



The role of ports in the hydrogen economy

Karin Debacher

HHLA is a vertical integrated port and transport logistics company serving customers along the entire transport chain



Port Operation

- Container throughput
- Container-related services (e.g. storage, repair)
- Multipurpose Terminals



Intermodal

- Container transport via rail and truck in the ports' hinterland
- Operation of inland terminals



Logistics

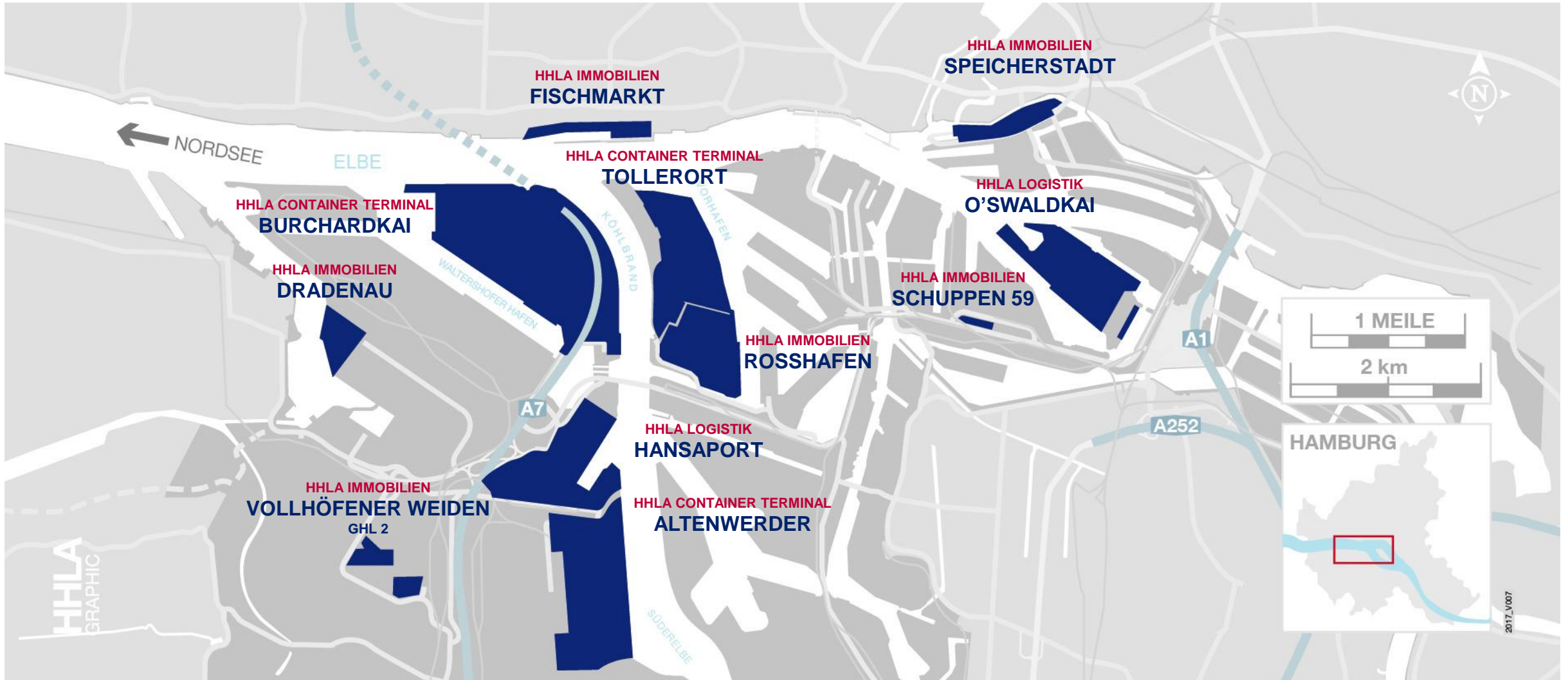
- Specialist handling of dry bulk, break bulk, vehicles, fruit, etc.
- Consulting and training



