URBANE

Urban Logistics Innovation Day

Final Event

6 November 2025 | Barcelona (AMB Headquarters)

eit Urban Mobility
Co-funded by the European Union

alice | Alliance for Logistics Innovation through Collaboration in Europe

inlecom

POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION

AMB | Àrea Metropolitana de Barcelona

Co-funded by the European Union

CIVITAS

Initial speech

Maite Pérez

AMB Àrea Metropolitana de Barcelona

Final event

November 6th, 2025

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

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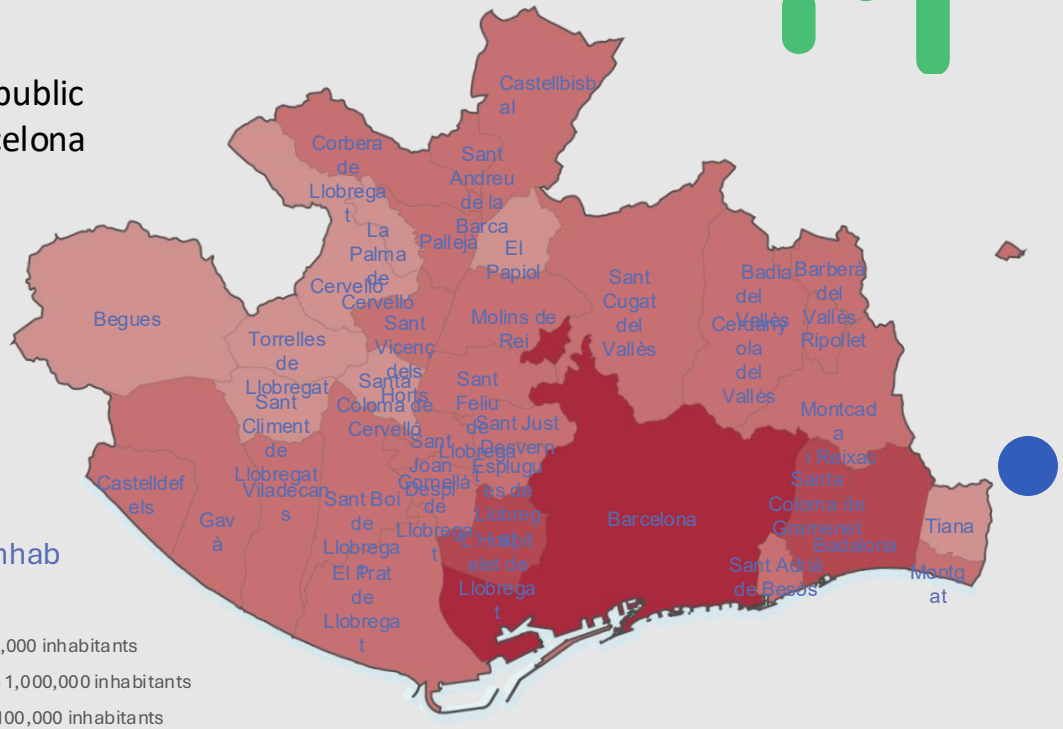
AMB-Who we are

The Barcelona Metropolitan Area (AMB) is the public administration of the metropolitan area of Barcelona

The metropolitan area is a territorial, social, demographic, economic and cultural entity formed during the last century as a product of the growth and connection of urban systems around the city of Barcelona. This is the largest metropolitan conurbation in the western Mediterranean, which generates half of the GDP in Catalonia.

636 Km²
3,3 mio inhab



- More than 1,000,000 inhabitants
- From 100,000 to 1,000,000 inhabitants
- From 10,000 to 100,000 inhabitants
- Less than 10,000 inhabitants

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AMB-Who we are

The AMB became the metropolitan public administration in July 2010, by Catalan Law 31/2010

The new public metropolitan administration replaces the three entities existing until 2011

This new AMB rationalises and simplifies the metropolitan governance by creating a single administration

1953

Regional Urban Development Plan of Barcelona:

- Barcelona's Urban Planning Comittee (the first metropolitan body of 27 municipalities)

1974

Decree law 5/1974:

- Barcelona Metropolitan Municipal Agency (EMMB)
- Barcelona Metropolitan Corporation (CMB)

1976

General Metropolitan Plan (PGM)

27 municipalities

1987-1988

Law 7/1987:

- Termination of CMB
- Creation of EMSHTR and EMT

Voluntary association of municipalities: MMAMB

AMB = MMAMB + EMA (EMSHTR) + EMT

2010-2011

Law 31/2010

Creation of the Barcelona Metropolitan Area (AMB)

- Commonwealth of Municipalities
- Metropolitan Institute for Hydraulic Services and Waste Treatment
- Metropolitan Transport Entity

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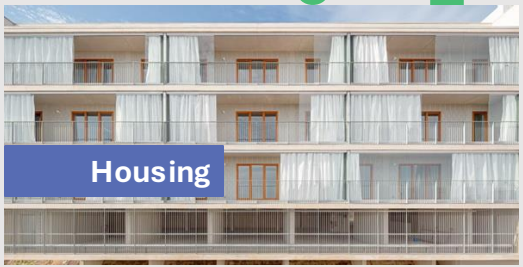
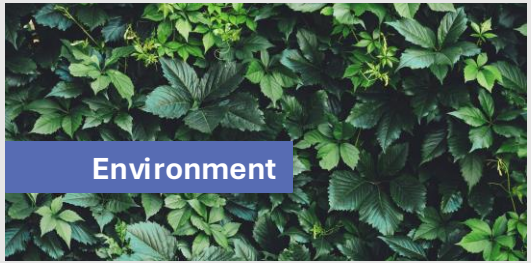
AMB-What we do

This new legal framework also reinforced the metropolitan administration with new competencies and objectives





Innovation and digitalisation

Strategic planning

International action

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AMB- Mobility and transport competences and services

11.9 M
daily trips of metropolitan area of Barcelona's residents (2023)

809 M
metro and bus passengers

545 km
Bicivia network

76.8 %
sustainable mobility trips

5,273
bus stops

- Collective urban public surface transport
- Underground public transport service
- Planning and administrative operation of the Taxi service
- Metropolitan Urban Mobility Plan
- Planning and management of cultural and tourist transport
- Promotion of sustainable transport and mobility
- Traffic programming in the basic road network

238
bus lines

8
metro lines

10,518
taxi licenses

Direct management	Indirect management	Direct management	Administrative licenses
TMB Transports Metropolitans de Barcelona	Soler i Sauret, Baixbus, avanza, moventis, TUSGsal, MONBUS	TMB Transports Metropolitans de Barcelona	AMB Taxi

Data for the year 2024

CIVITAS Sustainable and smart mobility for all

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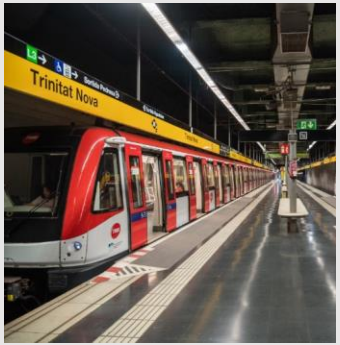
AMB- Mobility and transport competences and services

Bus Metropolità (TMB)

Bus Metropolità (indirect management)



Metro

Taxi

Park and ride

Low emissions zones

Electric stations

Bicivia

Bicibox service

AMBici service

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Thank you!

Maite Pérez

AMB Àrea Metropolitana de Barcelona

Àrea Metropolitana de Barcelona (AMB)

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💡 Plenary Session:

Physical Internet for low-emission last-mile logistics

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URBANE

URBAN LOGISTICS INNOVATION DAY & FINAL EVENT

Plenary Session 1: Physical Internet for low-emission last-mile logistics

Presenter
Ioanna Fergadiotou
Athens R&D Lab Director, Inlecom

Guest Presenter
Amalia Bozinaki
PMO, Frontier Innovation

Modetator
John Limaxis
Project Manager, Inlecom

Panelist 1
Jos Streng
Freight policy advisor,
City of Rotterdam

Panelist 2
Javier Romo García
Project Manager, CIDAUT

Panelist 3
Sebastien Horemans
CEO, PICK&SMILE

Panelist 4
Steve Corens,
Project Manager, VIL Flanders
Innovation Cluster for Logistics

Thursday 6 November

9:45 – 11:00, BARCELONA,
AMB Headquarters

Co-funded by the European Union
CIVITAS

URBANE

Urban Logistics Innovation Day

Final Event

6 November 2025 | Barcelona (AMB Headquarters)

URBANE: Digital Tools for Last Mile Last Logistics

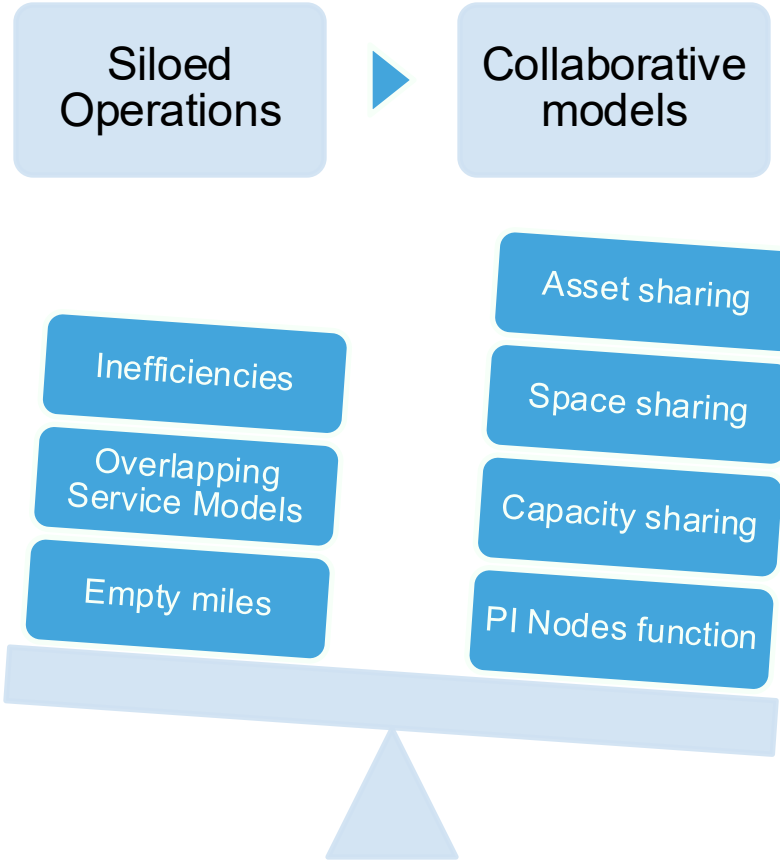
Ioanna Fergadiotou, Inlecom

Co-funded by the European Union

CIVITAS

Physical Internet (PI) in last-mile logistics

Co-Funded by
The European Union



> 4 Lighthouse Living Labs (WAVE 1)

> 2 Twinning Living Labs (WAVE 2)

Reference Assets

LL3 Valladolid

LL1 Helsinki

LL2 Bologna

LL4 Thessaloniki

Lighthouse LLs

2022

2024 Twinning LLs

Helsinki

TL2 Karlsruhe

Valladolid

TL1 Barcelona

Bologna

Thessaloniki

Human Centric Digital Twinning Tools

URBANE Innovation Transferability Platform

Co-development of innovative operational models

- Hub&Spoke delivery
- Hyperlocal on-demand delivery
- Collaborative delivery
- Containerisation delivery
- Digital-as-a-service delivery

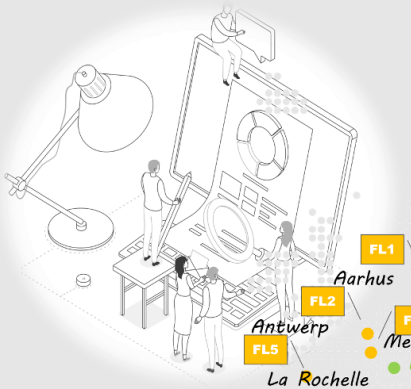
Innovations

- Physical
- Digital
- Business & Governance
- Social

Enabling Technologies
Digital Twins
AI
Blockchain

> Feasibility studies in 6 cities (WAVE 3)

PI - Zero Emissions Vision



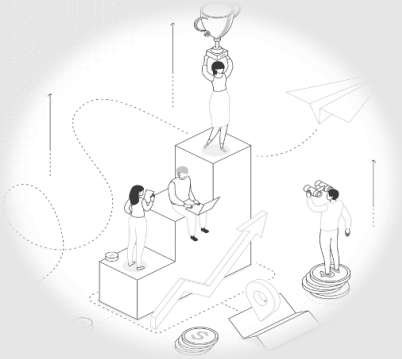
Follower Cities
Adoption Feasibility Studies

2028

2026

Helsinki
Aarhus
Antwerp
Mechelen
Prague
Karlsruhe
La Rochelle
Valladolid
Bologna
Barcelona
Thessaloniki

Successfully established PPPs

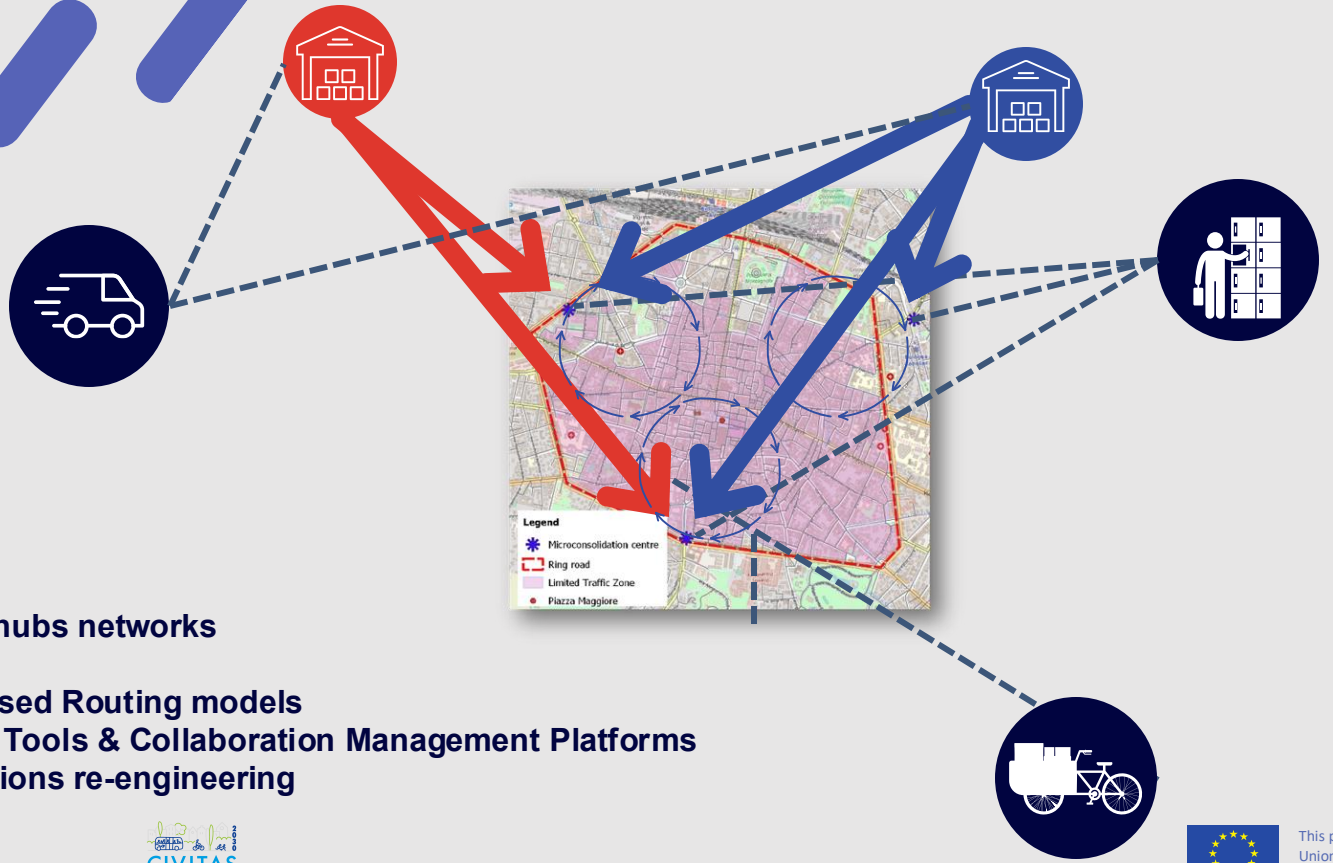


> Policy package & Adoption Roadmap

> Data-driven Impact Assessment Radar

Physical Infrastructure & Innovative Vehicles

PI last-mile deliveries



Micro-hubs networks
EDVs
Optimised Routing models
Digital Tools & Collaboration Management Platforms
Operations re-engineering

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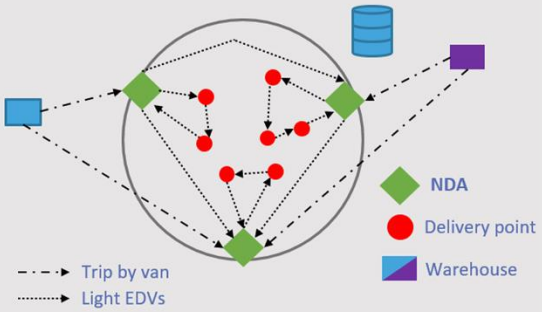
Helsinki - ADVs in last mile delivery

- 50% Decrease in kms driven by van in urban area using cargo bikes and ADVs.

- 50% Significant CO2 savings: using cargo bikes and ADVs instead of the traditional vans

+2% Increase of successful deliveries on 1st attempt

Bologna - Micrologistics hubs network



+3 Creation of the first Nearby Deliveries Areas (NDAs, SULP measure)

- 52% Significant CO2 savings compared to conventional door-to-door deliveries.

+2% Increased quality of deliveries: most of the parcels were delivered on the first attempt, in a more secure way (less thefts/losses of parcels)

Valladolid - AI-driven & fully electric deliveries

↓ 99%

Significant CO2/NO2 savings. The national postal service (CORREOS) has significantly reduced its emissions by 98% in the case of the van and up to 99% for the bicycle.

+10 Km

Increased range (up to 10 km of extra range per day in the case of the bicycle). Same level of delivery service (same average speed per trip).

↓ 34%

Reduction of delivery costs (bicycle).

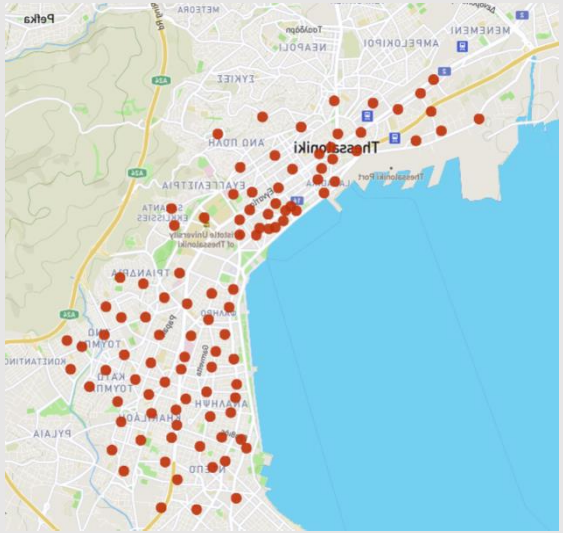
Thessaloniki - Delivery Networks with dynamic routing

Support companies to **design their parcel locker network** to optimise operations

Provide argument for city authorities to **guide LSPs** to **collaborative models with shared infrastructure**

Support city authorities to design **SULP by considering new urban space allocation policies**

Fusion of different data sources for **feasibility checking**



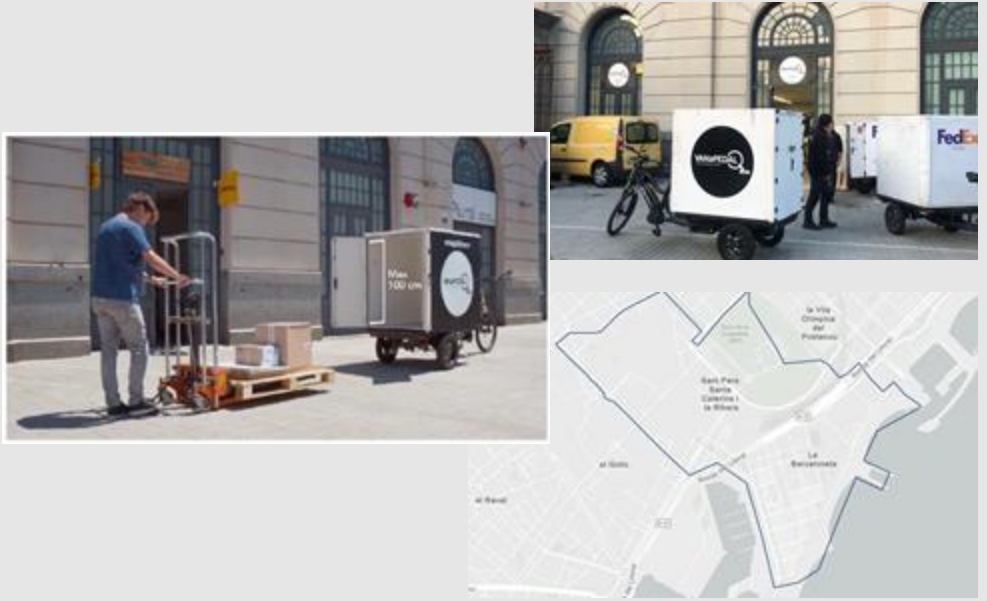
- 50-90 % Significant CO2 savings

Karlsruhe - Autonomous Robots & TramTrains

Barcelona - RFID in cyclo-logistics

OPERATIONAL: Faster handling, shorter routes, better traceability of parcels, data gathering and cloud (accessible) storage.

STRATEGIC: LSP collaboration



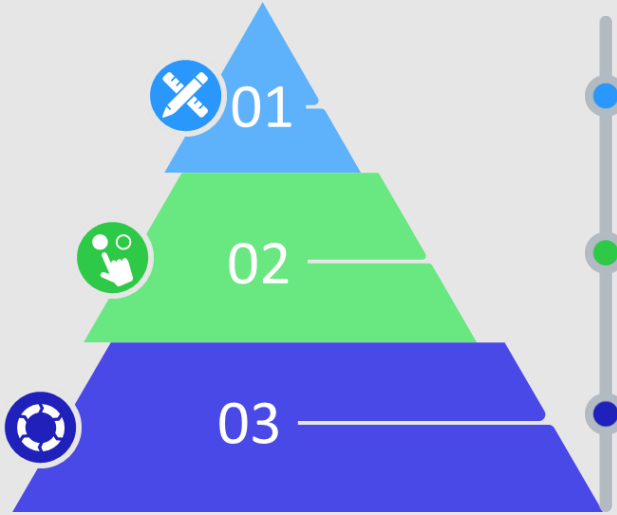
AMB Àrea Metropolitana de Barcelona

VANaPEDAL Green innovation since 2010

UOC Universitat Oberta de Catalunya

URBANE Impact Assesment Radar (IAR)

Holistic Data-Driven Impact Assessment Framework for innovative UL solutions adoption



1st Level – STRATEGIC – Guided planning for innovation
This level supports city authorities (planners and decision-makers) to shape innovative urban logistics ecosystem

2nd Level – TACTICAL – Arguments-driven network design
This level helps companies and city authorities to design infrastructure and service for innovative and/or PI-inspired urban logistics solutions

3rd Level – OPERATIONAL – Facts-driven assessment
This level supports companies and cities to measure and monitor the impact of (their) operations

Last Mile Delivery with ADVs

https://www.youtube.com/watch?v=k328j2W0jXE

Collaborative Delivery between Last Milers

https://www.youtube.com/watch?v=DKzW82uBVoc

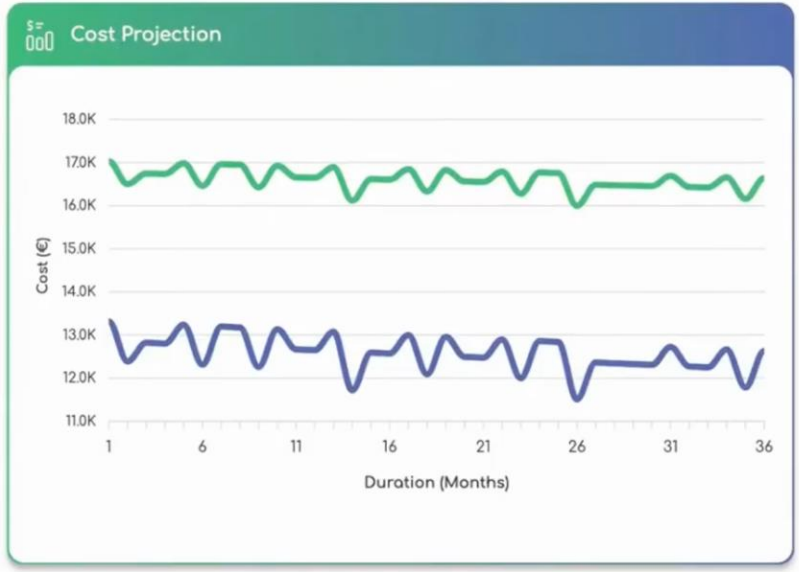
Last Mile Delivery with e-Bikes

https://www.youtube.com/watch?v=mwi3Mth5YEg

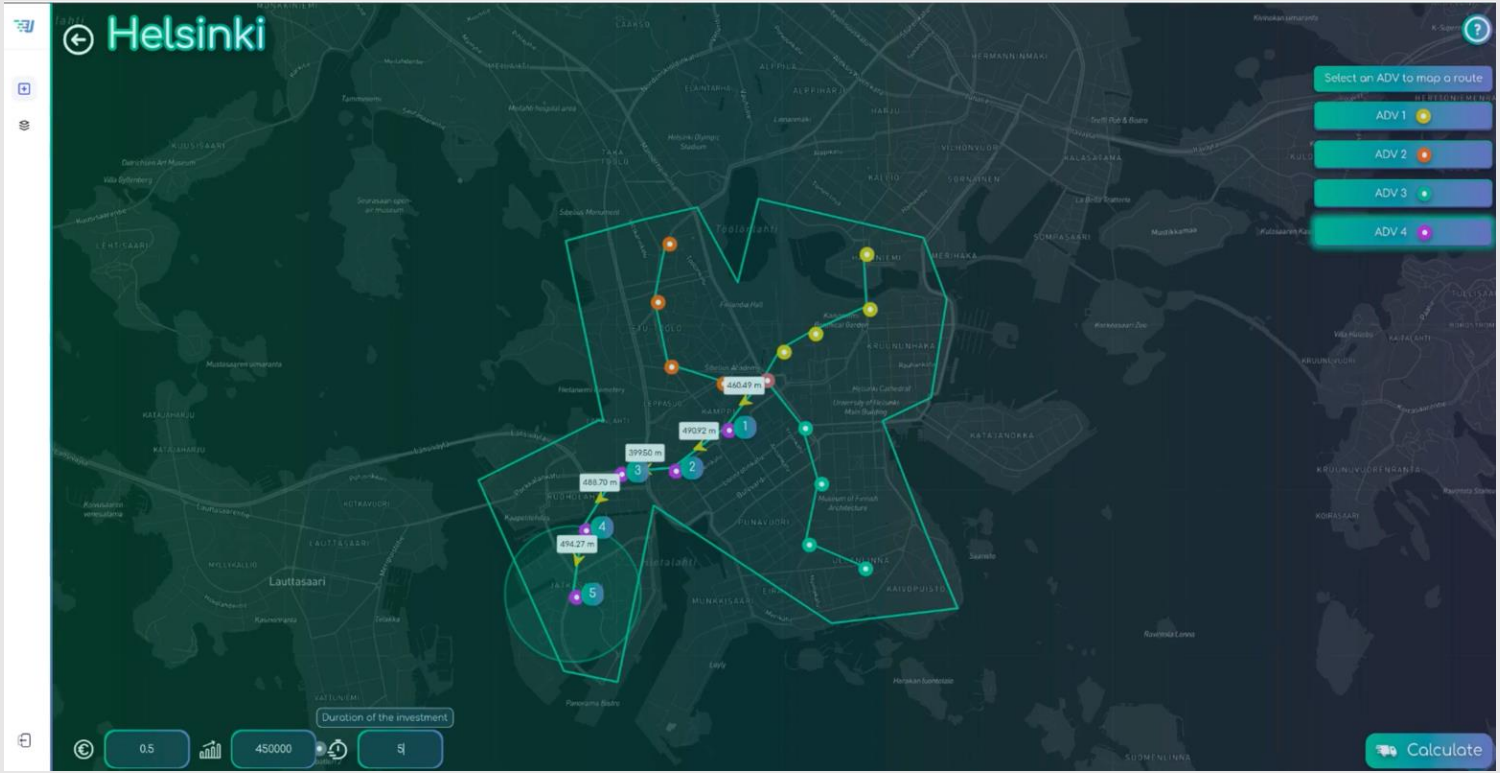
Simulation-aided decision making

Impact Comparison

Cost Benefit Analysis

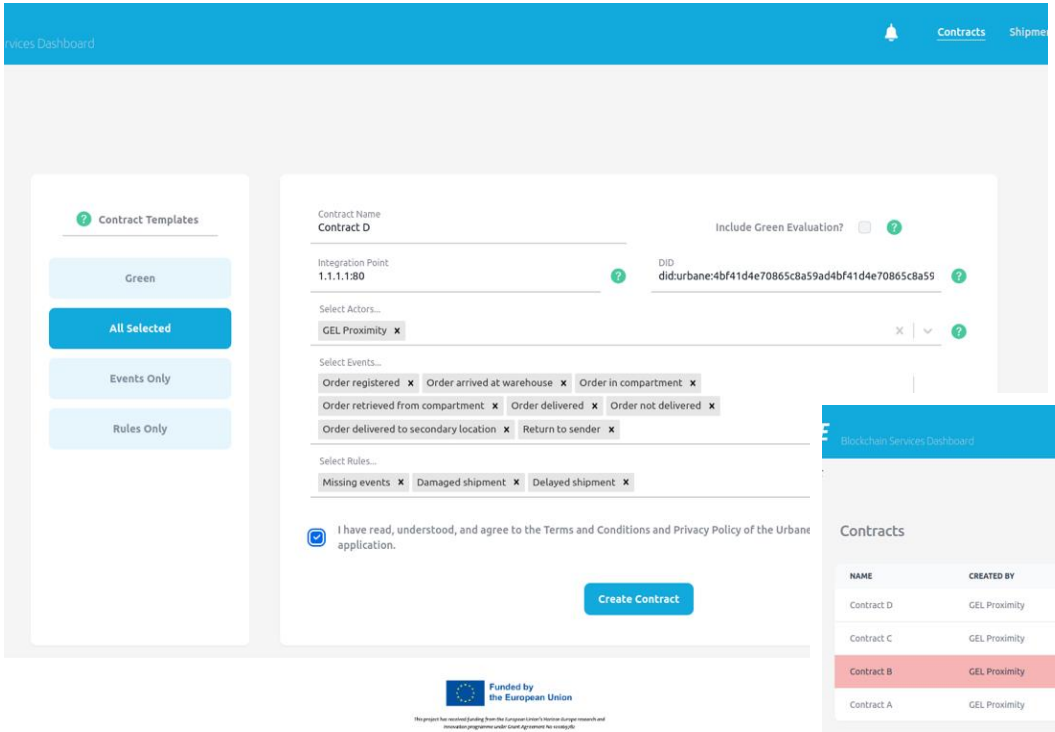


ADV route design

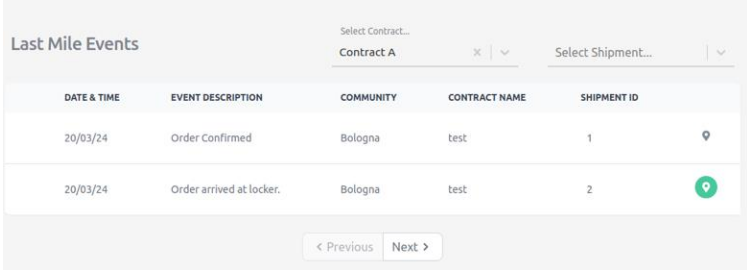


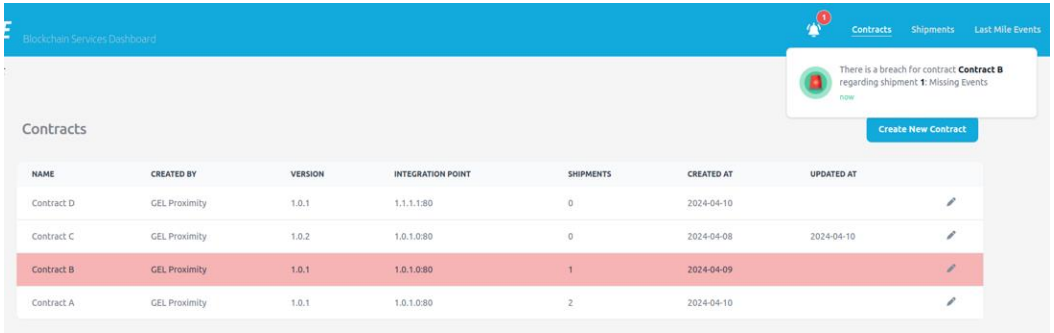
Smart Contract Generator (UI)

1. SLA parameters selection



2. SLA Monitoring





https://www.youtube.com/watch?v=8awH8D30oiw

3. Alerts

Thank you!

Ioanna Fergadiotou

INLECOM INNOVATION

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This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Logistics-as-a-Service (LaaS) Marketplace

Amalia Bozinaki | Frontier Innovations

Urban Logistics Innovation Day and URBANE project Final Event

6 November 2025 | Barcelona, Spain

Co-funded by the European Union

Outline

What is GREEN-LOG?

The Urban Logistics Challenges

Overview of technical GREEN-LOG solutions

Logistics-as-a-Service :

- Concept
- LaaS Core Features and Functionalities
- LaaS Technical Architecture
- LaaS Added Value

Pilot Use Case: Mechelen

Mechelen Pilot Key Achievements

What's next for GREEN-LOG LaaS Marketplace?

WHAT IS GREEN-LOG?

GREEN-LOG aims to accelerate systemic changes and create last-mile delivery ecosystems that are economically ecologically and socially sustainable

60% of the world population will live in urban areas

78% growth through 2030 in urban last-mile deliveries

1. BRING together city logistics ecosystems and supporting them to introduce innovative last-mile delivery solutions

2. ACCELERATE the shift to sustainable and smart mobility in last-mile delivery

3. DELIVER a fully functioning and solid system prototype demonstrated in the operational environment

4. DEVELOP Logistics-as-a-Service platform, automated delivery concepts, cargo bike-based innovations, and multimodal parcel deliveries

HORIZON-CL5-2021-D6-01-08

New delivery methods and business/ operating models to green the last mile and optimise road transport

€ 6,260,158 (EU contr.)

42 months (01/23-06/26)

32 partners

10 countries (EU & UK)

Netcompany S.A.

