



Floating wind - Size of the Prize

9 March 2021

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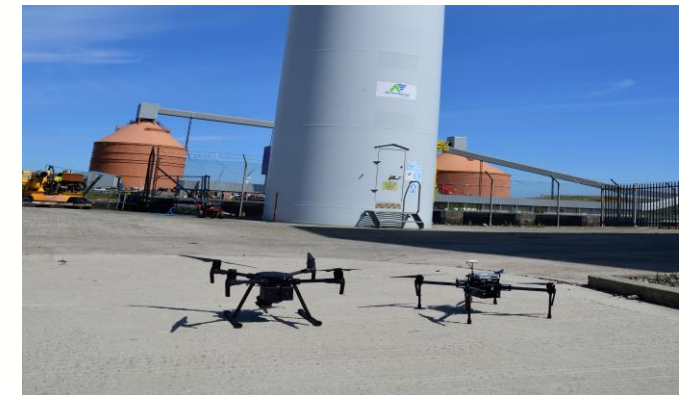
Agenda

- ORE Catapult
- Current and future global offshore wind capacity
- UK offshore wind and floating wind deployment profile
- Floating wind cost reduction
- Floating wind supply chain

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



- 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

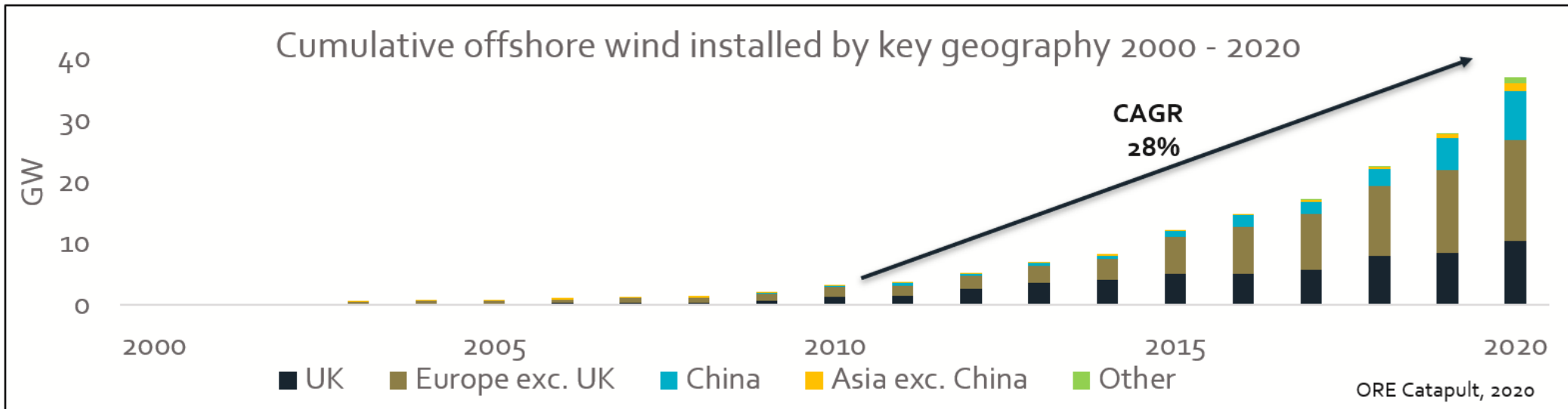
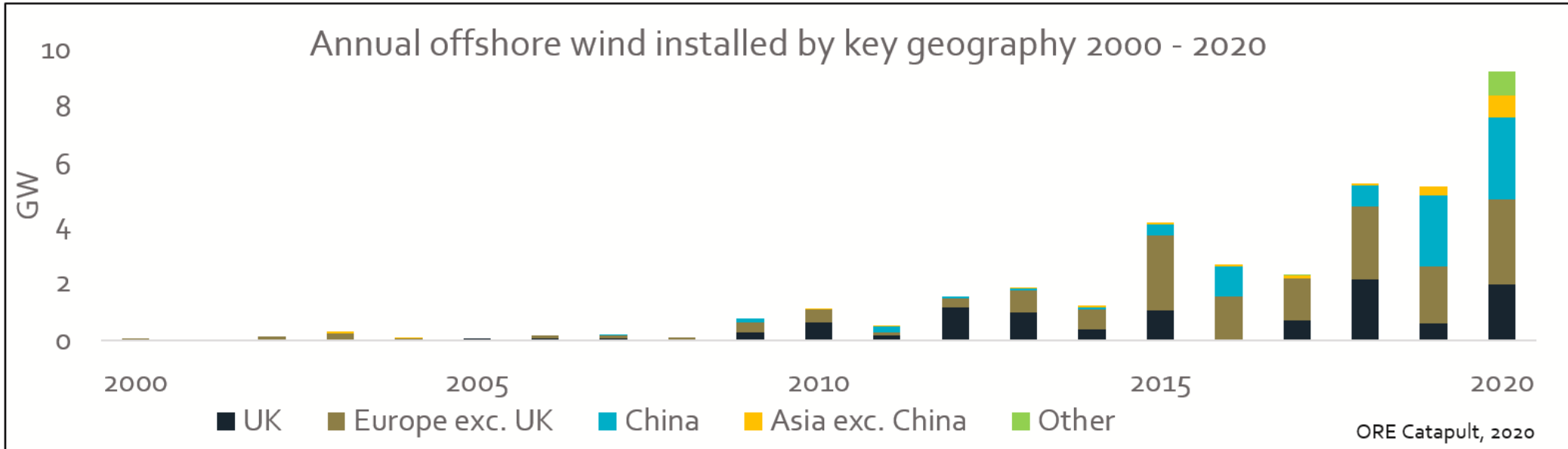
University of Sheffield - Power Trains