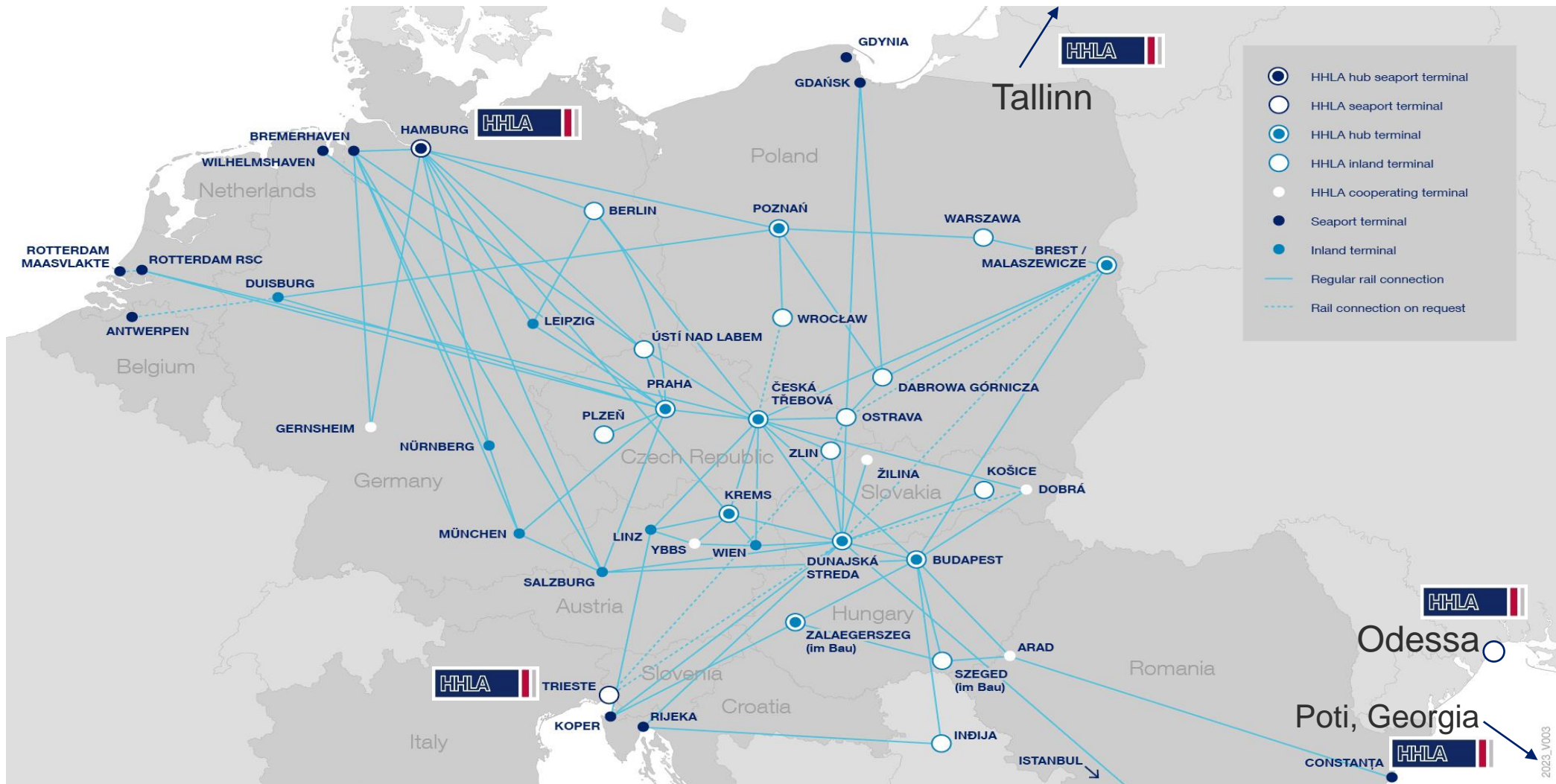
Real Estate

- DNA of HHLA and business card of the city
- Marketing of space in the Speicherstadt and Fischmarkt

