

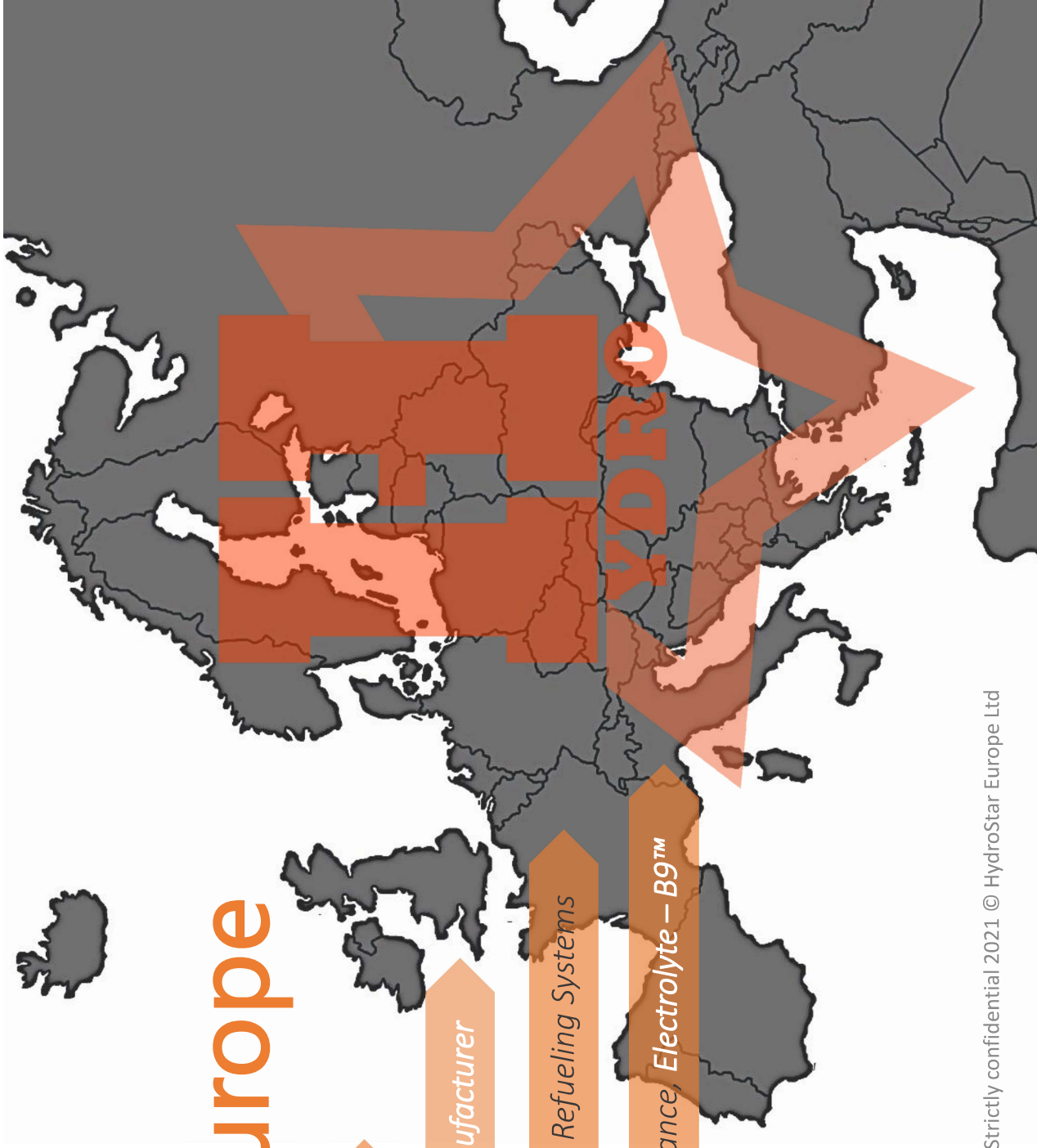
HydroStar Europe

Turnkey Hydrogen Solution Provider

Membraneless & PEM Electrolyzer Manufacturer

Green Hydrogen Production, Storage and Refueling Systems

Totally Green, Sustainable, Zero Maintenance, Electrolyte – B9™





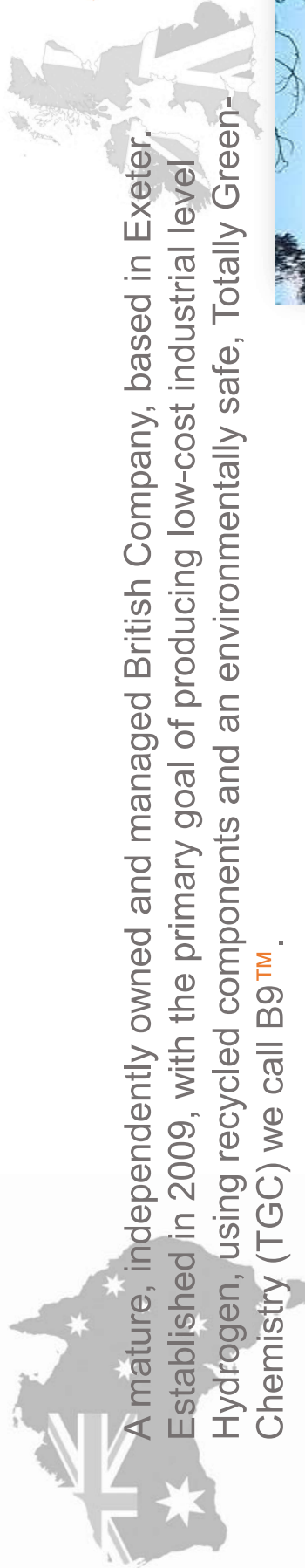
HydroStar Europe

An **Active European** Contender

Successfully **building relationships** Globally.

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Resources – A Robust Manufacturing Core

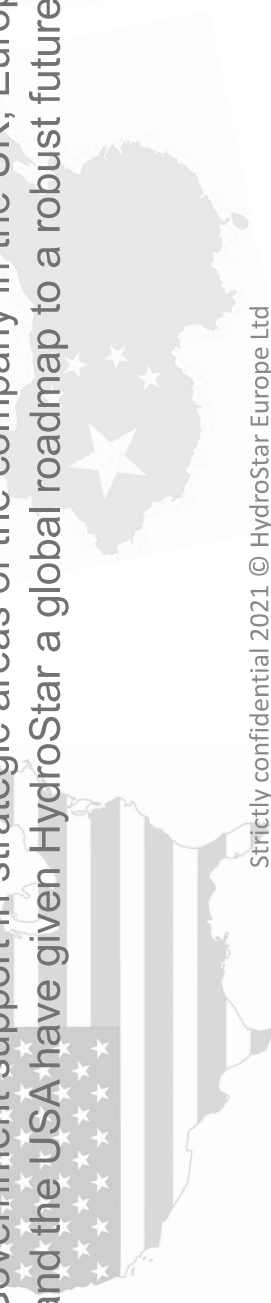


A mature, independently owned and managed British Company, based in Exeter. Established in 2009, with the primary goal of producing low-cost industrial level Hydrogen, using recycled components and an environmentally safe, Totally Green-Chemistry (TGC) we call B9™.

Manufacturing capabilities already established or under development in Australia - Canberra & Tasmania | UK – Exeter & Newcastle | USA – Portland | China – Beijing & WeiFang.



Backed by an Australian investment group – very high net worth, A Swiss investment group Planet Power, and in China assets in excess of \$14M, partnered with SinoHy Energy, allowing full R&D expansion and manufacture of commercial products in the form of 1MW to 100 MW expandable Energy Pods, HydroStar has grown into a strong market contender. Ongoing Government support in strategic areas of the company in the UK, Europe, Australia and the USA have given HydroStar a global roadmap to a robust future.





