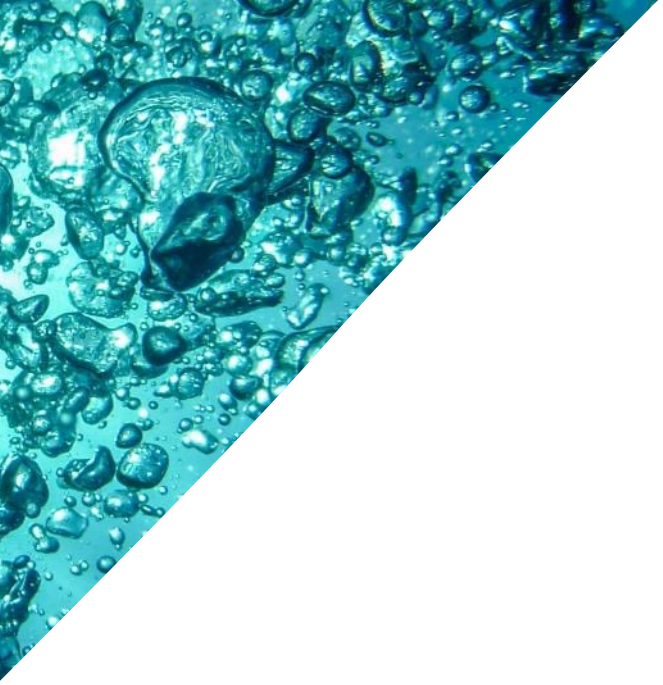

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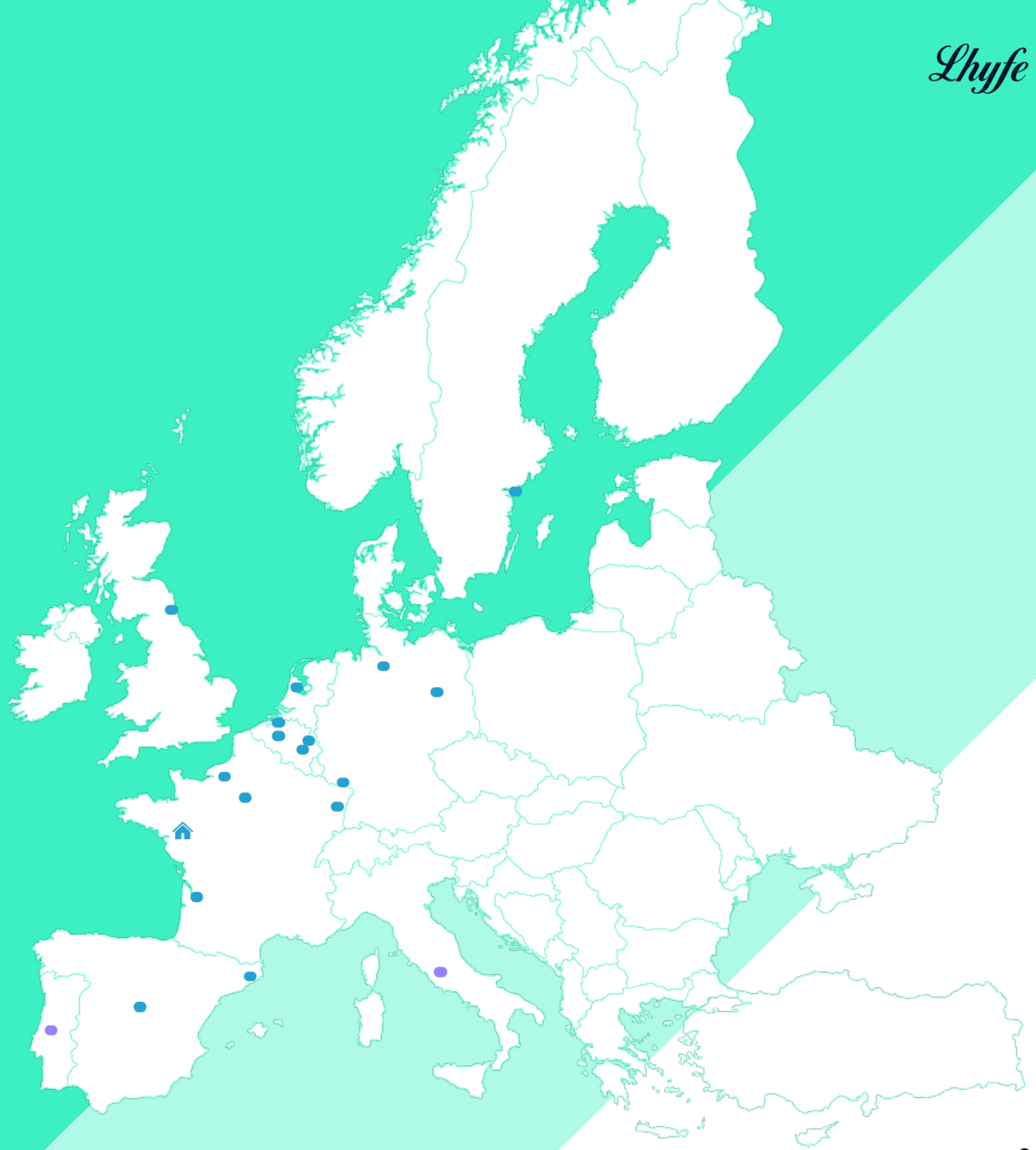
Green Hydrogen
&
The Road to Net Zero Industry

