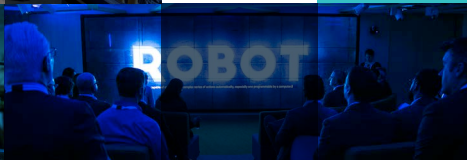
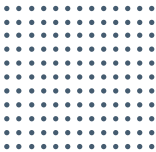
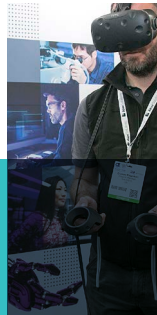




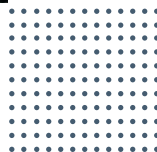
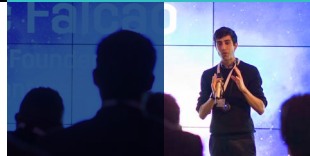
The
Oil & Gas
Technology
Centre

Your Innovation Partner



A year of delivery

Annual Review 2017



Established as part of the Aberdeen City Region Deal, supported by the Scottish Government, UK Government, Aberdeen City Council, Aberdeenshire Council and Opportunity North East.

Unlocking the full potential of the UK North Sea, anchoring the supply chain in North-East Scotland and creating a culture of innovation to attract industry and academia to the region.

ABERDEEN CITY REGION DEAL:

Powering Tomorrow's World



#ABZdeal

Archie Kennedy
Chairman

“We have achieved tangible results in our first year, identifying opportunities and creating a governance process that makes sure we fund technologies that companies want and need – and that will make a measurable difference.”

Introduction

2017 was a year of continued change in the global oil and gas industry, with companies focused on increasing efficiency, reducing costs and improving performance.

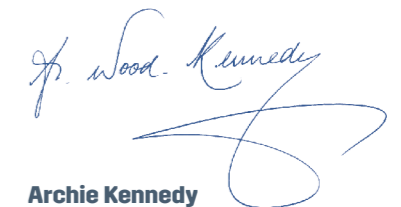
It was therefore the right time to establish the Oil & Gas Technology Centre to work in partnership with industry to inspire, accelerate and co-fund technologies to drive competitiveness and productivity on the UK Continental Shelf (UKCS).

With £180 million funding from the Aberdeen City Region Deal, to co-invest with matched funding from industry, we are creating strong partnerships that bring together companies of all sizes to deliver solutions.

We are seeing determination, resilience and, more importantly, a willingness to collaborate that we have not seen before. We need to keep working closely together, being brave about technology and acting as true pioneers – ultimately, we can all be winners.

Looking ahead, we remain clear on our goals – to unlock the full potential of the UK North Sea, anchor the supply chain in North-East Scotland and create a culture of innovation to attract industry and academia to the region.

I am confident we will build on our successful start and make real strides towards transforming our industry through innovative technology, so the UKCS and the North-East of Scotland is globally recognised as a thriving technology hub.



Archie Kennedy
Chairman

Colette Cohen
CEO

“We’re experiencing one of the most dramatic, technology-led revolutions the world has ever seen – we must be brave and seize the moment.”



A year of delivery

It’s been an exciting year for everyone at the Oil & Gas Technology Centre.

We’ve made great progress to establish the Centre, identify hundreds of innovative technologies and co-invest £37 million in more than 70 projects with industry to develop and deploy new technologies.

The support of the UK and Scottish Governments, the Oil & Gas Authority, local councils and universities has been excellent, and the strong involvement of the industry, with more than 90 memberships, has been very encouraging.

10 field trials were approved, identifying, for example, how non-intrusive inspection techniques could deliver annual savings of £244 million and a new thermite well plugging and abandonment solution could save the industry £100 million each year.

Our Calls for Ideas programme generated more than 180 new

technology ideas from inside and outside the oil and gas industry, and we have built strong connections across the UK innovation ecosystem.

5,000 people visited the Centre to take part in events and workshops during the year and in October 2017, we opened our Innovation Hub – a unique, collaborative space and the focal point for our activities with schools, colleges and universities.

