



**CATAPULT**  
Offshore Renewable Energy

## Accelerating learning and best practice – An ORE Catapult perspective

Paul McKeever  
September 2022

# AGENDA

Question – How do we accelerate learning and sharing of best practice in ORE through international collaboration and what is the role of the Supergen ORE Hub in providing research leadership for ORE to achieve targets for 2030, 2050 and beyond?

- Overview of ORE Catapult Role
- International Collaboration
- Role of Supergen ORE Hub

# Overview of ORE Catapult Role – Accelerate learning/best practice

## THE OFFSHORE RENEWABLE ENERGY CATAPULT

The UK's leading technology innovation and research centre for offshore renewable energy

**Mission:** to accelerate the creation & growth of UK companies in the offshore renewable energy sector.

- Unique facilities, research & engineering capabilities
- Bringing together innovators, industry and academia
- Accelerating creation and growth of UK companies
- Reducing cost and risk in renewable technologies
- Growing UK economic value
- Enabling the transition to a low carbon economy



**CATAPULT**  
Offshore Renewable Energy

## THE OFFSHORE RENEWABLE ENERGY CATAPULT

- Over 200 engineering, research and sector experts
- World-leading test and demonstration facilities

### 8 UK Regional Centres

Aberdeen, Blyth, Fife, Glasgow, Hayle, The Humber, Lowestoft, Pembroke Dock

### 3 UK Academic Research Hubs

Universities of Manchester & Strathclyde – Electrical Infrastructure  
University of Bristol – Blades  
University of Sheffield – Power Trains

### International Research and Innovation Centre

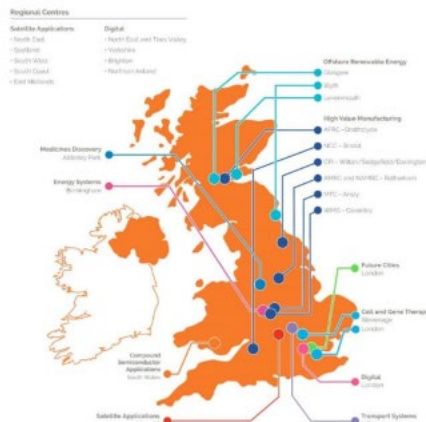
Yantai, China



**CATAPULT**  
Offshore Renewable Energy

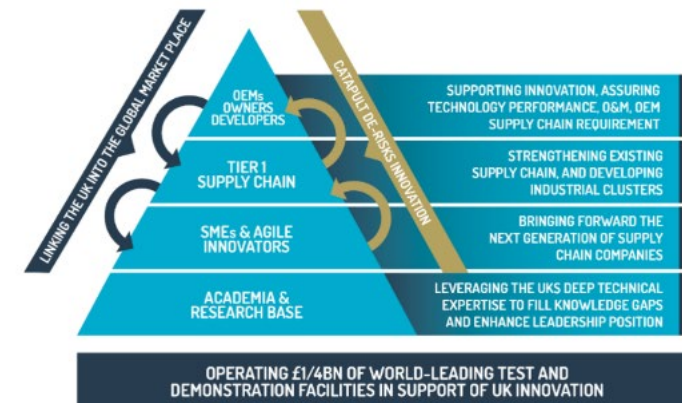
## THE CATAPULT NETWORK – A NATIONAL CAPABILITY

- Network of 9 world-leading technology innovation centres
- Supporting businesses in transforming great ideas into valuable products and services
- Independent, not-for-profit
- Delivering impact across the UK economy, enabling businesses to thrive in global markets



**CATAPULT**  
Offshore Renewable Energy

## THE ROLE OF ORE CATAPULT



**CATAPULT**  
Offshore Renewable Energy

# International Collaboration – Why?

- **ETIPWind** – Contains sector leading OEMs and Owners/Operators/Utilities; defines research and innovation (R&I) priorities
- **EERA JP Wind** – Provides strategic leadership for medium to long-term research for the European wind energy industry; brings together all public research organisations in Europe
- **WindEurope** – Leading trade association for our sector. Provides secretariat support for research/industry collaboration and lobbying platform for European Commission engagement.
- **IEA Wind** – Establishes global collaboration research platform. Coordinates task groups for key issues of the day (e.g. Task 25)
- **US** – Collaboration with US research community, e.g. NREL; the US has similar challenges and ambitions (10s GW of offshore wind)

