

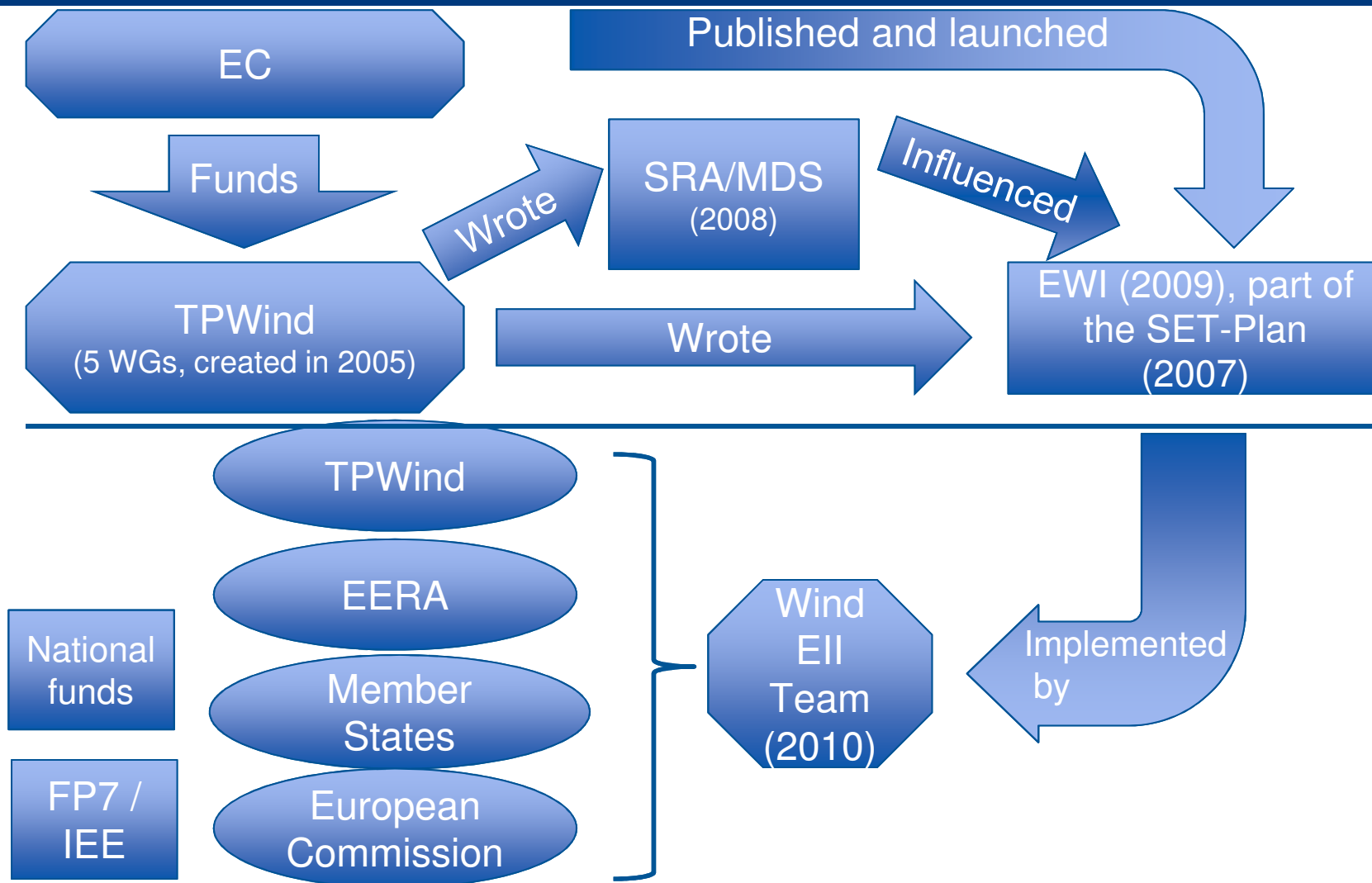
## R&D: EWI achievements and funding recommendations

