

# Lhyffe

S U S T A I N A B L E  
H Y D R O G E N  
P R O D U C E R

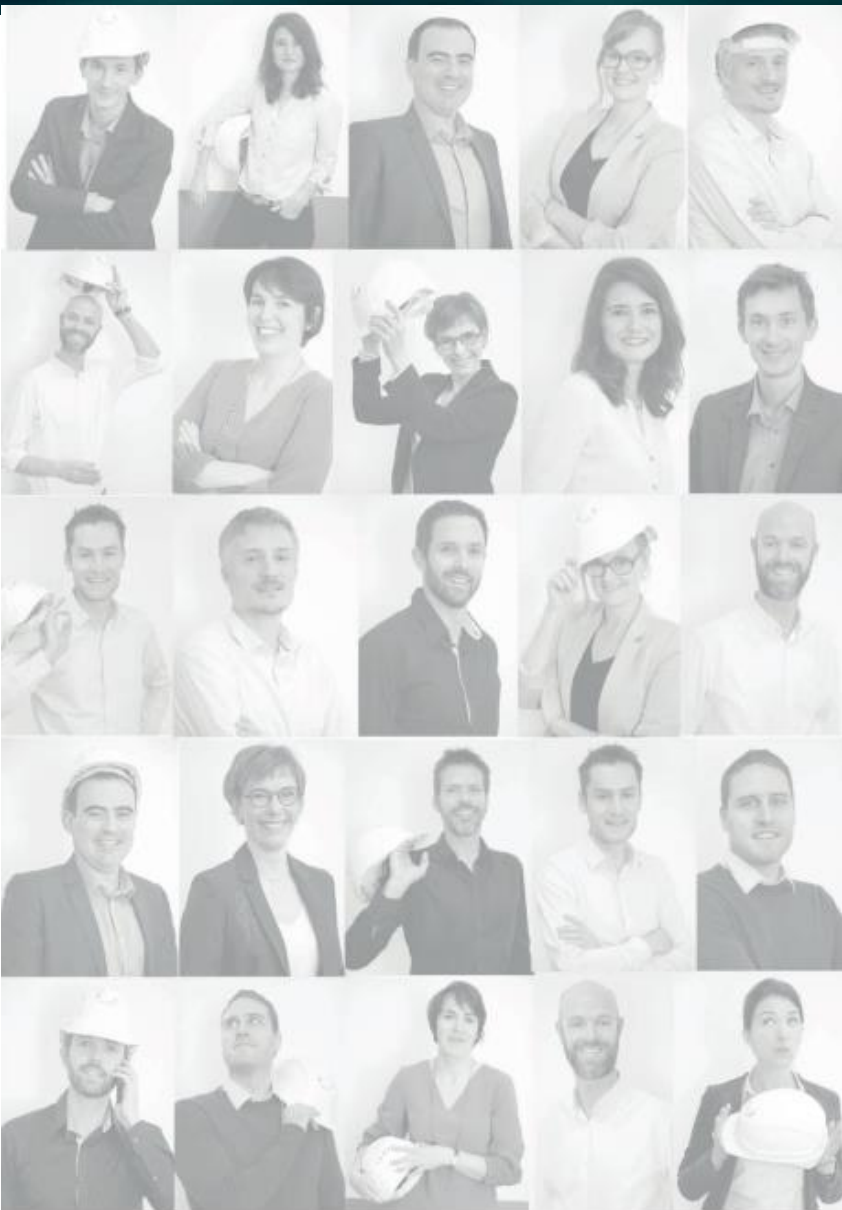




**W H Y ?**



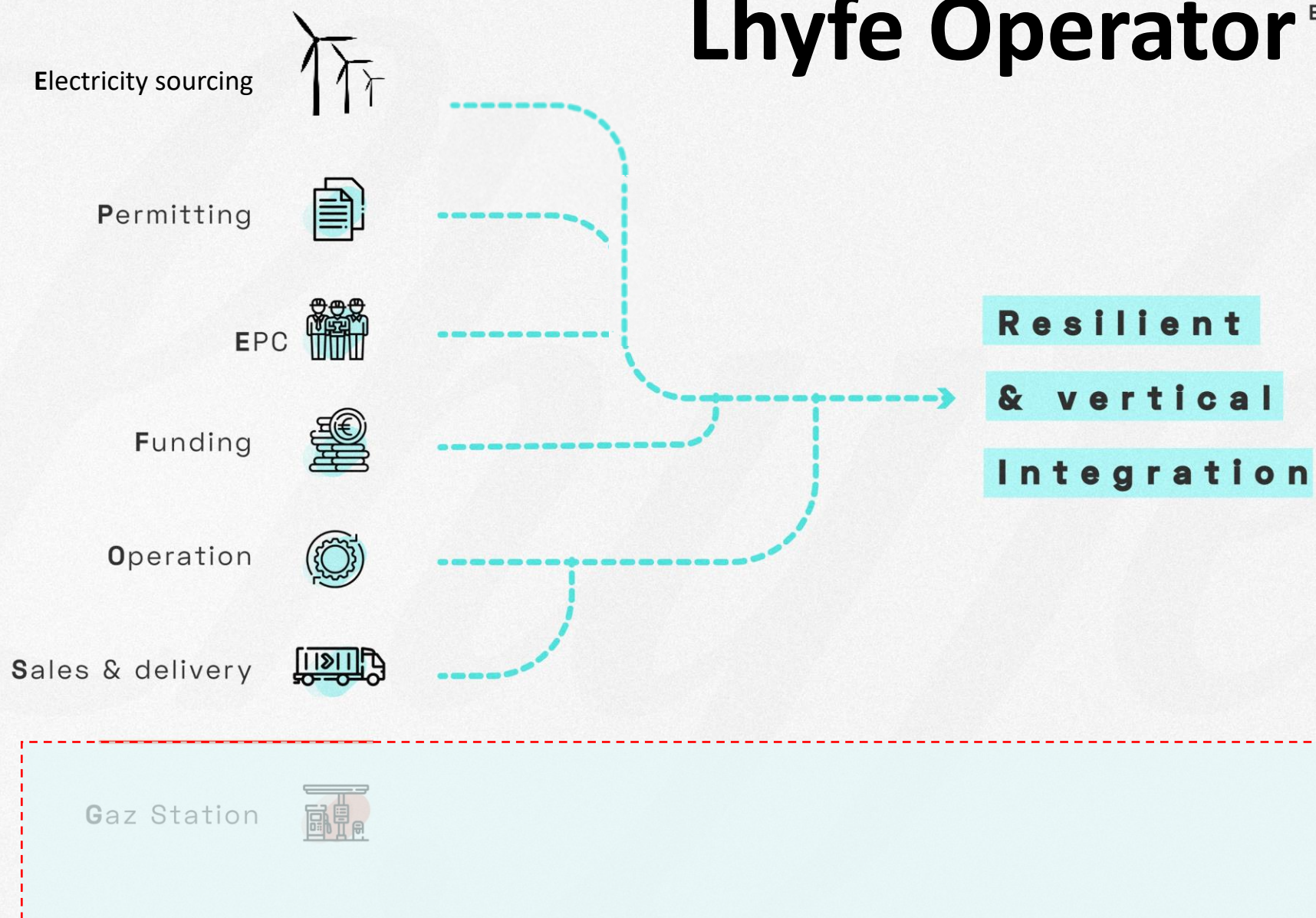




**“WE WANT TO  
CHANGE THINGS NOW,  
NOT TOMORROW !”**

# Lhyfe Operator

Business model .....





An underwater photograph showing the surface of the ocean with waves and sunlight filtering through the water. The text "Offshore Resources" is overlaid in the center in a white, bold, sans-serif font.