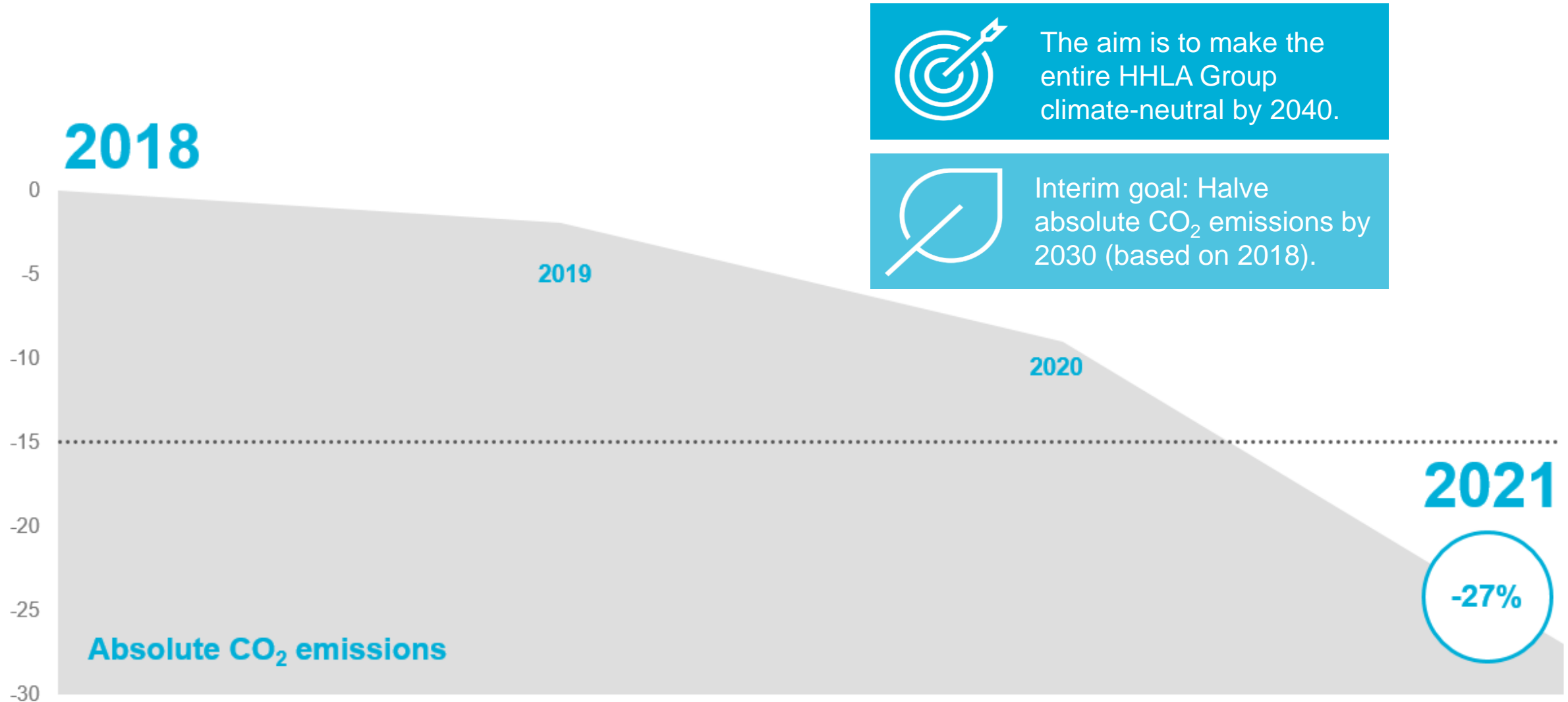
HHLA operates various logistics and cargo handling facilities in the Port of Hamburg




With over 600 weekly connections, HHLA-METRANS is the market leader in hinterland traffic in Central, Eastern and Southeast European industrial regions



Climate protection is firmly anchored at HHLA



Hydrogen: Multiple applications for hydrogen require multiple modes of transport



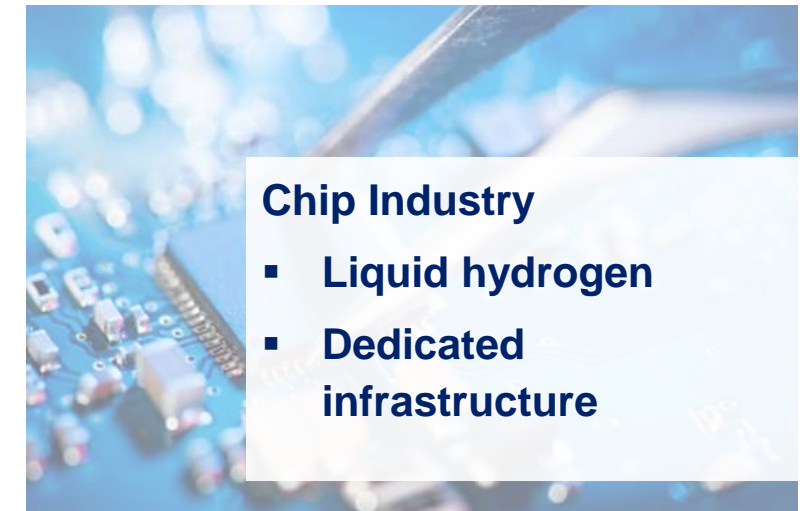
Metall industry

- High volumes
- Pipeline access



Logistics & Aviation

- High purity / Liquified
- Dedicated infrastructure



Chip Industry

- Liquid hydrogen
- Dedicated infrastructure



SME Industry

- Medium demand
- No grid connection



Fertilizer Industry

- Ammonia
- Existing infrastructure



SAF & Synthetic Fuels

- Methanol
- Existing infrastructure

The aim of the hydrogen activities is to unlock profitable growth areas along the transport routes of tomorrow

Conceptual phase



Feasibility for import strategies for different carriers

Demonstrator setup

Homepage → Media → Newroom → Detail view

21.10.2022

Successful completion of the first ammonia test delivery from the UAE to Germany

The first low-carbon ammonia test shipment from the United Arab Emirates (UAE) to Germany was successfully completed with its arrival at multi-metal manufacturer Aurubis. As a leading European logistics group with strong ambitions to drive forward decarbonisation, Hamburger Hafen und Logistik AG (HHLA) handled the test cargo at the climate-neutral Container Terminal Altenwerder in Hamburg.



