



Hurdles on the Last Green Mile: When Theory Meets Practice – Testing Sustainable Urban Freight Transport on Urban Waterways in the EU Project DECARBOMILE

LSSTF
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Decarbonise last mile logistics



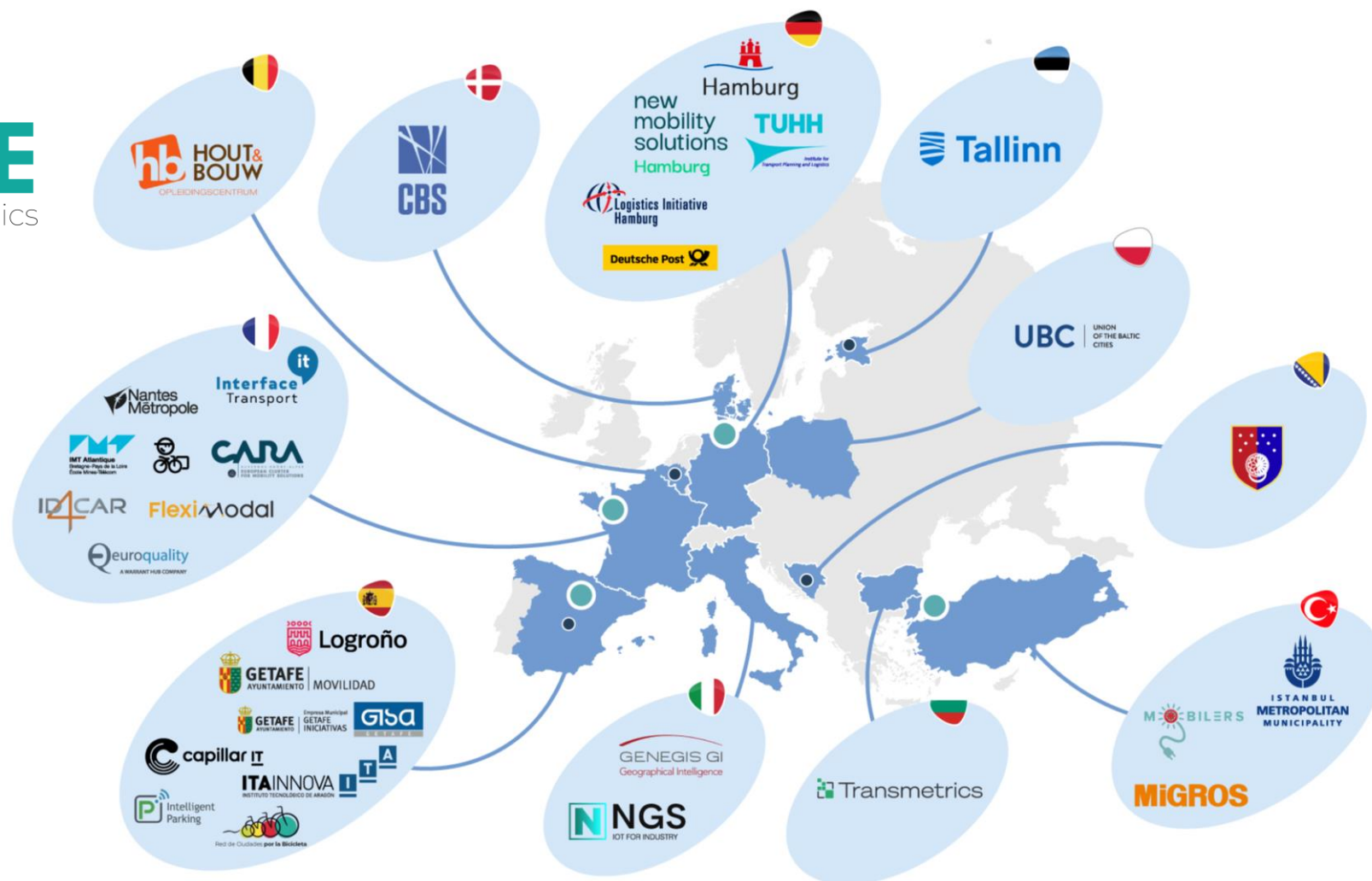
31
Partners



11
Countries

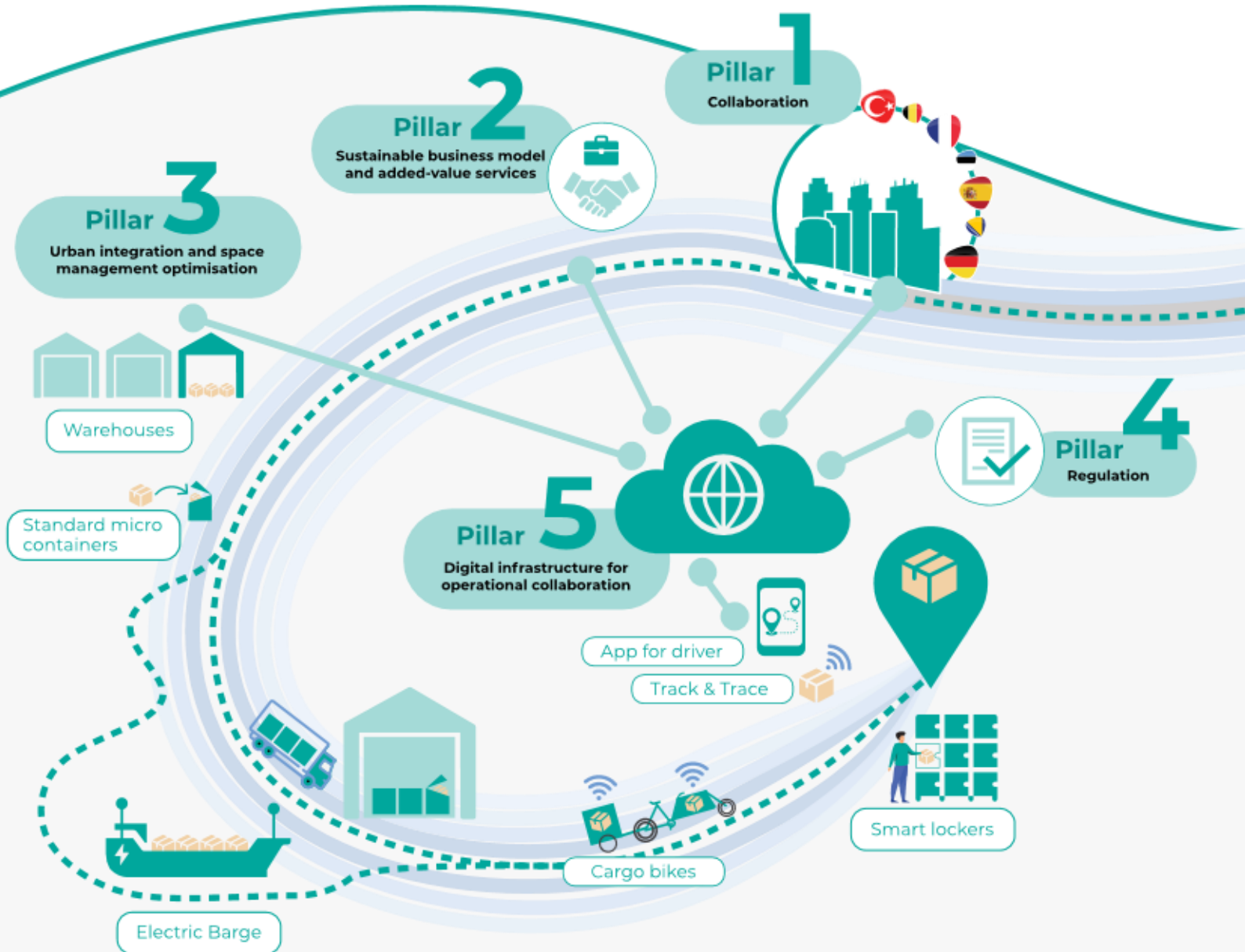


4
Living Labs



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Five pillars to DECARBOnise last MILE logistics



- GHG emissions
- Pollutants (NoX, ...)
- Reduction of Ton-Mile
- Noise Pollution
- Associated Traffic
- + Creation of local green businesses
- + Public-private collaboration
- Planet's life

Social media – connect with us!

[linkedin.com/decarbomile](https://www.linkedin.com/decarbomile)

Decarbomile

www.decarbomile.eu

The decarbonisation starts with the vehicles we use...