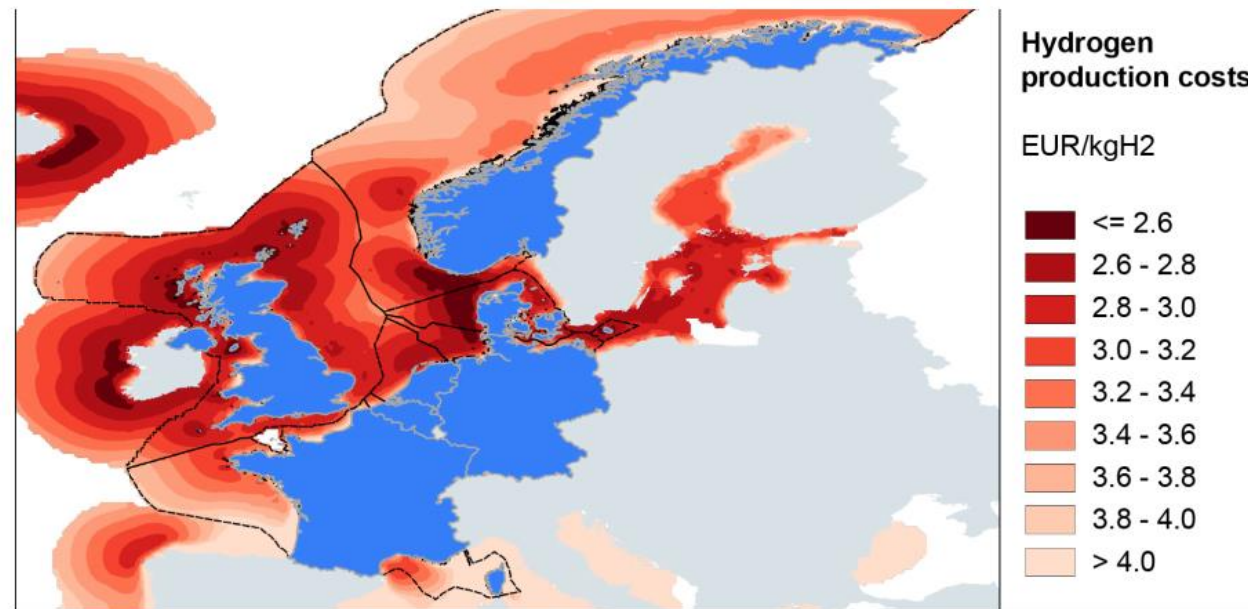
# Offshore Resources



EU ambitions by 2030:

- 40 gigawatts of green hydrogen using electrolyzers
- => About 80 to 120 gigawatts needed to power them

Hydrogen production costs from offshore wind in the Accelerated scenario, 2030



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Notes: This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. The analysis is based on hourly wind speed data from Copernicus Climate Change Service (2020).<sup>66</sup>



An underwater photograph showing the water surface above. Sunlight filters through the surface, creating shimmering patterns and bright highlights on the water's texture. The water is a deep teal color, and the overall scene is serene and abstract.

