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ReDAPT Project achievements

The project achievements were:

- Successful deployment and operational testing of a 1MW Tidal Turbine system at EMEC, with over 1.2GWhr of electricity generated
- Delivered data, insights and lessons learned as key reference materials and for use by the industry, specifically:
 - Device performance – Achieved 3 months of continuous autonomous running in a real tidal environment
 - Successful deployment & retrieval in high-flow conditions proven to be safe, feasible and predictable
 - Environmental monitoring and resource assessment
 - Achieved a baseline CoE for an individual Turbine that will aid the industry in understanding its challenges
- Industry certification standards and protocols rewritten
- Validation and industry acceptance of key tidal flow models
 - DNV GL – Tidal Bladed; E.ON – far field flow (Mike-3D); EDF & University of Manchester – near field flow (CFD modelling)
 - University of Edinburgh – instrumentation & turbulence modelling
- Influenced the direction, growth and investment in the UK marine energy supply chain
- Produced a multi-Terabyte database of high Quality environmental data, which is in the public domain to enable a large numbers of PhDs and other studies
- Plymouth Marine Laboratory – Bio fouling survey, good groundwork, full results end 2016

Project participants and useful contact details:

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The Energy Technologies Institute:

- The ETI Website contains links to the Public Domain Reports;
<http://www.eti.co.uk/project/redapt/>

The UK Energy Data Centre:

- The UKEDC – database for ADCP measured flow data;
<http://data.ukedc.rl.ac.uk/browse/edc/renewables/marine>