First demonstration projects for supply

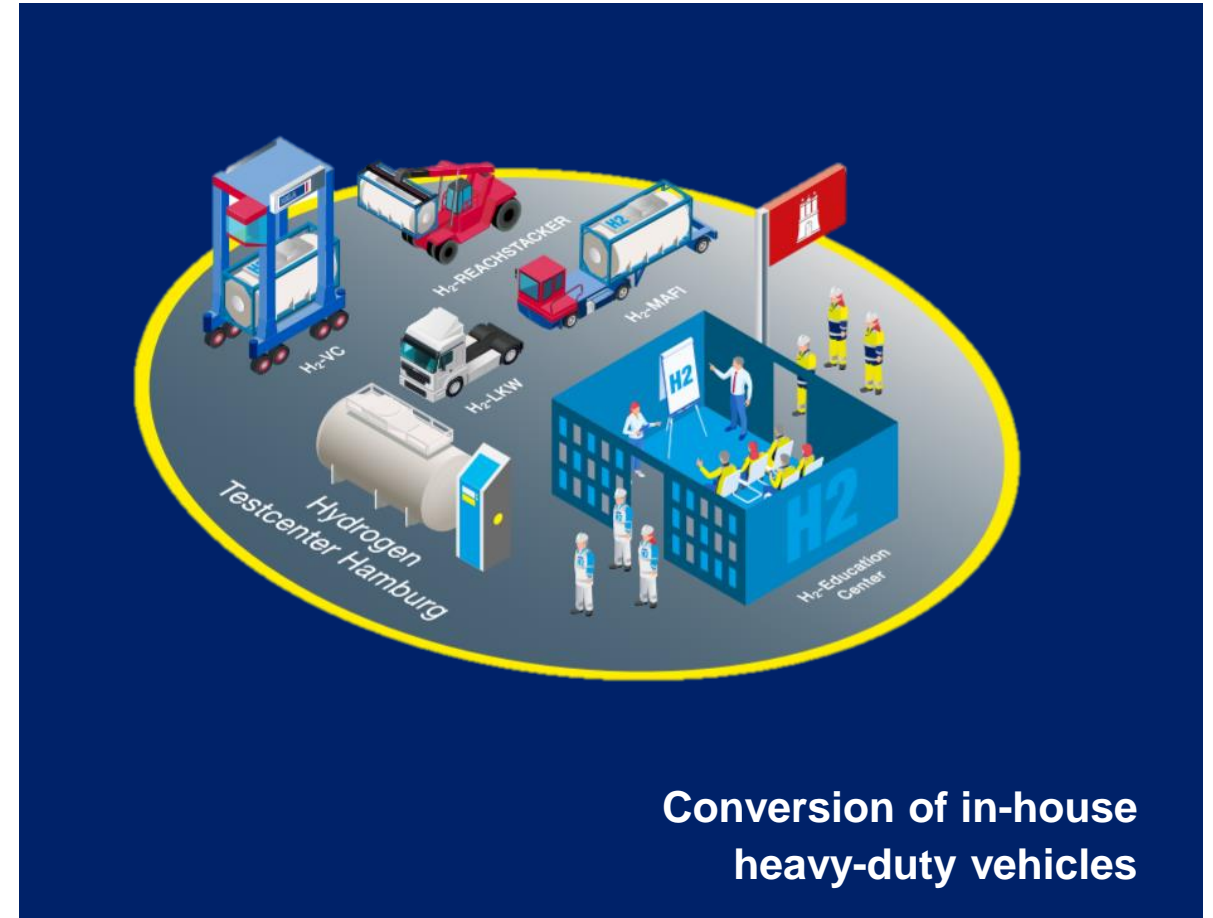
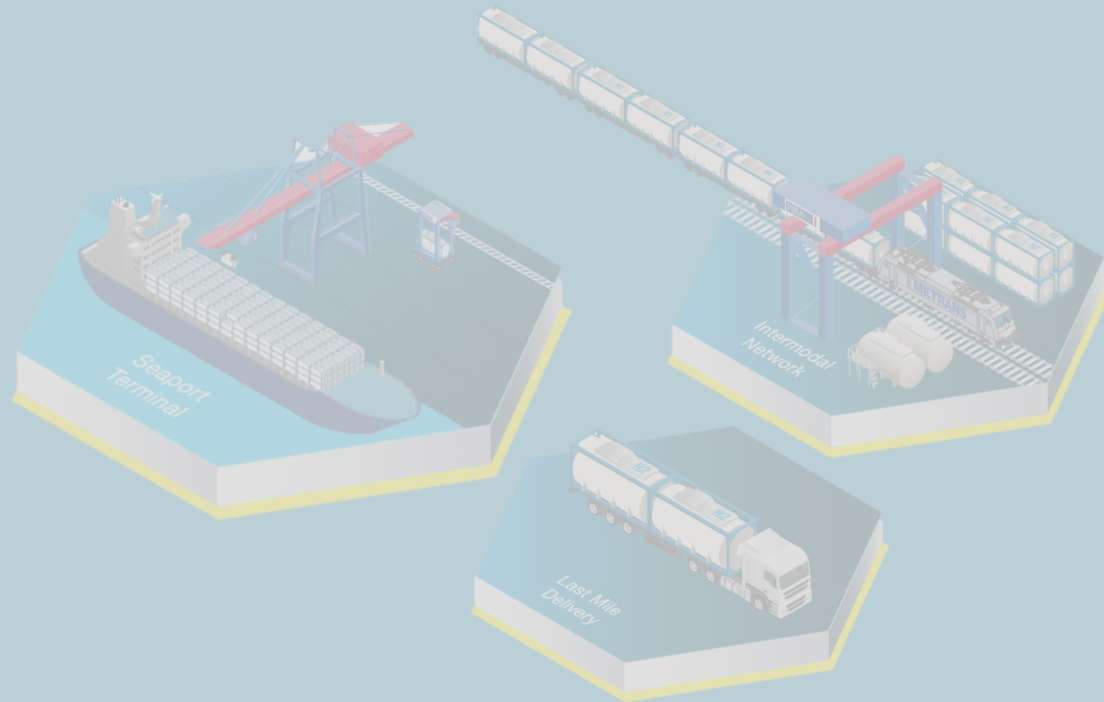
Full Scale Import terminal



