



An European urban transition project towards more sustainable cities through innovative solutions, in the fields of mobility, energy and digital.

Smart City

Global project

Coordination: Cartif
European grant: 18 M€
30 partners, 6 countries
Period: Dec. 2016 - Sept. 2022
Demonstrators: Nantes, Hamburg, Helsinki

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Hamburg

Coordination: Borough of Hamburg-Bergedorf
European grant: 5,25 M€
14 partners

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Mobility

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ACTION OVERVIEW

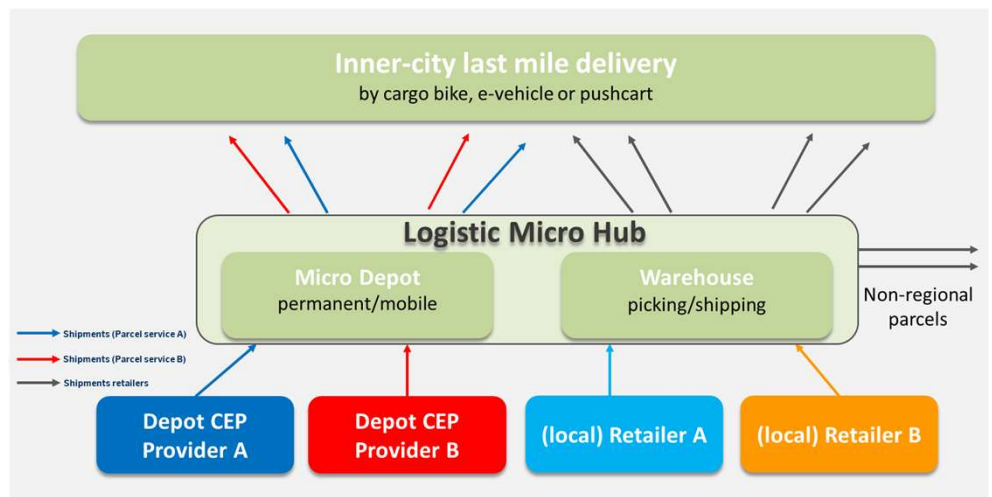
Logistic Micro Hub

Within mySMARTLife, a concept and a business model for a multi-label Logistic Micro Hub have been developed. The concept is called *GLoBe – Green Logistics Bergedorf*, the realisation of this hub being a declared objective of the Borough of Bergedorf.

OBJECTIVES

- › Replacement of conventional delivery trucks by cargo bikes and e-vehicles
- › Reduction of air pollution and traffic obstructions
- › Provision of new delivery services for local retail

IMPLEMENTATION



Scheme of a Logistic Micro Hub including warehouse and retailers. (Source: MRU GmbH, 2019, own source)

CHALLENGE

Traffic caused by delivery services is an important topic in the City of Hamburg. Together with a consulting firm, the Borough of Bergedorf analysed the local situation and developed a new approach for an inner city logistic solution. Instead of focusing on the final destination of a delivery, the concept of the Borough focuses on a rearrangement of the entire last-mile delivery process.

The new concept, developed around an existing multi-label parcel shop in a local shopping centre, will be expanded to a multi-label logistic micro hub that is to be used by different parcel delivery services for deliveries in the inner city of Hamburg-Bergedorf. "Multi-label" means that different delivery companies use the same infrastructures but, unlike in a so-called "white-label" solution, still operate under their own brand. "White Label" means that no brand of the parcel service is shown.

This hub should help to reduce traffic volume and congestions caused by stopping delivery trucks as well as emissions in the inner city when delivery routs are rearranged, and emission-free vehicles are used on the last mile.

PROGRESS

For the final development and eventual implementation of the concept, the Borough commissioned the consulting firm MRU GmbH, specialised in the logistics sector. In a one-year planning phase, the Borough of Hamburg-Bergedorf and MRU conducted workshops and research to analyse the demand for this new concept within the urban area of Bergedorf and adjusted the focus. The borough provides deep knowledge of the structures and relevant stakeholders in the area, whereas MRU has expertise on logistical processes and market players, as well as comprehensive data records on deliveries in the project area. The creation of the concept has started and a supply concept for the inner-city area of the Borough of Bergedorf is being developed as a new logistical solution for the smart city. For this purpose, the consulting firm MRU has developed the name "GLoBe - Green Logistics Bergedorf", which will be the new brand of the micro hub. The aim is to describe an integrated service system and to set up a pilot micro hub that combines the previously self-sufficient supply networks in a provider-neutral system. This allows to take Bergedorf's specific traffic and infrastructure requirements into account and gradually add new end-customer-oriented services, e.g. offered by local retailers.

The central element, and first milestone of the service and supply concept, is the establishment of a physical logistic micro hub within the central shopping center "City-Center Bergedorf" (phase I). In the start-up phase of the hub (phase II), the Logistic Micro Hub will be used to consolidate parcel shipments to private recipients (B2C) in the immediate neighbourhood, as well as to supply the shops in the shopping centre with parcels. A key element is the focus on the end customer, who is enabled to receive parcels from as many service providers as possible and to hand in their (return) shipments at a location that is as central as possible.

The concept essentially comprises three phases:

Project phase I	Project phase II	Project phase III	
Multi-label shop	Multi-label hub	B2B-service concept	Multi-label delivery
Parcel shop Hermes, DPD, GLS & UPS <ul style="list-style-type: none"> - Carrier agnostic pick-up and drop-off point for consumers - Acts as alternative delivery address - Feeds returns and outbound shipments into carrier networks (B2C, B2B and C2X) - Establishing a delivery system in the parcel shop's vicinity 	Multi-user hub for parcel companies <ul style="list-style-type: none"> - Provision of a sorting and a hub for several service providers respectively - Provision of spillover capacities for the parcel shop - Launch of individualised last mile delivery by e-vehicles 	B2B – from the region to the region <ul style="list-style-type: none"> - Same-day delivery for local retailers - Consolidated delivery of inbound regional goods for all kind of industries e.g. retail and food - Development of additional transport services 	Development of a multi-label parcel system <ul style="list-style-type: none"> - Expansion of parcel delivery to the planned delivery area of the GLoBe project - Parcel delivery according to consumer demands - Integration of further stakeholders - Onboarding of technology partners

The modular approach of the Logistic Micro Hub, the project phases I and II are the focus of mySMARTLife, the project phase III is a future task. (Source: MRU GmbH, 2019, own source)

LESSONS LEARNT

- › The interest among stakeholders from the parcel service and logistics sector as well as from local retail interest groups and different municipal entities within the City of Hamburg has shown that the problem approached by the Logistic Micro Hub is relevant in Bergedorf and other urban areas.
- › The impact a logistic micro hub can have with regards to the reduction of CO₂ emissions is considerably high. It is estimated that the hub can annually replace around 27,000 deliveries by emission free vehicles and thus save up to 700 t of CO₂ emissions and 2 t NO_x emissions.
- › The design and realisation of such a new concept requires comprehensive preliminary research to be able to identify the relevant stakeholders, who were not conducting businesses before and provide them with information required for the negotiations.