Istanbul

1st cycle-logistics deliveries

10

bikes
purchased

-70% CO₂

emissions compared
to initial fleet (motorbikes)



Multimodal
approach in Hamburg



River



Cycle



Newly developed modular
& ergonomic cargo-bike

6

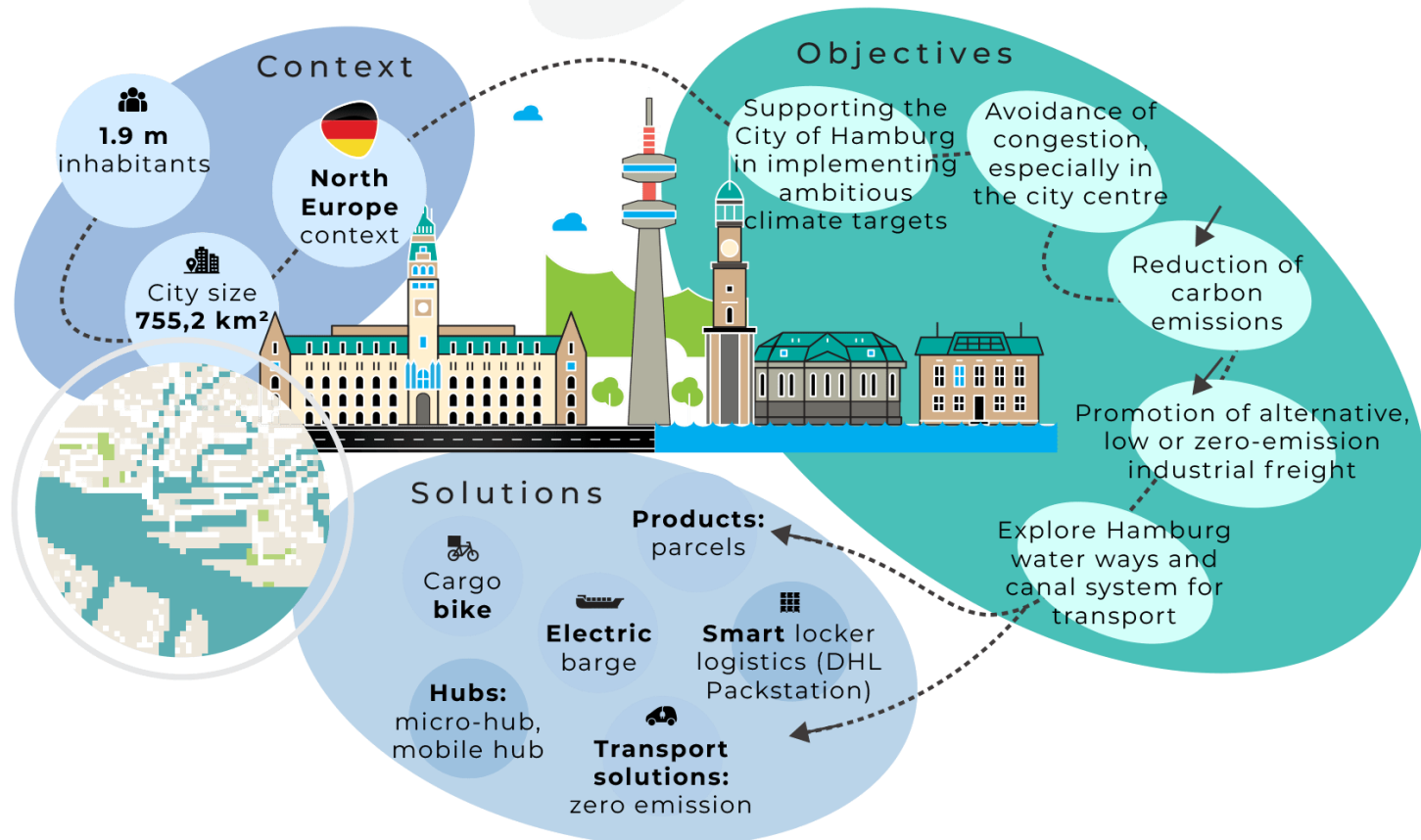
cities of
deployment

250kg

capacity



Living Lab #3 Hamburg - Germany



Lead partners



1/ Multimodal last-mile delivery for DPDHL : navigating parcels between water and earth

DHL testing multimodal delivery logistics through a combination of waterways and cargo bikes use.

Strategy for the Last Mile in Hamburg



Goals by 2030 (for courier, express and parcels)

- **Reduce CO2 emissions:** 40% reduction compared to 2017 levels.
- **Reduce traffic:** Significantly decrease traffic congestion.
- **Increase alternative transport:** 25% of deliveries via cargo bikes.
- **Increase pick-up points:** 30% of B2C shipments picked up at parcel stations.
- **Limit truck deliveries:** Maximum 45% of deliveries via truck, with 95% of those being emission-free.

