

# BUSINESS BREAKFASTS

North Queensferry • Musselburgh • Dundee • Aberdeen

**FORTH & TAY**  
OFFSHORE



Powering Scotland's East Coast

[www.forthandtayoffshore.co.uk](http://www.forthandtayoffshore.co.uk)



# BUSINESS BREAKFASTS

North Queensferry • Musselburgh • Dundee • Aberdeen

**Isla Robb**

Offshore Wind Specialist – Scottish Enterprise

Friday 27th September 2019

**FORTH & TAY**  
OFFSHORE



Powering Scotland's East Coast



## HOUSEKEEPING

- Fire Alarms
- If the Fire Alarms do sound and it is not a test, please evacuate using the clearly signposted exits
- Mobile phones on silent. BUT feel free to contribute to social media

**#ForthTayOffshore #FTOBusinessBreakfasts**



## PROGRAMME

08:00 Registration

08:45 Welcome

08:50 Forth and Tay Offshore Intro

09:00 Offshore Wind Industry Update

09:20 Business Perspectives

09:40 Offshore Renewable Energy Catapult

09:55 Floating Offshore Wind Competition

10:05 Services to Support your Business

10:25 Q & A

10:40 Closing Remarks

10:45 Networking

11:15 Close

Isla Robb, Scottish Enterprise

Niall Stuart, Red Rock Power

Robert Ledingham, Survitec

Hugh Riddell, OREC

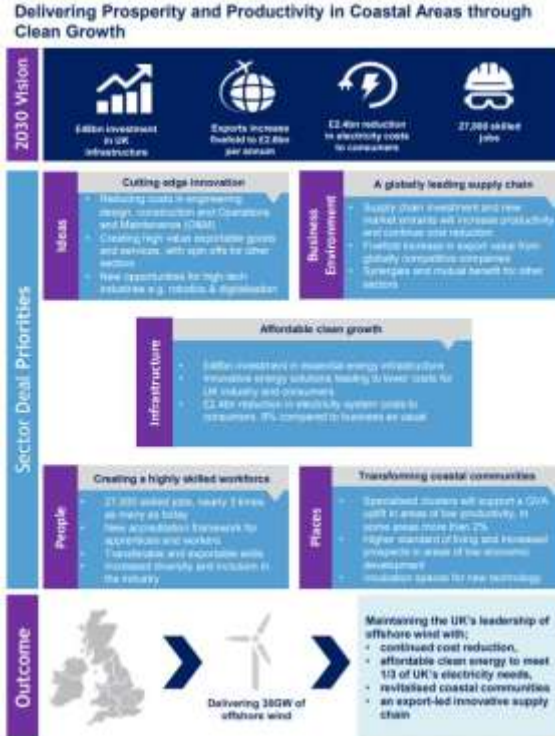
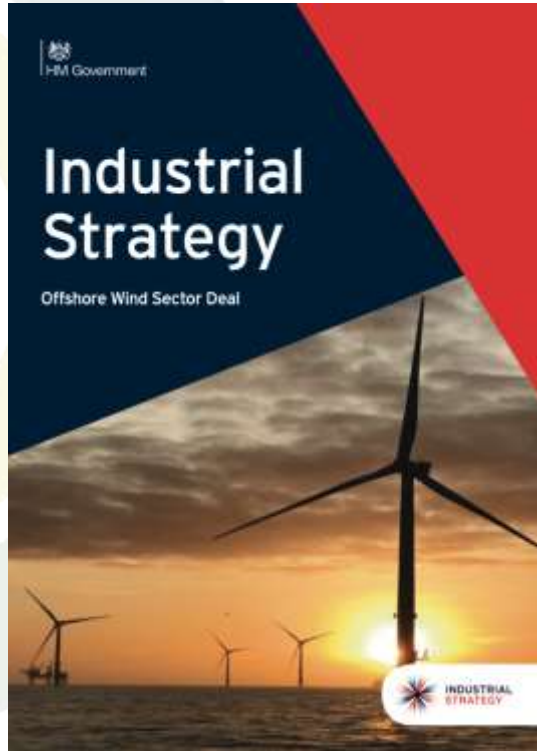
Dan Kyle Spearman, Carbon Trust

Isla Robb, Scottish Enterprise

Isla Robb

Isla Robb

# Why a Cluster approach to Offshore Wind?



## Place: Transforming coastal communities

- Regional hubs attracting new industries
- Synergies of collaboration between business & academia
- Higher standard of living and increased prospects in areas of low employment
- Incubation spaces for new technology

# Cluster Approach – Why Forth & Tay?



- 1 of 2 Clusters agreed in Scotland (8 in UK)
- **c3.75GW capacity** by 2030 (12% of UK capacity) / 2GW consented / 450MW moving into construction
- Playbook - Established capability – **Balance of Plant** (cabling, foundations and substations), **Operations, Maintenance & Service** and **Skills** (including R & D and training)
- Track record of **working together** in this space – East Coast Renewables
- Regional Strategic Drivers:
  - **Tay Cities Deal** - greater regional working / ambition to create a world-class renewable energy & decommissioning capability.
  - **Edinburgh & South East Scotland City Deal**



# Offshore Activity

FORTH & TAY  
OFFSHORE



# SUPPLY CHAIN CAPABILITY

## Development & Consenting

Environmental survey, seabed survey, met mast, development services.

## Balance of Plant

Foundations, cables, offshore substation, onshore electricals.

## Turbine Manufacture

Rotor, nacelle, tower & blades.

## Installation and Commissioning

Foundation, cables, turbine, offshore substations.

## Operations and Maintenance

All operations, all maintenance, onshore electricals.

Logos for Development & Consenting: University of Dundee, SMART, everoze.

Logos for Balance of Plant: FAB, motive, HAD-FAB, TEXO GROUP.

Logo for Turbine Manufacture: COLLETT.

Logos for Installation and Commissioning: Fort Ports, OCEANEERING, ctec, UTILITY ROV SERVICES.

Logos for Operations and Maintenance: RIX SHIPPING WE DELIVER, LIMPET, Briggs, EYMOUTH HARBOUR TRUST.

### Ports & Quayside Infrastructure

Logos: Fort Ports, ENERGY PARK FIFE SCOTLAND, Montrose PORT AUTHORITY, EYMOUTH HARBOUR TRUST.

### Skills and Innovation

Logos: CATAPULT Offshore Renewable Energy, Fife College, DA COLLEGE.





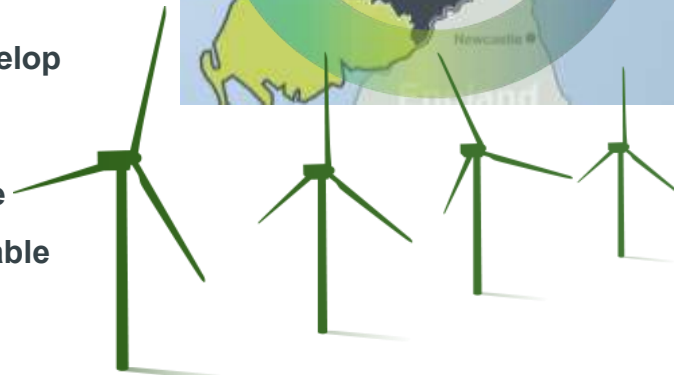
# Forth & Tay Offshore: Steering Group



Our cluster is not geographically exclusive, as we take in key areas across the central belt, covering developers and innovative institutions ensuring all parts of the industry are represented; playing a part in advancing the sector for Scotland.

# Our Aims

- Promote the regional supply chain to prospective customers in the Offshore Wind Sector and develop collaborative working across the industry
- Promoting the area as a destination of choice for new investments in the UK offshore energy supply chain
- Work with our world renowned colleges and universities to deliver innovative new solutions within the sector, while continuing to develop and promote the skills required to meet the sector's needs
- Invest in infrastructure investment which will enhance establish the cluster's offshore proposition as one of the UK's prominent renewable energy hubs.



