

# BWEA



Delivering the UK's wind, wave and tidal energy

October 2007

## **UK Offshore Wind: Moving up a gear**





2007 Significant repeat consultation:

2006 Key questions to industry parties

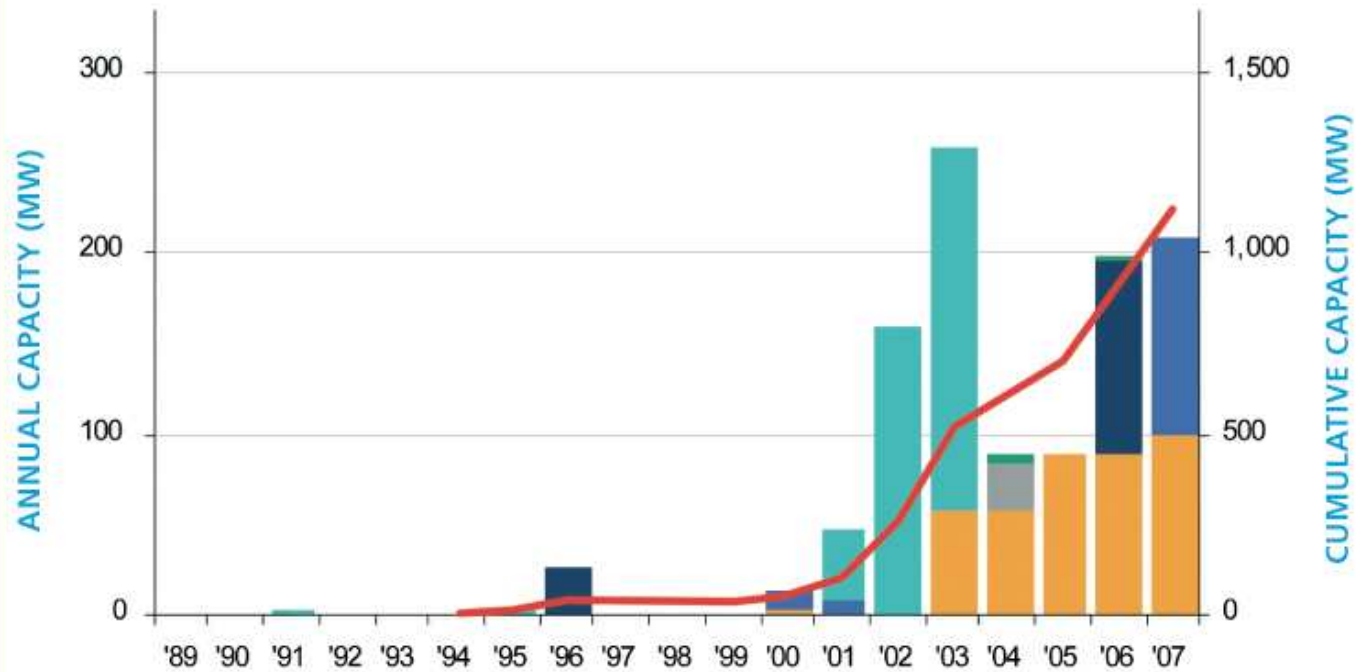
- Preserve current seabed
- remove economic gap
- Summarise key challenges
- Could sector physically deliver?
- Promote dialogue and investment

Answer:  
Involved:

- YES if long-term confidence was built and people worked together.
- Developers of all UK offshore projects (12 interviews)
- National Associates for all key EU markets
- Key supply chain members (24 interviews)
- Total 200 projects (100 GW)

# Global Offshore Wind Capacity to Date

GRAPH 1

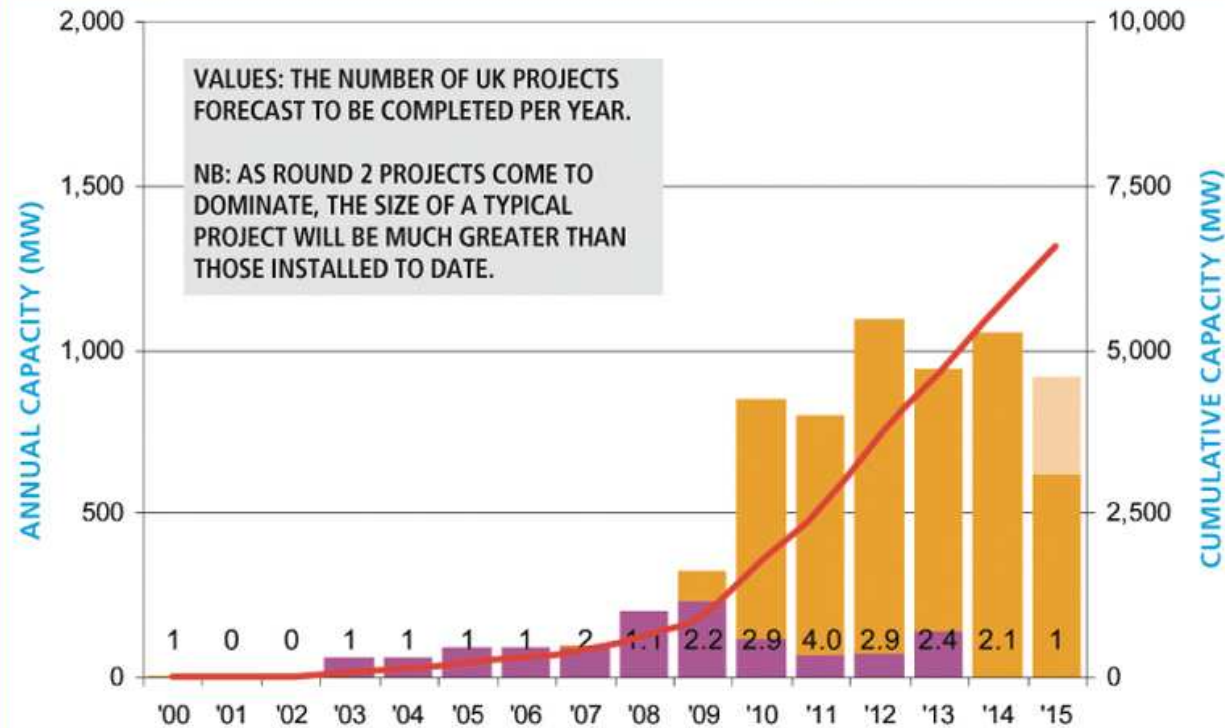


BY END	1995	2000	2005	2007
<b>GW OPERATING GLOBALLY</b>	0.01	0.04	0.7	1.1 (EST)

