InnoMatch

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EIC INNOVATION PROCUREMENT PROGRAMME

GO-START Hybrid Storage
case study

C2C NEW CAP

with the support of Patinter

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PILOT: CHARGE2C-NEWCAP & Patinter

GO-START Hybrid Storage | Commercial Transport, Fleet Logistics, and Heavy Vehicle Decarbonisation

0 DEAD STARTS	TRL 6	3 OUT OF 3	LOWER IDLING
ENGINE STARTING GUARANTEED	**COMMERCIAL FLEET TESTED**	**HARDWARE FIXES DEPLOYED**	**FUEL SAVINGS ACHIEVED**
100% starting reliability even with fully discharged main starter batteries	Engineered and validated on active commercial long-haul trucks	Successfully resolved power configuration challenges during field testing	Powers cabin auxiliary electronics without running heavy diesel engines

PILOT PROFILE

EIC Awardee: CHARGE2C-NEWCAP

Solution: GO-START Hybrid Storage

Partner: Patinter (Road Transport Fleet Operator, Portugal)

Testing Ground: Real-world long-haul commercial truck fleet operating across European highway transport routes

Sector & Challenge Focus: Commercial Transport, Fleet Logistics, and Heavy Vehicle Decarbonisation

The Challenge

Commercial heavy freight trucks rely on lead-acid starter batteries to crank large diesel engines. When truck drivers park during overnight rest breaks, running cabin heating, air conditioning, and electronics drains starter batteries, frequently leaving trucks unable to start in the morning. This causes costly delivery breakdowns, expensive emergency towing, and forces drivers to run engines continuously (idling), wasting expensive diesel fuel and increasing carbon emissions.

The Solution

GO-START is a hybrid energy storage module that combines supercapacitors (ultra-fast electrical discharge units) with lithium-ion batteries. It delivers instant, high-power bursts to start heavy truck engines reliably—even if the primary battery is completely depleted—while powering cabin electronics during rest breaks without running the diesel engine.

Objectives

The pilot aimed to install GO-START modules on commercial heavy trucks operating real European transport routes. Patinter wanted to eliminate engine starting failures, measure fuel savings from reduced engine idling, and test hardware durability.

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Constrains

The engineering team adjusted truck battery bay wiring to prevent dashboard electrical fault warnings while ensuring the module withstands heavy highway vibrations and weather exposure.

Performance

GO-START operated successfully on active long-haul trucks at Technology Readiness Level 6. The engineering team identified and resolved three hardware power challenges during early road trials, achieving 100% engine starting reliability and establishing Patinter as a flagship commercial customer reference.

Partner Operational Improvements

Elimination of starter battery breakdowns, lower diesel fuel consumption from reduced engine idling, and improved long-haul transport reliability.

> *"Overall, InnoMatch provided a valuable framework to test the technology in real operating conditions while keeping the buyer's financial exposure very limited."*
>
> **— CHARGE2C-NEWCAP**

SUCCESSFUL PILOT VALIDATION

Patinter retained test units for a 1-year evaluation period. CHARGE2C-NEWCAP is finalizing commercial retrofit sales packages for transport fleets across Europe.

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