Boris Davis – Business Developer
Colin Brown – UK and Ireland Country Manager

- Green Hydrogen Producer
- Founded in 2017 in Nantes - France
- >180 employees across the whole of Europe with ambitions to grow globally
- 3GW production by 2030
- Financially sound:
  - *Pre 2022 initial funding - secured € 70 million*
  - *2022 secured further funding - Mitsui & Co Ltd and EDPR*
  - *May 20th 2022 IPO on Euronext - raising € 140 million*
  - *Market capitalisation € 400 million*
- UK&I business established Q3 2022, HQ Newcastle Upon Tyne
- 5 in UK team further growth driven by projects



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Green Hydrogen - The right solution for Industry Net Zero

- 15% of UK Emissions from Industry[1]
- 77.9 $MtCO_2e$[2]
- 46.9 million cars[3]

1. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033990/net-zero-strategy-beis.pdf
2. https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2019
3. https://www.nimblefins.co.uk/average-co2-emissions-car-uk

Decarbonising Heavy Industry

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CHEMICAL

Propylene Oxide, H_2O_2, Ammonia, Methanol, Nylon, PTA, Synthetic Rubber etc.

The chemical industry already is a very large consumer of (grey) hydrogen.

Decarbonising it will require combining:

- New assets to produce green H_2
- CCS projects (due to high number of existing SMR assets)

METALS

The steel sector alone emits 7-8% of global CO2 emissions -a large part coming from integrated steel mills (blast furnaces);

Most blast furnaces will be stopped / replaced by DRI + electric arc furnaces;

Heat treatment / reheating furnaces are as well large emitters in rolling mills.

Co-produced oxygen from electrolysers is often a plus.

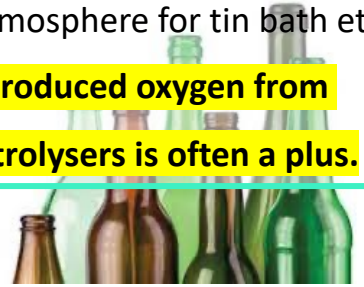
GLASS

Glass industry has two main options for decarbonising: Electric furnaces and H_2

Despite its better thermal efficiency, electrifying the furnace cannot be applied everywhere:

- Not fully suitable for very large furnaces (float glass) or some specific melting (frits industry)
- Cannot be used for other processes than melting (e.g. fiberizing, controlled atmosphere for tin bath etc.)

Co-produced oxygen from electrolysers is often a plus.



CEMENT

An industry with high level of CO_2 emissions: an average-sized cement plant emits 1 million tonnes of CO_2 per year.

The segment emits approx. 8% of global emissions.

Hydrogen can be used to decarbonise the cement plant's fuel mix. 2/3 of the CO_2 emissions come from decomposition of the raw materials.