# Activity to date



Cluster formation & Industry events



Working with Developers & Other Clusters



Promoting Supply Chain Capability

# Why should my business get involved?

- **Information and updates** on local, national & international offshore wind industry including contract and funding opportunities and support services
- **Promotion** of your company through the FTO and Scotland Offshore Wind Supply Chain database
- **One-to-one meetings** with offshore wind developers and their main suppliers to discuss contract opportunities at relevant events
- **Case studies** of other companies which have successfully entered the offshore wind market
- **Networking opportunities** to meet with potential partners or customers

**WORKING WITH AND FOR YOU.** The more you put in,  
the more you get out



# FORTH & TAY OFFSHORE

Powering Scotland's East Coast



SUPPLY CHAIN



SKILLS



INNOVATION



PORTS



## Forth and Tay Offshore Roadshow



# FORTH & TAY OFFSHORE

Powering Scotland's East Coast



SUPPLY CHAIN



SKILLS



INNOVATION



PORTS



## Industry Update



# FORTH & TAY OFFSHORE

Powering Scotland's East Coast



SUPPLY CHAIN



SKILLS



INNOVATION



PORTS



Industry Update  
Niall Stuart



# FORTH & TAY OFFSHORE

Powering Scotland's East Coast



- UK
- Scotland
- Future

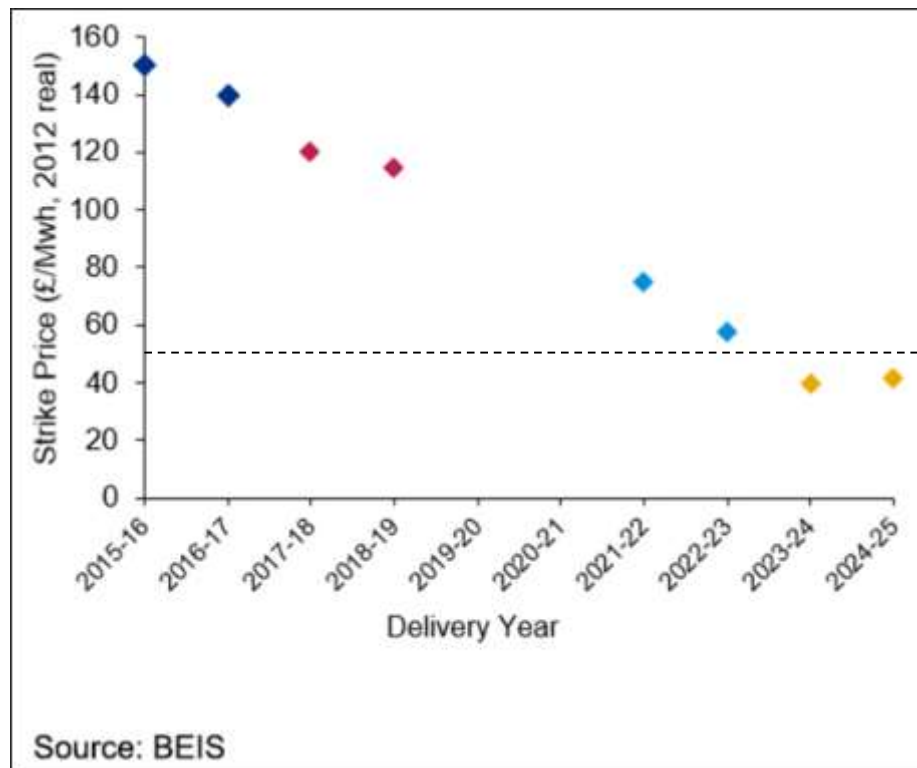




# UK - 2019

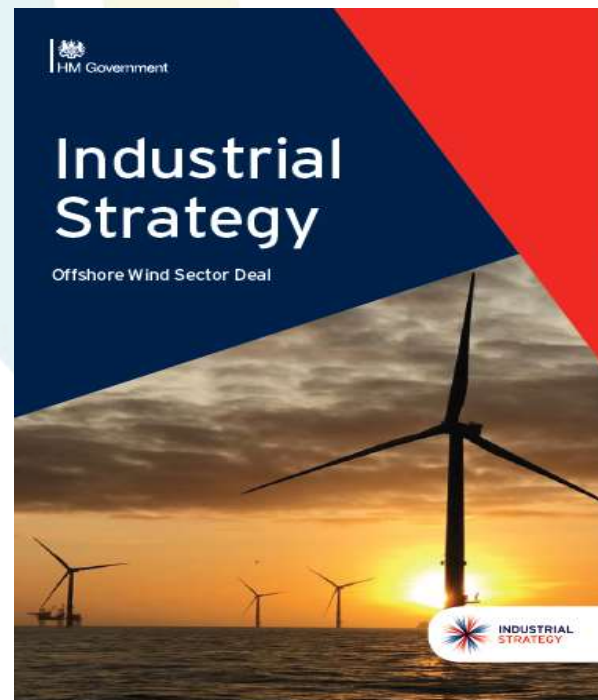
- 9.3GW across UK
- 7,200 direct jobs
- On track to generate 10% of UK electricity next year
- Major part of energy sector
- 3.5GW in construction/pre-construction to come <2023
- Contract for Difference Allocation Round 3 Sept 2019
  - 5.5GW to be delivered 2023 – 2025
  - Strike prices of £39.65 & £41.61

# CfD Prices

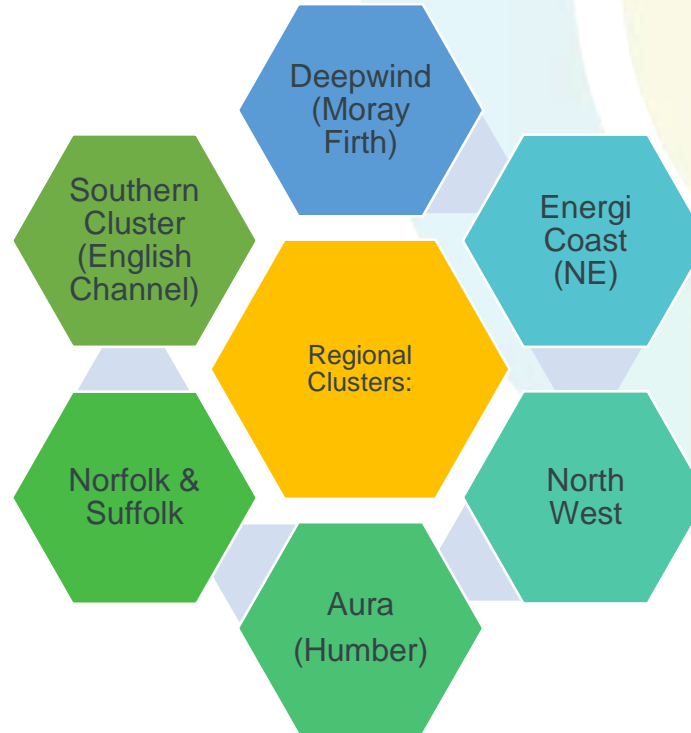


# Offshore Wind Sector Deal

- Bi-annual Contract for Difference rounds – delivery of 1-2GW pa
- By 2030:
  - 30GW in operation = 30% UK power needs
  - £40bn invested (~£2bn/GW)
  - 60 per cent UK content
  - 30% women in workforce
  - Increase exports x5 to £2.6bn
- Supply Chain
  - £100m growth fund
  - Clusters



# Clusters



Sector Deal Building Blocks:

Ideas



People



Infrastructure



Business Environment



Places

# Scotland

- Strong government support
- Home to leading national and international developers
- Key elements of supply chain in subsea, legal, financial, manufacture
- Flagship projects:
  - Robin Rigg (E.ON) 180MW - 2010
  - EOWDC (Vattenfall) 93MW - 2018
  - Hywind 2 Floating Demonstrator (Equinor) 30MW - 2018
  - Beatrice (SSE/RRP) 588MW - 2019

