



Offshore Renewable Energy



# The Materials and Manufacturing Research Challenge Theme

Feargal Brennan January 2022





Offshore Renewable Energy



#### **Presentation Overview**

- The Materials and Manufacturing Research Challenge
- Key impacts and findings
- Complementary relevant research
- Further research





UK Target of 40GW of Offshore Wind Power by 2030 60% Local Content 33.3% Female





Offshore Renewable Energy



### **C** - Materials and Manufacturing

- C1 Integrity in the marine environment (corrosion, fatigue, coatings etc.)
- C2 Serial (volume) manufacturing of complex structural systems
- C3 Design for safe and cost-effective installation methods
- C4 New materials and coatings
- C5 Recycling/reuse of composites

# **Summary & Conclusion**



- Offshore wind in relatively shallow waters has been a phenomenal success to date in terms of cost competitiveness and scalability;
- The next decade will bring larger floating deeper water wind platforms but with shallow water deployment and maintenance;

# **Summary & Conclusion**



 The Materials and Manufacturing Research Challenge identifies the key areas for Materials, Manufacturing and Structural Integrity Research to ensure a cost competitive, reliable, resilient and safe Offshore Wind and Marine Renewable Energy Sector.