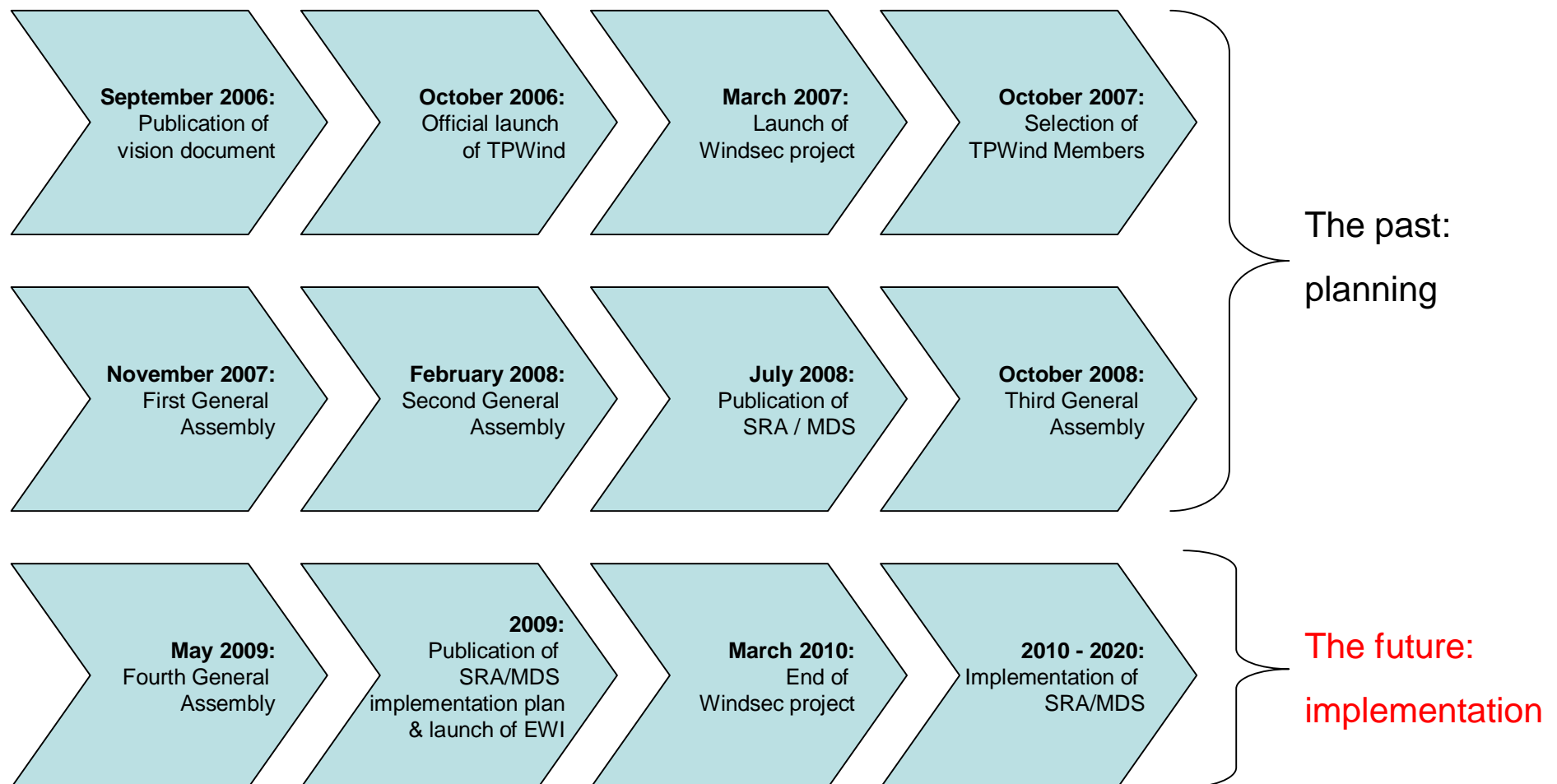

SRA/MDS implementation plan



European Wind Energy
Technology Platform

TPWind – Where we stand



TPWind - Main Deliverables: past and future

- q Vision document on wind energy up to 2030 (published in September 2006)
- q Strategic Research Agenda (SRA) / Market Development Strategy (MDS), to cover technology issues, policy R&D and market development (published in July 2008)
- q **SRA / MDS implementation plan (to be finalized in the first half of 2009)**
- q Action plan outlining the future of the Platform (i.e. after the end of the “Windsec” project). The action plan will be finalized in the first half of 2009
- q “European Wind Initiative”, developed in cooperation with the European Commission (the EWI should be launched before the end of 2009)

