

**Decarbonizing
industries and paving
the path for a carbon
neutral future.**



GLOBE Fuel Cell Systems is a German GreenTech Company

Founded in December 2020, GLOBE has its origins in the fuel cell research department and the innovation lab of Mercedes-Benz. Now, GLOBE has become a mature company with a team of 40 tech-experts.





**We develop and build
digitally connected, modular
H₂-powered fuel cell systems
for a wide range of industry
applications.**



“Because the **sustainable future** is one of the biggest challenges of our generation to finally reach the **net zero** emissions target.”

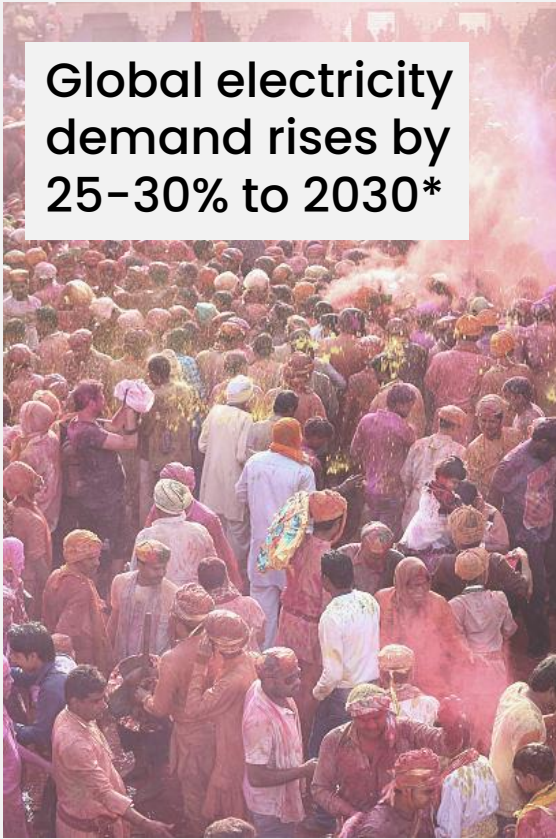


Steffen Bäuerle
CEO GLOBE Fuel Cell Systems

But net zero **vs.** rising energy demand



Global electricity
demand rises by
25-30% to 2030*



Population Growth



Heat Pumps



Mobility Transformation



Industry Development

* Source: iea report "World energy outlook" 10/22

So how can the globe satisfy its **hunger** for energy?



Existing power generation with plenty of disadvantages



Oil & Gas

dreadful carbon balance



Nuclear Power

safety & toxic waste



Solar Power

dep. on weather conditions



Wind Power

dep. on weather conditions



WE BELIEVE THE FUTURE OF ENERGY LIES IN HYDROGEN

carbon free production | storable | transportable | 63% drop of H₂ price*

* drop of hydrogen price by 63% till 2030 McKinsey & Company (2022),
Implications of the investment tax credit hydrogen PTC

The main pillars of the GLOBE business model



The business model of GLOBE comprises high-tech hardware, digital cloud business as well as fuel cell technology services.

I. GLOBE Fuel Cell Units

GLOBE XLP
medium-size



Power Output
10 – 60 kW

GLOBE LSP
large-size



Power Output
250 – 350 kW

II. GLOBE Datacore®

Cloud solution for data driven business



Data transfer to the cloud for AI based algorithms of all our fuel cell units

III. GLOBE as a service

Engineering expertise for strategic industry partners



Development of fuel cell systems for various applications

GLOBE XLP80 – our first market ready product



>60kW Peak Power with 11 kW Fuel Cell and 11 kWh Li-Ion Battery

62L Tank for 1,8kg H2 and one shift continuous usage

Refilling with 350bar in less than 5 min



The size corresponds to the standard size of a 5 PzS 775Ah battery

Full weight of generator with 1.8t for counterbalance demanding applications

GLOBE "DataCore" enables online transfer of various performance and sensor data to the cloud

Why fuel cell technology for intralogistics?

