COREALIS
THE PORT OF THE FUTURE

COREALIS Port of Antwerp Demo/Training Webinar

Port of Antwerp Living Lab

Nico De Cauwer – Port of Antwerp

November 10th 2020

2nd European port
14th port worldwide

COREALIS
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Belgium's biggest economic driver

235
Million tonnes of freight

12,068
hectares

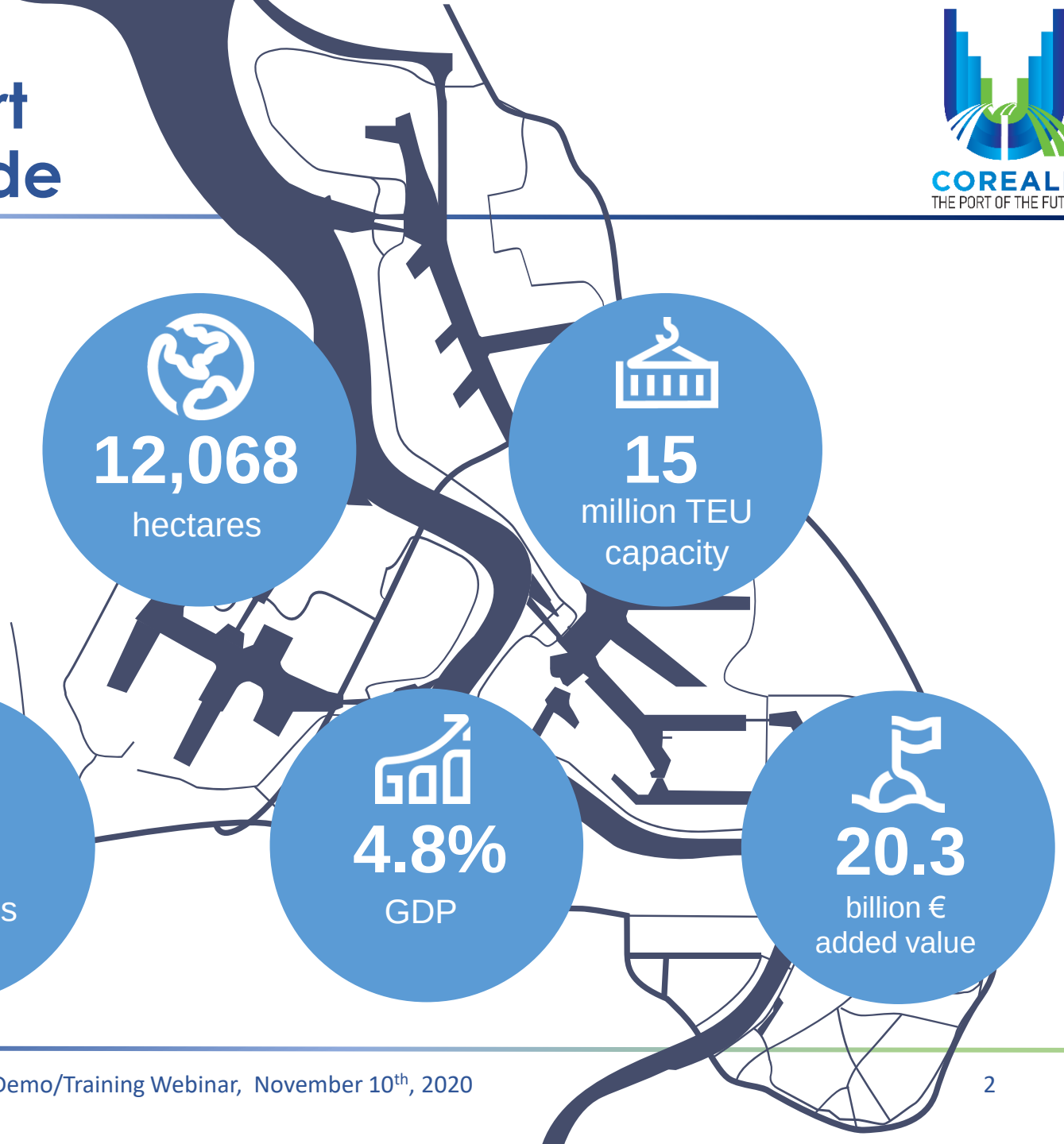
15
million TEU capacity

143,058
jobs

900
companies