Drafting the SRA/MDS implementation plan

- q The development of the SRA/MDS implementation plan moved its first steps during the 3rd General Assembly (8 – 9 October, 2008), when TPWind members identified concrete projects that could transform the “Strategic Research Agenda” into a reality
- q Following this step, TPWind chairpersons and the Secretariat developed a document describing all the projects identified by the various Working Groups
- q The first draft of this document (i.e. the implementation plan), has been finalized last week and will be further updated and modified in order to be presented at the next General Assembly (13 – 14 May, 2009)
- q The implementation plan will not be published (at least not at this stage) but it will be used to plan the next steps of the Platform and to monitor its progresses
- q However, a quick overview of the identified projects has been provided in the brochure “TPWind: the way forward” (1.000 copies are now being distributed at EWEC and an electronic version will be uploaded on TPWind website)

SRA/MDS implementation plan— Contents

- q The implementation plan is divided into the following parts:
 - § Introduction and background
 - § Overview of all identified projects (through “project folders”)
 - § Tentative Gantt chart for their implementation
 - § Conclusions and next steps
- q 45 project ideas were identified in total, which can be categorised and summarised on the basis of their focus and level of priority, as highlighted by the table below:

Type of project / Level of priority	Research and Development	MDS studies and policy actions	Total
High	25	11	36
Medium	1	6	7
Low	1	1	2
Total	27	18	45

- q 60% of the identified projects focus on R&D issues, while the remaining 40% deal with studies and supporting actions at policy level. The balance between research and economic / political projects demonstrates the capacity of TPWind to cover all relevant issues for the development of the wind energy sector

Sub-section	Project number and title	2009		2010		2011		2012		2013		2014		2015	
Sitting in complex terrains	1. New data sets and models for wind energy physics (€ 75 – 150 m)														
Offshore meteorology															
Wakes															
Extreme wind speeds															
Wind profiles at great heights															
Short-term prediction															

SRA/MDS implementation plan— WG2 projects (wind power systems)

Sub-section	Project number and title	2009	2010	2011	2012	2013	2014	2015
Wind turbine as a flow device	2. Advanced aerodynamic modelling and flow devices (€ 24 m)							
Wind turbine as a flow device	3. Analysis of flow in and around large wind farms (€ 14 m)							
Wind turbine as a mechanical structure/materials	4. Characterisation and development of materials (€ 40 m)							
Wind turbine as a mechanical structure/materials	5. Manufacturing technology (€ 20 m)							
Wind turbine as a mechanical structure/materials	6. Drive train development (€ 20 m)							
Wind turbine as an electricity plant	7. Advanced generator concepts (€ 15 m)							
Wind turbine as an electricity plant	8. Power electronics (€ 8 m)							
Wind turbine as a control system	9. Control strategies and algorithms, systems (€ 25m)							
Innovative concepts and integrated designs	10. Integrating design methodologies (€ 20 m)							
Innovative concepts and integrated designs	11. New concepts (budget to be developed)							
Operation and maintenance	12. Preventive maintenance and condition monitoring (€ 30 m)							

SRA/MDS implementation plan– WG3 projects (wind energy integration)

Sub-section	Project number and title	2009	2010	2011	2012	2013	2014	2015
Wind power plant capabilities	13. Grid codes (€ 1 m)							
Grid planning and operation	14. Acceptance of OH lines (€ 500.000)							
Grid planning and operation	15. Smart Power Line Technology (€ 1 m)							
Grid planning and operation	16. Offshore transmission (€ 150 m)							
Grid planning and operation	17. Operation and interoperability of networks (€ 2 m)							
Energy and power management	18. Modelling tools (€ 1 m)							

Sub-section	Project number and title	2009		2010		2011		2012		2013	
Safety	19. Standardisation and harmonisation across the EU <i>(€ 200,000)</i>										
Safety	20. Identification of training centres <i>(€ 200,000)</i>										
Environment	21. Make environmental data public <i>(€ 1 m)</i>										
Environment	22. Geotechnical data <i>(€ 1 m)</i>										
Substructures	23. Reengineering offshore substructures <i>(€ 10 m)</i>										
Substructures	24. Manufacturing automation <i>(€ 100 m)</i>										
Assembly, installation, decommissioning	25. Improved vessels <i>(€ 500,000)</i>										
Turbines	26. New offshore WTGs <i>(€ 1 m)</i>										
Operation and maintenance	27. Better access methods <i>(€ 10 m)</i>										