# Offshore Deployment





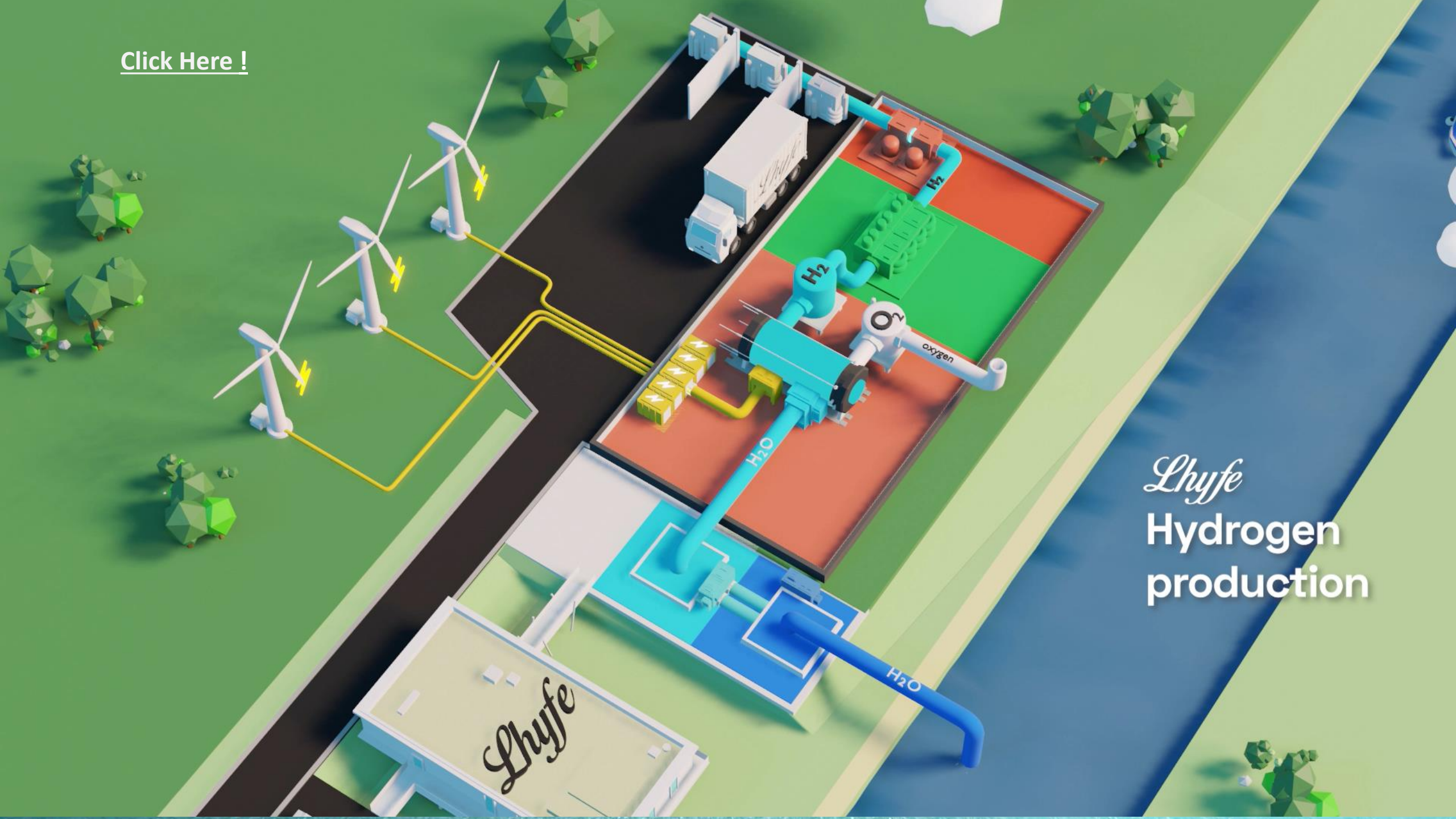
# PRODUCER AND SUPPLIER OF CLEAN & RENEWABLE HYDROGEN

...directly connected to the renewable energy

**1st production site in  
OPERATION in JULY  
2021  
in France**



[Click Here !](#)