- KEY:
- UK
  - DENMARK
  - SWEDEN
  - NETHERLANDS
  - OTHER (IRELAND, JAPAN)
  - CUMULATIVE GLOBAL CAPACITY

## UK Offshore Wind Capacity (WITH NO SUPPLY CHAIN LIMITS IMPOSED)

GRAPH 2



BY END	2000	2005	2010	2015
GW OPERATING IN UK	0.0	0.02	1.8	6.6

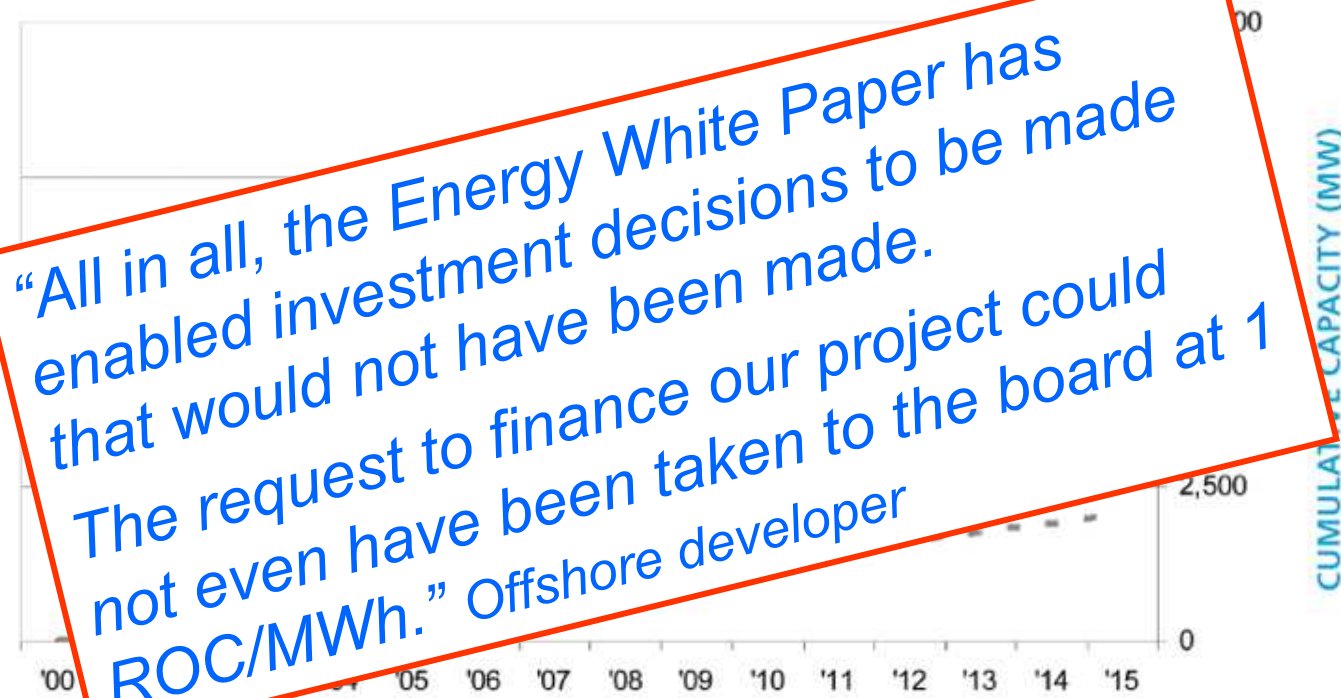
KEY: ■ UK OFFSHORE ROUND 1 PROJECTS ■ UK OFFSHORE FUTURE ROUNDS (INDICATIVE)

■ UK OFFSHORE ROUND 2 AND OTHER KNOWN PROJECTS. ROUND 2 ACTIVITY FORECAST TO CONTINUE UNTIL 2019 — CUMULATIVE CAPACITY

# UK Offshore Wind Capacity (WITH NO SUPPLY CHAIN LIMITS IMPOSED)

GRAPH 3

(COMPARED TO FORECASTS OF APRIL 2006)

