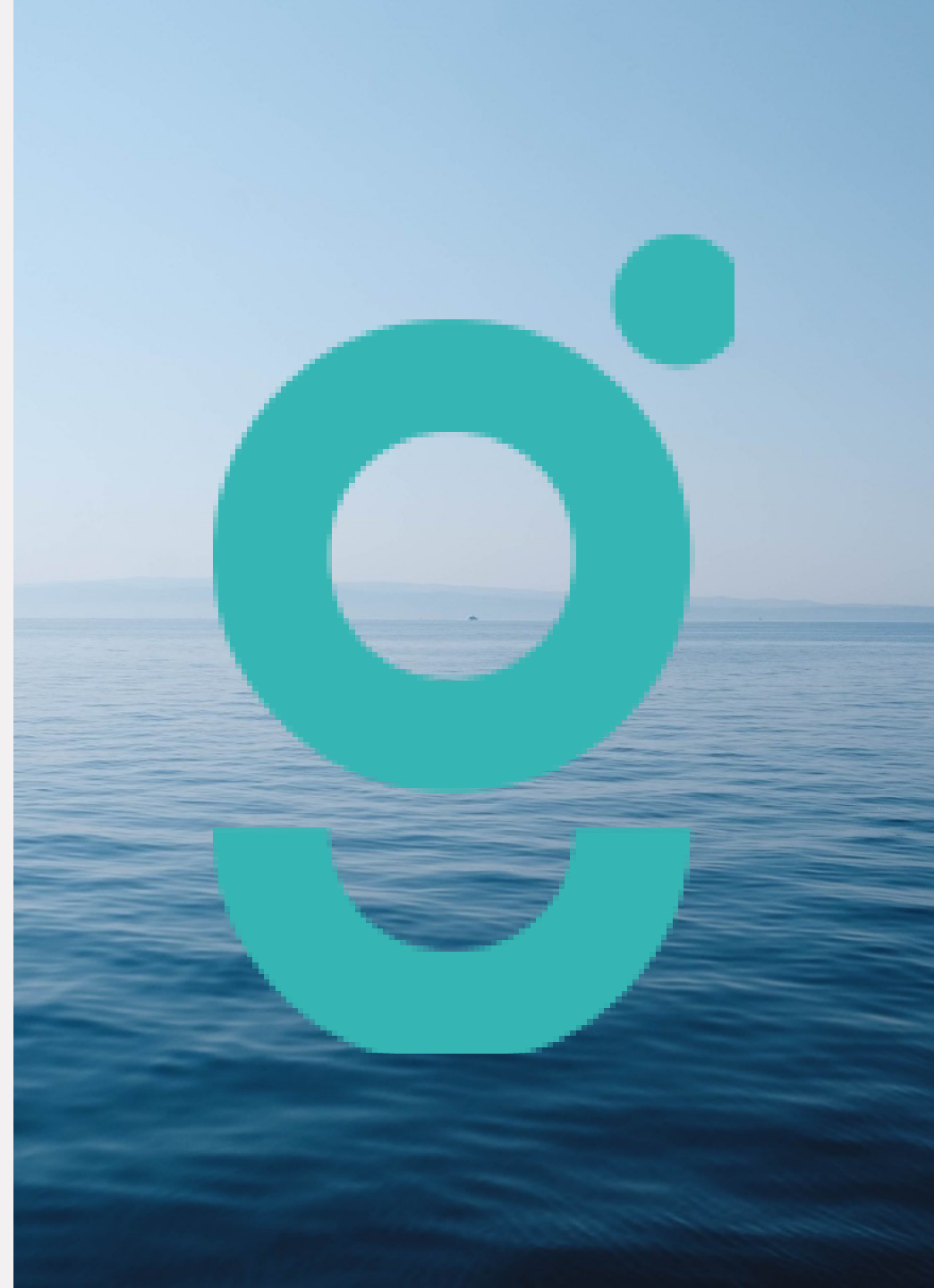




Reliable & High- Performance PEM Electrolyser for the UK

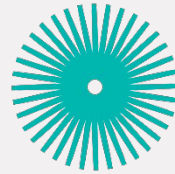
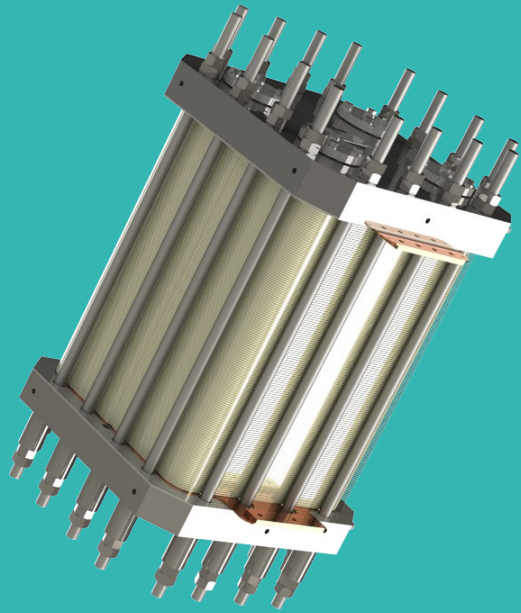
Masa KANEKO

26/11/2024

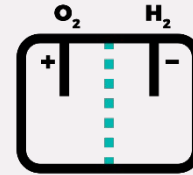


Elogen

Key figures



Over 15 years' experience
in electrolysis using PEM technology



3 continents
Electrolysers in operation in Europe, Asia and the US



120+ highly-skilled employees,
covering all disciplines



25+ MW projects in execution

FY2023 Order book



FY2023 Revenues





Elogen, a company of the GTT group



**Technological
expert in
containment
solutions for
liquefied gases**

GTT Key Figures (as of 31 December 2023)

Revenues	427.7 M€ (+39.2% YoY)
EBITDA	234.5 M€ (+45.6% YoY)
Net Income (+57% YoY)	201.4 M€
Already secured revenues	1.8+ B€
Employees	750+
Market capitalization⁽¹⁾	4.5 Bn€

(1) As of 31/12/2023 - The GTT group is listed on the SBF120 index.

**GTT and Elogen share the
same DNA**

R&D and innovation