We also agreed to establish two new Centres of Excellence in the North East of Scotland; in decommissioning in partnership with the University of Aberdeen, and in subsea engineering with Robert Gordon University.

We’ve made a positive start but there’s so much more to do.

We’re experiencing one of the most dramatic, technology-led revolutions that the world has seen and at the same time, a fundamental energy transition is underway in the UK and globally.

This is about fundamentally rethinking and reimagining how we produce oil and gas offshore. And embracing an ever-expanding spectrum of new technologies to help us do so. The future is in our hands – we must be brave and seize the moment.

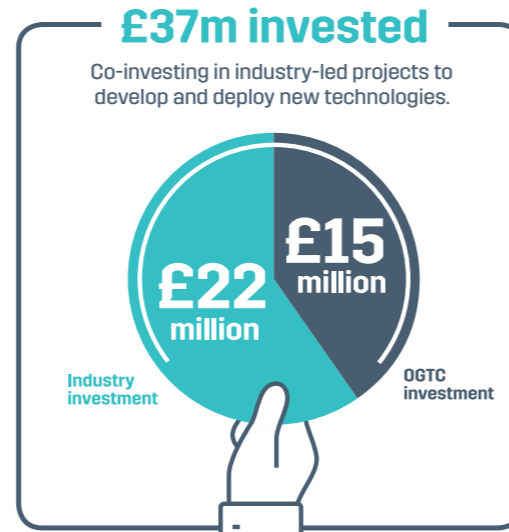
We look forward to continuing to work with our partners to help unlock the full potential of the UK North Sea, anchor the supply chain in North-East Scotland and create a culture of innovation in the region.

Colette Cohen
Chief Executive Officer

2017: A year of delivery

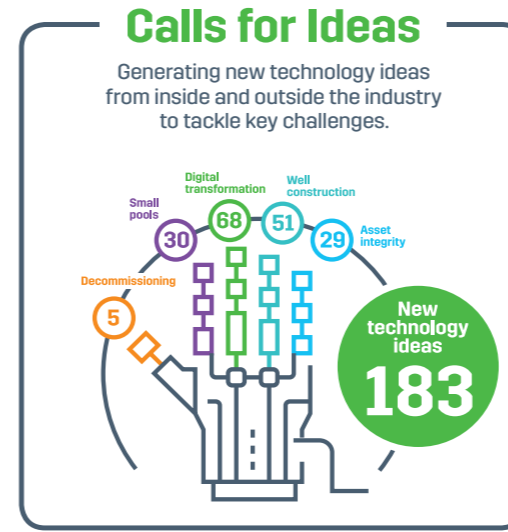
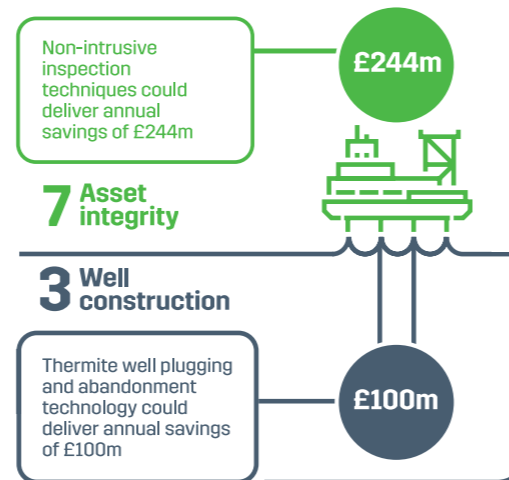
Launched in February 2017, as a key part of the Aberdeen City Region Deal, the Oil & Gas Technology Centre inspires, accelerates and funds technology innovation.

We co-invest in industry-led projects that take new technologies from early stage concept through to deployment in the oil field.