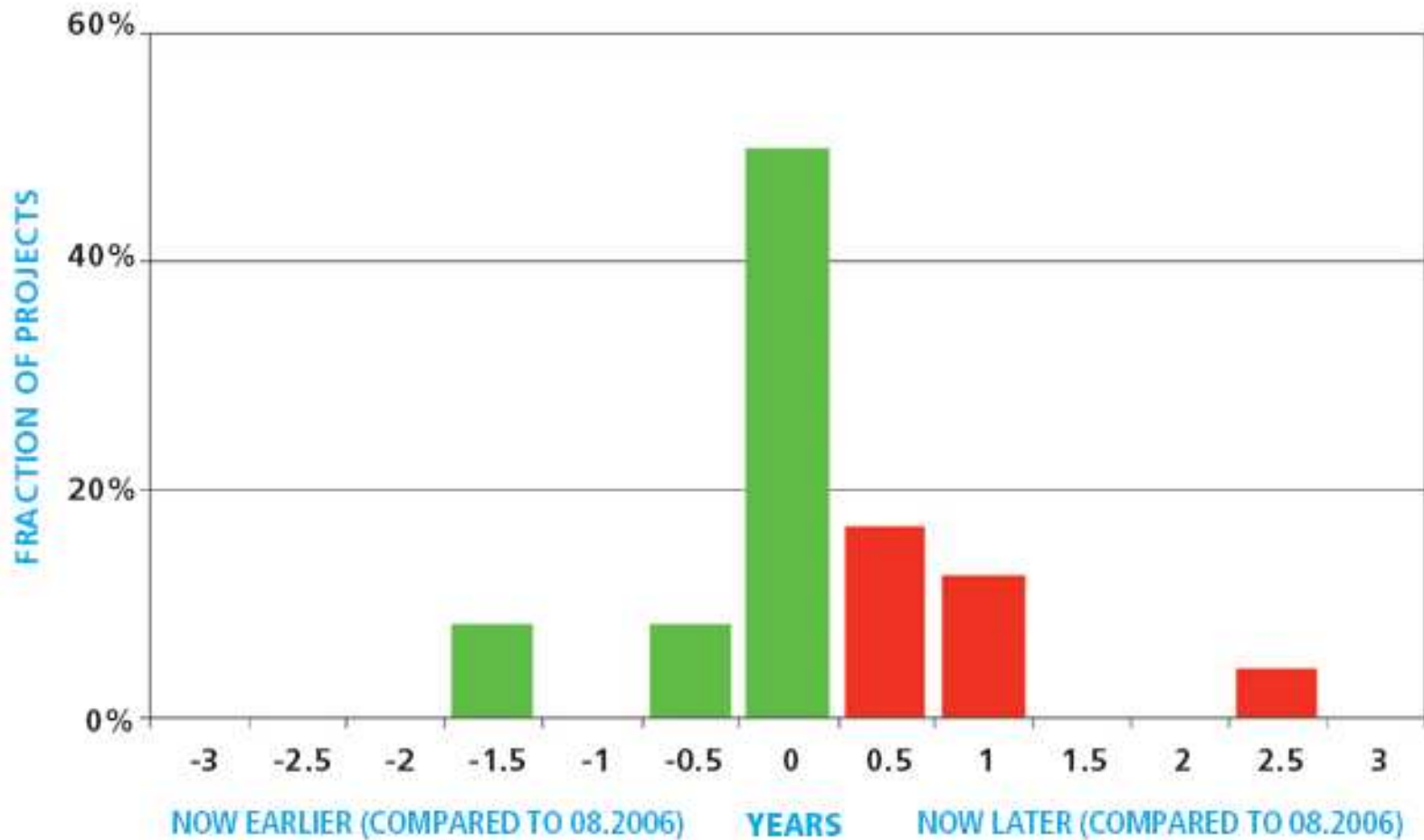


**“All in all, the Energy White Paper has enabled investment decisions to be made that would not have been made. The request to finance our project could not even have been taken to the board at 1 ROC/MWh.” Offshore developer**

**KEY:** ■ ■ ■ **BROKEN GRAY LINE. CUMULATIVE CAPACITY. REF. SCENARIO 1 CONTINUATION OF CURRENT POLICIES FORECAST APRIL 2006** ■ **GRAY LINE. CUMULATIVE CAPACITY REF. SCENARIO 2 NEW POLICY IMPETUS IN 2006 FORECAST APRIL 2006**  
— **CUMULATIVE CAPACITY IN CURRENT FORECAST**

## Changes in Planned Installation Date for Projects COMPARED TO AUGUST 2006

GRAPH 4



Global Offshore Wind Capacity (WITH NO SUPPLY CHAIN LIMITS IMPOSED) GRAPH 4

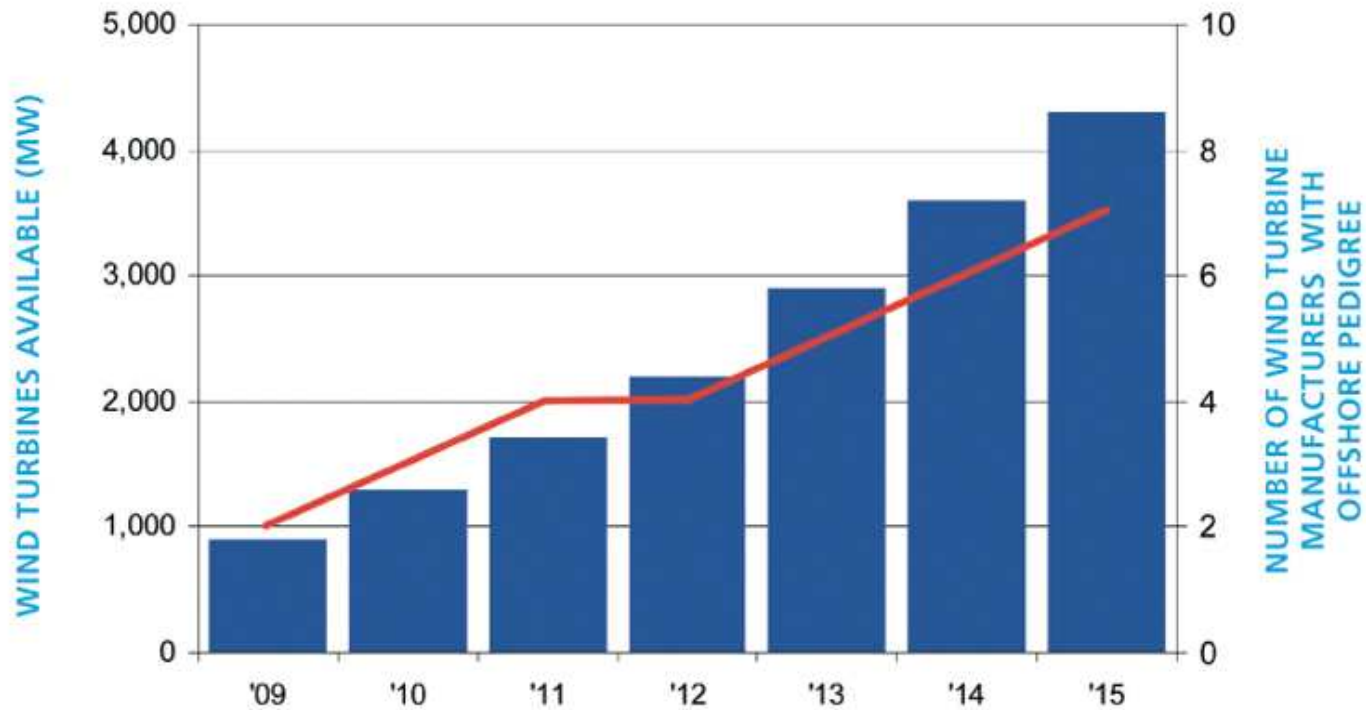


BY END	2000	2005	2010	2015
GW OPERATING IN UK (NO SUPPLY CHAIN LIMITS IMPOSED)	0.0	0.7	4.2	17.7

- KEY:
- UK OFFSHORE ROUND 1 PROJECTS
  - UK OFFSHORE ROUND 2 AND OTHER KNOWN PROJECTS
  - UK OFFSHORE FUTURE ROUNDS (INDICATIVE)
  - EU NON-UK OFFSHORE PROJECTS, PLANNED AND FORECAST
  - NON-EU OFFSHORE PROJECTS, PLANNED AND FORECAST
  - CUMULATIVE GLOBAL OFFSHORE (INC. UK)