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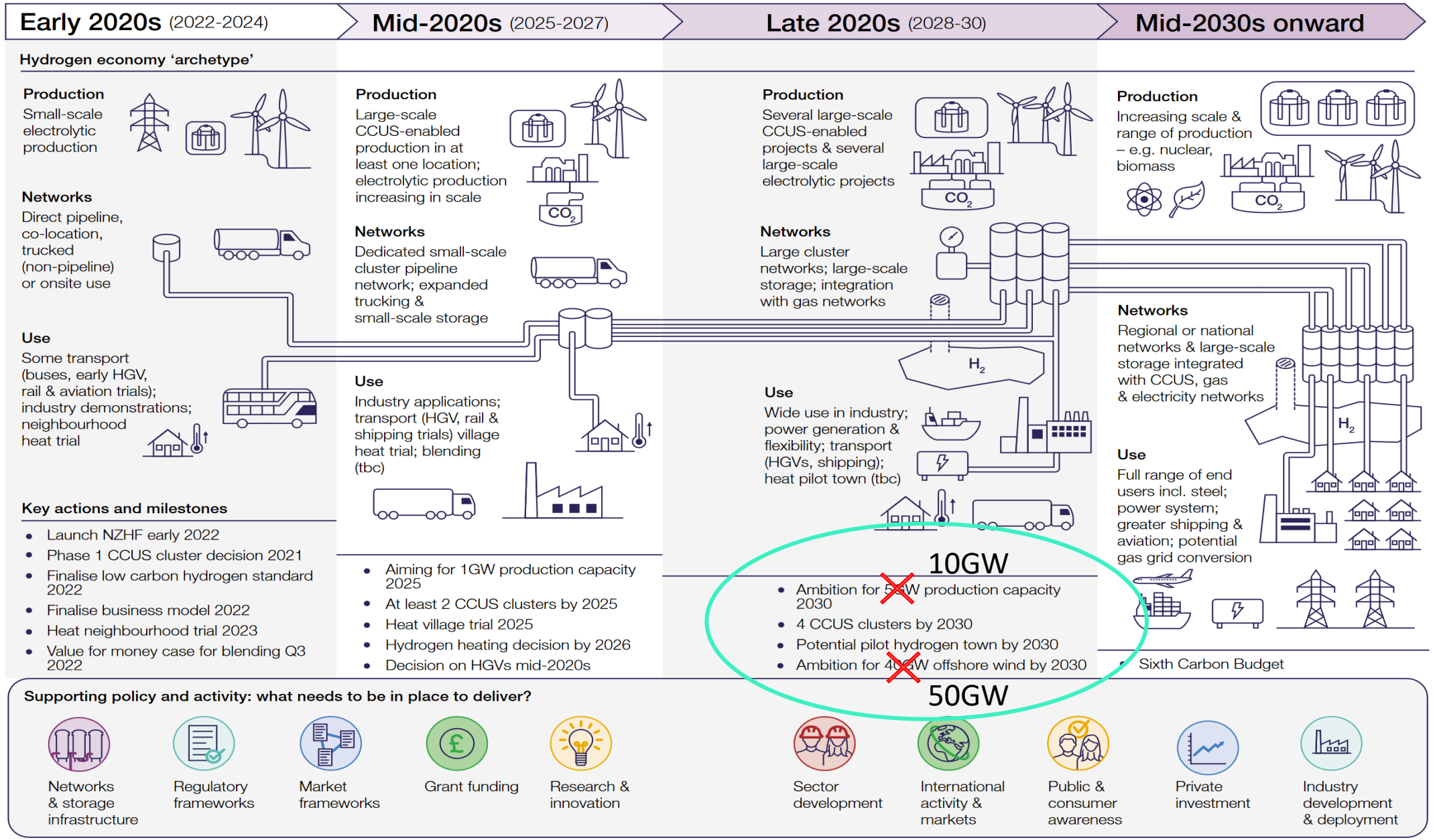


https://www.gov.uk/government/publications/uk-hydrogen-strategy

1st Operational Site : Bouin (France)