SRA/MDS implementation plan– WG5/WG6 projects (MDS studies)

MDS studies	Project number and title	2009		2010		2011		2012	
Enabling market deployment	28. Recommendations for electricity market rules (€ 100.000)								
Enabling market deployment	29. Economics of wind energy in future EU electricity markets (€ 150 - 200.000)								
Enabling market deployment	30. Fair and efficient remuneration for wind energy (€ 150 - 200.000)								
Reducing costs	31. Wind power O&M costs (€ 200.000)								
Reducing costs	32. Industrial Forum within TPWind (€ 200.000)								
Integrating wind into the natural environment	33. EIA review and guidelines (€ 300 - 500,000)								
Integrating wind into the natural environment	34. Environmental impact of wind farms								
Integrating wind into the natural environment	35. Impact on radar								
Integrating wind into the natural environment	36. Predicting, reducing and monitoring noise and shadow flicker								
Integrating wind into the natural environment	37. Environmental impact of electricity generation and consumption (especially offshore)								
Integrating wind into the natural environment	38. Centralised database on environmental baseline								
Integrating wind into the natural environment	39. Monitoring data								
Ensuring public support	40. Motivation of public opinion								
Ensuring public support	41. Benefits for local communities								
Human resources	42. Education and training								

MDS policy actions	Project number and title	2009		2010		2011		2012		2013	
Enabling market deployment	43. Impact of the economic crisis on wind energy <i>(€ 100 - 150.000)</i>										
Enabling market deployment	44. Wind energy impact on electricity markets <i>(€ 100 - 150.000)</i>										
Integrating wind into the natural environment	45. Common criteria for priority zones										

SRA/MDS implementation plan— next steps (I)

- q In order for TPWind to effectively implement the identified projects, the following strategy is proposed:
 - § 2009 should be considered as a preparatory year. The WGs were successful in outlining the actions, but much still needs to be done in order to create the conditions for their implementation. In order to do that, TPWind members should engage in further discussions in order to develop detailed action plans
 - § In order to maximize the effectiveness of its action, TPWind should primarily focus on high priority projects (36 in total, i.e. 80% of those identified by the WGs). These projects should be launched immediately after the completion of the relevant action plans, which means in the beginning of 2010
 - § Medium and low priority projects (9 in total) can be postponed to a later stage and be launched in 2011 (medium priority) and 2012 (low priority— see the Gantt chart for more details)
 - § The only exception to this rule could be represented by projects n. 19 and 21 (WG4), because their preliminary results should be presented at the next European Offshore Wind Conference and Exhibition (Stockholm, 14 – 16 September, 2009). For this reason, these two actions should be launched as soon as possible

SRA/MDS implementation plan— next steps (II)

- q The next TPWind General Assemblies will represent powerful tools for creating the conditions for implementing the identified projects
- q For this reason, the 4th GA, to be held on May 13th and 14th, 2009, should concentrate on drafting detailed action plans for the most urgent projects
- q On the other hand, the 5th GA, which should take place in October / November 2009, should have the main goals of finalizing the action plans, presenting the relevant sources of funding and creating the conditions for a smooth launch of the projects
- q Further to that, final version of the implementation plan, the EWI and the action plan on the future of TPWind will be presented during the 5th GA
- q Once the implementation plan will be finalized and approved, TPWind will use it to discuss its next steps with the EC

SRA/MDS implementation plan—conclusions

- q Implementing the identified projects represents a key priority for the wind energy sector, which needs to fulfil its full potential
- q The political conditions for doing it appear to be very favourable, since the European Commission is clearly interested in backing the development of renewables, especially in view of EU's 20% binding target for renewable energy production by 2020 (which has been set in the 20% Directive approved in December 2008)
- q The resources for implementing all the identified projects will come from the EWI, the FP7, the FP8 the EIB and the EBRD (which are expected to manage a considerable budget dedicated to renewables – see COM(2008) 800 “A European Economic Recovery Plan”)
- q However, public funds will not cover more than 50% of project costs in any case: the rest will have to be covered by the private sector
- q For this reason, a clear commitment of the industry will also be needed
- q TPWind is currently working to create the best possible conditions for a smooth launch of the identified projects

Thank you for your attention!



<http://www.windplatform.eu/>