

Technology  
Driving  
Transition

OGTC

A man with a beard and glasses is wearing augmented reality (AR) glasses. He is reaching out with his right hand towards a large, 3D, metallic-looking starburst graphic that is glowing with a bright cyan light. The background is a solid cyan color with a subtle grid pattern.

# Technology Driving Transition

Annual Review  
April 2020 - March 2021

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## 01 A year in review

# A clear focus on technology development to enable an affordable net zero North Sea.

When I joined the OGTC Board in June 2020, the COVID-19 pandemic had already taken a firm grip on the UK and, as we have all experienced, it presented extraordinary challenges to our society, economy and lives. This has been a difficult year, but amid the headwinds, OGTC has performed outstandingly, led by its CEO Colette Cohen. In November 2020, OGTC announced a change to its strategy and purpose, with a focus on technological development and deployment to enable an affordable net zero North Sea.

**“Disrupt or be disrupted. Those are the options open to the energy sector in the field of low-carbon technology development.”**

I am a great believer in start-up companies and disruptive technology to deliver significant, impactful change. OGTC and its TechX accelerator are incredibly important in this regard, attracting some of the best technology start-up talents to the North East of Scotland. Our focus is to ensure the UK remains a world leader in the establishment and export of net zero energy solutions.

OGTC fully embraced digital delivery over the last 12 months, continuing to form key industry alliances, and working with its members, innovators and academic partners. At the same time, inspiring the next generation through its STEM activities with delivery of Inspire20, an educational webinar series, and virtual intern programmes.

I would like to thank my fellow Board members for their support, enthusiasm and commitment throughout the period. We look forward to another exciting year and making significant strides in helping the UK achieve its net zero targets.



**Martin Gilbert**  
Chairman  
OGTC



# Creating a new reimagined energy sector, innovation led and fit for the 21<sup>st</sup> Century.



Well, no one expected 2020, but leading OGTC through 2020 has been singularly rewarding. This was a year about people, about resilience and about priorities. OGTC adjusted to home working without a hitch, and continued to support our members, technology developers and staff in a positive and impactful ways.

But we also found the time, enthusiasm and commitment to help each other with home schooling, making and delivering facemasks and creating activities to ensure we stayed fit and sane. I am incredibly proud of how the team showed up and thrived in extremely difficult circumstances.

**“The coronavirus pandemic, together with a global collapse in oil price, has seen the oil and gas sector experience hugely turbulent times this past year.”**

2020 also gave us the opportunity to look hard at our priorities – to ask ourselves if we were doing everything we could to support our industry and develop the technology that really would make a difference. We have always embraced disruption and we believe in our industry and a better future.

So, it is not surprising that 2020 also saw OGTC pivot to explicitly work to accelerate the transition to an affordable net zero energy future through innovation and the deployment of disruptive technology.

The industry had already clearly set out their blueprint for net zero vision for 2050, so we reshaped our organisation, moving from seven solution centres to just one, a Net Zero Solution Centre with three core programmes: Emissions Reduction, Energy System Integration and Offshore Energy 4.0.

**“Even in a year as challenging as 2020, OGTC co-invested nearly £15M in new technology projects in areas as diverse as remote methane measurement and marine transport through to hydrogen and offshore inspection robots.”**

With the integration of The Oil & Gas Innovation Centre (OGIC), we have deepened our research programme, building new relationships across academia and we’re working cross sector to build the alliances with industry, government and academia to help deliver the technology needed to accelerate the energy transition.

Publishing our ‘Closing the Gap’ report in October 2020, provided the energy sector with a well-researched document that identifies where innovation is required to help us deliver an affordable net zero North Sea. While our ‘Reimagining a Net Zero North Sea’ report developed in partnership with the Offshore Renewable Energy Catapult (ORE Catapult) outlined three potential scenarios to deliver a reimagined, affordable net zero North Sea building on our strong energy foundations.

If there is opportunity in adversity, it comes from being forced to think differently about how we emerge from a crisis – re-shaping our national energy needs and building an economy based on a net zero ethos. We can create jobs, diversify and build a new future, one I hope is also more diverse in gender balance and attitude.

2020 also saw a new Chair join us at OGTC. I am confident that with Martin and the Board’s support, our industry, cross sector, local and government partners, we can move the needle and accelerate progress towards an affordable net zero North Sea.



**Colette Cohen OBE**  
CEO, OGTC

## Our purpose is to develop and deploy technology to accelerate the transition to an affordable net zero North Sea.

In October 2020, we pivoted to align with industry's commitment to a net zero North Sea by 2050. At the heart of our transformation is a technology vision, which reimagines the North Sea.

A vision that aims to eliminate emissions from existing facilities, unlocks the full potential of an integrated energy system, and propels the energy industry towards a digital future.

As part of our new strategy, we reconfigured our business, moving from seven solution centres, to one Net Zero Solution Centre, focused on the delivery of technologies in three key areas:

**Emissions Reduction**

**Energy System Integration**

**Offshore Energy 4.0**

Resolute in our mission to inspire and innovate in an inclusive environment, we continue to grow new companies through TechX; progress partnerships with Robert Gordon University and University of Aberdeen to deliver excellence in R&D in subsea and decommissioning; and expand our cross sector and cross-academia network to ensure we work in the right technology partnerships to transform the North Sea.

Supporting the diversification of our supply chain to position them as technology leaders.

