This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 861598

LEAD: Low-Emission Adaptive last mile logistics supporting on demand economy through Digital Twins

Innovative zero-emission freight solutions for cities

URBAN MOBILITY DAYS 2020
Context

- Rise on-demand logistics (accelerated by COVID-19 new online purchasing habits) → stress last mile delivery systems
- **Customer**: responsive system for customised products
- **Industry**: instant delivery
- **Cities**: possible negative consequences.
  
  Urban planner + city authorities + stakeholder = prediction, evaluation, new business models
- **LEAD**: develop logistic solutions ↔ Low emission operations, adaptive model & Digital Twins models
What is LEAD?

• LEAD – Digital Twins creation in 6 cities (TEN-T urban nodes)
• Solutions → case scenarios
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LEAD Strategies

1. **Innovative business models**
   with a view to optimising the performance of last mile logistics (based on volatility of demand, delivery life cycles and costs) in response to the challenges posed by the on demand economy.

2. **Agile freight storage and distribution**
   Agile schemes for urban freight storage and last mile distribution, including crowdsourced shipping, capacity sharing, multi-echelon and Physical Internet inspired approaches.

3. **Low emission delivery vehicles**
   including Electric Delivery Vehicles (EDVs), hybrid and automated vehicles for freight delivery like cargo-bikes, delivery robots and droids - walkers will also be considered.

4. **Smart data-driven logistics solutions**
   for shared, connected and low-emission logistics operations, empowered by an adaptive modelling approach and Digital Twin models, applied in real-life environments.
LEAD Innovations

- Digital Twins in last miles logistics
- Helping cities embrace technology advancements and data value
- Co-creation of solutions for on-demand economy
- Speeding up transition towards the PI paradigm

Living Lab (LL) is a stakeholder-centered ecosystem, operating in an urban node context, for the systematic evaluation of innovative ideas and technological solutions in real life use cases.
### Expected Impacts

**Impact 1**
- Clear understanding of cost-effective strategies, measures and tools to achieve essentially zero emission city logistics in major European urban centres by 2030.

**Impact 2**
- New tested, demonstrated practices and solutions for better cooperation between suppliers, shippers and urban/regions policy makers (planners).

**Impact 3**
- Clearly provide inputs for the preparation and implementation of SULPs, SUMPss and other planning tools (big data and real-time traffic management).

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Green Deal & Strategic Transport R&I Agenda (STRIA) Roadmap

Contribution to Green Deal plan ambitions by promoting Sustainable Mobility
Clean energy
Zero pollution

- electrification
- alternative fuels
- vehicle design and manufacturing
- connected and automated transport
- network and traffic mgt systems
- smart mobility and services
- infrastructure
Contact us!

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