Helping technology build a
sustainable world

Elogen, a key player in green hydrogen with the largest production capacity in France

Current production capacity

With its production facility near Paris (Les Ulis), Elogen is the only manufacturer of PEM electrolyzers in France.



- Total surface area of 2300 m2
- Innovation, Customer Service
- Assembly of stacks, R&D test benches
- Industrialisation of stacks, leveraging resources with deep experience of manufacturing industry
- **Les Ulis : our center of excellence for industrialisation**

On track for 1GW production



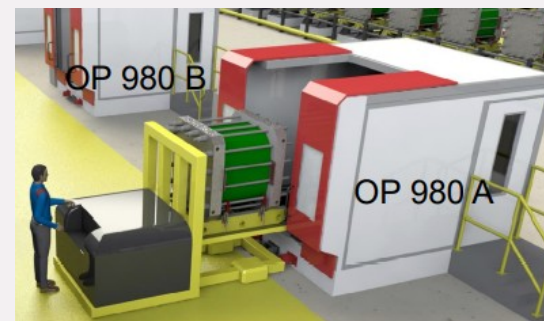
Flagship site

Within the framework of IPCEI of hydrogen for financing the project

Production to start in 2025, with a capacity of at least 1GW

14.000m2 (up to 35.000m2) – Location : Vendôme, France

Fully automated



Flexible Adaptation

Dry cooler & Thermal loup included

- Client possible to mutualise its cooling infrastructure with Electrolyser
- Possible to recover waste heat