GREEN-LOG

Co-funded by the European Union

UK Research and Innovation

CIVITAS

The Urban Logistics Challenges

Fragmented Operations

Limited collaboration and siloed systems

High costs, fuel waste, and delayed deliveries

Lack of Real-Time Visibility

Limited real-time tracking and predictive system intelligence

Low transparency across stakeholders

Inflexible Logistics Systems

Poor adaptability to traffic, policy, and demand changes

Poor optimisation and service quality concerns

Environmental & Urban Pressure

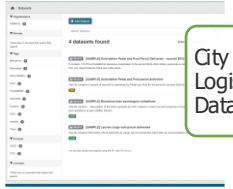
Congestion, pollution, and high CO_2 emissions

Inefficient routing and limited adherence to sustainability policies

Overview of technical GREEN-LOG solutions

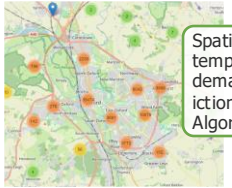
Planning Technologies

Middleware



City Logistics DataSpace

Service

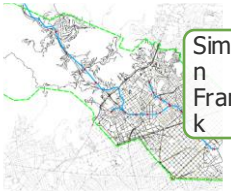


Spatio-temporal demand prediction Algorithn

Service

MCC deployment and load pooling strategiser

Network Service



Simulation Framework

Web Application

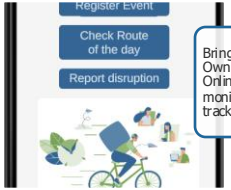
Augmented intelligence modelling platform (AIMP)

Real-Time and Connected Technologies

Web Application

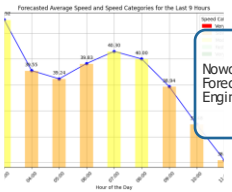
Logistics as a Service Marketplace

Mobile Application



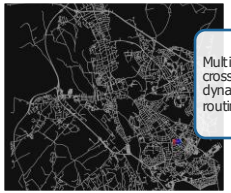
Bring Your Own Device for Online asset monitoring & tracking

Service



Nowcasting & Forecasting Engine

Service



Multi-modal & cross-service dynamic (re) routing

Web Application

Digital Control Tower

GREEN-LOG Logistics-as-a-Service Marketplace

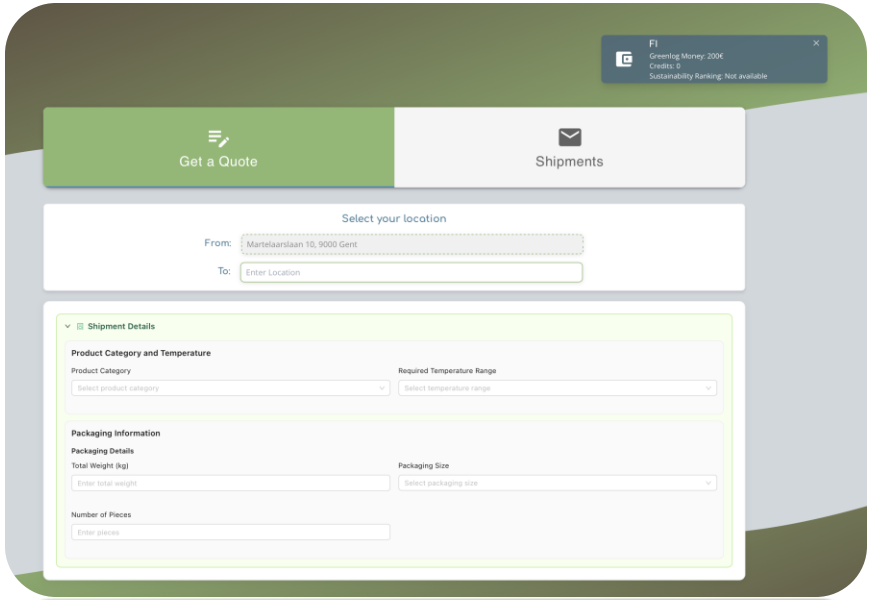
GREEN-LOG

Co-funded by the European Union

Logistics-as-a-Service Concept

An integrated innovation web application designed to:

- Connect consumers and logistics service providers (LSPs) for last-mile delivery
- Operated by **city logistics aggregators** to coordinate providers and support local policies
- Supports **real-time integration** with LSP systems via standardized APIs
- Offers an **intuitive interface** for users to select logistics services based on time, cost, and environmental preferences



GREEN-LOG

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UK Research and Innovation

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Core Features & Functionalities of the LaaS Marketplace

Core Features

- **User Registration & Profiles.**
- **First mile Pickup & Last Mile Delivery with low-emission logistics**.
- **Logistics Tracking & Historical Data Monitoring**

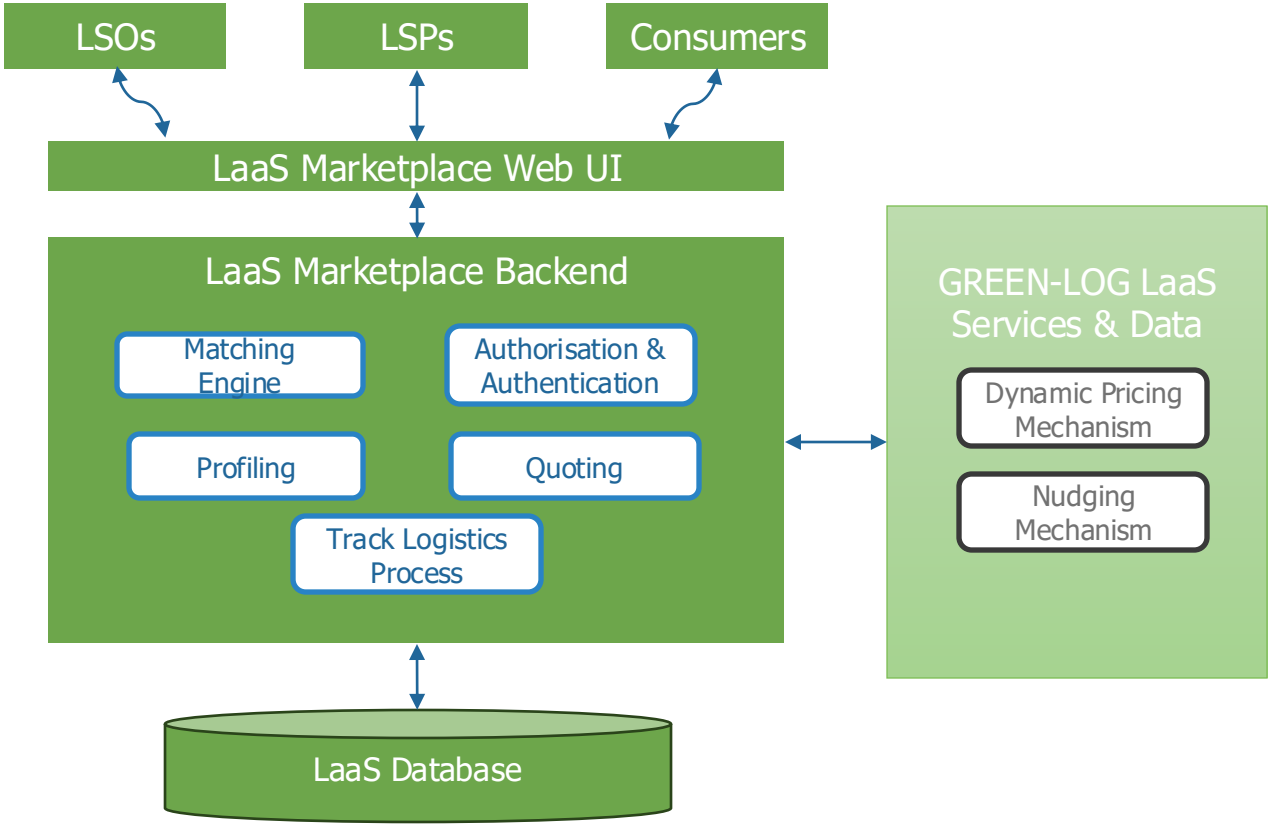
User Roles

- **Local Shop Owners (LSOs)** enter shipping preferences and request pick-up from their designated locations.
- **Consumers** create personal profiles, add preferred addresses, and request for a delivery.
- **Logistics Service Providers (LSPs)** define fleet details, pricing, and service areas for real-time matching, while tracking pick-ups and deliveries through the platform.

System Intelligence & Added Value

- **Smart Matching Engine** for users and providers
- **Dynamic pricing** generates quotes based on availability, distance, and load consolidation opportunities.
- **Shipment bundling logic** leading to real-time optimization that reduces vehicle trips and emissions
- **Behavioral Nudging for Sustainability** guiding users toward greener, less congested deliveries.
- Supports policy goals like Low Emission Zones (LEZ) and time-window regulation.

Reference Architecture of LaaS Marketplace



What Makes the LaaS Marketplace Valuable?

Enhancing Transparency and Collaboration

- Shippers, LSPs, consumers, and local authorities
- Encourages real-time data integration

Nudging Sustainable Choices

- Incentivizes sustainable delivery choices by adjusting costs based on eco-impact and timing flexibility
- Shifts peak deliveries to off-peak times, managing urban congestion and improving transport efficiency

Promoting Sustainability

- Eco-friendly systems
- Incorporate city policies to reduce traffic congestion

Dynamic Pricing Mechanism

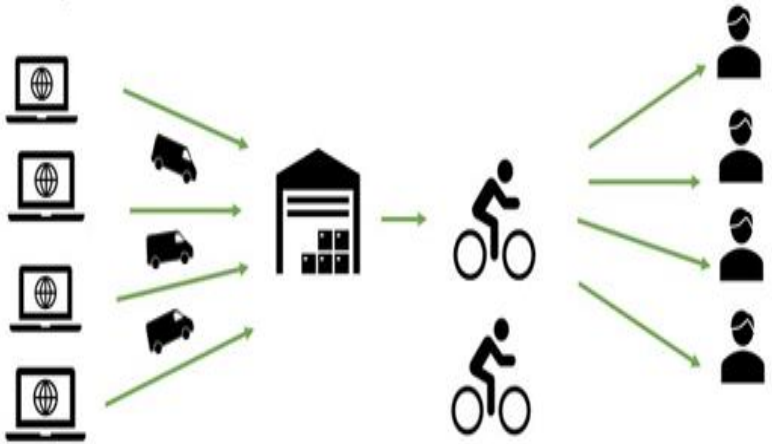
- Boosts vehicle fill rates & reduces driven kilometers through demand consolidation
- Tries to align service levels with user preferences, policy goals, and operators' targets

Pilot Use Case: Mechelen

Nudging consumer behaviour towards sustainable delivery methods

Pilot's Objectives:

- ☞Create awareness
- ☞Focus on bundling
- ☞Less vans, more cargo bikes targeting to:
  - More traffic safety and
  - Less CO2 emissions.

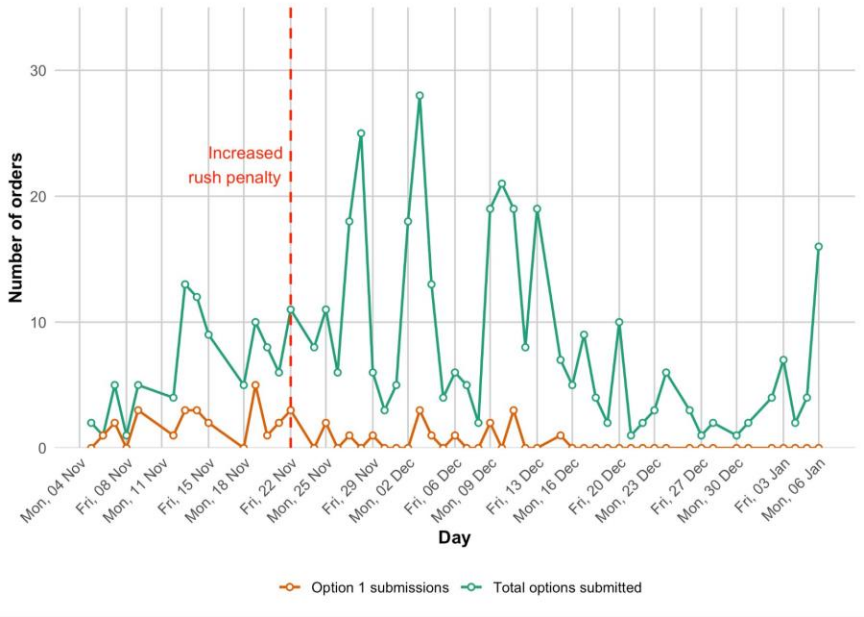


Mechelen Pilot: Key achievements

KPI Results

- 58 users, 497 parcels, 94 cargo bike trips
- Effective price nudging and sustainability nudging
- 47% Overall consolidation and 27% individual consolidation
- Effective VKT saved which enables the evaluation of environmental KPIs
- Positive end user survey results + continuous user feedback which enable the evaluation of societal and economic KPIs
- Potential improvement for 2nd demo round concluded

Impact of Price



What's next for GREEN-LOG LaaS Marketplace?

- Continue **evaluation of the LaaS Marketplace** under real-world pilot conditions
- Explore **real-time integration** with Local Logistics Service Providers' systems via APIs for enhanced monitoring and data exchange
- **Integrate functionalities** developed in sister Horizon projects (e.g., Smart Contracting from URBAINE)
- Assess the **scalability and transferability** of the current solution in additional pilot cities

URBANE

URBAN LOGISTICS INNOVATION DAY & FINAL EVENT

Plenary Session 1: Physical Internet for low-emission last-mile logistics

Modetator
John Limaxis
Project Manager, Inlecom

Panelist 1
Jos Streng
Freight policy advisor,
City of Rotterdam

Panelist 2
Javier Romo García
Project Manager, CIDAUT

Panelist 3
Sebastien Horemans
CEO, PICK&SMILE

Panelist 4
Steve Corens,
Project Manager, VIL Flanders
Innovation Cluster for Logistics

Thursday 6 November

9:45 – 11:00, BARCELONA,
AMB Headquarters

Co-funded by the European Union
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🚛 Breakout Sessions I - Towards Sustainable Urban Logistics: Pilot insights and planning methodologies

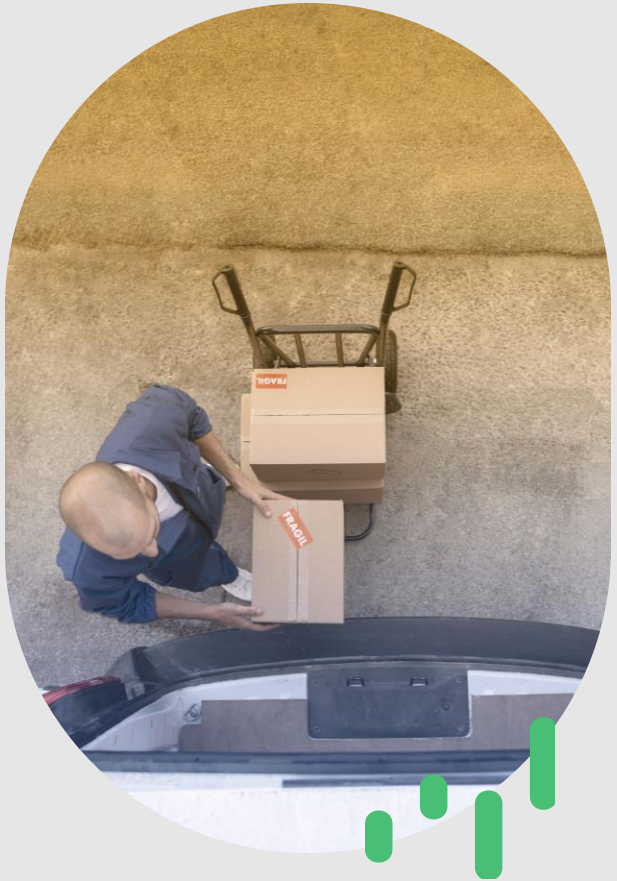
Room A (Plenary room)

Data and Digital Tools for More Efficient Urban Logistics

Room B (Multipurpose room)

Tools Demonstration for Sustainable Urban Logistics Plans

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782



Breakout Session 1

Towards Sustainable Urban Logistics: Pilot insights and planning methodologies (Room A)

This project is co-funded by the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Speakers

Fabio Fumagalli
GEL Proximity

Panos Protopapas
INLECOM

Philippe Rapin
Urban Radar

Yingli Wang
Cardiff University

Yangying Li
ALICE

This project is co-funded by the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Leveraging URBANE to Power DISCO Data Space Solutions

Panos Protopapas
Research Scientist (INLECOM)

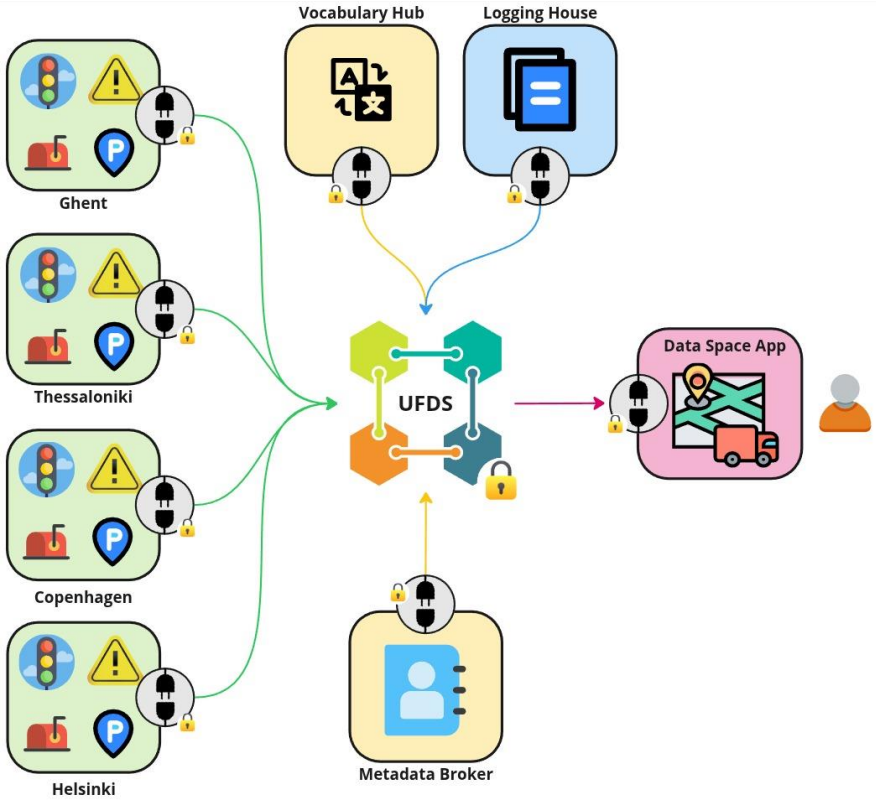
URBANE Final Event – 6 November 2025

Funded by the European Union

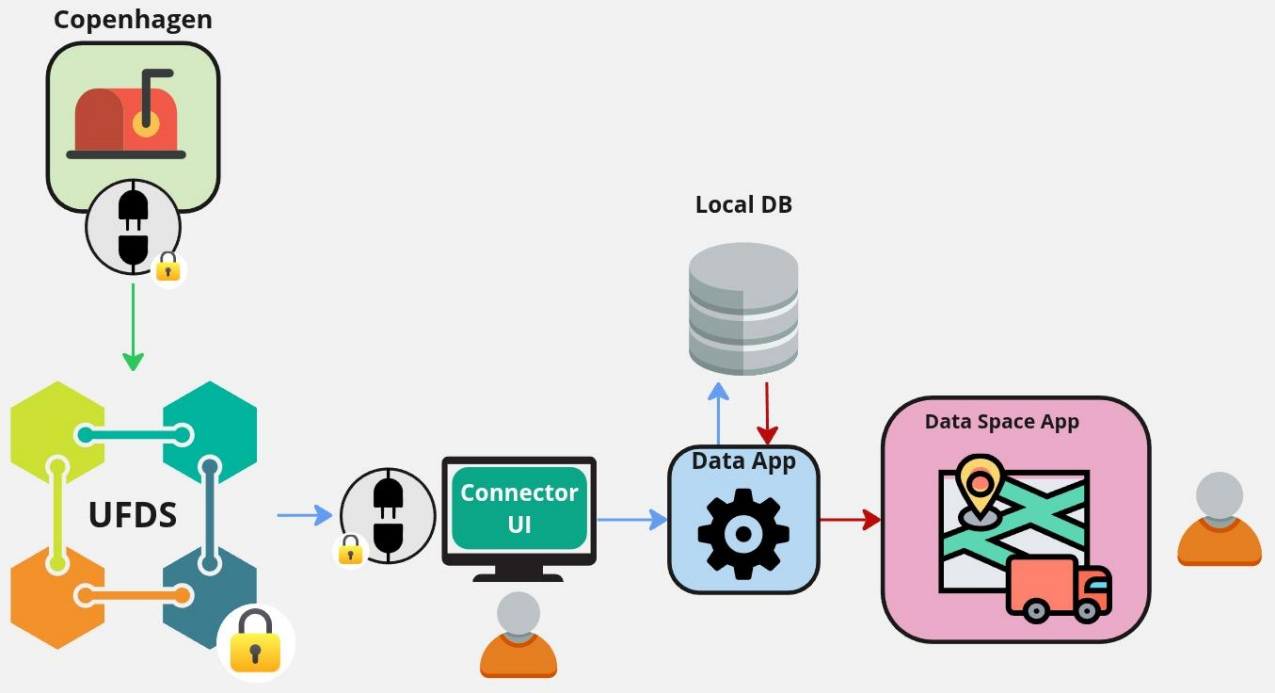
This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101103954

1. DISCO – URBANE Integration
2. URBANE backed DISCO Applications
3. Demo

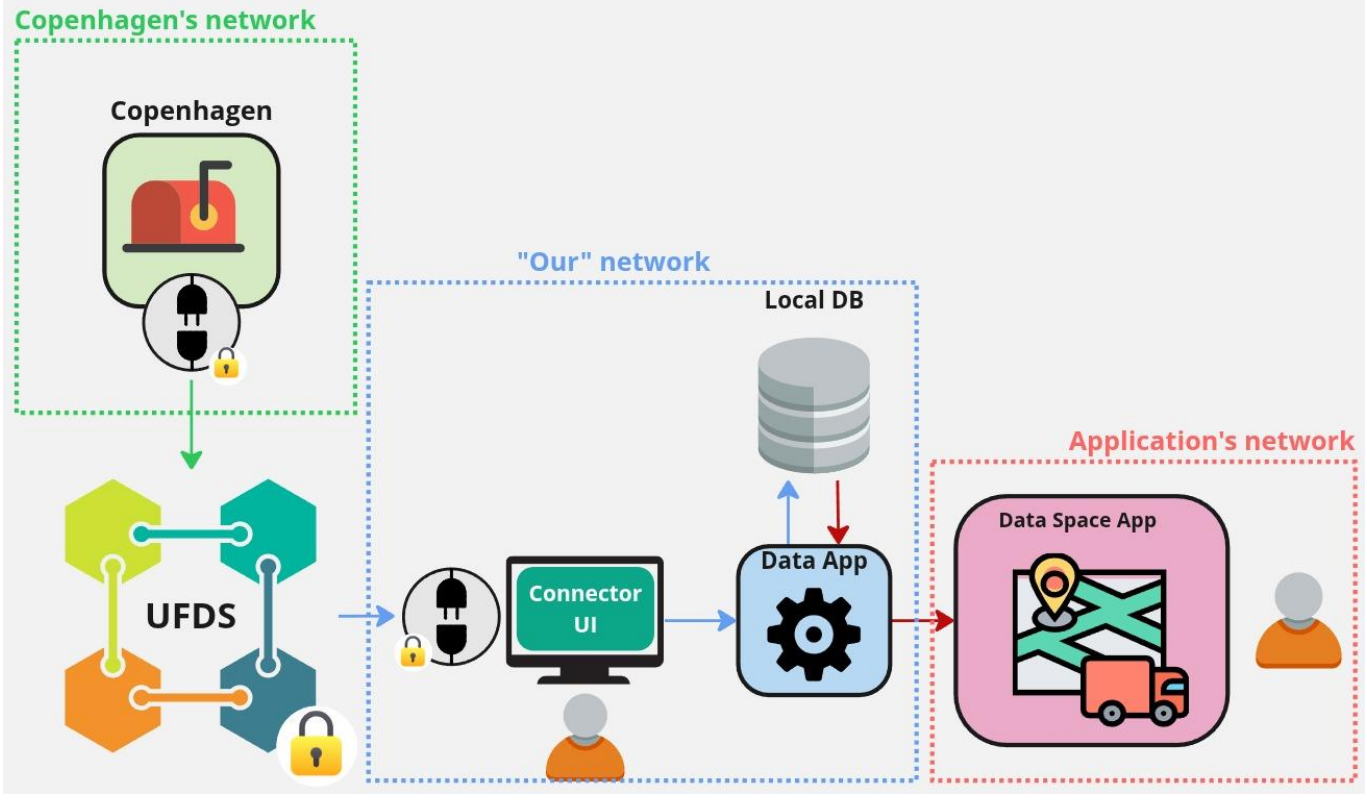
DISCO–URBANE Integration



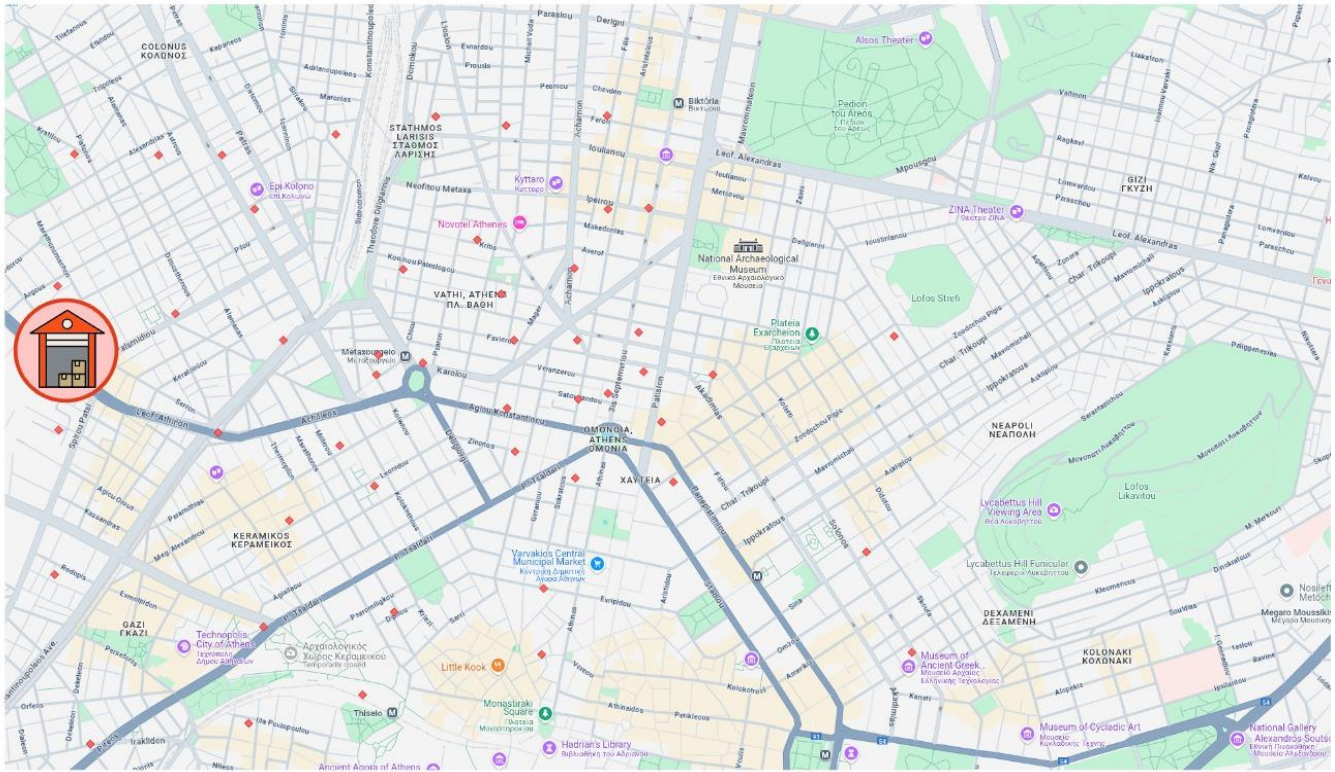
DISCO–URBANE Integration



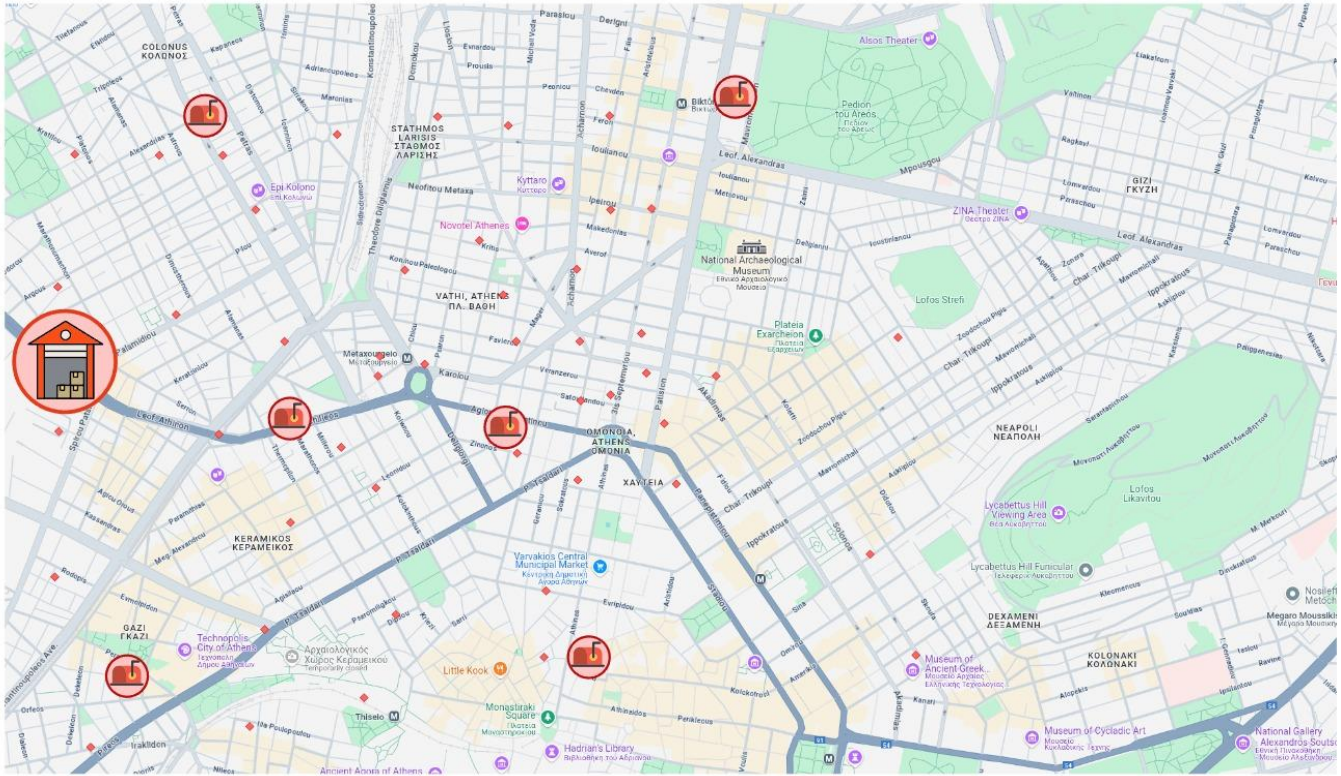
DISCO–URBANE Integration



URBANE backed DISCO Apps



URBANE backed DISCO Apps



Demo

Thank you!

URBANE

Final event

6 November 2025

Barcelona

The Last-Mile Software Orchestrator

Fabio Fumagalli

Head of Information Technology

ogel PROXIMITY

Urban Logistics today

Urban logistics is fragmented.

Every carrier runs its own network and software stack. That means duplicated infrastructure, empty trips, more congestion and emissions.

The challenge isn't moving more vans:
it's connecting what's already moving.

Orchestration is the missing layer.

URBANE vision and the Role of GEL Proximity

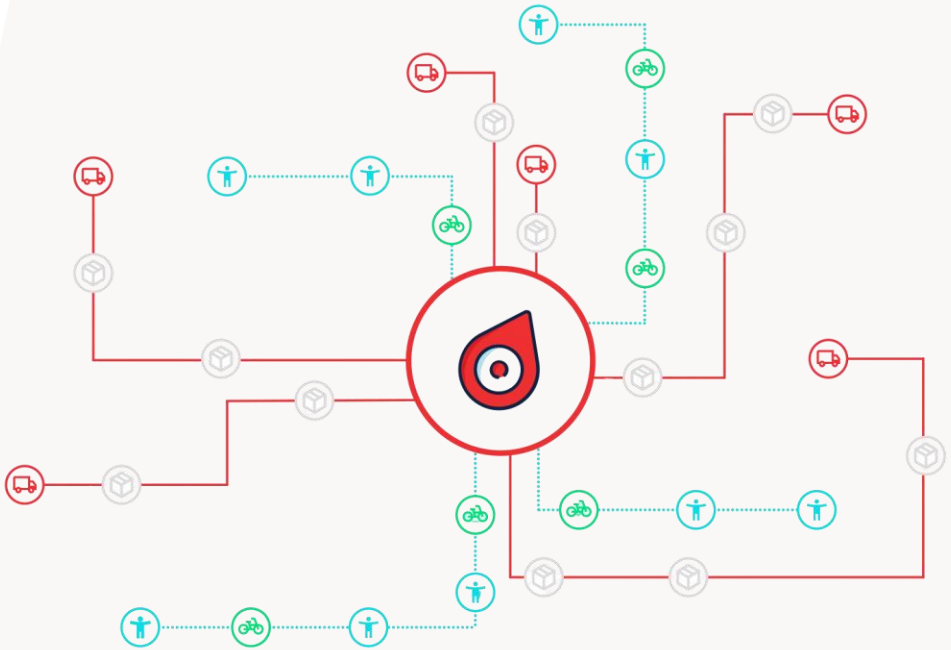
URBANE embraces the Physical Internet

GEL Proximity turns that vision into reality

That's what collaboration looks like in practice.

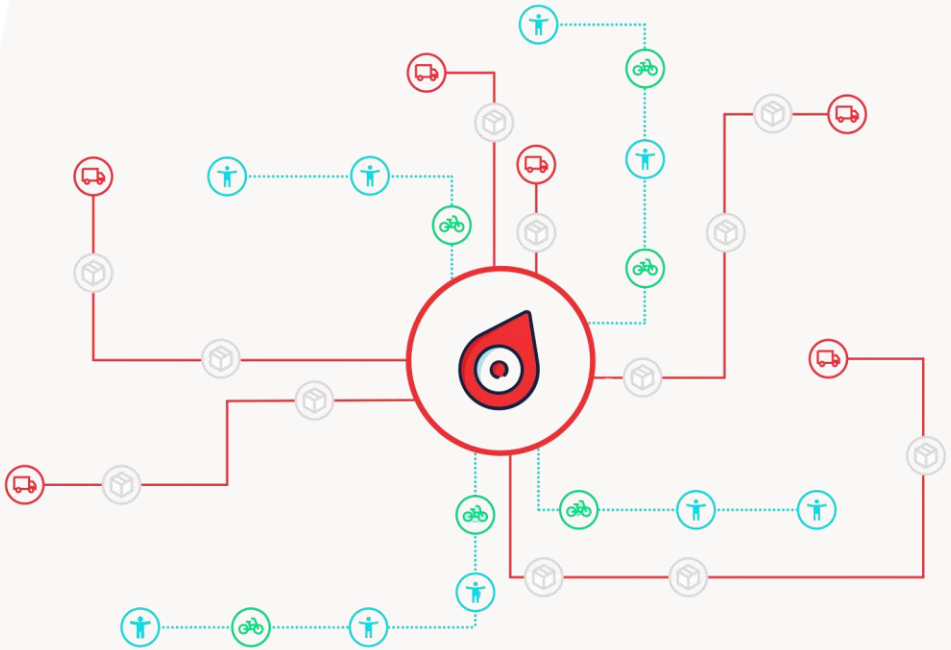
What Physical internet means

The "Physical Internet" is a concept that aims to create a universal, open, and collaborative logistics network by applying the principles of the digital internet to the physical movement of goods. It seeks to improve efficiency, sustainability, and transparency in supply chains by standardizing containers, encouraging shared resources, and using smart technologies for optimized routing and asset management.



The role of Blockchain

The GEL Proximity Orchestrator leverages blockchain technology to ensure data transparency, traceability, and integrity across proximity logistics operations. Each transaction within the delivery and pickup network—such as parcel handovers, confirmations, and status updates—is securely recorded on a distributed ledger, creating an immutable audit trail. This approach enhances trust among carriers, retailers, and pickup point operators, while simplifying compliance and verification processes. By integrating blockchain, GEL Proximity guarantees tamper-proof data sharing and fosters a verifiable ecosystem of logistics partners.

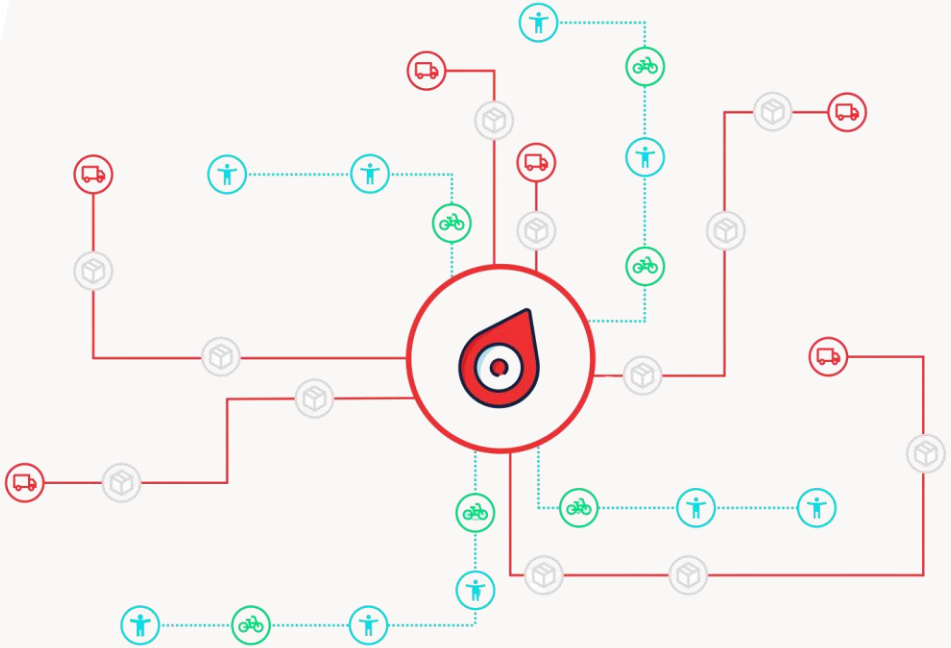


What Orchestration means

An orchestrator is like a conductor: synchronizing different instruments so they play one melody.