HydroStar Europe

A Global **Brand** Image

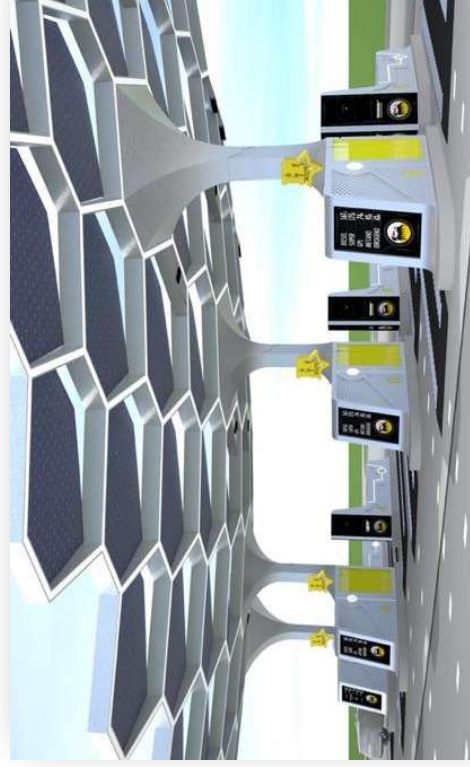
Meeting the needs of an expanding market with Future-Proof
Customer-Centric Designs.



World Class Designs



In a world where image is everything, HydroStar have combined technology with ‘an unparalleled look’ to create a Hydrogen Cell Fuelling Station to meet the needs of the **21st Century and Beyond.**



From truck to car Hydrogen refuelling stations using **Award Winning** designs.



HydroFill



Innovative **World Class Designers** work closely with clients to seamlessly integrate our technology into an affordable design, to create a unique image that suits their and their customer’s needs.



Next Generation HydroPod Designs

Designed by HydroStar Europe, manufactured, and currently under test in Canberra, Australia.



1 MW SOLAR-HYDROPOD



GREEN SUSTAINABILITY.

*Solar Panels are for the internal control system



50kW and 30kW HydroSol Units



HydroStar Europe

An Innovative **Product Range**

A Global Manufacturer and Supplier of **Green Hydrogen** Products.



HydroPod and Industrial Units



HG Series Electrolyzer Integrated Pod 5Nm³/h-1200Nm³/h



HG Industrial Series 5 to 60 MW

Onsite HydroFuel Filling Station

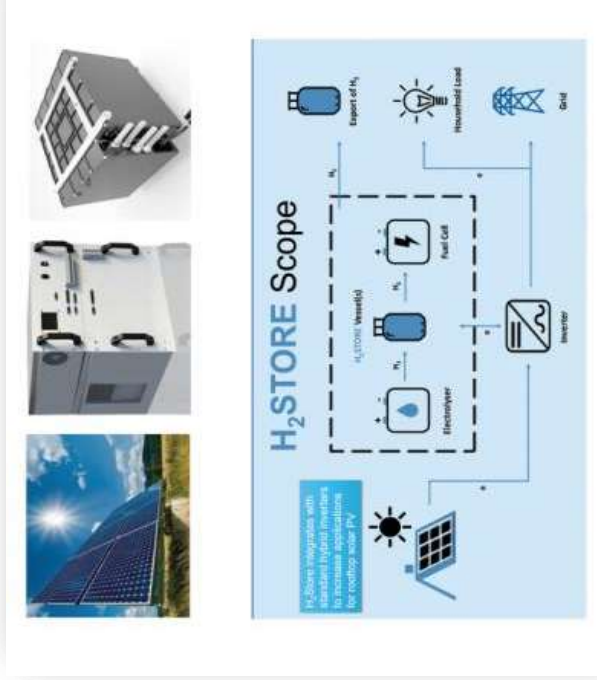


HydroStar Onsite PEM Units $5\text{Nm}^3/\text{h}$ - $1200\text{Nm}^3/\text{h}$



HydroFuel Filling Station -Electrolyzer/
Compression/Storage
MAX: 500Kg - 2000Kg/day