### Emissions Reduction

Develop technology to reduce UKCS operational emissions to net zero

Field development

Production, operations and logistics

Late life and decommissioning

### Energy System Integration

Integrate infrastructure to create a net zero offshore energy system

Renewables and energy storage

Hydrogen and other clean fuels

Carbon capture, utilisation and storage

### Offshore Energy 4.0

Develop remotely controlled operations empowered by data, automation and robotics

Smart assets

Field automation and remote operations

Robotics and autonomous systems

# Since inception

**£163M**  
co-invested with industry

**268**  
projects approved

**£100M**  
leveraged from industry partners

**£10-15bn**  
GVA potential

**64**  
field trials completed

**23**  
commercialised technologies

**1,280**  
technologies screened

# During the reporting period of 1 April 2020 to 31 March 2021

**£15M**  
co-invested with industry

**39**  
projects approved

**215**  
technologies screened

**5,967**  
visitors and virtual attendees

**3**  
industry reports

**96**  
events

**49**  
field trials planned or underway

# Technologies developed by OGTC and partners are reducing emissions, lowering costs and enabling safer working.

Today, innovations in machine learning, predictive maintenance, robotic remote asset monitoring, autonomous vessels and wearable technology are being rapidly adopted to improve efficiency and increase productivity.

“Industry-wide, we need to accelerate our efforts, moving faster to adopt breakthrough technologies that will really move the dial to create a net zero North Sea.”

**Myrtle Dawes**  
Solution Centre Director  
OGTC

# Emission Reduction

Developing technology to reduce UKCS operations emissions to net zero

## GDi

A digital twin tool that visualises the overall health of an asset, allowing effective management of inspection, repair and maintenance work, improved critical decision making and safety. It has the potential to reduce the cost of asset integrity programmes by up to £2 million per platform.

**> £2M**

reduction in cost of asset integrity programmes



### TracTec Tool

Novel caisson and conductor inspection technology that can be launched from the platform, removing the need for divers, ROVs and support vessels - up to 86% cheaper than traditional methods. The product has been successfully commercialised, with more than 30 deployments in the UKCS.

**> 86%**  
cheaper than traditional methods



### Infinity Actuator Gauntlet

'Bullet-proof bag' that provides a low-cost way to render a degraded actuator safe and in operation until it is replaced or decommissioned.

With 150,000 actuators in the UKCS, this technology could save £2 million per platform and £600 million across the North Sea.

The product has been successfully commercialised, with six offshore operators having deployed the system 52 times.

**£600M**  
saving across UKCS





# Energy System Integration

Integrating infrastructure to create a net zero offshore energy system

## Flylogix

Methane measurement and quantification technology, integrated within an autonomous unmanned aerial vehicle (UAV), which allows operators to accurately measure and report on emissions, saving £35,000 per asset.

**£35K**  
saving per asset

## CorrosionRADAR

Remote monitoring that reduces the carbon footprint of the UKCS by eliminating fugitive emissions and reducing unplanned shutdowns. Increased safety and reduced inspection costs could save 50%, equating to around £130 million annual savings for the UKCS.

**£130M**  
annual savings for the UKCS

## IMRANDD Data Analytics

Inspection data analytics solution with the potential to reduce manual handling by 95% and overall asset inspection by 20-35%. The product has been successfully commercialised, with eight companies having deployed the solution 12 times.

**95%**  
reduction in manual handling

## AXIS Tension Leg Buoy

OGTC is working in partnership with a major operator and an offshore wind farm developer to lay the foundations for the first offshore wind to oil & gas demonstration project on the UKCS. The Axis Tension Leg Buoy offers a step-change cost reduction and has the potential to create circa 6,000 fabrication jobs in the UK, as well as many hundreds more installation and operational maintenance posts.

**6,000**  
potential fabrication jobs in the UK

## Mocean Energy

The Renewables for Subsea Power (RSP) project is a collaborative technology development venture between Mocean Energy, EC-OG, Modus, and Chrysoar (Harbour Energy). This involves building and commissioning an offshore renewable wave energy device that charges subsea batteries to supply clean power and communications to subsea equipment. Phase one of the project, the Front End Engineering Design (FEED), was completed in 2020. Phase two, which brought on Baker Hughes as an additional project partner, was approved at the end of 2020 and is aiming to run a dry commissioning test on the RSP system by the end of 2021.

**2021**  
dry commissioning test goal

## Scotland's Net Zero Roadmap (SNZR)

SNZR is an Innovate UK funded project led by North East Carbon Capture, Usage & Storage Alliance (NECCUS) and supported by both industrial and academic partners. The project is delivering a technology roadmap that sets out how Scottish industry can move towards net zero by 2045, based on exploring several decarbonisation scenarios. To date, OGTC has conducted a technology fore sighting exercise ranking the most suitable industrial decarbonisation technologies relevant for the Scottish industrial clusters. Current work encompasses developing a database of deployment-ready and disruptive technologies, which include hydrogen, CCUS, electrification and fuel switching; as well as recommendations to drive technology adoption on a site-by-site basis.

**2045**  
net zero technology roadmap



# Offshore Energy 4.0

Developing remotely controlled operations empowered by data, automation and robotics

## Autonomous Robotics

A fully autonomous, self-propelled node that has the potential to reduce the cost of acquiring ocean bottom seismic, saving £7.5 million for one block alone, a rate comparable to towed streamer acquisition – optimising development and reducing emissions.

**£7.5M**

saving for one UKCS block alone



## Envio

Digital inventory management system for remote locations which optimises equipment utilisation and prevents the use of uncertified equipment. By increasing equipment visibility, one deployment can save up to £315,000.

**£315k**

saving and avoids repeat jobs

## PROPHES

PROPHES is a machine learning analytics platform, designed to improve asset reliability, and extend the productive life of the UKCS. The software uses a blend of telematics data and operational context from data such as production loss records and maintenance work orders to quickly and simply analyse degradation, flag potential failures, label problems for future analysis and link offshore investigation with onshore surveillance to minimise unnecessary site visits.

