

To clean and decarbonise the air

Dr Andrew Woods Chief Executive CATAGEN
Emerging Technologies for NET ZERO Economy

Renewable Energy

Could produce up to 60% reduction
in total emissions in the world

Act now #tocleananddecarbonisetheair

<https://www.bbc.co.uk/news/science-environment>

Find out more at www.catagen.com

A Net Zero Technologies Company

Overview

CATAGEN is a net zero technologies company based in Belfast.

- We provide emissions testing to global automotive manufacturers in the development of new vehicles.
- A spin out from Queen's University Belfast - our patented OMEGA technology replaces vehicle catalyst testing without consuming fossil fuels.
- One of the fastest growing companies in Northern Ireland in 2019 and 2020, placing 2nd and 4th in the Deloitte Technology Fast 50 in Ireland.
- TechNation's Net Zero cohort 2021.
- Powered 100% by renewable energy, a carbon negative company.





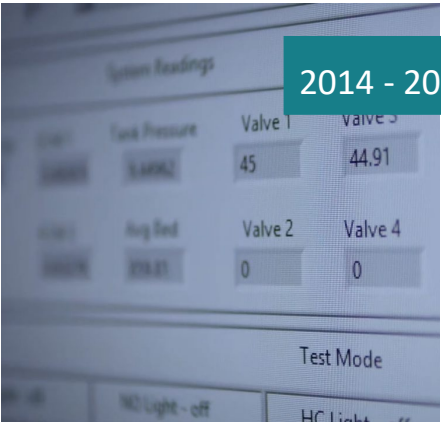
About us

TIMELINE



The journey begins

Successful spin out exit from Queen's University Belfast and first generation LabCat.



A strategic approach

Intensive research and development, resulting in the launch of a successful business model.



New & sustainable future

Customer acquisition of world leading vehicle OEMs. Approved by VCA.



Growth & scaling

Opening of 2nd facility – the Net Zero Technology Centre with world leading capability.