In logistics, that means aligning data flows and parcel movements across carriers, pickup points, and citizens.

The result:
seamless, efficient, and data-driven deliveries.



Agnostic Lockers

This orchestration makes agnostic lockers possible.

The locker provider installs the hardware, and GEL Orchestrator enables every carrier, every last-miler to use it. We also allow direct pickup by the final customer.

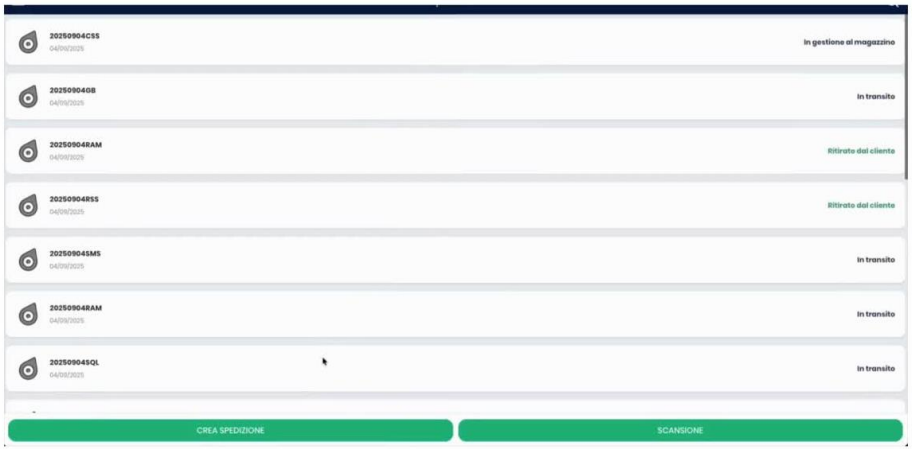
It’s a true open-access model: lockers become shared urban infrastructure instead of private assets.

Architecture Snapshot

Our platform unifies multiple APIs under one orchestration engine.

It harmonizes data formats, manages authentication, and applies rules for emissions targets or delivery windows.

It’s modular, interoperable, and ready to integrate with URBANE’s Digital Twin and GreenLog tools.



Data & Digital Tools Synergy

The orchestrator is deeply connected to URBANE's data ecosystem.

Locker occupancy feeds into the Decision Support System; analytics from the DSS refine our routing algorithms.

It's a genuine two-way exchange of information, turning data into a public-private asset rather than a silo.

Benefits & Impact

This model cuts congestion and emissions, improves road safety, and encourages the use of cargo bikes.

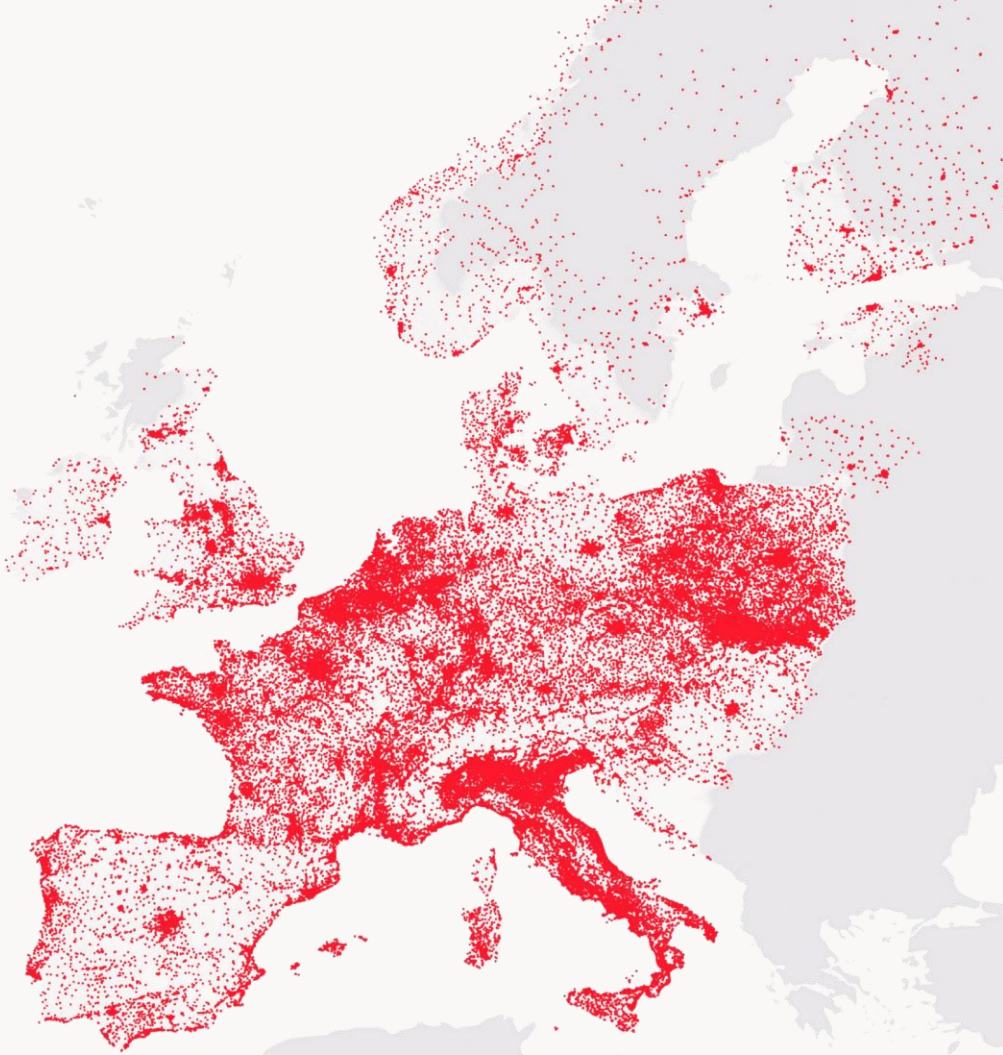
It shows that collaboration and competitiveness can coexist.

That’s why Europe now recognizes GEL Proximity as a forward-thinking enabler of the Physical Internet.

Scalability & Replication

The orchestrator can and will scale across Europe.

Each city keeps its local systems, but the orchestration logic remains consistent: **that's how we build an interoperable European network.**



Future Roadmap

Our roadmap includes:

AI-driven allocation
that predicts the best pickup point before dispatch

Full GreenLog integration
for city-level visibility

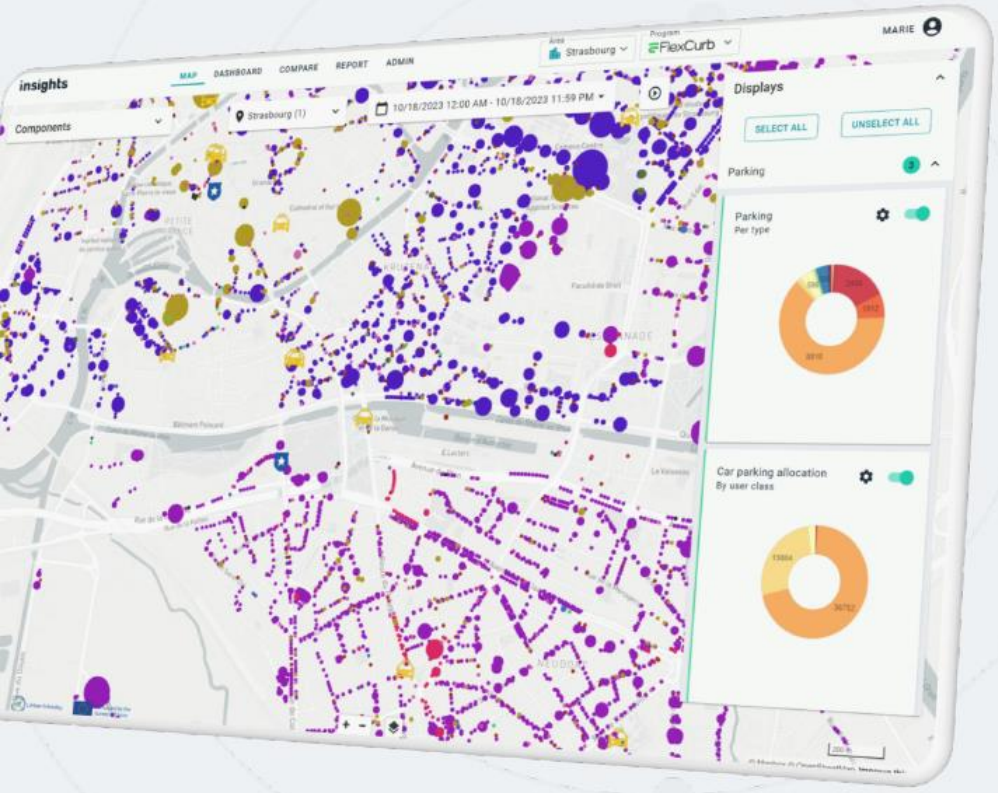
Ongoing contributions
to European data-sharing standards

The future of the last mile isn't about owning more assets,
it's about connecting what already exists.

The GEL Orchestrator is the bridge that makes that possible.

Leader in Out Of Home Solutions

gelproximity.com



URBAN RADAR

Digital Platform for Public Authorities: Where to Locate Your Micro-Hubs

URBANE – Technical Workshop on Data and Digital Tools in Urban Logistics

Philippe RAPIN | CEO, Urban Radar

THE BIG QUESTION

Urban Radar | Geo Data Intelligence Platform for Public Authorities

How can a city ensure that last-mile deliveries are fast, efficient, and sustainable without adding more traffic and emissions?

THE URBAN LOGISTICS CHALLENGE

URBAN RADAR

Cities want to act but they often can't *see* their logistics patterns clearly.

- Rapid e-commerce growth and delivery volumes
- Rising congestion and emissions
- Cities seeking smarter, cleaner logistics
- **Micro-hubs** as enablers for sustainable last-mile delivery.

URBANE

WHY DATA & DIGITAL TOOLS MATTER

Data reveals what intuition can't.

- Transform fragmented logistics data into actionable insights
- Support evidence-based decisions for city planning
- Enable coordination with private logistics operators

URBAN RADAR IN A NUTSHELL

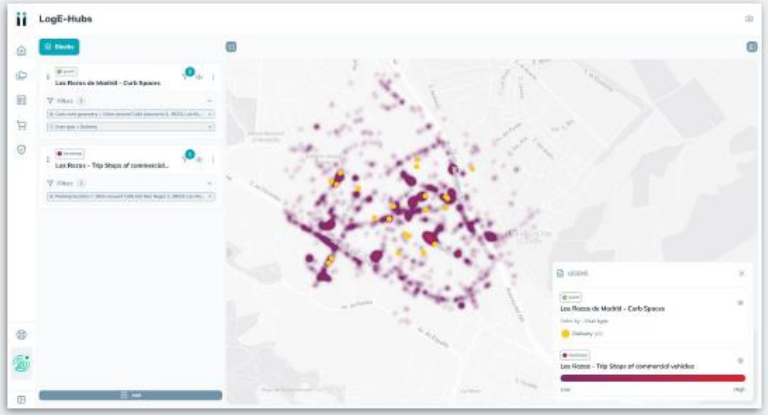
- European start-up specializing in **urban logistics intelligence**
- **Geo Data Intelligence Platform** designed for public authorities
- Integrates **mobility, freight, and land-use** data
- Provides **spatial insights** for urban planning and decision-making

USE CASE 1: Loading Zone Master Plan

Goal: Compare existing loading zones with actual commercial vehicle stops

Data:

- Curbside zones / Loading zones
- Commercial vehicles stops ≥ 10 min



Outcome:

→ Visualize where loading zones work vs. where trucks double-park

→ Reallocate curb space based on real demand

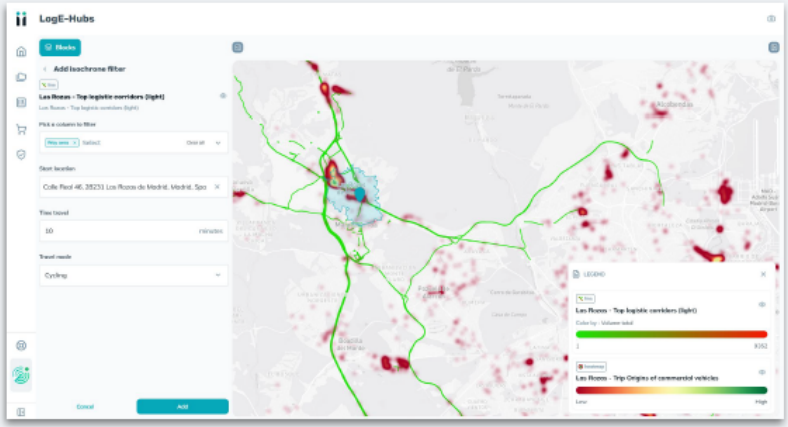
USE CASE 2: Last-Mile Logistics Hub Positioning

URBAN RADAR

Goal: Identify optimal locations for cargo-bike micro-hubs

Data:

- Origins/Destinations of LCVs
- Logistics corridors (main road infrastructures to access the territory)
- Road congestion and vehicle speed
- Isochrone (10 min cycling) from the city center



Outcome:

→ Understand where LCVs come from and which routes they use

→ Pinpoint ideal hub sites within cycling distance of city center

USE CASE 3: New Locker Implantation

Goal: Identify new locations for parcel lockers

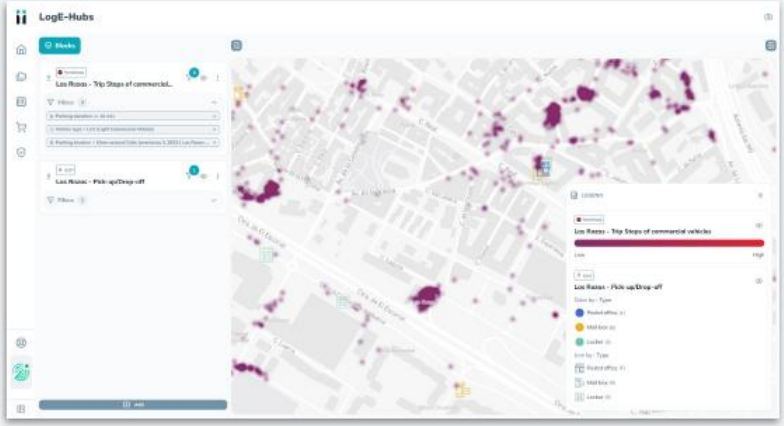
Data:

- Pick-up/Drop-off location
- Concentration of LCVs stops ≤ 10min

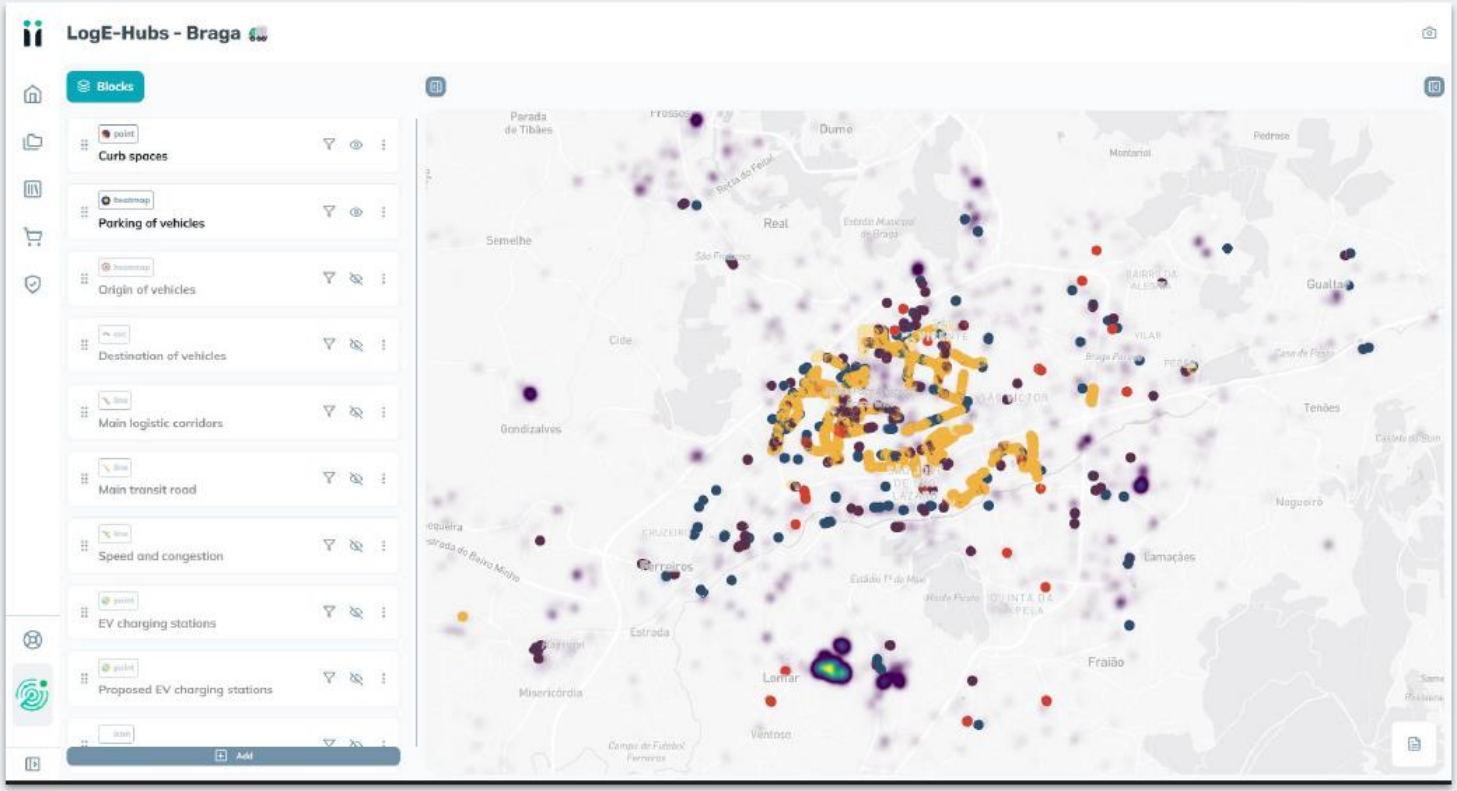
Outcome:

→ Map dense short-stop zones (likely parcel deliveries)

→ Spot gaps in existing locker network



EXAMPLE BRAGA



THE FUTURE : PREDICTIVE PLANNING

From reacting to predicting.

So far, everything I've shown is descriptive it tells you what's happening today.

The next step is **predictive planning**: anticipating how delivery demand will evolve tomorrow.

With AI and scenario modeling, cities will soon be able to simulate how new policies or infrastructure for example, a new micro-hub will affect delivery flows, emissions, or curb demand.

That's where we're heading: from reacting to problems to **anticipating and preventing** them.

GEO DATA INTELLIGENCE PLATFORM OVERVIEW

URBAN RADAR

Three core capabilities:

1. **Data aggregation** from multiple sources
2. **Analytics & visualization** dashboards
3. Public/Private **Data exchange**
4. **Decision-support** for micro-hub and logistics planning

URBANE

KEY LESSONS & CHALLENGES

Key Lessons

- **Data must serve decisions, not the other way around**
- **Collaboration is essential** : cities + operators = better outcomes
- **Visual clarity builds consensus**
- **Small pilots can have big impact** : start local, scale citywide

Challenges Ahead

- **Data fragmentation & interoperability** across systems
- **Trust & governance** for public–private data sharing
- **Scaling across Europe** while respecting local contexts
- **From analysis to action** — enabling faster implementation

CLOSING THOUGHT

Cities are not just delivery points they are living systems.

To help them breathe, move, and grow sustainably, we need **data that brings clarity, not complexity.**

At **Urban Radar**, we believe every smart, data-driven decision like choosing where to locate a micro-hub, brings us one step closer to **cities that work better for people, goods, and the planet.**

URBAN RADAR

Philippe RAPIN - CEO

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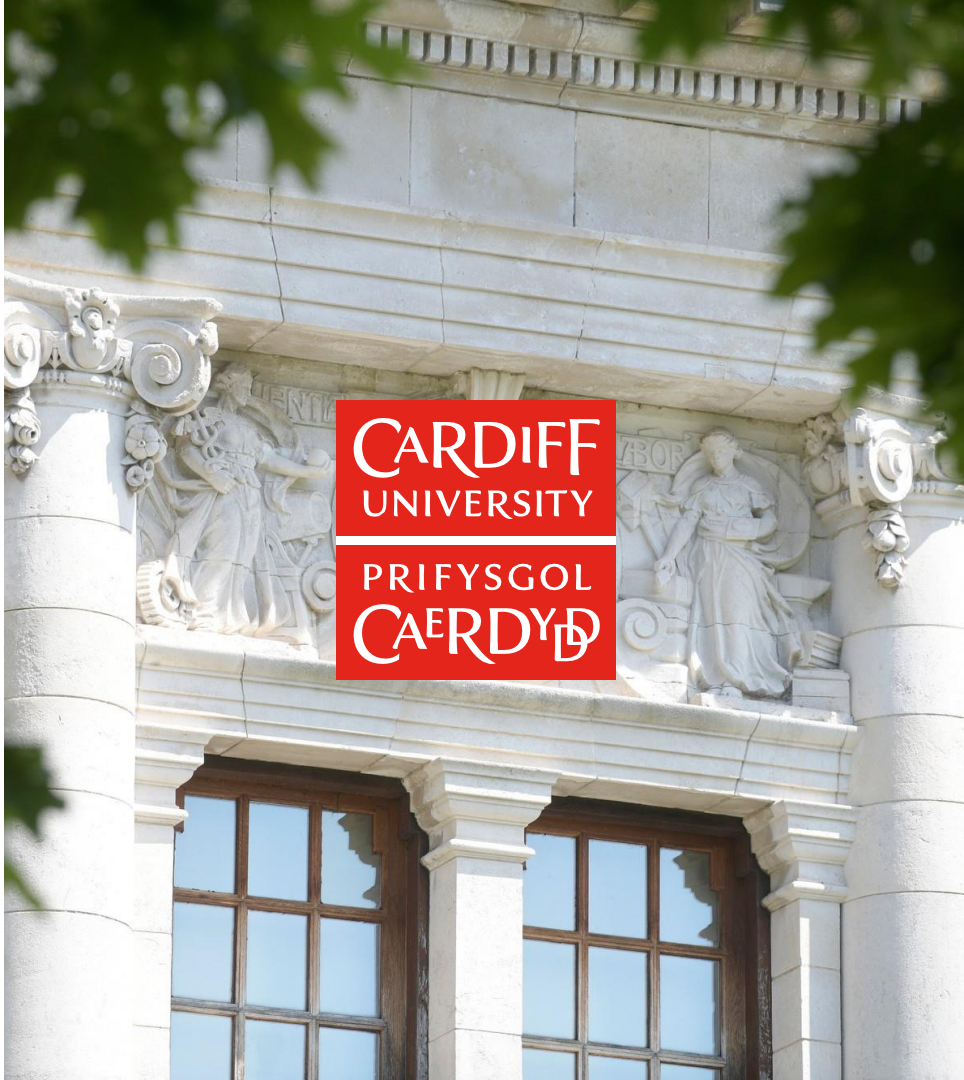
urbanradar.io

UGAP

Enabling Circularity Through Digital Product Passports: Pathways to Supply Chain Adoption

Prof. Yingli Wang
Cardiff Business School
November 6, 2025
(email: WangY14@cardiff.ac.uk)



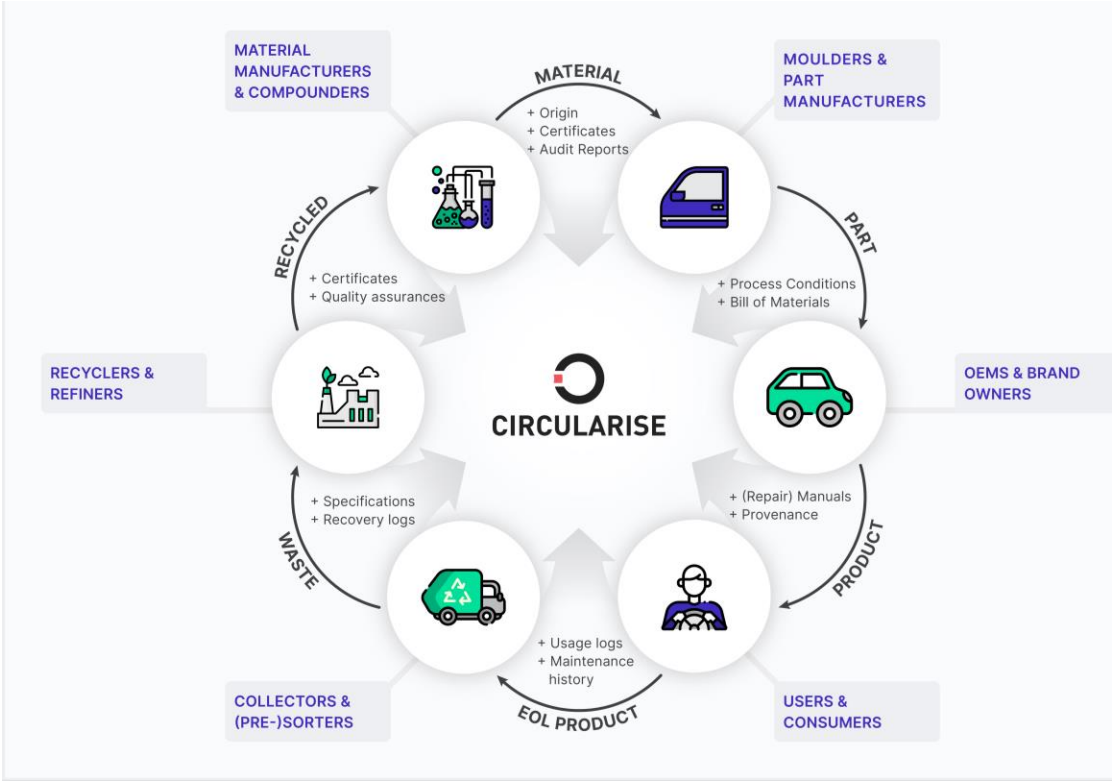
Agenda

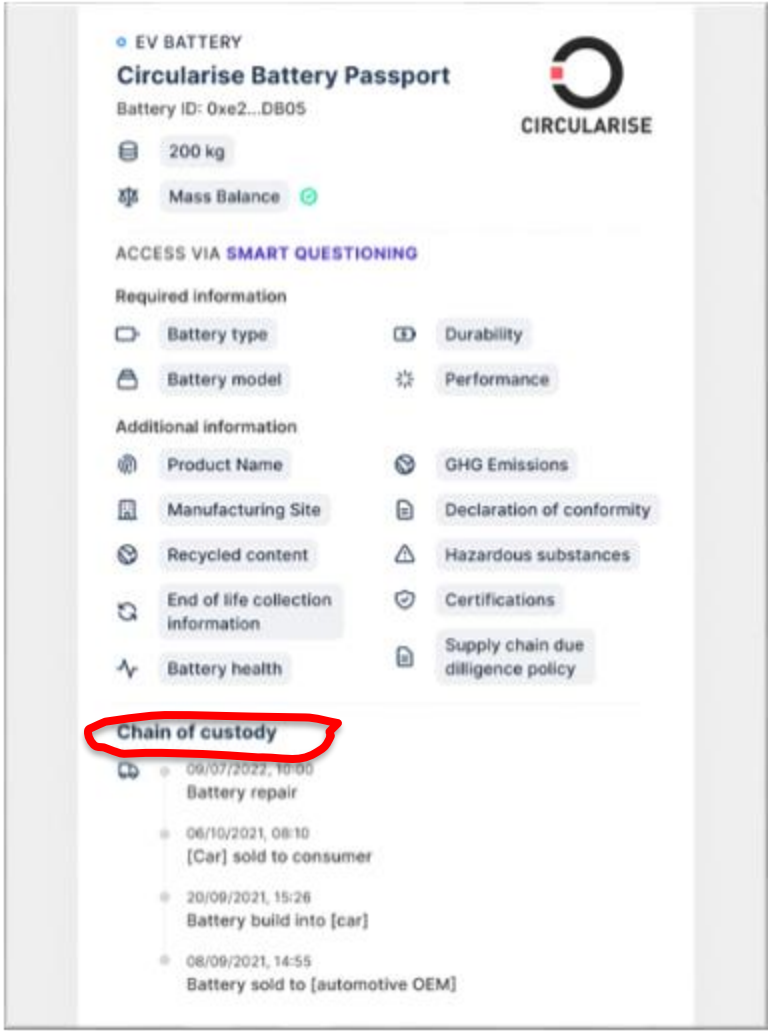
- What is Digital Product Passport (DPP)?
- Why should we bother?
- Research findings

What is a digital product passport (DPP)?

DPP Definition

- A Digital Product Passport (DPP) is a structured collection of product related data with pre- defined scope and agreed data ownership and access rights conveyed through a unique identifier and that is accessible via electronic means through a data carrier. The intended scope of the DPP is information related to sustainability, circularity, value retention for re- use, remanufacturing, and recycling.





Source: https://www.circularise.com/blogs/digital-product-passports-the-future-of-bioplastics

Why should we bother?

"blood diamonds"

Nike Space Hippie

EV battery

Buildings as bank of materials

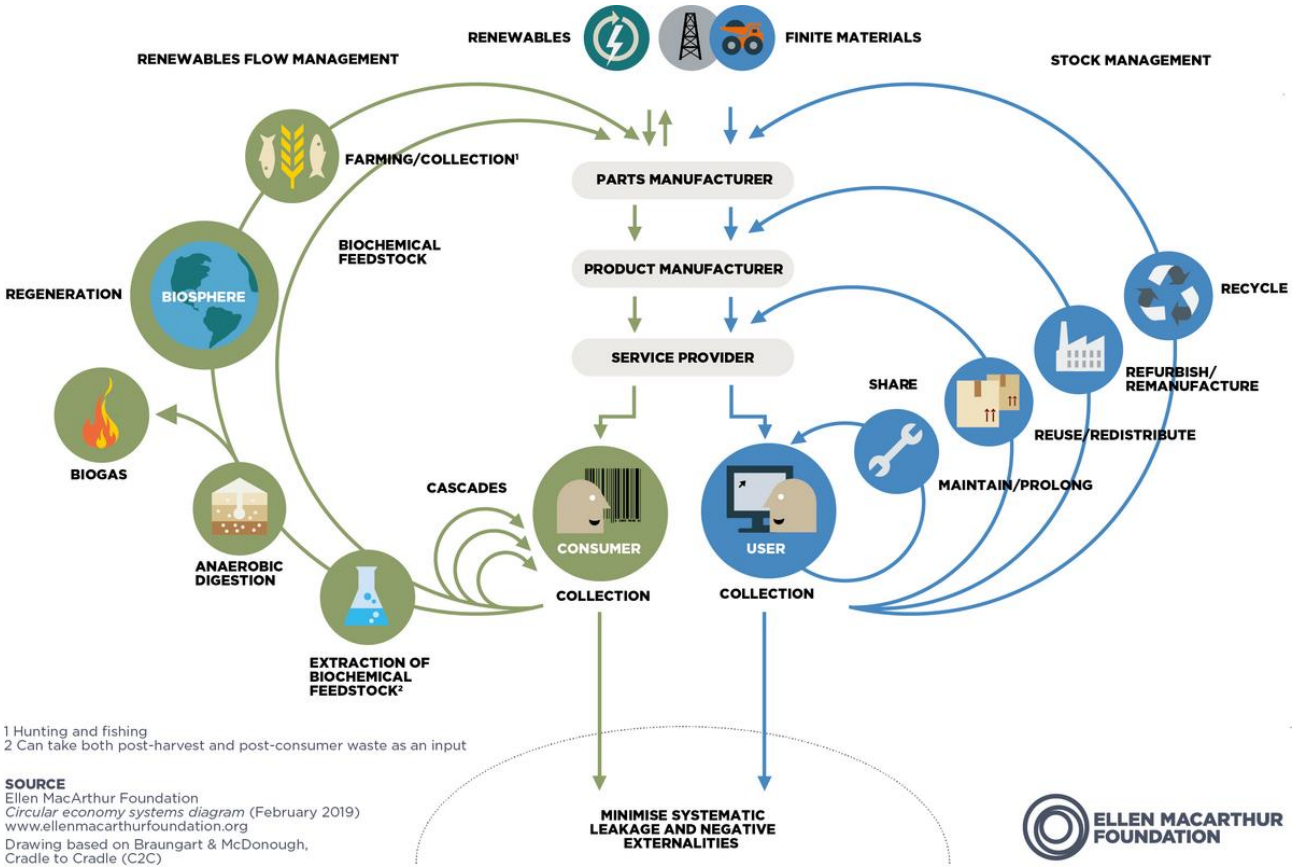
Supply Chain Opaqueness

10Rs

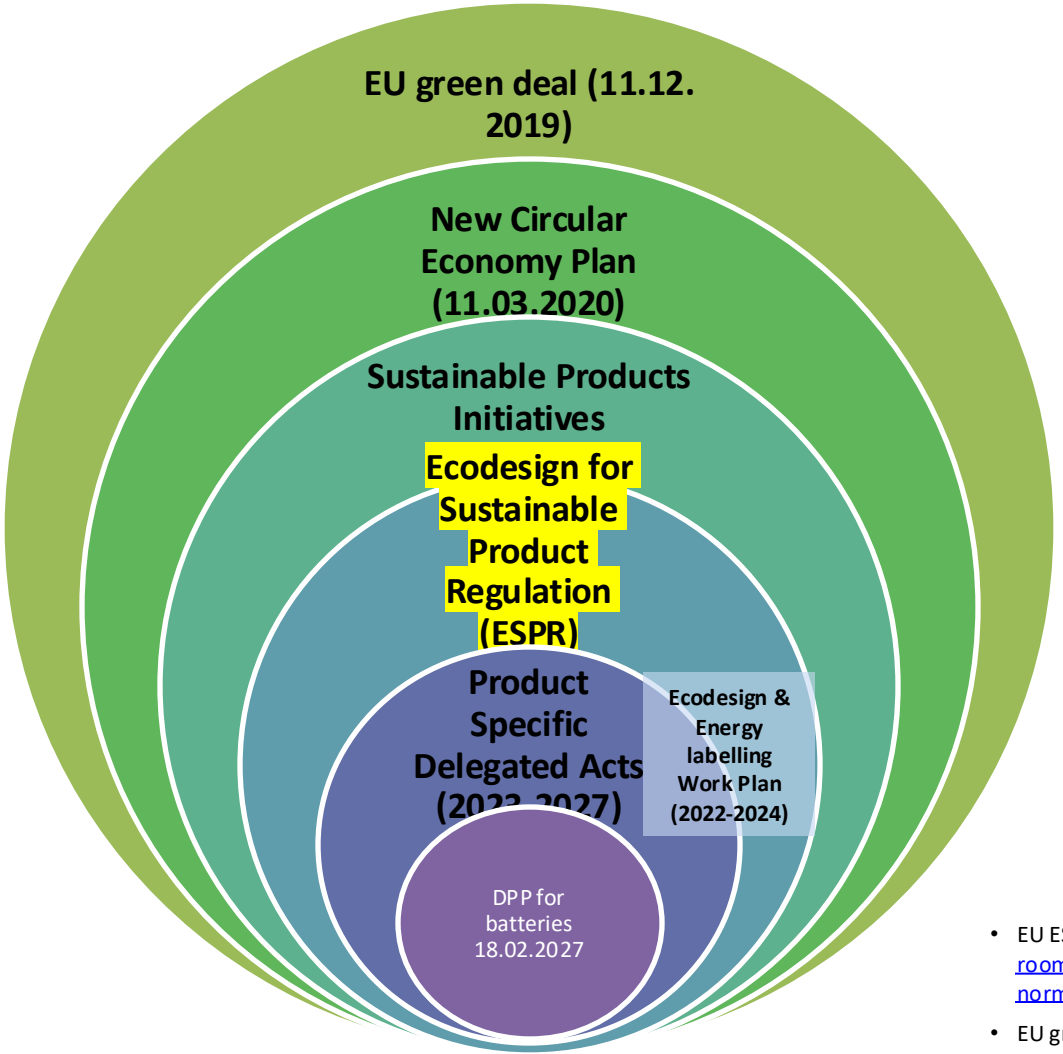
- → R0 Refuse
- → R1 Rethink
- → R2 Reduce

- → R3 Reuse
- → R4 Repair
- → R5 Refurbish
- → R6 Remanufacture
- → R7 Repurpose

- → R8 Recycle
- → R9 Recover



https://www.ellenmacarthurfoundation.org/publications



Context:

On 30 March 2022, the Commission put forward a proposal for a regulation to establish a general framework for setting ecodesign requirements for sustainable products and to repeal current rules (Ecodesign Directive) which focus on energy-related products only. The revised rules, part of a circular economy package, would **apply to almost all products on the internal market** (except food, feed, medicinal products, living organisms, products of human origin, products solely for defence/national security…).