**1%**

reduction in plant losses across the UKCS would save at least £35 million per year

## TotalEnergies E&P and Taurob

Autonomous robots that lessen human contact for hazardous operations, Taurob is the world's first autonomous robot for visual inspection offshore. It can read dials, gauges and valve positions while navigating pathways and stairs – transforming offshore inspection, improving safety and reducing cost by £127 million annually.

With our continued support, two autonomous robots have been trialed at TotalEnergies' Shetland Gas Plant for more than three months. The robots collected valuable data which was then directly uploaded to TotalEnergies' digital assets. Wide-scale adoption of autonomous robotic inspection has the potential to transform the offshore sector.

**£127M**

annual inspection savings across UKCS



"Big, bold, radical technology shifts can have a major impact on our ability to meet the UK's climate goals. OGTC is working with industry, government and academia to bring affordable, high impact, net zero technologies to market that will accelerate the decarbonisation of the energy sector, which will be essential as we shift to a low carbon economy."

Luca Corradi  
Innovation Network Director  
OGTC

## Our TechX Pioneer programme has gone from strength to strength. Cohort three attracted more than 150 applications, from 37 countries.

Now in its third year, and embracing an online format due to the COVID-19 pandemic, the TechX Pioneer application process culminated in 12 Pioneer companies being selected – eight via the global application round and four through the TechX Ventures programme, a partnership with Deep Science Ventures (DSV).

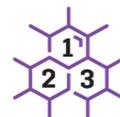
The programme further supported our drive towards net zero, with 50% of the cohort made up of clean energy companies, including novel gas detection and quantification technology that reduces fugitive emissions.

This year, Equinor joined bp and KPMG as strategic industry partners – providing access to technology specialists, financial experts, test facilities and opportunities to showcase the technologies globally.

This year's cohort showed true grit and resilience, taking their start-ups from ideation to creation:



**Five new offices set up**



**Three new laboratories established**



**Over 180 customer interviews completed**



**17 offers of field trials**



**10 successful pivots in company direction**



**Over £2 million of additional investment secured**

### Boosting diversity with the Ideas Club

With the aim of inspiring and supporting more diverse, inclusive, high potential clean energy start-up teams in the UK energy sector, we launched a new initiative to build a diverse, female focused technology community.

Ideas Club kicked off in November 2020 with a series of online events. It aims to build a wide network of female founders and leaders; a community dedicated to encouraging diversity in clean energy start-ups. This is a unique initiative focused on technology innovation and gender balance within the UK energy sector. Following a strong start, our ambition is to develop start-ups which can be strong candidates for the TechX clean energy accelerator.

**“We must push further and faster – 79% of UK energy companies with no female executives in 2020 is unacceptable. We need more female led start-ups.”**

**Colette Cohen**  
CEO  
OGTC

### 12 Pioneers set to lead the way:

#### Actuation Lab:

A spin-out from the University of Bristol and founded in 2018, Actuation Lab is developing a novel zero-maintenance actuator for valves and HVAC systems in the energy and process industries.

#### Carnot:

Co-founded in 2019, Carnot is developing game-changing power units with twice the efficiency, half the fuel consumption and potentially zero CO2 emissions versus current engines.

#### Creid 7:

Development of non-intrusive sensor technology that can accurately monitor material condition to calculate fatigue life of wellheads, conductors and pipelines.

#### Mellizyme:

Founded in 2019, Mellizyme has developed a proprietary enzyme to recycle waste plastics into added-value chemicals, enabling a circular economy for the material.

#### Mission Zero:

Mission Zero is developing novel, bio-inspired, and low energy direct air carbon capture technology that is cost competitive at all scales and integrates into the CO2 value chain.

#### Nudge:

A digital platform to connect agile companies with a flexible talent workforce within the energy sector.

#### PipelineSentry:

Winner of the 2020 bp ventures performance award, PipelineSentry creates digital twins of pipelines and enables automated engineering integrity assessments.

#### Puls8:

Winner of the 2020 bp ventures technology award, Puls8 is developing non-intrusive tooling that gives instant and categoric confirmation for the identification of pipework and tubing.

#### QLM:

Gas detection and imaging systems based on infrared single-photon detection to provide fast, accurate and low-cost gas leak detection.

#### sHYp:

The first electrolyser to use sea water to produce hydrogen without the need for desalination.

#### Steel Space Casing Drilling:

Founded in 2018, Steel Space Casing Drilling is developing a single run, multimotor, casing drilling tool – an innovative technique to drive a single casing drilling shoe.

#### Supercritical:

Supercritical has radically redesigned the electrolyser to deliver the low cost pressurised, zero-emission hydrogen.

## From investment to further innovation; past Pioneers continue to change the face of our industry.



### RAB-Microfluidics

**A start-up from the first TechX cohort received a £1.2M investment in January 2021.**

The Eos Advisory investment strengthens the Aberdeen-based company's team and further develops their product roadmap. RAB-Microfluidics was built out of the University of Aberdeen, then selected for the TechX Pioneers programme in 2018, where it won the bp ventures technology award. The company's "laboratory on a chip" technology allows oil samples from heavy machinery such as gearboxes in wind turbines or engines in shipping vessels to be analysed on site, compared to traditional methods of shipping samples to onshore laboratories. The technology delivers oil analysis 1000x faster and 10x cheaper than the current "send the sample to the laboratory" approach.



### Hydromea

**Subsea technology specialists and TechX Pioneer start-up, Hydromea, was awarded an industry grant by OGTC and TotalEnergies in 2020.**

The multi-year project will accelerate the development of the world's first tetherless underwater inspection drone for complex, confined, flooded ballast tanks on ships, closed waterways, and hydropower dams. This technology will save costs, eliminate risk to personnel and enable remote inspection, which reduces the CO<sub>2</sub> footprint of asset integrity activities. The underwater drone can fit into a backpack, can be remotely controlled, and sends HD video back in real time without any physical connection to the pilot.