**Provides excellent positioning and networking to inform the UK community of the technology and innovation opportunities within the sector.**



## DRIVING ECONOMIC GROWTH

- **Thought leadership**
  - In depth Analysis & Insight
  - Economic and Cost modelling
  - Market research
  - Policy influence
  - Energy transition
- **Identifying innovation priorities**
  - UK Government-funded Offshore Wind Innovation Hub, aligned with industry
  - Innovation challenges to supply chain to meet technology requirements
- **Industry Leadership**
  - Offshore Wind Industry Council and Sector Deal delivery
  - Scottish Offshore Wind Energy Council
  - Addressing devolved Government innovation and renewable energy priorities
- **Strong support to SME innovators**
  - Technology evaluation and validation
  - Helping secure investment
  - Growth programmes
    - Launch Academy, Fit for Offshore Renewables



# Role of Supergen ORE Hub

- Focus on UK benefit
- Link expenditure areas to technology themes
- Use national and international collaborations to establish R&I priorities
- Address shorter term/interim solutions for 2030 and longer term solutions for 2050

## SUPPORTING RESEARCHERS AND INNOVATORS THROUGHOUT THE UK

### Accelerated Next Generation Technology

- Next generation turbines of 12MW+
- UK research, supply chain growth and IP creation



### Energy System Integration

- Establishing UK leadership
- Demonstration facilities
- Hydrogen economy



### Floating Offshore Wind

- Accelerating commercialisation
- Developing first commercial scale floating offshore wind farm
- Developing core UK strengths



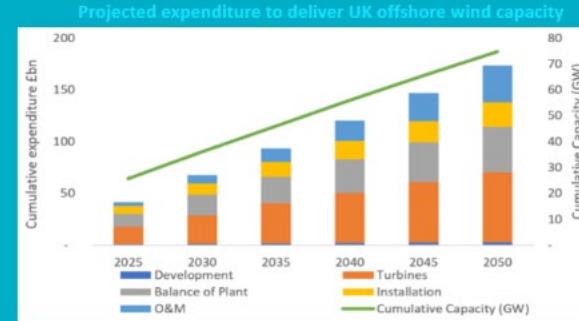
### Smart & Sustainable O&M

- Providing next-gen facilities for development and testing
- Creating decommissioning capability
- Securing innovation and cost understanding / reduction



## UK ECONOMIC GROWTH ON THE PATH TO NET ZERO

The UK needs to quadruple low-carbon power supply by 2050, including at least 75 GW of offshore wind\*



The UK growth potential from offshore renewables is truly enormous.



## DRIVING ECONOMIC GROWTH

- Thought leadership
  - In depth Analysis & Insight
  - Economic and Cost modelling
  - Market research
  - Policy influence
  - Energy transition
- Identifying innovation priorities
  - UK Government-funded Offshore Wind Innovation Hub, aligned with industry
  - Innovation challenges to supply chain to meet technology requirements
- Industry Leadership
  - Offshore Wind Industry Council and Sector Deal delivery
  - Scottish Offshore Wind Energy Council
  - Addressing devolved Government innovation and renewable energy priorities
- Strong support to SME innovators
  - Technology evaluation and validation
  - Helping secure investment
  - Growth programmes
    - Launch Academy, Fit for Offshore Renewables



## CONTACT US

Email us: [info@ore.catapult.org.uk](mailto:info@ore.catapult.org.uk)

Visit us: [ore.catapult.org.uk](http://ore.catapult.org.uk)

Engage with us:



GLASGOW

BLYTH

LEVENMOUTH

GRIMSBY

ABERDEEN

CHINA

LOWESTOFT

PEMBROKESHIRE

CORNWALL