# Projects in Development

## Kincardine (KOWL)



**Developer:** KOWL

**Capacity:** 50MW (6 turbines)

**Status:** Site prep / Component manufacturing / Post-FiD

**Turbine ~ MVOW (9.5MW)**

**Foundations ~ Navantia (Floating)**

**Array cables:** Prysmian; **Export cables:** Prysmian

**Forecast online:** 2020

## Moray East (EDPR and Engie))



**Capacity:** 950MW (100 turbines)

**Status:** In construction

**Turbine ~ MVOW (9.5MW)**

**Foundations ~ Geosea (Jackets)**

**Array cables:** Boskalis; **Export cables:** NKT

**Substation:** Siemens / Smulders

**Forecast online:** 2022

## Neart na Gaoithe)



**Developer:** EDF Renewables

**Capacity:** 450MW (max 54 turbines)

**Forecast online:** 2023

# Consented Projects

## Moray West



**Developer:** EDP  
Renewables

**Capacity:** 800MW (max 85  
turbines)

**Forecast online:** TBC  
(unsuccessful in 2019 CfD  
round)

## Inch Cape



**Developer:** Red Rock  
Power

**Capacity:** max 72 turbines

**Forecast online:** TBC  
(unsuccessful in 2019 CfD  
round)

## Seagreen A&B



**Developer:** SSE

**Capacity:** ~1,500 MW

**Status:** CfD for 454MW  
secured in 2019 allocation

**Forecast online:** 2024/5

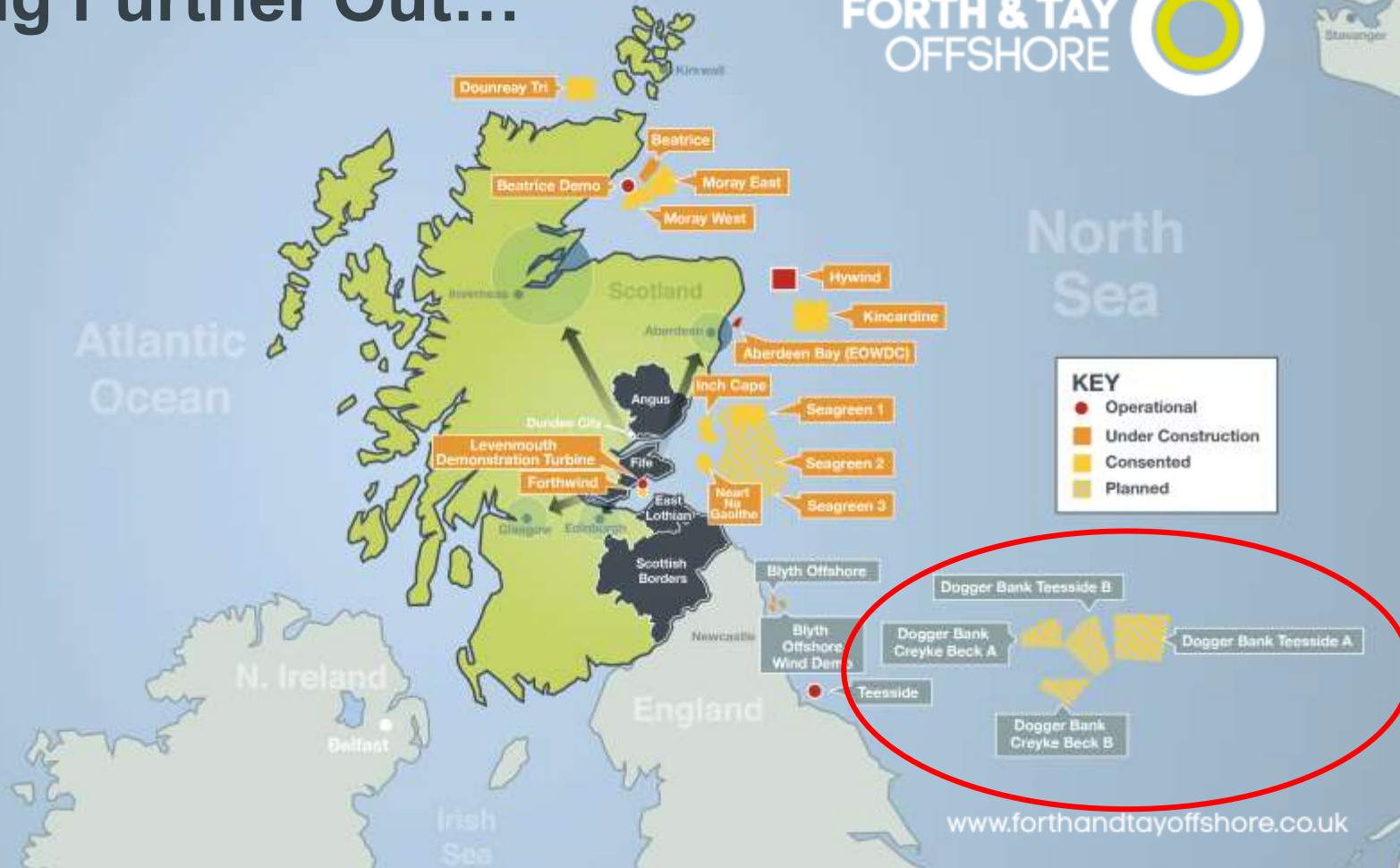
# Further Information

- Sign up to Cluster for:
  - Events updates
  - Project updates
- Complete surveys to be on cluster and Scottish Enterprise databases
- Contact Tier 1's
- Project websites:
  - <https://www.seagreenwindenergy.com/>
  - <https://nngoffshorewind.com/>
  - <http://www.inchcapewind.com/contact>

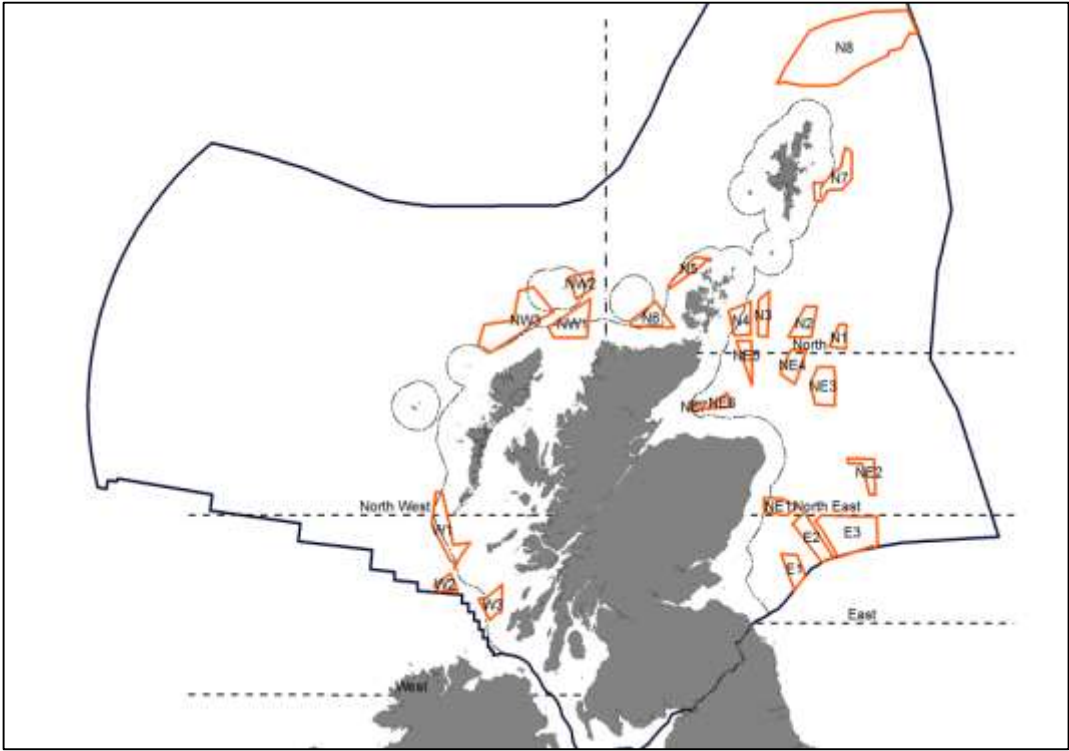


# Looking Further Out...

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OFFSHORE



# ScotWind and Round 4



# Policy Context

- Net Zero enshrined in law by UK and Scottish Governments
- Need to de-carbonise heat and transport through either:
  - Electrification
  - Hydrogen
- ⇒ Significantly more offshore wind!
- 75GW offshore wind by 2050...?!



# Summary

- UK
- Scotland
- Next Chapter

# FORTH & TAY OFFSHORE

Powering Scotland's East Coast



SUPPLY CHAIN



SKILLS



INNOVATION



PORTS



Thank You!





# An Insight from Industry

→ Robert Ledingham

A vertical strip on the left side of the slide shows a blue ocean with white-capped waves under a clear sky.

## OUR VISION

**To be the World Leader in Critical Safety and Survival Solutions for customers in the Marine, Offshore, Defence, Aviation and Renewable Energy markets**





# SUPPORT ACROSS ALL OPERATIONS

Lifeboats



LLRS



Fall Arrest



MES



Liferafts



Lifejackets



Immersion Suits



Fire Safety



Ancillary Items



Inspections & Maintenance



# SUMMARY OF PROJECT INVOLVEMENT

- **Lifejackets and Transfer Suits**
  - London Array
  - Galloper
  - Hornsea 1
  - Dudgeon
  - Hywind Scotland
- **Height Safety and Tooling**
  - Sheringham Shoal
- **Lifejackets and MRT AU10 (PLB)**
  - Gemini – The Netherlands
  - Veja Mate – Germany
- **McMurdo Fastfind 220 (PLB)**
  - Riffund
  - Aberdeen Bay
  - Rampion
  - Walney



# PATHWAY INTO THE INDUSTRY

- **Identified a gap in critical safety equipment provision specific to the wind market**
  - Gen.2 immersion suit.
  - Suitable for aviation and marine transfer and constant wear applications.
  - Bespoke to the wind industry.
- **Reviewed the Survitec wind energy business to date**
  - Identified that we only accounted for 2% of the addressable market for immersion suits in 2017-2018.
  - Global Key Account manager to offshore wind appointed.
  - Global strategy to be reorganised to address all energy opportunities.
  - Aberdeen base is to become Survitec's centre of excellence for wind energy.
- **Attendance at events (growing our profile)**
  - Workshops
  - Supply chain events
  - Lunch and learns with customers
  - Demonstration days (strength of products), Heli PPE for Horsea 1



# OPPORTUNITIES

- **Multiple offshore windfarms in the UK, each requiring bespoke solutions to their environmental and operational needs.**
- **Young industry where there are still gaps in specialised and bespoke solutions**
  - Current solutions are available but not used.
  - New solutions need to be devised.