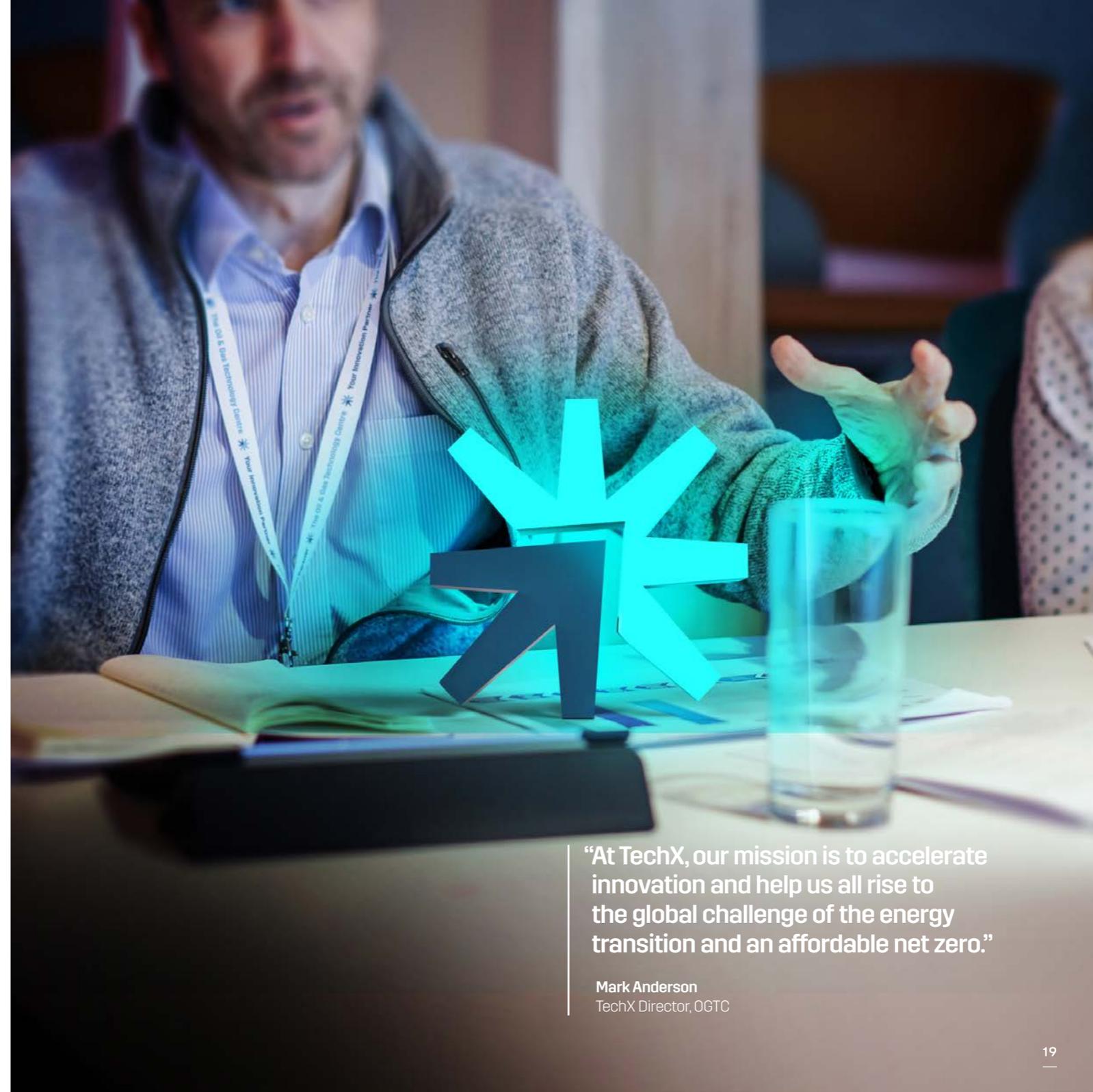


### Sedwell

### Sedwell

**A graduate from the second TechX cohort, Sedwell, has launched InterBolt™ following 12 months of continued development.**

Based in Suffolk and founded in 2017, Sedwell's technology enables continuous remote monitoring of critical bolted connections. The product, InterBolt™, eliminates the need for manual inspection by enabling a 'predict and prevent' maintenance regime. The technology integrates bolt load monitoring directly into the bolt itself, providing technicians with real-time load measurements during installation to ensure bolts are tensioned correctly. This prevents failure and eliminates costly and disruptive manual inspections on offshore wind farms and oil and gas platforms. Sedwell was awarded the Pitch of the Day award at TechX's Demo Day.