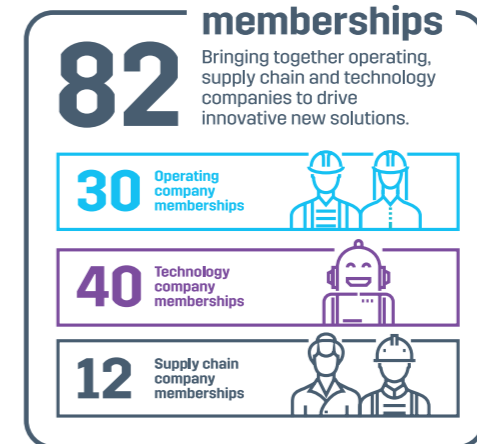
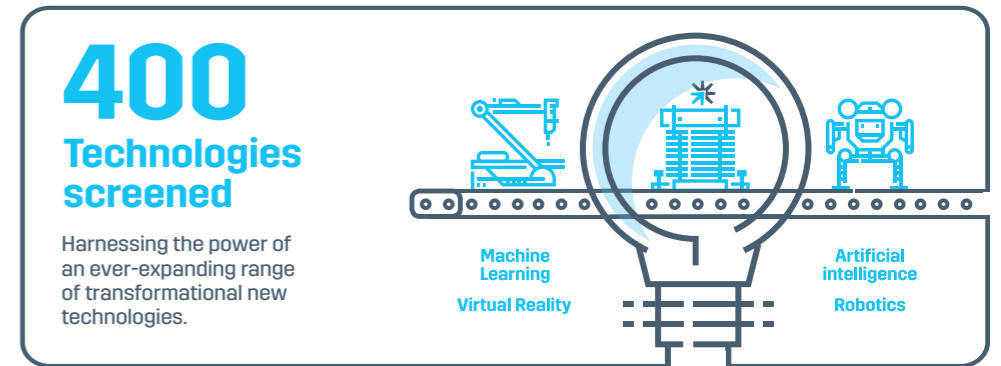
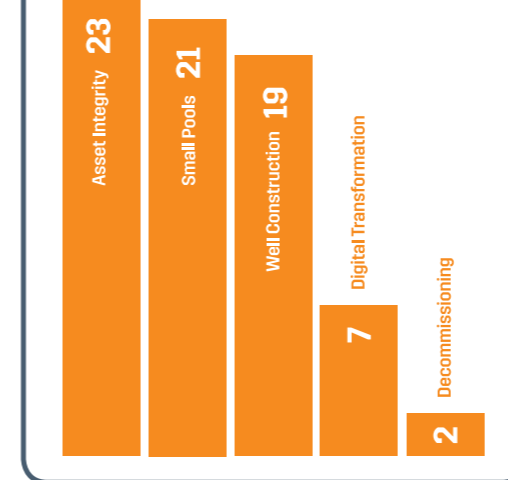
10 field trials creating value

Working with industry partners to test and trial new technologies in an operational environment.



72 projects in total

Delivering technology project to fix today, maximise recovery and transform tomorrow.





Lord Duncan
UK Government Minister

“The Oil & Gas Technology Centre is funded with more than £90 million of UK Government investment through the Aberdeen City Region Deal, and one year on is already seeing results. I have been impressed on previous visits by its commitment to innovation and technologies of the future, and I am confident that it will continue to contribute towards a prosperous future for the North-East of Scotland.”



Paul Wheelhouse
Scottish Government Business,
Innovation & Energy Minister

“With £90 million of Scottish Government investment, the Oil & Gas Technology Centre has had a hugely successful first year, seeing £37 million co-invested in more than 70 projects to develop and deploy new technology that could transform the future of the industry in the North Sea Basin. Innovation is absolutely key to a sustainable future for our oil and gas industry and to enable our supply chain to continue to win new business.”



Sir Ian Wood GBE
Chairman
Opportunity North East

“The City Region Deal funding which established the Oil & Gas Technology Centre was a strong endorsement from UK and Scottish Governments of North East Scotland’s industrial resilience, innovation and growth potential. Opportunity North East is proud of the role we played in the formation of Oil & Gas Technology Centre and are very impressed with the speed at which it is clearly making a significant impact.”