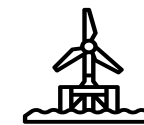
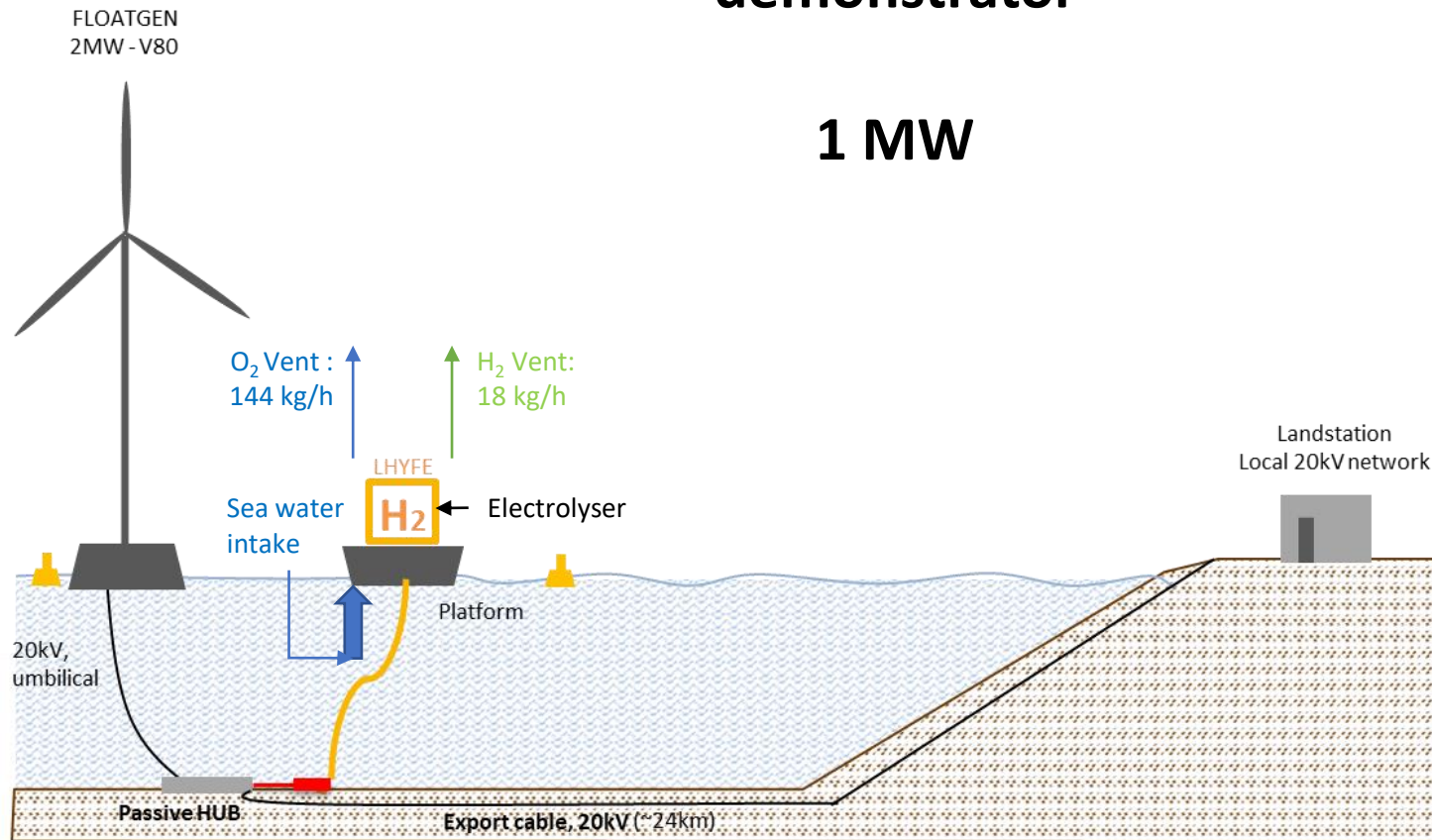