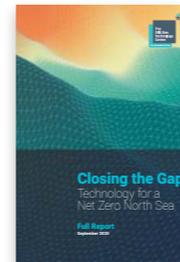
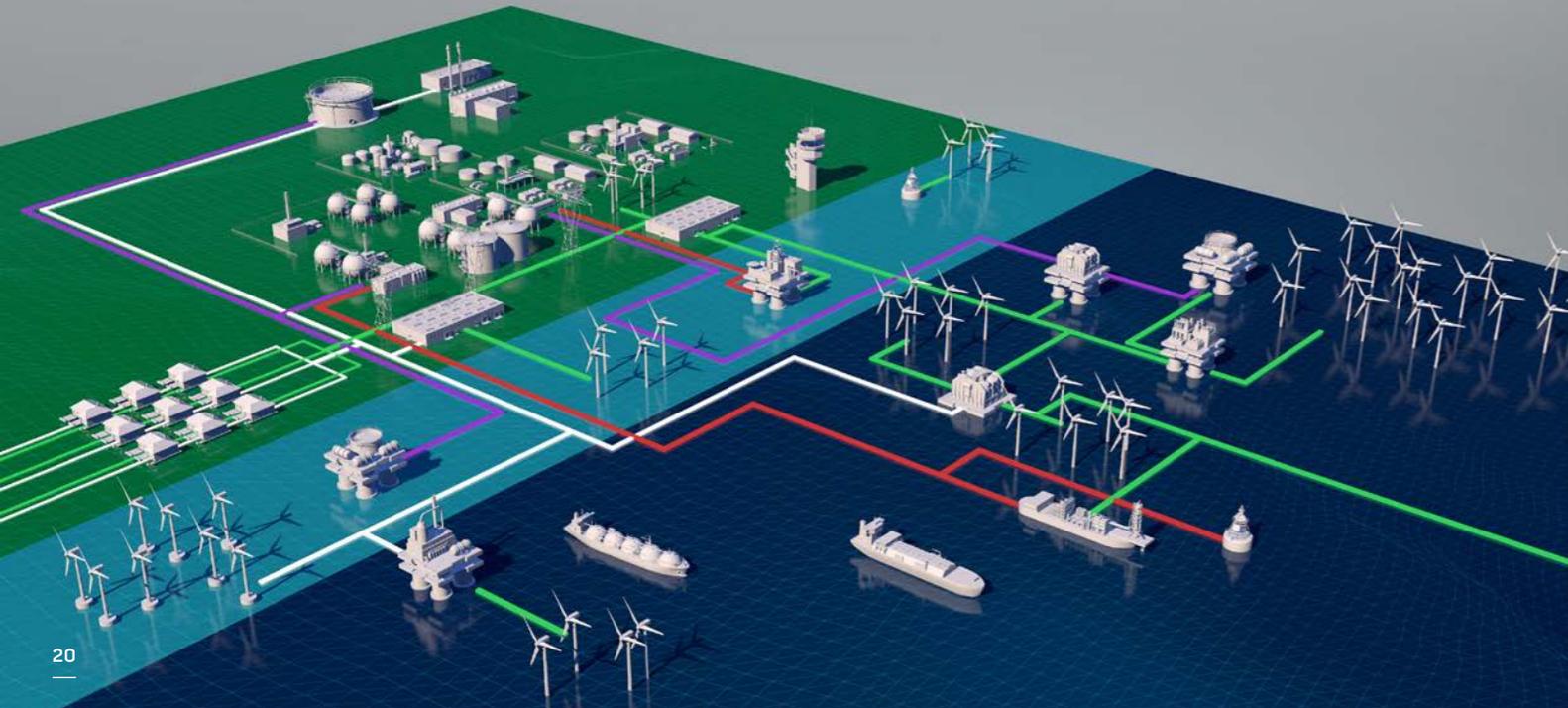
**“At TechX, our mission is to accelerate innovation and help us all rise to the global challenge of the energy transition and an affordable net zero.”**

**Mark Anderson**  
TechX Director, OGTC

## Harnessing the possible: an integrated energy future

With less than 30 years left for the UK to achieve its net zero goals, it is critical we focus on priorities and move at pace.

In 2020, our thought leadership programme saw the publication of industry reports that comprehensively analysed the technology needs to deliver a net zero North Sea, and created a series of scenarios which reimagined the North Sea as an integrated energy system.



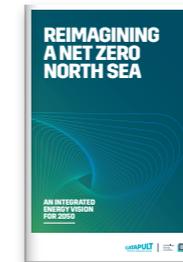
### Closing the Gap: Technology for a Net Zero North Sea

This report sets out a technology roadmap, leveraging partnerships with the renewables sector to accelerate the delivery of the next generation of energy in the UK.

Supported by Scottish Government, the study provides further intelligence, building on the 2017 Scottish Energy Strategy.

The report highlights:

- Delivering a tech-enabled integrated net zero energy future will cost £430 billion but generate more than £2.5 trillion in value to the UK economy.
- Leading global push to develop net zero energy system technologies will create major opportunities for UK jobs and manufacturing.
- OGTC and other organisations which develop technology to enable net zero carbon energy, in partnership with industry, government and academia, are pivotal to unlock this value.



### Reimagining a Net Zero North Sea: An Integrated Energy Vision for 2050

The launch of this report in partnership with the ORE Catapult highlighted the need for the UK offshore energy sector to become a global leader in clean energy by investing in technology innovation.

Key findings included:

- By investing in technology to create an integrated net zero North Sea, the UK can be a supplier, rather than a buyer, of affordable clean energy solutions.
- The UK can retain its competitive position in energy skills and capability, growing over 232,000 jobs over the next three decades.

In the report, detailed scenarios paint a picture of what the UK's offshore energy system could look like by 2050, with the oil and gas and renewable energy sectors working together to transform the North Sea.



### UKCS Data Digital Maturity Survey – Report 2020

With support from Deloitte, the UKCS Data and Digital Maturity Survey was launched in June 2020 by OGUK, the leading representative body for the UK offshore oil and gas industry, in partnership with the Technology Leadership Board (TLB), OGTC, and Opportunity North East (ONE) to assess the maturity of digitalisation across the sector.

Findings from the first survey of digitalisation in the oil and gas industry revealed a strong appetite to ensure technology is matured to improve the sector's connectivity, efficiency and sustainability. The report, however, also highlighted the need to promote collaborative working if these transformational changes are to become a reality.

## Driving innovation: connecting with research institutes and investing in academic partnerships.

From 1<sup>st</sup> April 2020, the activity undertaken by the Oil & Gas Innovation Centre (OGIC) transferred to OGTC and the funding provided has been used to develop a Net Zero R&D Programme in partnership with industry and academia.