Andy Samuel
Chief Executive
The Oil & Gas Authority

“Successful deployment of existing and new technologies will greatly help us achieve our objective of maximising economic recovery for the UK Continental Shelf, while strengthening the UK’s position as a global leader, exporting oil and gas technology equipment and services.”



Councillor Jim Gifford
Chair of the City Region
Deal Joint Committee

“The Oil & Gas Technology Centre has out-performed even the most ambitious expectations that any of us had when the business case was first approved. Getting it off the ground, as well as going on to exceed their targets in the first year alone is a great achievement. This demonstrates that there was a real need in the market for a facility like this, and also proves conclusively that our City Region Deal is delivering projects that will make a difference to Aberdeen and Aberdeenshire in the long term.”



Councillor Jenny Laing
Leader
Aberdeen City Council

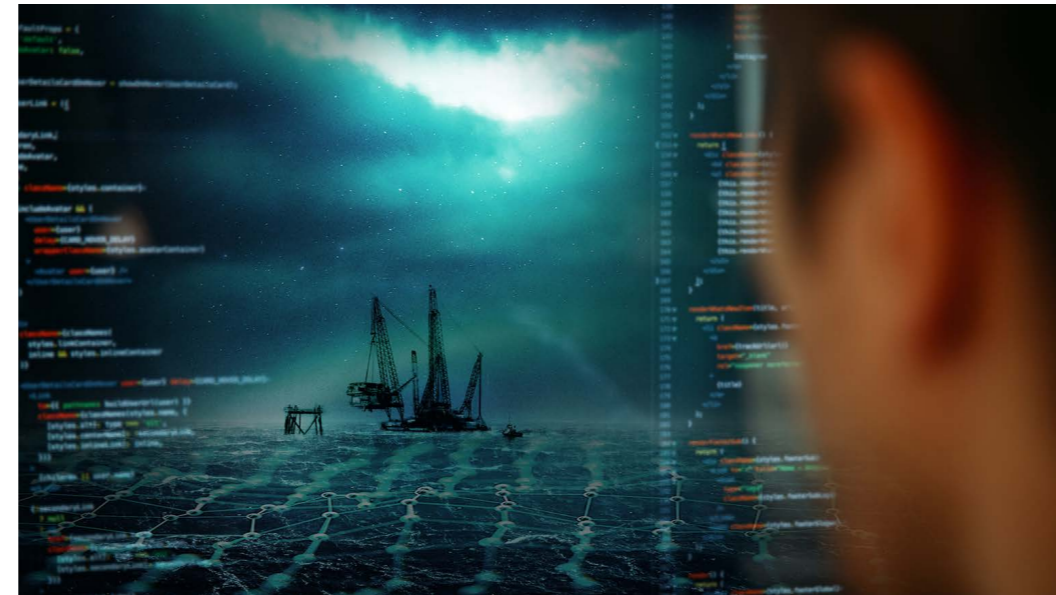
“The Aberdeen City Region Deal has a vital role to play in the Regional Economic Strategy, which has a focus on internationalisation and diversification. The Oil & Gas Technology Centre will be integral to supporting those aims and it is a significant milestone for the city and for the region as a whole.”

January - February

Government Ministers open Technology Centre

Lord Dunlop, UK Government Minister for Scotland, and Paul Wheelhouse MSP, Scottish Government Minister for Business, Innovation and Energy, officially opened the Oil & Gas Technology Centre in Aberdeen on Friday 10 February.

Leaders from industry, universities and local councils attended the launch event to hear keynote speaker Ian Constance, Chief Executive of the Advanced Propulsion Centre, deliver an inspirational speech. He described how the UK automotive industry has embraced technology and innovation to reinvent itself over the past decade.



