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# Holistic energy management for electric vehicles deliveries in cold chains



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Developed by :

**IVECO**

**alkè**



**MICHELIN**

**brembo**

**AIT**  
AUSTRIAN INSTITUTE  
OF TECHNOLOGY



**eurecat**

Project by : Horizon Europe

**SHIFT2ZERO**

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# HOLISTIC ENERGY MANAGEMENT FOR ELECTRIC VEHICLES DELIVERIES IN COLD CHAINS

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## Solution description

### Holistic energy management for cold value chain deliveries

Combination of intelligent regenerative braking strategies and advanced tyre technologies to improve vehicle efficiency and reduce non-exhaust emissions. By optimising energy recovery and reducing friction through low-resistance tyres, the solution enhances performance, especially in stop-and-go urban missions.

Digital Twin models support the calibration of braking and tyre systems to minimize particle emissions.



## Benefits

- Boosting vehicle efficiency by recovering more energy during braking and reducing rolling resistance through advanced tyres.
- Reducing emissions via optimised brake and tyre systems, while bi-directional charging turns vehicles into mobile energy assets.
- Lowering costs, enabling grid support, and expanding delivery reach.

## Main beneficiaries:

Fleet managers, OEMs, cold-chain operators, logistics operators infrastructure providers

- Support cold chain deliveries while serving as energy sources for optimized charging operations.
- Two-way charging capability enabling the charging of smaller vehicles and various logistics tools directly from the EVs.

Technology readiness level : **TRL 7 / TRL 8**  
Implementation stage : **Pilot**

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Would you like to know more?  
Take contact :



Fanny Breuil  
Project coordinator



Carrer de Bilbao, 72, Sant Martí,  
08005 Barcelona, Spain



[info@shift2zero-project.eu](mailto:info@shift2zero-project.eu)



+34 93 7419100

[www.shift2zero-project.eu](http://www.shift2zero-project.eu)

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