## **Example: The Evacuator**

- Fireproof collective evacuation device



# CHALLENGES

- **Operator dependency on content local to head quarters and existing supply chain.**
- **Differing working standards between operators, with no set legislation like we see in the oil and gas world**
- **Made quick ground with individual windfarms, but the real challenge has been the overarching energy majors.**
- **Ambiguity of local content statement.**



# FORTH AND TAY CLUSTER

- Survitec has offices around Scotland.
- Promote local content and people.
- Share learning between members.
- Keep up-to-date with available support services.
- Creation of jobs and keeping them here.

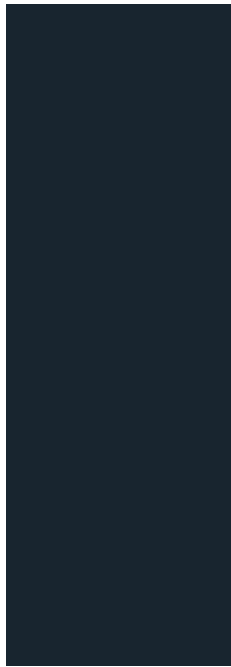




# Thank you



[SURVITEC.COM](https://www.survitec.com)



## Forth and Tay Offshore Wind Briefing Event

27/9/19

Hugh Riddell, Regional Partnership Manger



10

## Innovate UK

Designed to transform the UK's capability for innovation

Core grant leveraged with industry and other public funding

### Regional Centres

#### Satellite Applications

- North East
- Scotland
- South West
- South Coast
- East Midlands

#### Digital

- North East and Tees Valley
- Yorkshire
- Brighton
- Northern Ireland

#### Offshore Renewable Energy

- Glasgow
- Blyth
- Livermouth

#### High Value Manufacturing

- AFRC - Strathclyde
- NCC - Bristol
- CR - Willans/Sedgefield/Darlington
- AMRC and NAMRC - Rotherham
- MTC - Amey
- WMG - Coventry

#### Future Cities

- London

#### Cell and Gene Therapy

- Stevenage
- London

#### Digital

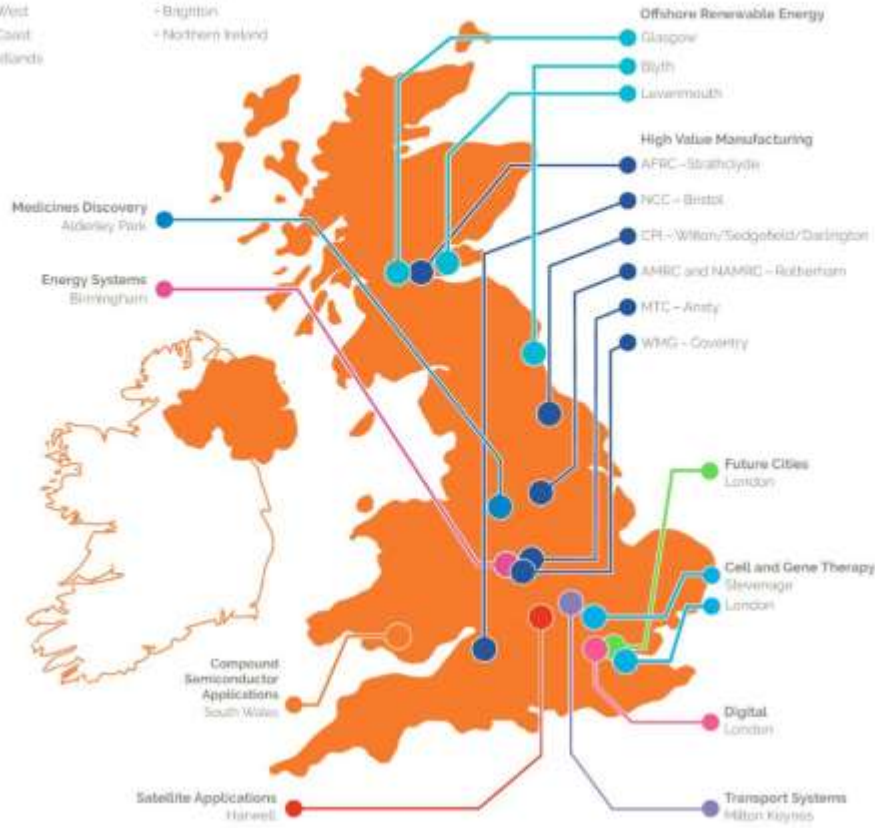
- London

#### Satellite Applications

- Harwell

#### Transport Systems

- Milton Keynes



## Our mission

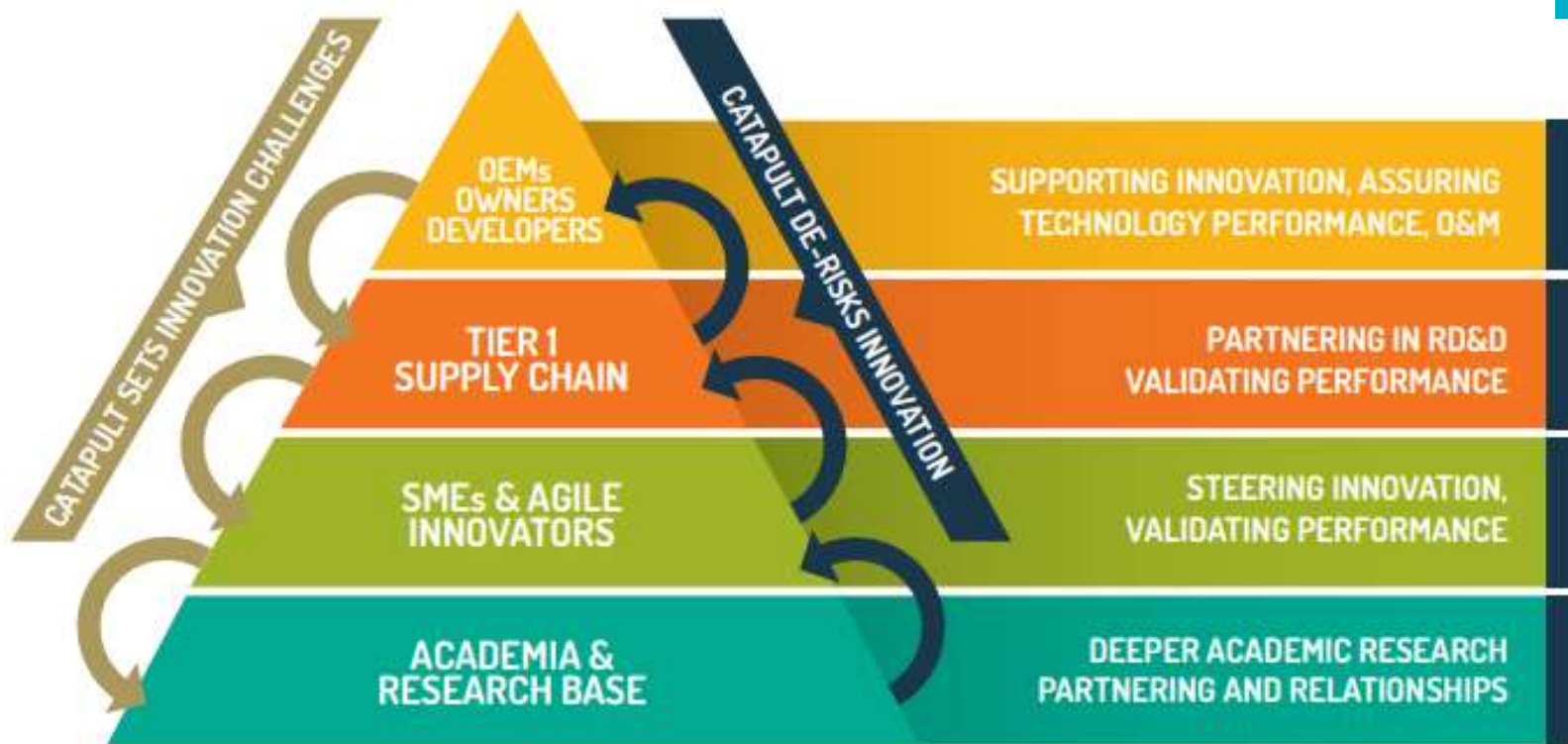
*To accelerate the creation and growth of UK companies in the ORE sector*