HydroStore – Energy Storage System



Solar Hydrogen Battery System | PV to Green H₂ to Electricity

Alkaline Water Electrolysis Hydrogen Production Equipment built under license, USA(2.8Nm³/h-100Nm³/h)



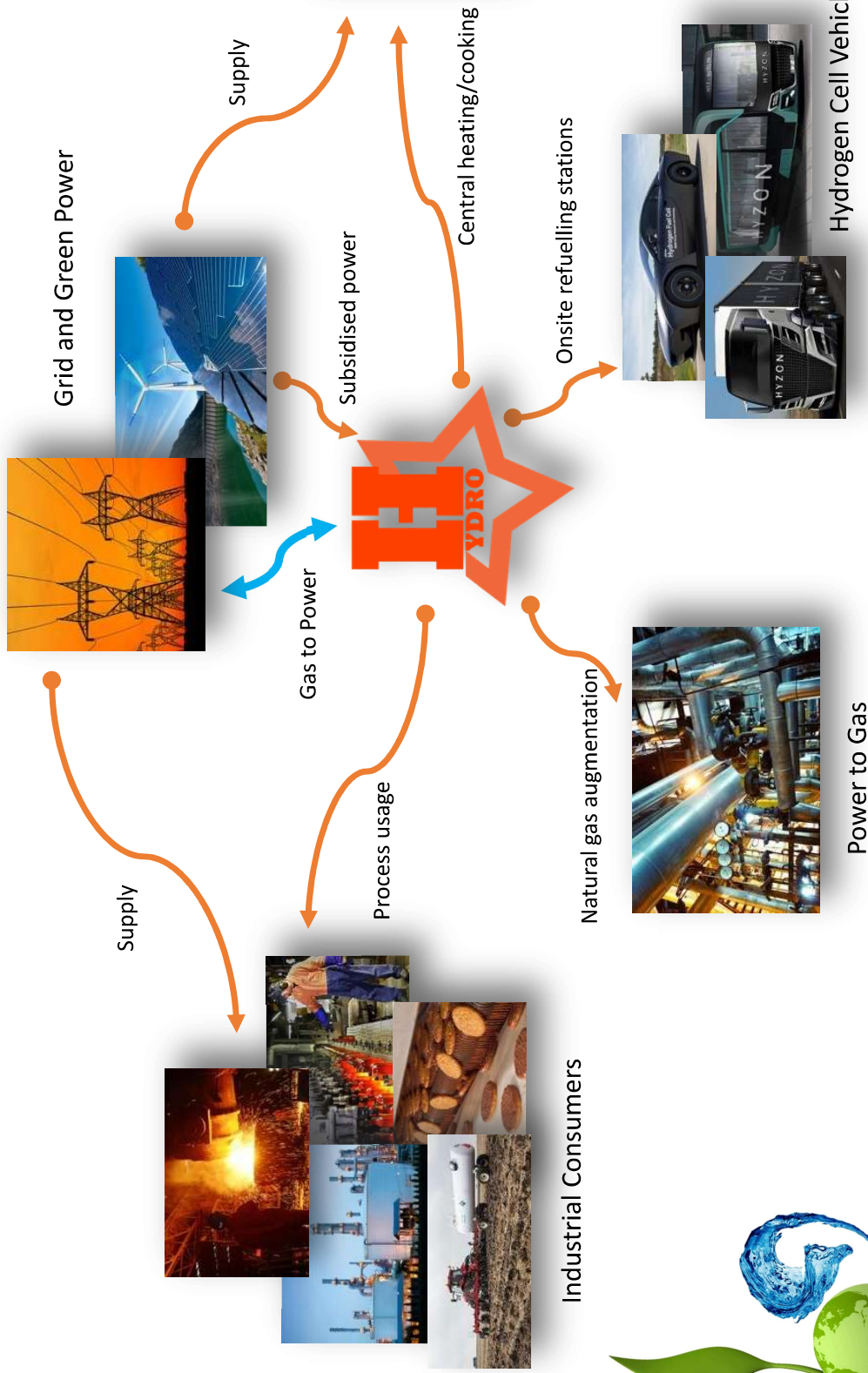
HydroStar Europe

Proven Through Project Success

Global success with a varied and inclusive portfolio of **International** Projects with an ability to fulfill all market sectors.



Market Fit – Supplying All Sectors



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Datong Project – 500Kg HydroFill Station



Name: Datong hydrogen refueling station 500kg/day on-site hydrogen production

Project location: Shanxi Datong

Project Background: This project is equipped with 1x500Nm³/h electrolyzed water hydrogen production system to meet the hydrogen demand for 50 hydrogen fuel cell buses, and is the first domestic hydrogen production and hydrogenation integrated station

Operation Time: May 2019

Technical data:

Hydrogen production capacity	500Nm ³ /h
Filling amount	500 kg/day
Working pressure of hydrogen generator	1.6Mpa(gage pressure)
Filling amount	45Mpa
Canning pressure	35Mpa



Anhui Project – Feeding the Grid



Name: PEM Hydrogen Storage and Supply Project

Project location: Lu'an City, Anhui Province

Project Background: This project is a demonstration project of comprehensive utilization of hydrogen production and energy storage of State Grid Group of China. The purpose of this project is to explore and verify the technical maturity and economic significance of hydrogen production from electrolytic water and hydrogen fuel cell for power generation and heating.

Operation Time: Delivery before the end of December 2020. Test run to be completed before the end of June 2021