## Wind Turbines Available for the Global Offshore Market Capacity and Number of Wind Turbine Manufacturers with Offshore Pedigree

GRAPH 5

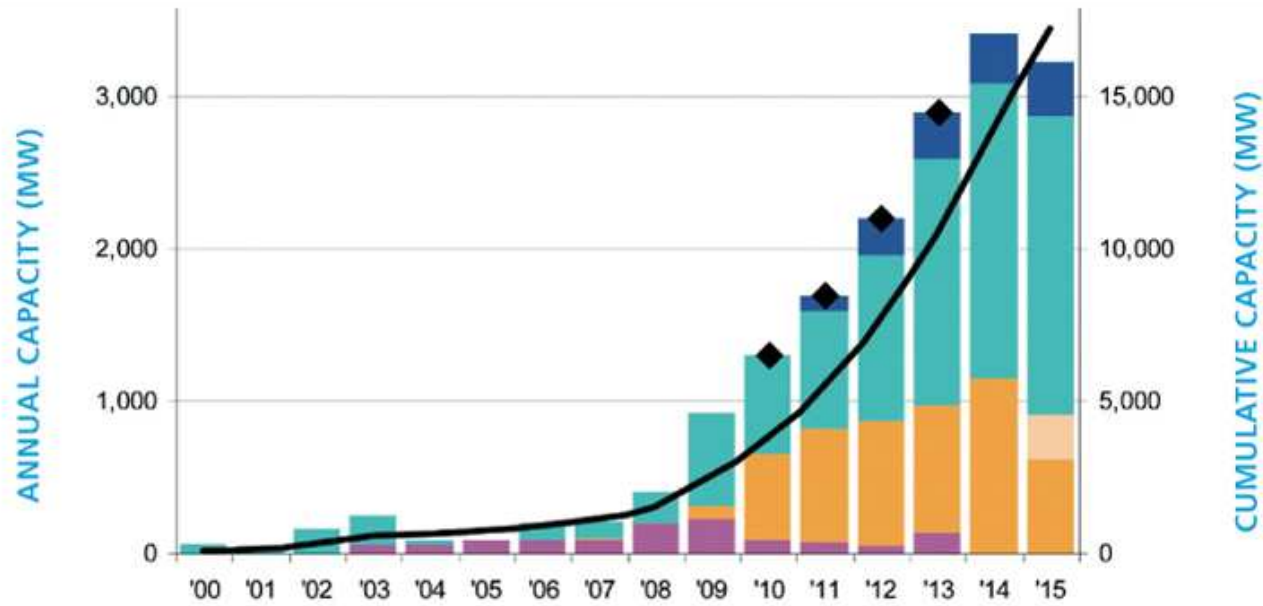


KEY: ■ AGGREGATE FORECAST OF WIND TURBINES AVAILABLE TO THE MARKET

— NUMBER OF WIND TURBINE MANUFACTURERS WITH OFFSHORE PEDIGREE DEFINED AS HAVING 200MW TURBINES GENERATING OFFSHORE

# Global Offshore Wind Capacity (WITH SUPPLY CHAIN LIMITS IMPOSED)

GRAPH 7

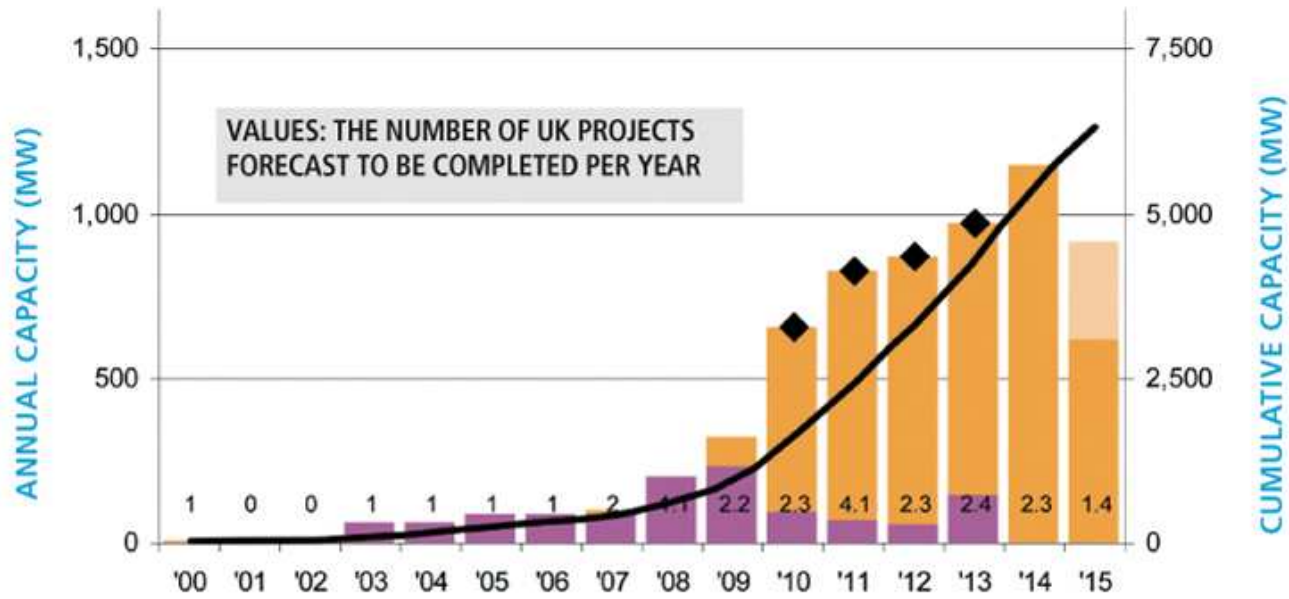


BY END	2000	2005	2010	2015
GW OPERATING GLOBALLY	0.0	0.7	3.8	17.2

- KEY:
- UK ROUND 1 PROJECTS
  - UK OFFSHORE ROUND 2 AND OTHER KNOWN PROJECTS
  - UK OFFSHORE FUTURE ROUNDS (INDICATIVE)
  - EU NON-UK OFFSHORE PROJECTS, PLANNED AND FORECAST
  - NON-EU OFFSHORE PROJECTS, PLANNED AND FORECAST
  - ◆ HIGHLIGHT YEARS IN WHICH SUPPLY CHAIN LIMITATIONS ARE FORECAST TO REDUCE INSTALLATION RATES
  - CUMULATIVE GLOBAL OFFSHORE (INC. UK) WITH SUPPLY CHAIN LIMITATIONS IMPOSED