## Our vision

*By 2023, ORE Catapult will be the world's leading offshore renewables technology centre*

- Centres of Excellence
- Academic Research Hubs in partnership with leading universities
- Expanding our assets in Blyth and Levenmouth the world's foremost open-access facilities





**OPERATING £1/4BN OF WORLD-LEADING TEST AND DEMONSTRATION FACILITIES IN SUPPORT OF UK INNOVATION**

## OUR IMPACT IN 2018/19

113



Active R&D Projects

252 since 2013

55



International Projects

80 since 2013

49%



Year-On-Year Uplift in Total Revenue

158



SMEs Supported

597 since 2013

120



Industry Collaborations

1848 since 2013

1.4bn



Value of Test Facilities

49



Academic Collaborations

469 since 2013

8%



Year-On-Year Uplift in Comparative R&D

36

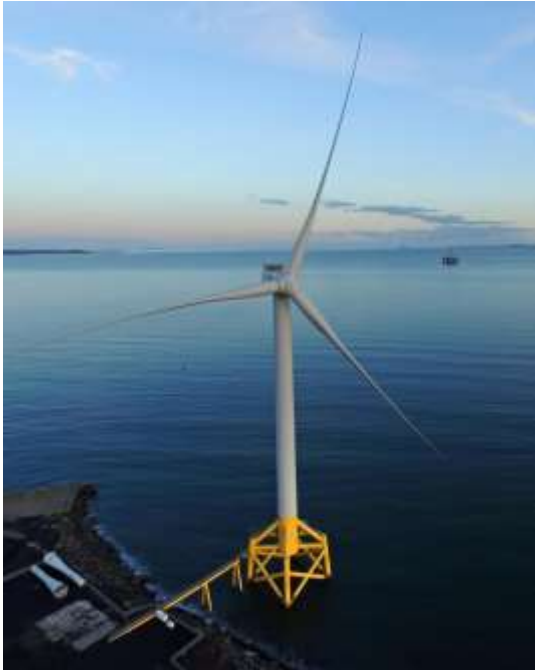


Companies Supported with Product Development

144 since 2013

# Levenmouth Demonstration Turbine

- The largest open access demonstration turbine in the world
- SME technology demonstration access to Levenmouth offshore wind turbine to prove and commercialise innovative new sensing technologies.
- SMEs, such as Limpet Technology, gain access to a full-scale operational turbine



*Limpet Technology Demonstration*



## BLADES

- Test & validate next generation 100m+ offshore wind turbine blades
- Develop and test innovative solutions for rain erosion (e.g. composite materials)
- Accelerate innovative blade designs and materials

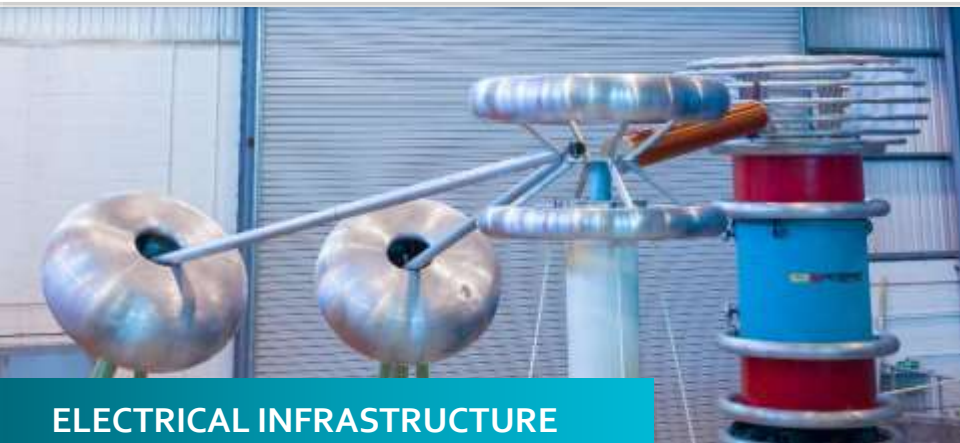
**FACILITIES:** 100m and 50m Blade Test Halls  
Blade Erosion Test Rig  
Wind Turbine Blade Test Facility



## POWERTRAINS

- Test & validate next generation 10MW+ offshore wind turbine powertrains
- Accelerate innovative powertrain technology, from Sub-1MW to 3MW
- Support development of critical powertrain components: bearings, gearbox, generator

**FACILITIES:** 1MW, 3MW, 15MW Powertrain Facilities  
Wind Turbine Bearing Test Facility



## ELECTRICAL INFRASTRUCTURE

- Test & validate the market's largest cables - 66kV - through ageing, insulation breakdown and failure analysis
- Dynamic cable fatigue testing - for the future development of floating wind

**FACILITIES:** HV and Materials Labs  
Pre-qualification bays  
Dynamic cable rig

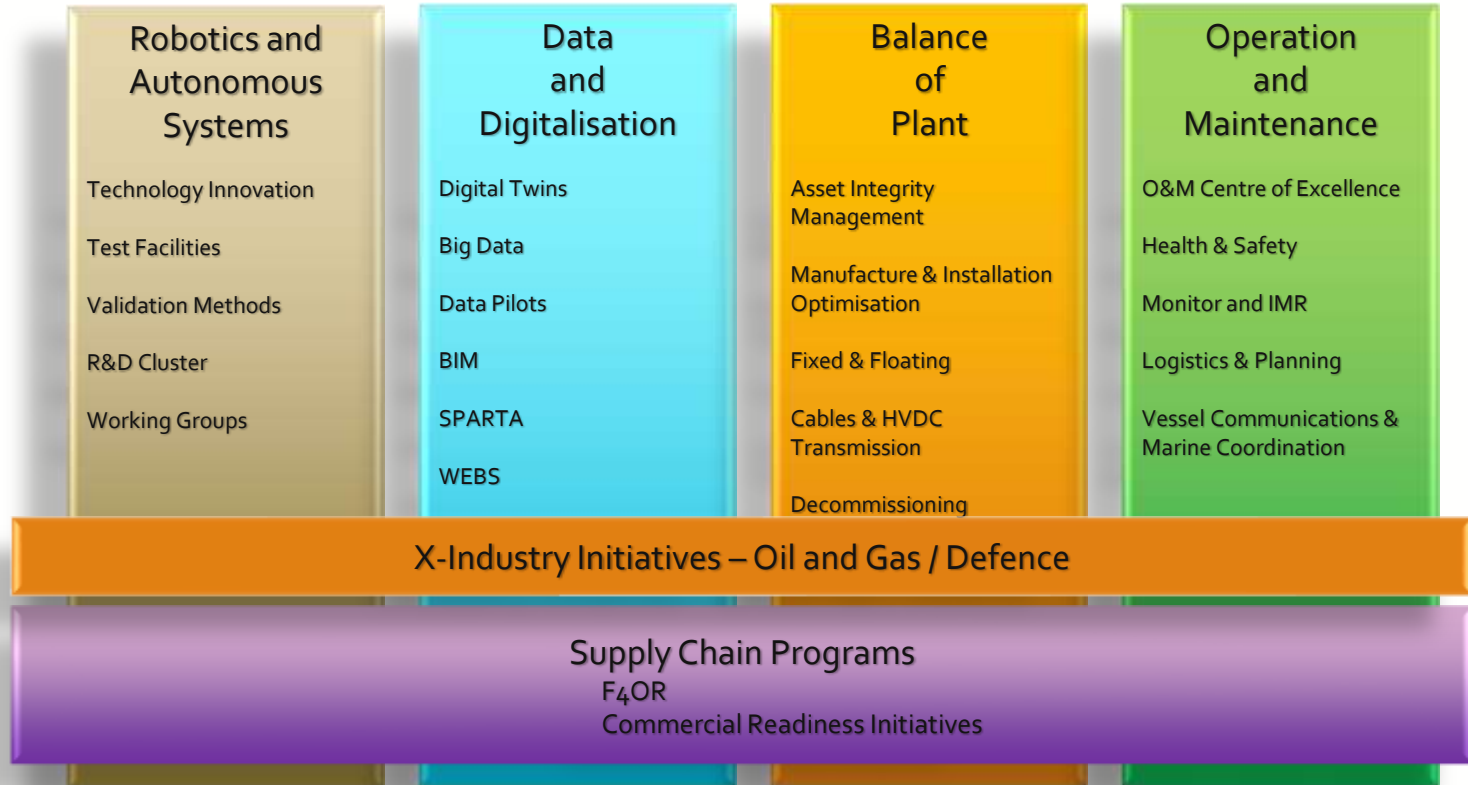


## O&M TECHNOLOGY TEST & VALIDATION

- Test robotics & autonomous systems (RAS) using controlled subsea dock environment, training tower (drones) and blades (blade inspection)
- Wet and dry controlled dock environment testing:
  - Cable inspection, protection and connection systems
  - Subsea & topside balance of plant