Significant advantages compared to existing battery systems

- Increased productivity through rapid refueling (less than 5min)
- More space for value-added processes due to elimination of battery swap stations and swap sheds
- Significantly higher utilization of individual fleet vehicles and the fleet overall (CAPEX reduction)
- Reduction of vehicle and personal injuries during battery swap
- Elimination of peak power loads due to charging operations
- Reduction of the CO₂ balance sheet due to the use of green hydrogen
- Due to GLOBE's roots in the automotive industry, all systems are developed to the highest quality standards and are designed to operate for 20,000 working hours



The intralogistics market is becoming hydrogen-powered

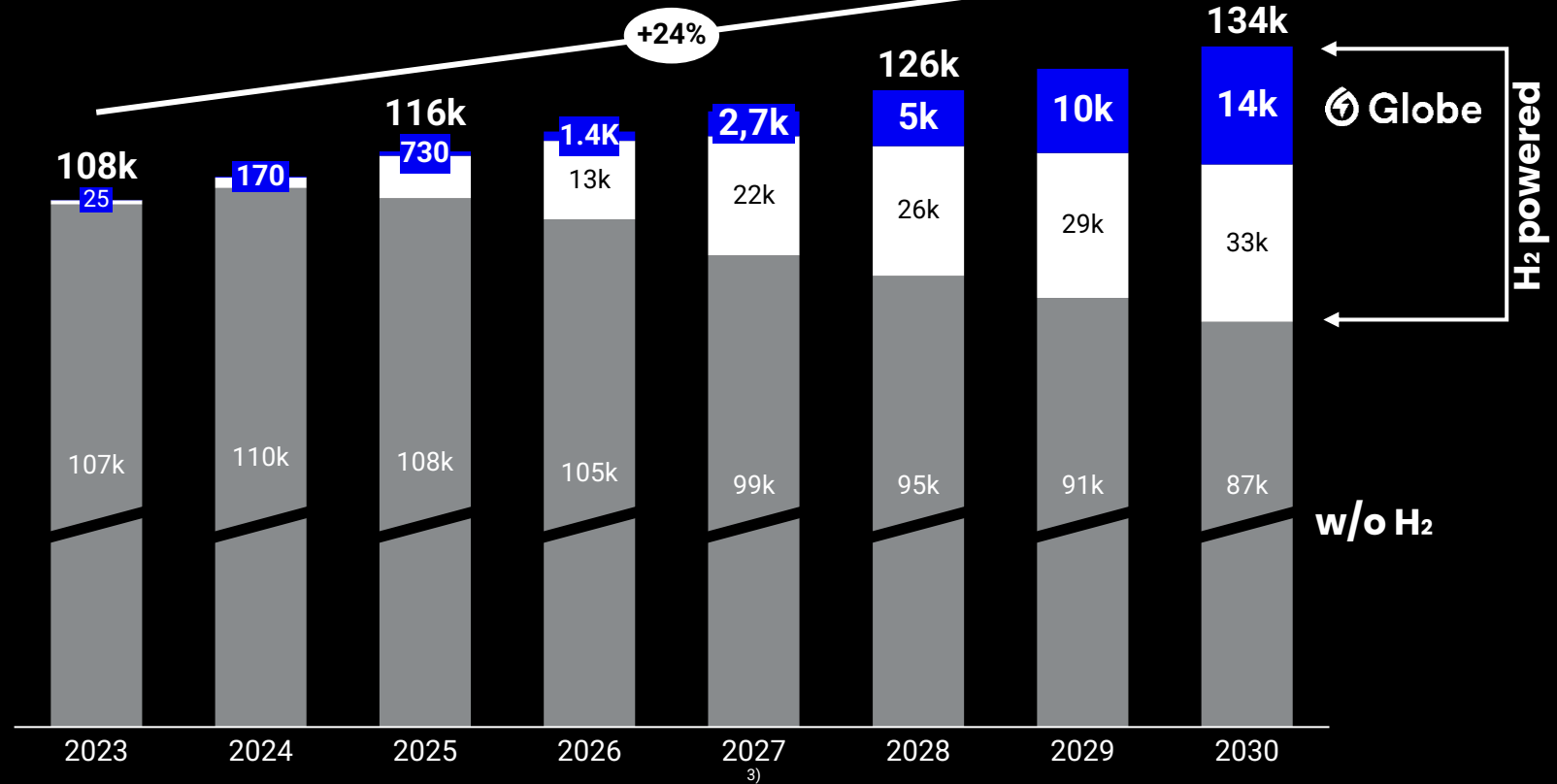


In 2030, every 3rd forklift in Europe will be powered by fuel cell systems



European market development ²⁾

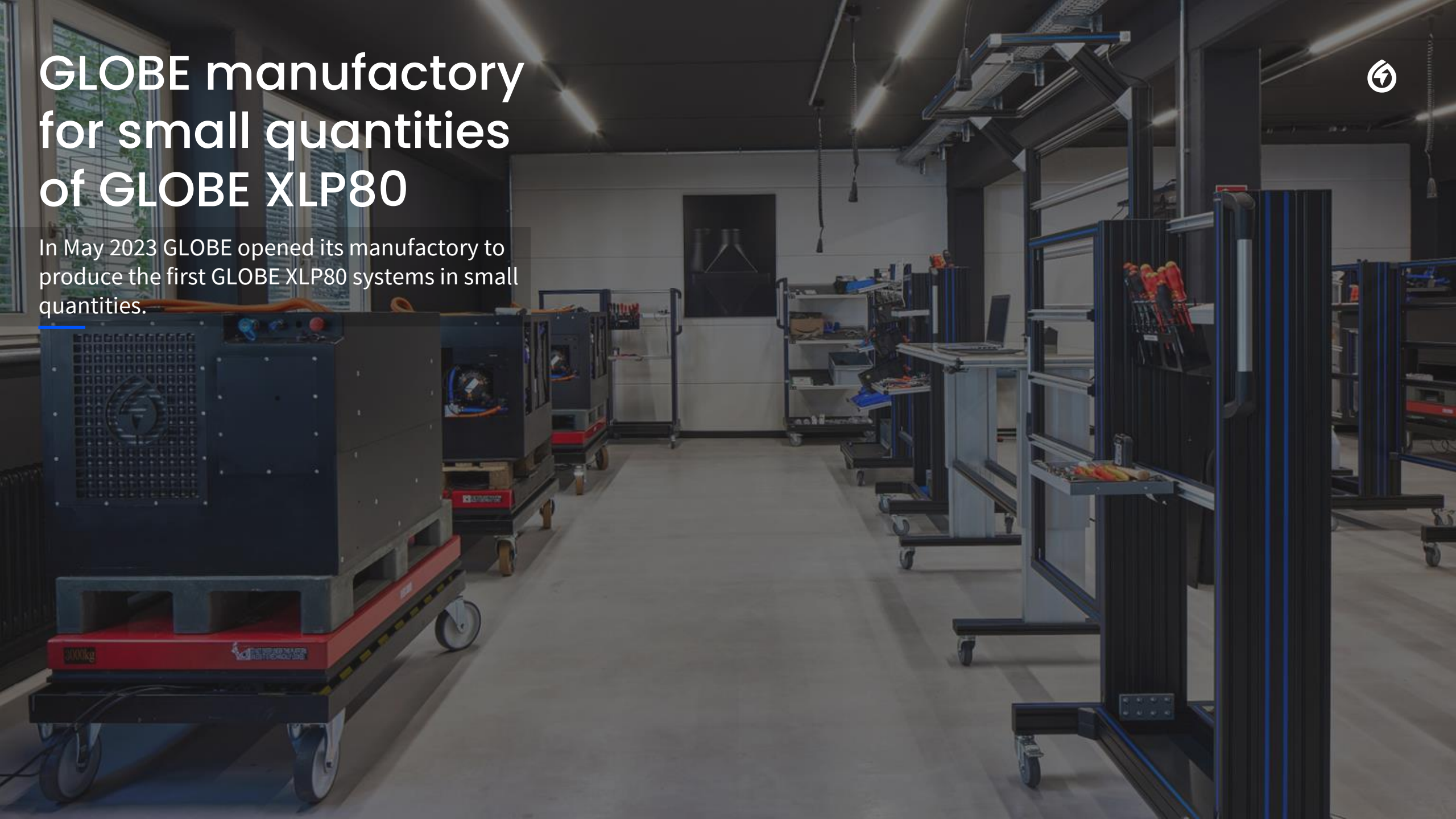
market potential
~1.5 bn. €



Source: 1) Statista study "Intralogistik Dossier" (2019)
 2) McKinsey Study Fuel Cell forklifts market perspective (12/2019)
 3) Intralogistic Tier-1 OEM; Sales Outlook H2 vehicles 2027 = 25k units

