

## Disruptive powertrain design

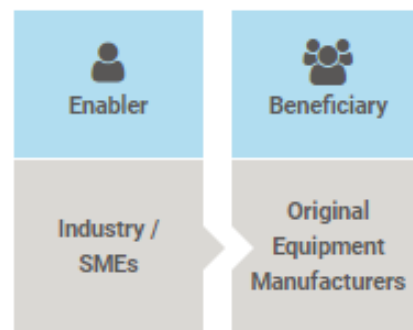
Type of Entry: Innovation Area

Turbines > Powertrain > Powertrain design

<https://offshorwindinnovationhub.com/category/turbines/>

### Description

The powertrain is the critical component in wind turbines that convert the aerodynamic loads on the rotor to useful energy in the form of electricity. Over the years, the design of commercial offshore wind turbines has converted to a few popular configurations. Several non-conventional powertrain designs are being researched to address specific shortcomings of the conventional design. Issues such as reliability can be addressed by modularisation and innovative designs for components such as bearings. It will need coordination between RTOs, Academia and Industry



### Strategic Outcome

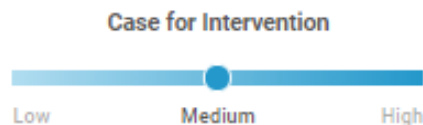
- Enabling disruptive innovation
- Commercialising >15MW turbine platforms
- Maximising operational performance of existing wind farms



Notes: Potential IP owned by UK companies but parts manufacturing most likely to happen outside of UK



Notes: Technologies such as multiple generators or Ricardo Multilife will improve reliability



Notes: Design is unknown, but most likely similar components will be used and impact will be low