**FACILITIES:** Subsea docks  
Training tower  
Blade sections

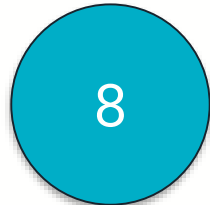
## The Four 'Pillars' of Operational Performance





## Vattenfall – EOWDC (Aberdeen Bay)

- 11 turbine array 2.5km from beach (2 x 8.8MW & 9 x 8.4MW)
- Unique opportunity for UK Innovators to work with ORE Catapult to bring new technologies to the market through testing in a real-world environment
- Collaboration to advance cost reduction and improve safety in offshore wind.
- ORE Catapult submit innovation concepts for selection, demonstration and review annually



Technology demonstrations approved by Vattenfall



**£10,000  
Prize Pot**

*"Provide an accurate wind farm Power Available (PA) measurement using data that is already available at operational wind farms"*

- Teams of up to six
- Any background: data, wind, researchers, businesses
- Registrations open till 18<sup>th</sup> October
- Opportunity to pitch technologies to ScottishPower Renewables

<https://ore.catapult.org.uk/stories/offshore-wind-hackathon/>

## Offshore wind technical issues

OEMs and utility companies have:

- Confidential engineering challenges to solve with no time to explore markets
- Low exposure to companies outside the offshore wind supply chain



A platform for solving industry challenges

## Technical solutions from other sectors

Solution providers find it difficult to:

- Find the right person within a target customer's organisation
- Prove the value proposition of products
- Understand customer's time constraints



## TURBINES

Developing the next generation of offshore wind turbines, incorporating all the technology that forms the structural and operational elements of the wind turbine generator.



## SUBSTRUCTURES

Innovations in fixed and floating wind turbine foundations and substructures, including transition pieces.



## ELECTRICAL INFRASTRUCTURE

Moving to next generation electrical infrastructure including array cabling, power transmission, grid integration, and onshore & offshore substations.



## O&M AND WINDFARM LIFECYCLE

Optimising and future-proofing all services associated with offshore wind, including site development, installation, wind farm O&M, condition monitoring, and decommissioning.



69

Applications across seven challenges in two competitions



20

UK Companies given the opportunity to pitch their ideas to and OEM and utility company



6

Companies progressing with demonstration projects with OEM and utility company (further two pending)

5

Businesses now developing technology funding applications (four with ORE Catapult)



## KTN IX Challenge: Generator Pole Shoe Inspection and Tightening

The generator pole shoe bolt connection on the GE Haliade-X units need to be inspected within an interval of 36 months after commissioning is complete. Companies are required to develop a semi or fully autonomous device that is capable to perform the inspection of the pole shoe connection.



## KTN IX Challenge: Blade Inspections & Repairs

The harsh environmental conditions that apply to an offshore wind turbine create the need for regular inspections, maintenance and repair of the blades and its subcomponents. GE seeks an inspection method that eases the job by eliminating human resource exposure to rope climbing.

[VIEW >](#)



## Lightning Protection System Inspection

Develop an innovative, cost-effective solution for inspecting blade lightning protection systems.

[VIEW >](#)



# What is the Launch Academy

Filtering best solutions

Equipping for growth

New solutions entering the market

Outcomes



- ▶ COST REDUCTION
- ▶ INCREASED UK CONTENT
- ▶ UK ECONOMIC GROWTH
- ▶ ENHANCED UK SUPPLY CHAIN

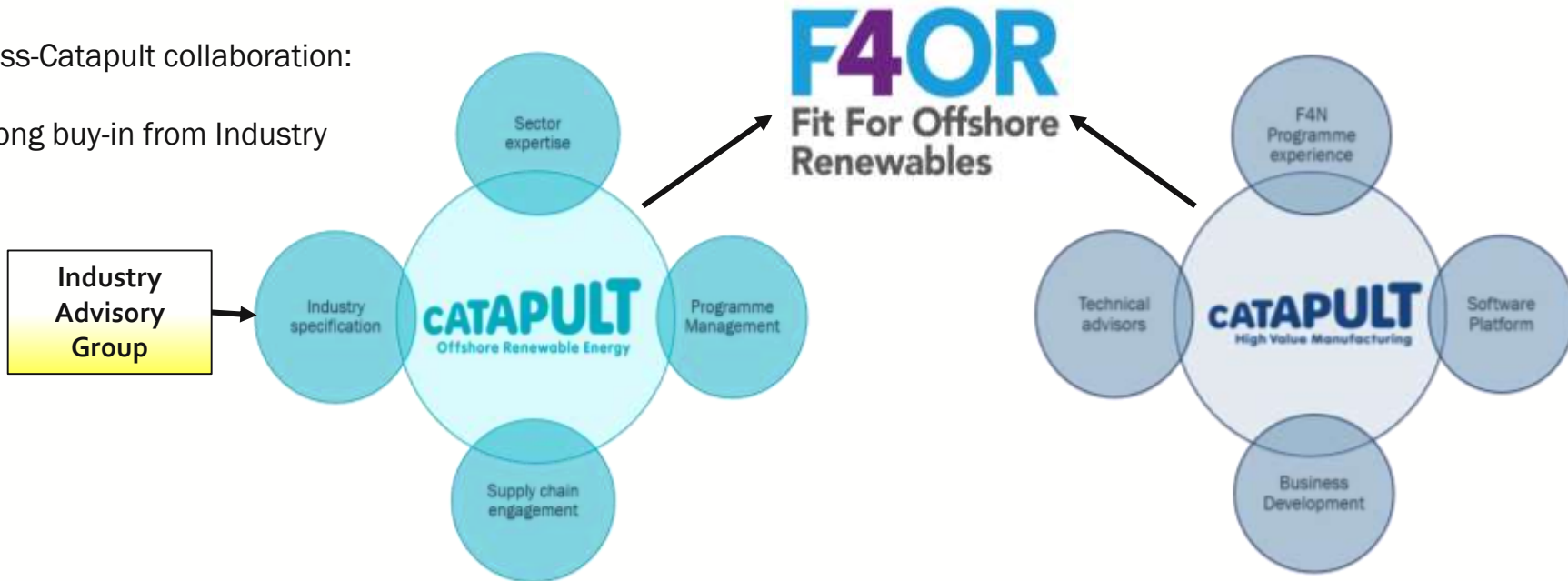
Partners:



SIEMENS Gamesa



- The National F4OR programme is currently under development (building on the success of the Scottish Pilot)
- National Programme Launch is planned for Oct/Nov 2019
- Cross-Catapult collaboration:
- Strong buy-in from Industry



# Offshore Wind Growth Partnership (OWGP)



## Objectives

Increased competitiveness of UK supply chain leading to:

- Increased UK content in UK projects.
- Increased exports to global markets.

## Funding

- OWIC (offshore wind developers) are funding OWGP.

## Delivery

Budget of £100m over ten years to provide:

- Analysis – strategic capability assessments
- Services – expert advisory services to supply chain
- Grants – for innovation and prototypes





# Targeting high growth potential companies

## Who?

- ✓ work in offshore wind sector
- ✓ create new sustainable jobs
- ✓ increase exports to global markets
- ✓ develop UK owned IP
- ✓ bring cross-sector skills and experience

## What?

- Support to participants through a series of interventions

## How?

- National programme with reach via clusters
- Engagement with OWIC members



# Four core strands of activity

Enhanced engagement between developers and supply chain.

Developer-led activity

A

Collaborating for Growth

Business Competitiveness

An intensive structured business improvement programme.

B

Increasing the breadth of the UK supply chain by attracting cross-sector companies.

C

Building New Capacity

Supply Chain Futures

Developing growth based on new UK intellectual property.

