Freight Transport in Europe to the next level

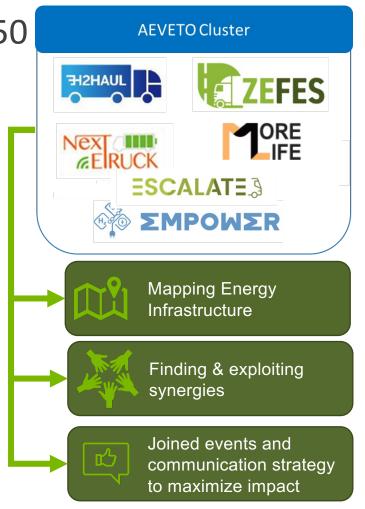
Ian 2023 – Jun 2026

Duration 42 Months





- Europe commits itself to be CO2 neutral by 2050
- Long haul freight transport needs to be transformed to reach this goal
- Zero Emission Heavy Duty Vehicles are key to achieve the set-out targets
- Battery Electric Vehicles (BEVs)
- **Fuel Cell Electric Vehicles (FCEVs)**
- ZEFES is part of AEVETO cluster, contributing to make Europe the leading example for a carbon-neutral transport system



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Ambition





Pathway for long-haul BEVs and FCEVs to become more affordable, reliable and more energy efficient

Real-world demonstrations of longhaul BEVs and FCEVs across Europe.



Mapping of flexible and abundant charging/refuelling points. Demonstrate **novel charging concepts**.

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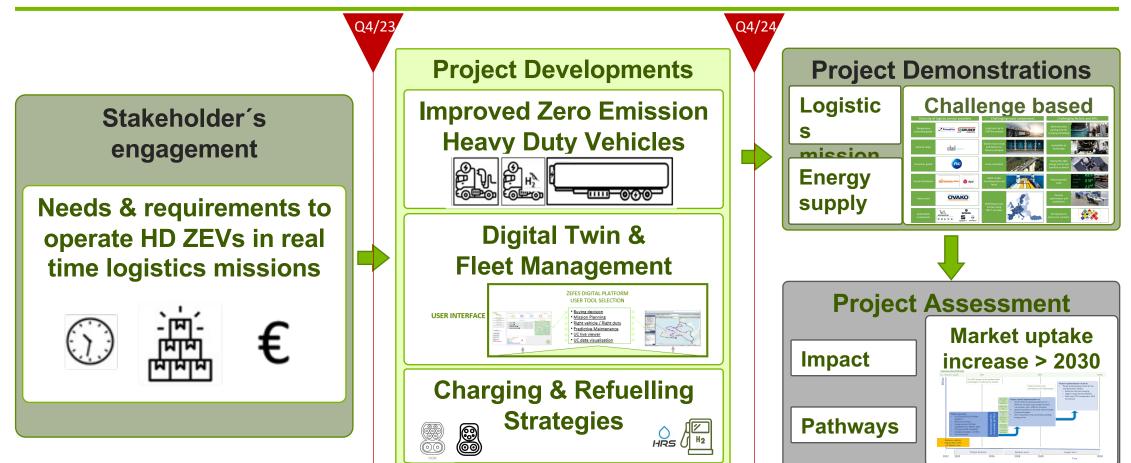
Technologies which can deliver promised benefits to operate in complex transport supply chains.

Digital Twin for **fleet management** to support the long-haul BEVs and FCEVs vehicles in the logistics supply chains.



Concept







5

Expected outcome



Technologies

- 9 vehicle configurations, 6 BEV, 3FCEV, 2 e-trailers, Standard configuration 44t, EMS1 & EMS2 up to 64t GCW
- Fast charging concepts, 400km after 40min charging
- HRS up to 750km between refuelling
- Digital Twin Platform for ZE-HDV in fleets, design, configuration and efficient operation

Demonstrations 6

- 15 demonstrations over 15 months
- 13 logistics service providers & shippers & carriers
- TEN-T/E corridors under real-world conditions
- Intermodal (rail & ferry) and cross border

Impact

- >1Mio kilometres of data for validation and assessment
- 30.000hr expected lifetime of FC







I At the HVTT17, we will present first results out of the stakeholder's engagement phase up to Q3/2023



- **R**Needs & requirements
 - **C**Logistics
 - **Infrastructure**
 - **©**Digital platform
 - **Road** permits

Thank you for your attention!







Disclaimer





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