On July 18 2024, ESPR entered into force.

- EU ESPR https://www.europarl.europa.eu/news/da/press-room/20231204IPR15634/deal-on-new-eu-rules-to-make-sustainable-products-the-norm & https://ec.europa.eu/newsroom/growth/items/769584/
- EU green deal: https://www.consilium.europa.eu/en/policies/green-deal/#initiatives

Battery passport timeline

Initially proposed in 2020, the EU Battery Regulation entered into force in August 2023 with the battery passport becoming mandatory from February 2027 onwards

Timeline of the EU Battery Regulation

Source: thebatterypass.eu, Battery Passport Content Guidance (2023)

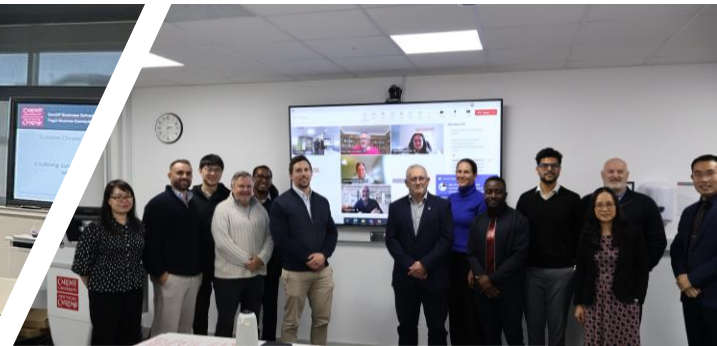
DPP in practice

Early pilots in construction, fashion and critical minerals

Newcastle University

UKRI Engineering and Physical Sciences Research Council

Cardiff University
Prifysgol Caerdydd



Materials

Structure

Structural timber

Structural steel

Bricks

Hangars, greenhouses and barns

Landscaping and paving

Pavers, kerbs and setts

Flagstones

Shell

Insulation

Natural stor elements

There is limited traceability of buildings and construction products, which inhibits reuse and recycling possibilities.

Woodwork

Windows

Doors

Staircases

Architectural antiques

Fireplaces

DPP ecosystem

DPPs function as a '*golden thread*', weaving together multiple stakeholders and processes to close the circularity loop.

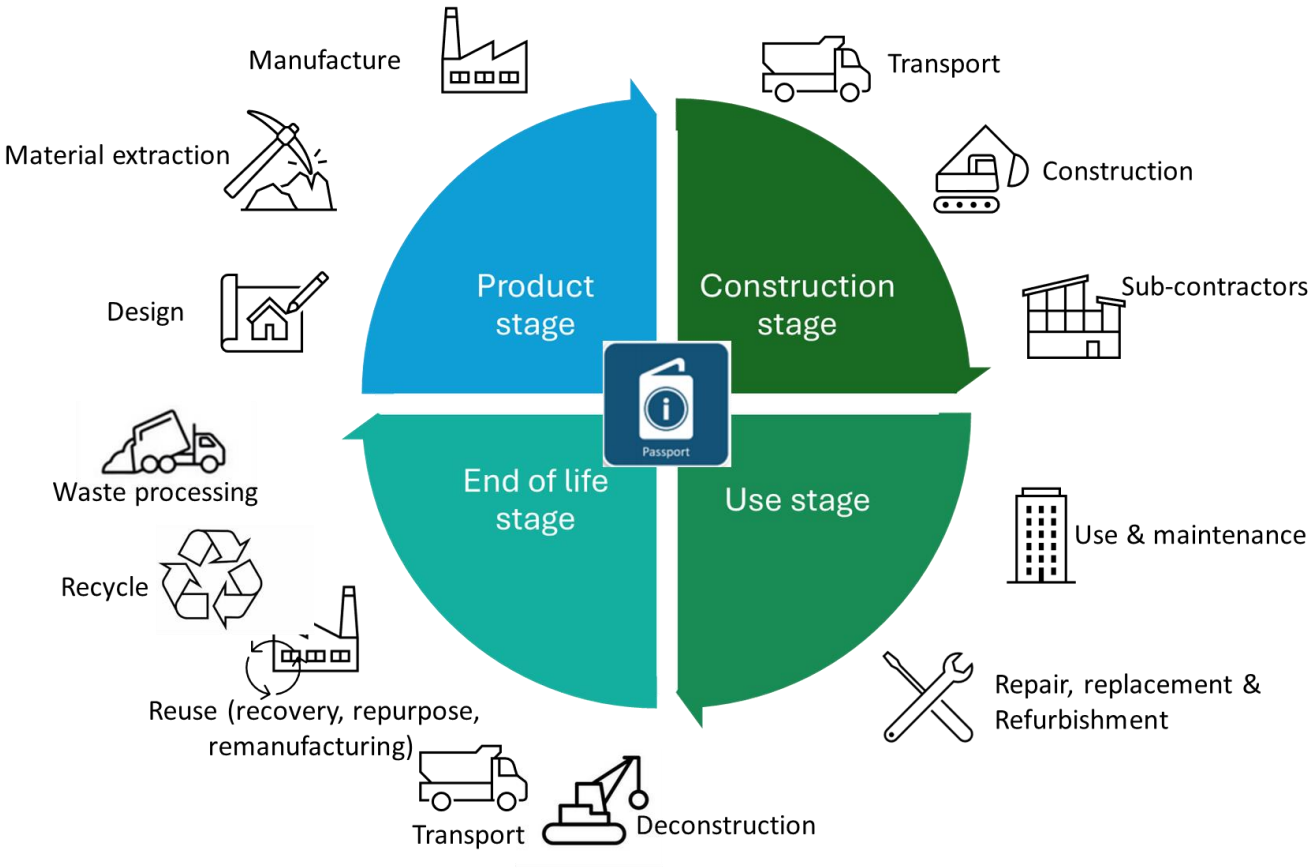
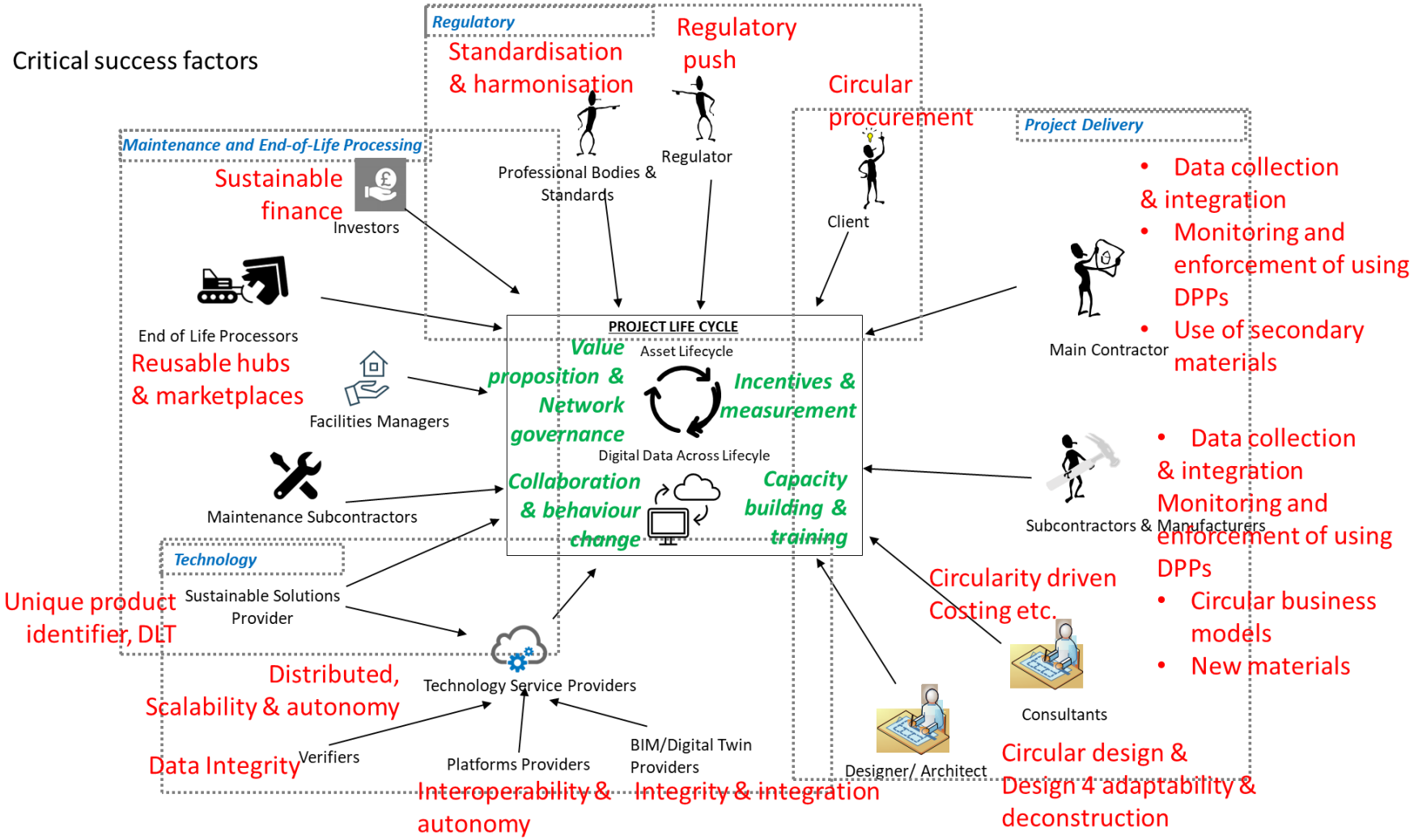


Figure: DPP connects different ecosystem actors along a product/material life cycle in construction (source: authors).

Critical success factors

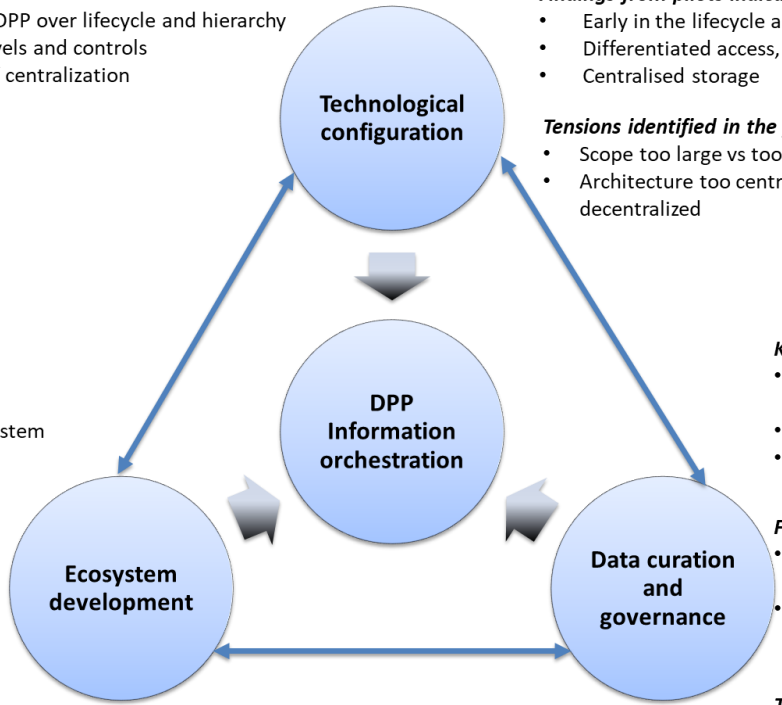


An information orchestration approach

Key decision areas:
- Scope of DPP over lifecycle and hierarchy
- Access levels and controls
- Degree of centralization

Findings from pilots indicate:
- Early in the lifecycle and extensive hierarchical scope.
- Differentiated access, but with restriction controls
- Centralised storage

Tensions identified in the pilot studies *:*
- Scope too large vs too small
- Architecture too centralized vs too decentralized



Key decision areas:
- Leadership over the lifecycle
- Value appropriation
- Ensuring compliance cross the Ecosystem

Findings from pilots indicate:
- Evolving orchestration will be needed over the lifecycle.
- Gains and costs are often asymmetrically distributed.
- Compliance is challenging to enforce.

Tensions identified in the pilot studies *:*
- Shorter term vs longer term perspectives of value appropriation

Key decision areas:
- Agreement of standardized data requirements
- Data governance structure
- Processes and protocols to ensure data integrity

Findings from pilots indicate:
- Guidance will be needed on data requirements
- A combination of legislative and market mechanisms will be needed.

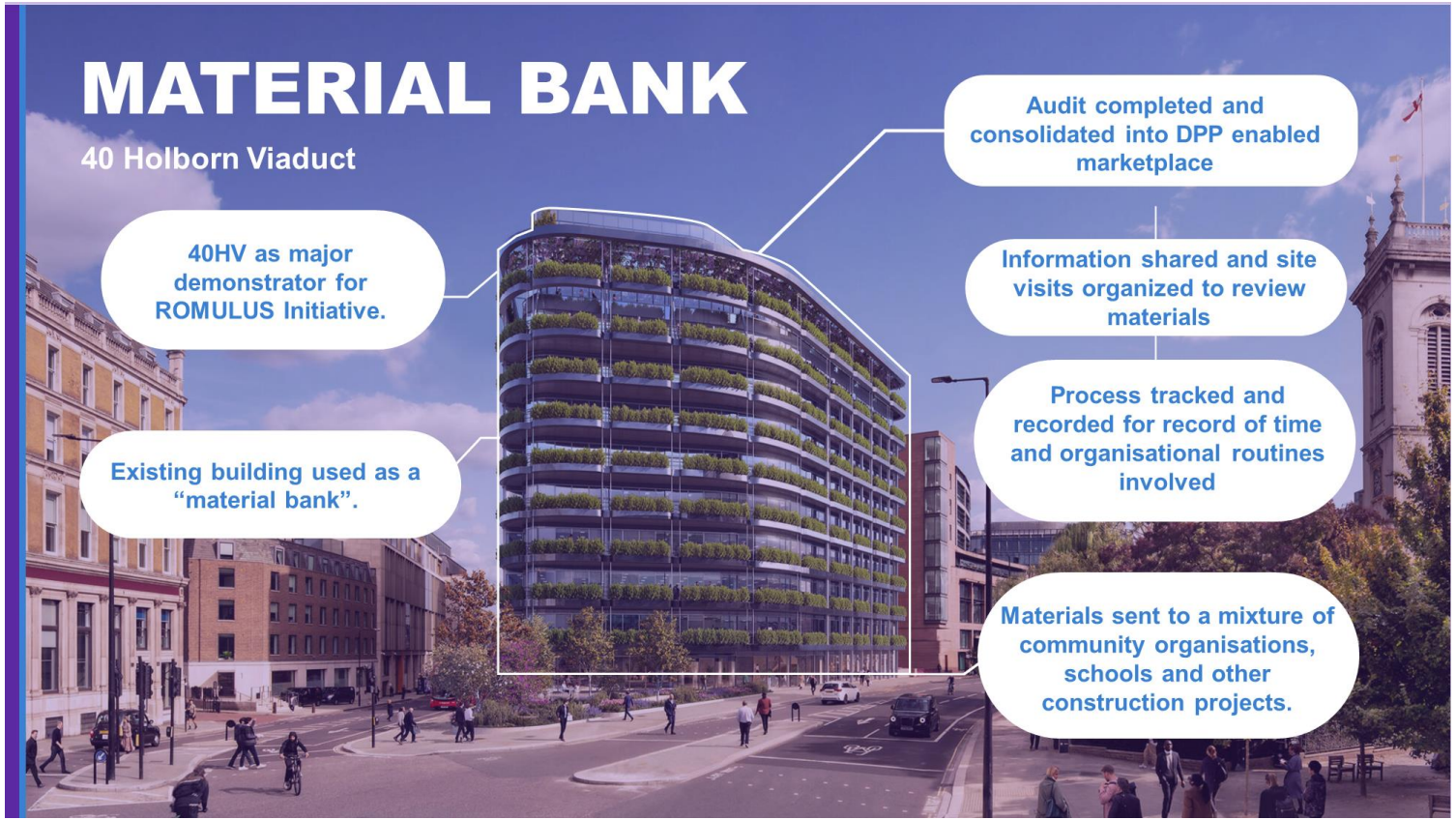
Tensions identified in the pilot studies:
- Too detailed vs not enough detail
- Too standardized vs too flexible

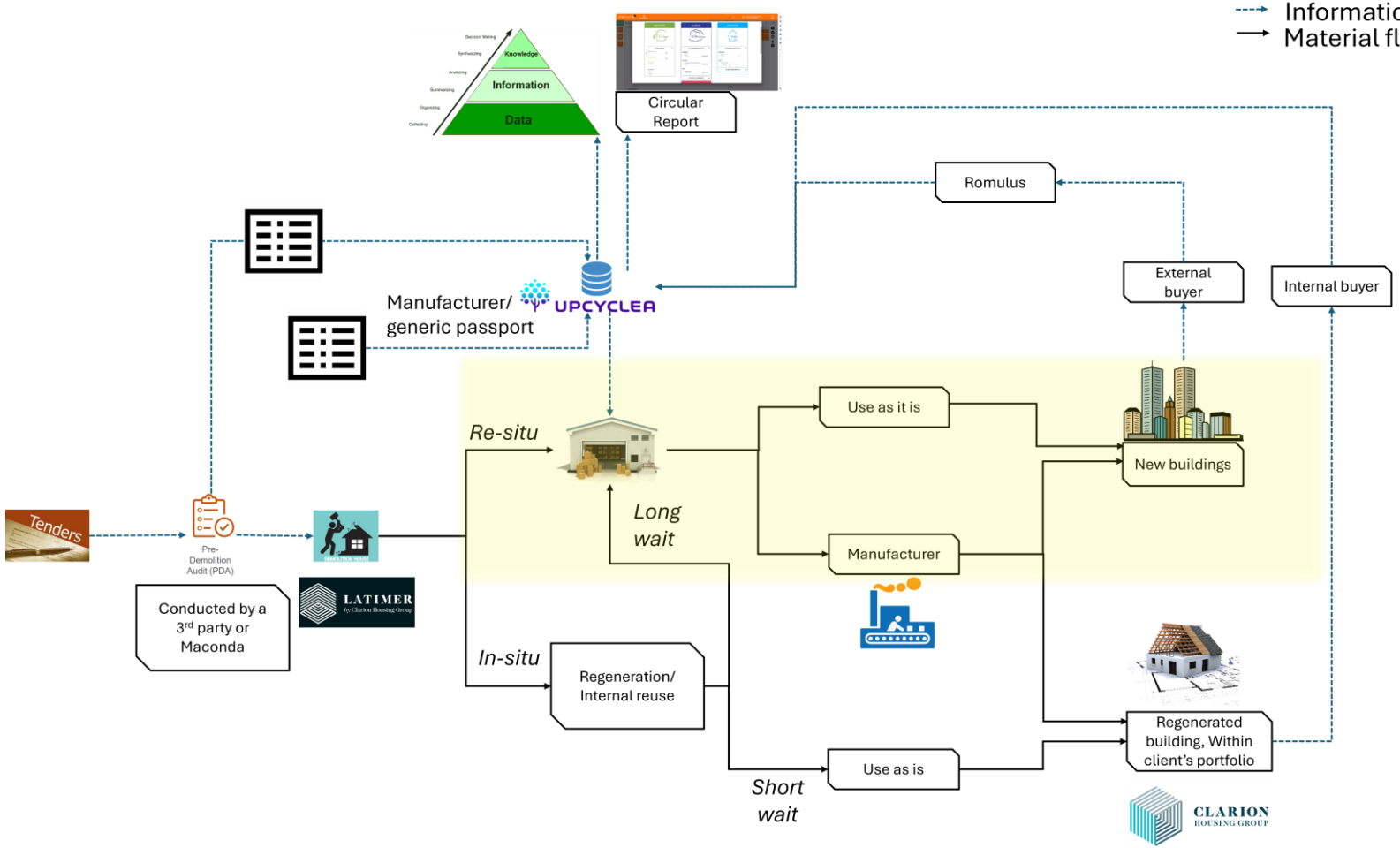
DPP building blocks

	Topics	Key questions
Scope	Life cycle stage	At what stages should a DPP be initiated and what is the scope of coverage?
	Application level	What level should DPPs be applied
Technology configuration	Data capturing	In what ways, are data captured?
	Data storage	How and where data should be stored?
	Data carrier	What data carrier and link up mechanism should be used?
	Data access/security	How should access to the data be allowed and managed?
Data curation and governance	Data requirement	What data will be included in the DPP at what degree of standardisation?
	Data Governance	Who should provide, own, update and verify DPP related data? Who monitors and ensures compliance to the rules?
Ecosystem Development	Ecosystem orchestrator	Who takes the lead to create DPPs?
	Ecosystem actors	What are the main stakeholders involved? Who contributes what to joint value creation, and who gets what from the joint value created. How would you ensure compliance to rules (incentives, monitoring, sanctions and conflict resolution)?
Capture Learnings	Main outcomes	What are the main outcomes and key learnings from the pilot?
	Post-pilot	How will you scale up the DPP adoption after the completion of the

Realising the value of DPP
via Secondary material marketplace & urban mining

Romulus

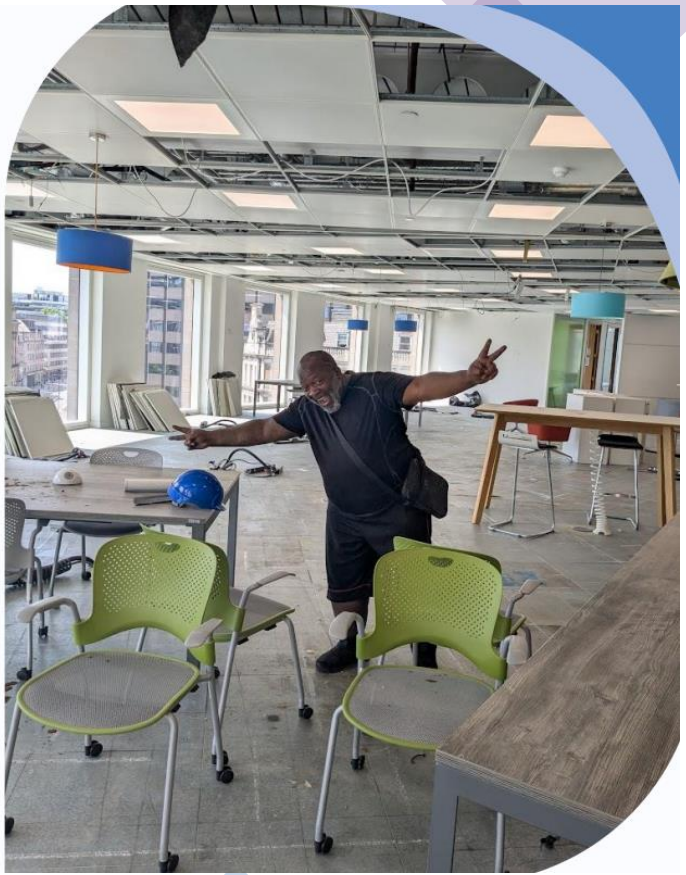




Source: Gosling, J et al. 2025, Migrating to online secondary marketplaces as the dominant logic for construction, EUROMA conference

STREETBOX CASE STUDY

- Streetbox are a food surplus CIC preventing excess food from being wasted, supplying local food banks and feeding the local community.
- Streetbox are building a café & kitchen for surplus food using only reused materials to serve the hackney community.
- Introduced via a ROMULUS member → contacted ROMULUS community manager (Maconda).

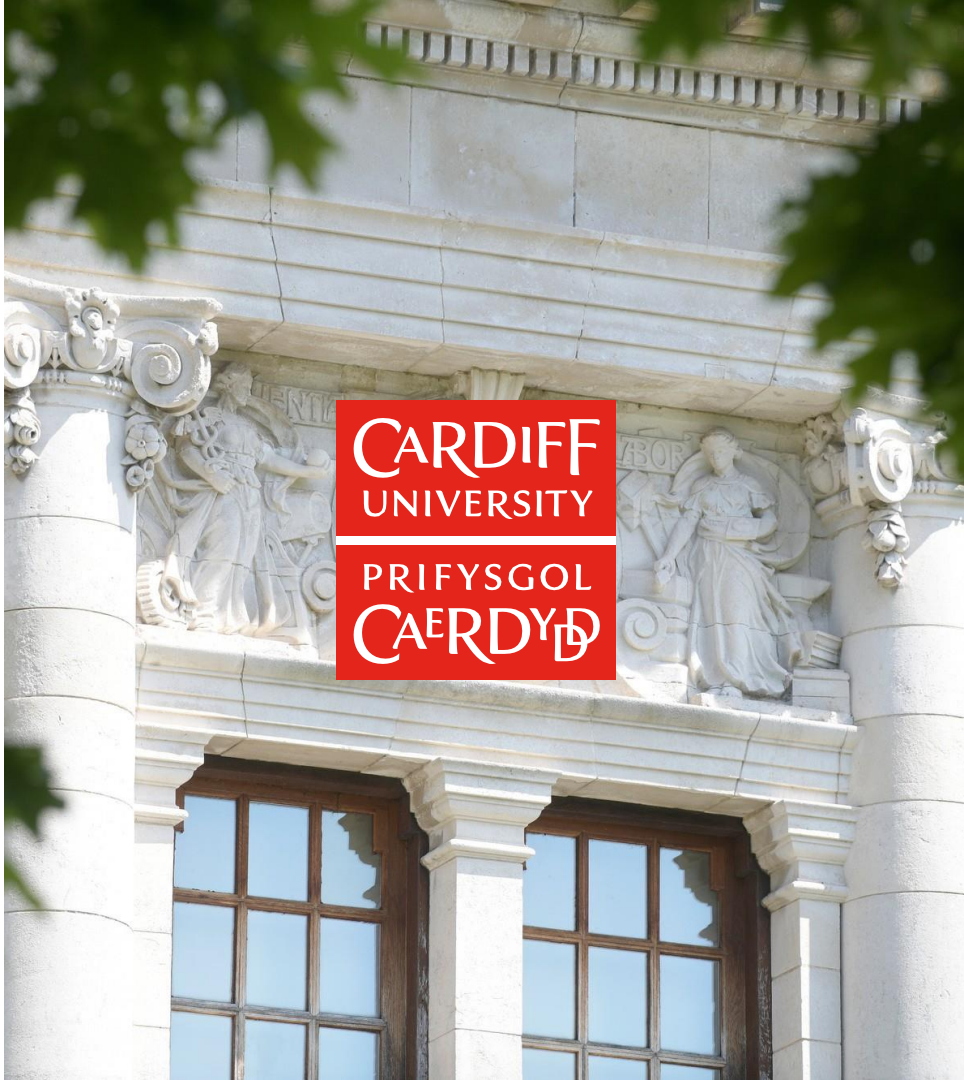


Conclusion

- Current development of DPPs is heterogeneous, immature and at different scale and maturity.
- DPP could be a catalyst to drive long term circular practices but needs a systematic approach for its creation and orchestration
- Information orchestration provides a useful framework for DPP further adoption and diffusion in supply chain.
- DPP enables secondary marketplace but needs both digital and physical infrastructures in place including logistics hubs.

Thank you!

Prof. Yingli Wang
Cardiff Business School
November 6, 2025
(email: WangY14@cardiff.ac.uk)



URBANE Final Event – Tools For Sustainable Urban Logistic Plans (SULPs)

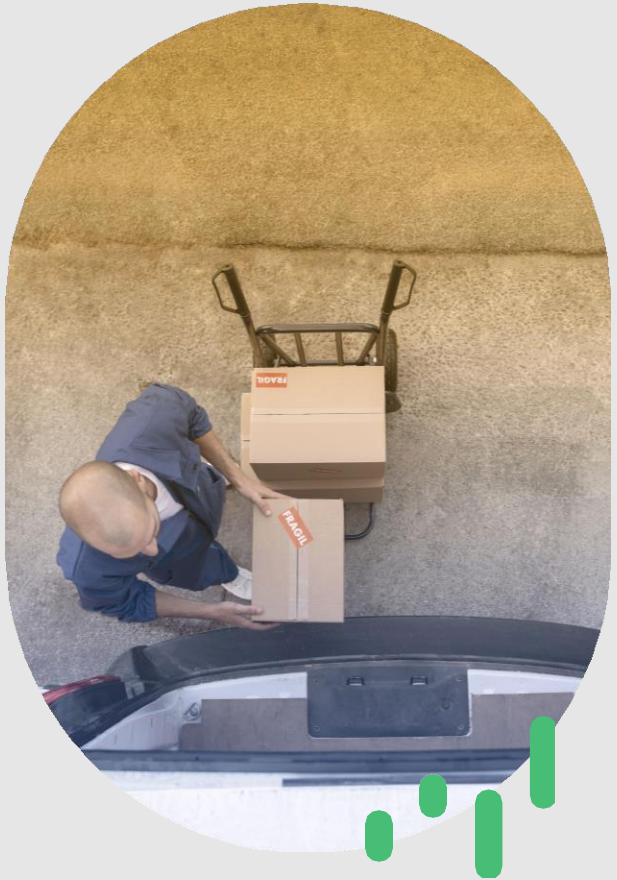
Dimos Touloumidis (CERTH)
Zisis Maleas (CERTH)
John Limaxis (INLE)

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Outline

1. Introduction to SULPs
2. Data Driven Impact Assessment Radar
3. URBANE Digital Twin - CitIQore

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782



Introduction to SULPs

Presenter: Dimos Touloumidis
Company: CERTH/HIT

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

URBANE FINAL EVENT | BARCELONA

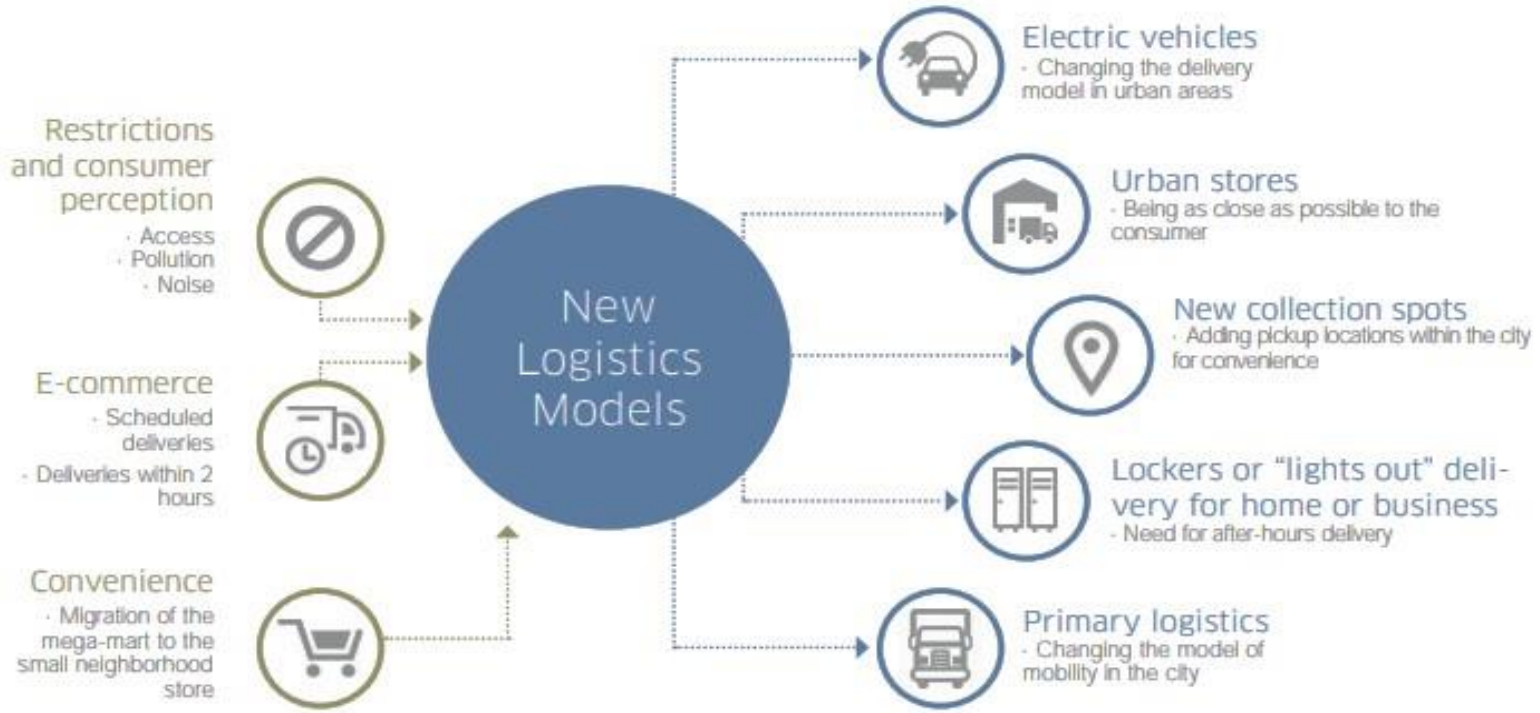
Nov 6th , 2025

Urban Logistics Tradeoff

- E-commerce boom drives LSPs to maximize routing efficiency and delivery density
- Citizens demand reductions in emissions, noise, and urban freight traffic
- Municipalities must secure revenue and livability with sparse delivery data

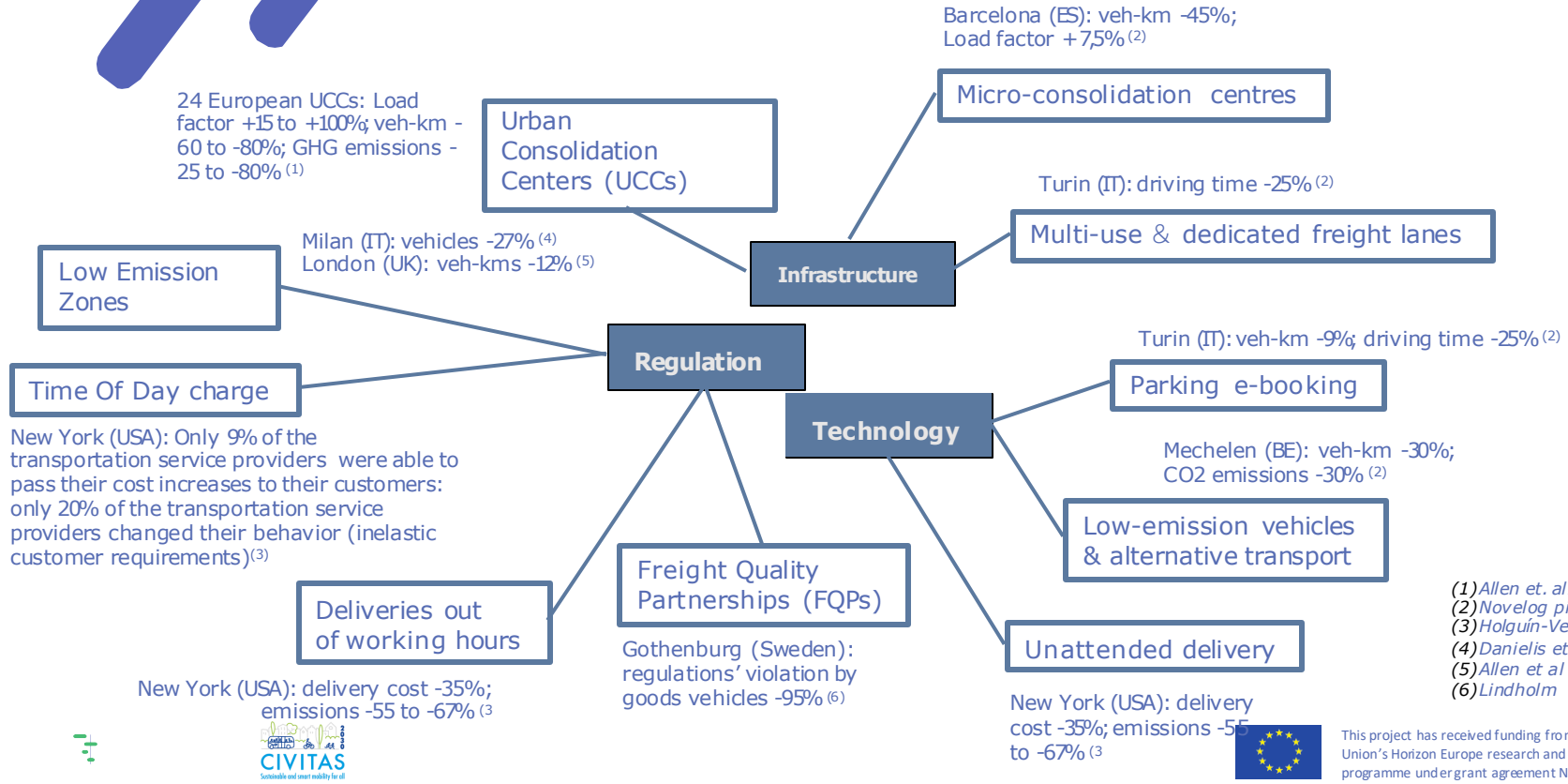
Touloumidis, D., Madas, M., Kanellopoulos, P., & Ayfantopoulou, G. (2025). Integrating Urban Factors as Predictors of Last-Mile Demand Patterns: A Spatial Analysis in Thessaloniki. Urban Science, 9(8), 293. https://doi.org/10.3390/urbansci9080293

Market trends



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

High Potential



(1) *Allen et. al. (2012)*
(2) *Novelog pilot results*
(3) *Holguín-Veras et al (2017)*
(4) *Danielis et al (2014)*
(5) *Allen et al (2013)*
(6) *Lindholm (2014)]*

CIVITAS

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Current situation

- Urban-logistics innovation is booming
- But it's fragmented and industry-led
- City planning is playing catch-up and innovations is still outside
- Results: inequitable coverage, unmanaged externalities (emissions, safety, congestion) and policy blind spots

Where we aim at?