**“The Scottish Funding Council, together with its partners in Scottish Enterprise and the Scottish Government, is delighted to invest in bringing OGIC activity into OGTC to help the oil and gas industry towards reaching the ambitious net zero target. Aligning the successes of OGIC, and in particular its strong academic and business links, with OGTC’s Net Zero Solution Centre, will give the oil and gas sector the best chance of transitioning to a net zero economy.”**

**Dr Stuart Fancey**  
Scottish Funding Council

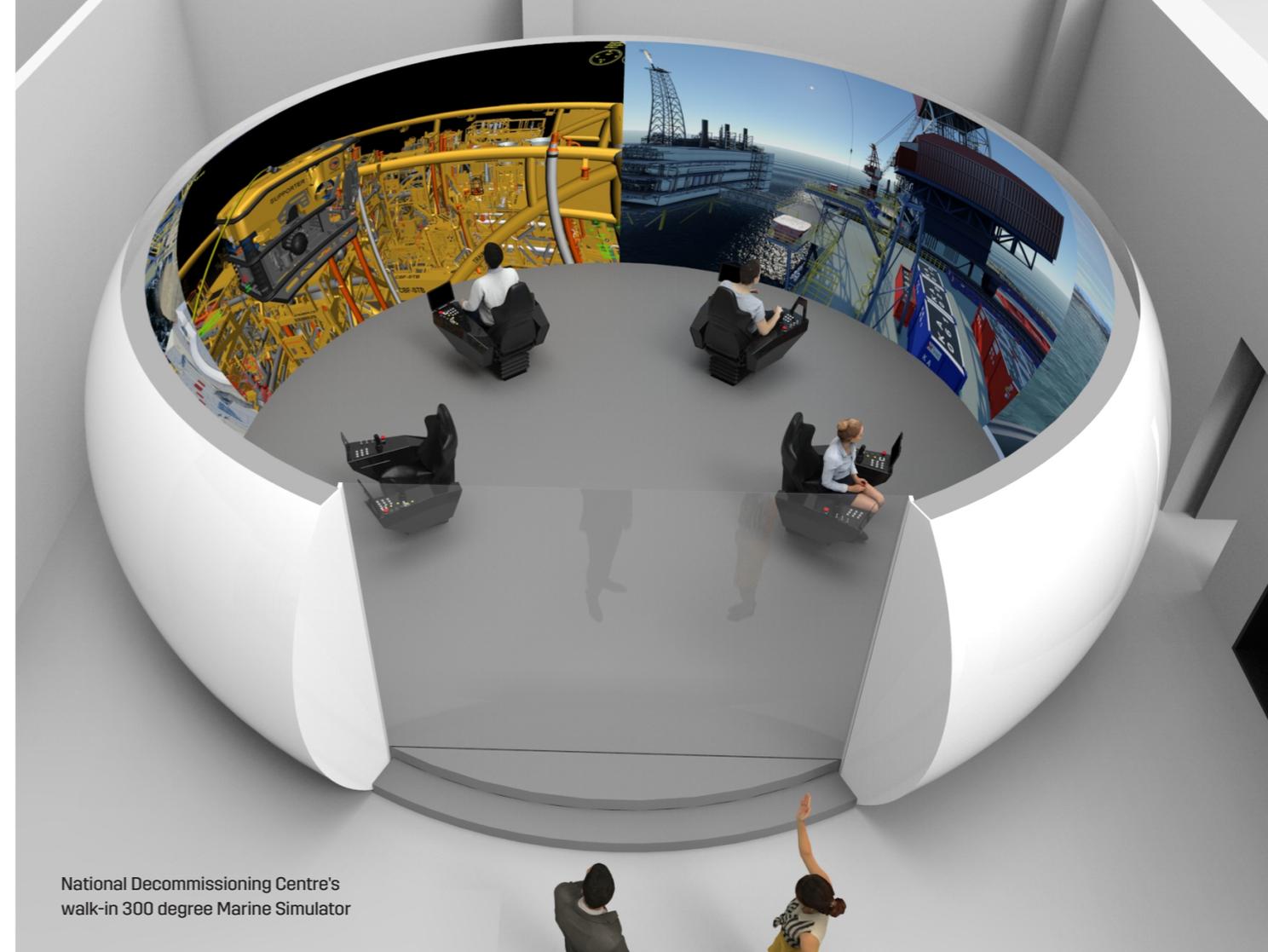
The Net Zero R&D Programme is supported by £3 million from the Scottish Funding Council, Scottish Government and Scottish Enterprise – a fund focussed on developing net zero projects in partnership with industry and Scottish universities. The R&D programme team successfully progressed the first call for ideas focused on net zero, for early TRL technology that targets direct air capture or direct seawater carbon capture.

### Net Zero R&D Programme ‘Call for Ideas’

The first ‘Call for Ideas’ was launched in October 2020, with a call aimed at attracting innovative ideas to improve direct air capture technologies. The call closed in December 2020 with a record-breaking number of companies responding, out of which OGTC and University partners are now working with a shortlist of four direct air capture R&D projects.

**“We must collaborate at pace to solve challenges and move the needle to get us to net zero by 2045. The conditions are right to enable net zero technology research and development in Scotland, and OGTC will invest in collaborative projects between academia and industry to drive the energy transition.”**

**Vinay Mulgundmath**  
Chief Technologist  
OGTC



National Decommissioning Centre's walk-in 300 degree Marine Simulator

### Working with UK universities

OGTC combines industry expertise and focus with academic excellence through our partnerships with universities throughout the UK.