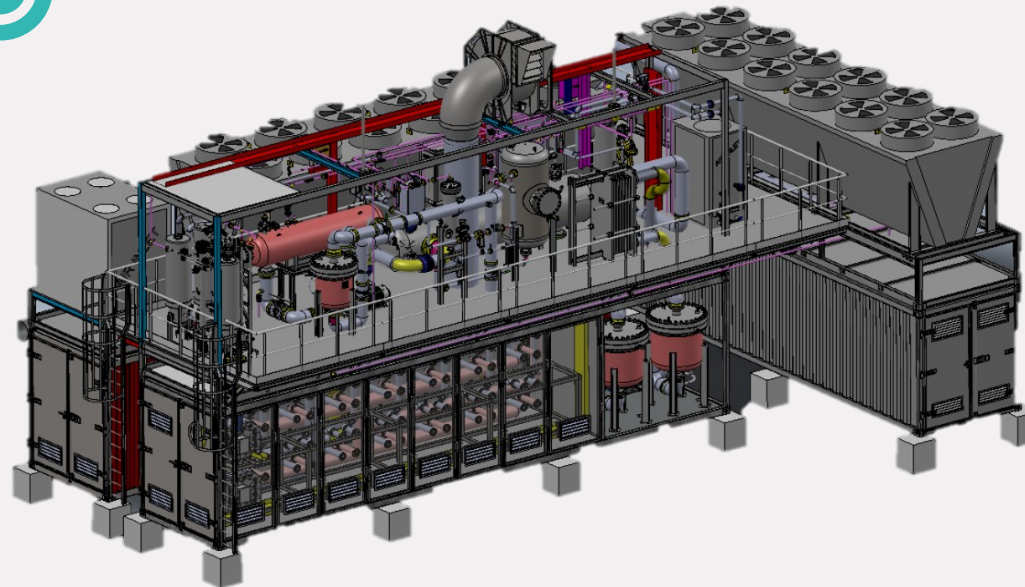


Water Purification included

- Possible to adapt to Client specification
- From demin water to industrial water as raw water intake

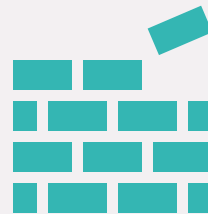
Electrical group customisation

- MV Transfo incl/excl
- Rectifier: IGBT/Thyristor
- Harmonics



Corrosion assumption C4

- Possible to adapt to
- C5M/I
- CX (Offshore)



Hydrogen purity

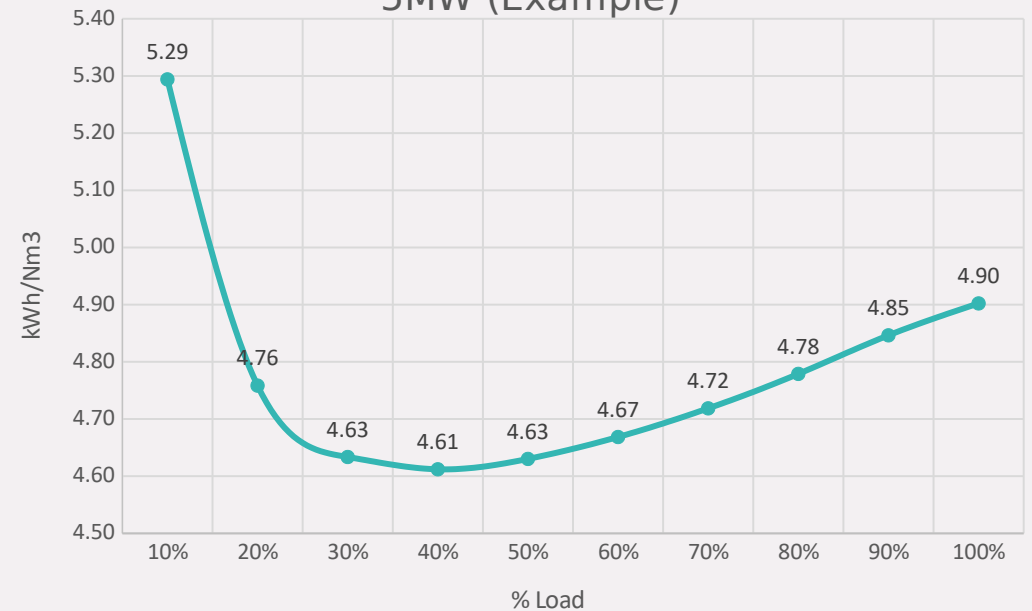
- Mobility : Comprehensive H2 Purification
- Industrial : H2 Dryer
- H2 derivatives : Deoxidation