Consideration of possible import structures

As part of our hydrogen strategy we link our heavy duty vehicle applications with national and international projects for hydrogen import and distribution

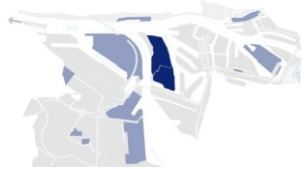
Positioning in the area of import and distribution



Conversion of in-house heavy-duty vehicles

HHLA plans to convert own heavy-duty commercial vehicles in Hamburg and Europe to hydrogen operation in different phases

Phase 0



Multimodal test site for hydrogen equipment

Proof of concept for the use of fuel cell equipment as part of a Innovation Cluster

CPL



Phase 1

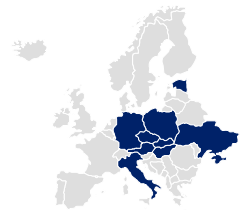


H2 LoAD - Hydrogen Logistics Applications & Distribution

Changeover to FC technology at HHLA facilities in Germany incl. fueling infrastructures and network connections



Phase 2



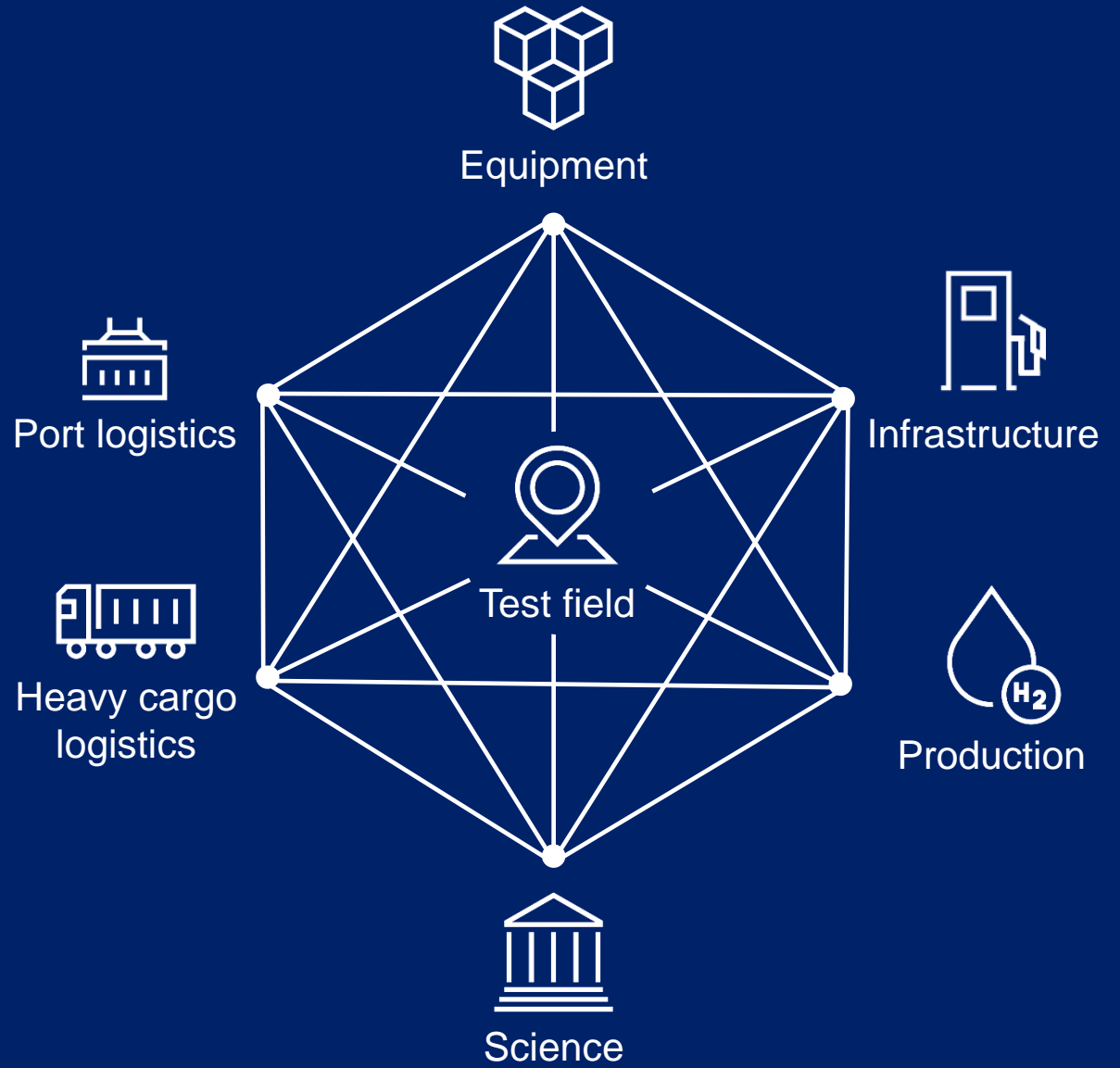
European rollout





Clean Port & Logistics

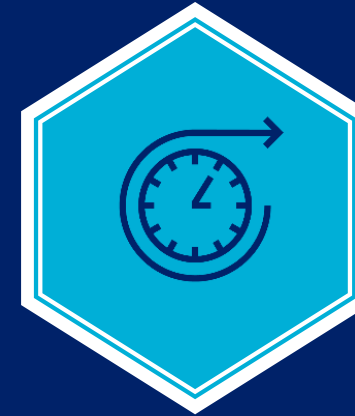
Speeding up transition in heavy duty logistics and port operation



The Aims



**Robust
foundations** for
decision-making



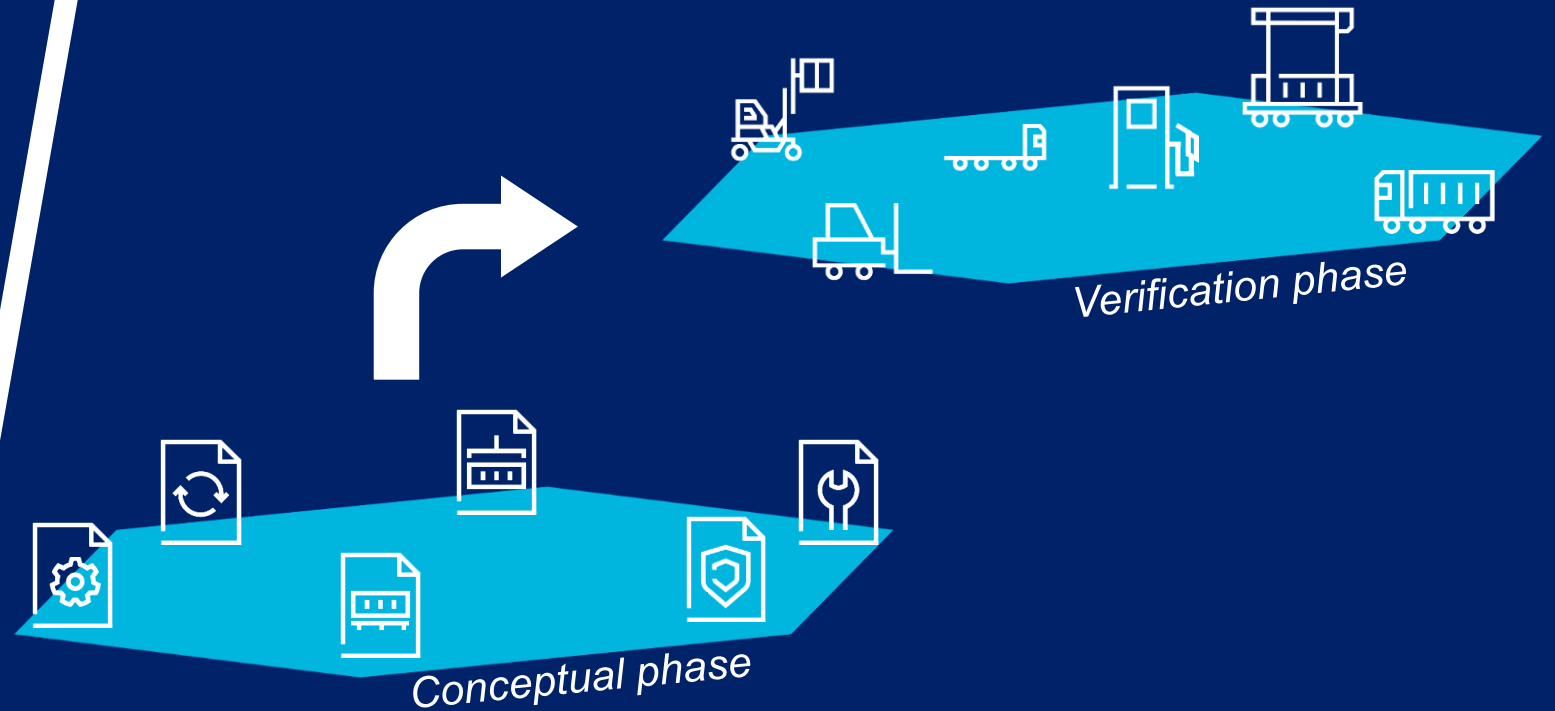
**Rapid market
maturity** of the
technologies