First three Solution Centres open

Our first three Solution Centres opened for business, covering asset integrity, well construction and small pools. All our Solution Centres work with oil and gas operators, supply chain companies and technology developers to identify challenges and provide solutions.



March - April

Prime Minister visits the Centre

We welcomed Prime Minister Theresa May to see in person how we're harnessing technology to transform the industry and unlock the full potential of the UK North Sea.

The Prime Minister joined our chairman, Archie Kennedy, and chief executive, Colette Cohen, at a meeting with leaders from across the industry and local universities. The Prime Minister also toured the Centre, meeting several technology companies to see their innovative solutions first-hand. From offshore inspection drones and virtual reality applications to offshore renewable power solutions, she witnessed the many ways that technology is making a positive impact across the sector.



May - June



Building our network

Throughout the early months, we continued to build our network with visits and links to R&D institutions and universities across the UK. Naturally, our primary academic partners are the local ones: The University of Aberdeen and Robert Gordon University.

First Call for Ideas

Our first Call for Ideas invited companies to come forward with innovative technology concepts and ideas to transform the way that offshore oil and gas wells are plugged and abandoned.

The competition focused on three specific themes: modelling the probability of hydrocarbon flow to surface; verifying permanent barriers; and new and alternative methodologies and barriers.

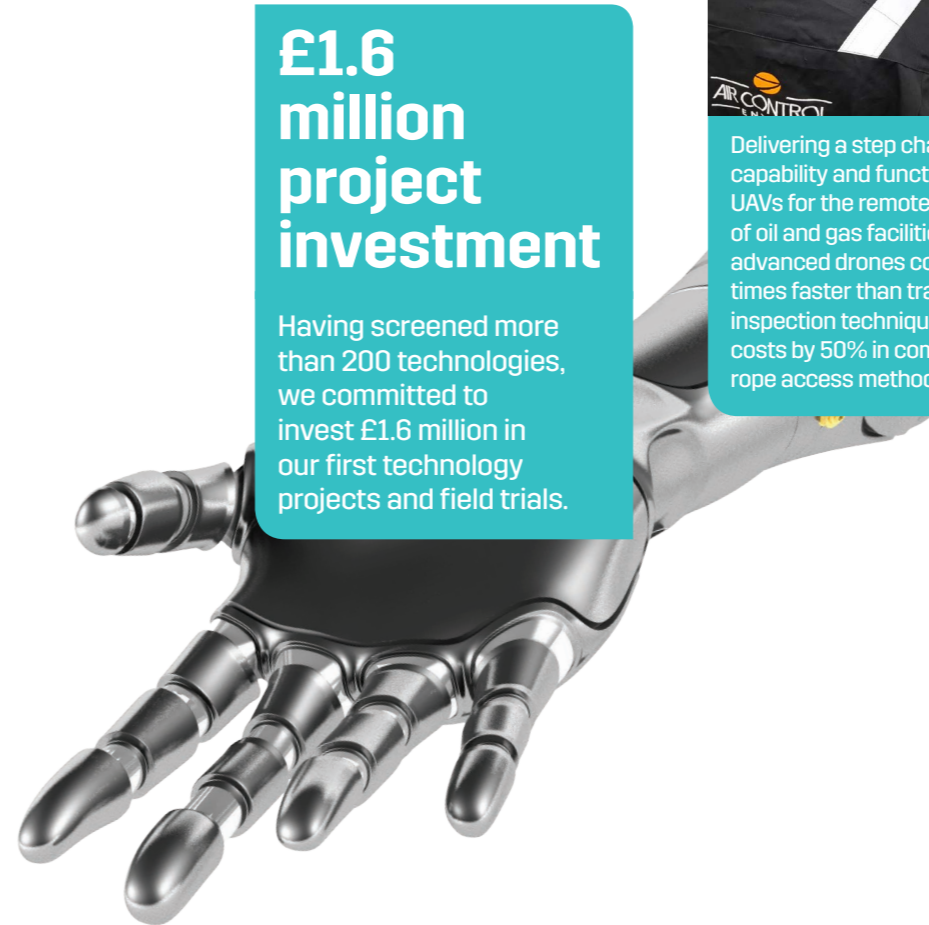
We pledged to invest around £1 million in a portfolio of projects resulting from the Call. From the 48 ideas submitted, four were selected to receive a combined investment of £1.3 million. The projects, with BiSN, Strathclyde University, Heriot-Watt University and Baker Hughes, are all underway.