About us

SUSTAINABILITY



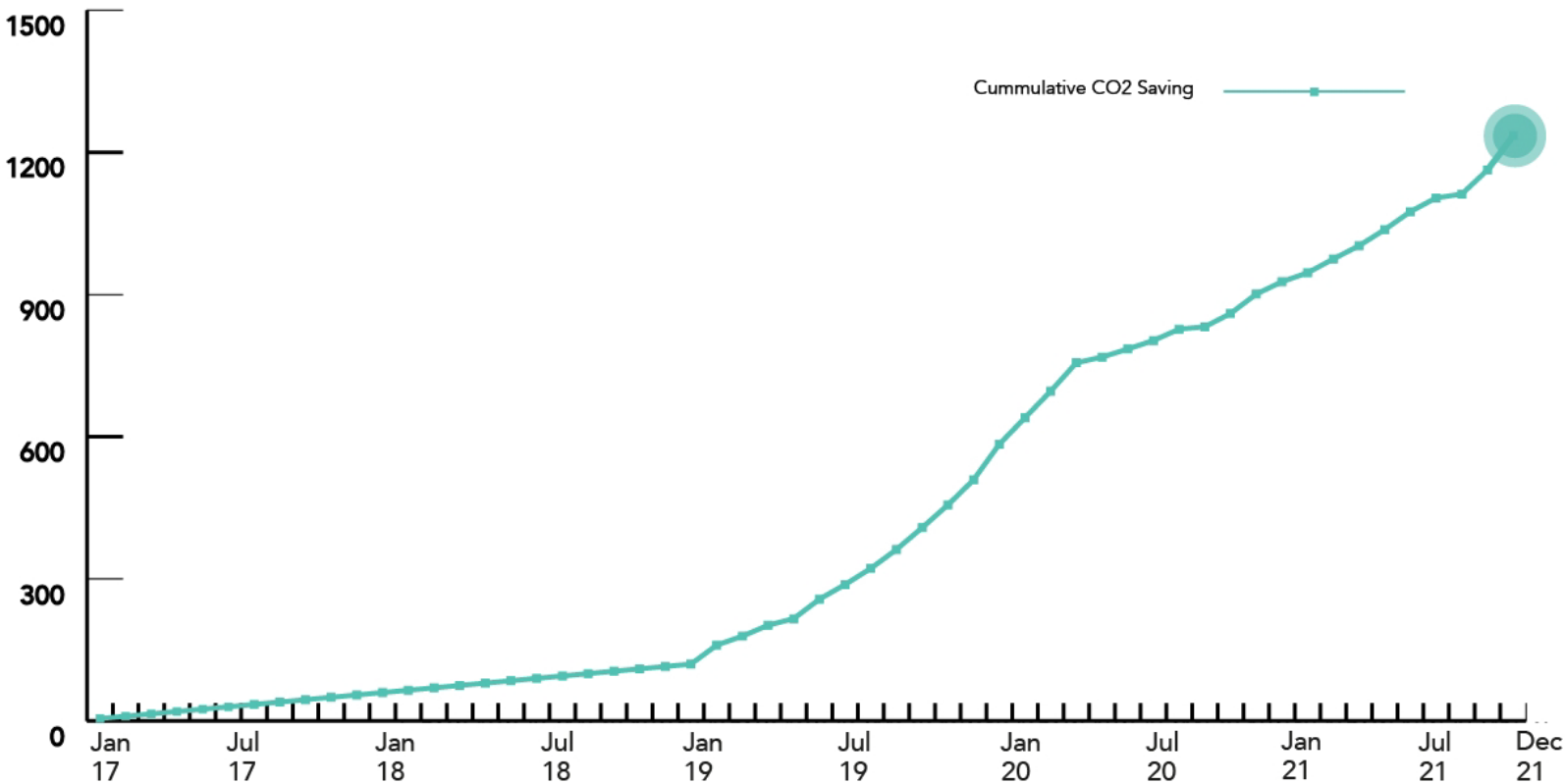
Planting >500 trees annually with SQSTR



Powered by 100% renewable energy

To clean and decarbonise the air

1,235 Tonnes of CO₂ displaced by 2021



Emissions testing

PATENTED OMEGA TECHNOLOGY

**THERE
ARE
NO
ENGINES
HERE**

OMEGA:04

—

PURE MEASUREMENT
OF PERFORMANCE

PATENTED TECHNOLOGY
PCT/GB2009 051698

Emissions testing

BENEFITS

4-6 Weeks

Planned availability

Time saving vs internal solution.



Sub

2%

Test to test variability

Industry leading levels of reproducibility



98%

CO₂ emissions saving

98% CO₂ displacement.



Up to

40%

Cost savings

Energy efficiency (fuel)
and right first time



We have also supported OEMs with type approval for the US (EPA & CARB), Indian and Chinese regulators.



Accredited by



CERTIFICATE No. GB21040018

IDIADA Homologation Technical Service CERTIFIES that :

Catagen Limited

5 Elmbank, Channel Commercial Park,
Titanic Quarter, Belfast, BT3 9DT

is able to perform in their facilities the tests regarding
Exhaust and Aftertreatment Hardware Accelerated Ageing
for projects of IDIADA according to the following directives and regulations:

Regulation (EC) 715/2007

Regulation (UN) 83 Type V, Catalyst Aging

In accordance with the requirements of IDIADA's qualification procedure IT-HO-90L.
This certificate will be valid until 2 years after the date stated below.


James Eales
 Projects Lead,
 IDIADA UK


Richard Bailey
 Homologation Manager,
 IDIADA UK



Warwick, UK, 5th February 2021

Validated this report with the security code: 7566472 - at: <http://management.idiada.com/home-ve>

GB21040018

To clean and decarbonise the air



**APPROVED BY THE
VEHICLE CERTIFICATION AGENCY**

This is to certify that the testing facilities of

Catagen
 5 ELMBANK CHANNEL COMMERCIAL PARK, QUEEN'S ROAD, TITANIC QUARTER,
 BELFAST, BT3 9DT, NORTHERN IRELAND

*have been approved by VCA
for the purposes of testing to:*

**'Accelerated Ageing of Exhaust Gas After treatment Hardware
as per the World Harmonised Light Duty Procedure
Commission Regulation (EU) No 715/2007 and 692/2008 as last amended by
2018/1832**

Signature: 

D. LAWLOR
 Chief Technical and Statutory Operations Officer

By authority of
VCA Chief Executive

Date of approval: 16 JULY 2019

**VCA
The United Kingdom Vehicle Approval Authority**

This certificate is issued pursuant on the conditions shown below

Registration Number: FAB071

This certificate is issued by and is the property of the Vehicle Certification Agency,
1 The Eastgate Office Centre, Eastgate Road, Bristol, United Kingdom



Auto



Motorcycle



Heavy Duty



Fuels & Lubricants



Marine



Recreational vehicles



Non-road



Gensets

Green Hydrogen and E-Fuels Technologies

Net Zero Technologies

CORE COMPETENCIES

CATAGEN has a vantage point for NET ZERO Markets and Technologies

- Emissions Data and Simulation
- Energy Efficient Chemical Reactor Technology
- IP & Knowledge



Kwasi Kwarteng

Secretary of State for Business, Energy and Industrial Strategy
2mo

This week in Northern Ireland I met some incredible scientists, engineers and entrepreneurs developing the technology we need to meet the UK's climate targets.