*Lhyfe*  
Hydrogen  
production



# World 1st offshore demonstrator

## 1 MW



Green electrons only



Remote operations from LHYFE data center

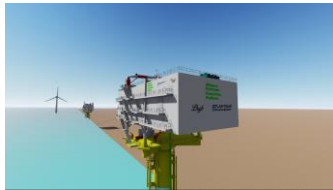


## Sea *Lhyfe*

## Project

## Offshore H2 production concept developments

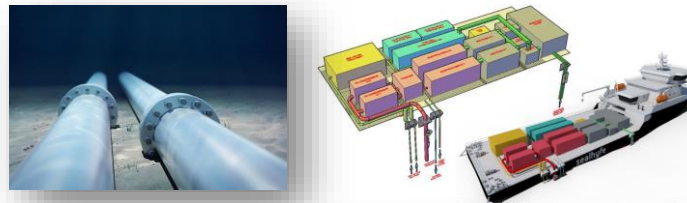
*Lhyfe*  
+  
**CHANTIERS  
DE L'ATLANTIQUE**



### Topside Concepts

- From 100 MW and above
- Can produce about 50 T/d of H2 corresponding to 1000 boe/d

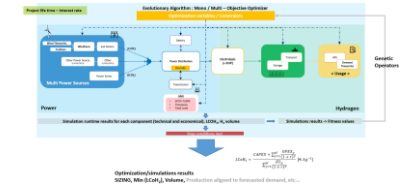
*Lhyfe*  
+  
Re-use Oil & gas assets  
**SOFRESID  
ENGINEERING**