International Research and Innovation Centre

Yantai, China

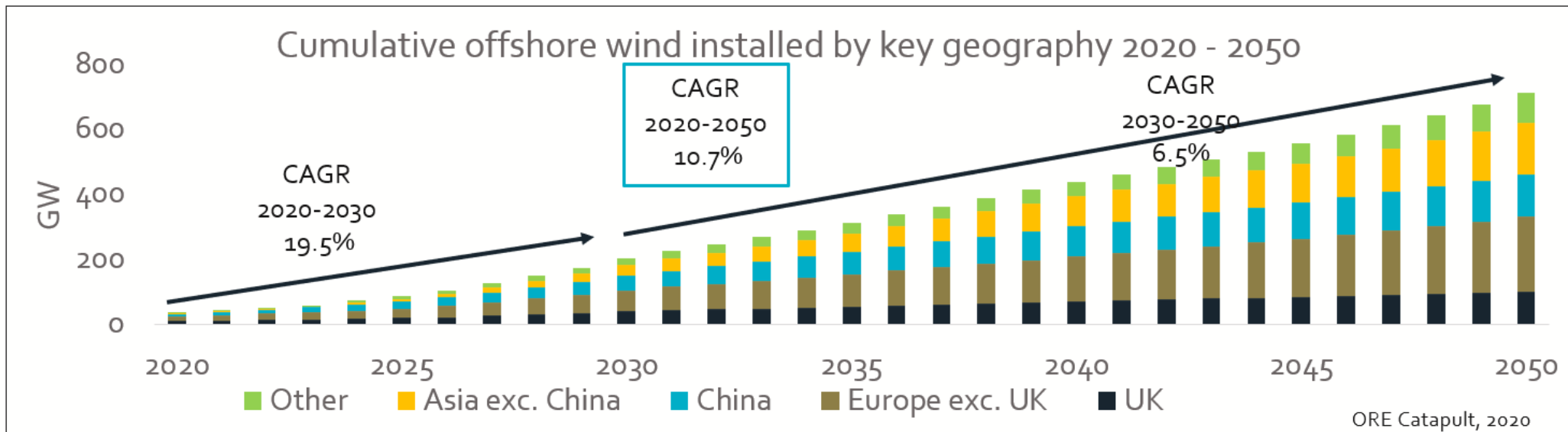
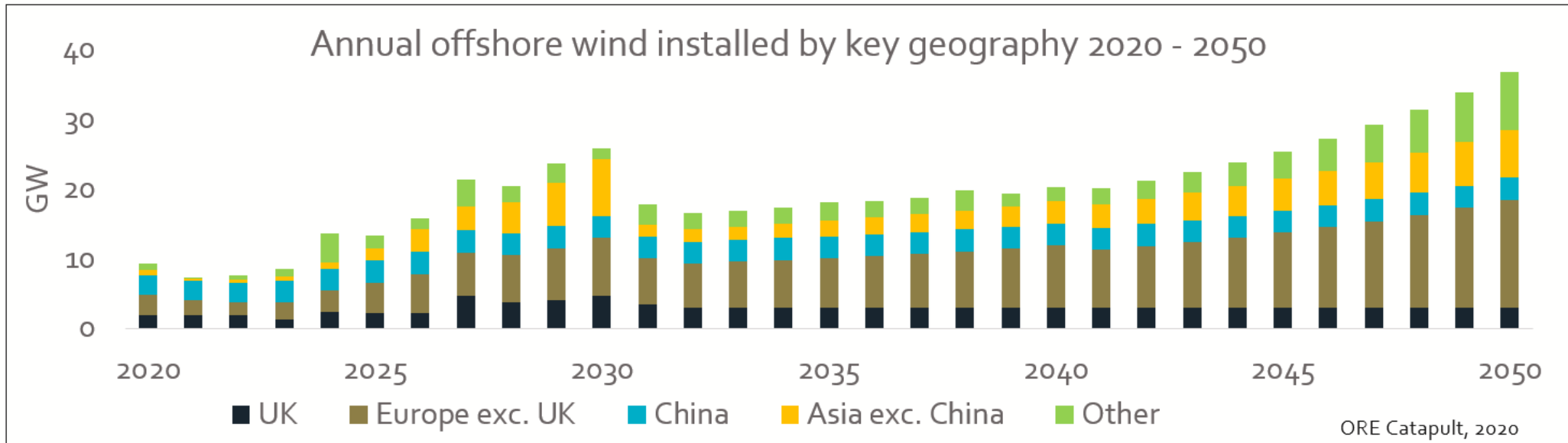


