



Sustainable Last-Mile Delivery System

Poznan Living Lab



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101147942

Urban Logistics
Micro hubs
PUDO*
Optimization

* Pick-Up and Drop-Off

Developed by :



POZnań*



Project by :

Green Turn

Technologies

Your profile

Solutions



Sustainable Last-Mile Delivery System

Urban Logistics
Micro hubs
PUDO
Optimization

Green
Turn



WHAT IS THE INNOVATION?

In Poznań, the Sustainable Last-Mile Delivery System aims to introduce a micro hub serving the city center and Old Town, where dense urban development, limited road space and pedestrianized areas make conventional van-based deliveries less efficient. Parcels are consolidated at the micro hub and assigned to electric cargo bikes or electric vans depending on distance, parcel characteristics and access conditions.

A decision-support model uses spatial demand data and a multi-criteria optimization algorithm to allocate parcels, select suitable vehicles and generate efficient delivery routes. The model prioritizes zero-/low-emission vehicles and aims to reduce vehicle-kilometres and emissions while maintaining an efficient and economically viable delivery service.



The solution combines four elements within one decision-support model:

- Micro hub-based parcel consolidation
- Integration of home delivery and PUDO points
- Cargo bikes and electric delivery vehicles
- Multi-criteria vehicle allocation and route optimization

Value Drivers

- Lower CO₂ emissions and fewer vehicle-kilometers
- More efficient routes through consolidation
- Better use of cargo bikes and electric vans
- Reduced dependence on door-to-door van delivery

Main Beneficiaries:

Cities, logistics operators, PUDO network operators, retailers and e-commerce customers



Technology readiness level : 8
Implementation stage :
Pilot

Technologies

Your profile

Solutions



Sustainable Last-Mile Delivery System

Urban Logistics
Micro hubs
PUDO
Optimization

Green
Turn

THE PILOT IN POZNAŃ, POLAND

Pilot period: 1 January 2026 – 31 December 2026

The pilot tests an integrated last-mile delivery model for Poznań's city center and Old Town, combining a micro hub, PUDO points, electric cargo bikes and electric vans.

The pilot includes:

1. Demand & spatial analysis – mapping parcel flows and delivery conditions.
2. Parcel allocation – assigning parcels to home delivery or PUDO points.
3. Vehicle & route optimization – selecting vehicles and optimizing routes and micro hub operations.
4. Performance assessment – measuring environmental, operational and economic KPIs.

Take a photo of this slide and
get in touch to learn more about
the **Sustainable Last-Mile
Delivery System in Poznan**

Scan to know more
about Green Turn



Connect with GreenTurn
on LinkedIn!



**Would you like to know more?
Take contact :**



Bartosz Kożuch
Senior Logistics R&D Projects Specialist



Research Group of Logistics
Łukasiewicz | Poznan Institute of Technology
ul. Ewarysta Estkowskiego 6
61-755 Poznań, Poland



bartosz.kozuch@pit.lukasiewicz.gov.pl



+48 61 850 49 00

<https://green-turn.eu/>

Technologies

Your profile

Solutions