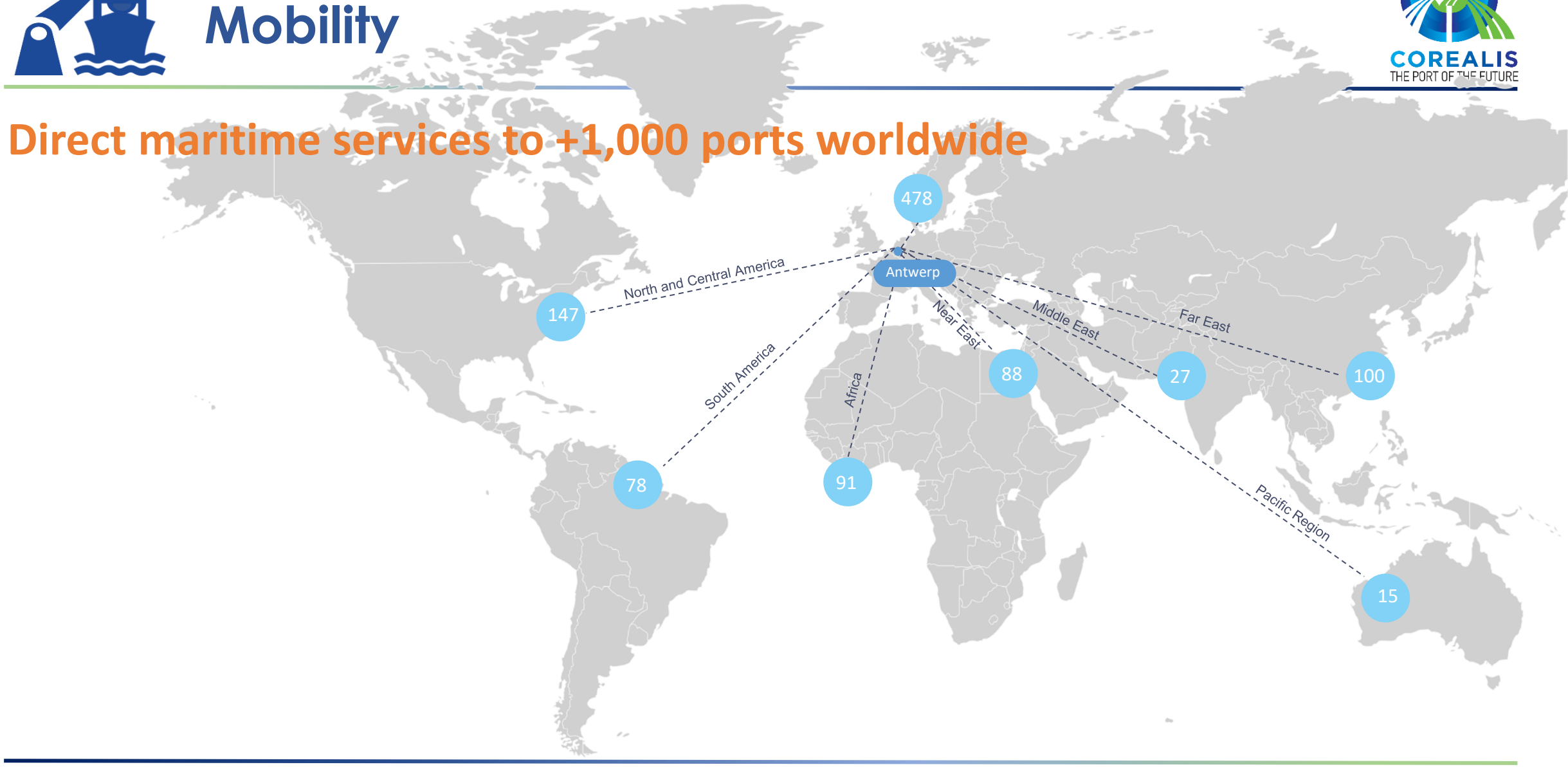
4.8%
GDP

20.3
billion €
added value



Mobility

Direct maritime services to +1,000 ports worldwide



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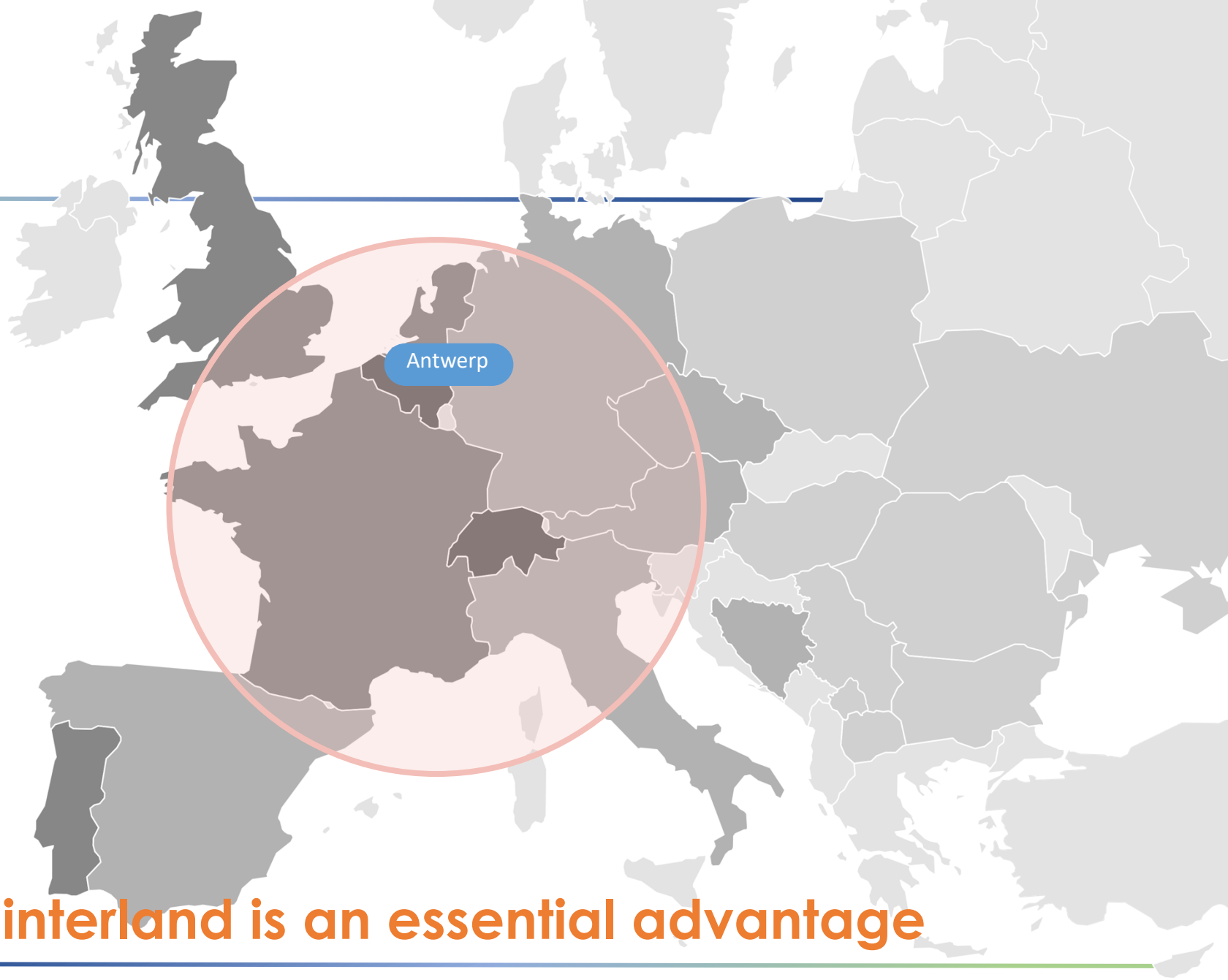
Mobility