Technical data:

Hydrogen production capacity	≥ 220nm ³ / h
Hydrogen Purity (volume ratio)	≥ 99.999%
Hydrogen Temperature	< 40 °C
Hydrogen Dew Point	≤ - 50 °C



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Shenzhen Project – Portable Drone Refueller



Name: 350kg smart high-pressure mobile hydrogen production, storage & refueling system

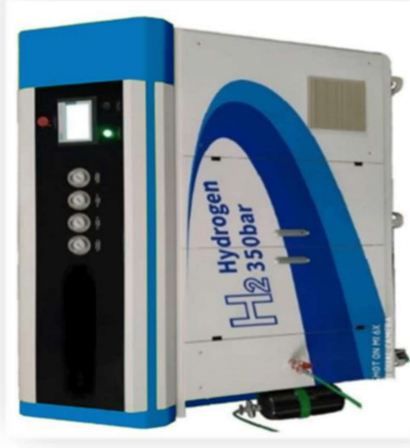
Project location: Shenzhen City, Guangdong Province

Project Background: Fill hydrogen to hydrogen fuel cell drones

Operation Time: August 2018

Technical data:

Rated hydrogen production	0.3Nm ³ /h
Oxygen output	0.15Nm ³ /h
Outlet hydrogen purity	≥99.999%
hydrogen humidity	≤-45°C
Outlet oxygen purity	≥99.9%
System working pressure	0-0.6Mpa
Maximum driving air pressure	0.8Mpa
Maximum output pressure	35Mpa
Maximum output flow	132nL/min
Rated DC power consumption	≤5.8KWh/Nm ³ H ₂
Hydrogen production method	PEM hydrogen production
Hydrogen storage method	high-pressure gaseous hydrogen storage
Product control method	based on PLC control



Karachi Project – Coal-fired Augmentation



Name: Pakistan Power Jabbi Shareef 2x660MW Coal-fired power generation project

Project location: Northwest of Karachi, Pakistan

Project Background: The planned capacity of the power plant is 2x660MW ultra-supercritical coal-fired air-cooled units

Operation Time: August 2019

Technical data:

Hydrogen production	10Nm ³ /h
Hydrogen purity (volume ratio%)	≥99.999%
Hydrogen humidity	dew point temperature ≤-60°C
Hydrogen outlet pressure:	≥3.0MPa, up to 3.5MPa
Outlet pressure of hydrogen storage tank	≥3.0MPa





HydroStar Europe

Service Now and Forever

A backbone of quality service throughout the whole **Life Cycle**.