# UK Offshore Wind Capacity (WITH SUPPLY CHAIN LIMITS IMPOSED)

GRAPH 8



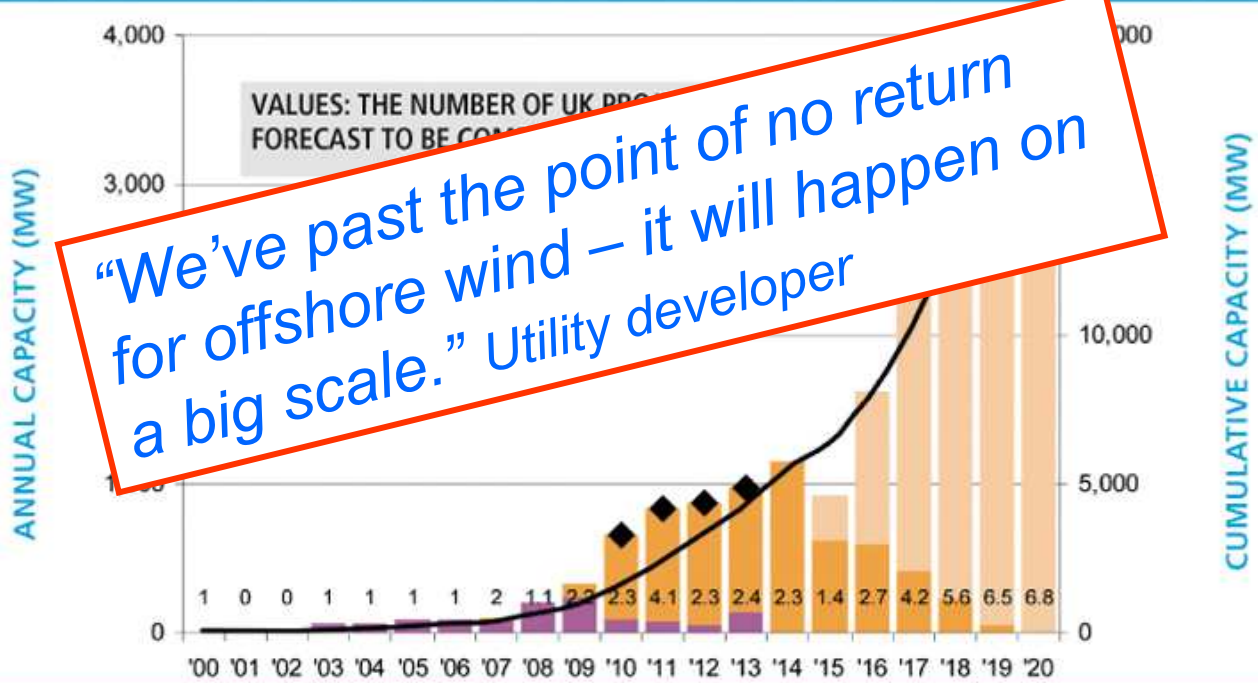
BY END	2000	2005	2010	2015
GW OPERATING IN THE UK	0.0	0.2	1.6	6.3

- KEY:
- UK ROUND 1 PROJECTS
  - UK OFFSHORE ROUND 2 AND OTHER KNOWN PROJECTS
  - UK OFFSHORE FUTURE ROUNDS (INDICATIVE)
  - HIGHLIGHT YEARS IN WHICH SUPPLY CHAIN LIMITATIONS ARE FORECAST TO REDUCE INSTALLATION RATES
  - CUMULATIVE CAPACITY

NB: IF THE ECONOMICS OF OTHER OFFSHORE WIND MARKETS ARE NOT IMPROVED TO BE IN LINE WITH UK, THEN UK WILL TAKE UP AVAILABLE SUPPLY FIRST AND HENCE WILL NOT SUFFER FROM GLOBAL SUPPLY LIMITATIONS. BASED SOLELY ON UK MARKET REQUIREMENTS, IT IS ANTICIPATED THAT THE SUPPLY CHAIN WILL BE ABLE TO DELIVER FULLY IN ALL ASPECTS UP TO 2015, BUT INVESTMENT TO MEET FUTURE DEMANDS WILL NOT OCCUR.