- Logistics needs to get onto the political agenda
- Collaboration between stakeholders

Need for collaborative planning based on quantified aspects of the problem (cost, CO2 benefit, social impact, business impact, etc)

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SULP Circle

- **Phase 1:** Preparation & analysis
- **Phase 2:** Strategy development
- **Phase 3:** Measure planning
- **Phase 4:** Implementation & Monitoring

This project has received funding from the European

Aifandopoulou, G., & Xenou, E. (2019). Sustainable urban logistics planning. Topic Guide. European Commission.

Phase 1

Step 1

Set up working structures

A1.1_Formation of a small team

A1.2_Multi-Stakeholder Platform (MSP)

A1.3_Identification and gathering of data and information

Step 2

Define the development process and scope of the plan

A2.1_Definition of the area

A2.2_Linking up with other planning processes and organizations

A2.3_Involving a variety of relevant stakeholders

A2.4_ Draft a work plan

Step 3

Analyze the current UFT situation

A3.1_Identify information sources

A3.2_Analysis of the current UFT situation

Preparation and Analysis

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Phase 2

Step 5

Develop vision and objectives with stakeholders

A5.1_Definition of concrete objectives

A5.2_Agree with stakeholders on objectives

Step 4

Build and jointly assess scenarios

A4.1_Create scenarios

A4.2_Capitalization of those scenarios

Step 6

Set targets and indicators

A6.1_A set of achievable targets should be defined

Strategy development

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Phase 3

Step 8

Agree actions and responsibilities

A8.1_ Break down of the measures into actions

A8.2_Identify funding sources and assess financial

A8.3_Agree on the priorities, responsibilities and timeline

A8.4_ Ensure wide political and public support

Step 7

Create and assess measures with stakeholders & Define integrated measure packages

A7.1_Selecting measures or a package of measures

A7.2_Assessing and monitoring the implementation

Step 9

Prepare for adoption and financing

A9.1_Creation of a sound financial plan

A9.2_Finalisation and assurement of the quality

Measure planning

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Phase 4

Step 11

Monitor, adapt and communicate

A11.1_Apply the selected monitoring tools

A11.2_Communicate the progress of the implemented actions.

Step 10

Coordination and implementation of actions

A10.1_Appropriate risk management

A10.2_Procure the goods and services

Step 12

Review and learn lessons

A12.1_Lessons Learnt

A12.2_ Sharing your knowledge and experience

A12.3_ Consider new challenges and solutions

Implementation & monitoring

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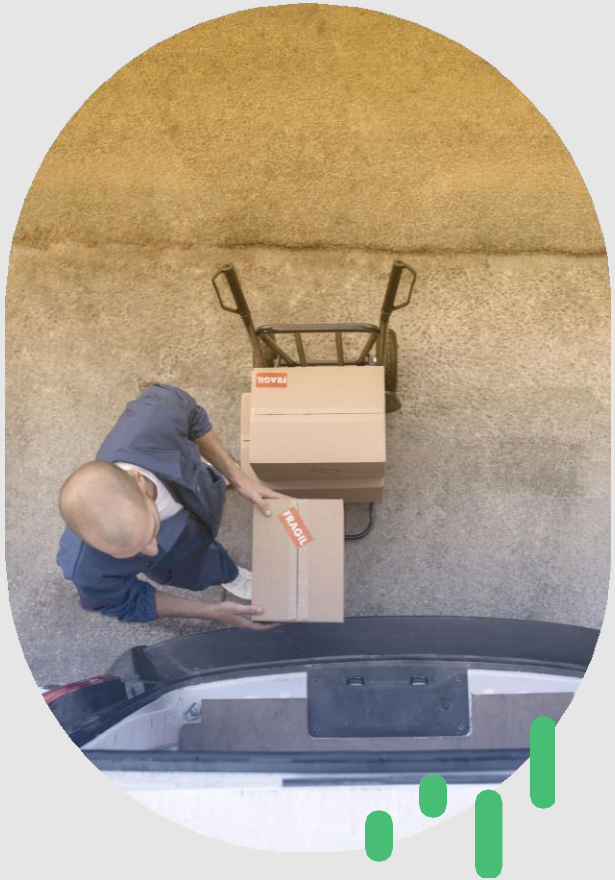


Data-driven Impact Assessment Radar

Presenter: Zisis Maleas
Company: CERTH/HIT

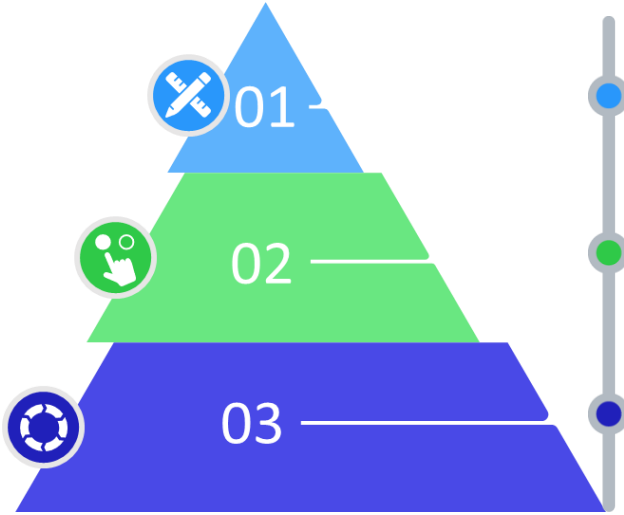
This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

URBANE FINAL EVENT | BARCELONA

Nov 6th , 2025

Main Features [1/4]

1. Holistic Data-Driven Impact Assessment Framework for innovative UL solutions adoption



1st Level – STRATEGIC – Guided planning for innovation
This level supports city authorities (planners and decision-makers) to shape innovative urban logistics ecosystem

2nd Level – TACTICAL – Arguments-driven network design
This level helps companies and city authorities to design infrastructure and service for innovative and/or PI-inspired urban logistics solutions

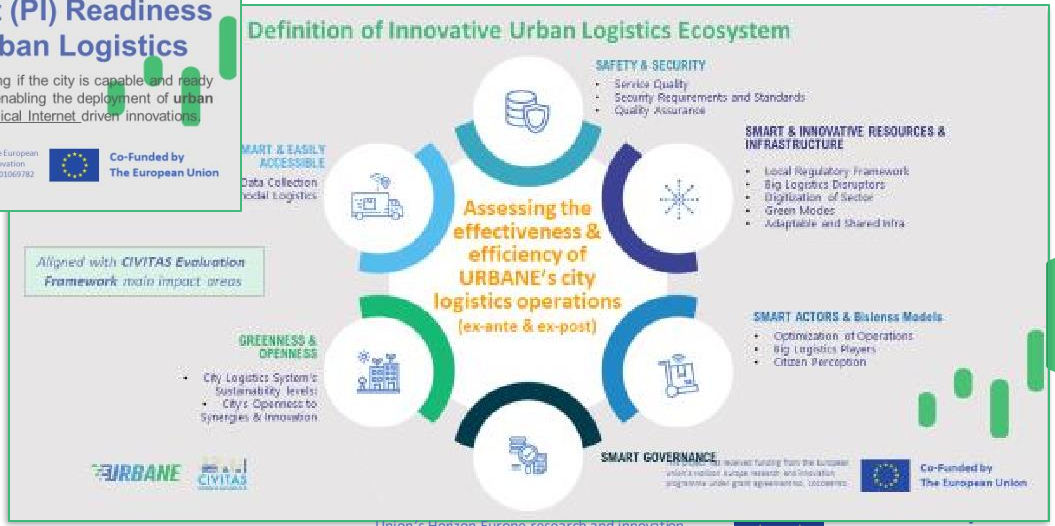
3rd Level – OPERATIONAL – Facts-driven assessment
This level supports companies and cities to measure and monitor the impact of (their) operations

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Co-Funded by The European Union

Main Features (2/4)

1st Level – STRATEGIC – Guided planning for innovation



Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

The European Union

Main Features (3/4)

6. Urban Logistics Infra & Service Design tools available for use

2nd Level – TACTICAL – Arguments-driven network design

a) Optimal number of Lockers

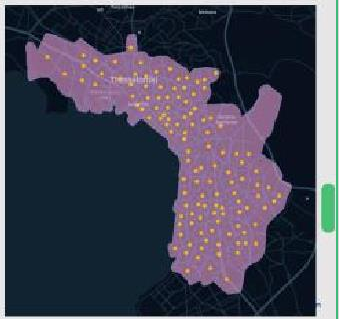
Objective: Minimize urban logistics costs related to e-commerce through optimal locker placement.

Cost Categories:

- Primary Costs: Includes transportation, city depot, and handling expenses. Key variables are kilometers driven, delivery process duration, and parcels per vehicle route.
- Secondary Costs: Focuses on societal impacts like environmental effect, congestion, and emissions (CO2 measured in kg).

Benefits of Parcel Lockers:

- Reduction in kilometers driven by vehicles by consolidating deliveries and improving customer access.



AIRBANE CIVITAS

Locker Network Optimization

c) Shared use of lockers/Microhubs in Public space

Scenario: The city of Thessaloniki, based on demand, needs approximately 440 lockers with an average distance for each resident of 330 meters.

Goal: 50% reduction in CO2.

Results with shared lockers:

- Reduction of the total number of lockers by ~32% and reduction of average distance to 150 meters.
- Small companies struggle to shift to green deliveries because they have a low usage rate of the lockers and high investment costs.

Scenario: Five (5) shared Urban Consolidation Centers (UCCs) in Thessaloniki.

Goal: 50% reduction in CO2.

Results:

- 15% reduction in the company's operational costs.
- 30% reduction in total kilometers in the city.

AIRBANE CIVITAS

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Physical Internet Locker Network Optimization

CIVITAS

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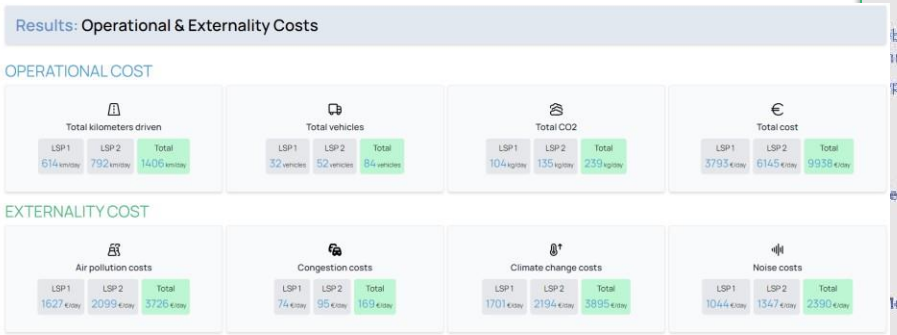
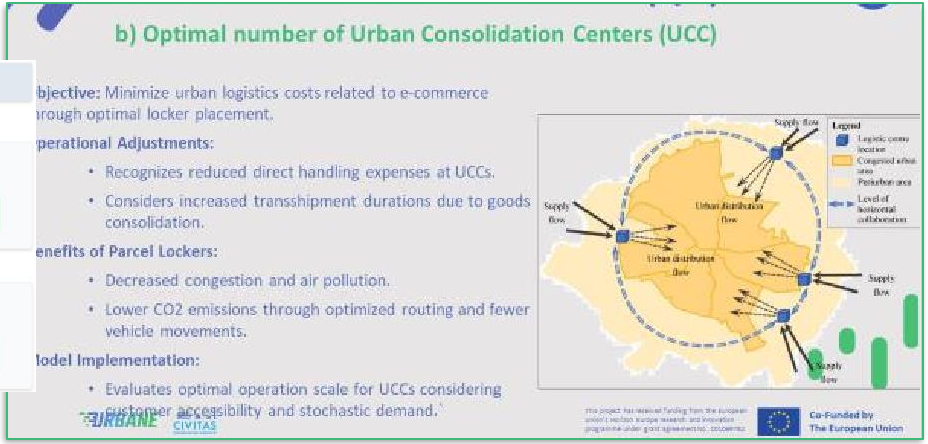
Main Features (3/4)

6. Urban Logistics Infra & Service Design tools available for use



Operational and Sustainability Costs and Analytics



Shared Micro Hubs in Public Spaces with Cargo Bikes

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

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Main Features (4/4)

8. Dashboard ready for Impact Assessment of Operational innovations in UL

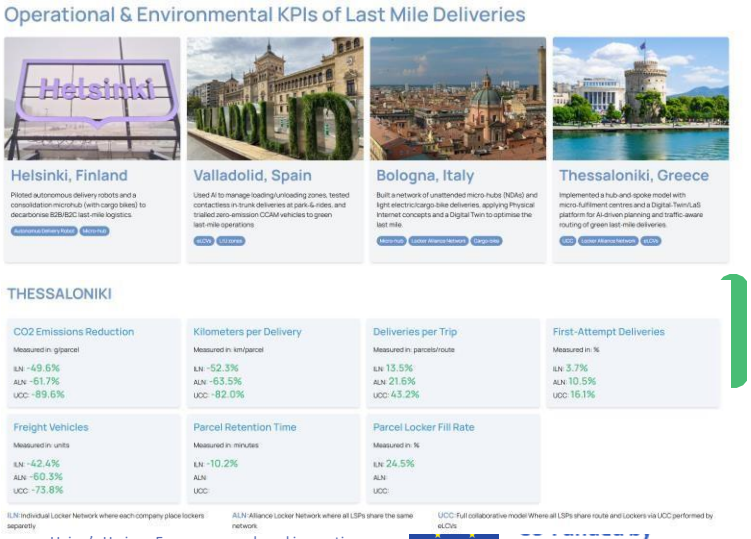
Assessment Purpose: Focuses on addressing the questions: "How do I improve?" and "What if?" and tests various operational scenarios **based on real-world results** to identify the most effective approach and best practice for a city.

- **Utilizes advanced results of the Digital Twin tools**.
- **Conducts impact assessments of different scenarios** to optimize city-specific objectives, such as reducing CO2 emissions.

Key Performance Indicators (KPIs):

- **Measurable results from more than 6 Last-Mile business concepts**
- Calculates both general and **city-specific KPIs**.
- Aims to assess and enhance the liveability of the city through the **performance of urban logistics solutions**.

3rd Level – OPERATIONAL – Facts-driven assessment



Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

The European Union

Impact Assessment Radar Demo

https://ia-radar.imet.gr/

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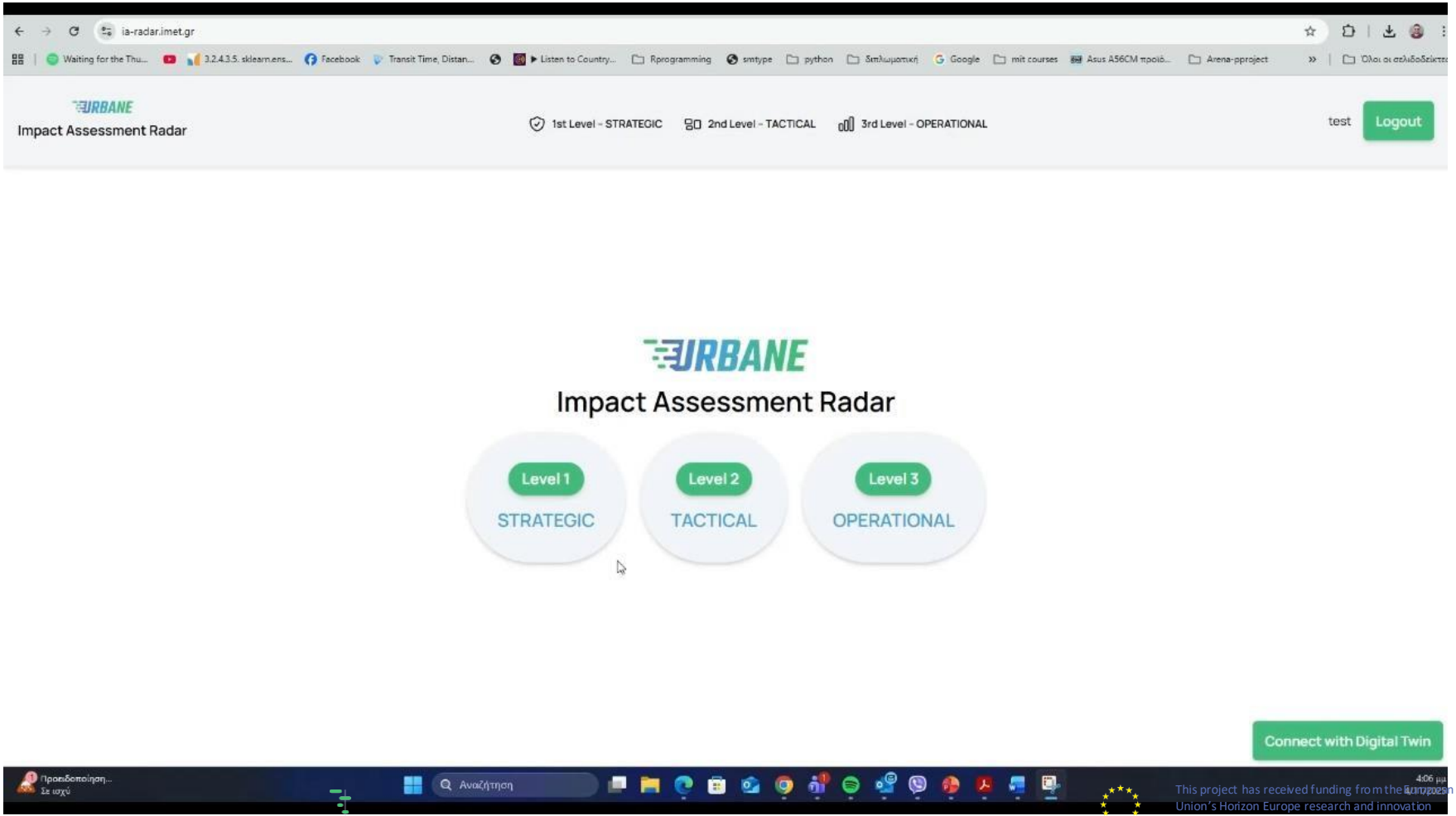

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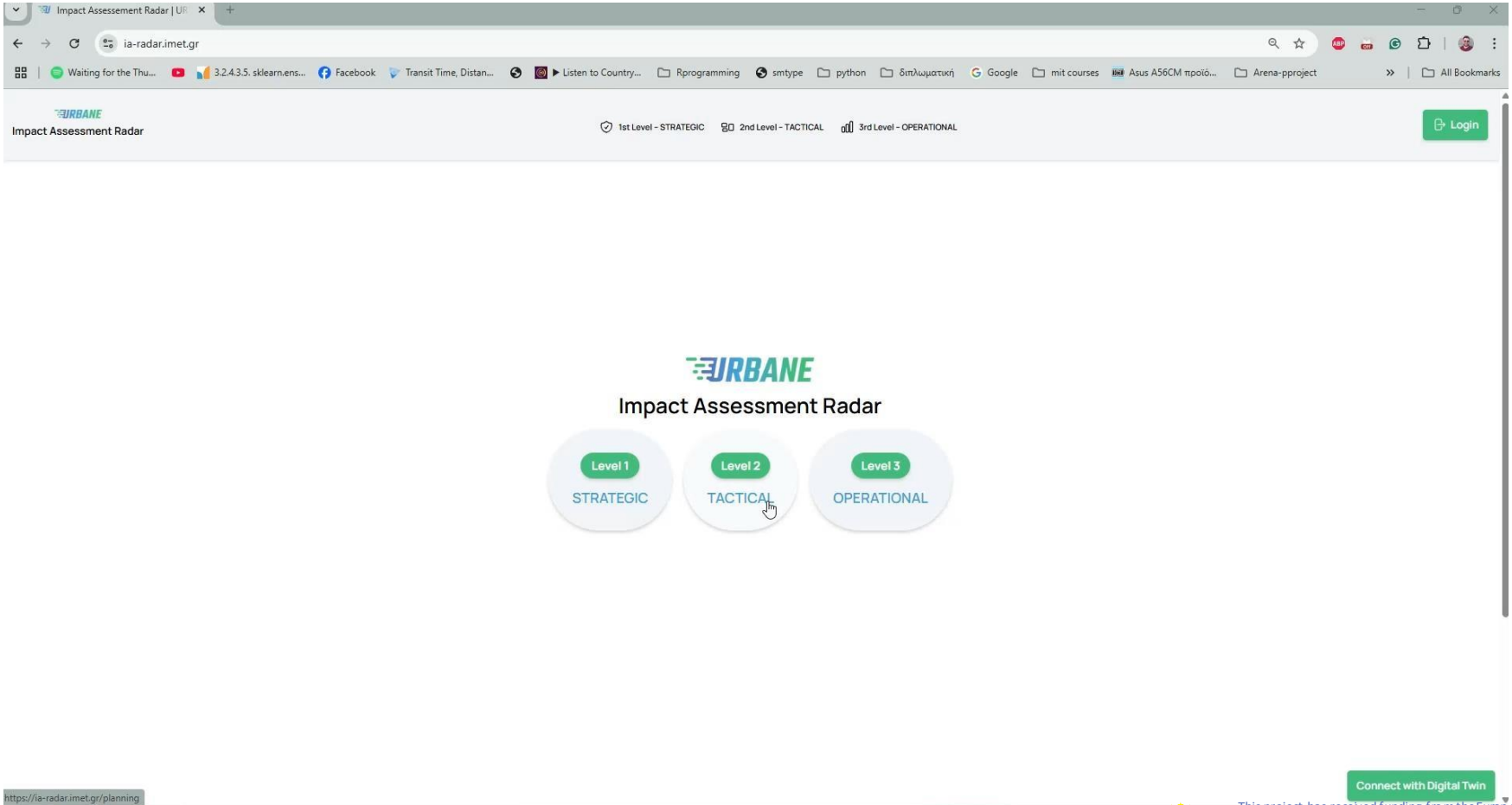

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Impact Assessement Radar | UR

ia-radar.imet.gr/locker-network-optimization

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Number of companies that will be involved in the city logistics operations

1 companies

Step 2: Input values

Area of interest

The area of interest in square kilometers

20 km2

Locker capacity

Number of lockers per day

32 lockers/day

Company 1

Demand (Company 1)

Number of parcels per day

4000 parcels/day

Depots (Company 1)

Number of depots in the area of interest

4 depots

Advanced Parameters

Calculate >

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Connect with Digital Twin

Impact Assessement Radar | UR
ia-radar.imet.gr/locker-network-optimization
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Locker Network Optimization

Step 1: Set up companies

Provide the number of companies that will be involved in the city logistics operations.

Number of companies

Number of companies that will be involved in the city logistics operations

1 companies

Step 2: Input values

Area of interest

The area of interest in square kilometers

20 km2

Locker capacity

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Advanced Parameters

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Connect with Digital Twin

Impact Assessement Radar | UI
ia-radar.imet.gr/planning
Waiting for the Thu... 3.2.4.3.5. sklearn.ens... Facebook Transit Time, Distan... Listen to Country... Rprogramming smtype python διπλωματική Google mit courses Asus A56CM προϊό... Arena-pproject All Bookmarks

Level 2

Tactical

Arguments-driven network design. This level helps companies and city authorities to design infrastructure and service for innovative and/or PI-inspired urban logistics solutions

Select the desired tool

Locker Network Optimization

Fleet Size Optimization

Micro-hub Simulation

https://ia-radar.imet.gr/fleet-size-optimization

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Connect with Digital Twin

ia-radar.imet.gr/planning

Waiting for the Thu... | 3.2.4.3.5. sklearn.ens... | Facebook | Transit Time, Distan... | Listen to Country... | Rprogramming | smtype | python | διπλωματική | Google | mit courses | Asus A56CM προϊό... | Arena-pproject | All Bookmarks

Select the desired tool

Locker Network Optimization

Fleet Size Optimization

Micro-hub Simulation

Co-funded by the European Union

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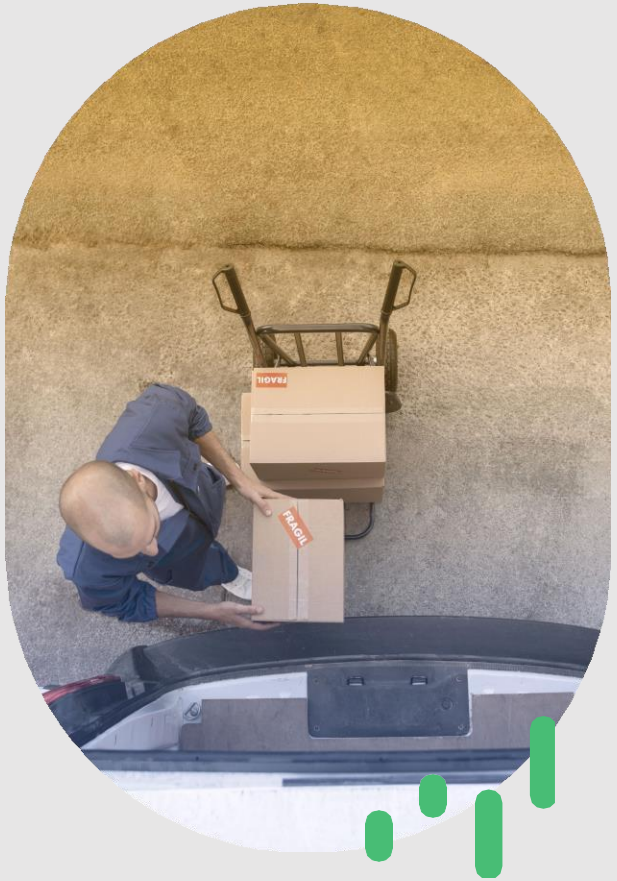
Connect with Digital Twin

https://ia-radar.imet.gr/microhub



URBANE Final Event – Tools For Sustainable Urban Logistic Plans (SULPs)

URBANE Digital Twins - CitIQore app

John Limaxis (INLE)

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

D

A digital twin is an integrated, multi-physics and multi-scale virtual simulation of a physical system, enriched with sensor data, events, and historical information to represent its entire lifecycle

A digital twin system architecture as a fixed technological platform does not exist

URBANE Digital Twin Maturity

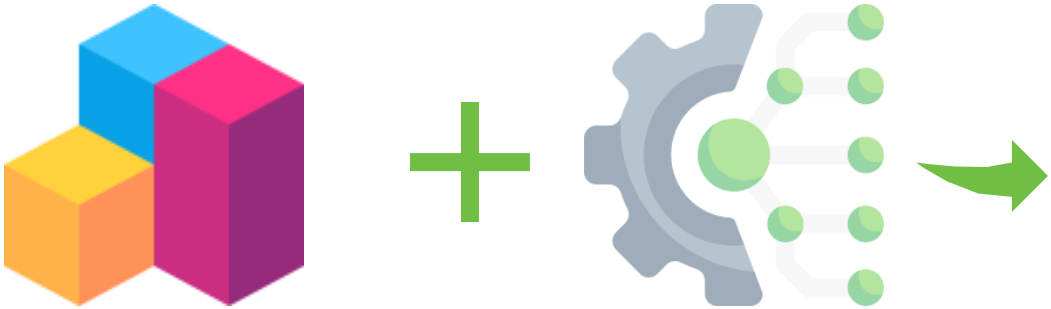
Level	Model Sophistication	Physical Twin	Data Acquisition from Physical Twin	Machine Learning (Operator Preferences)	Machine Learning (System/ Environment)
1 Pre-Digital Twin	virtual system model with emphasis on technology/ technical-risk mitigation	does not exist	Not applicable	No	No
2 Digital Twin	virtual system model of the physical twin	exists	performance, health status, maintenance; batch updates	No	No
3 Adaptive Digital Twin	virtual system model of the physical twin with adaptive UI	exists	performance, health status, maintenance; real-time updates	Yes	No
4 Intelligent Digital Twin	virtual system model of the physical twin with adaptive UI and reinforcement learning	exists	performance, health status, maintenance, environment; both batch/real-time updates	Yes	Yes

Source: M. Madni, "Leveraging Digital Twin Technology in Model-Based Systems Engineering," *Systems*, vol. 7, no. 7, 2019.

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

URBANE Digital Twinning Capabilities for SULPs

Examples of "What-If" Scenarios for evidence-based planning



Model Library

Data Assets

- Evaluation of depot and **locker placement**
- Comparison and combinations of **fleet composition** (autonomous robots, cargo bikes, light Evs) for last mile deliveries
- Influence of **demand variations** on network configuration

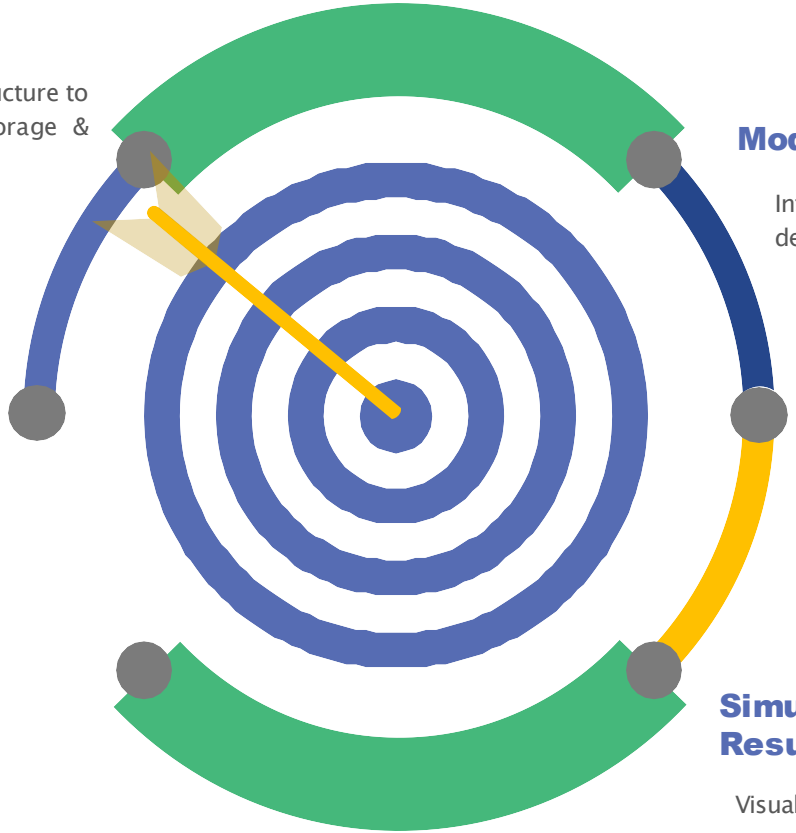
URBANE Digital Twin Components

Big Data

Set up the Big Data Infrastructure to enable data ingestion, storage & processing

Connectors

Develop Connectors with LL data sources for data ingestion



Model Library

Integrate URBANE Models to DT through a dedicated integration process

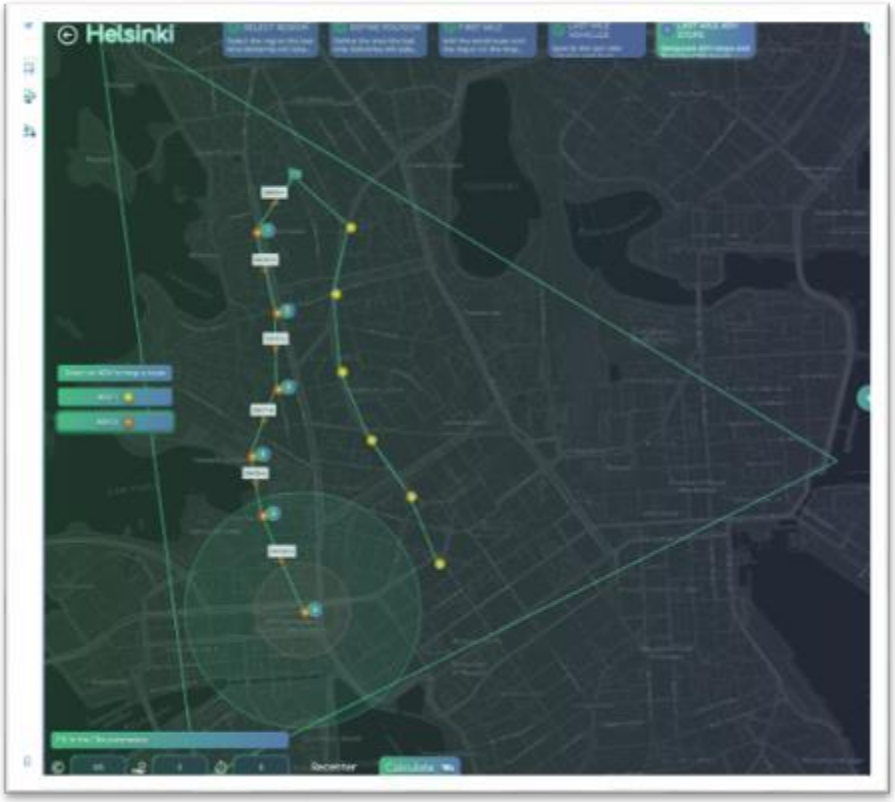
DT Environment & Model Orchestration

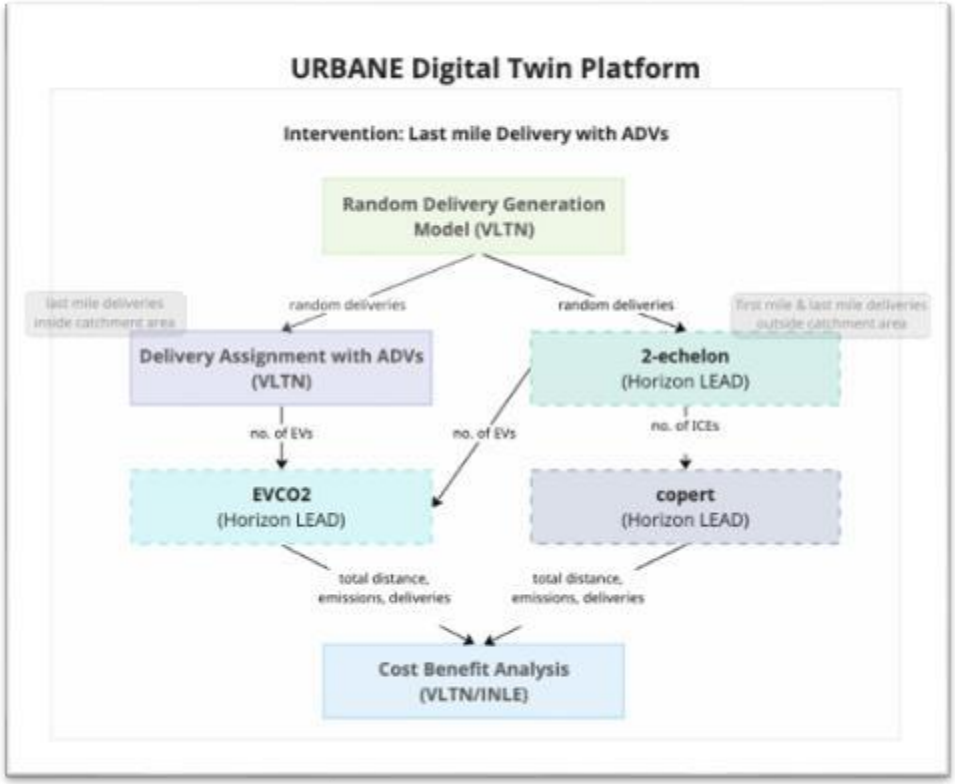
Selecting models of interesting & design sequencies and workflows

Simulation Execution & Results

Visualise and compare different last mile logistic scenarios

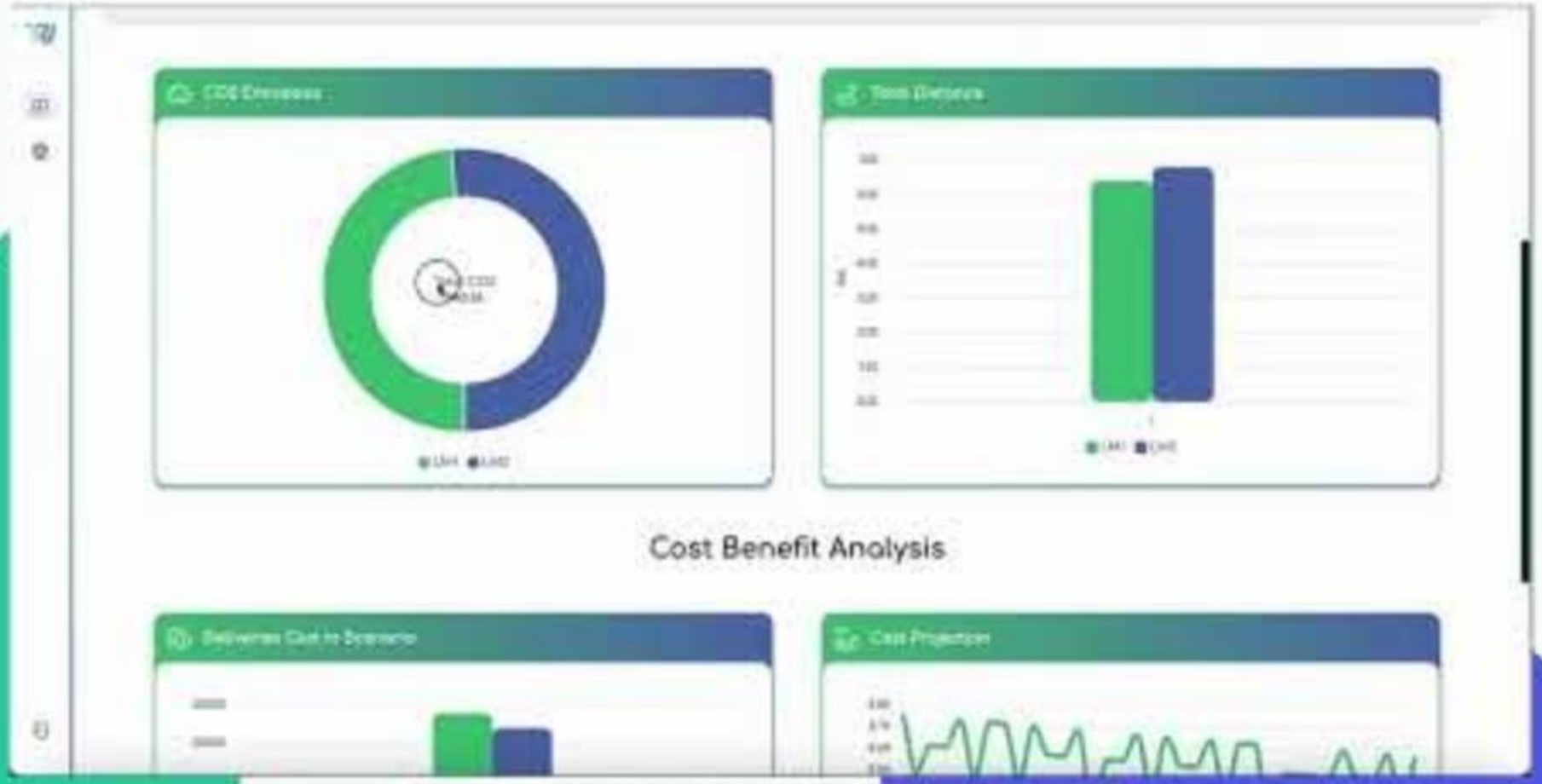
CitIQore: Last Mile Delivery with ADVs





DEMOTIME

Simulations /
What if- Scenarios



as well as the contribution of each participating last miler.