Offshore wind global capacity to date

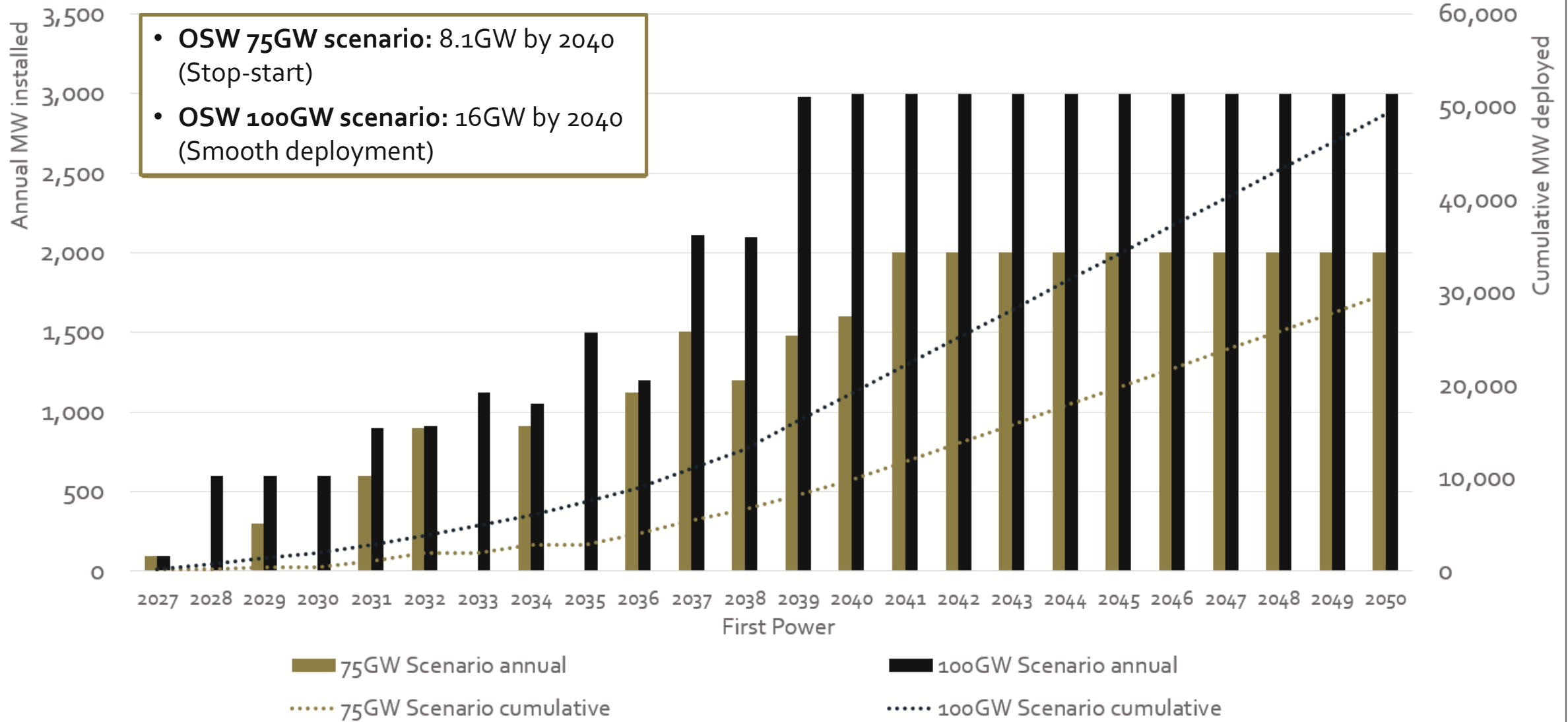


*CAGR = Compound annual