# Potential UK Offshore Wind Capacity to 2020 (WITH SUPPLY CHAIN LIMITS IMPOSED)\*

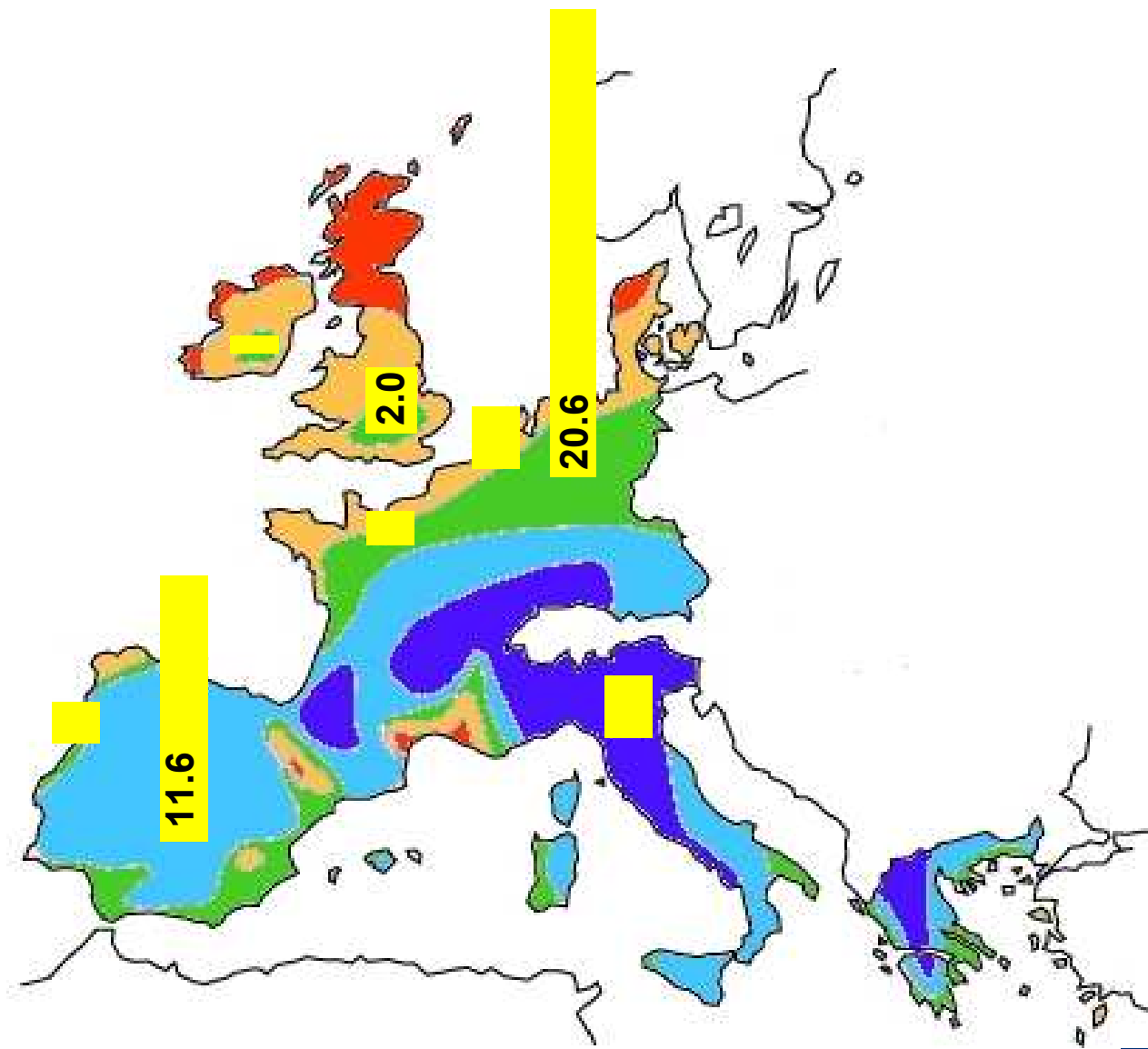
GRAPH 9



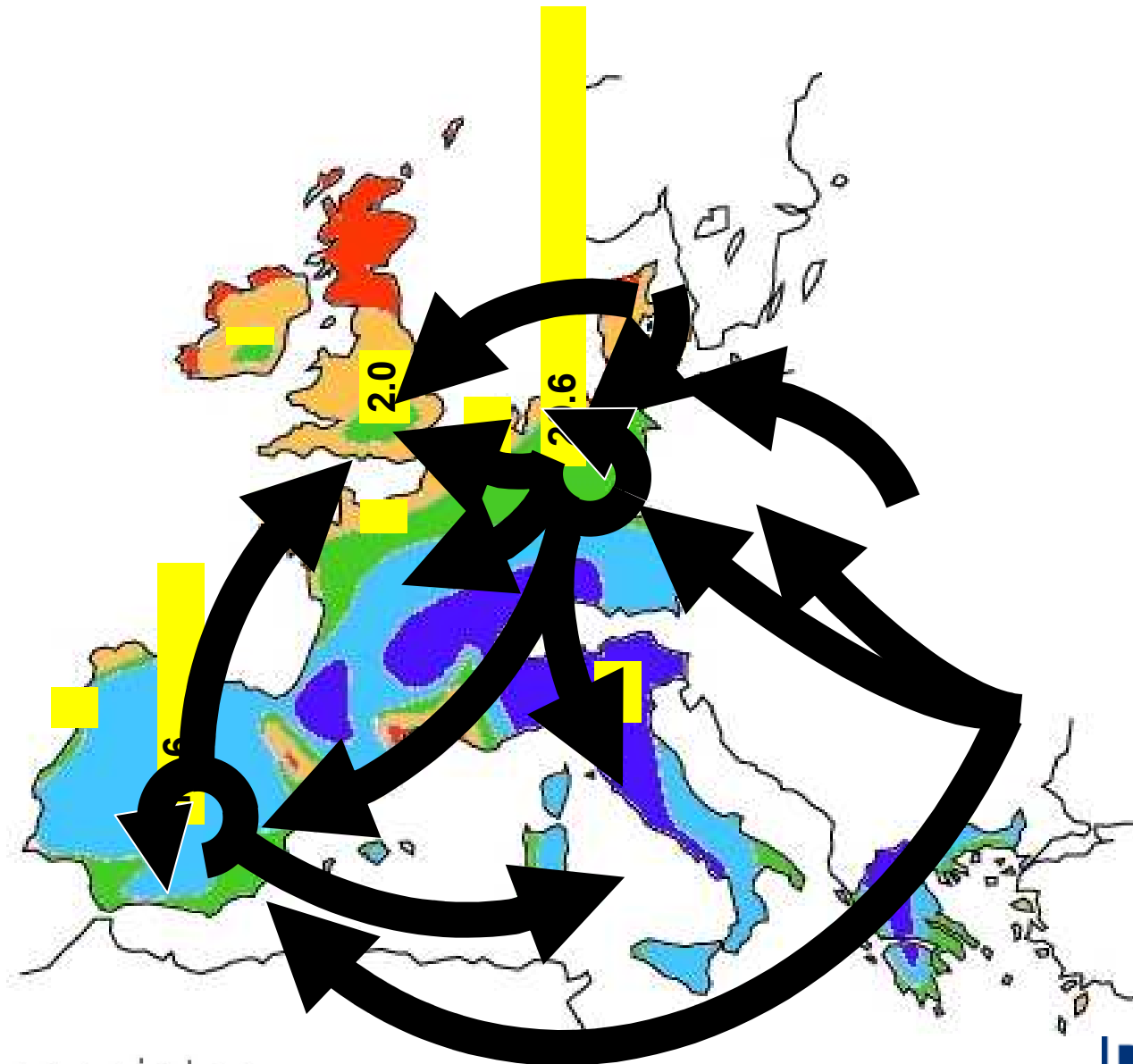
BY END	2000	2005	2010	2015	2020
GW OPERATING IN THE UK*	0.0	0.2	1.6	6.3	20.0