D

## Business Competitiveness

- **Target:** Innovation in manufacturing/fabrication
- **Objective 1:** Encourage companies to explore new ways of working
- **Objective 2:** Build ecosystem of delivery partners
- **Delivery:** Access to manufacturing advisory services\*

## Supply Chain Futures

- **Target:** Next generation products and services
- **Objective 1:** Enable technology development planning
- **Objective 2:** Engage with developers and Tier 1s at early stage
- **Delivery:** Grant funding for feasibility studies

# Contact us

## GLASGOW

Inovo  
121 George Street  
Glasgow  
G1 1RD

T +44 (0)333 004 1400

## BLYTH

National Renewable  
Energy Centre  
Offshore House  
Albert Street  
Blyth, Northumberland  
NE24 1LZ

T +44 (0)1670 359 555

## LEVENMOUTH

Fife Renewables  
Innovation Centre (FRIC)  
Ajax Way  
Leven  
KY8 3RS

T +44 (0)1670 359 555

## HULL

O&M Centre of Excellence  
Ergo Centre  
Bridgehead Business Park  
Meadow Road, Hessle  
HU13 0GD

## Aberdeen

Subsea UK Building  
30 Abercrombie Court  
Arnhall Business Park  
Prospect Road  
Westhill, Aberdeenshire  
AB32 6FE





# Floating Wind Technology Accelerator

Dan Kyle Spearman  
Carbon Trust



# Floating Wind Technology Acceleration Competition

**£1m**

Scottish Gov't  
Grant Funding

**3-7**

TRL eligible

**£250k**

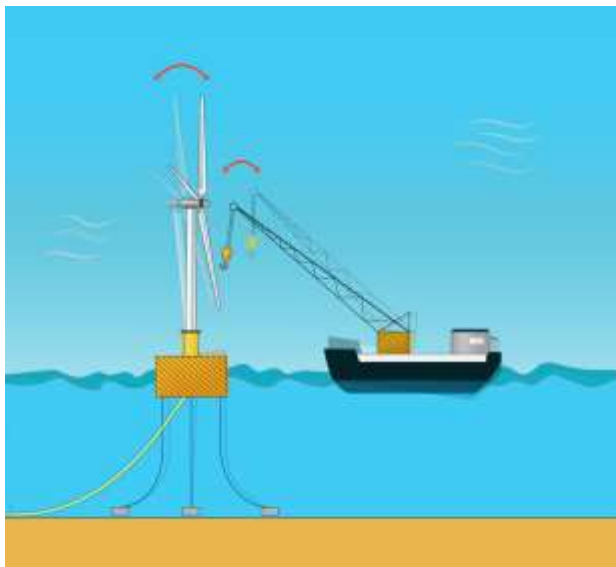
Max. grant per  
project

**12-14  
months**

Project  
duration

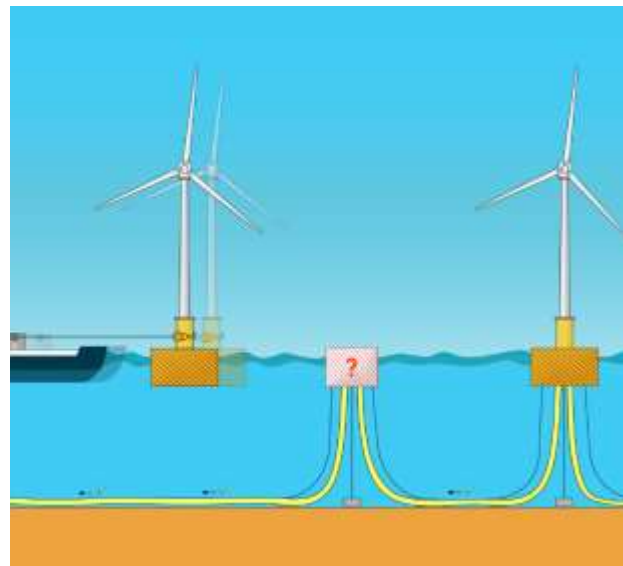
- Objective is to support the development of technologies which will accelerate the deployment of floating offshore wind in Scotland.
- Project is supported by the Floating Wind JIP: 14 leading offshore wind developers & Carbon Trust, supported by Scottish Government.
- Looking to address four main challenges but also open to other technology ideas under 'Miscellaneous' category.

# Floating Wind Technology Acceleration Competition

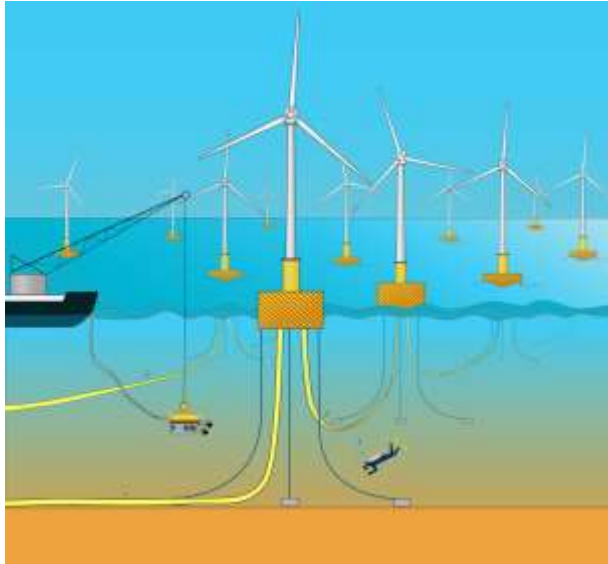


1. Safe and cost-effective exchange of large turbine components offshore

2. Safe and cost-effective disconnection and re-connection of offshore foundation structures

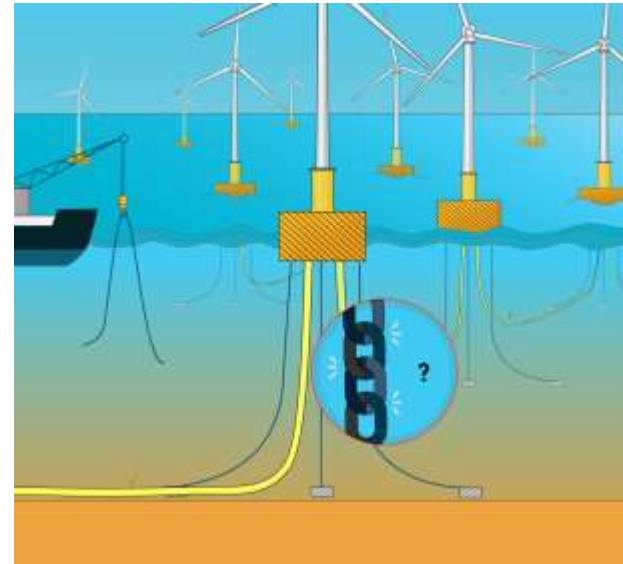


# Floating Wind Technology Acceleration Competition



3. Cost-effective monitoring and inspection of large numbers of mooring lines, cables and foundation structures.

4. Cost effective manufacturing, installation and maintenance of mooring lines and anchors





## Floating Wind Technology Acceleration Competition


- Deadline for Applications is 09:00 on **Tuesday 5<sup>th</sup> November**
- Shortlisted applications will be invited to present to Floating Wind JIP Developers in London between **3<sup>rd</sup> and 5<sup>th</sup> December**
- Successful projects will be expected to start by early January 2020 and be completed by end January 2021.
- For further information and to apply please visit:  
<https://www.carbontrust.com/about-us/tenders/floating-wind-technology-acceleration-competition/>
- Please send any questions to [floatingwind@carbontrust.com](mailto:floatingwind@carbontrust.com)

**BUSINESS  
BREAKFASTS**

North Queensferry • Musselburgh • Dundee • Aberdeen

**FORTH & TAY  
OFFSHORE**   
Powering Scotland's East Coast

# Support for the supply chain



Isla Robb  
Scottish Enterprise

# Scottish Enterprise offshore wind support



- **Supply Chain Workshops** - Exploring specific supply chain opportunities
- **Meet the Buyer Events** - Tailored events with leading OEMs and developers



- **Energy Markets Expert Support Programme** - Up to two days of FREE one-to-one support on market and technology appraisal, plus 4 days 50% funded
  - Offshore wind
  - Heat
  - Water
  - Energy Systems
  - O&G decomm
  - Nuclear decomm
  - Low carbon Transport



- **Technical Solutions Workshops** - Sessions focussing on specific industry challenges and potential solutions

- **Supply Chain Database**

# Oil, Gas & Energy

27 September 2019

Colin McHardy  
Diversification Manager: Oil, Gas & Energy  
Tel: 01224 061100



A person is shown from the chest up, holding a glass of wine. They are in a vineyard with rows of grapevines in the background. The scene is bathed in a warm, golden light, suggesting late afternoon or early morning.

**FOOD, DRINK &  
AGRICULTURE**

A laboratory setting with several glass beakers and test tubes on a surface. The lighting is a soft, warm orange, creating a focused and scientific atmosphere.

**LIFE SCIENCES**

A large offshore oil rig or platform in the ocean. The structure is complex with many levels, pipes, and cranes. The image is tinted with a cool, blue-green color, emphasizing the industrial and energy sectors.