Opened
September 2021

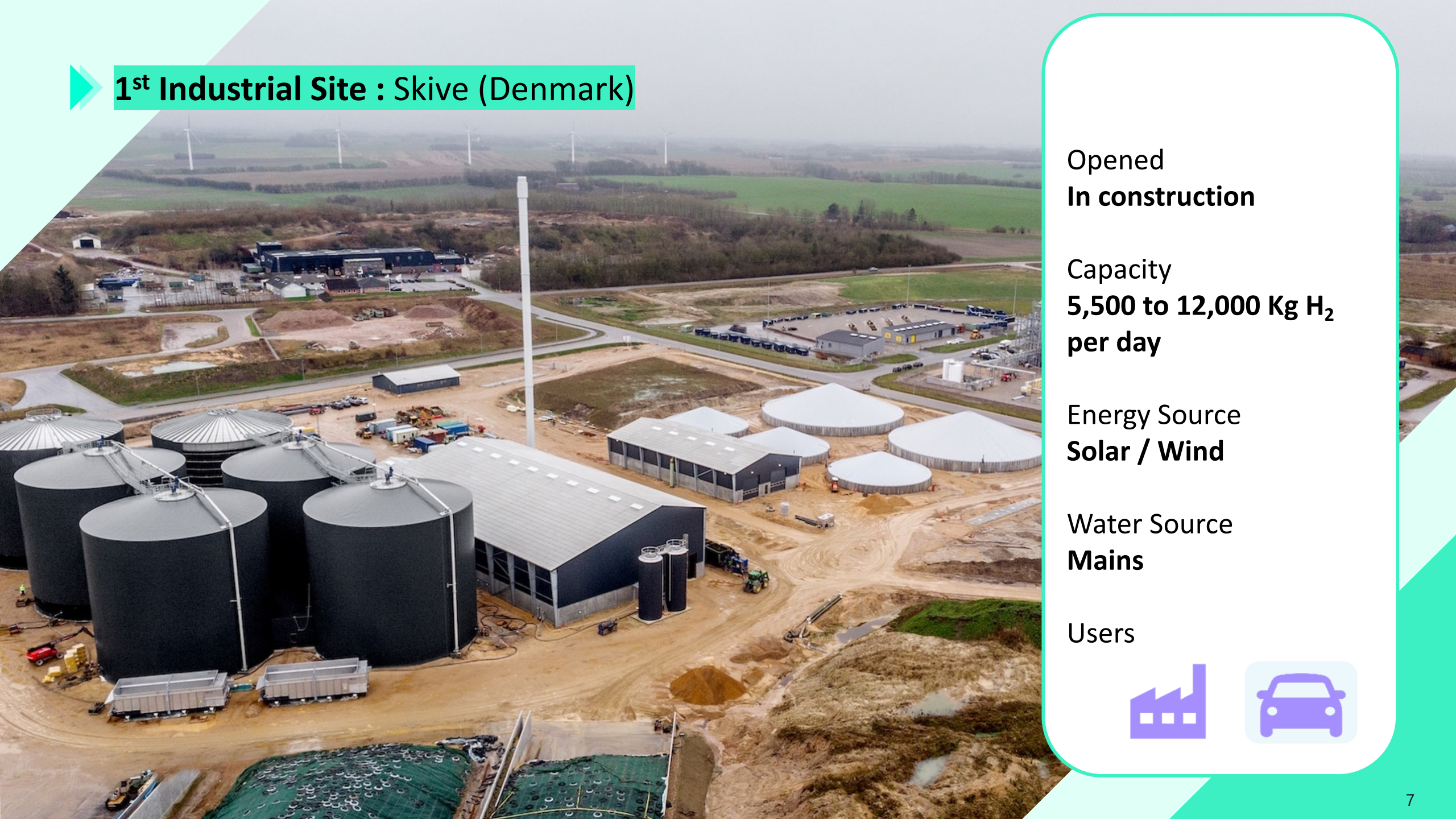
Capacity
300 to 1000 Kg H_2 per day

Energy Source
Wind Farm

Water Source
Sea Water

Users

1st Industrial Site : Skive (Denmark)