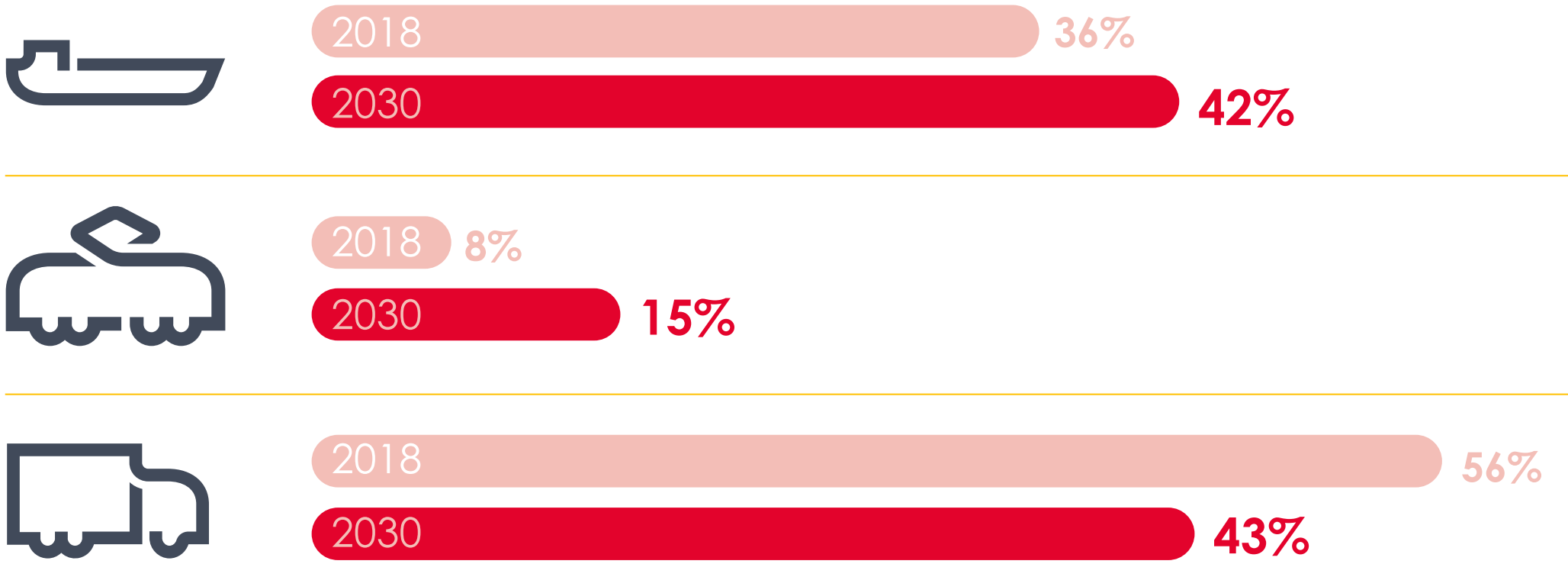
- Rail
- Barge
- Road
- Air



Connectivity with hinterland is an essential advantage

Mobility: freight transport (containers)

Ambitious modal shift targets 2030: more rail and inland shipping



Digital Transition – Our innovation strategy

Innovation is a match between culture and technology

OPERATOR

INTERNAL

FACILITATOR

EXTERNAL

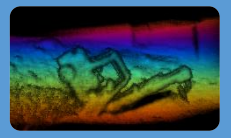
TECNOLOGy

CULTUURE

OUTSIDE IN

POC/POV new tech





INNOVATION PLATFORMs

The port as an open innovation platform

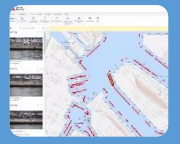
drones

Autonomous vessels

Air quality

STIMULATE INTERNAL INNOVATION

Experiment !