Performance offered by Elogen

- ✓ **H2: 1000 Nm³/h at constant 30 barg and 99.999 % purity with drying unit**
- ✓ **O2: 500 Nm³/h at constant 10 barg and 99.6 % purity** if not vented
- ✓ **Flexible control : 10 % to 100 % of nominal operating point**
- ✓ **Energy consumption: 4.90 kWh/Nm³** at BoL 100% load
- ✓ **Outdoor operations: -20°C to +40°C**
- ✓ **Corrosion protection: C4** following DIN EN 12944 and DIN EN 14713

Load Curve BOL - Stack & BoP
5MW (Example)



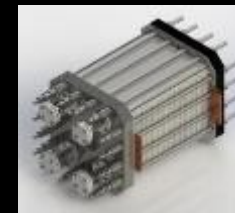
Elogen's business model

Elogen is a technology designer of complete systems, with full control of R&D and stack assembly

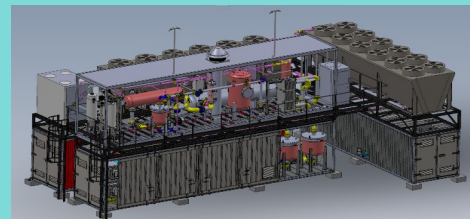
Stacks, at the heart of Elogen technology