**Lively
marketplace** where
solutions quickly
find their users

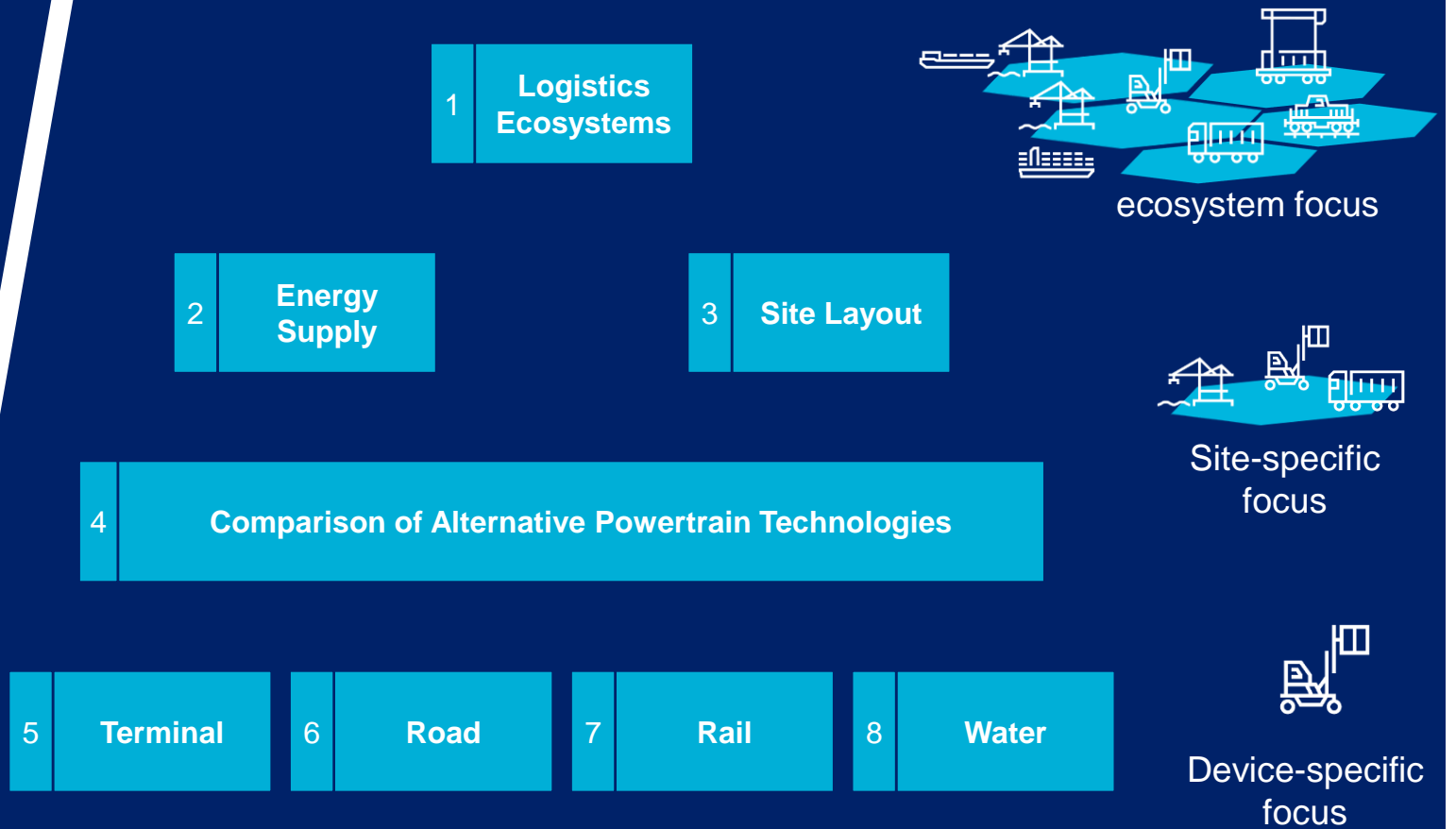
The Approach

*Validation of theoretical concepts
in real operation*



Working Groups


Topics and focuses





Communication

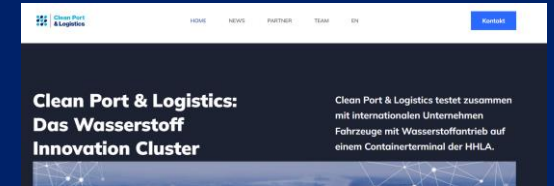
Events and channels

 **General Meeting**
Half-yearly
Member ABC