GLOBE manufactory for small quantities of GLOBE XLP80

In May 2023 GLOBE opened its manufactory to produce the first GLOBE XLP80 systems in small quantities.



First GLOBE XLP80 units have been sold

Our first customer is one of the world's largest manufacturer of forklifts and warehouse equipment and the market leader in Europe. GLOBE will start delivery of GLOBE XLP80 in autumn 2023.



II. GLOBE DataCore

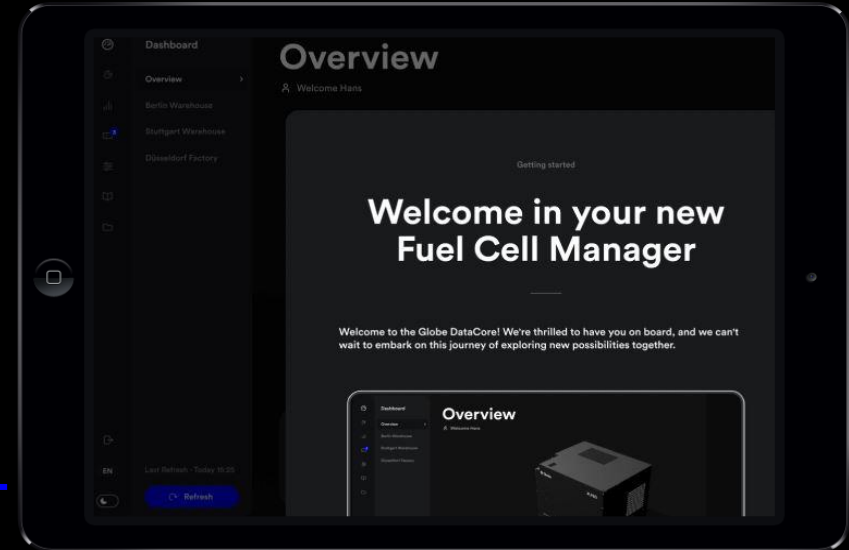
Smart digital technology will make
fuel cell applications more efficient and profitable