growth rate

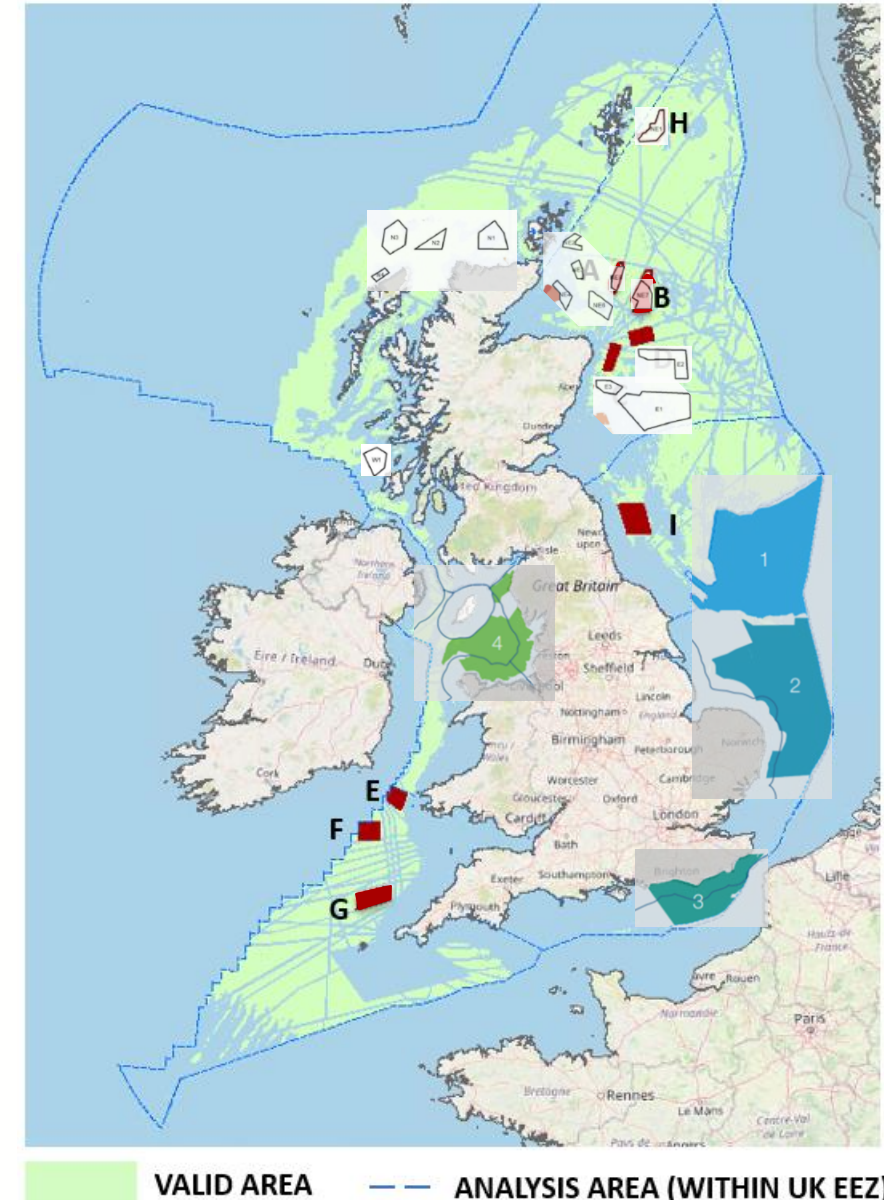
Offshore wind global capacity forward look