COMMUNITY BUILDING

Accelerate

NxtPort

THE BEACON

CHAINPORT

PORTXL

Digital nervous system facilitating a safe and efficient port

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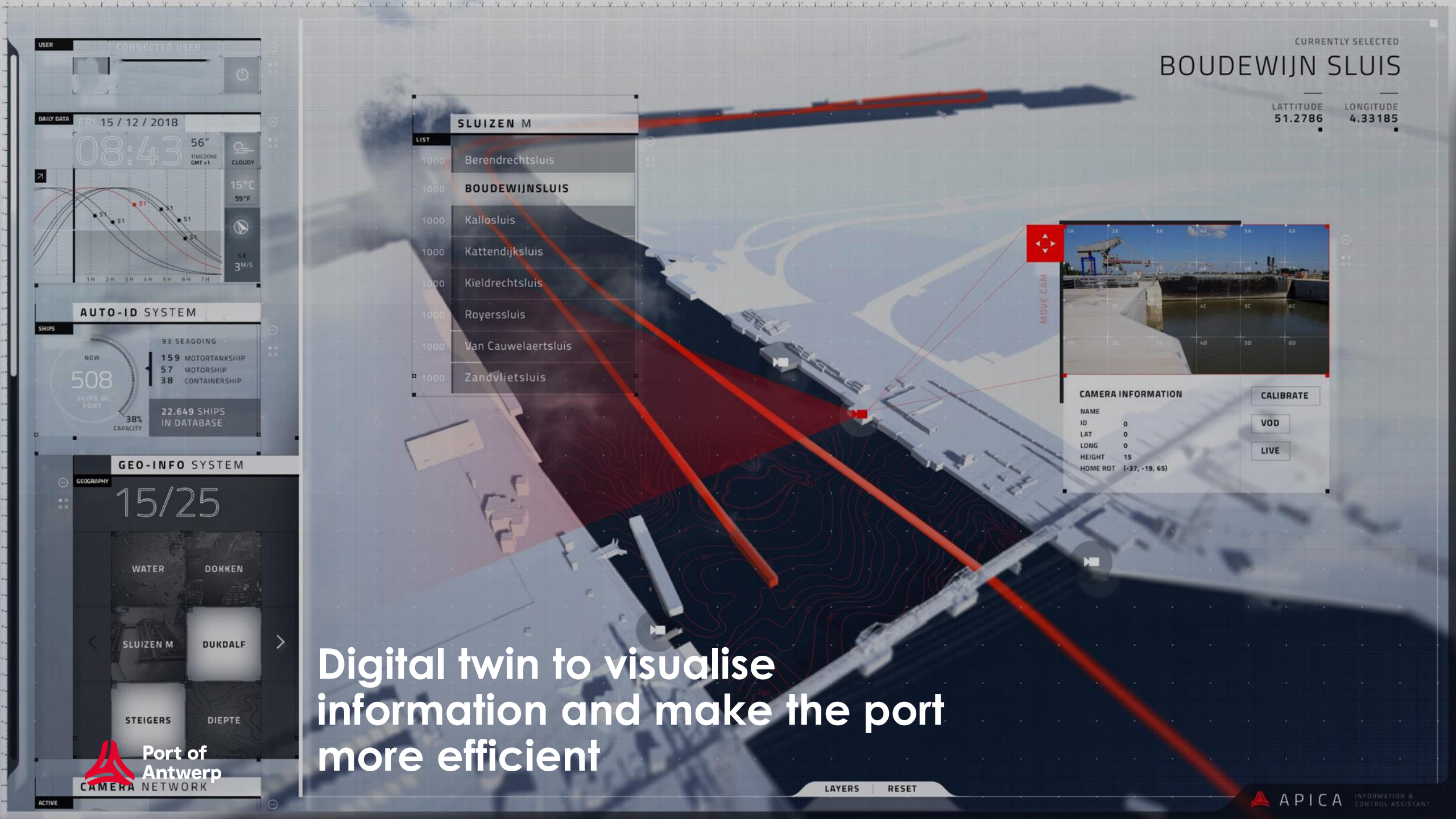

Digital twin to visualise information and make the port more efficient

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Living Lab – Contribution to COREALIS goals

COREALIS objectives

O1. Embrace circular economy models in its port strategy and operations.

O2. Reduce the port's total environmental footprint associated with intermodal connections and the surrounding urban environment for three major transport modes, road/truck, rail and inland waterways.

O3. Improve operational efficiency, optimise yard capacity and streamline **cargo flows** without additional infrastructural investments.

