



INN WIND.EU

Overview of the Project and Research Collaboration

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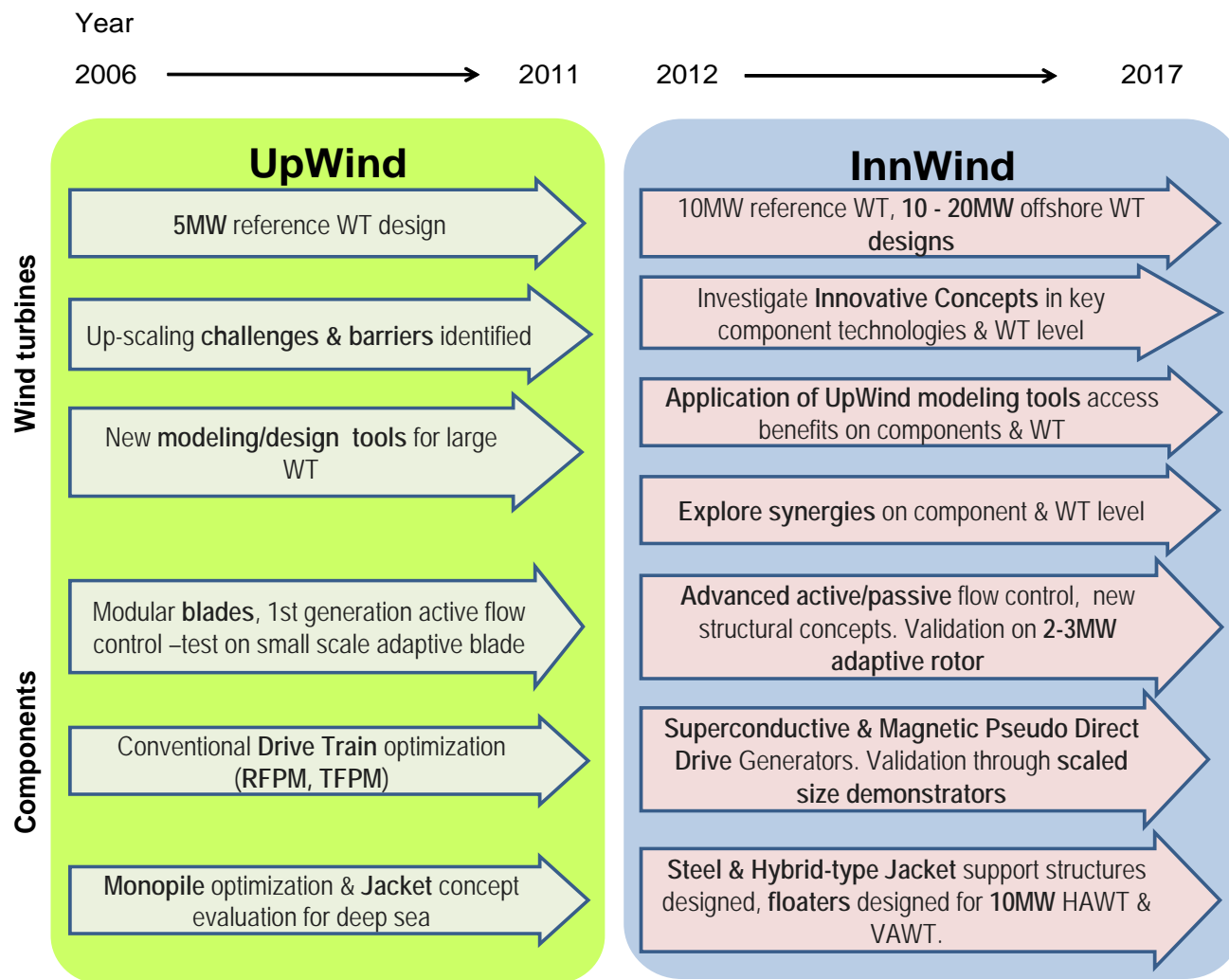
Key Objectives of INNWIND.EU



1. **Beat the cubic law** of weight (and cost) of classical up scaling and render a 10-20 MW offshore design cost-effective in deep waters.
2. Develop **innovative** turbine concepts, performance indicators and design targets and assess the performance of components and integrated conceptual designs.
3. Development and **assessment** of modeling tools capable of analyzing 20MW innovative turbine systems.
4. **Integrate** the design, manufacturing, installation, operation and decommissioning of support structure and rotor-nacelle assembly in order to optimize the structure and life-cycle as a whole.
5. Establish **effective communications channels** in the co-ordination of all project activities between the partners and dissemination of the knowledge gained.