### Floating Concepts

- 10 MW and above
- About 5 T/d and above

*Lhyfe*  
+  
Global optimization  
**cea tech**  
FROM RESEARCH TO INDUSTRY



### H2 Technology

- Transport
- Storage



# Haldane Project

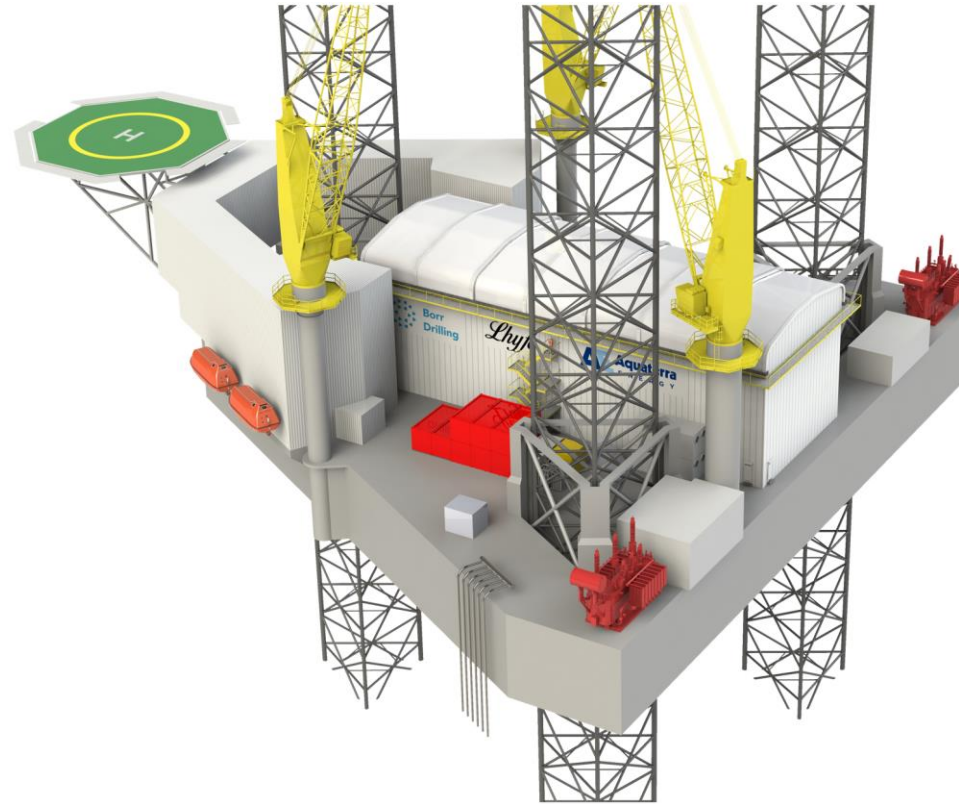
## Background and Characteristics

Use an **existing Jack-up rig**

Design and **accommodate H2** process

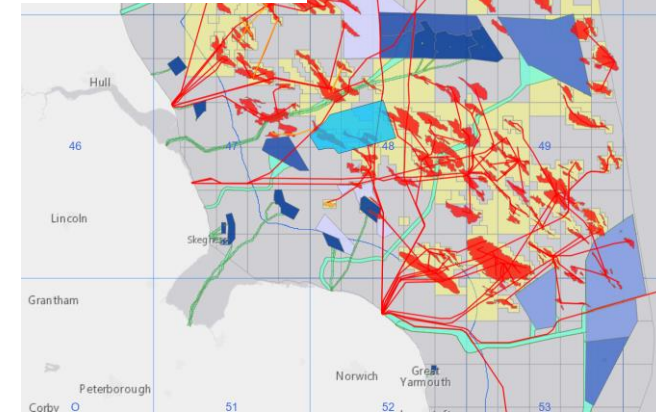
About 300 MW electrolysis capacity

About 120 T/d H2 production corresponding to about 3000 boe/d



Red: O&G fields

Blue: Offsh. WF



**AE** Aquaterra  
ENERGY

*Lhyfe*

 Borr  
Drilling



*Lhyfe*







The background is a deep teal color with a textured, slightly grainy appearance. There are several bright, out-of-focus light spots (bokeh) scattered across the upper half, suggesting light rays filtering through water. A horizontal line of white, shimmering highlights runs across the middle, resembling the surface of water or a layer of bubbles. The overall effect is serene and aquatic.