GLOBE Datacore® – Decarbonization needs fully digital approach



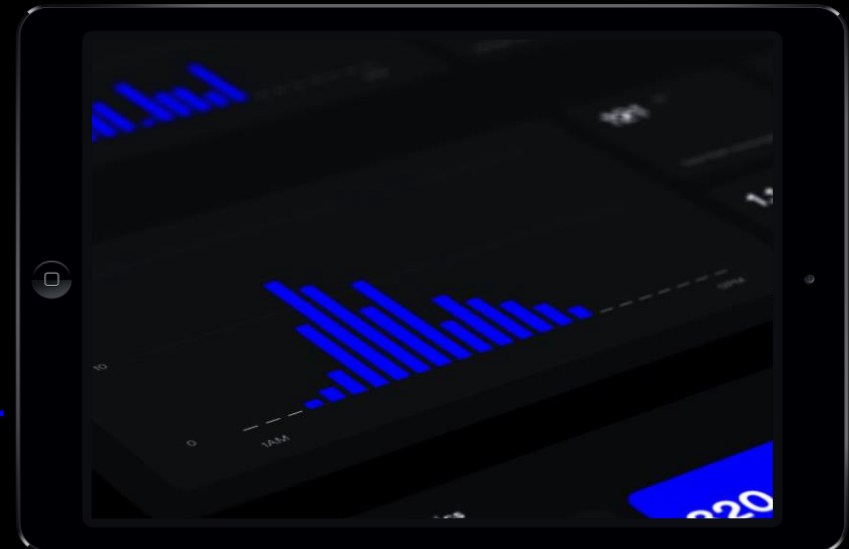
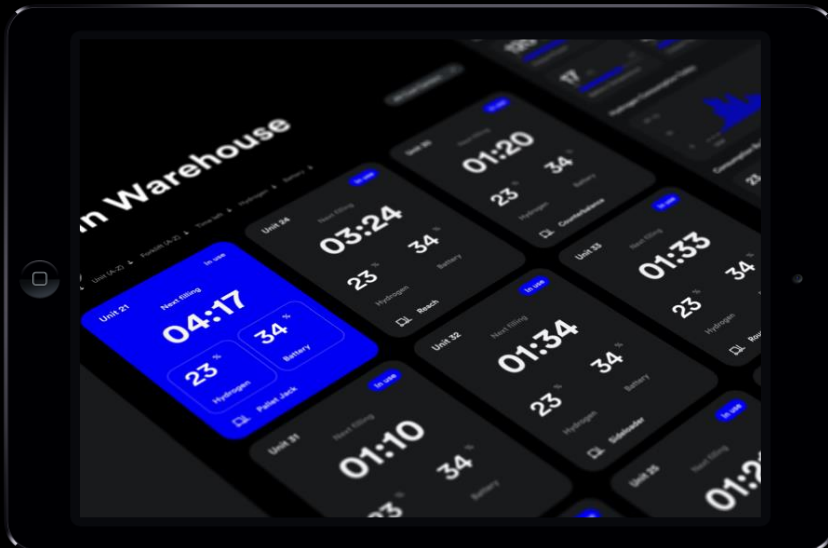
GLOBE fuel cell systems with large number of integrated sensors to send more than 1,000 signals per second into the cloud

Full access for GLOBE and our costumers via Fuel Cell Manager to manage entire fleets



By using artificial intelligence, we can thus identify predictive maintenance and calculate CO₂ certificates

Full real-time access to performance data, consumption and runtimes of GLOBE fuel cell systems



III. GLOBE as a service

Applying fuel cell technology know-how
with and for strategic industrial partners

We accompany industry partners into the world of fuel cell technology



Globe

What we bring

- fuel cell tech know-how
- fuel cell network
- fast processes
- quick ramp up of personnel
- entrepreneurial mindset



- new business
- re-engineer
- re-imaging

Corporate Partner

What they bring

- market know-how
- customer access
- brand & reputation
- financial resources
- strong organization

The Founder Team



Tech-minded entrepreneurs at heart.

- **Dr. Bernhard Wienk-Borgert**

Co-Founder & CTO

Bernhard holds a master in industrial engineering and a PhD in fuel cell research from RWTH Aachen, Germany.

He worked for many years in the Mercedes-Benz fuel cell R&D as well as in the cost engineering team where he got deep insights in fuel cell and battery costs.