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101103733

How do I get access?

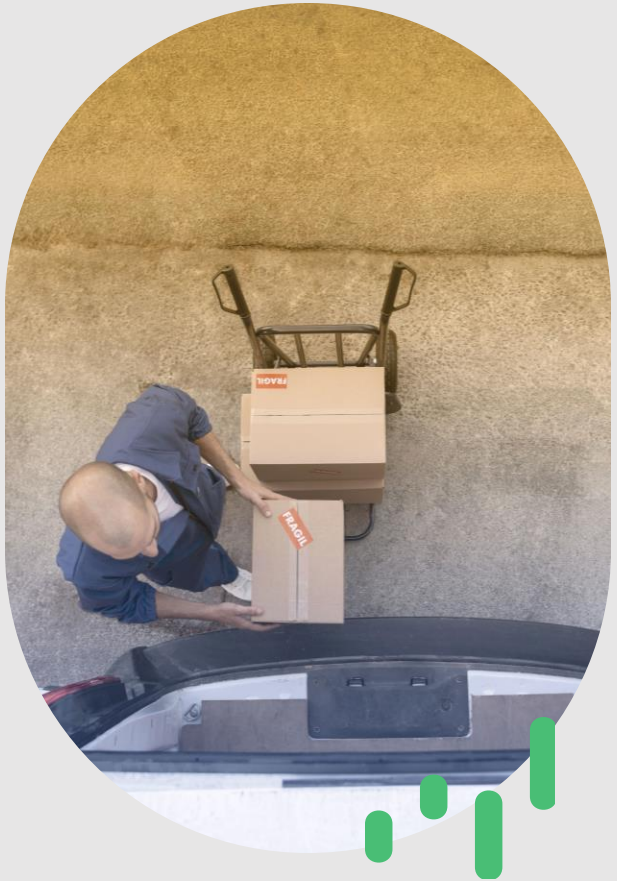
Feel free to contact us at citiqore@konnecta.io to give you access!

🚚 Breakout Sessions II - Towards smarter urban freight: Digital innovation and collaborative governance

Room A (Plenary room)
Public Space and Public-Private Partnerships

Room B (Multipurpose room)
Insights from Urban Cycle Logistics Pilots

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782



Breakout session

City – business

This project is co-funded by the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

OBJECTIVE OF THE SESSION

This session brings together URBANE partners and city authorities to foster dialogue on the future of urban logistics.

The discussion aims to showcase the results achieved in the follower cities and highlight policies that enable more collaborative approaches to a more efficient logistics between logistics companies and city authorities.

Co-funded by the European Union

SPEAKERS AND MODERATOR OF THE SESSION

Marisa Meta
FIT Consulting

Esmée Hof
City of Mechelen

David Robin
City of La Rochelle

Pedro Vale Moreira
City of Braga

Panagiotis Kanellopoulos
ACS Courier

Facilitated by

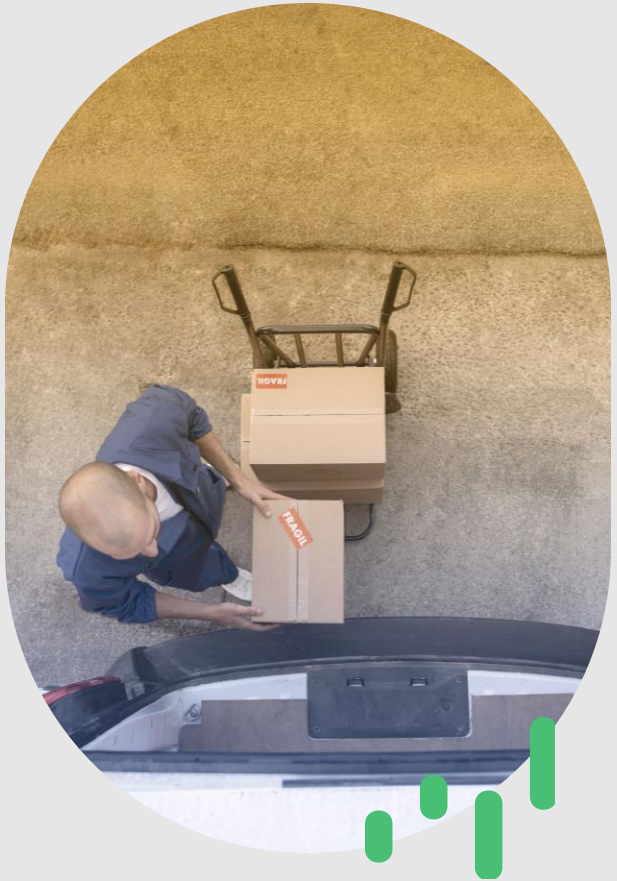
Raffaele Vergnani
POLIS

Co-funded by the European Union

Final Event

Public space & public - private partnership

Marisa Meta - FIT Consulting



November 06th , 2025

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Co-Funded by
The European Union

Public space is under pressure

Where's the space? Sorting packages for delivery on a New York City sidewalk. Photo by ablokhin.

We need to rethink the use of public space!

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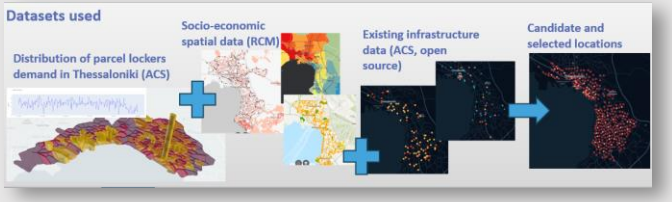
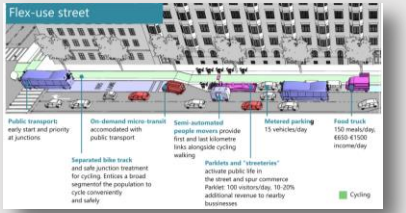
Urban challenge: rethinking public space

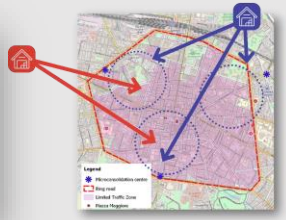
✓ **Proximity**



✓ **Non-exclusivity**



✓ **Collaboration**



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

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Planning for efficiency
Innovation Transferability Platform

Innovation Transferability Platform
provides support to urban logistics local communities

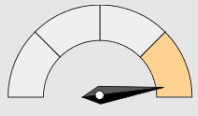
- ✓ **Strategic level**
- ✓ **Tactical Level**
- ✓ **Operational level**

		500-600 Lockers	350-420 Lockers	270-320 Lockers
	Baseline	ILN	ALN	UCCLN
CO2 Emissions Reduction	-	- 49.6%	-61.7%	-89.6%
Kilometers per Delivery	-	-52.3%	-63.5%	-82%
Deliveries per Trip	-	+13.5%	+21.6%	+43.2%
First-Attempt Deliveries	-	+3.7%	+10.5%	+16.1%
Freight Vehicles	-	-42.4%	-60.3%	-73.8%

Baseline Scenario Describes the current situation

Individual Locker Network outperforms baseline scenario

Alliance Locker Network shows significant improvements



Full collaborative model under UCC can reduce emmisions by up to 90%!

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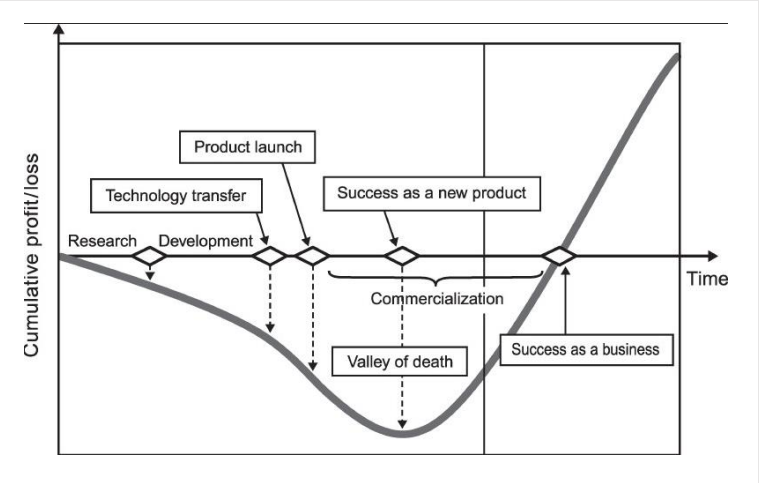
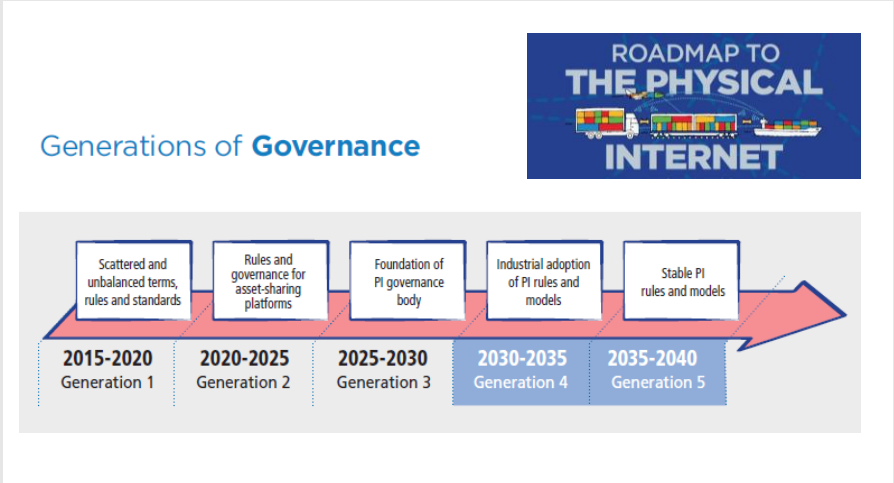
From pilots to adoption





This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

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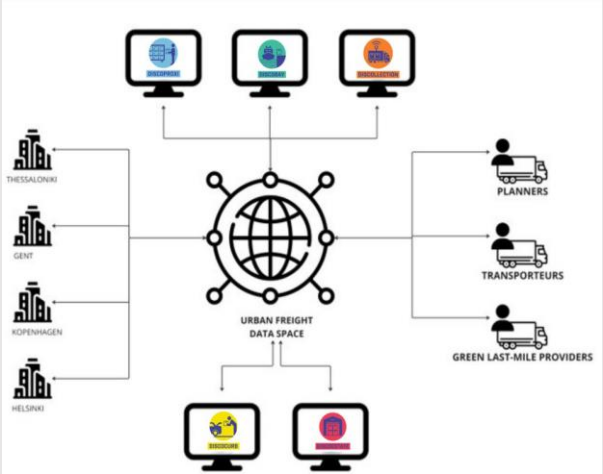
The enabler for PI governance: Urban Freight Dataspaces

- **Connect tools, cities and Logistics Service Providers to the data space**
- **Enable collaboration amongst stakeholders in all cities**
- **Allow scalability of applications**

If we want to reach a MaaS / LaaS revolution, we need to enable scalable interoperability, not only within but across cities

Cities	LSPs	Government
Integrate city guidance, enforcement & monitoring in a logistics ecosystem	Optimise your operations by integrating with an ecosystem of Logistics Services	Enable consistency and scalability between local policies



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Co-Funded by The European Union

Thank you!

Marisa Meta

FIT Consulting

meta@fitconsulting.it

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the granting authority. Neither the European Union nor the granting authority can be held responsible for them. Any communication or dissemination activity related to the action must use factually accurate information.

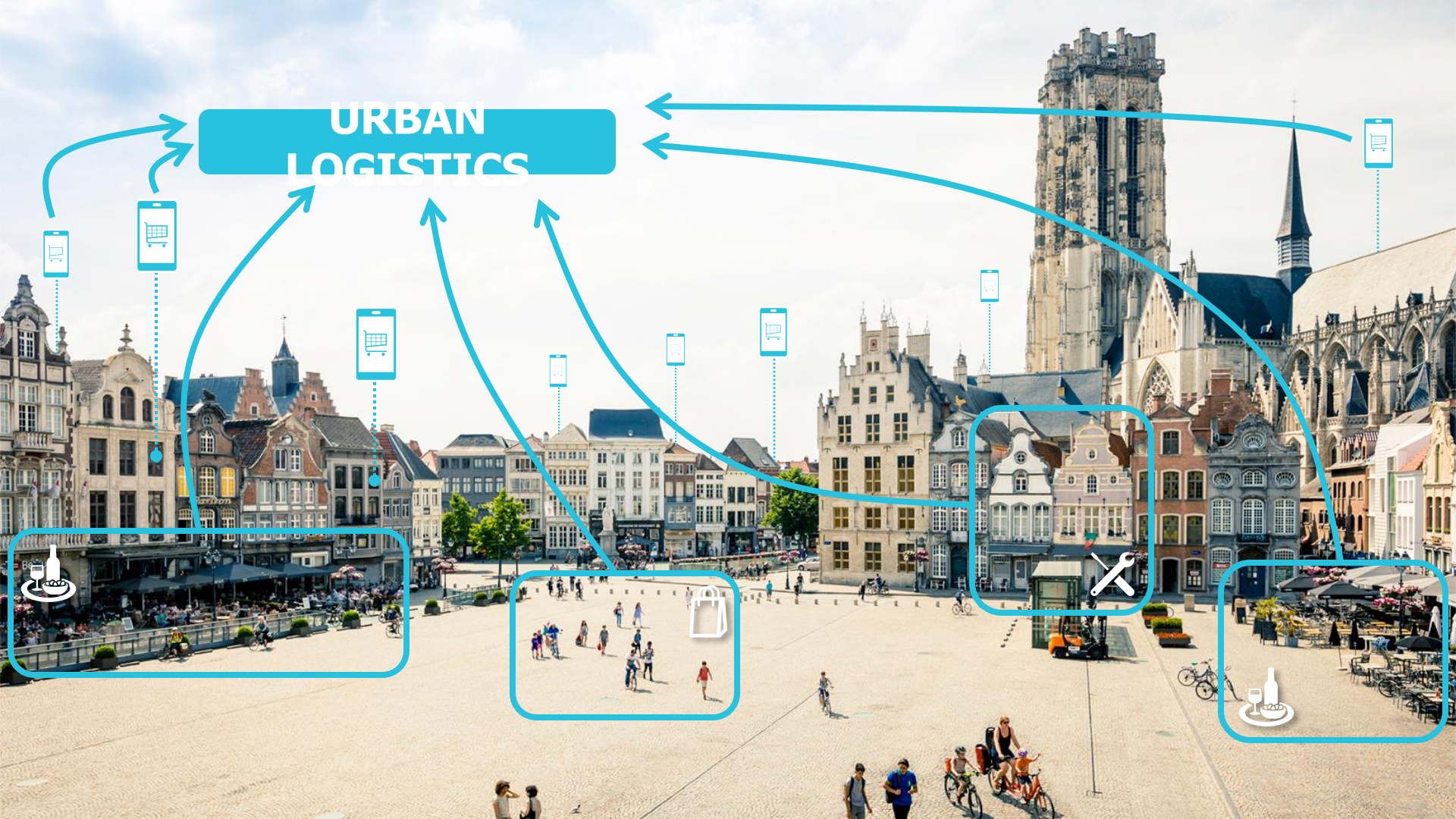
Co-Funded by The European Union

URBANE FINAL EVENT

Medium-sized city with +/- **90.000 inhabitants**

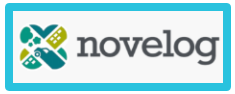
Centrally located in Flanders between **Antwerp and Brussels**

Vibrant and cycle-friendly city center


URBAN
LOGISTICS

PAST PROJECTS

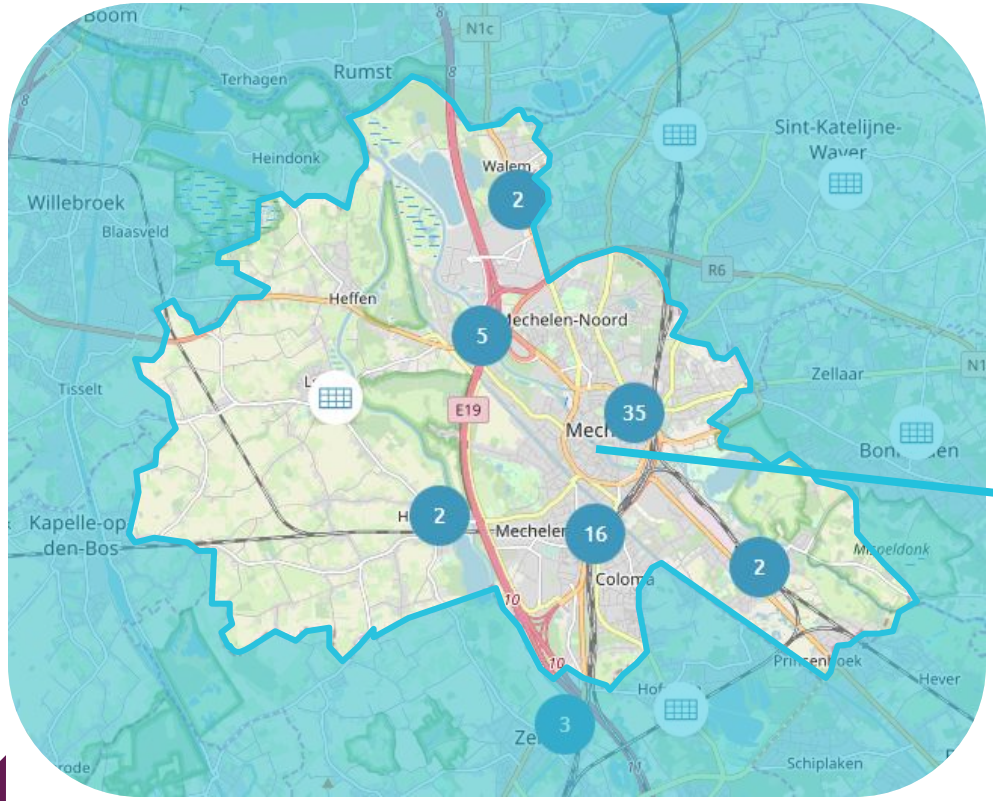
CURRENT PROJECTS

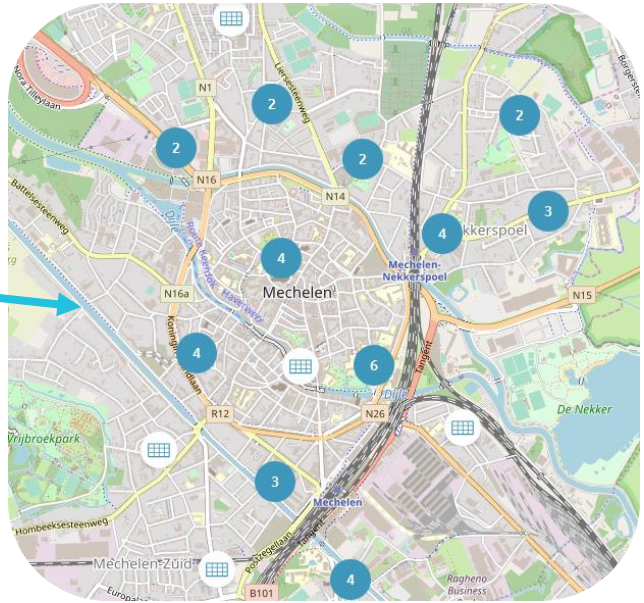


EU-PROJECTS (MOBILITY)

Interreg
North Sea Region
SURFLOGH
European Regional Development Fund

EUROPEAN UNION





NETWERK +50 LOCKERS

Ecozone positive impact on our ecological footprint of 97%

VUB mobi VUB results : CO2 emmission for parcel delivery

Business as usual 2019

126,6 ton CO_2/jaar

125,9 ton CO_2 bpost

0,7 ton CO_2 from customers driving to PUDO

Eco-zone Mechelen 2021

3,6 ton CO_2/jaar

- 122,4 ton bpost emission free delivery

-0,6 ton CO_2 behavioral change of consumers

Reduction of 97% CO_2 emission

which aligns with the EU ambition of 2050

RESULTS

Is it an open system?

HOWEVER…

Mechelen = **follower city** in URBANE

Living lab **Bologna** – one locker system, different LSP's

Our aim: **open locker system = more sustainable**

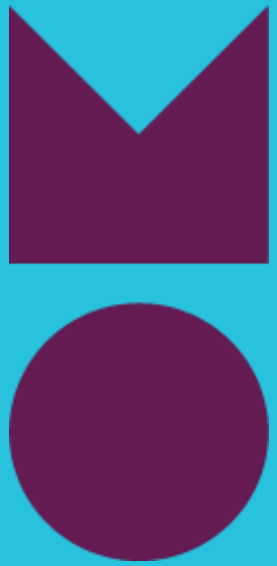
Most important lesson learned through the feasibility study: **it is feasible!**

No technical barriers.

However: commercial barriers, as well as legislative.

Locker system Bologna

URBANE: HOW CAN WE OPEN UP THE LOCKERS?




MOBILITÉS
INNOVANTES
Laissez-vous
transporter par
notre esprit pionnier
agglo-larochelle.fr
Communauté
d'Agglomération de
La Rochelle

OUR TERRITORY

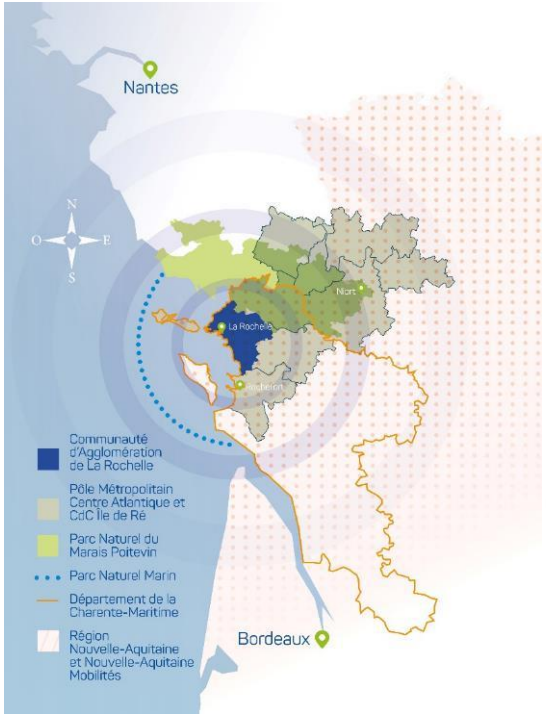
12 655 companies

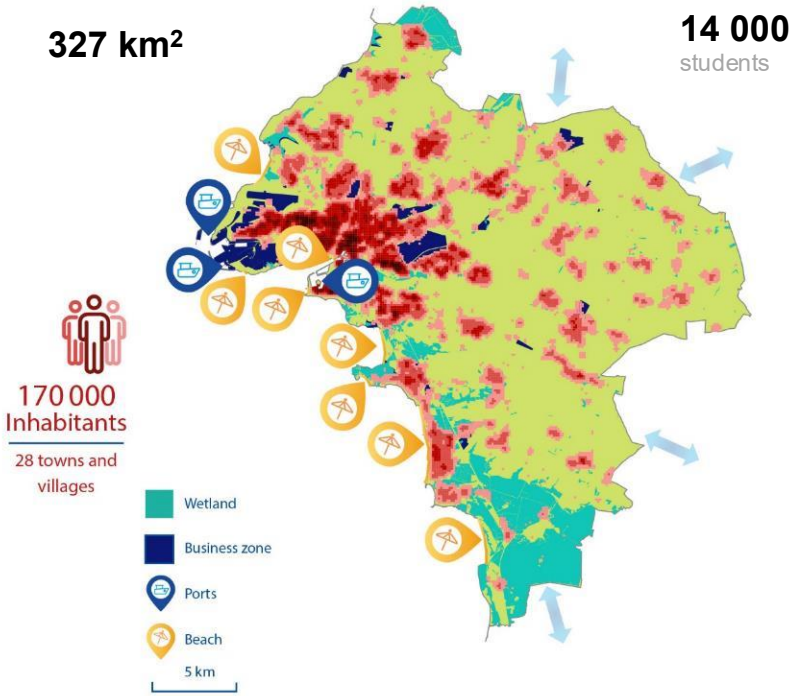
66 200 employees

1 000 ha of business parks

327 km²

14 000 students





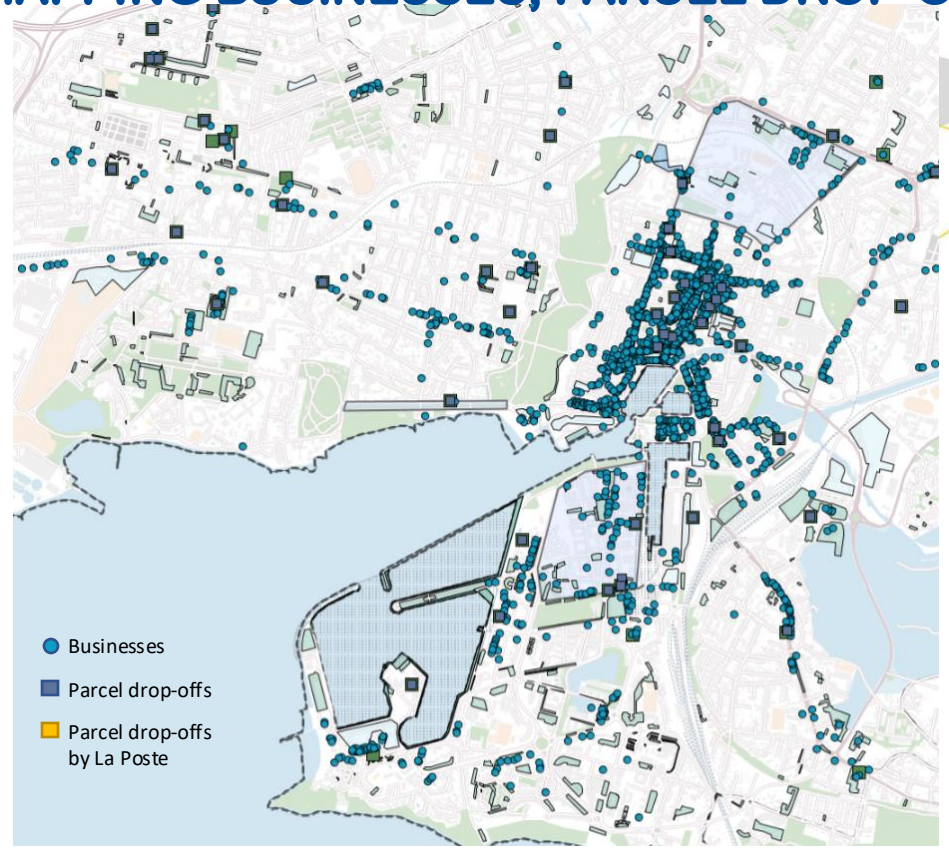
LAST KM DELIVERY OF GOODS

Over the years, central districts have become increasingly pedestrian and cycle-friendly.

Access to the city centre by car and lorry is increasingly restricted for both ecological and local business reasons.

Mobility hubs have been created to facilitate interconnections between modes of transport.

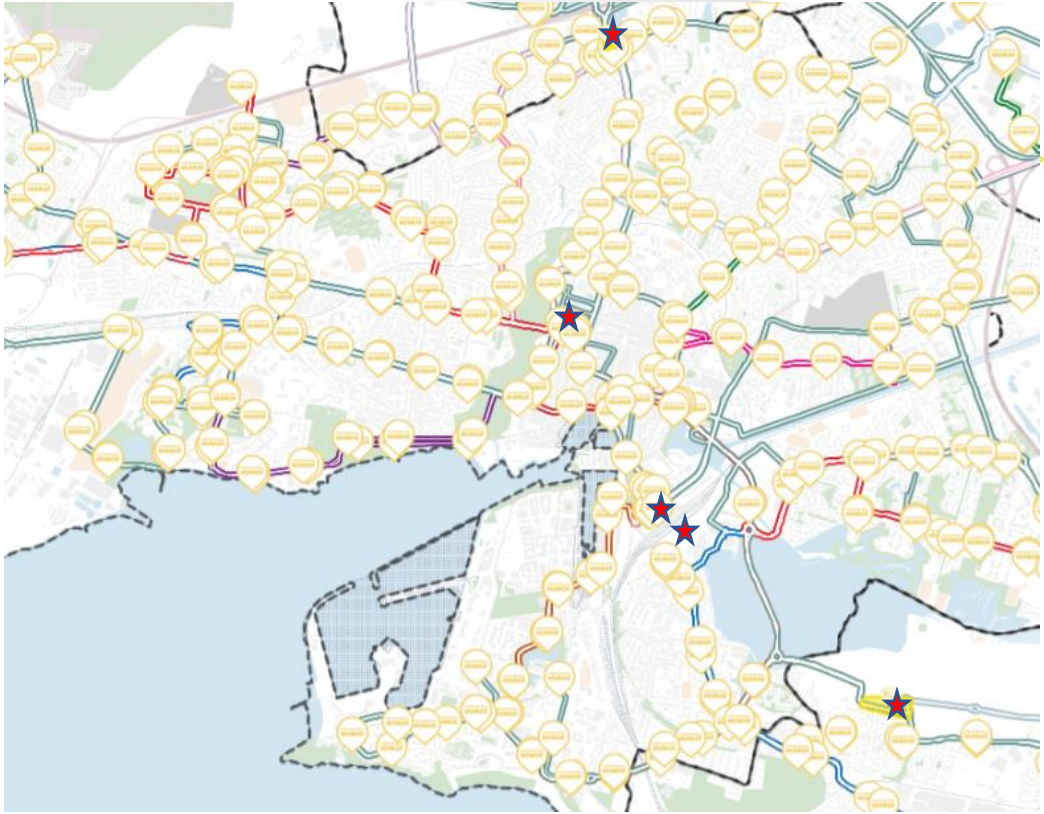
MAPPING BUSINESSES, PARCEL DROP-OFFS



MAPPING EXISTING LOCKERS, PARCEL DROP-OFFS REGARDING THE OPERATING COMPANIES

Some parcel collection points are single-brand, while others are multi-brand.

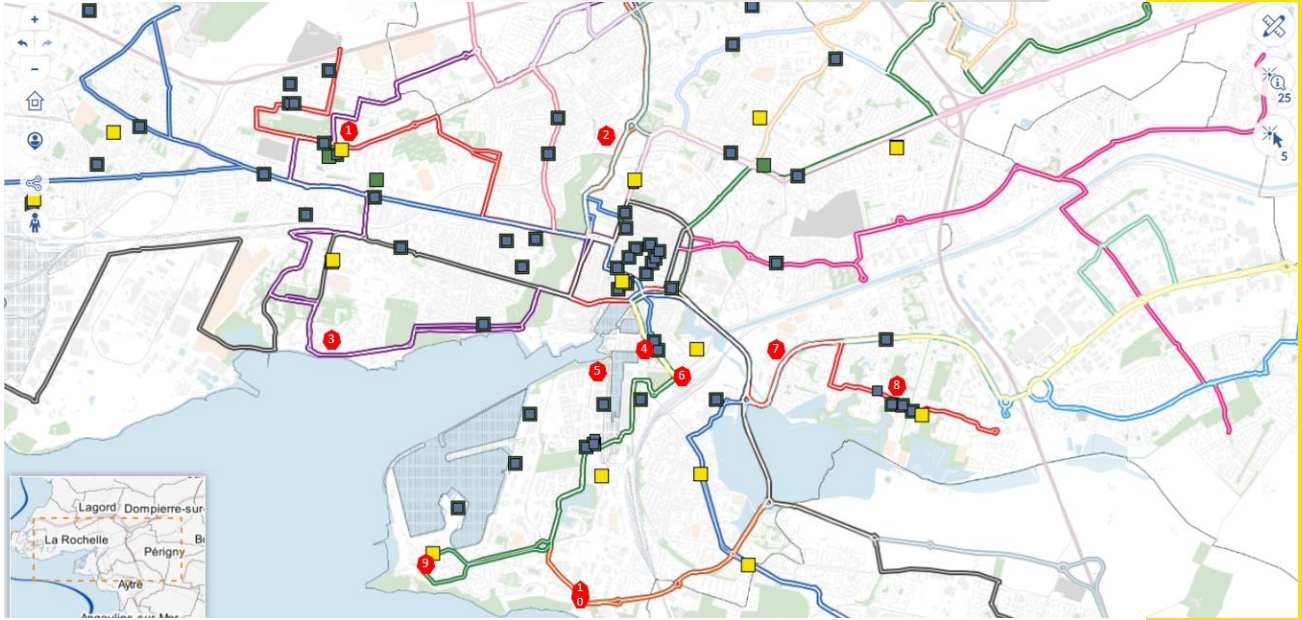
UNDERSTANDING MOBILITY HUBS & NODS



Mobility hubs

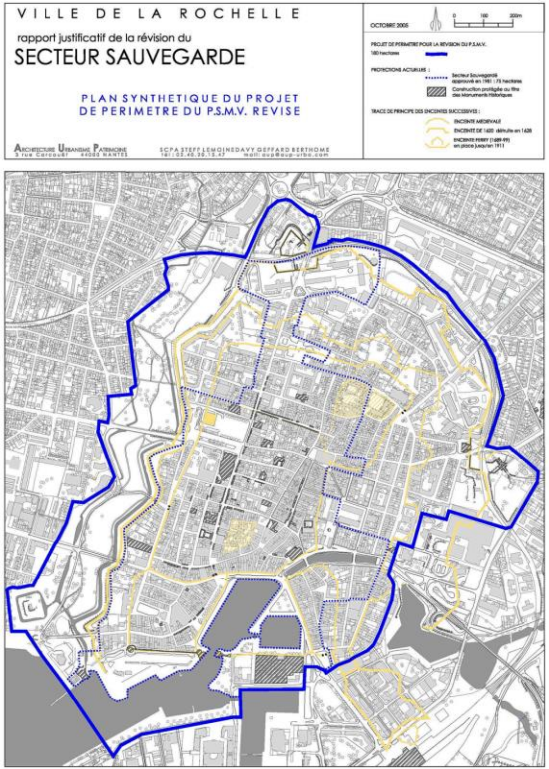
More than 1 000 bus stops all over the urban community.

