

# Neo Orbis Amsterdam Demonstrator project

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Port of Amsterdam  
H2Ships Dissemination Meeting  
October 2022



# Interreg North-West Europe H2SHIPS



European Re



## Delft University of Technology

Researches the regeneration of the fuel used and the system design, together with the University of Amsterdam.

## H2 Circular Fuel

The inventor and builder of the sodium borohydride unit that we will use.

## MARIN

A research institute that advises us on maritime technology.

## Wijk Yacht Creation

The partner designing the vessel for us.

## Lloyd's Register

This company that issues the vessel's certification and safety approval.

## Baumüller

A systems integrator advising us during the design phase.

# Interreg

North-West Europe

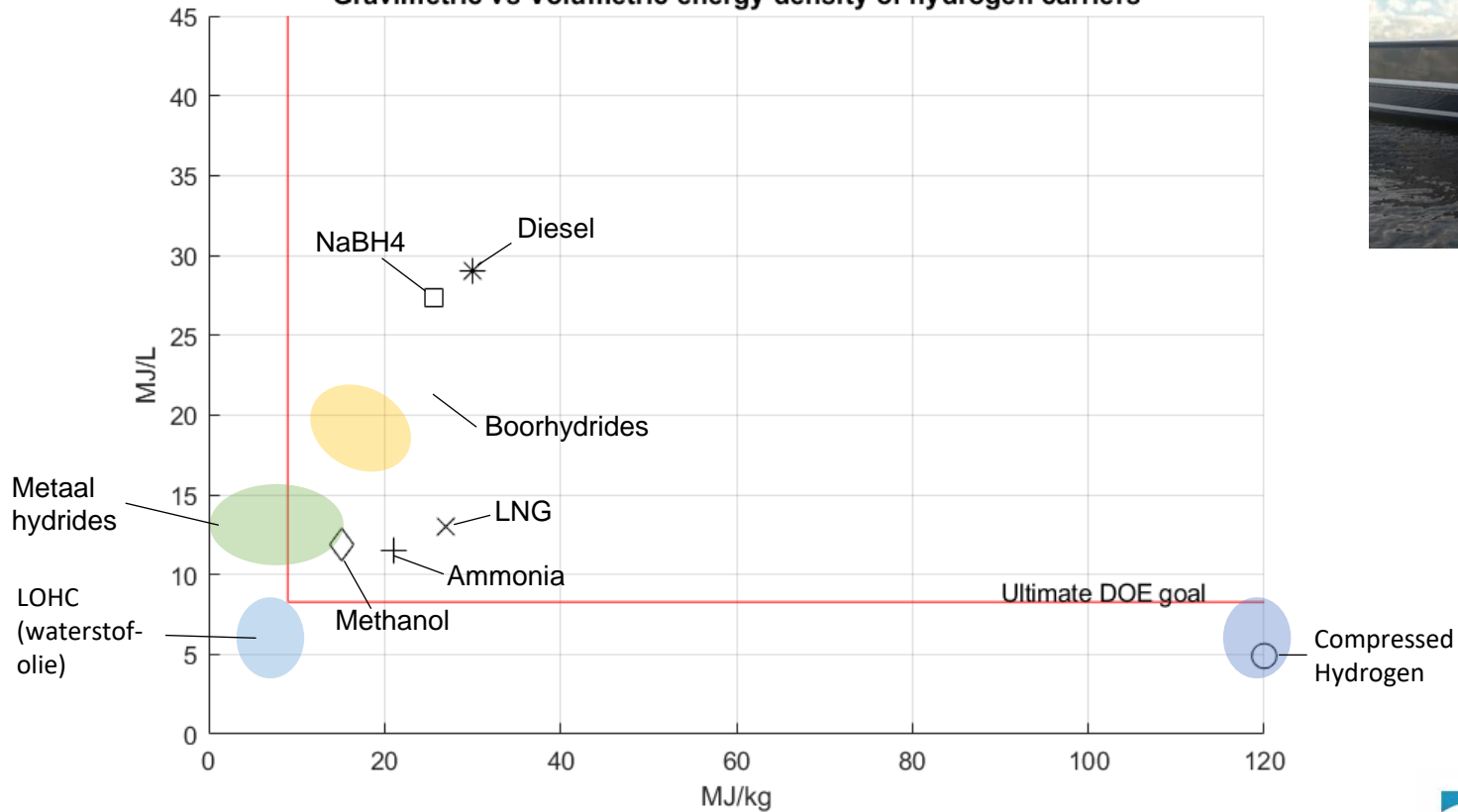
## H2SHIPS



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Gravimetric vs Volumetric energy density of hydrogen carriers



