

Urban logistics /
Last mile

Collaborative
processes,
connectivity and data

Shared parcel locker network by Blockchain smart contracts

Developed by :



Project by :



Funded by the
European Union

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Operational fields

Technologies

Solutions



SHARED NETWORK OF PARCEL LOCKERS & MICRO-HUBS

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Solution description

Shared parcel locker network can connect all parcel lockers to enable use by various operators

GEL Proximity is a service that allows service providers to make deliveries and returns to Pick-up Points. Likewise, it allows the Networks and possibly also the eCommerce businesses themselves to make their Pick-up Points available and manage the operational flows that a Network of Pick-up Points needs.

The GEL Proximity platform allows integration via dedicated libraries and APIs that can be used by any IT system without limitations. The purpose of GEL Proximity is to make integration with different Pick-up Point Networks simple and unified, internally managing all the complexities of standardizing heterogeneous data and exposing unique and scalable integration methods.



Benefits

- **Automations:** The GEL Proximity platform is designed to manage a high number of transaction volumes efficiently.
- **Importing shipments and returns:** The GEL Proximity system records all requests for confirmation of new shipping or return orders that are made by each Merchant.
- **Smart contract to ensure data security:** Block-chain enabled smart contracts to protect privacy and commercial interests

Main beneficiaries:

- E-commerce providers
- Logistics service providers
- Operators and owners of parcel lockers, pick-up points and micro-hubs

Smart contract to serve as Proof of Delivery:

Demand (LSP 2)		Demand (LSP 3)	
Number of parcels per day	100	Number of parcels per day	200
parcels/day		parcels/day	
Total daily working time		Vehicle speed	
Working time in minutes	480	Average speed of the vehicle	30
minutes		km/h	
Single delivery duration		Deposits (LSP 1)	
Average time to deliver a single parcel	4	Number of deposits in the area of interest	2
minutes		deposits	
Deposit handling cost		Deposits (LSP 2)	
Cost per month	0.5	Number of deposits in the area of interest	2
€/month		deposits	
Fuel consumption		Vehicle cost	
Average fuel consumption per 100km	7	Cost of vehicle per day (depreciation, capital, maintenance costs)	1
€/100km		€/day/vehicle	

Technology readiness level : **6**
Implementation stage :
Pilot

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Block-chain enabled smart contract

- All actors have visibility and can access information during and after the shipment process to have steps certified (according to respective needs).
- The focus of the smart contracts is to improve visibility of the Supply Chain for operators and by this manner enhance their collaboration.

Join us to share your
assets or explore parcel
lockers networks in all
European countries



Check the project
website:

[www.urbane-
horizoneurope.eu](http://www.urbane-horizoneurope.eu)

Would you like to know more?
Take contact :



<https://gelproximity.com/en/contacts/>



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cities/lighthouse-living-labs/bologna-italy/#](https://www.urbane-horizoneurope.eu/demonstration-cities/lighthouse-living-labs/bologna-italy/#)



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