*Filippo Gagliardi, TPWind Secretary General  
EWEA 2013 - 5 February, 2013*

## The EWI

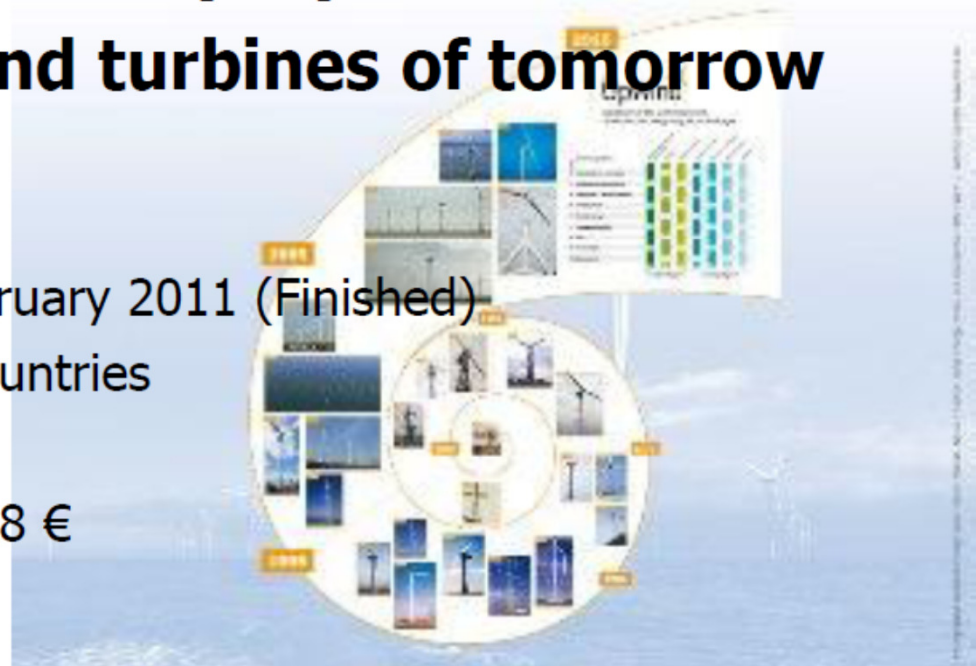
- ❑ The European Wind Initiative (EWI) is a long-term, large-scale Programme aiming at improving and increasing public funding for wind energy R&D
- ❑ Part of EU Strategic Energy Technology Plan (SET-Plan) – 2007 European Commission blueprint for the development of low carbon technologies
- ❑ The SET-Plan launched European Industrial Initiatives (EII)s in 2010, i.e. Programmes for fostering R&D in 8 strategic energy sectors
- ❑ The EWI has a total budget of € 6bn (composed of private and public resources) for the 2010 – 2020 period

## TPWind and the EWI: in a nutshell



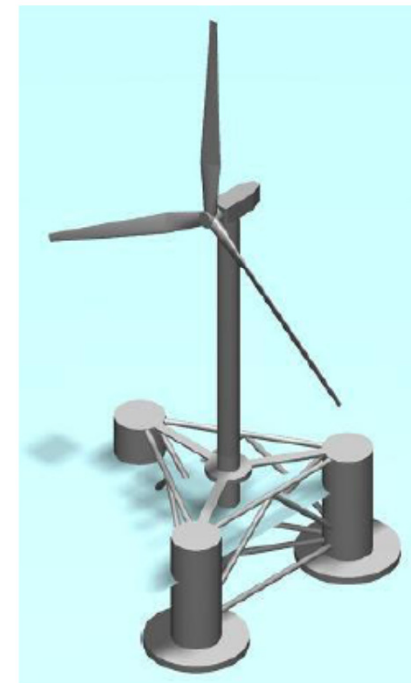
## Key EWI projects: UPWIND (EWI Strand 1)

- **Integrated Wind Turbine Design**
- **Coordinator : DTU/RISOE (DK)**
- **Towards the large wind turbines of tomorrow**
- FP6 Integrated Project.
- Contract number: 019945
- 60 months – March 2006 to February 2011 (Finished)
- 45 partners from 14 different countries
- Total budget: 22,618,628 €
- Max. EC contribution: 14,566,628 €
- Website: [www.upwind.eu](http://www.upwind.eu)