Service Oriented – From R&D to Upgrade



Upgrade or Replacement

Automatic updates of software for control systems when needed and a lifetime warranty on all non-perishable parts provides clients with peace of mind.

Operation and Maintenance

Constant online monitoring and physical quarterly visits make for a secure maintenance plan, combined with a training and awareness program to give clients the skills to operate trouble free and efficiently.

Commissioning

Comprehensive planning, documenting, scheduling, testing, adjusting, verifying, and training providing an install that operates as a fully functional system per the Owner's Project Requirements.

R & D Design

An analysis of the client's requirement will mold the outcome of the final product. Reces to site will enable a detailed project management plan to be created.

Product Supply

Every detail from manufacturing source to final delivery point managed by HydroStar and their global partners. A process that has been executed numerous times without difficulty. Remote assembly is possible for extreme conditions.

Installation

With more than 10 years experience of build and installation, focusing on precision and following an agreed timeline we guarantee a smooth process from start to finish.





HydroStar Europe

Our Advantage – To Always Be Positive

Our Pioneering **Team** and Innovative **Technology** are our Greatest Assets, and both are here to fulfill our client's requirements.



Competitive Advantage

EXPERIENCED TEAM

A combined experience of over 400 years, with industry experts drawn from NASA (engineering), Rolls Royce (project management) and MIT (design) partnered with a world-class advisory board

PROVEN TECHNOLOGY

Both Standard and Membraneless electrolyzers with infinite Green Hydrogen production capacity with proven project visibility

GLOBAL MANUFACTURING

Manufacturing bases in operation, under construction, design and development in Australia, China, USA and the UK

INTERNATIONAL CLIENT BASE

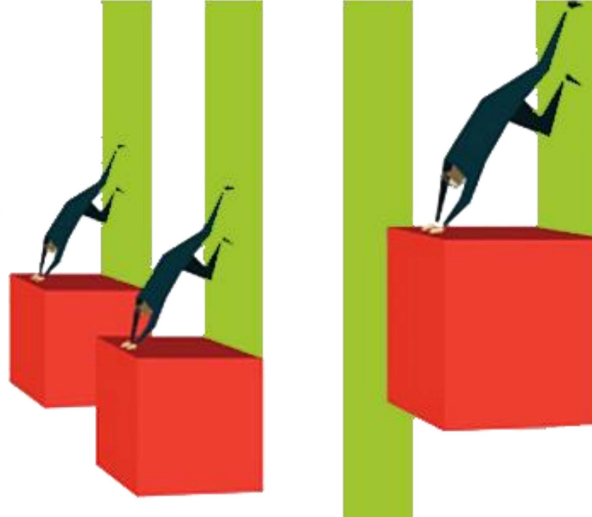
Government backed funding over 3 continents and OEM contracts have enabled HydroStar to build a network of International Clients

INDUSTRY PARTNERSHIPS

Working closely in partnership with H2X (Australia), Smart-H (UK), Syno-H (China), HydroStar Asia-Pacific (Australasia) and prodigious Universities globally

COMPLETE SERVICE PACKAGE

Full online diagnostic and International on-site services with a lifetime warranty on all parts





HydroStar Europe

OEM global partnerships

Design and manufacture of Hydrogen component parts, including Standard and Membraneless electrolyzers and complete Turnkey Solutions.

