GREEN-LOG

GREEN-LOG successfully concludes first demonstration of zeroemission logistics across five European cities

June 2025 - The Horizon Europe GREEN-LOG project (Cooperative and Interconnected Green delivery solutions towards an era of optimized zero-emission last-mile Logistics) has successfully completed its first round of demonstrations across five European Living Labs established in Athens (Greece), Barcelona (Spain), Flanders (Belgium), Oxfordshire (UK), and Ispra (Italy). This achievement marks a significant milestone in the project's mission to advance sustainable urban logistics innovation by assessing the impact of zero-emission delivery solutions on logistics efficiency, sustainability, and stakeholder engagement. The demonstrations tested multiple innovative solutions tailored to each city's unique urban and peri-urban contexts, showing promising results in reducing emissions and improving delivery efficiency.

Innovative solutions demonstrate practical sustainability

The first round of demonstrations implemented a variety of cutting-edge logistics approaches and technologies developed by GREEN-LOG.

In **Athens**, real-world and simulation-based demonstrations were conducted to compare shared versus independent last-mile deliveries using a white-label electric vehicle with a single driver. Results showed impressive reductions in kilometers driven (-35%), travel time (-26%), and number of stops (-12%), validating the potential of collaborative delivery models and smart locker technologies.



Barcelona focused on multimodal solutions that integrated public transport with cargo bikes, alongside testing autonomous delivery robots within railway station environments. The trials confirmed the operational viability of using trains to overcome geographical challenges and



dependence on road vehicles, while the autonomous robot demonstrated reliable navigation capabilities in public transport settings.



The **Ispra** pilot combined cargo bikes and autonomous droids for meal deliveries, achieving high user satisfaction rates with 93% of participants supporting long-term implementation of the service despite minimal improvement in delivery times.



In the **Flanders Living Lab pilot in Mechelen**, the Logistics-as-a-Service (LaaS) platform, led to a significant reduction in delivery tours (47%) through cargo consolidation. The platform successfully influenced consumer behavior through dynamic pricing models, demonstrating how digital tools can drive sustainable delivery choices.







Oxfordshire demonstrated robust logistics solutions including predictive demand tools, optimised routing services, and innovative hub concepts. The Mobile Delivery Hub notably improved courier efficiency by significantly reducing reloading times, while the Moveable Consolidation Hub demonstrated strong potential for parcel consolidation and emissions reduction.



Environmental and operational benefits

Key environmental achievements include substantial CO_2 emissions reductions across all pilot cities, with the Flanders pilot alone saving nearly 37kg of CO_2 and reducing NOx emissions by over 19g. The Oxfordshire demonstration reduced CO_2 emissions by 87.25kg per day through its consolidation hub approach.

"The results from the first round of pilot projects provide clear evidence of the effectiveness of our approach in accelerating sustainable urban logistics through real-world implementation. Cocreation with local stakeholders to deliver systemic innovations in diverse urban environments is essential for achieving meaningful reductions in CO₂ emissions while maintaining or enhancing service quality," said Amalia Ntemou, Project Manager from the GREEN-LOG Coordination Team.

Stakeholder reception and future direction

The solutions demonstrated received positive feedback from end-users, including logistics operators and consumers. In Ispra, over half of the participants expressed satisfaction with the innovative delivery service, while the users of LaaS Marketplace platform in Flanders reported an average 69% increase in awareness of sustainable urban delivery solutions.

"The identified challenges and feedback provided by stakeholders are being used to refine our use cases and further develop the GREEN-LOG solutions for the second round of demonstrations," added Panos Georgakis, Technical Manager for the project.



The second round of demonstrations will build on these initial insights, with refinements to simulation models, enhanced LaaS functionalities to improve user experience, and expanded consolidation efforts testing different policies through dynamic pricing and nudging models.

About GREEN-LOG

GREEN-LOG is a Horizon Europe project co-funded by the European Union, aiming to accelerate sustainable city logistics through the implementation of real-life solutions in multiple and heterogeneous last-mile delivery ecosystems. The project is centered around innovative co-creation in Living Labs across five European cities and areas: Athens (Greece), Barcelona (Spain), Flanders (Belgium), Oxfordshire (UK), and Ispra (Italy).

For more detailed information on these developments, please visit the <u>GREEN-LOG project</u> <u>website</u>, where project deliverables will be available after approval by the European Commission.

GREEN-LOG is a project under the **CIVITAS Initiative**, an EU-funded programme working to make sustainable and smart mobility a reality for all. Read more - <u>civitas.eu</u>.

PROJECT KEY FACTS	
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