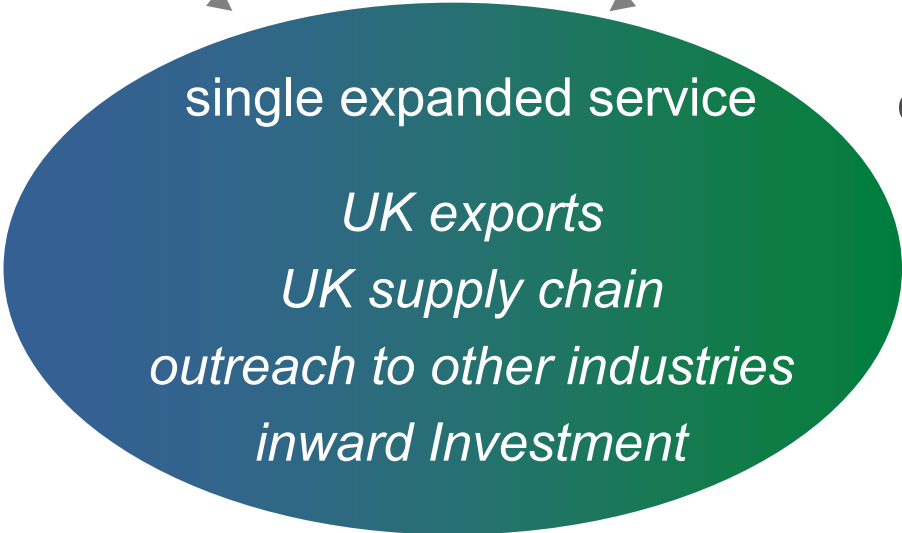
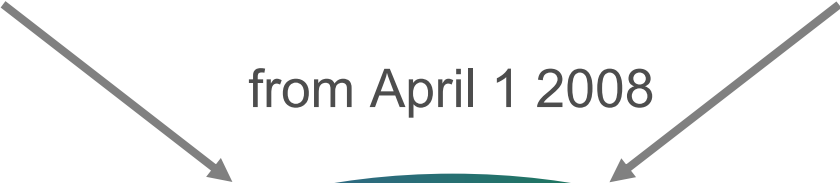
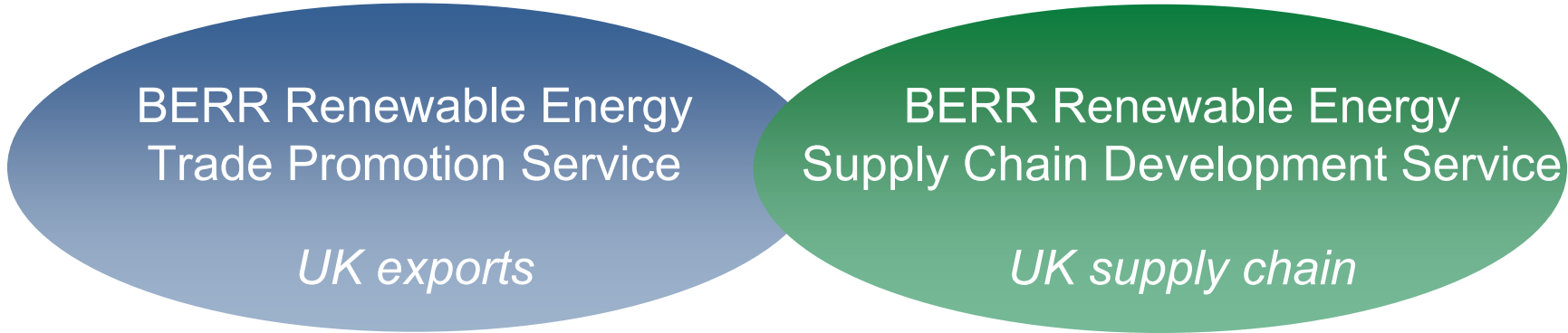
- KEY:
- UK ROUND 1 PROJECTS
  - UK OFFSHORE ROUND 2 AND OTHER KNOWN PROJECTS
  - UK OFFSHORE FUTURE ROUNDS (INDICATIVE)
  - HIGHLIGHT YEARS IN WHICH SUPPLY CHAIN LIMITATIONS ARE FORECAST TO REDUCE INSTALLATION RATES
  - CUMULATIVE CAPACITY

# Installed turbines by start 2007 (GW)



# Installed Turbines in 2007 (GW)





operated by:

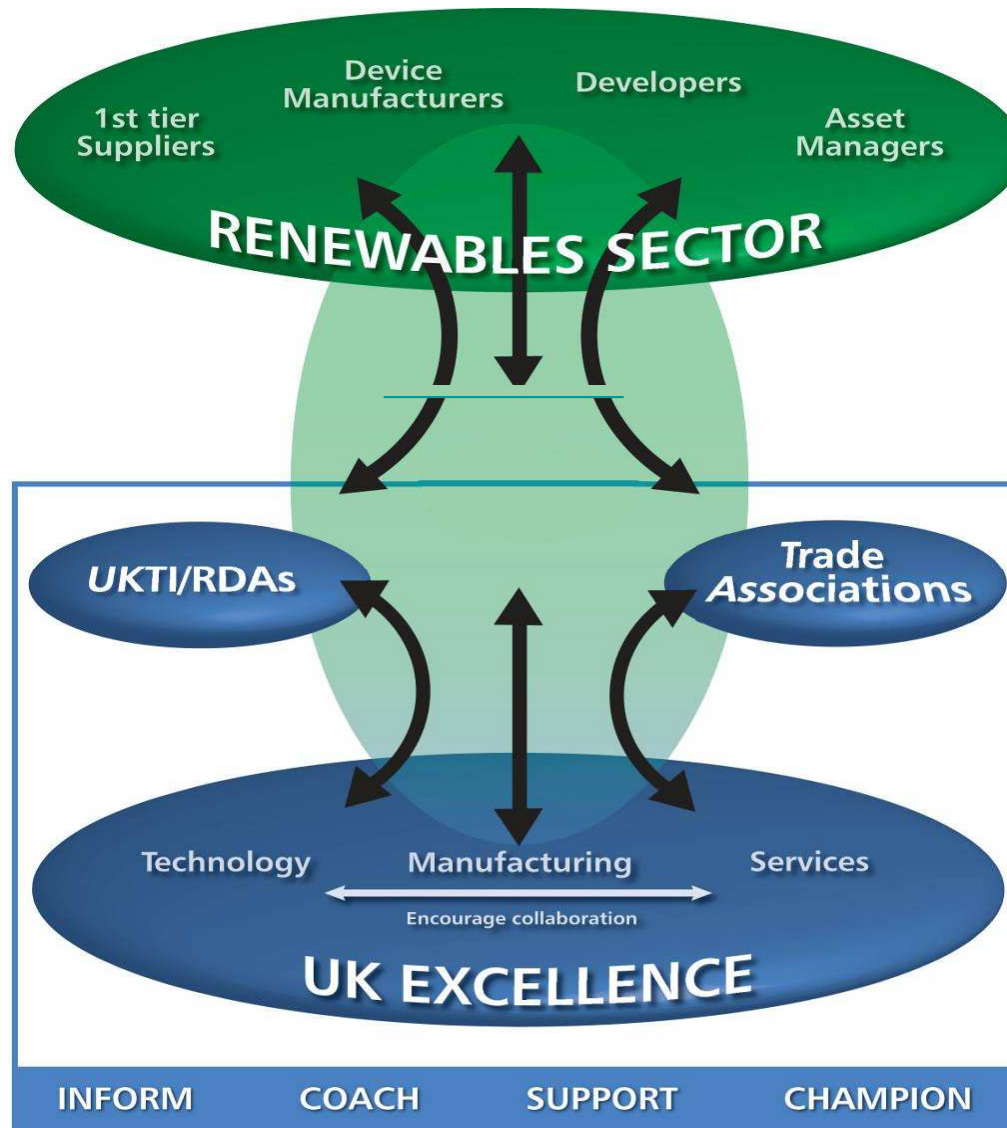


branding etc. still being developed

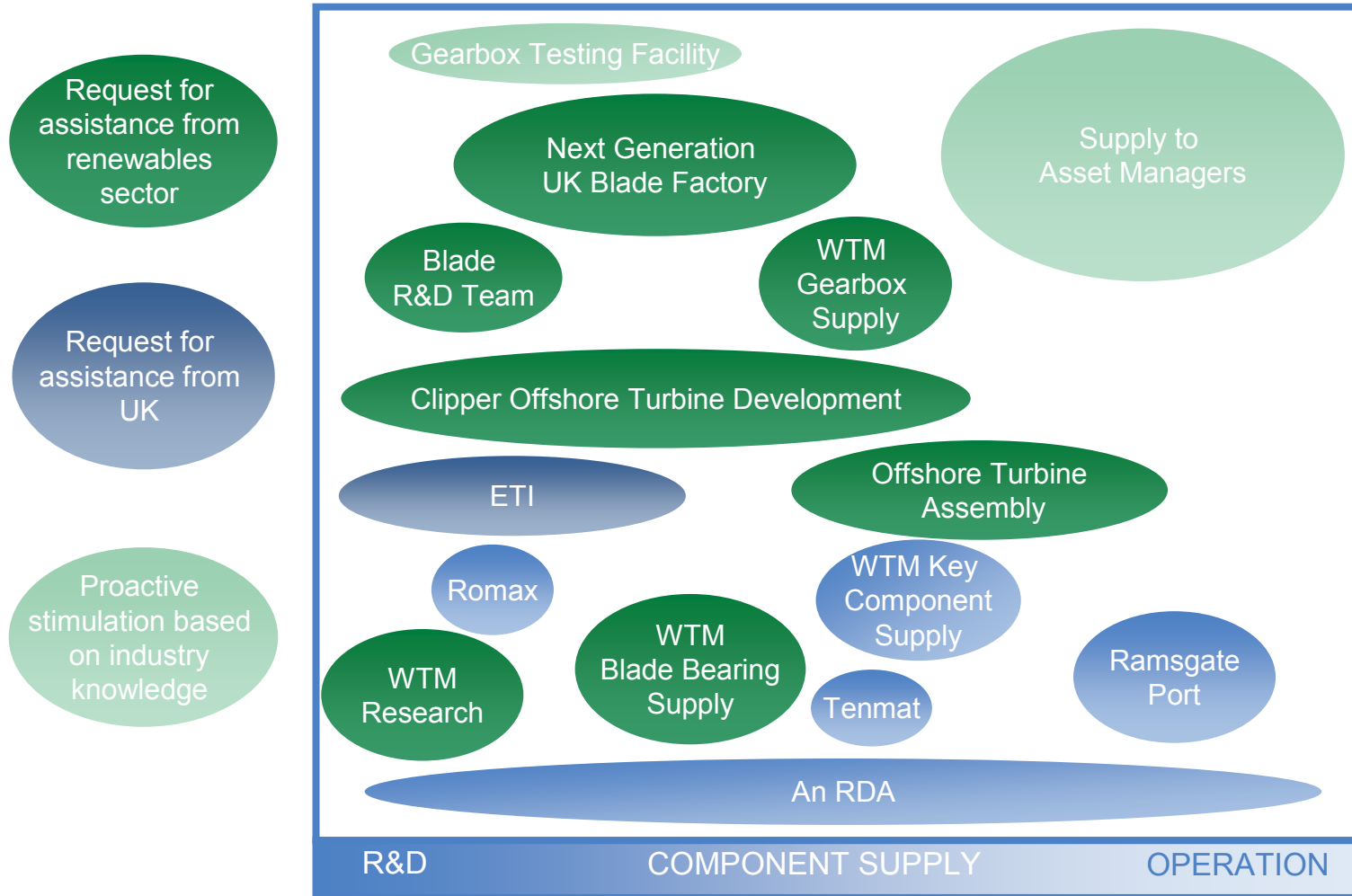
# purpose

“support the growth of a world-scale UK renewable energy industry with increasing global market share, and capabilities sufficient to support the achievement of the UK’s 2020 renewable energy targets”

# BERR supply chain development service



# examples of activity





Full BWEA Report available at [www.bwea.com/offshore/](http://www.bwea.com/offshore/)

- More detail from interviewees
- UK opportunities and threats
- Post Round 2 activity
- Selected project data – aggregated across UK & EU
- Methodology

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