Annual FOW Installed Capacity

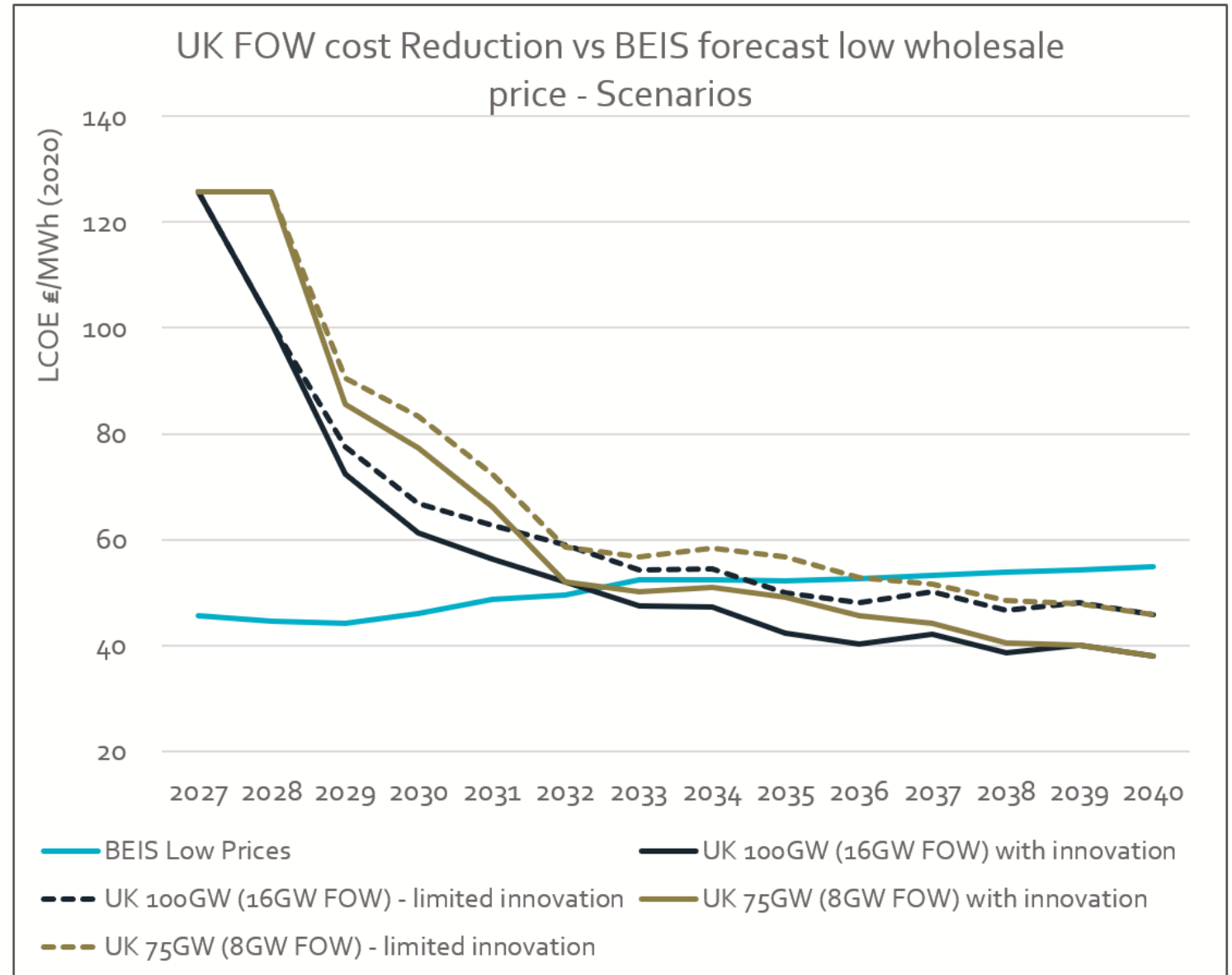


- 9 zones prioritised as preferential site conditions (19 GW)
- Biggest LCOE impact: distance to cable landfall + average significant wave height
- Lowest cost zones as being built-out in the first 16GW
- Lease award to CfD auction: 5 years -> streamline consenting
- ScotWind zones + bilateral T&D leases in England and Wales (2021-2022)
- Outside of ScotWind zones -> immediate work for leasing mechanism