Working with our academic panel, we validate the activities of OGTC to ensure we are focused on leading edge technology R&D. In North East Scotland, our partnerships with the University of Aberdeen and Robert Gordon University have resulted in the creation of two centres of excellence.

Together with the University of Aberdeen, we are building on the successful establishment of the National Decommissioning Centre. While our partnership with Robert Gordon University will see the launch of the National Subsea Centre in 2021.

## National Decommissioning Centre (NDC)

The National Decommissioning Centre (NDC) is a £38m partnership between OGTC, the University of Aberdeen and industry. The centre opened in 2019 focussed on reducing cost, extending field and asset life, and transforming the approach to decommissioning, including infrastructure repurposing opportunities.

In 2020, the NDC secured support from two major industry partners, Chevron and Shell. Chevron is supporting three PhD and one PDRA project. Shell is supporting a substantial research project.



# 10

PhD projects

# 4

Postdoctoral projects

# 2

Major industry partners

# 3

Research projects

# 2

OGTC funded projects

# 1

KTP

# £1.7M

of external funding secured

### Real-time simulator creates immersive opportunities

Over the course of the year, the NDC has completed the installation of its marine simulation suite. This £1.3m investment will support the development of the Smart Basin concept, exploring how energy infrastructure will be integrated and the contribution to our net zero ambitions. The simulator will also be used for scenario planning and to prototype new technology in an immersive, physics-based environment.

International academic collaborations now include Chulalongkorn University in Thailand and Curtin University in Australia, and recent research funding was secured with the University of Essex for work supporting the INSITE II programme.

Work has also continued on the specification for the Barrier Verification Chamber. This unique asset in academia will allow the testing and verification of technology associated with well decommissioning and repurposing for CCUS and hydrogen, and will be operational in 2022.

## National Subsea Centre (NSC)

The main building refurbishment of the National Subsea Centre (NSC) was completed in December 2020, with opening scheduled for 2021. The NSC will address current and future challenges in subsea engineering through world-leading research and development. An application to the Scottish Government Energy Transition Fund also outlines the impact of collaboration with the NDC through joint academic programmes of work, particularly around data.



# 2

OGTC projects (1 underway, 1 in planning)

# 5

project proposals submitted, awaiting outcome

# 1

study awarded (commenced September 2020) PhD student applications submitted

## Association of Innovation, Research and Technology Organisations (AIRTO)



### A unique partnership for innovation, research and technology

At the turn of the year, we announced an exciting new partnership with the Association of Innovation, Research and Technology Organisations (AIRTO). The five-year partnership will deepen collaboration between the oil and gas industry and the UK's Innovation, Research and Technology (IRT) sector with the aim of accelerating UK-based investment that targets low carbon solutions, net zero technologies and alternative fuels.

## Creating alliances and partnering to fast-track the energy transition.

We are working in collaboration with the ORE Catapult, the High Value Manufacturing Catapult Network, the Aerospace Technology Institute, the Advanced Propulsion Centre, and others in a collaborative project to look at the end-to-end technology gaps and innovation needs for hydrogen production and distribution.

OGTC is part of the SusWIND Program which accelerates sustainable composite materials and technology for wind turbine blades. Led by National Composites Centre (NCC), partners include ORE Catapult, Vestas, The Crown Estate, Renewable UK, Shell and BVG Associates. OGTC's focus is on the recycling technology landscape and supply chain.



OGTC is a founding partner of the North East Carbon Capture, Usage & Storage Alliance (NECCUS). The Scottish Government formally committed to backing the alliance, and by doing so it will help drive forward the country's decarbonisation programme, enabling the capture of carbon emissions by major industrial emitters, first from Scotland and later from across the UK.

As part of the SNZR, a collaborative project funded by Innovate UK, OGTC leads the technology forum supporting the concept development teams in the selection of the best technology for the decarbonisation of the Scottish industrial cluster.



In 2020, OGTC and the ORE Catapult formed the Energy Transition Alliance (ETA) to drive technology projects. The five-year collaboration will deliver solutions to accelerate the energy industry's transition to a net zero future.



"The energy transition to deliver net zero presents a massive opportunity for the UK. Innovation to meet the global demand for green energy technologies will ensure that we retain our world-leading position in offshore renewables, creating many thousands of jobs and significant economic growth."

**Andrew Jamieson**  
Chief Executive  
ORE Catapult

"The creation of the ETA comes at a pivotal time for our industry and the future of the North Sea, as we transition to a net zero basin. This alliance is an example of the critical cross sector partnering that will be required to realise the benefits of an integrated North Sea. Technology, innovation and a willingness to work cross sector will be essential if we are to successfully deliver on our net zero goal."

**Colette Cohen**  
CEO, OGTC

The ETA has prioritised five initial projects. These range from next generation hydrogen production and floating offshore wind, to low-cost power-from-shore technologies to eliminate offshore emissions.

OGTC and ORE Catapult are developing a commercially viable solution for the cost-effective recycling and reprocessing of wind turbine blades, a market estimated to be worth \$1 billion. The alliance is also leading a major study of offshore renewables supply chain, which aims to maximise the full potential of the UK supply chain in the production, installation and decommissioning of offshore renewables, creating an estimated 27,000 jobs by 2030.



## Connect people, enable discussions and inspire ideas.

Innovation happens at the intersection of industries, cultures, fields and disciplines. The clash of ideas and learning from failure. OGTC has a platform to share thinking and critically examine perceived wisdom.