CATAGEN LIMITED is providing best-in-class emissions data to the automotive industry to help design and develop cleaner vehicles.

I had the honour of cutting the ribbon on their new Net Zero Technologies Centre in Belfast, which will be crucial for developing the tech we need to decarbonise the British economy.

It is judged that development of hydrogen-fuelled transport could be integral to achieving **full transport decarbonisation**.

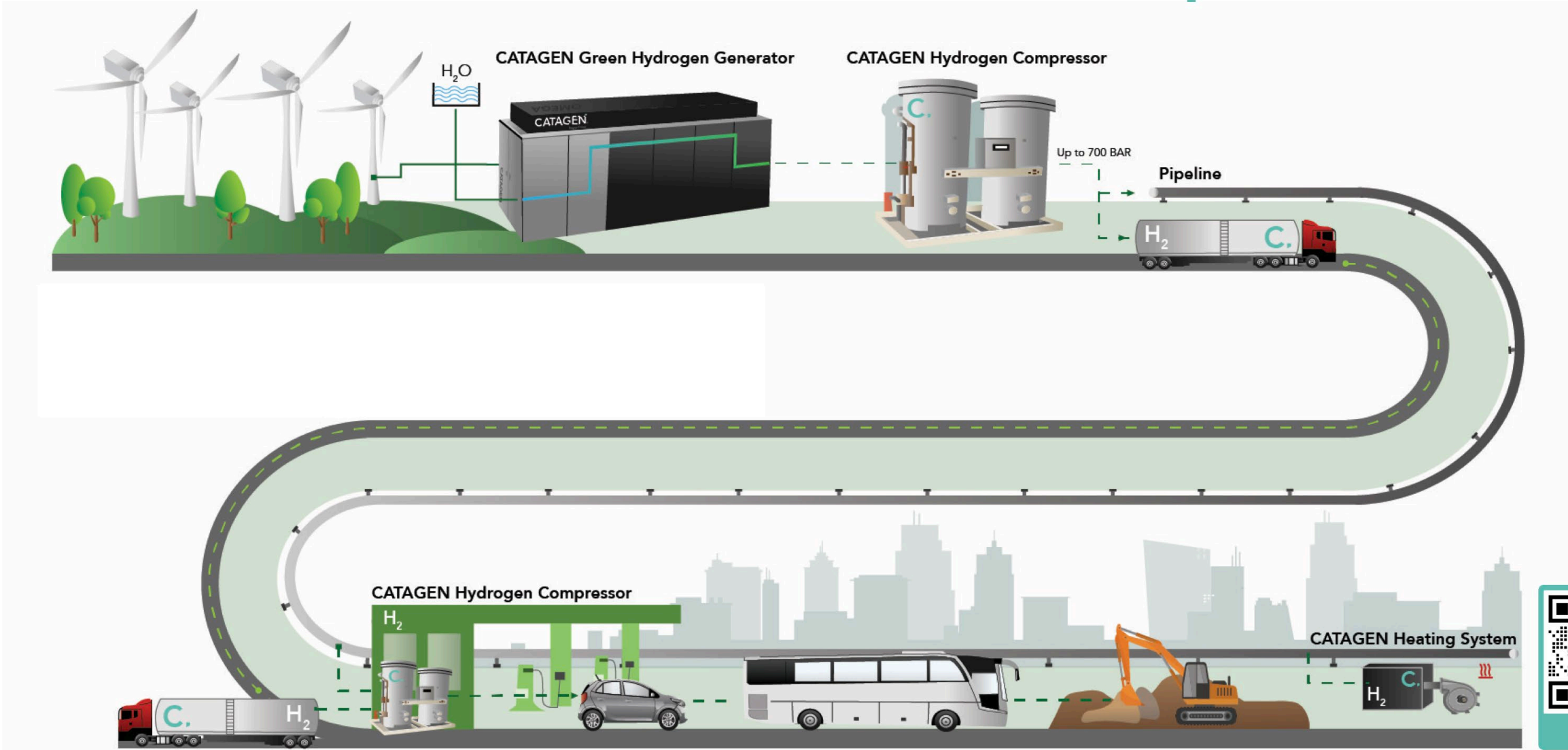
Part of the Ten Point Plan for a Green Industrial Revolution: **Point 2:**