**Thank you for your  
attention**

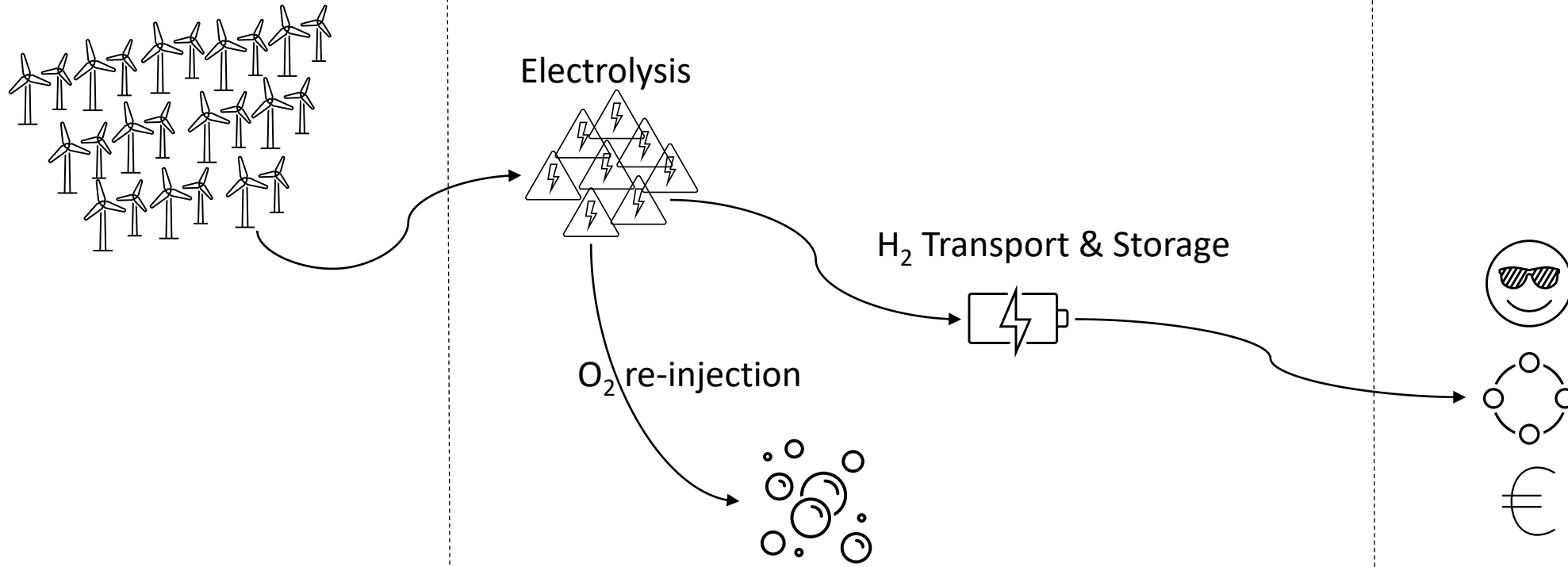


## Why choosing Lhyfe?

Electricity production

*Lhyfe*

Client



# Win the fight !



The background is a deep teal color with a textured, slightly grainy appearance. There are several bright, out-of-focus light spots (bokeh) scattered across the upper half, suggesting light rays or bubbles underwater. A horizontal line of white, shimmering highlights runs across the middle of the image, resembling the surface of water or a layer of bubbles. The text "Back-up slides" is centered in the middle of the image, in a white, sans-serif font.

Back-up slides



An underwater photograph looking up at the surface of the water. The water is a deep teal color, and the surface is visible as a bright, shimmering line with many small ripples and reflections of light. The text 'Transport systems' is overlaid in white, centered horizontally and positioned just below the water's surface.

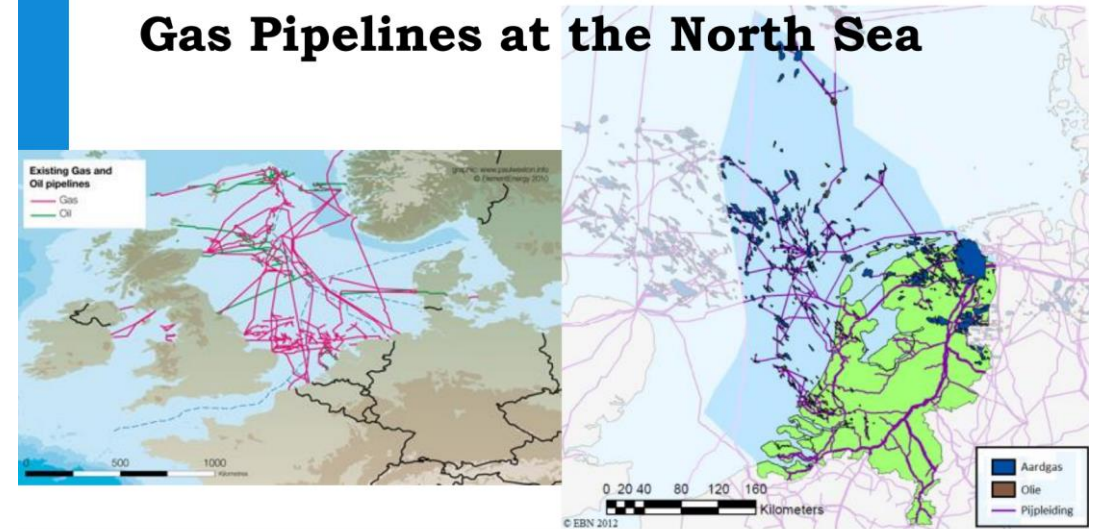
# Transport systems



## Cable versus pipeline cost

	Cable (BritNed)	Pipeline (BBL)
Capacity	1 GW	15 GW
Construction Cost	€ 500 mln	€ 500 mln
Volume (year)	8 TWh	120 TWh

## Gas Pipelines at the North Sea



- A higher cost efficiency to transport energy by pipe as by cable
- An offshore gaz network compatible with hydrogen
- An onshore gaz network under development



## OUR AMBITIONS FOR OFFSHORE DEPLOYMENT

Target: 3GW offshore by 2030