- Designing
- Manufacturing
- Testing



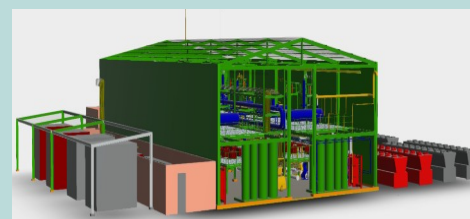
Containerised Electrolysers



- Design
- Purchase of all equipment

+ Subcontracting of the assembly to specialized companies

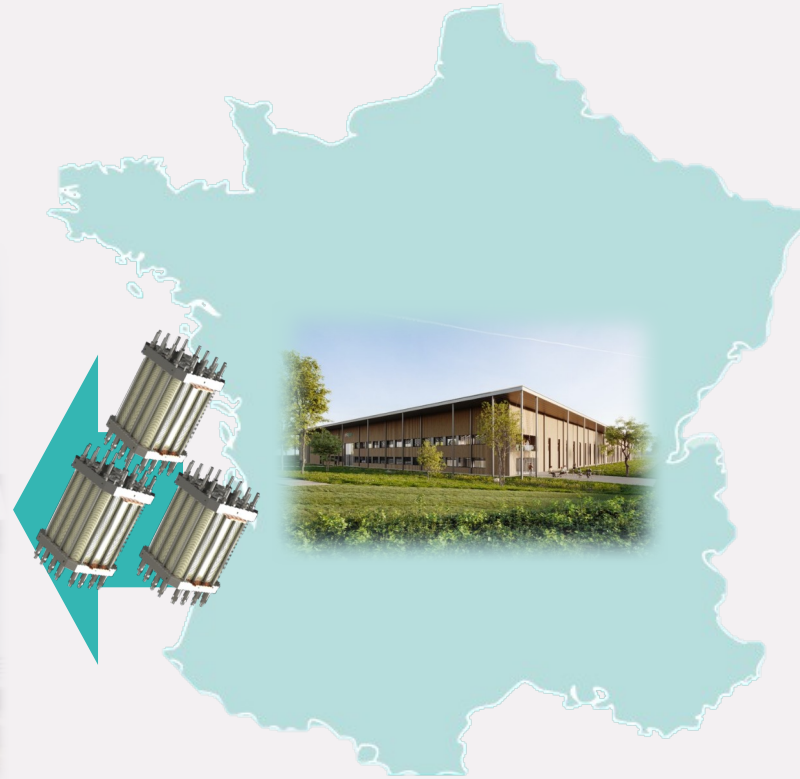
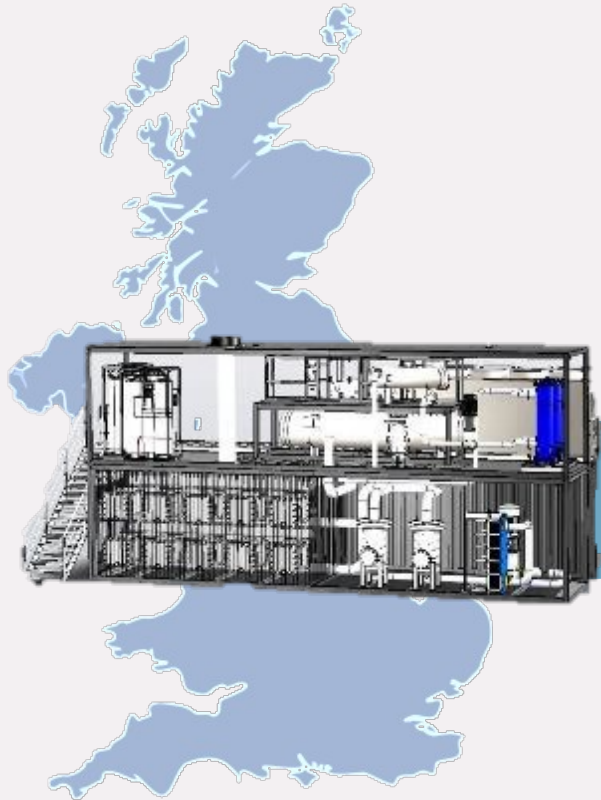
Large Scale Electrolysis Plants



- Design
- Supply of stacks

+ Construction handled by EPC contractors

Business Approach – Containerised Solutions



UK-based partners
Assembly of
Electrolyser Skid
fabrication based on
Elogen engineering

elogen
Electrolyser design
&
PEM stacks
fabrication

SYMBIO

SymphonHy factory

Elogen's PEM electrolyser at the heart of major industrial hydrogen mobility projects



elogen | Empowering a sustainable world

France



CrossWind Hollandse Kust Noord Wind project

Elogen know-how to help build intelligent wind farms



- ✓ Electrolyser of **2.5 MW** able to produce up to **1t of H2 / day** at **99.999% purity**
- ✓ **Offshore adaptation** and integration into a topside module
- ✓ Part of a “Baseload Power Hub” concept:
 - ✓ **Facility that integrates battery storage and green hydrogen electrolysis production at megawatt scale**
 - ✓ **Energy storage in periods of high-power production**
 - ✓ **Conversion of hydrogen to electricity, via a fuel cell, during periods of lower power production**
- ✓ Located ~20km offshore Dutch coast