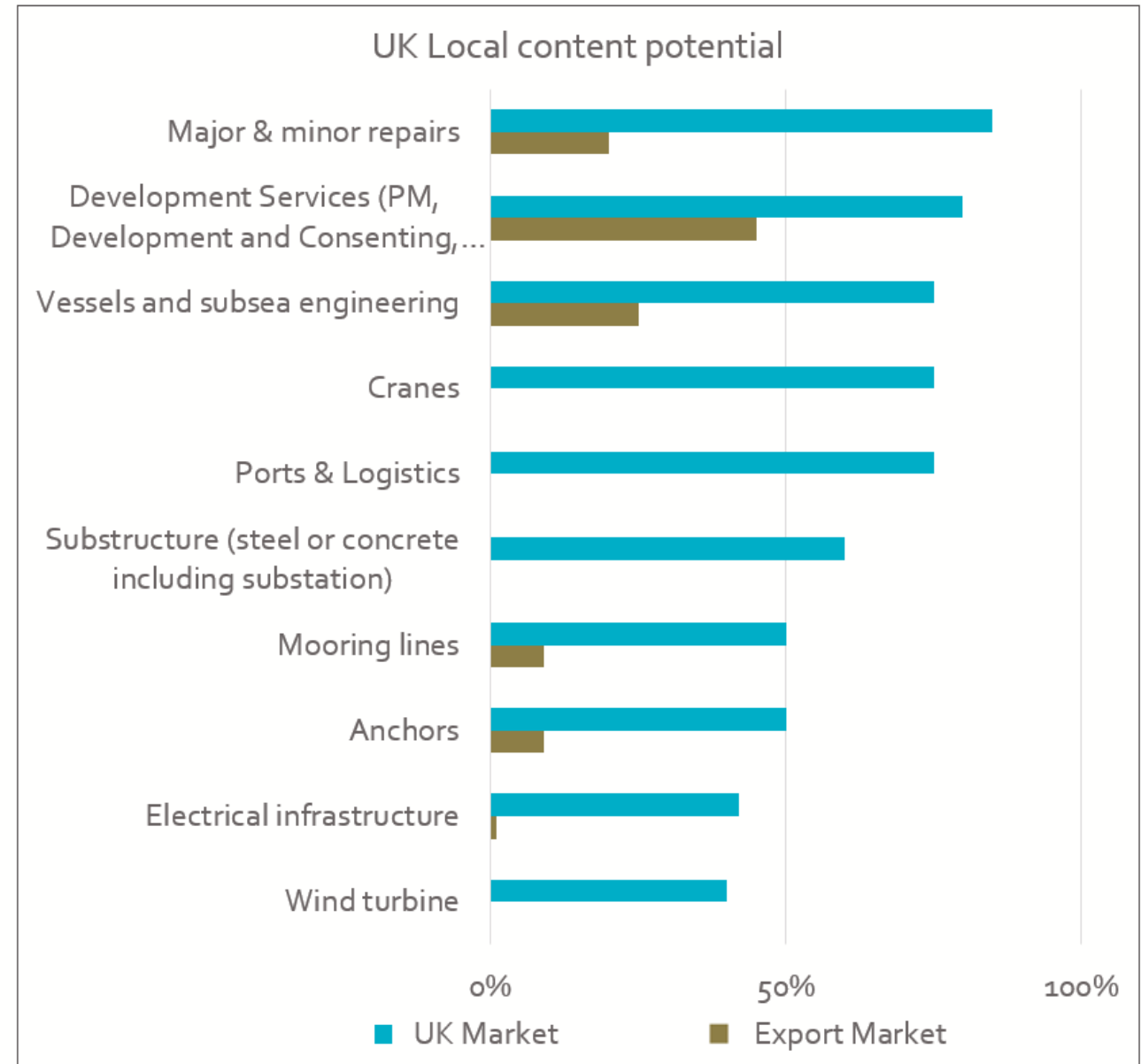
Source: ORE Catapult (2020) "Floating Offshore Wind Cost Reduction Pathway to Subsidy Free"

- **Deployment** drives cost reduction
- Importance of **early pipeline** consistency and volume
- Full LCOE convergence in the late 2030s.
- **Faster deployment** critical for market leading position of UK supply chain in FOW
- **Innovation** has biggest impact on longer term cost reduction.
- **Larger capacity projects** -> cost parity with other technologies by the mid 2030s.



- **Oil and Gas** -> power cable, dynamic riser, umbilical systems, anchors/moorings
- Limitation on supply volume of **anchors** depending on type – high competition
- Chain **mooring lines** manufactured mainly overseas
- **Electrical infrastructure** capability in substation topside, design and manufacture of array cables, electrical connectors
- **First mover** advantage offers maximum potential vs **Market follower** 1/3 of the max
- Early strategic investment in **ports and fabrication yards**
- Floating wind potential to support 17,000 UK jobs and £33.6bn of GVA by 2050

Source: ORE Catapult (2018) "Floating Wind Macroeconomic Study"



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