O4. Enable the port to take **informed medium-term and long-term strategic decisions** and become an **innovation hub of the local urban space.**

→ **Cloud Brokerage platform (Marketplace)**

→ **Cargo Flow Optimiser**

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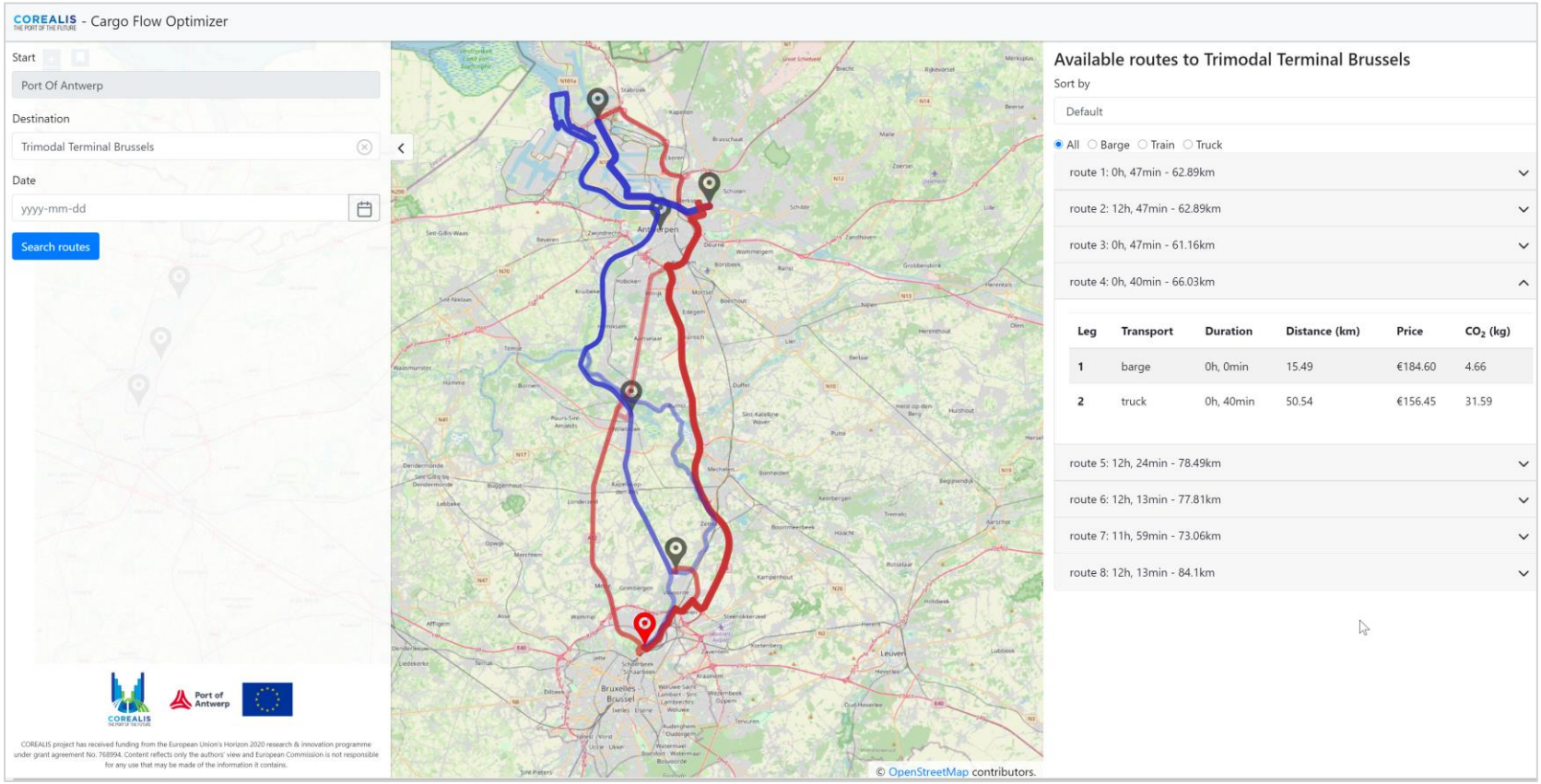
Cargo Flow Optimiser - Multimodal Inland Planner

- **Functionalities:**
  - Selection (terminal-)destinations in Europe
  - (Optional) date of transport selection
  - Transport mode filtering
  - Sorting by CO2 emissions, distance, duration or price

  →

  - Multiple routes by multiple transport modes
  - Cost simulation
  - CO2 emissions prediction
  - Duration calculation
  - Distance measuring



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Cargo Flow Optimiser - Multimodal Inland Planner

- **Objectives:**
  - Improve modal split towards rail and barge
  - Reduce the dwell time of containers in the port