## Key EWI projects: HIPRWIND (EWI Strand 2)

- **Large-Scale Collaborative**
- **High Power, high Reliability offshore wind technology**
- **Coordinator : FhG-IWES (DE)**
  - ▶ **Floating wind energy system**
  - ▶ Grant agreement number: 256812
  - ▶ 60 months – November 2010 to October 2015
  - ▶ 19 partners from 9 different countries
  - ▶ Total budget: 19,831,585 €
  - ▶ Max. EC contribution: 11,021,621 €
  - ▶ Website: [www.hiprwind.eu](http://www.hiprwind.eu)

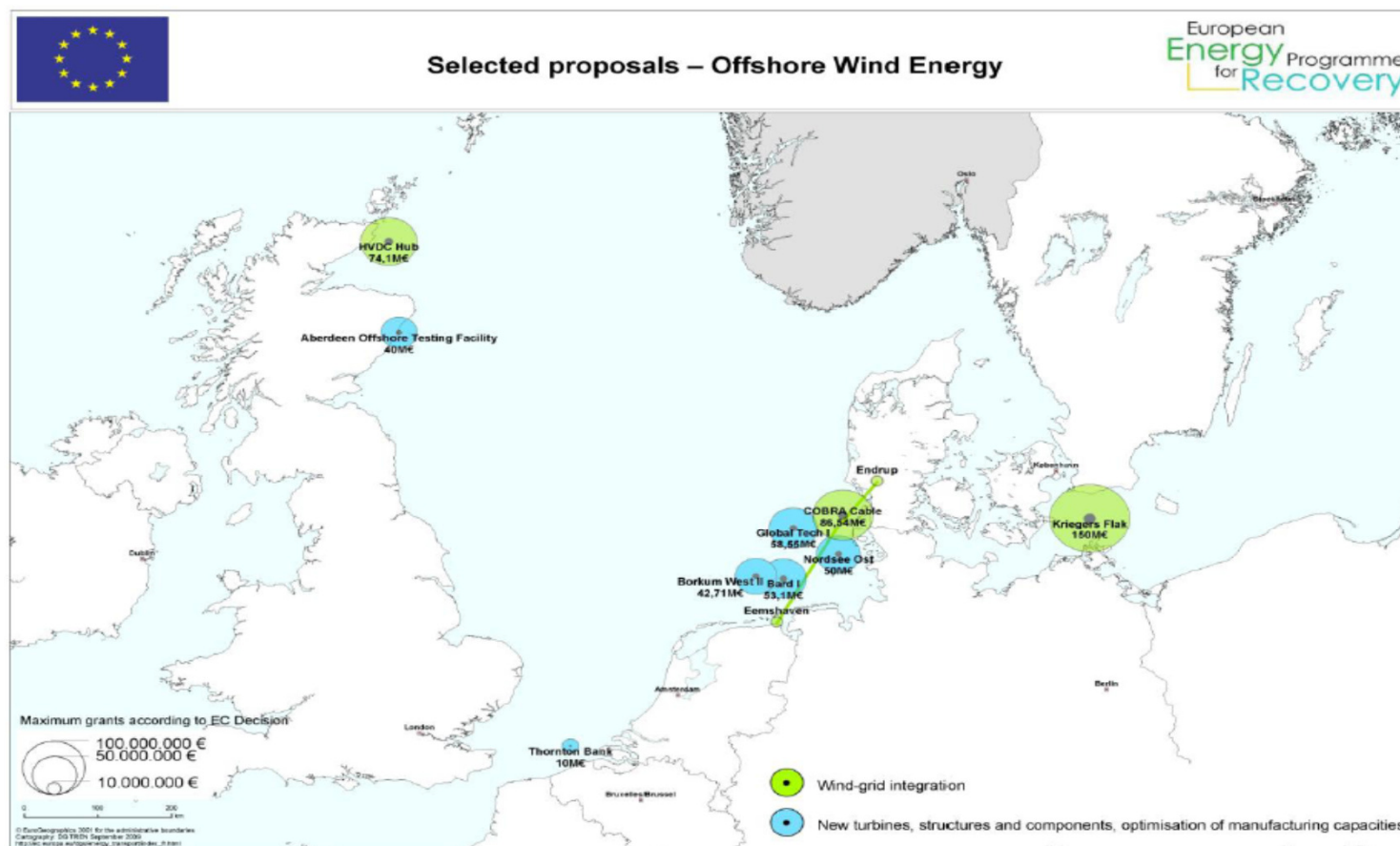




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# Key EWI projects: EEPR (EWI Strands 2 and 3)