Background for the project



INNWIND.EU Overview and Consortium



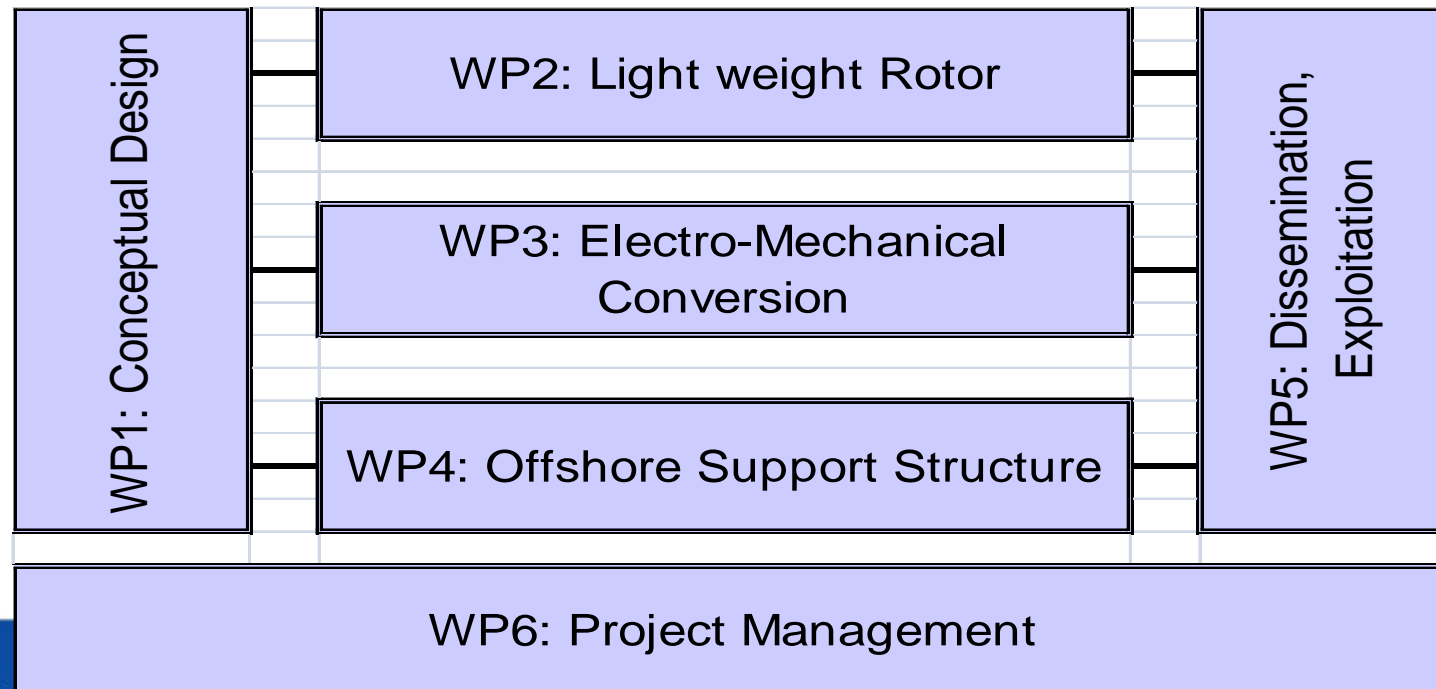
- INNWIND.EU started 1. November 2012
- 5 year project, 19.6M€ overall budget
- 28 Participating organizations
- 7 Leading wind energy industries, 20 leading Universities/Research organizations, 1 trade institution
- Main Focus Areas:
 - a light weight rotor having a combination of adaptive characteristics from passive built-in geometrical and structural couplings and active distributed smart sensing and control
 - an innovative, low-weight, direct drive generator
 - a standard mass-produced integrated tower and substructure that simplifies and unifies turbine structural dynamic characteristics at different water depths



Structure of the Project

Innovative large offshore wind turbine design

1. **Component level innovations** integrated into the wind turbine, virtually tested and further developed.
2. Demonstrations of Innovations include **super conducting generators, pseudo magnetic drives and smart blades.**



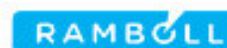
INNWIND.EU Consortium



COORDINATOR



PARTNERS



Cooperation with other Research Projects/Test Centers



- Wave tank tests done at Nantes, France in cooperation with EU FP7 funded Marinet project
- Wave tank tests done at DHI, Denmark based on access granted by DHI
- Spinner Lidar demonstrations done at NREL and Sandia Labs, U.S.A. in collaboration with other projects.
- Wind/Wave measurements database access from FINO3 platform for design assessment studies
- Cooperation with EU FP/ project SupraPower on demonstration of superconducting generators
- Cooperation with H2020 Demowind on Pseudo-Magnetic direct drive generator demonstrations

