



Shifting to zero-emission logistics
with right-sized, mission-focused,
N1 eLCVs



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About Shift2Zero

Shift2Zero project

Innovative e-LCVs designs for zero-emission logistics and sustainable mobility



European project funded under the topic: HORIZON-CL5-2024-D5-01-06 - New designs, shapes, functionalities of Light Commercial Vehicles (2ZERO Partnership).

- **3,5 years** duration, from 1st January 2025 – 30th June 2028
- Budget: **12M€**, of which 10M€ funded by the European Commission
- **30 partners** from **10 European countries**
- Coordinated by **Eurecat Technology Centre**
- Grant agreement ID: **101192375**



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Shift2Zero project

Our consortium



30
PARTNERS
FROM

10
EUROPEAN
COUNTRIES

- 5 RTO
- 4 ACADEMIA INSTITUTIONS
- 15 INDUSTRIAL PARTNERS
- 5 PUBLIC ADMINISTRATION
- 1 LOGISTICS INNOVATION NETWORK



What is Shift2Zero?

Advancing zero-emission logistics solutions for sustainable urban mobility



The Shift2Zero project contributes to this transition by developing **innovative designs and cutting-edge solutions for zero-emission electric light commercial vehicles (e-LCVs)**, tailored to meet the evolving needs of urban logistics.

The project's primary goal is to **reduce road transport emissions and to enhance operational efficiency**, ensuring that the solutions developed are aligned with real-world challenges.

“By uniting leading EU transport experts, Shift2Zero aims to reinforce the **EU's leadership in the transport sector**, with a focus on e-LCVs



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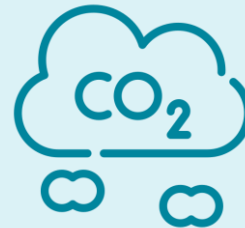
Aligned with European needs

Solving the challenges of urban logistics and climate goals

The evolving demands of urban logistics and climate goals create an urgent and clear need for innovative and sustainable automotive solutions.



Freight vehicle activity is expected to **increase by 36% by 2030**



Potentially leading to a **32% rise in greenhouse gas (GHG) emissions**

Shift2Zero addresses this challenge by leveraging the strengths of both N1 vehicle platforms and purpose-built designs, **accelerating the transition toward zero-emission logistics.**



- Smarter urban logistics
- Safer and more affordable vehicles
- Collaboration with the industry
- Accelerating green transition

Expected impacts

Expected impacts

Driving sustainable logistics forward



Significant CO₂ reduction

Optimized vehicle design and energy-efficient systems to lower emissions.



Enhanced safety for drivers & pedestrians

Sustainable materials and additive manufacturing to improve N1 vehicle safety.



Increased adoption of e-LCVs

Overcoming cost and operational barriers for wider electric light commercial vehicle use.



Future-proof logistics

Adaptable, scalable vehicle solutions to ensure long-term operational efficiency.

Shift2Zero innovations

What we do?

Shift2Zero innovations



Developing and demonstrating **six innovative e-LCVs concepts** to enhance **operational efficiency and user comfort** while also **aligning with EU environmental goals**.

These concepts will be equipped with advanced sensors and software to optimise routes, reduce energy consumption and maximise fleet efficiency.

With these solutions, Shift2Zero aims to **address both the supply** (operational and industrial requirements) **and the shifting demand** (increased e-commerce and fresh product delivery).



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Shift2Zero innovations

Developing six novel vehicle concepts

Multi-temperature controlled, optimised and energy-efficient cargo body

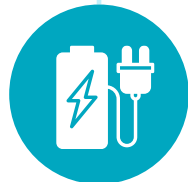
Advanced cooling and airflow systems enable mixed transport of various goods while reducing fleet size and emissions.

Optimised thermal comfort and safe ergonomics in vehicles' cabin

Sustainable design enhances safety, pedestrian protection, and manufacturing efficiency while reducing weight and costs.