- **Steffen Bäuerle**
Co-Founder & CEO

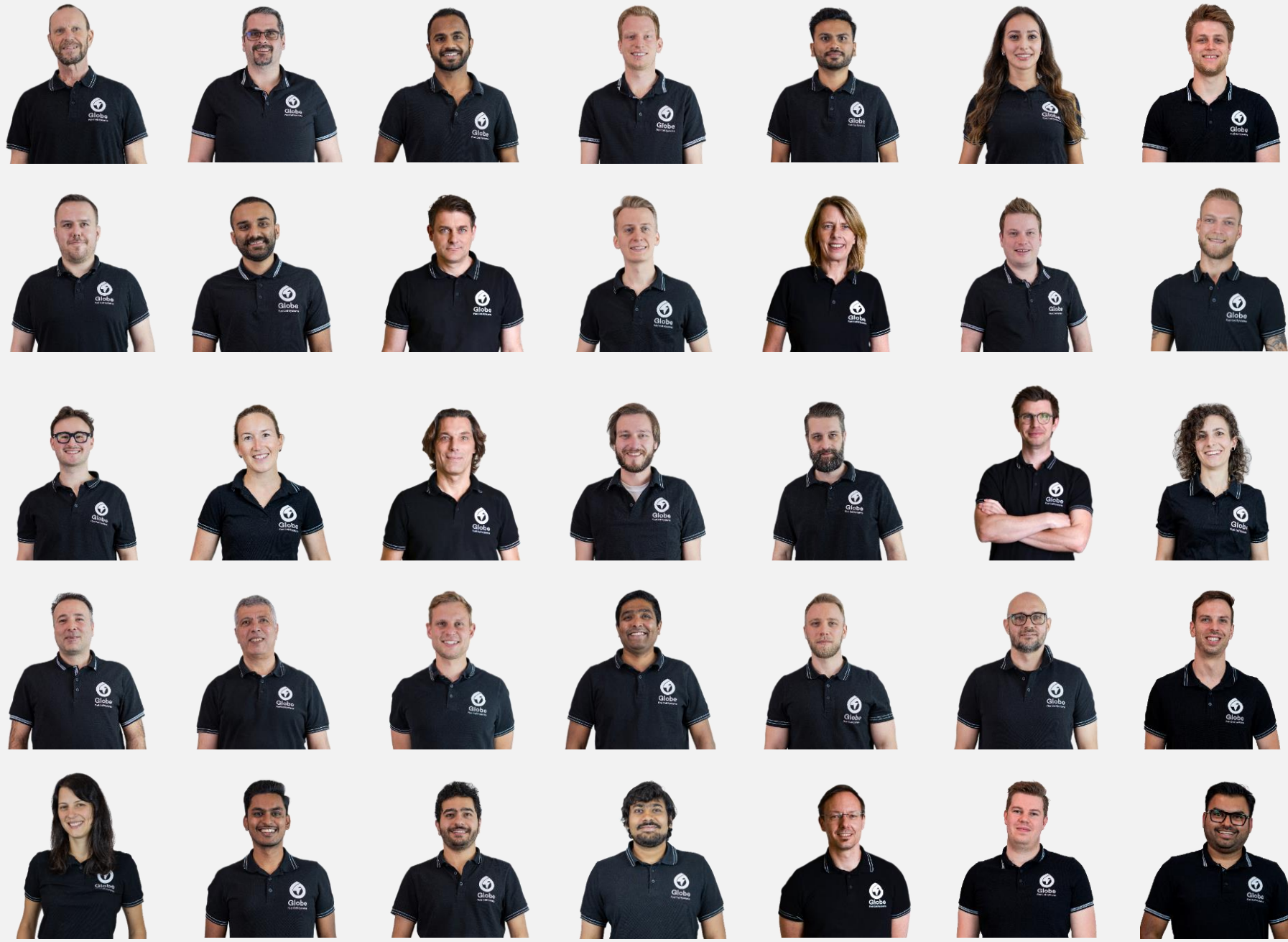
Steffen worked for 8 years as MD of Mercedes-Benz Tech Innovation. He is an expert in realizing sustainable growth over time.

Steffen was also project leader of a stationary Fuel Cell Backup Power project of Mercedes-Benz together with Rolls-Royce Power Systems.



Our GLOBE GreenTech Experts

The highly dedicated team combines skills and experience to empower the globe. We all share the vision reaching the net zero emission target with the help of fuel cell technology.





We are GLOBE Fuel Cell Systems

Let's rethink ^{our} ~~the~~ future together