- **Grid integration of offshore wind energy (315 M €)**
  - **New turbines, structures, components, optimisation of manufacturing (250 M €)**
- TOTAL: 565 M€**





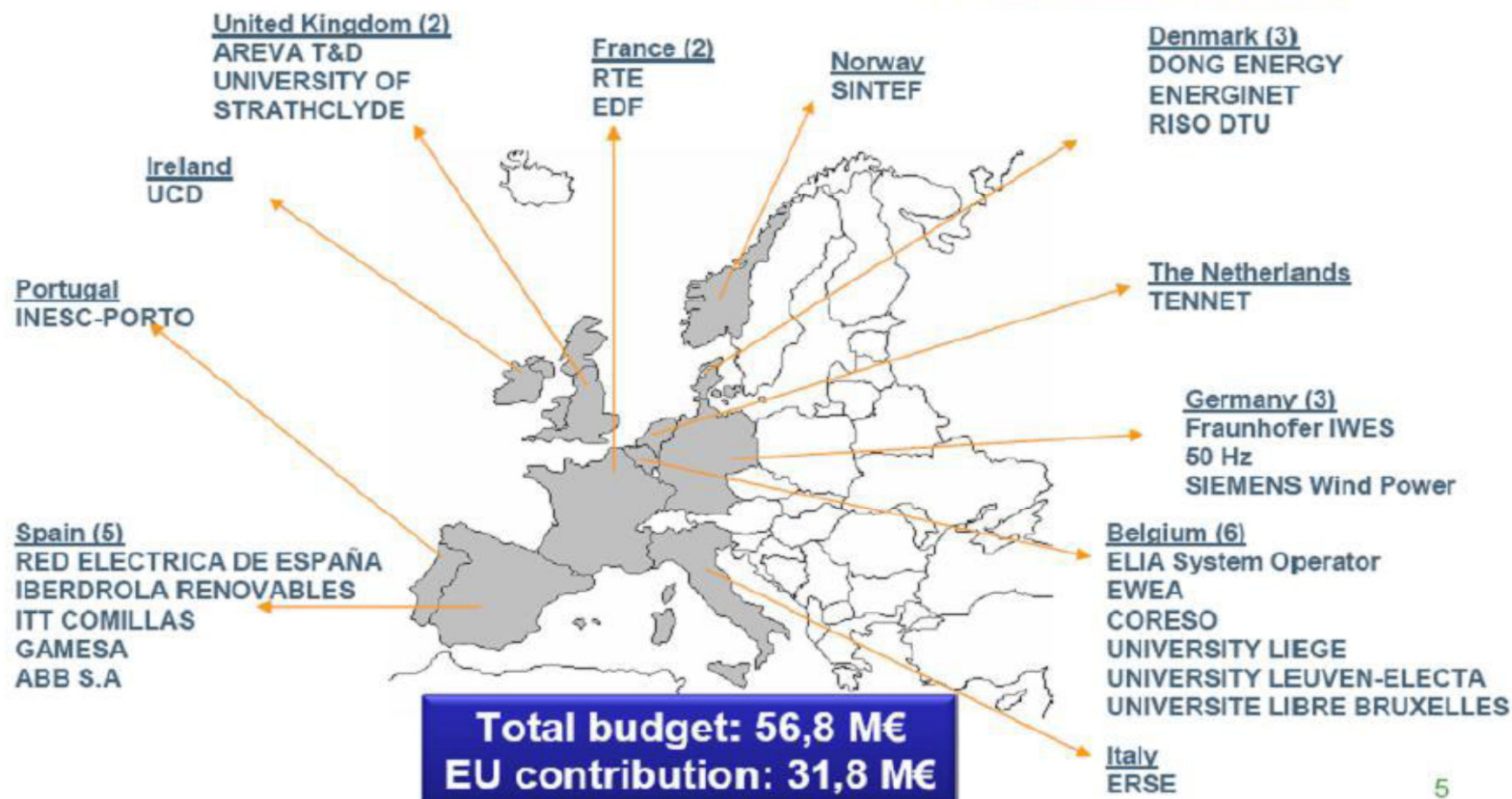


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## Key EWI projects: TWENTIES (EWI Strand 3)