Launch of two new Calls for Ideas

Early June saw the launch of two new Calls for Ideas, one to identify, support and fund solutions that use robotics to reduce inspection costs, and the other to help unlock the 225 marginal discoveries in small pools across the UKCS.

Decommissioning Solution Centre

We created our Decommissioning Solution Centre to work in partnership with the industry and technology providers to develop and deploy technologies that help extend the production life of UKCS fields and help deliver the goal of reducing decommissioning costs by 35%.



£1.6 million project investment

Having screened more than 200 technologies, we committed to invest £1.6 million in our first technology projects and field trials.

Project profile: Air Control Entech



Delivering a step change in the capability and functionality of UAVs for the remote inspection of oil and gas facilities. These advanced drones could be 20 times faster than traditional inspection techniques and reduce costs by 50% in comparison to rope access methods.

Project profile: Deepwater Oil Tools



Developing a special articulated joint called ArticuloLock™, which could enable drilling operations in rough weather conditions, saving tens of millions of pounds each year. Using technology to transform the construction and operation of wells could reduce costs by up to 50%.

July - August



40

New Members Update

By late August, we had over 40 members working in partnership with us on projects to increase the pace of innovation. New members included major operator Total, global engineering group Lloyds Register, major service provider Oceaneering International Services Limited, and subsea technology company EC-OG.

Digital Transformation Solution Centre

Our Digital Transformation Solution Centre was created to work with partners from many sectors. It aims to learn how to use digital technology to not only improve, but to transform a business – or even disrupt an entire industry, as the likes of Uber and Airbnb have done elsewhere.

Ideas flow in for Small Pools and Asset Integrity

By the start of August, the latest Calls for Ideas had generated almost 60 potential solutions to help reduce oil and gas industry costs and maximise economic recovery.

We received 30 technology concepts that could transform the subsea development life-cycle approach and make marginal fields on the UKCS economically viable. We also generated 29 innovative robotics ideas to boost the quality and lower the cost of pressure vessel and tank inspections.

Technology Forum helps unlock future oil and gas developments

We partnered with the Oil & Gas Authority to host a Technology Forum to support the 30th Offshore Licensing Round and showcase solutions with the potential to lower development costs on the UKCS. The event brought together more than 300 people, from operating companies to prospective investors and technology developers. There was strong interest in the 30th Round, with 96 applications covering 239 blocks.



Project investment tops £12 million

Just seven months after opening, we approved total investments of more than £12 million.

Project profile: Infinity Oilfield Services



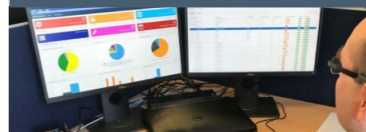
Field-trialling a safety device, which includes Kevlar, to contain corroded valve equipment to eliminate the risk of an uncontrolled hydrocarbon release. The solution could improve safety performance, extend asset life and save UK North Sea operators up to £320 million.

Project profile: Raptor Oil



Transforming the transmission of downhole drilling data to the surface. This acoustic telemetry technology could increase the speed and capacity of data communication, helping to improve efficiency, reduce costs and enable better decision-making.

Project profile: Apollo and LifeTech



Developing a tablet-based, software solution for integrity management. It delivers integrity data across the full lifecycle of an asset, allowing for quicker and more accurate data gathering and reporting, creating a potential 20% efficiency gain.