**OIL, GAS & ENERGY**

A group of people, including a woman in sunglasses and a man, are smiling and looking towards the camera. They appear to be in a social or travel setting, possibly at a festival or event.

**TOURISM**

A woman is sitting at a desk in an office or workspace, looking down at a laptop. She is wearing a dark top and has her hair pulled back. The background shows other office equipment and a bright, clean environment.

**DIGITAL &  
ENTREPRENEURSHIP**



- **Establishing a leading position within energy transition** - focus on accelerating the creation of a strong and diverse industrial cluster focused on low carbon energy solutions underpinning Aberdeen's position as a leading global energy city
- **Anchor the supply chain**, with its high-value employment and breadth of skills and expertise in the region for the long-term through internationalisation, decommissioning and diversification with a focus on energy transition
- **Accelerate digital transformation within the supply chain** to enhance competitiveness and productivity through supporting their adoption of digital technology.



## Diversification

- ONE and SE joint project to support diversification of the oil & gas supply chain into new sectors that will help accelerate the energy transition
- Provide SMEs with **understanding of industry challenges and commercial opportunities** in diversification markets
- **Facilitate SME access to customers** in these markets
- Provide **one-to-one support** to SMEs to build capacity and enable them to pursue/secure new business
- Provide customers in diversification markets with access to **motivated, informed and capable supply chain SMEs**
- SE research – supply chain has increased sales from non-oil & gas markets from 22% to almost a third (32%) in a year, demonstrating the **pace of change**



## Offshore Wind

- Major offshore renewable projects happening in the north east
- Oil & gas industry's commercial, engineering, design and technical skills, knowledge and expertise are being applied to advance the scaling of offshore renewables
- Established companies supporting the sector



# Aberdeen Renewable Energy Group

- Wants Aberdeen City and Shire to be as famous for renewables as it is for oil and gas
- Dedicated to the acceleration of supply chain growth in North East Scotland
- Developing wide reaching links, networks and partnerships of commercial benefit to members
- One of the longest established renewable energy development organisations in the UK
- Creating new initiatives and facilitating the development of projects



DELIVERING A RENEWABLES FUTURE



# AREG services

- Active and targeted promotion of members and their capabilities through media, publications, exhibitions, events across the UK, and through extensive network
- Briefings and seminars tailored to membership interests – technical, commercial, technology, innovation, legislation and policy, projects and key players
- Widely circulated weekly e-bulletin – market intelligence, featured members, relevant events
- Newsletters
- International supply chain development - market briefings, inward missions from key markets, facilitation of market access
- Business development advice



DELIVERING A RENEWABLES FUTURE



# Scottish Development International

Trade Team



**Overseas staff**  
in **30+** offices  
in **23**  
countries,  
providing  
trade support  
to companies  
identifying  
trade  
development  
opportunities



**Trade specialists**  
in Scotland  
providing 1-2-1  
support and  
strategic  
challenge to  
companies in  
key sector  
portfolios

# ENERGY ACTIVITY PLAN

July



Angola Mission (with EIC and DIT)

Ian Ross  
ANGOLA

[ian.ross@scotent.co.uk](mailto:ian.ross@scotent.co.uk)  
0141 468 5506

Sep



Offshore Europe Aberdeen

Denise  
Addie  
SCOTLAND

[denise.addie@scotent.co.uk](mailto:denise.addie@scotent.co.uk)  
0141 468 5298



Nuclear Decommissioning Japan  
(with DIT)

TBC  
JAPAN

[edward.friel@scotent.co.uk](mailto:edward.friel@scotent.co.uk)  
0141 468 5992



Nigeria/ Ghana Mission

Ian Ross  
NIGERIA

[ian.ross@scotent.co.uk](mailto:ian.ross@scotent.co.uk)  
0141 468 5506

Oct



Asia Offshore Wind Taiwan (with DIT)

TBC  
TAIWAN

[edward.friel@scotent.co.uk](mailto:edward.friel@scotent.co.uk)  
0141 468 5321



East Africa mission (showcase in hotel)

Ian Ross  
MOZAMBIQUE

[ian.ross@scotent.co.uk](mailto:ian.ross@scotent.co.uk)  
0141 468 5506



Mission to AWEA and key US  
offshore wind states (with partner)

John McGinnes  
USA

[john.mcginnes@scotent.co.uk](mailto:john.mcginnes@scotent.co.uk)  
0141 468 5618



Offshore Technology Days  
Show (with DIT)

Phil Stirling  
NORWAY

[phil.stirling@scotent.co.uk](mailto:phil.stirling@scotent.co.uk)  
0141 468 6009



China Wind Power Expo  
(with Renewable UK)

TBC  
CHINA

[edward.friel@scotent.co.uk](mailto:edward.friel@scotent.co.uk)  
0141 468 5321



OTC Brazil (with DIT)

Marion Murray  
BRAZIL

[marion.murray@scotent.co.uk](mailto:marion.murray@scotent.co.uk)  
0141 468 5865

Nov



Offshore Wind Europe  
Copenhagen (With Renewable  
UK)

Adam Swainbank  
DENMARK

[adam\\_swainbank@scotent.co.uk](mailto:adam_swainbank@scotent.co.uk)  
0141 343 7928



Africa Oil Week Capetown

Ian Ross  
SOUTH AFRICA

[ian\\_ross@scotent.co.uk](mailto:ian_ross@scotent.co.uk)  
0141 468 5506



ADIPECExhibition (with EIC)

Hadi Fawzy  
ABU DHABI

[hadi.fawzy@scotent.co.uk](mailto:hadi.fawzy@scotent.co.uk)  
0141 468 5467

Jan



Guyana (DITled)

Marion Murray  
GUYANA

[marion\\_murray@scotent.co.uk](mailto:marion_murray@scotent.co.uk)  
0141 468 5865

Feb



India Petrotech (with DIT led  
by EIC)

TBC  
INDIA

[edward.friel@scotent.co.uk](mailto:edward.friel@scotent.co.uk)  
0141 468 5506



EGYPT

Hadi Fawzy  
EGYPT

[hadi.fawzy@scotent.co.uk](mailto:hadi.fawzy@scotent.co.uk)  
0141 468 5467



Mexico Mission (DITled)

Marion Murray  
MEXICO

[marion\\_murray@scotent.co.uk](mailto:marion_murray@scotent.co.uk)  
0141 468 5865



Wind Energy Expo (with EIC)

TBC  
JAPAN

[edward.friel@scotent.co.uk](mailto:edward.friel@scotent.co.uk)  
0141 468 5992

Mar



Brazil Mission (DITled)

Marion Murray  
BRAZIL

[marion\\_murray@scotent.co.uk](mailto:marion_murray@scotent.co.uk)  
0141 468 5865



CHINACIPPE (led by partners)

Ian Ross  
CHINA

[ian\\_ross@scotent.co.uk](mailto:ian_ross@scotent.co.uk)  
0141 468 5506



Australia Oil and Gas  
(with EIC)

TBC  
AUSTRALIA

[edward.friel@scotent.co.uk](mailto:edward.friel@scotent.co.uk)  
0141 343 7951



Energy Systems Mission  
to California (TBC)

John McGinnes  
USA

[john.mcginnes@scotent.co.uk](mailto:john.mcginnes@scotent.co.uk)  
0141 468 5618



Algeria Trade Mission

Hadi Fawzy  
ALGERIA

[hadi.fawzy@scotent.co.uk](mailto:hadi.fawzy@scotent.co.uk)  
0141 468 5467

# Support



**Scottish Investment Bank**  
helps SMEs access finance and  
invests alongside private sector  
partners from across the globe



**R&D Grant**  
supports

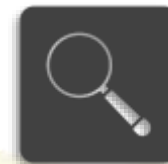
**RSA**  
for creating jobs in  
specific locations



**£20 million**  
for innovative  
energy projects  
(EIF)

**SMAS**  
Scottish Manufacturing  
Advisory Service

**Brexit support**  
**service** with PrepareForBrexit.scot



**R&D Tax Credits** for  
new products and  
services



**Scottish Cyber Voucher**  
**Digital Development Loan**



Offshore Renewable Energy Catapult

PNDC

ETP

National HVDC Centre

NSRI

Edinburgh centre for Robotics

Renewable Engine



**ORCA HUB**  
Offshore Robotics for Certification of Assets  
Remote Safety and Integrity



# Stay in touch

## Stay connected



[www.forthandtayoffshore.co.uk](http://www.forthandtayoffshore.co.uk)

[www.offshorewindscotland.org.uk](http://www.offshorewindscotland.org.uk)



# Questions...

Questions, questions, questions.....

....Answers, answers, answers

# Thank you