 **Media events**
On demand
Member AB

 **Working groups**
Periodically
Member ABC

 **Excursions/Seminars**
On demand
Member ABC

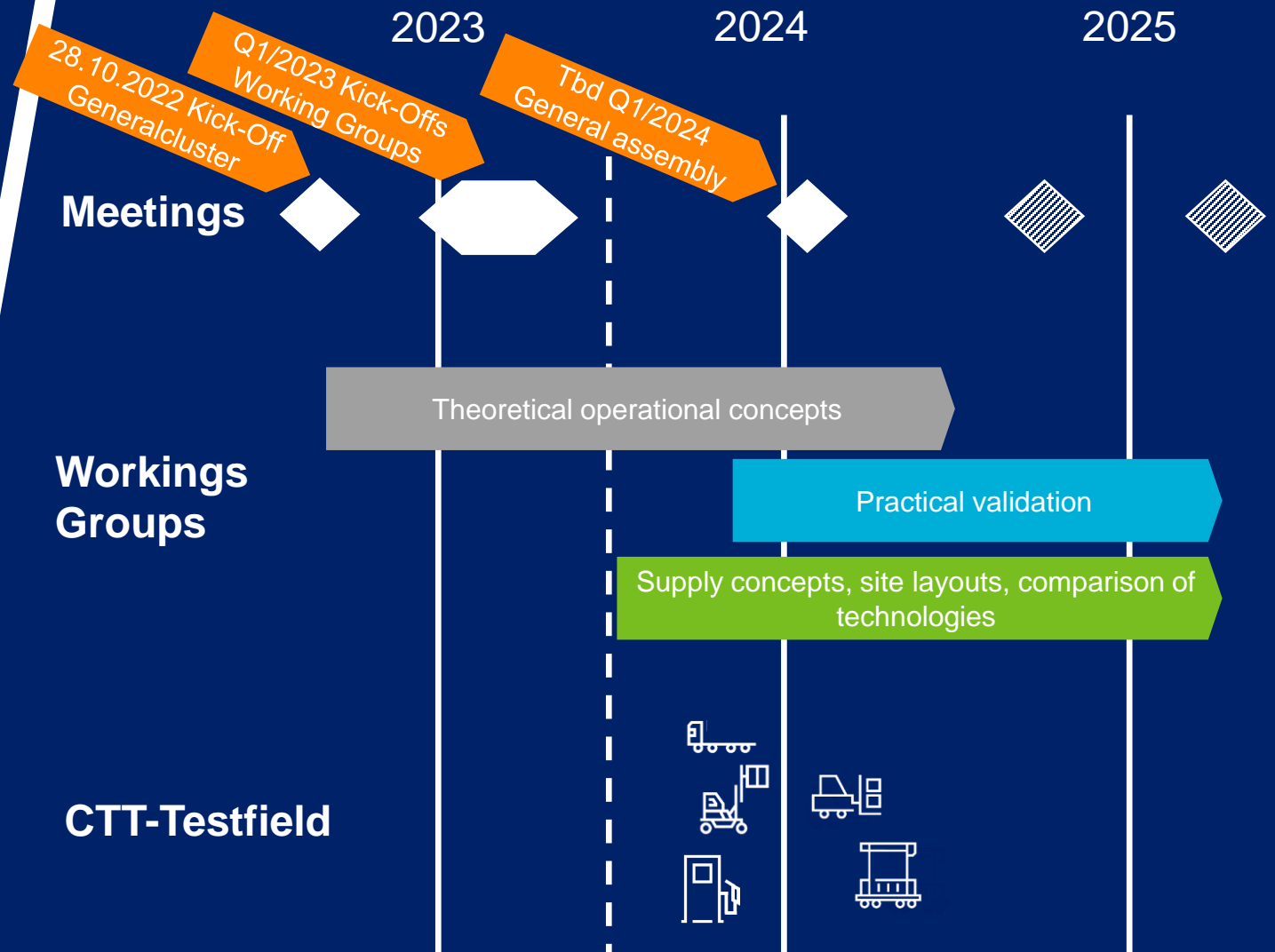


www.hydrogenports.org



<https://www.linkedin.com/groups/12723267/>

The Timeline



The Members

global, regional, local





Thank you

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