CROSSWIND

A JV between



and



elogen | Empowering a sustainable world



Netherlands

Valmax

Mobility projects in Pyeongchang and Buan

Two contracts within collaboration agreement with Valmax in Korea



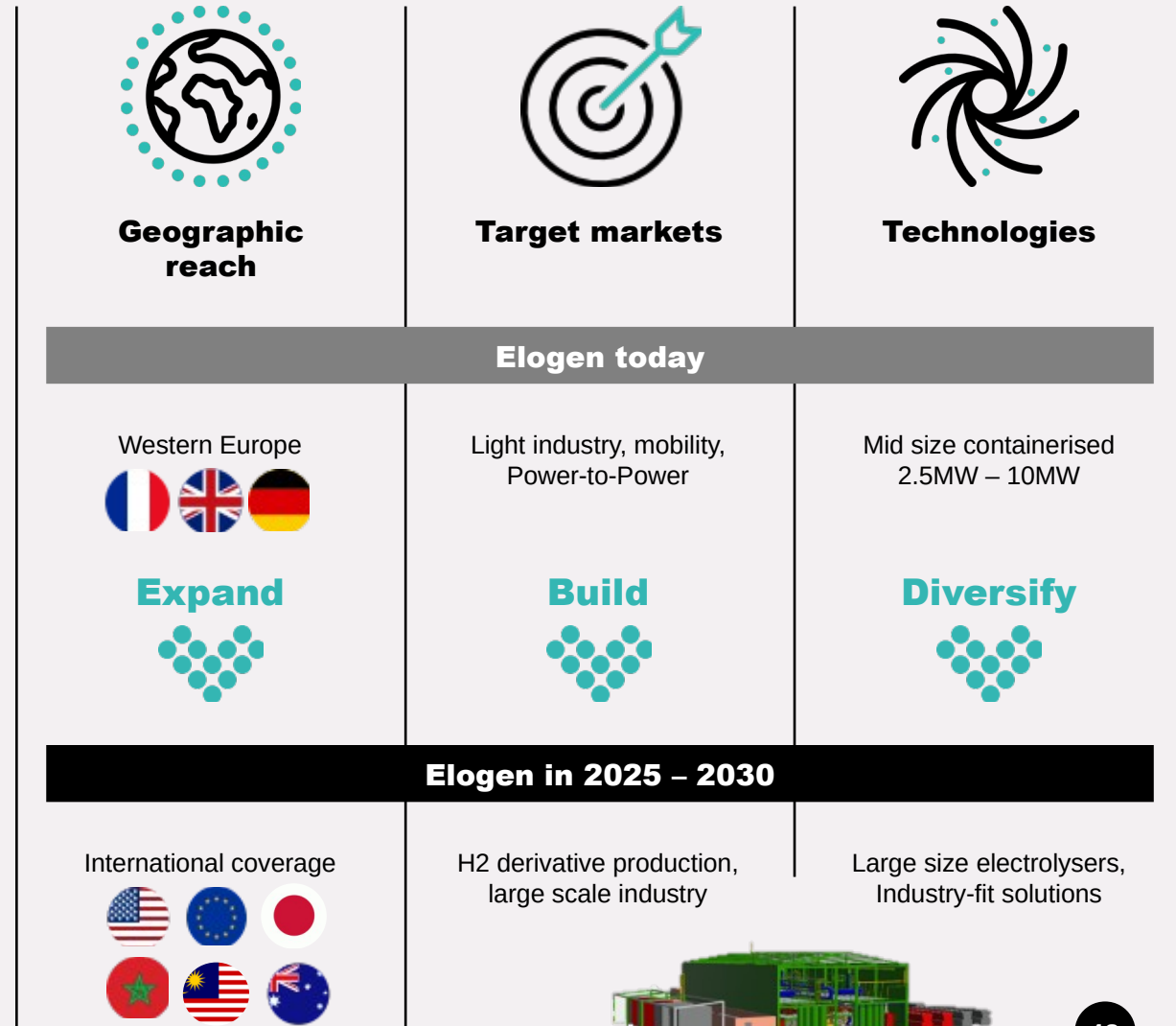
- ✓ **2.5 MW PEM electrolyser** with production capacity of up to 1t of H2 / day at 99.999% purity
- ✓ **Mobility projects** based on green hydrogen production
- ✓ **Buan project and Pyeongchang project** are the **first two sites** selected in South Korea to develop the country's hydrogen production
- ✓ Within the **collaboration agreement** signed between Valmax and Elogen in May 2022
- ✓ **Electrolyser located in the North Jeolla province and Gangwon province, to be installed in 2025**



Elogen ambition

Support the expansion of green hydrogen

- ✓ **Develop our R&D activities**
- ✓ **Diversify our technologies to produce larger-scale electrolyzers**
- ✓ **Scale up manufacturing processes, with a Gigafactory project within the framework of the Hydrogen IPCEI**
- ✓ **Develop local networks of partners for assembly of electrolyzer BoP and EPC projects**



Contact

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elogen

Visit our website: elogenh2.com