Opened
In construction

Capacity
5,500 to 12,000 Kg H_2 per day

Energy Source
Solar / Wind

Water Source
Mains

Users

1st **Offshore Pilot :** Le Croisic (France)

Opened
2022

Capacity
400 Kg H_2 per day

Source of Energy
Offshore Wind

Water Source
Sea Water

Ocean deoxygenation

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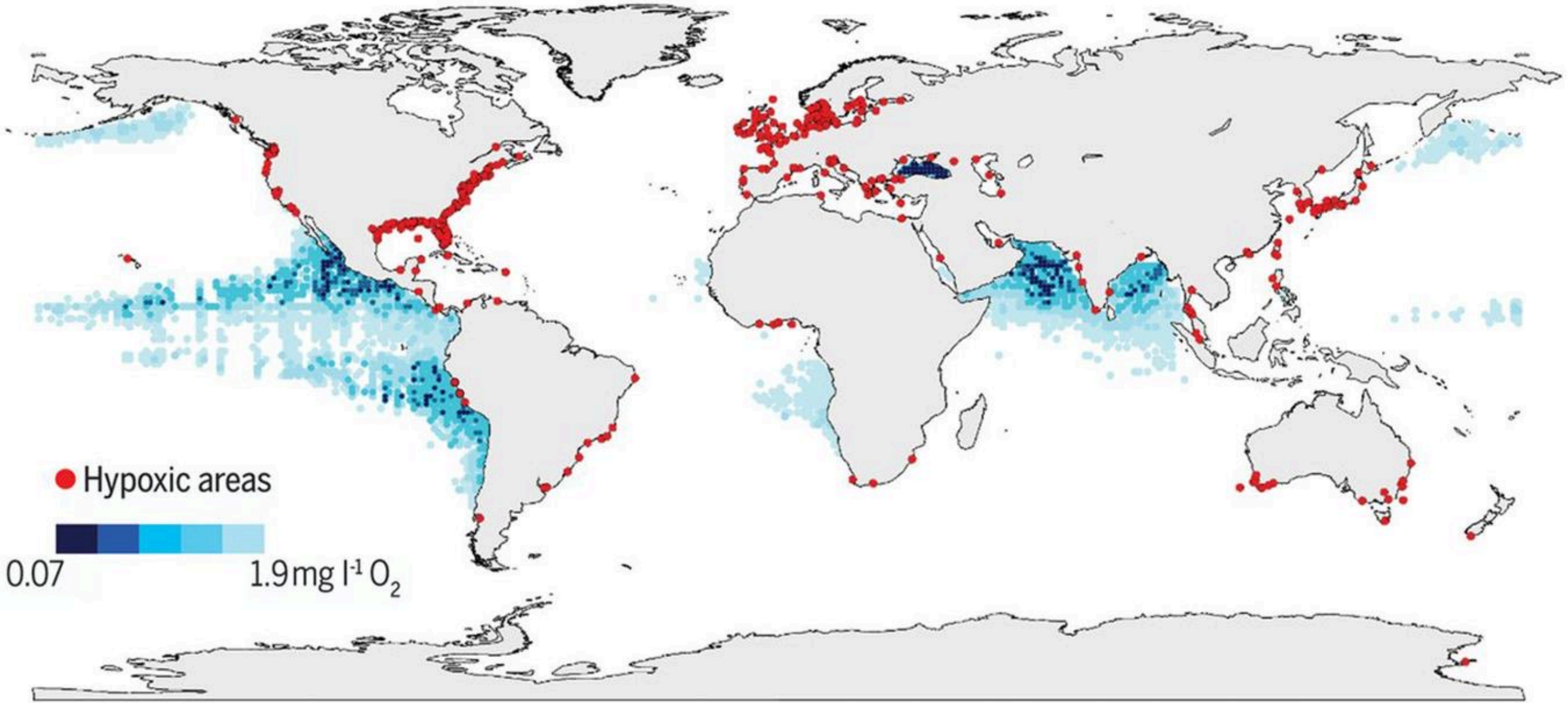

https://en.unesco.org/go2ne

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