Other topics include the possible reactivation of urban waterways for logistical purposes and the establishment of a central contact point for urban logistics

BÜRGERSCHAFT
DER FREIEN UND HANSESTADT HAMBURG

Drucksache **22/5939**

22. Wahlperiode

05. 10. 21

Mitteilung des Senats an die Bürgerschaft

Urbane Logistik Hamburg – Strategie für die Letzte Meile

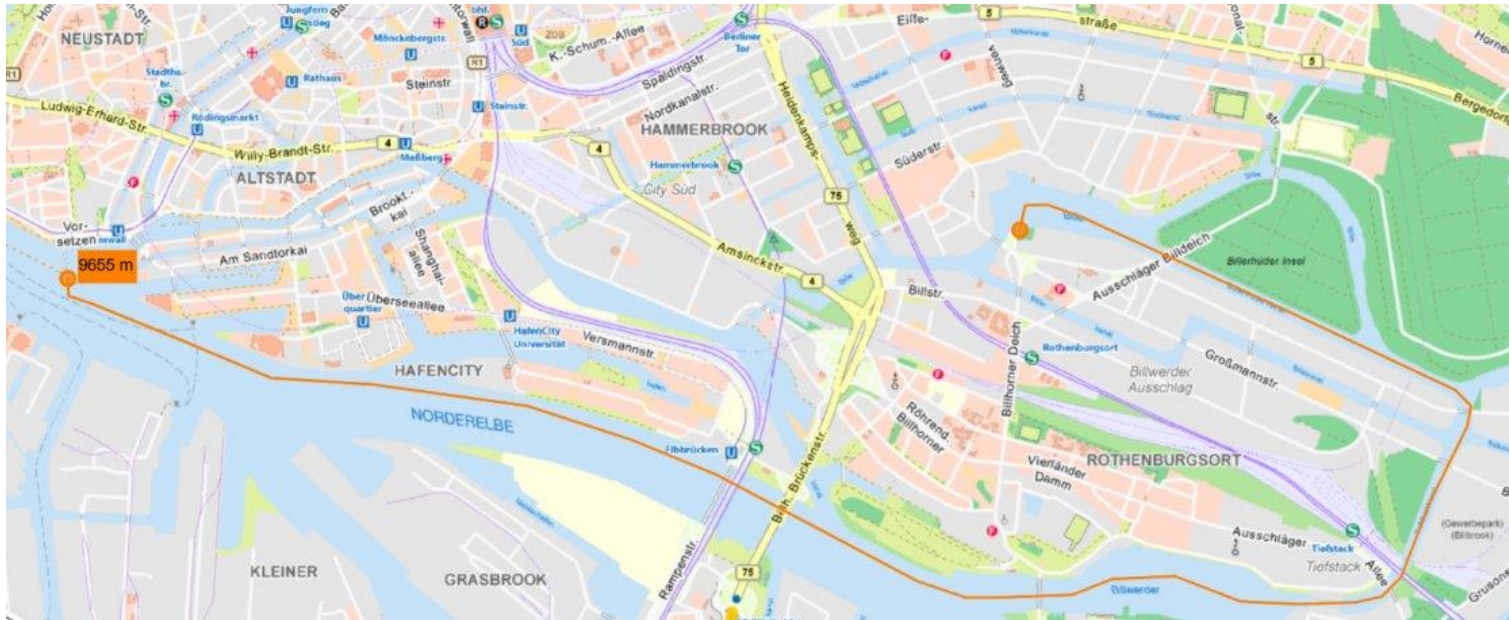
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1. Anlass	Im Vergleich zu 1990 um 55 Prozent sinken, bis 2050 sollen die CO ₂ -Emissionen Hamburgs um mind. 95 Prozent gesenkt werden, um somit Klimaneutralität zu erreichen. Hamburg orientiert sich dabei insbesondere für das Jahr 2030 an den bisherigen Klimazielen des Bundes, siehe Klimaschutzplan 2050 (November 2016) und Klimaschutzprogramm 2030 (Oktober 2019).
Der Hamburger Senat hat 2019 mit der Ersten Fortschreibung des Klimaplanes der Freien und Hansestadt Hamburg und dem Klimaschutzgesetz (beides siehe Drs 21/19200) zwei entscheidende Weichen gestellt, um die Klimaziele Hamburgs zu erreichen. Bis 2030 soll der CO ₂ -Ausstoß	

Reactivate urban waterways for logistical purposes

- Aiming at decarbonizing the last mile by developing innovative cargo bike solutions
- Hamburg: transport of parcels on the second-last mile with an boat using HVO to avoid truck traffic and emissions
- transport on the last mile in the city centre by e-cargo-bike



DECARBOMILE Living Lab Hamburg Route



Route

From: rowing club RV Bille
Via: Tiefstackschleuse lock
To: unloading site at Überseebrücke

