



GREEN-LOG

Cooperative and Interconnected
Green delivery solutions
towards an era of optimized
zero emission last-mile Logistics

www.greenlog-project.eu



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UK Research
and Innovation

CHALLENGE & VISION

The world is experiencing an unparalleled growth in last-mile transport following the unprecedented growth of e-commerce. The steep curve is expected to continue in the years to come, fueled by a multitude of factors related to societal changes and technological advancements. This new reality brings a number of challenges to urban and peri-urban ecosystems and puts immense pressure on courier companies for seamless servicing of higher volume home deliveries.

Against this backdrop, **GREEN-LOG**, the Horizon Europe co-funded project, aims to accelerate systemic changes and create last-mile delivery ecosystems that are economically, ecologically, and socially sustainable.



GOALS

-  BRING together city logistics ecosystems supporting them to **introduce innovative last-mile delivery solutions**.
-  ACCELERATE the **shift to sustainable and smart mobility in last-mile delivery** as defined by the European Green Deal action plan and the EC's Roadmap to a Single European Transport Area, while building upon the recommendations of the European Environment Agency for first/last/only mile modes.
-  DELIVER a **fully functioning and solid system prototype** with well-integrated components **demonstrated in the operational environment** of well-designed pilot cases.
-  DEVELOP **Logistics-as-a-Service platforms** for interconnected city logistics, **automated delivery concepts** using autonomous vehicles and delivery droids, **cargo bike-based innovations** for sustainable micro consolidation, and **multimodal parcel deliveries** integrating public transportation.

LIVING LABS



LL#1

ATHENS, Greece

Multi-stakeholder collaborations for shared MCCs

Athens is a densely populated area and faces challenges that have severe impact on urban logistics. The aim is to establish a network of logistics service providers, local stakeholders, and businesses to implement **micro-consolidation centres (MCCs)** in public places jointly used by various courier companies. The use of **white label vans**, **electric vehicles**, and **lockers** will also be explored and demonstrated.

LL#2

BARCELONA, Spain

Multimodal last-mile deliveries

The suburban area of Barcelona has not taken the opportunity to implement greener delivery methods as intensely as the urban zone. The Barcelona LL will assess and develop appropriate last-mile delivery models such as primarily **cargo bike hubs**, but also **lockers, linked to rail stations** in a variety of urban contexts (covering Barcelona's city centre and towns along the metropolitan rail network).



LL#3

FLANDERS, Belgium

(Leuven, Ghent, Mechelen)

Last-mile Urban Logistics-as-a-Service

The region of Flanders has announced the ambition to introduce zones for zero emission urban freight in cities. The goal is to develop a functional **Logistics-as-a-Service platform** where urban logistics data is used to link demand (e.g., urban freight shipments, on-demand requirements, storage requirements) and supply (e.g. the provision of sustainable logistics services, warehouse space, need for certain type of vehicles) in order to improve the sustainability of first- and last-mile city logistics.



LL#4

OXFORDSHIRE, United Kingdom

Next generation last-mile delivery
integrating self-driving cargo bikes

Oxfordshire is a county in England that includes the City of Oxford, the population of which has grown at an unprecedented rate in recent years. GREEN-LOG intends to bring together active players in Oxford's freight operations to address the challenges of scaling up zero emission last-mile deliveries in the city. Some of the key concepts include designing **movable micro-consolidation centres** and **mobile delivery hubs**, demonstrating **new customised cargo bike designs**, and developing a **digital marketplace**.



LL#5

ISPRA (JRC), Italy

Next generation last-mile delivery
integrating delivery robots

The Joint Research Centre (JRC) is an EC infrastructure in Ispra where GREEN-LOG solutions will be demonstrated. **Autonomous and multimodal delivery** able to support daily activities by increasing efficiency, reducing errors, and decreasing human involvement, especially in most of the standardised and repetitive operations will be achieved through the integration of the fleet management system (Yape droids and Measy cargo bikes) with the booking system implemented in the delivery platform.



Follower cities

HELSINGBORG,
Sweden

ARAD,
Romania

VALGA,
Estonia



APPROACH

The GREEN-LOG approach provides a cutting-edge simulation environment for scenario building combining different solutions to enable the integration of last-mile delivery interventions with the highest possible impact on environmental sustainability and traffic reduction, also considering their financial viability.

The approach is deployed and validated in five **Urban Living Labs (LLs)**, an inclusive set of demonstration sites that cover EU regions with different Urban Logistics characteristics and varying challenges. These LLs will act as city platforms for nurturing social innovation, understanding of user needs, habits and preferences, co-designing, and deploying of last-mile delivery solutions while allowing the most effective exchange of ideas.

Three **follower cities** that experience rapid economic and social change and are highly interested in tailoring and replicating GREEN-LOG solutions will benefit from intensive transferability acceleration actions.



30 partners



10 countries



5 Urban Living Labs



3 follower cities



€6.3 million EU contribution



PARTNERS

GREEN-LOG is a strong consortium of 30 high-profile partners from all over Europe, including SMEs, universities and research institutes, a large IT company, major last-mile logistics operators, city authorities, a city logistics association, and an association of EU cities.



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GREEN-LOG is a project under the CIVITAS Initiative.

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