Project profile: EC-OG



Investing in a North Sea field trial of the EC-OG Subsea, Power Hub solution. This ground-breaking turbine system harnesses the energy within ocean currents to generate, store and deliver autonomous electrical power to offshore facilities.

Project profile: Interwell



Field-trialling a ground-breaking concept for well abandonment, which could save the industry more than £100 million per year. The thermite technology generates temperatures of up to 3,000 degrees Celsius to melt all well elements and create a permanent, impermeable barrier.

September - October

Showcasing breakthrough solutions at Offshore Europe

Our Technology Zone at Offshore Europe hosted technology providers and innovative organisations from a wide range of sectors. Our SME competition generated almost 70 entries across five key themes, with 24 organisations winning a free space on our stand. We hosted a series of technology leadership discussions and more than 2,000 people came to talk us during the event. The High Value Manufacturing (HVM) Catapult, IBM and QinetiQ also joined us to showcase solutions from outside the oil and gas industry.

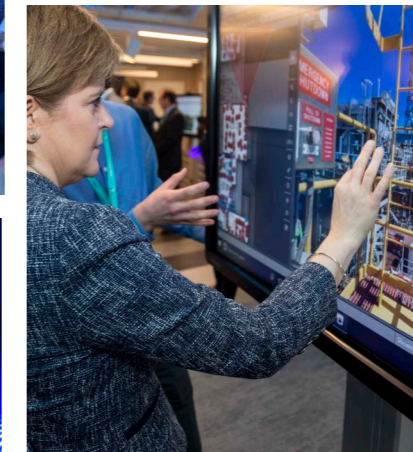


During Offshore Europe, we enjoyed a visit from pupils from St. Machar Academy in Aberdeen and heard their vision for the future of Aberdeen's oil and gas industry. CEO Colette Cohen awarded the group £500 to buy new technology for the school.



First Minister opens Innovation Hub

Scotland's First Minister Nicola Sturgeon MSP opened our Innovation Hub, a state-of-the-art facility designed to inspire innovation in the oil and gas industry. The Hub is an exciting and stimulating space, where we work in partnership with the industry and technology providers to develop breakthrough solutions, connecting problems with solutions and solutions with problems. Since opening, the Hub has hosted a programme of innovation events and workshops with expert facilitation, bringing together leading academics and recognised experts from industries beyond oil and gas to help generate new concepts and ideas. More than 5,000 people visited us in 2017, many of them taking part in exciting events and workshops.



November - December



First MER Award

Our Asset Integrity Solution Centre, its members and Total won a Maximising Economic Recovery (MER) UK Award at the Oil & Gas UK Awards in early November.

The award recognises companies whose cooperative approach and positive behaviours have helped to maximise the economic recovery of oil and gas from the UKCS.

The prize celebrated the collaborative work that enabled early field trials of non-intrusive inspection technologies to take place on Total's Elgin platform.

More Calls for Ideas

By the end of the year, all five Solution Centres had issued at least one Call for Ideas. The responses have been very impressive and highly encouraging.

Robotics creates opportunity and ideas

In early November, over 250 people took part in a series of workshops and tech talks at our Innovation Hub, all designed to accelerate the use of robotics offshore.

A team of experts from the oil and gas and robotics industries took part in a two-day, facilitated workshop and identified 15 potential solutions for the application of air-, land- and sea-based robotics in the offshore energy industry.



TechX accelerator launch

We launched TechX – a unique technology accelerator and incubator focused on helping smaller, ambitious technology developers take their solutions into the oil and gas market – faster. Our three tailored programmes – Pioneer, Market Entry and Ventures – will accelerate the future of 100 start-ups and 200 SMEs.

With up to £100,000 funding available to Pioneer companies and up to £500,000 funding available for Market Entry participants, with no equity or payback required, TechX provides unrivalled access to customers to help companies fast track a route to market. Our strategic partner, BP Ventures, offers an exclusive group of Pioneers a further £100,000 of funding each, as well as dedicated access to BP's facilities and expertise.