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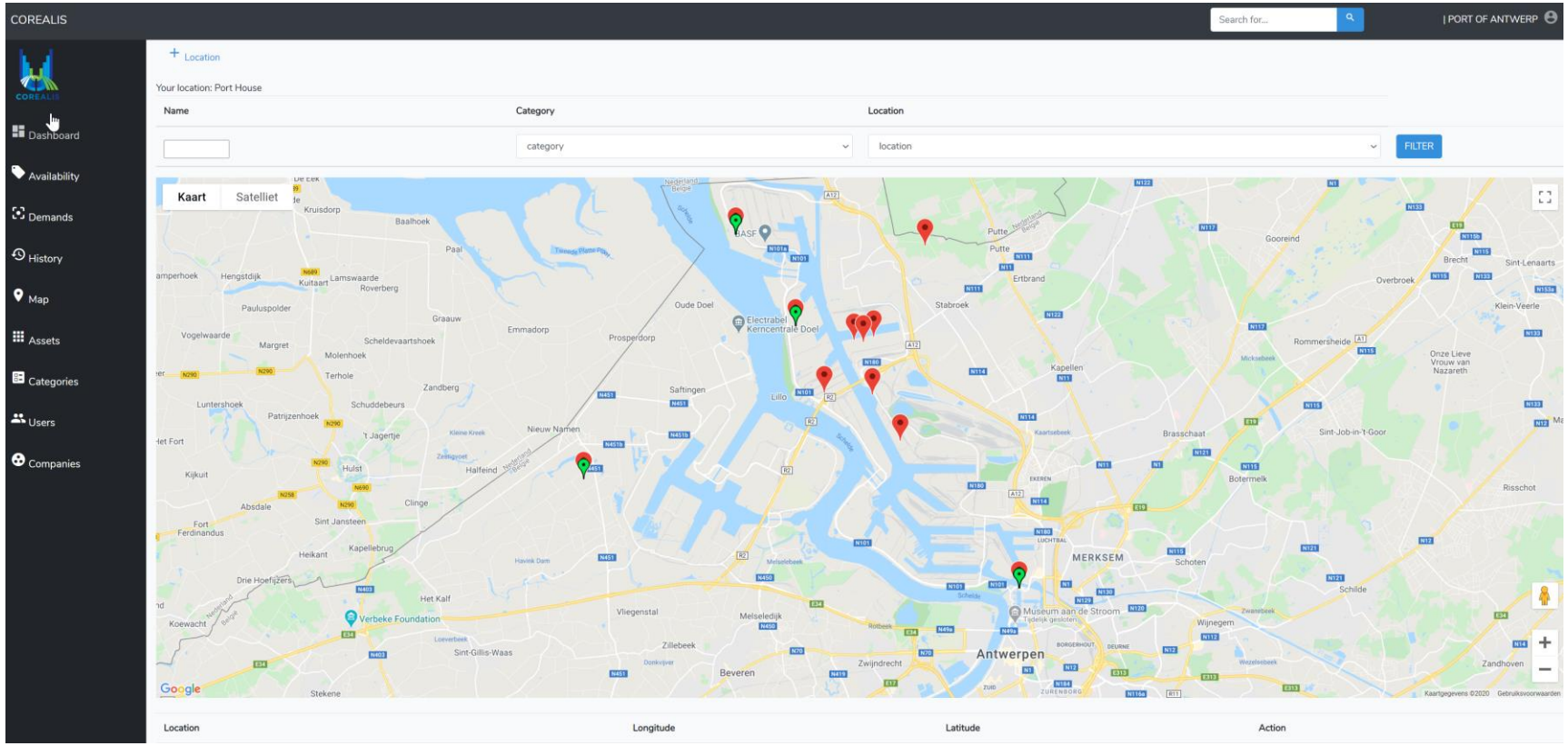
- **Functionalities:**
  - Equipment availability
  - Equipment demand
  - History
  - Equipment location
  - Asset management
  - Categories
  - User management
  - Company management

Equipment Brokerage Platform



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- **Objectives:**
  - Proper use of port equipment = low idle time
  - Booking of equipment between terminals = no unnecessary investments

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THANK YOU FOR YOUR ATTENTION

Port of Antwerp Living Lab

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