**Interreg**   
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**SH<sub>2</sub>IPDRIVE**  
 HYDROGEN FOR MARITIME

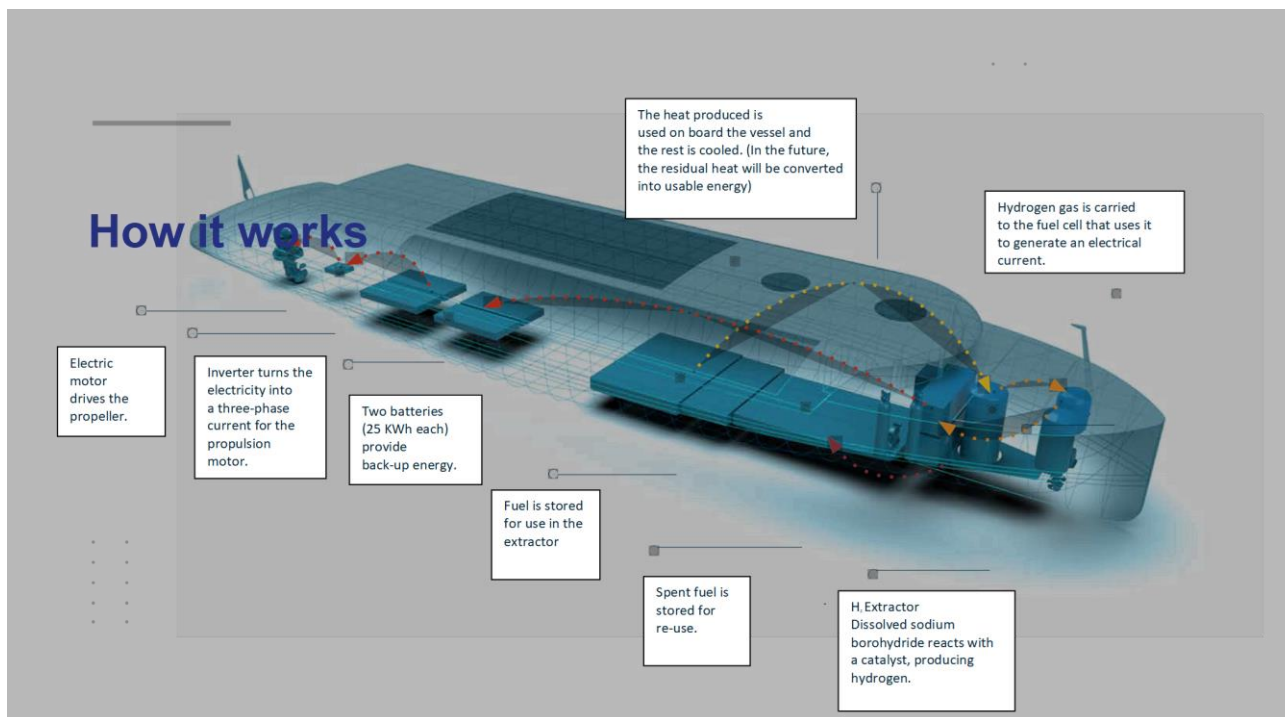
# Interreg

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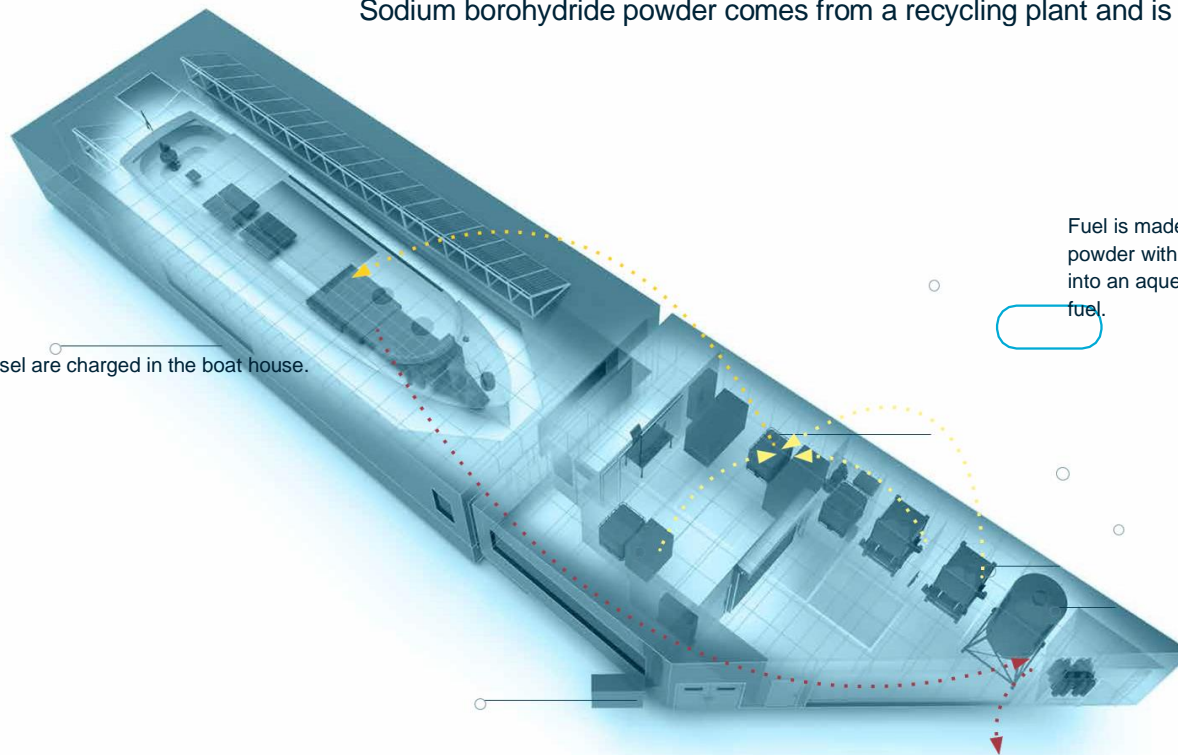


# Boathouse

Sodium borohydride powder comes from a recycling plant and is stored in the boathouse



The batteries on board the vessel are charged in the boat house.



Fuel is made by mixing sodium borohydride powder with a stabiliser and ultrapure water into an aqueous non-combustible liquid: fuel.

We make ultrapure water from tap water.

Spent fuel is stored for transport to the site where it is regenerated into sodium borohydride (packing-in).

- Certification established Lloyd's Reg
- No safety area during (easy) bunkering
- Start building 2022 @ shipyard Next Generation, Lauwersoog, NL.
- Sea Acceptance Test 2023
- FAT integrated NaBH<sub>4</sub> system @ Marin
- Nov: conclusions of scale up to inland vessel (H2CARGOSHIP) and first results of regeneration process experiments (BORE2ACTOR)



## Further questions:

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**THANK YOU !**