Driving the growth of low carbon hydrogen

Point 4: Accelerating the shift to zero emission vehicles

Point 10: Green finance and innovation





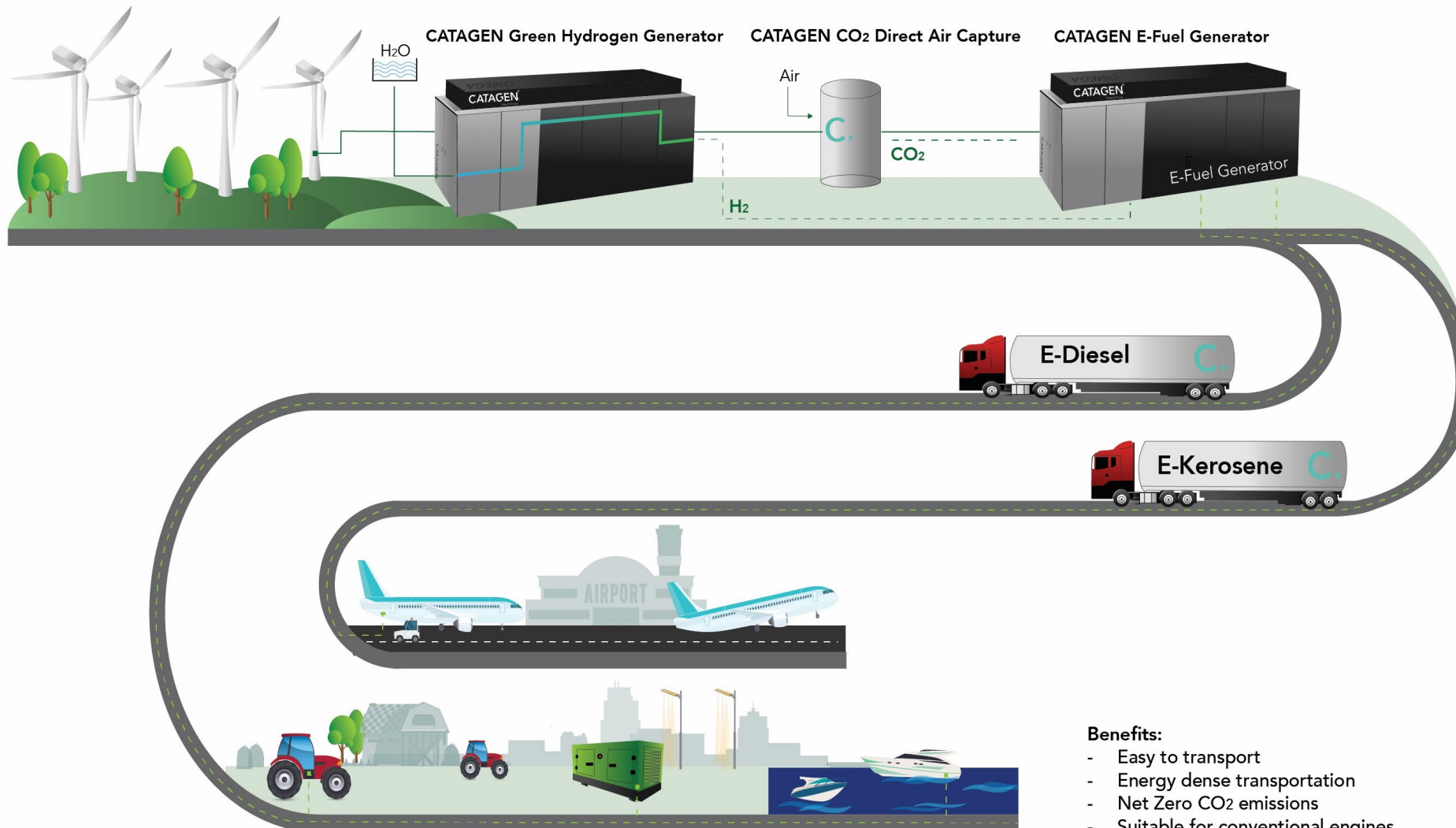
E-Fuels Hydrogen Carrier for heavy duty diesel, aviation
and marine

Part of the Ten Point Plan for a Green Industrial Revolution:

Point 6: Jet zero and green ships

Point 10: Green finance and innovation





Benefits:

- Easy to transport
- Energy dense transportation
- Net Zero CO₂ emissions
- Suitable for conventional engines

"Climate change is a grave and mounting threat to our wellbeing and a healthy planet. Our actions today will shape how people adapt and nature responds to increasing climate risks."

Hoesung Lee, Chair of the IPCC

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www.catagen.com

Follow Us on LinkedIn andrew@catagen.com



SCAN ME