Distance:
9,7 km

- longest route, but most reliable
- locks are open every day
- no bridges too low
- no problematic silt- or mud levels on low tide
- strong current on Elbe river (influences travel time)
- not suitable for daily operation due to tide and weather (prediction tool developed)

DECARBOMILE Living Lab Hamburg Route



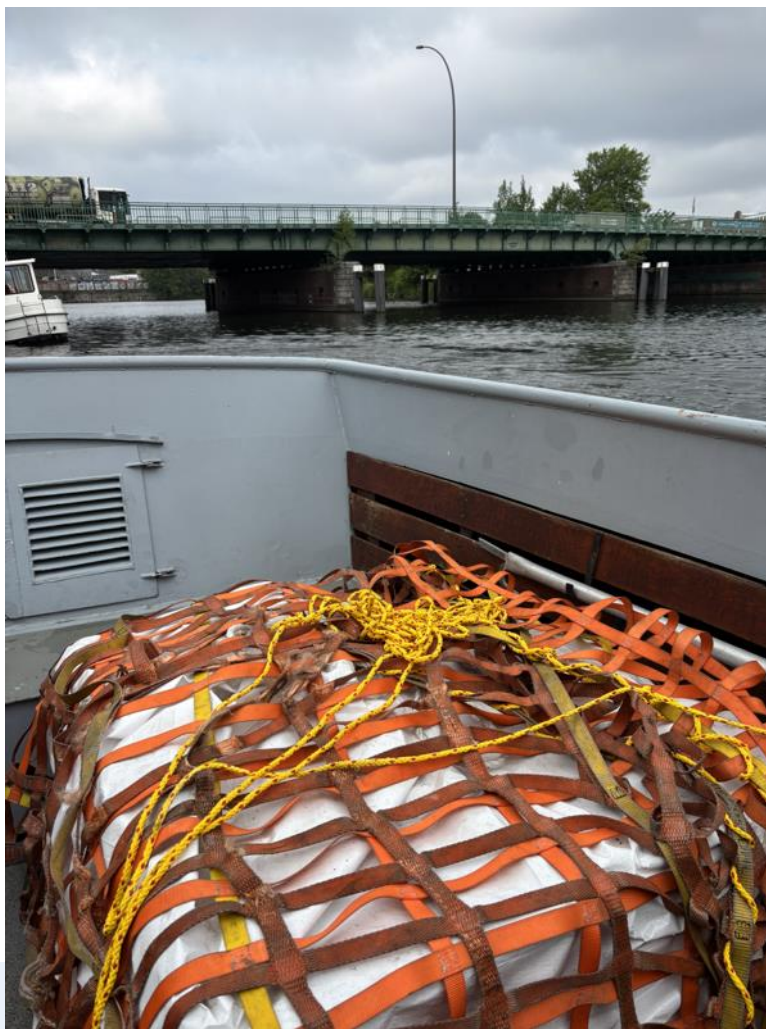
DECARBOMILE: 6-week trial period (1/3)



DECARBOMILE Living Lab Hamburg Route



DECARBOMILE: 6-week trial period (2/3)



DECARBOMILE Living Lab Hamburg Route



DECARBOMILE: 6-week trial period (3/3)



Learnings from the use case



- The technical solutions **using a scissor lift** (originally planned, not implemented as the Belgian partner did not deliver) for loading and unloading of goods seems to be the best option
- **Steep ramps** can be challenging for cargo bikes (and steepness can be affected by the tide)
- The parcel transport **scheme tested will not be rolled out**, as transport via tidal waters involves too many downtimes (in contrast to the Berlin solar powered boat project in which a second boat is used since April) -> the tide plays a crucial role for the viability of use cases
- **Using locks adds another uncertainty** as there is no booking and waiting times are possible if locks are in use
- Viable business cases for urban waterway transport are to be identified based on the **final evaluation** of the DECARBOMILE project
- Possible ideas include the transport of **building materials**, a shuttle from the harbour (south) to the city centre (north) and **deliveries for hotels and restaurant**

- Appropriate infrastructure measures would be necessary to increase commercial use of the urban waterways in Hamburg, e.g. removal of mud and silt
- construction of suitable landing stages necessary
- Chicken egg problem: No suitable infrastructure, no business models / no business models, no investment into infrastructure -> viable business models have to be identified to justify investments
- On Hamburg's inland waterways, conflicts of use with leisure activities also play a role in some cases -> recreational areas have to be considered
- Getting permissions is quite challenging as there are various responsibilities -> simplification needed
- Skippers are rare and costly -> autonomous vessels could make urban waterway transport more attractive

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and soon
our recommendations
based on our experiences !

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