Holistic energy management for cold chain logistics

Integrating regenerative braking, advanced tires, and bi-directional charging for improved efficiency and sustainability.



Modular swappable transshipment units

Standardized cargo modules enhance flexibility, streamline handling, and boost operational efficiency.

Geofenced N1 vehicles for urban safety

Open-standard geofencing and pedestrian-friendly logistics improve urban mobility and curbside management.

Dual-use modular vehicles for goods and passenger transport

Adaptable seating and IoT-based safety features enable efficient transport of both passengers and cargo.

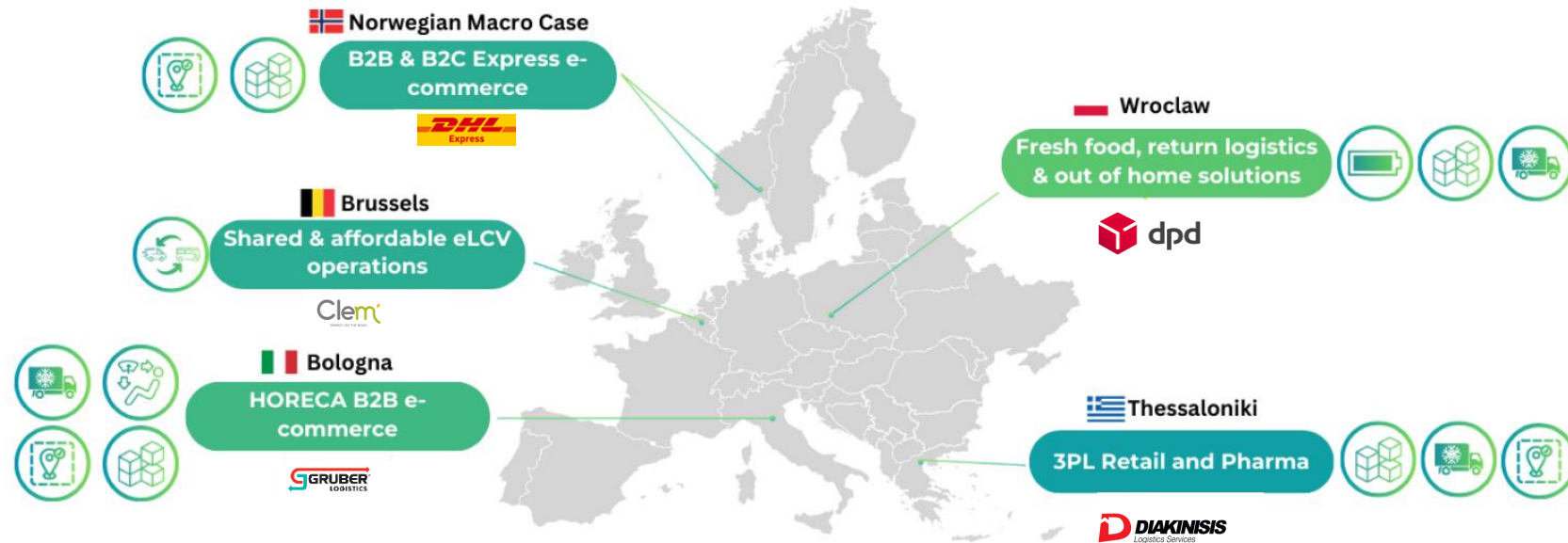
The pilots

Shift2Zero pilots

Demonstrating the new vehicle concepts in five real-life scenarios

5 European countries, 6 cities & 5 end-users

- **Pilots representing diverse urban realities** of North, West, Central and Southern Europe, which allows extensive good practice while **keeping context-specific replicability of solutions**.
- Each pilot **tests the vehicle concepts in different combinations**, exploring **potential synergies to meet diversifying current and future user requirements**.





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Thank you!

 Shift2Zero Project

 www.shift2zero-project.eu

 info@shift2zero-project.eu



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A project coordinated by:

eurecat