ADDING AN EXTRA LEVEL OF INFORMATION : BUS WITH HIGH LEVEL OF SERVICE



Regarding differents layers of information, we preselected 10 precised areas ( ) for private sectors to deploy lockers & microhubs.

WHY NOT PUTTING LOCKERS & MICROHUBS IN HISTORICAL CITY CENTER ?



All street furniture must be approved by a commission of architects from Buildings of France so as not to disfigure the area.

After discussion, lockers and microhubs cannot be deployed within the blue perimeter.

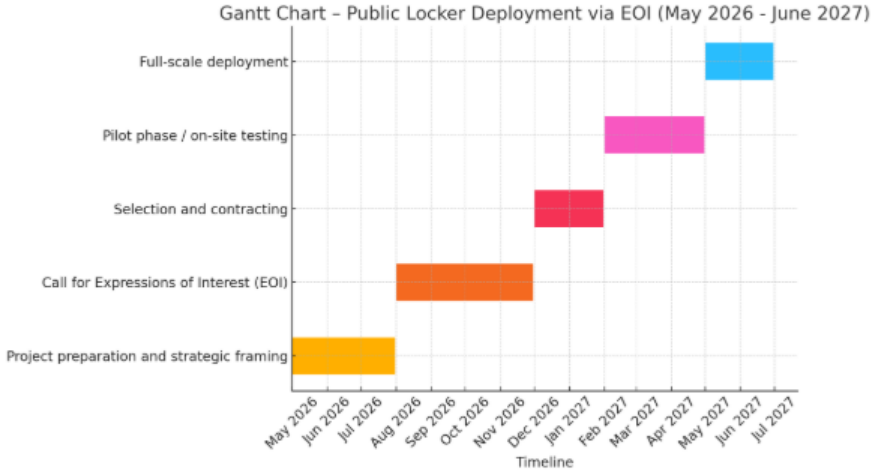
HOW & WHEN TO DEPLOY LOCKERS & MICROHUBS ?

A **call for expressions of interest (AMI)** is a procedure used by a public authority or administration to identify economic actors (companies, associations, start-ups, etc.) capable of proposing innovative solutions or projects on a given subject.

The objective is to:

- Collect proposals from companies (technical models, space requirements, management methods, pricing etc.);
- Validate potential sites with companies ;

Then select the most relevant partners for a pilot project or **authorised occupation of public land** (temporary occupation permit).



LogE-hubs

Strategic planning for optimized urban logistics hub location and consolidated logistics operations

Pedro Vale Moreira

Transport Authority Unit

eit Urban Mobility

Co-funded by the European Union

City introduction

Braga

- Northern Portugal, a historic and dynamic city.
- ~210,000 residents.
- A top Iberian city for culture, business, and innovation.
- Committed to UN SDGs, focusing on smart urban development.

Urban Logistics and Traffic Optimization

- Micrologistics in the historic centre
- Regulation of loading and unloading operations
- Traffic calming and park-and-ride facilities

Co-funded by the European Union

SOCILIBRE

Solidary and digital logistics for the last mile

- Training and capacity-building for key actors at risk of social exclusion
- Conceptual and technical model of a logistics hub with a Last-Mile Delivery System
- Conceptualisation of an E-commerce Platform and Last-Mile Sharing App, with its respective governance model

LogE-hubs

The LogE-hubs project aligns with Braga's mobility strategies and priorities by:

- Optimizing Urban Logistics: Strategic hub placement to reduce congestion and improve last-mile delivery.
- Sustainable Mobility: Eco-friendly solutions aligning with Braga's carbon reduction strategy.
- Smart Resource Management: Data-driven logistics for efficiency and lower environmental impact.
- Innovation & Resilience: Enhancing Braga's smart city vision with advanced urban mobility solutions.

LogE-hubs

Braga challenge to be addressed	Solution to be developed as part of the project	Expected outcome by the end of the project
• Traffic congestion • Sustainable logistic • Strategic urban planning • Decarbonisation	• Data driven decision making platform for territorial logistics efficiency	• Data visualisation platform to optimize urban logistics hub location and consolidated logistics operations.

Project and platform analysis

- Braga is deploying and testing LogE-Hubs to optimize urban logistics, focusing on distribution centres, delivery zones, and loading points.
- Key metrics include engaging 20 logistics operators, targeting key urban logistics zones (mainly the historical city centre), and piloting for 6 months.
- Insights and data from the Braga demonstration will serve as a blueprint for future implementations, enabling other municipalities to replicate the LogE-Hubs system.

Project and platform analysis

- **Objective:** Compare the distribution of loading and unloading bays with the actual stopping locations of commercial vehicles.
- **Data blocks:** Loading and unloading bays + Stops made by commercial vehicles
- **Filters:** Type of space: loading and unloading;Parking duration ≥ 10 min;Analysis area: historic centre
- **Conclusions:** By overlaying the two layers, it is possible to observe that there is a significant number of stops in areas without designated loading and unloading bays. Likewise, there are loading and unloading bays that are very underused.

Analysis of the possible location for a last-mile logistics hub

- **Objective:** Identify possible locations for the installation of a logistics centre for cargo bike deliveries.
- **Data blocks:** Unloading stops + Road usage by vehicles stopping in Braga
- **Filters:**
  - Unloading: Isochrone filter ⇒ Parking location: streets in the city centre / Travel time: 10 min / Mode of transport: bicycle
  - Vehicle type = LCV (Light Commercial Vehicle)
  - Road usage by stopping vehicles: same filter
- **Description:**This helps to understand the main routes used by LCVs entering the city centre. From this, it is possible to identify the best street/location for a last-mile logistics hub within a 10-minute cycling distance from the city centre.

Thank you!

For more information, please contact:

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(+351) 966412621

eit Urban Mobility

Co-funded by the European Union

ACS and the URBANE Project

Exploring New Pathways for Urban Logistics

Innovation department

ACS by numbers

44 years
of experience
(since 1981)

Leader Courier Company in GR
~25% market share

100% Greek territory coverage ~15.000 destinations

>60.000 m2
infrastructure

2.000
Services Points
(~600 Shops/Pudos, ~1.400 Lockers)
In Greece, Cyprus, Albania & Bulgaria

> 3.000
specialized employees
(~550 at headquarters)

>7 M
Successful Telephone Communications

€0,9 bill.
Reliable
Automated
COD service

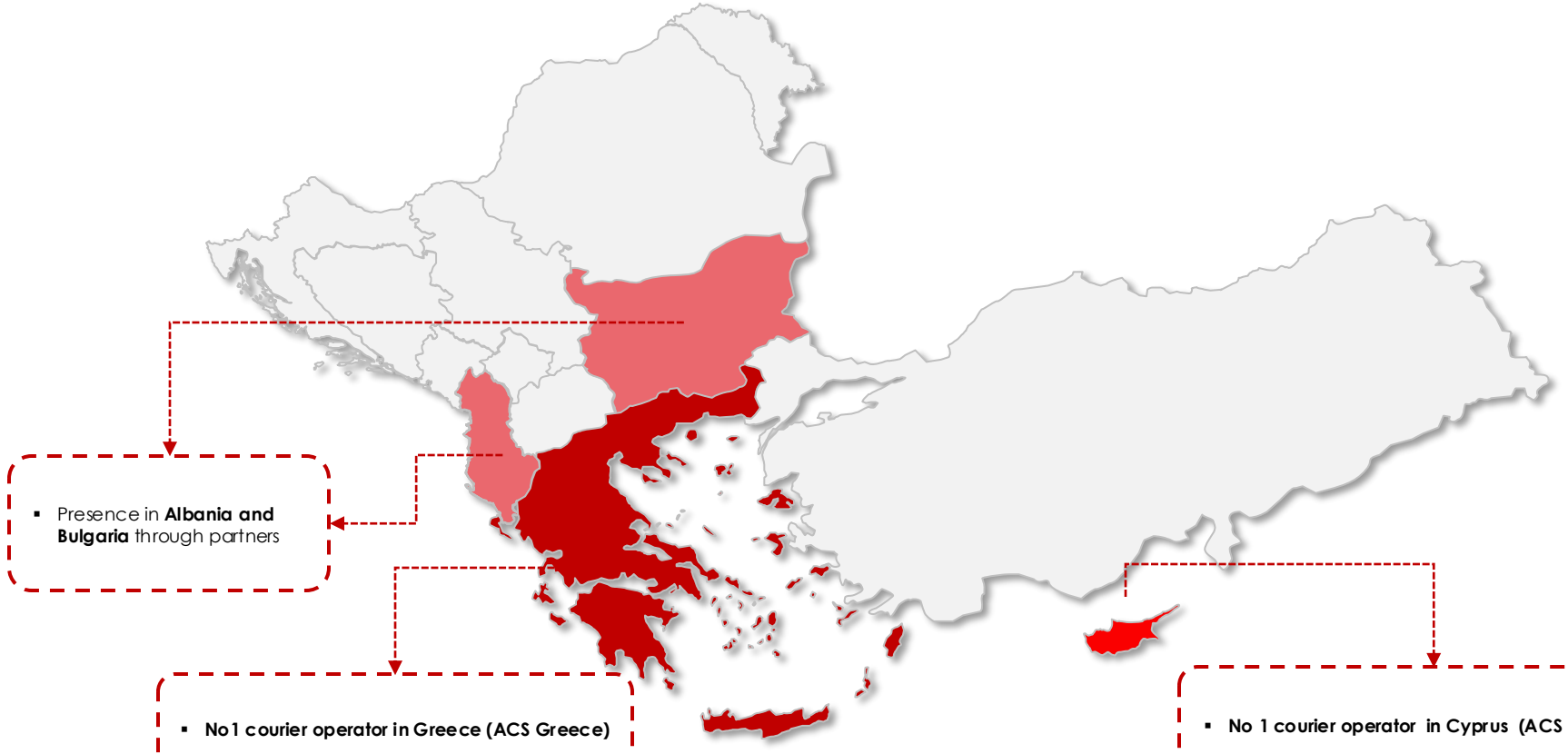
2.000
transport
vehicles

87
Daily linehauls
(land, sea and air)

Latest Technology
IT Systems
Online tracking & CX interfaces

Modern Automated sorting systems
> 60K pph throughput capacity

Key Player in South-East Europe



- Presence in **Albania and Bulgaria** through partners

- **No1 courier operator in Greece (ACS Greece)**

- **No 1 courier operator in Cyprus (ACS Cyprus)**

New State-of-the-Art Sorting Hub Facility in Egaleo, Athens

The new sorting center in Athens is state-of-the-art, allowing ACS to realize further economies of scale, expand its capacity and significantly improve efficiency, while positioning to accelerate its growth by being the only company that will be able to reliably service the fast growing e-commerce market

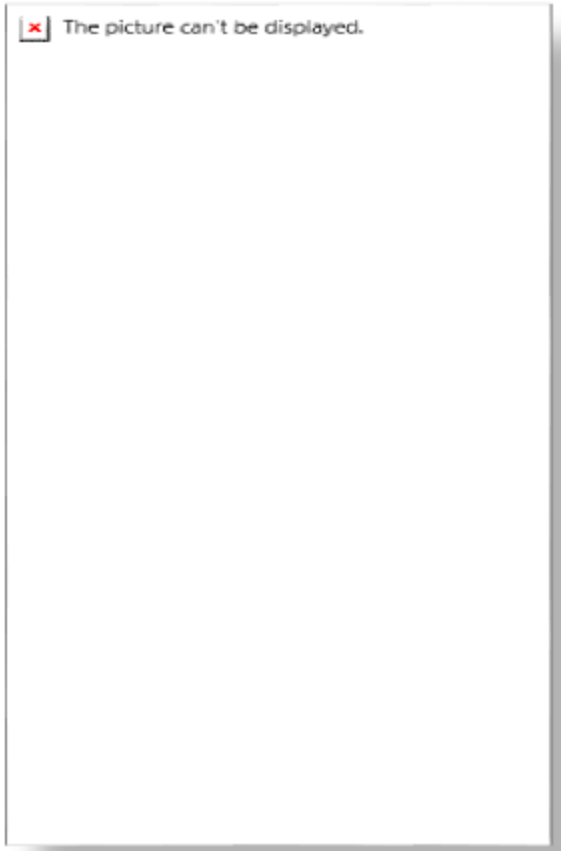
New Sorting Hub Highlights

- Building surface of 36,000 sqm
- Sorting capacity of more than 50,000 parcels per hour, which could reach up to 70,000 parcels per hour
- throughput allow for faster and enhanced achieving later cut off times and sorting to the route
- Advanced sorting capabilities and Total investment: ~€50m
- Rooftop equipped with 1MW PV
- Provision for 100 EV charging stations
- Economic benefit from the new sorting center to come mainly from economies of scale in opex through presorting

New Hub	BUILDING	SORTING SYSTEMS
Description	36.000 m2	>50k parcels/hour
Start of Operation	2022	2022

***Source**: ACS management*

ACS Shops, Smart Points & Lockers



>1.800 OOH delivery points in Greece:

- ✓ ACS Shops
- ✓ PUDOs
- ✓ APMs (Lockers)

ACS Lockers offer ability to Collect ***24/7***& ***POS*** payment

271 ACS Shops

100% coverage of Greek territory

270 PUDOs

Co-op with ***Coral Gas***

1.300 APB's(lockers)

60K+ cells

ACS Lockers expansion plan is to reach ~ 3.500 by 2026 end

Urban Logistics Challenges in Thessaloniki

Urban Space occupation – The Urban battleground

From **Congestion** to **Contestation** for **Urban space**
Limited or **no coordination** with **authorities** or other entities

Rapid Delivery and Increased Demand For e-Commerce

- **1 Order per Month per Citizen in Thessaloniki** (12-13M per Year in total)
- 2013 → 2023 e-commerce **rise from 27% → 56% in Greece**
- **EU 2024: 77% of citizens aged 16–74 shopped online (Vs 59% in 2014)**
- **>50% Willing to pay** more (+10% of product) **for same day delivery** (McKinsey)

Increased Customer Trips

27% Detour while returning from work in Thessaloniki*

Traffic-unaware Route Design

- **82% Successful Deliveries on first attempt (ACS)****
- **>40% of last milers basic** or lack of route planning*
- **+35%** on average route time **increase due to congestion** in Thessaloniki*

*Data from CERTH/HIT lab
**2023 - Thessaloniki

Rethinking & Redesign delivery networks

Sustainability
Reliability
Urban compatibility

Share data for common benefit

New agnostic formats
Communication protocols
AI powered processes

Create New Business Models

Who will own the Last Mile?
- Logistic Companies
- Authorities
- Platforms

Thessaloniki living lab

use case 1
Installation of Micro-Hubs
to Public Places

use case 2
Simulation of PI green last-mile
solutions

Impact Assessment & Results

The Locker Network implemented based on Thessaloniki Smart Mobility & Logistics LL Analytics and URBANE Platform Impact

At least 16

Parcel Lockers placed based on URBANE outputs and actions

Blockchain Integrated System

Ready to support the participation to a Locker Alliance Network

Impact Assessment & Results

Measurements based on Locker Network of ACS implemented during Thessaloniki LL actions

10.2%
Parcel Lockers Pickup Rate
improvement due to optimal locker expansion

Moving **Customer Habits**

4.5% → 29%
Parcel Lockers Fill Rate
increment to better demand induction

Customer **Engagement** to **Sustainable** Solutions

Thank you

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PANEL DISCUSSION

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Esmée Hof
City of Mechelen

David Robin
City of La Rochelle

Pedro Vale Moreira
City of Braga

Panagiotis Kanellopoulos
ACS Courier

Facilitated by

Raffaele Vergnani
POLIS

Co-funded by the European Union

MAIN TAKEAWAYS

- City authorities provide regulation, infrastructure, and vision; private operators bring innovation, flexibility, and data.
- Co-design processes lead to higher acceptance and more resilient urban logistics systems.
- Data spaces build trust and collaboration through clear governance and data sovereignty.
- Micro-hubs repurpose underused spaces for local distribution
- Embed logistics in sustainable urban mobility plans (SUMPs)
- Integrate logistics into urban design, not as an afterthought

Co-funded by the European Union

DECARBOMILE
Decarbonise last mile logistics

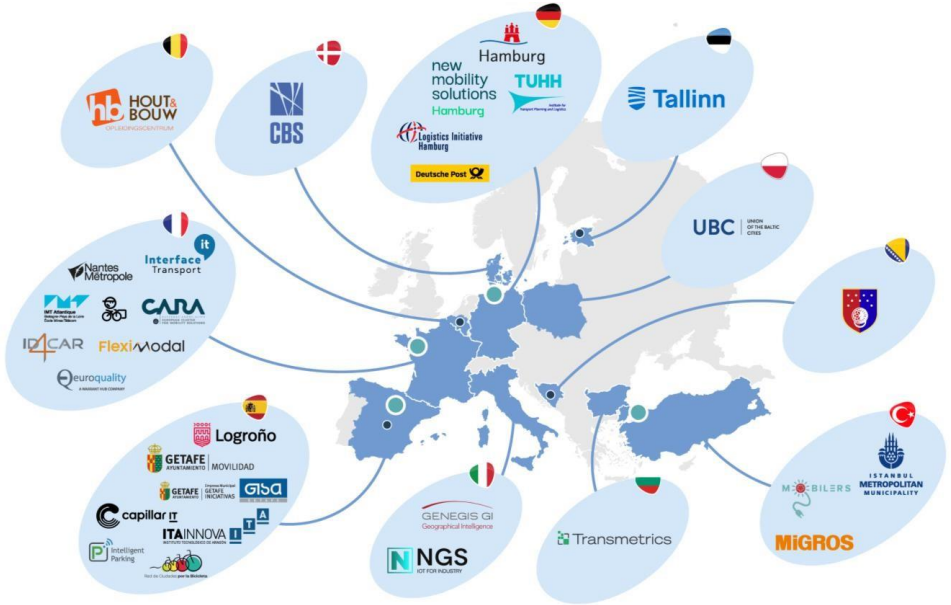
Urbane Logistics Innovation Day And Urbane project Final Event

6th November 2025

RedBici.org

This project has received funding from the European Union's **Horizon Europe Research and Innovation programme** under Grant Agreement No. **101069806**

Consortium overview



48
MONTHS
September 2022 to August 2026

7.9
MILLIONS

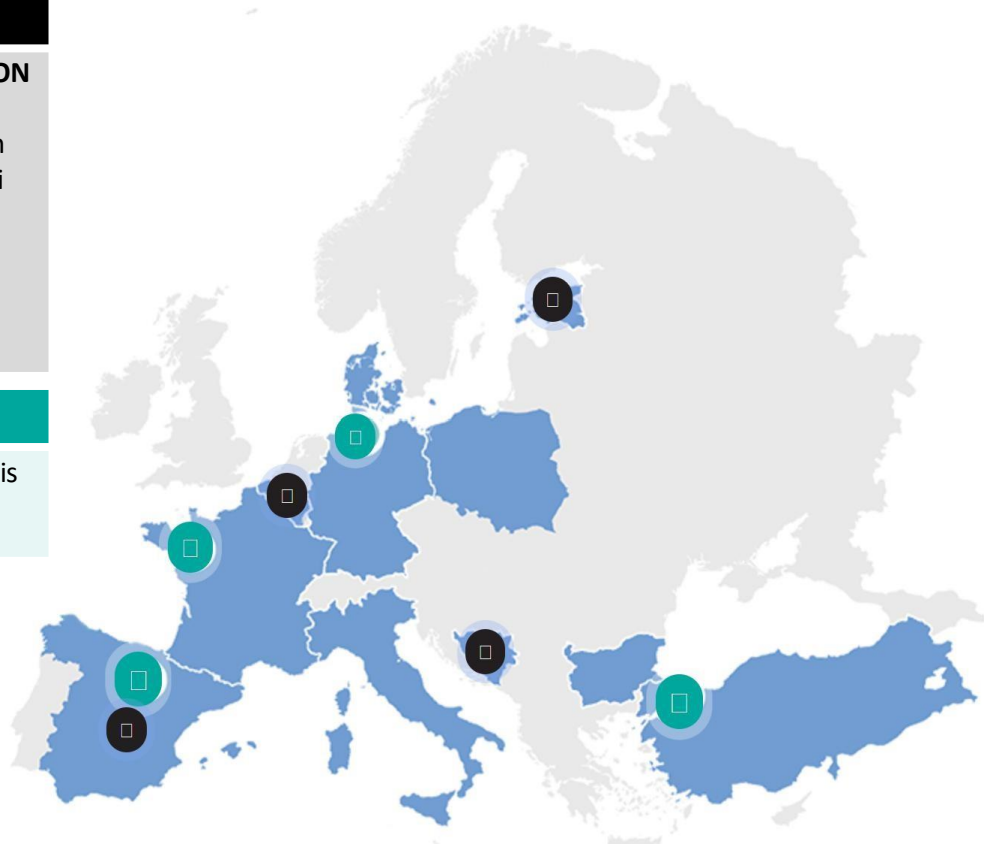
31
PARTNERS

www.decarbomile.eu

4 Pilots & 4 Satellites

Logroño	Nantes	Hamburg	Istambul
CYCLELOGISTICS Microhub Nanohub Smart lockers (City council)	**CYCLELOGISTICS** Microhub Mobile hub Fleet (City council)	**MULTIMODAL** barge & cyclelogistics (DHL)	**OPTIMIZATION** e-bikes B2C, Urban consolidation centre (Migros)

Getafe	Ghent	Tallin	Sarajevo
Nanohub – train station	Electric barge	Urban logistic plan Tallin 2035	Urban analysis



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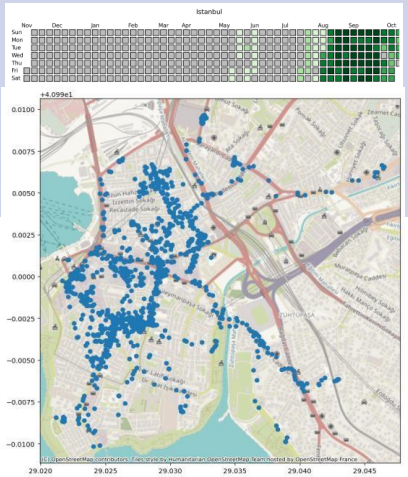
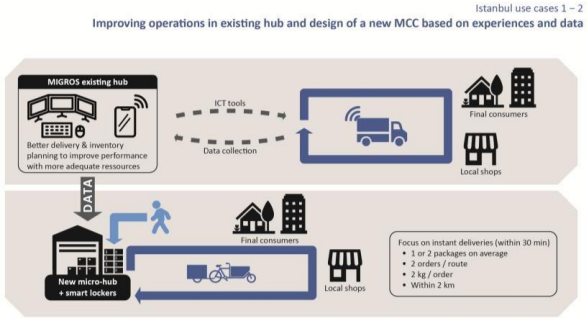
Istambul

Use case 1	Use case 2	Use case 3
Improve existint e-commerce operations Tracking and Optimization tools	E-bike operations for B2C • 7 e-bikes in use (implemented sensors • to 6 of them) • Planning to have 9 e-bikes in October • Paralelly 2 motorbikes in operation (for long distance and heavier orders) • Daily around 200-210 deliveries • 7-8 deci per order (25*35*25 cm volume) • 40 km/h • 900 meters – 1 km per order	Urban consolidation center Migros & Iletment (6 month implementation – waiting final agreement)



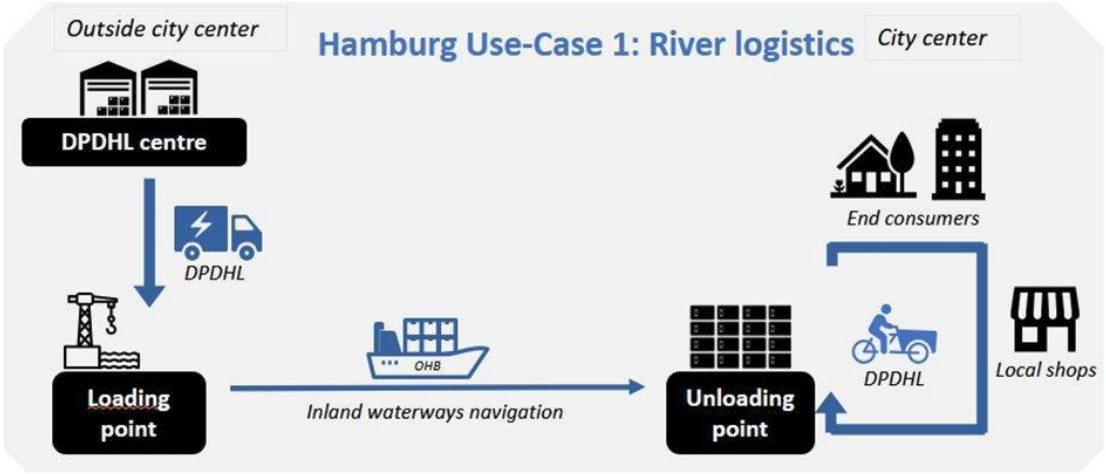


Istambul – Lessons learned

Lessons learned

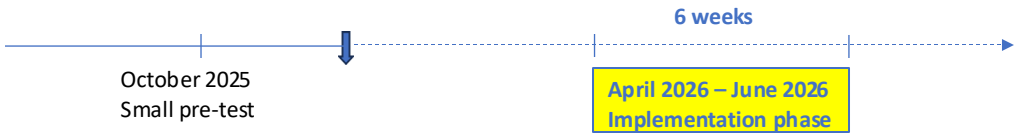
- Committing to a 4-year period is challenging when physical space is involved (may lose it while waiting…)
- It's difficult to implement European projects in line with local procedures (concerning financial processes)
- Since potential partners aren't familiar with the format, they tend to be cautious (operational / authority partners)
- Tracking and data helped a lot to implement new decarbonized solutions
  - e-bikes
  - Storage of goods more intelligent

Hamburg



Data collected:

- Accelerometer
- Position
- Speed
- Altitude
- Environmental
- …



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Hamburg – Lessons learned

Transport on the water
- Time in lock: min 10 minutes
- Travel time: 65 minutes
- Lock closed if water level is low
- Current influences the travel times
- Goods need to be protected from water (transport in the cargo bike containers)

Loading point:
- ˜15 minutes
- Security of goods when loading
- Protection – envoronmental issues

Unloading point
- Unloadind height differences lower tan at loading point
- High waves at the unload point could make unloading difficult
- Transport via cargo bike on the bridge (permission needed)
- Sorting of goods to the cargo bike containers at the unloading point

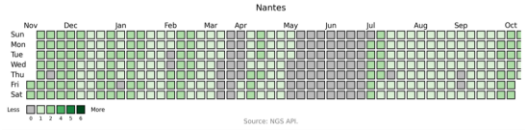




Nantes

Use case 1

Optimize and monitor last mile deliveries using ICT tools (Toutenvelo & Triporteur)



November 2025

Ongoing implementation phase (12 months)

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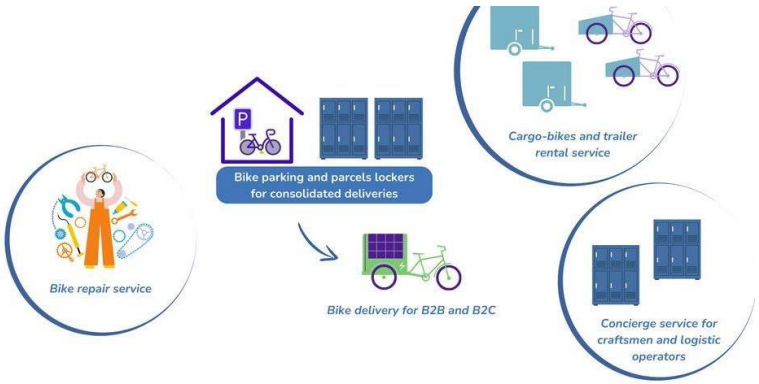
Nantes



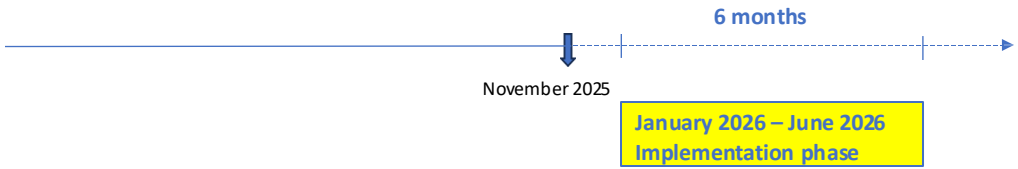
Use case 2

Hybrid Hub for professional and personal uses of cargo bikes
Three services to facilitate modal shift from car/van to bike for three categories of users : logistic operators, craftmen and citizen.

During the testing phase, there'll be a controled access to professionals. Later on, there's the possibility of opening it to the public.

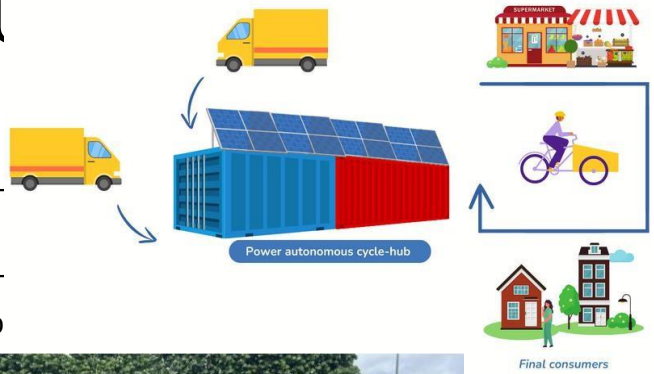
Area of work : Hub in a parking lot and will serve mainly Nantes City center.

Types of goods : parcels, waste, bulky furnitures, building materials.



Nantes

- l



- T as a consolidation hub. Solar tonomous.
- T y time, offering a flexib

- in the Solilab (Ile de Nantes) and the de
-

November 2025

? Implementation phase

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Nantes – Lessons learned

- Difficulty engaging external actors
  - Partnership with other projects to make it possible
- Logistics volume influences use case
- Extra funds needed to buy equipment (Tricylift)
- Legal barriers
  - Permissions for Mobile Hub location
  - Public spaces - a lot of agreements from diferent departments

Logroño

Use case 1

Consolidated flows at a nano-hub

Use case 2

UCC at San Blas market

Use case 2.1

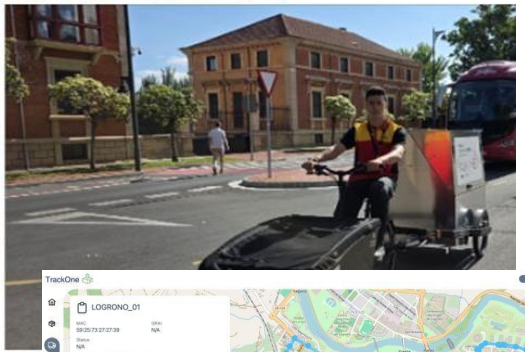
- Reverse logistic

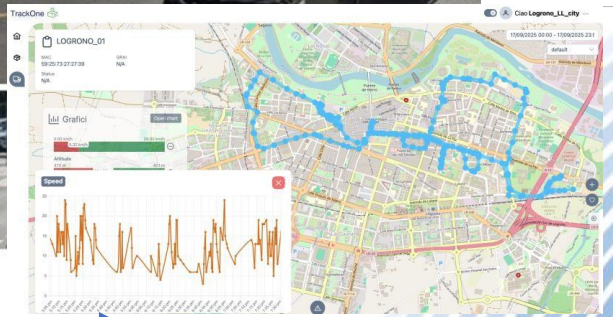
Use case 2.2

- Consolidation of community delivery service

Use case 3

Parcel locker network





USE CASE 1

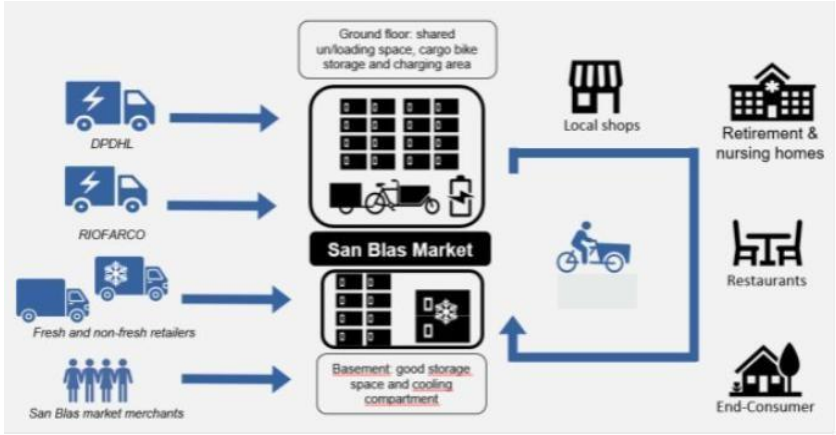
November 2025

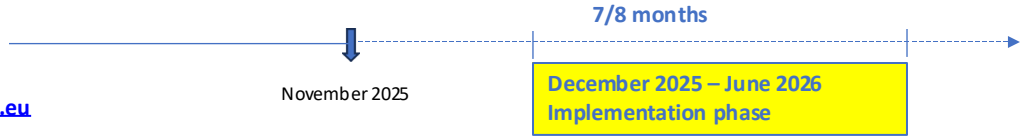
Ongoing implementation phase (9 months)

Logroño

USE CASE 2

- **Microhub**
  - Consolidation
- **Cyclelogistics activity**
  - B2B
  - B2C
  - Reverse logistics
  - Local commerce



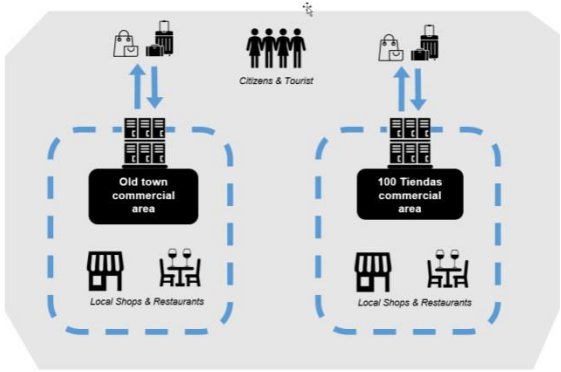


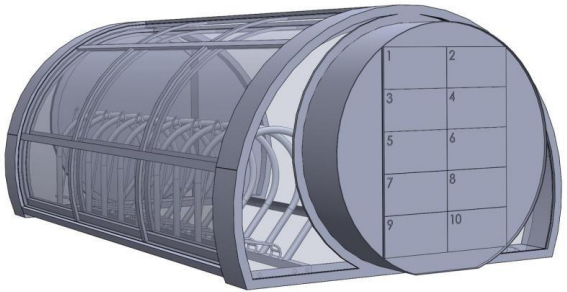
Logroño

USE CASE 3

The INT lockers will serve 2 main functions:

- ✓ Pick up stations for citizens of goods already purchased to local shop.
  - They will allow local shops to sell and deliver goods outside opening hours.
- ✓ Storage for citizens of their shopped goods, for up to 24h, while visiting the city or going to a restaurant or theatre.
  - This will be a way to promote the combined entertainment of local shopping and restauration in a single trip to the center.