Innovative non-intrusive inspection trials create value

The results of three non-intrusive inspection (NII) trials, organised in partnership with Total E&P UK, demonstrated the potential to deliver significant cost, safety and efficiency benefits compared with traditional intrusive methods. We worked with Eddyfi, MISTRAS and Sonomatic to conduct the trials, who deployed a range of ultrasonic corrosion mapping and time of flight diffraction solutions. Our survey with engineering firm, ABB, found that adopting NII technology could deliver increased production and lower maintenance costs worth up to £244 million per year on the UKCS.

Looking ahead

2017 was a busy and exciting year for the Oil & Gas Technology Centre and we're focused on maintaining this positive momentum in the year ahead.



Centres of Excellence

We're partnering with the University of Aberdeen to create the National Decommissioning Centre of Excellence and Robert Gordon University to establish the National Subsea Engineering Centre of Excellence. Industry led, the Centres will build on the research and development capability of both universities, linking with other UK innovation centres and institutions to tackle industry challenges.



First TechX Pioneers

Our first TechX Pioneers Programme attracted more than 125 applications from 24 countries. 10 technology start-ups have now been selected to take part in the intense 16-week programme, which begins in June 2018. It's great to have our first Pioneers on board and we look forward to helping them create exciting new solutions for the industry.



Field Trial Programme

Working with technology developers and operating companies to trial new solutions will continue to be priority in 2018. We already have more than 30 field trials planned for the year ahead and we expect to add more to the programme. Proving new technologies in an operational environment is critical to their commercialisation and deployment.



Transformational Technology

Demand is growing for technologies to help transform the oil and gas industry for the low carbon economy. We hope to bring forward several new projects in this area in 2018, working closely with other parts of the energy sector. We'll also continue to support the potential UK Sector Deal for offshore oil and gas in which transformational technology is a key element.



STEM Programme

Encouraging more young people to get involved in science, technology, engineering and maths (STEM) is essential to create a culture of innovation in North-East Scotland. We will work with schools, colleges, universities and other partners to develop a STEM programme using our Innovation Hub to host events and workshops that inspire the next generation.



Integrate ITF

In February 2018, we confirmed our merger with ITF – the Industry Technology Facilitator – to focus and enhance technology and innovation support for the industry. We'll continue to integrate ongoing ITF projects with our solution centre programme and work with ITF colleagues and members to deliver a smooth transition that sets us up for future success.

Governance



Our Board

Chaired by Archie Kennedy, our Board is responsible for the overall strategic direction and long-term success of the Oil & Gas Technology Centre. 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 Mike Fleming, our Audit Committee advises our 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.

The Audit Committee oversees the development and implementation of key policies on behalf of the Board. For example, a robust Conflict of Interest Policy was implemented in 2017. It is designed to make sure that decisions taken by the Centre are impartial, fair and balanced.



Performance Reporting

We regularly report our performance against range of key indicators to the Aberdeen City Region Deal Joint Committee, which comprises senior representatives from the UK and Scottish Governments, Aberdeen City and Aberdeenshire Councils and Opportunity North East.

Financials

Summary Financial Statement to 31 March 2017

The Oil & Gas Technology Centre's financial year runs from April to March, so our latest accounts are for the period to March 2017, when we were in the start-up phase. We have provided an extract from balance sheet as at 31 March 2017 to reflect our financial position. Our summary financial statement for the year to 31 March 2018 will be published in our 2018 Annual Review.

	£'000
Fixed Assets	
Tangible assets	18
Current assets:	
Debtors	208
Cash at bank	2,243
	2,451
Creditors: amounts falling due within one year	(2,469)
Net Current liabilities	(18)
Total assets less current liabilities	-
Net Assets	-
Reserves	(303)
Retained earnings	-

The financial statements were approved by the Board of Directors and signed on its behalf on 13 December 2017 by:

Archie Kennedy
Chairman

Our members





**The
Oil & Gas
Technology
Centre**

Your Innovation Partner

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