### Consortium and budget

- ✓ 10 European Member States
- ✓ 1 Associated Country



## EU budget spent up to now

- ❑ EWI Strand 4's most important project so far will be launched in 2013 or 2014 and deal with the development of a new EU Wind Atlas
- ❑ This project will be co-funded by the EC and MS through the ERANET+ scheme. It is, therefore, a key achievement of the EWI
- ❑ If we sum the budget of all EU projects previously mentioned, as well as that of the last FP7 Energy call for proposals (published in July 2012), we can estimate that EU Institutions spent **€ 800m on the EWI over the 2010 – 2012 period**
- ❑ Although EU funds contributed to implementation of the EWI, coordination with Member States was more complex than expected. TPWind and EWEA therefore asked for easier rules to coordinate EU and national funds under Horizon 2020 (the FP7 successor for the 2014 – 2020 period)



## Effectiveness of EWI implementation at EU level

Year / Programme	FP7	Intelligent Energy Europe (IEE)
<b>2011</b>	Two FP7 topics, out of the seven recommended in the EWI 2011 Work Programme, were included in the 2012 FP7 Energy Work Programme (new materials for large scale turbines and reliability of large scale wind turbines).	One IEE priority, out of the two recommended in the EWI 2011 Work Programme, was partially addressed by the 2011 IEE call for proposal (social acceptance, but without the economic component).
<b>2012</b>	Five FP7 topics, out of the nine recommended in the 2012 Work Programme, were included in the 2013 FP7 Energy Work Programme (advanced aerodynamic modelling for very large rotor blades, new EU wind atlas, grid connection of offshore wind farms, DC power collection and HVDC grids– although the EC grouped the three grid integration topics into a single one).	One IEE priority, out of the two recommended in the EWI 2012 Work Programme, was partially addressed by the 2012 IEE call for proposal (social acceptance, like in 2011, but without the economic component, which will however be covered by the Joint Research Centre in an ad-hoc study).

## 2013 EWI funding recommendations (I)

- ❑ 2013 funding recommendations for EWI Strand 1, new turbines and components:
  - Smarter operation and maintenance (O&M): preventive maintenance and condition monitoring, as well as optimisation of life-cycle costs (suggested EU budget: €10m).
  - Sensing, algorithms and actuation in control strategies and systems (suggested EU budget: €10m).
  - Optimisation of turbines to complex terrains and extreme climates (suggested EU budget: €10m).
  
- ❑ 2013 funding recommendations for EWI Strand 2, offshore technology:
  - Design tools for very large, far from shore, deep waters wind farms (suggested EU budget: €10m).
  - New bottom-fixed substructures (suggested EU budget: €10m).
  - Cost-effective multi-MW floating platforms (suggested EU budget: €20m).
  - New life-time extension and decommissioning strategies (suggested EU budget: €10m).

## 2013 EWI funding recommendations (II)

- ❑ 2013 funding recommendations for EWI Strand 3, grid integration:
  - Technical options, control methods and operational concepts to provide ancillary services to the power system (suggested EU budget: €10m).
  - Wind power plant models (suggested EU budget: €10m).
  - Impact of wind power on market prices (suggested EU budget: €10m).
  - Control and coordination of wind power plants and HVDC networks (suggested EU budget: €10m).
  - Optimal configuration of power collection grids (suggested EU budget: €10m).

## 2013 EWI funding recommendations (III)

- ❑ 2013 funding recommendations for EWI Strand 4, resource assessment, spatial planning and social acceptance:
  - Wind energy synergies with other economic sectors, including impact on growth (suggested EU budget: €1m).
  - Analysis of the EU wind power sector competitiveness in the global energy market (suggested EU budget: €0.5m).
  - Offshore wind power clusters (suggested EU budget: €1m).
  - Minimisation of underwater noise (suggested EU budget: €5m).
  - Protection of bats (suggested EU budget: €2m).
  
- ❑ Nine funding recommendations were put forward in the EWI 2011 Work Programme and eleven in 2012. There are seventeen in 2013 due to:
  - the revision of the R&D priorities for the 2013–2015 cycle
  - the absence of a new round of EEPR funding, which had a significant impact over the 2010–2012 period

Thank you for your attention!



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