



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



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



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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.

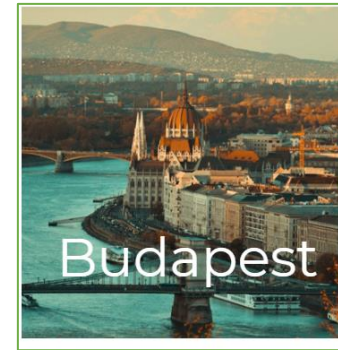
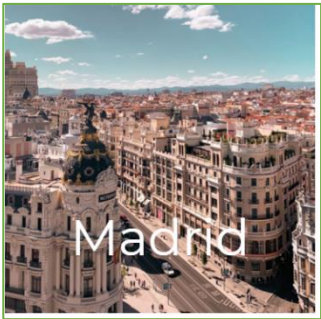
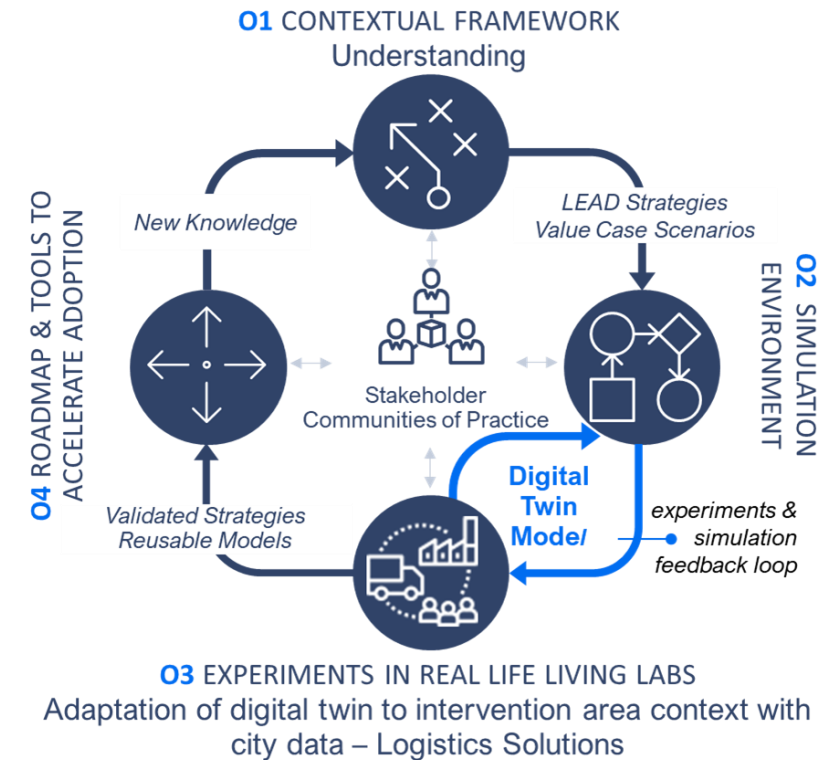
Urban planner + city authorities + stakeholder =
prediction, evaluation, new business
models

- **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



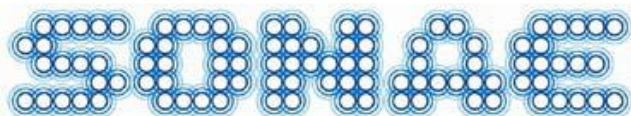
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Partners



Den Haag



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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

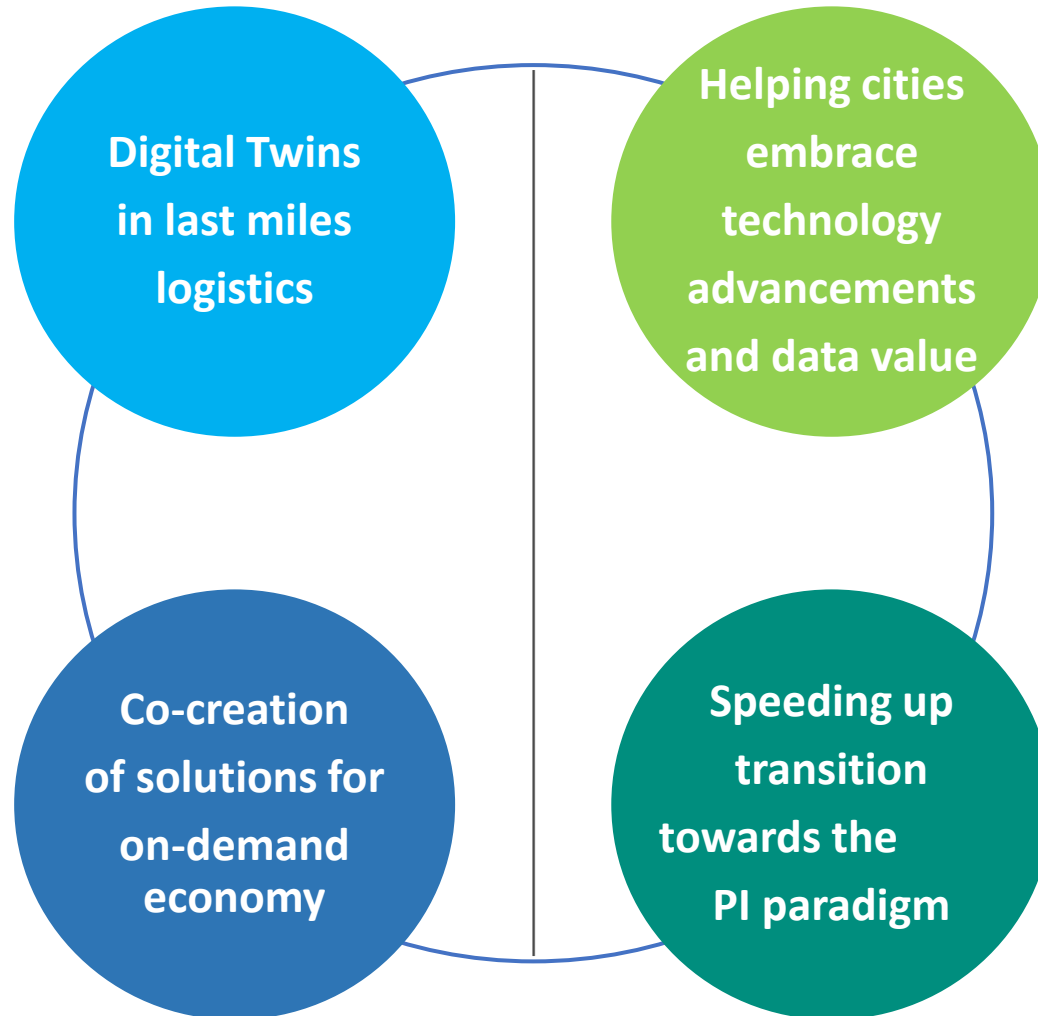
for shared, connected and low-emission logistics operations, empowered by an adaptive modelling approach and Digital Twin models, applied in real-life environments



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LEAD Innovations



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.



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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, SUMPs and other planning tools (big data and real-time traffic management)



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



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Contact us!

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