**“Aligning with OGTC’s core values, we innovate and aim to inspire active collaboration. It all starts with teamwork; diversity of thought, the combining of minds and working towards a common goal. This is essential in delivering our technology vision which reimagines the North Sea.”**

**Laura Paterson**

People and Organisational  
Development Director  
OGTC

Whilst not being able to connect face-to-face in the past year, we implemented a range of remote networking, information sharing, and inspirational digital sessions – engaging established industry professionals and ensuring the next generation continue to be inspired, igniting that ‘spark’. Our continually evolving series of events now also includes:



### Tech20

Our Tech20 webinar series explores the latest tech trends with world-leading experts. Over the course of the year, we delivered 27 Tech20 webinars, covering technologies from outer-space to subsea. We adopted an online format that mirrored in-person sessions, providing hundreds of registrants with a 20 minute presentation, 20 minute Q&A and 20 minute opportunity to network.



### Insight60

In June 2020, we launched an online event series – Insight60. Through a series of webinars with thought leaders and industry experts, the challenge of the energy transition and application of innovative technology was put to the top of the agenda.



### Road to Glasgow – Transition Talks

With the journey to COP26 in Glasgow underway, we launched our Road to Glasgow Transition Talks’ podcast series in August.

Transition Talks aims to explore and provide a deep dive into key themes as we head towards the 2021 summit.



### Inspire20

In support of our first virtual intern programme and to support those whose intern placements had been cancelled, we launched Inspire20 in May 2020. The online programme provided educational and career talks with the aim of helping young people understand the energy transition and the range of exciting careers available. The series of 20-minute, educational webinars, aimed at people aged 16-24, were delivered by OGTC’s own young professionals.

### Virtual ‘hackathon’ tackles industry challenges

In partnership with tech-giant, Microsoft, OGTC launched its first virtual hackathon event – Code [Less] – at ENGenious. In September, the event saw 75 participants team up to solve a variety of industry challenges, without using coding, to raise awareness of the demand for automation and innovation in the energy sector and the push towards a net zero economy.

**In early 2021, OGTC launched its first sustainability policy as part of its commitment to COP26. This demonstrated the importance we place on reducing our carbon footprint and our impact as an organisation.**

**Working with industry, government and academia partners, OGTC is committed to realising an affordable net zero North Sea. We take our responsibilities to sustainable development seriously, delivering benefits not only for the energy sector, but for society, the economy, and the environment.**

We have a dedicated team focused on understanding, measuring, analysing and reporting OGTC's carbon footprint. Further to this, we committed to a 50% reduction of our emissions by 2025, and to being net zero by the end of 2030.

In June 2020, OGTC joined the United Nations Global Compact, the world's largest corporate responsibility initiative with over 12,000 businesses in 140 countries. OGTC has already embedded key Sustainable Development Goals (SDGs) into its own goals. These include:



In February 2021, Colette Cohen, CEO, pledged support for HRH The Prince of Wales and the Sustainable Markets Initiative's 'Terra Carta' or 'Earth Charter'. The Charter, unveiled during the One Planet Summit in Paris in January 2021, seeks to protect the world's natural resources and accelerate the transition to a greener future. It contains nearly 100 actions that businesses can take, including a commitment to achieving net zero emissions by 2050 or sooner and protecting natural ecosystems.

**“As nations prepare this year and to make commitments at COP26, this Charter is an exemplar in its focus on engaging industry in the delivery of net zero by 2050 and OGTC is delighted to have formally signed up.”**

**Colette Cohen**  
CEO  
OGTC

Providing support for the Charter will see OGTC work with industry, academia and government to accelerate towards an affordable net-zero future through innovation and the development and deployment of technology in the North Sea.

**TERRA  
CARTA**  
*For Nature, People & Planet*

## Financials and governance

The OGTC's financial year runs from April to March, and its accounts are for the period to March 2021.

	31 <sup>st</sup> March 2020 £'000	31 <sup>st</sup> March 2021 £'000
<b>Non-current assets</b>		
Tangible assets	899	1,281
Deferred tax asset	56	56
<b>Current assets:</b>		
Trade & other debtors	2,393	948
Cash at bank	3,424	5,431
Creditors: amounts falling due within one year	(6,772)	(7,716)
<b>Net current liabilities</b>	<b>(955)</b>	<b>(1,338)</b>
<b>Total assets less current liabilities</b>	<b>-</b>	<b>-</b>
Deferred tax liability	-	-
<b>Net assets</b>	<b>-</b>	<b>-</b>
<b>Reserves</b>	<b>-</b>	<b>-</b>

The financial statements are due to be approved and authorised by the Board in October 2021, following approval they will be issued.

"OGTC is a key component of the Aberdeen City Region Deal and works closely with its Joint Committee and Programme Board, collaborating with Aberdeen City and Aberdeenshire Councils and Opportunity North East to build further growth into an already successful regional economy.

With new partnerships evolving, OGTC is positioned to work with a broader range of stakeholders across industry and government. These strong relationships will create opportunities to partner for funding, supporting crucial programmes that ensure the North East of Scotland continues to be a leader in technology and innovation for the future net zero economy."

**Nicola McIntosh**  
Finance and Commercial Director  
OGTC

## Our Board

Chaired by Martin Gilbert, our Board is responsible for the overall strategic direction and long-term success of OGTC. It is responsible for making sure we have the resources, controls, and governance we need to deliver our goals. Our Board meets regularly to review our strategies and policies and receives reports from our leadership team. It delegates to our Chief Executive Officer, who in turn delegates responsibility for specific activities to members of the leadership team.

## Our audit committee

Chaired by Jeff Corray, our audit committee advises the Board on the effectiveness of our management procedures. It receives reports on risk, control and governance of the centre, offers advice to the Board and monitors the resulting actions.

## Performance reporting

We regularly report our performance against a range of key indicators to the Aberdeen City Region Deal joint committee, which comprises senior representatives from the Aberdeen City and Aberdeenshire Councils and Opportunity North East (ONE).

Technology  
Driving  
Transition



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