November 2025

December 2025 – August 2026
Implementation phase

Logroño – lessons learned

STAKEHOLDERS

NEEDS !! / Level of digitalization / Resources (HHRR & €)

Difficult to involve external stakeholders, better be consortium partner

DATA ANALYSIS

REGULATION

Local ordinance

Legal framework (microhubs)

LACK OF KNOWLEDGE

Cyclologistic sector / Tools / (software and hardware)

POLITICAL SUPPORT

INCIDENCES

Expect the unexpected

TENDER

Process & negotiation & uncertainty

MULTIDISCIPLINARY COLLABORATION

Several skills needed: technological, expertise operation, IT, marketing, legal, consultancy...)

Logroño – challenges

- ✓Data collection to **assess the future economic viability**
- ✓Effective **communication campaign**
- ✓UC1 --> Effectiveness of action (plan B if necessary)
- ✓UC2 Cyclelogistics: data collection to assess economic viability
- ✓UC 3 test with users
- ✓**Data sharing** (operators' requirements)
- ✓Maintain involvement of **external stakeholders**
- ✓**LEZ** restrictions implementation

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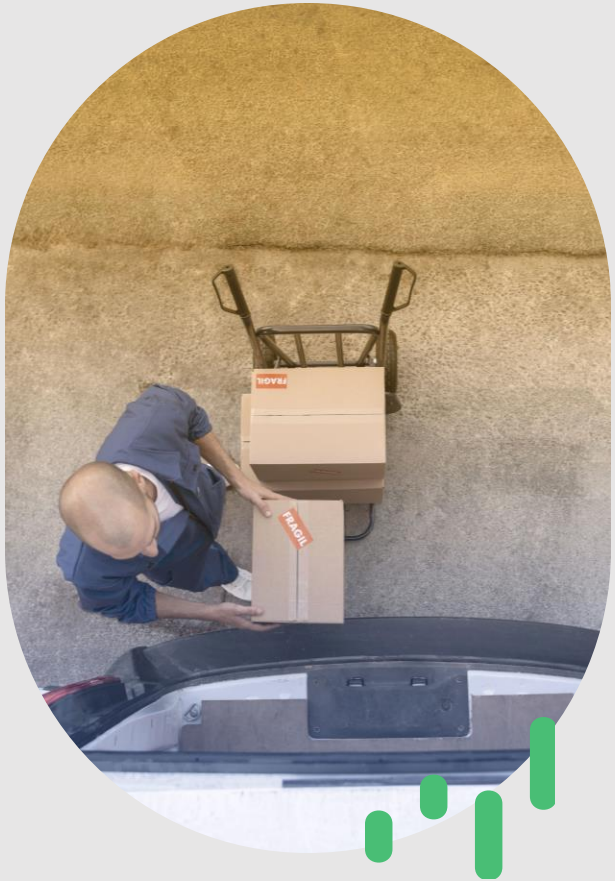
💡 Plenary Session:

Innovation Uptake and Policy

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Innovation Uptake & Policy

Alonso Davila Graf, POLIS
Blanca Yáñez Serrano, EIT Urban Mobility



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Final Event
6 November 2025

What now?

How do we achieve continuity in the project's findings? What happens afterwards?

Dual perspective to uptake → **commercial** exploitation (business plans, market pathways) & **policy** dissemination (governance, recommendations)

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Commercial Exploitation & Scaling Up

How can the commercial exploitation that emerges from URBANE be scaled up beyond the project?

For example, what can emerge from the **URBANE Business Models & Plans**? What can they foster?

Helsinki LL: Shared micro-consolidation centre with AV delivery
Bologna LL: Agnostic network of microhubs
Thessaloniki: Shared locker alliance
Valladolid LL: Deterrent car park delivery

- Facilitates forward-looking **business opportunities**
- Fosters an **ecosystem of collaborative partners** that can take their pilots forward
- Provides guidance for **enhancing local regulations**
- Fosters communication between **competing operators**
- Etc.

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Policy Recommendations & Replicability

Wave 1

Helsinki
Bologna
Thessaloniki
Valladolid

Wave 3

Aarhus: Helsinki, Bologna - Space, location, engagement, etc.

La Rochelle: Helsinki, Bologna – ADVs, stakeholder awareness, strategic planning

Antwerp: All – Political will, Marketing, policy frameworks

Mechelen: Bologna – stakeholder cooperation, regulatory framework, data sharing

Ravenna: Bologna, Valladolid – Technologies, stakeholder engagement, regulations

Prague: Bologna, Thessaloniki – Space, stakeholder engagement, data sharing

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Policy Recommendations & Replicability

Regulations & Legal Frameworks

- SULPs
- LEZ/ZEZ/LTZ
- Bureaucracy, permits, etc.

Data Governance & Digital Infrastructure

- Digital Twins
- Smart Contracts
- Data collection, management, etc.

Governance & Stakeholder Cooperation

- Contracts, guidelines, tenders
- Political will
- Engagement & accountability

Business Models & Market Entry

- PPPs
- Consumer/user behaviour
- Incentives

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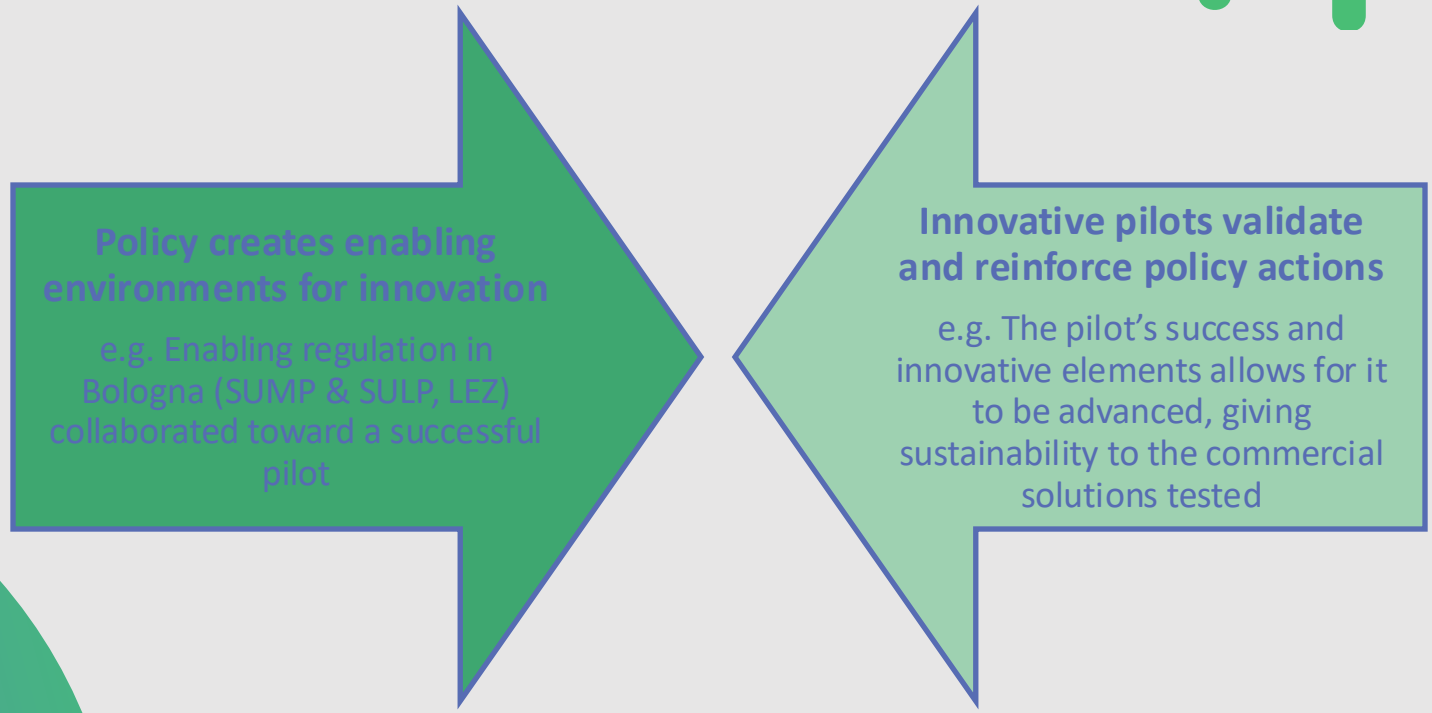
Synergies Between Policy and Commercial Uptake



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Thank you!

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Blanca Yáñez Serrano

EIT Urban Mobility

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Funded by
The European Union

Plenary Session 2

This project is co-funded by the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069782

Panel discussion

Yanying Li
ALICE

Magnus Blinge
Trafikverket

Pedro Fernandez
Madrid City Council

Wiebke Müller
EIT Urban Mobility

Anton Renard
City of Antwerp

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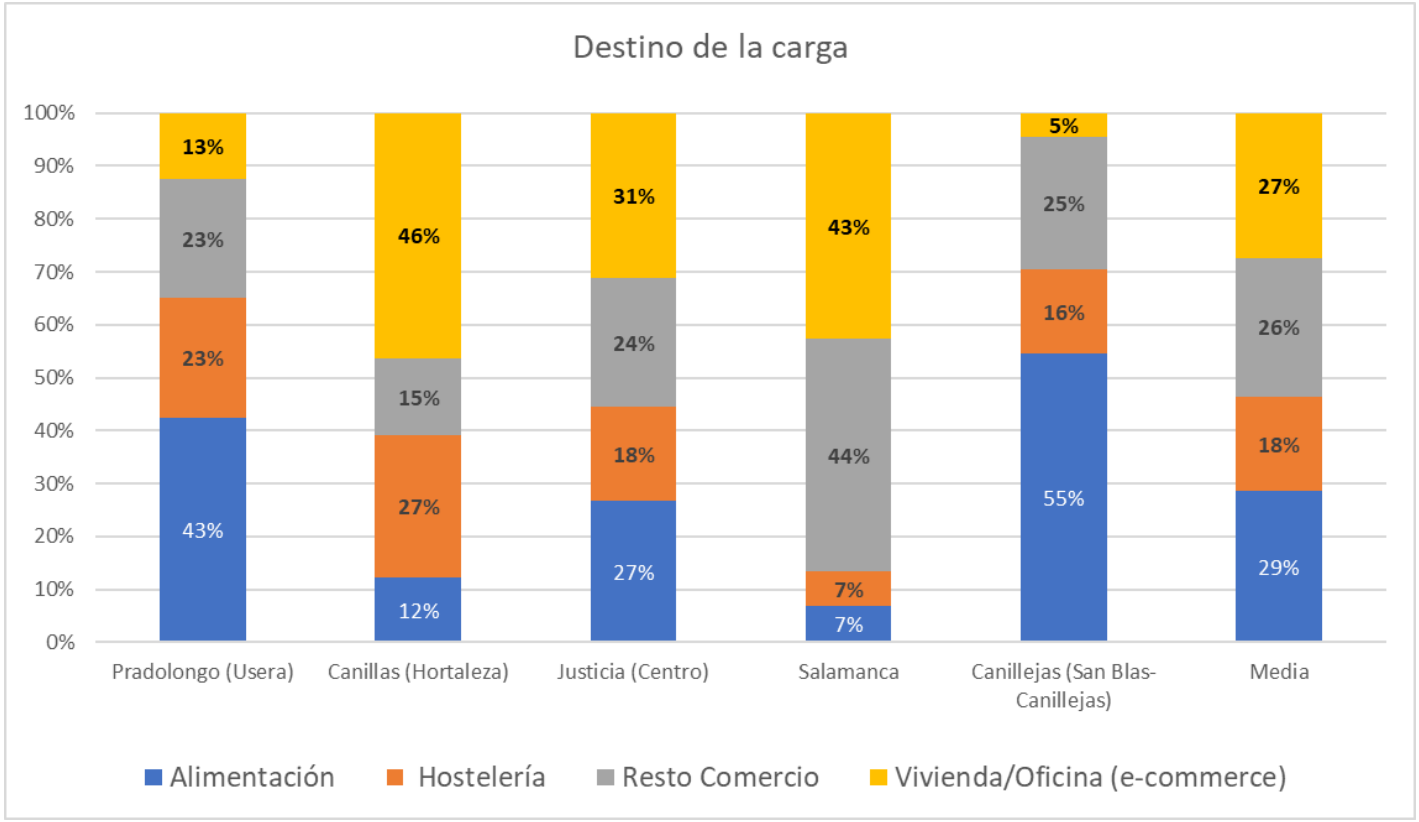
Urban Logistics Innovation Day

Madrid’s Urban Logistics Strategy

Barcelona, November 6th 2025

Challenges we faced in Madrid not long ago...

1. Rapid increase in e-commerce



Average:

- Residential/Office: 37%
- Other Commerce: 16%
- Hospitality industry: 18%
- Food: 29%

2. Concentration of activity in the morning

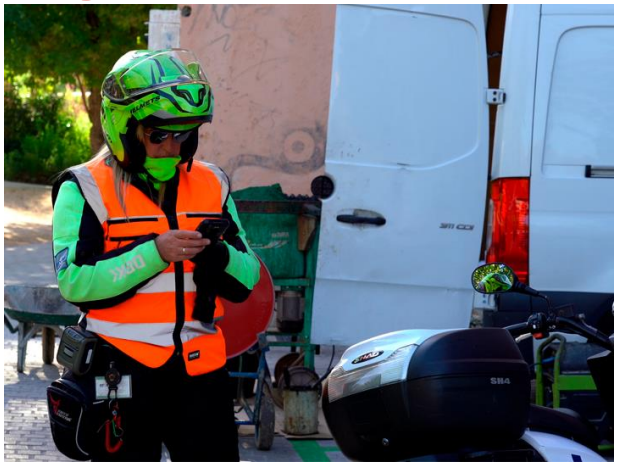
Hourly Distribution of loading and unloading Operations

3. Lack of tools for managing loading and unloading bays

Probabilidad de encontrar una plaza de C/D vacía a lo largo del día (%)

- 0 - 25
- 25 - 50
- 50 - 75
- 75 - 100

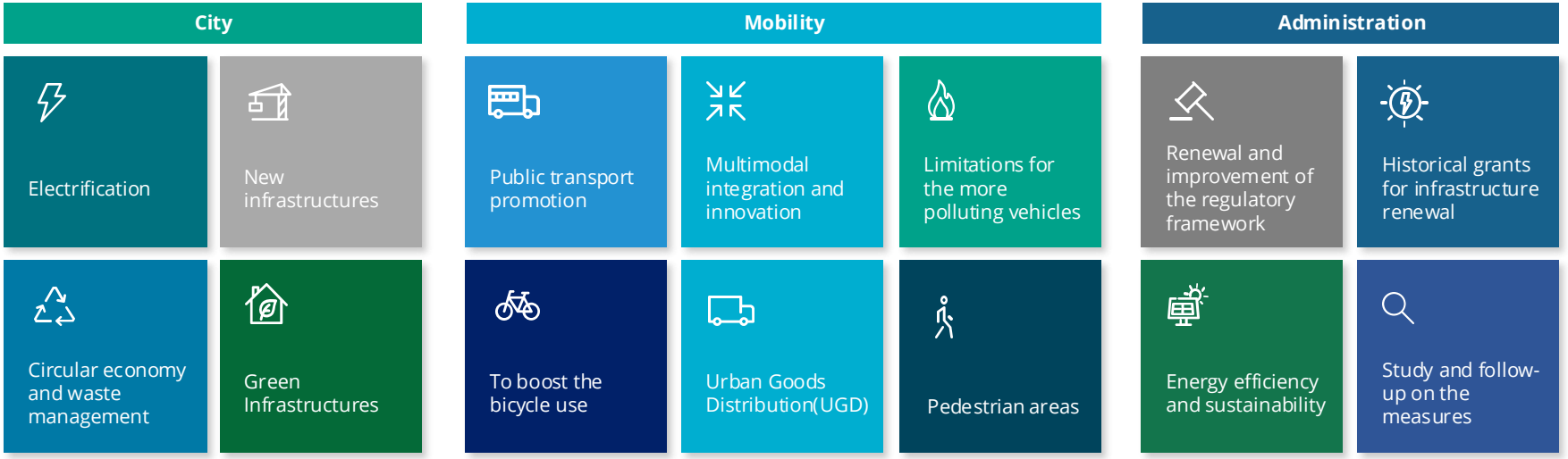
Challenges we faced in Madrid not long ago...



Sources: madrid.es; madrid360, pyramidconsulting

Madrid’s Urban Logistics Strategy

Madrid 360 Environmental Sustainability Strategy



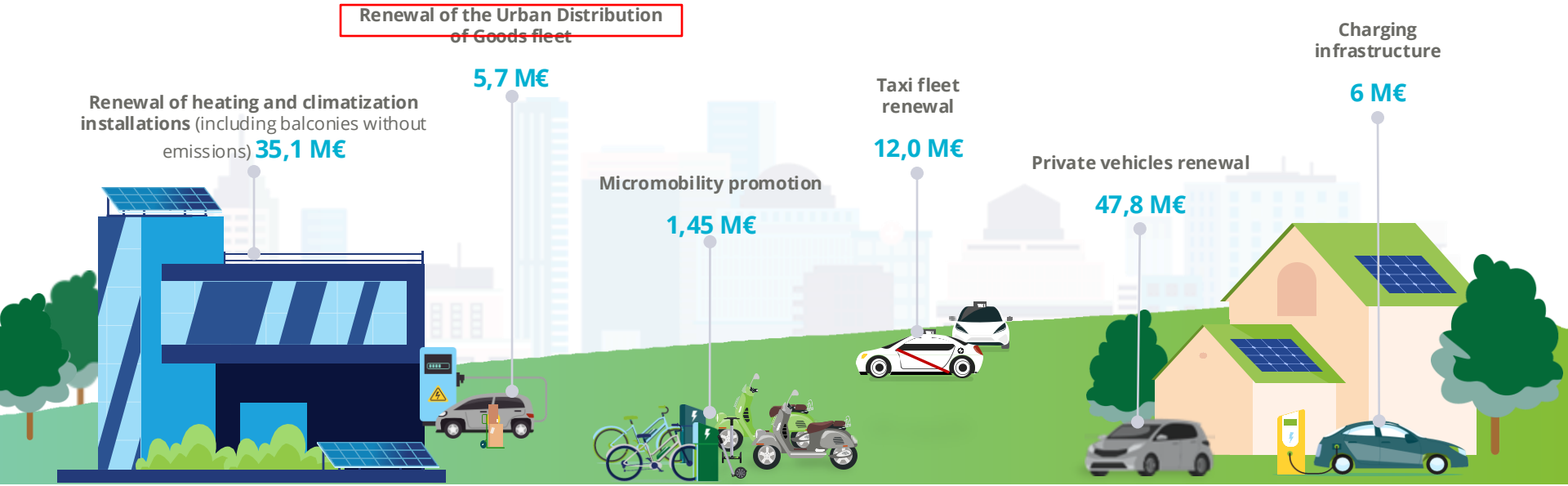
Urban Logistics Strategy: DUM 360

- Creation of an **application** to find out the **occupation of loading and unloading bays**
- The installation of **sensors** in loading and unloading bays to obtain more information on their use.
- Increasing the **number of zones** for the delivery of goods
- The **extension of the timetable** for carrying out logistics operations
- The implementation of **new signage**
- Creation of a **new team** to deal with **incidents in the sector** and monitor the proper functioning of the system.
- The promotion of **micro-hubs** through **public-private partnerships** to encourage **night-time delivery** of goods.
- The provision of new **lockers for e-commerce**
- The creation of an **Urban Logistics forum** to implement other measures resulting from dialogue with the sector.

Some examples of what we implemented ...

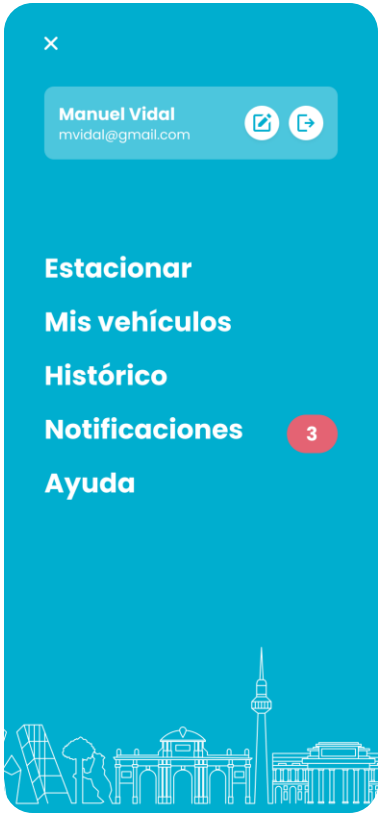
Strategic grants for fleet renewal

Strategic grants accompany the implementation of the Low Emission Zone to foster public acceptance of the measures implemented

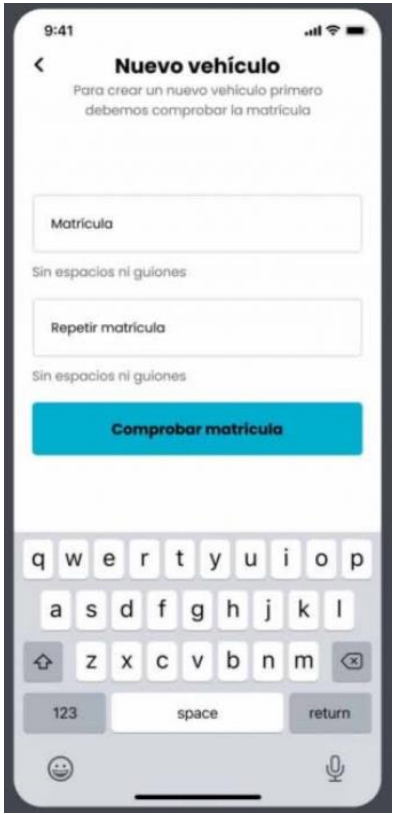


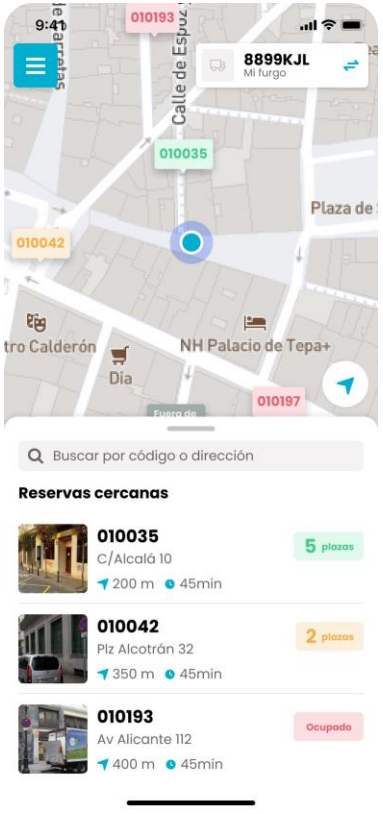
New vertical and horizontal signage

DUM 360 App

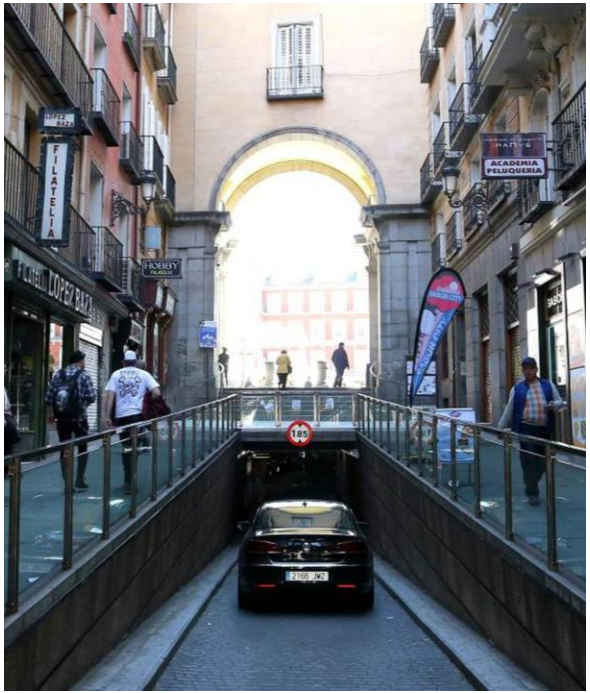

Manuel Vidal
mvidal@gmail.com
Estacionar
Mis vehículos
Histórico
Notificaciones
3
Ayuda


9:41
Nueva cuenta
Nombre
Apellidos
ES +34
Teléfono
Correo electrónico
DNI
Documento
Contraseña
Repetir contraseña
Acepto la política de privacidad
Acepto los términos y condiciones
Registrarme

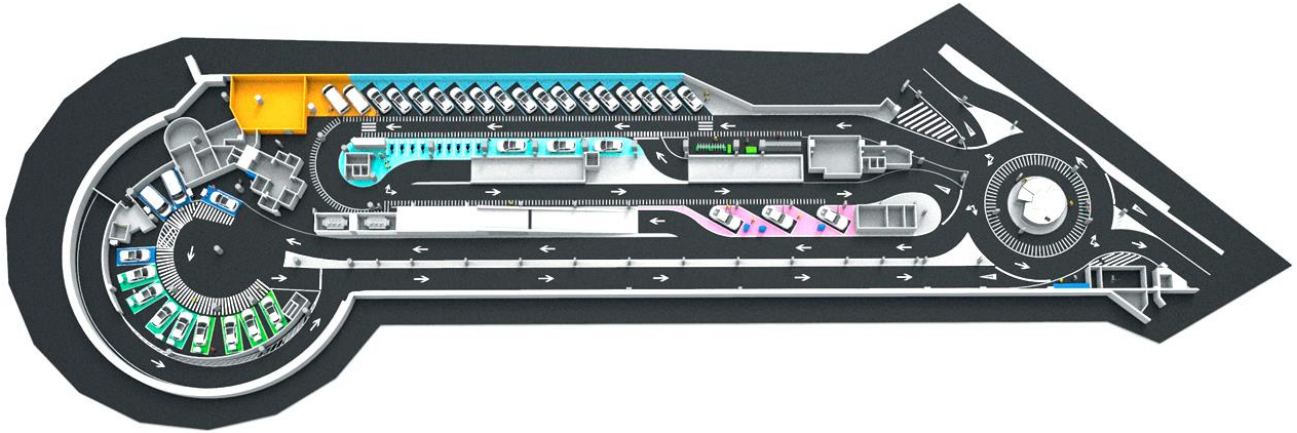

9:41
Nuevo vehículo
Para crear un nuevo vehículo primero debemos comprobar la matrícula
Matrícula
Sin espacios ni guiones
Repetir matrícula
Sin espacios ni guiones
Comprobar matrícula


9:41
8899KJL
Mi furgo
010193
010035
010042
Plaza de
NH Palacio de Tepa+
Día
010197
Buscar por código o dirección
Reservas cercanas
010035
C/Alcalá 10
5 plazas
200 m
45min
010042
Plz Alcotrán 32
2 plazas
350 m
45min
010193
Av Alicante 112
Ocupado
400 m
45min

Microhubs in underground parking facilities



Microhubs in underground parking facilities



1 X urban consolidation center

1 X Battery of lockers

2 X Loading and unloading spaces

At least one

Present and next steps for Madrid

UNCHAIN

The UNCHAIN project is an EU-funded initiative aimed at transforming urban logistics and planning to create greener, smarter, and more sustainable cities across Europe. It focuses on breaking data barriers and enabling seamless cooperation between public authorities and logistics stakeholders

UC1: Promotion and optimization of shared transport facilities

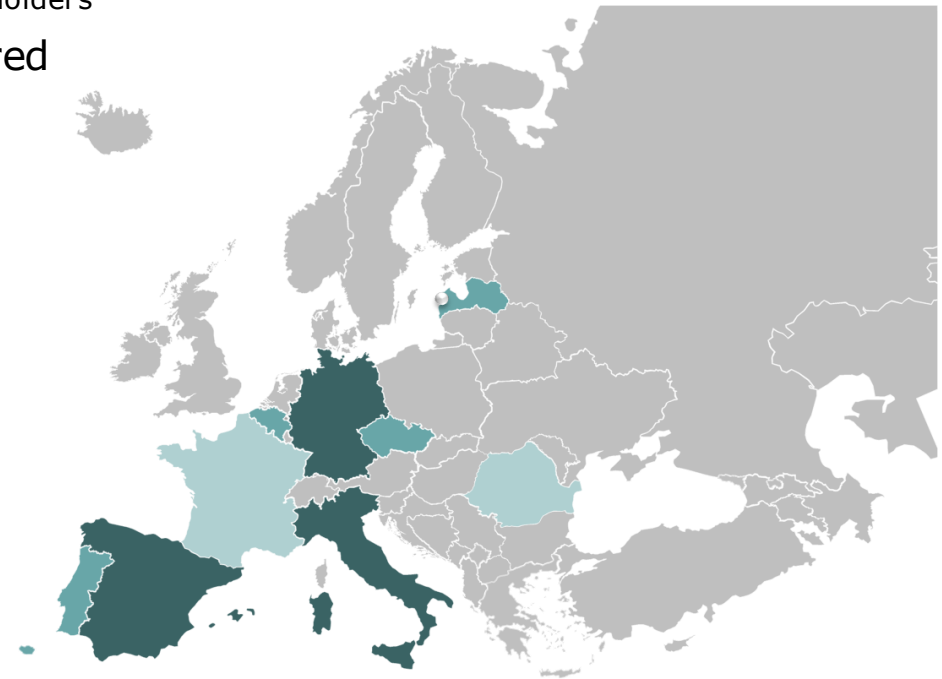
- UCC location and integrated planning KIT
- IT Pop-Up delivery points management tool
- Advanced Management IT cockpit for shared facilities

UC2: Efficient and safe urban logistics

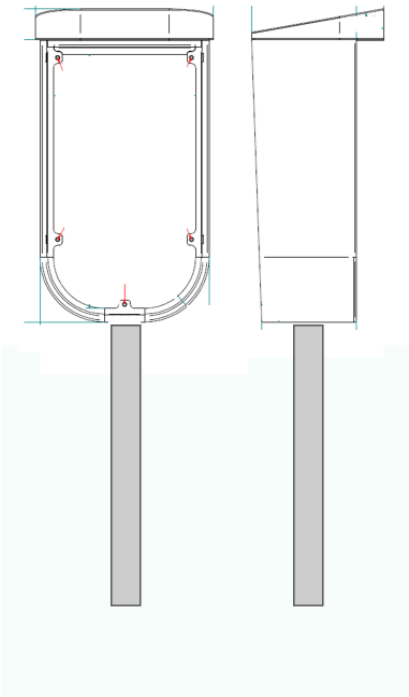
- Congestion forecasting and safe route planning

UC3: Dynamic and efficient curbside management

- Dynamic curbside management



Dynamic curb side management



A device similar to the one shown will be installed to indicate the type of use allowed in every time frame

The dynamic curb side management tool will implement a type of dynamic signage that will allow a more flexible use of parking spaces.

It aims to:

- Reduce agitation traffic
- Reduce parking indiscipline (double parking)
- Increase parking occupation
- Increase traffic safety

The City Council will propose periods dedicated to different uses, such as school pick-up/drop-off, reduced mobility, logistics. In other periods parking will be accessible for everyone.

Safe and efficient route navigator

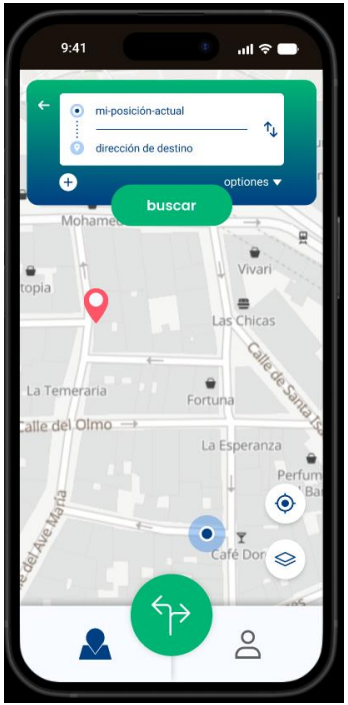
The safe and efficient route navigator is designed specifically for logistics operators in Madrid.

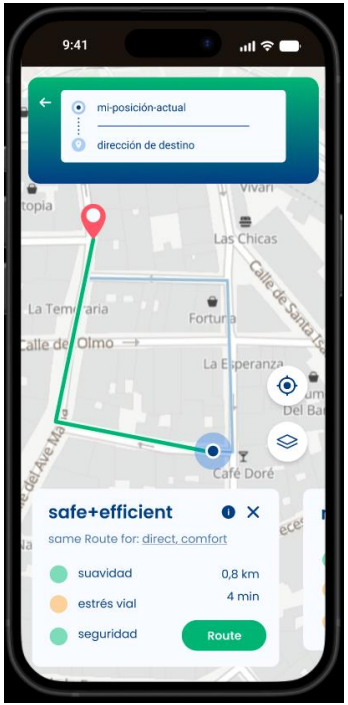
It allows the identification of loading and unloading bays close to the delivery destination and provides when selected direct routing to these.

It aims to reduce:
- traffic congestion
- agitation traffic
- Parking indiscipline

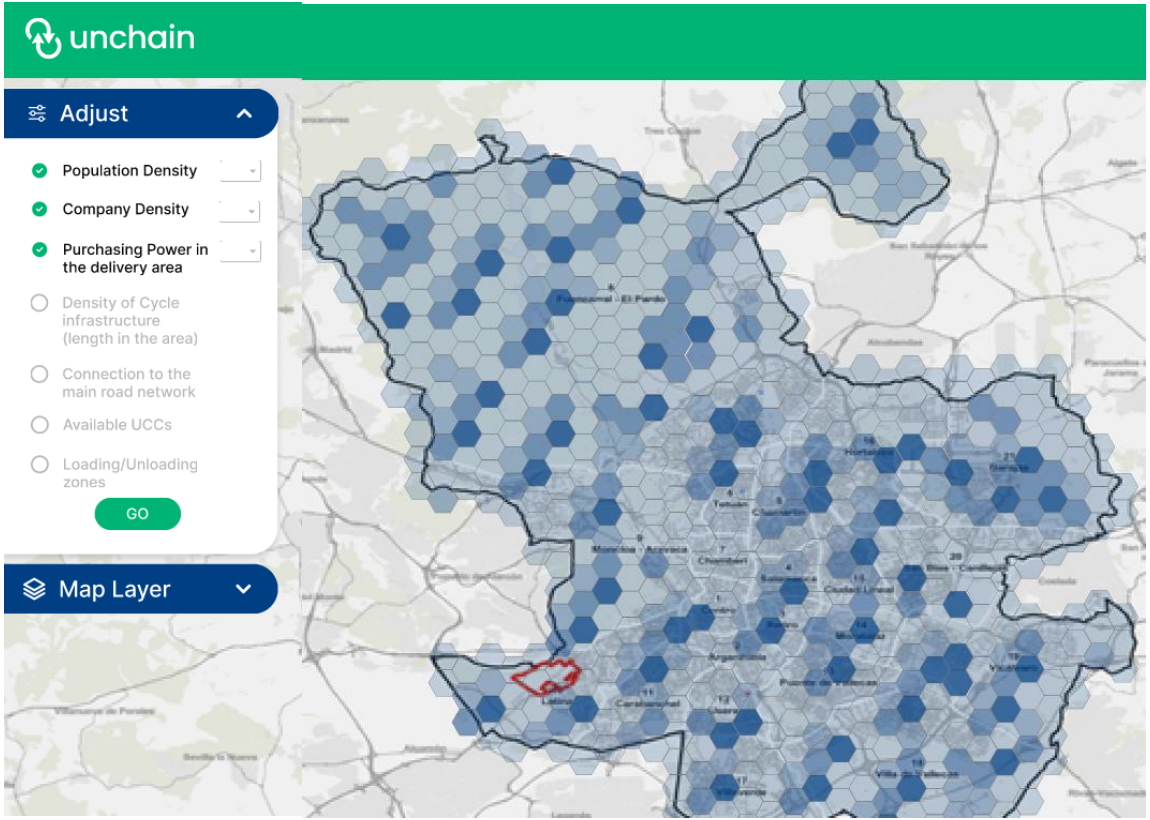
It proposes routes that enhance traffic safety (minimizing exposure of vulnerable groups).

In the future the algorithm could be integrated in the DUM 360 App, making it even more dynamic for example through the incorporation of occupation data of loaging and unloading bays.





UCC Planning kit



The UCC planning kit is designed to propose suitable locations for the implementation of new urban logistics centers.

It allows the user to select different parameters the algorithm should take into account for the calculations and assign specific weights to each of these.

It aims to provide policy makers with the necessary tools to design efficient networks of UCCs, complementing existing infrastructures with new infrastructures.

Multimodal spaces as delivery points

Madrid is exploring different options for the implementation of more efficient networks of lockers to reduce traffic and pollution associated to urban logistics.

The location of lockers in multimodal spaces (especially linked to public transport) shows great potential to increase the number of users as it is convenient to collect small packages on the way to or from work.

Thank you!