

**PRIORIDADES DE INNOVACIÓN INTERNACIONALES EN
ENERGÍA EÓLICA**



MINISTERIO
DE CIENCIA
E INNOVACIÓN



STRATEGIC RESEARCH INNOVATION AGENDA (SRIA) - VIA STREAMING

**IVÁN PINEDA.
DIRECTOR OF INNOVATION. ETIPWIND**

ETIPWIND R&I priorities 2025-2027



What is ETIPWind?

- **European Technology & Innovation Platform** on wind energy established in 2016.
- Industry and research experts who align the sector's R&I priorities and provide **recommendations** to the European Institutions and national governments.
- Funded by the European Commission in the framework of the **SET Plan** through the **SETIPWind project (2022-2025)**.



Governance

WIND ENERGY RESEARCH AND INNOVATION COMMUNITY

SETIPWind

ETIPWind Steering Committee

Representatives from the whole wind energy community (industry, research, academia)

Joint Secretariat

Implementation Working Group on Wind Energy

Representatives from Member States in charge of coordinating research agendas on wind energy.

CTOs Forum

Industry CTOs, permanent working group in WindEurope

SET PLAN

Other ETIPs

Other IWGs

ETIPWind Steering Committee

• INDUSTRY



• RESEARCH



• OBSERVER



What ETIPWind does

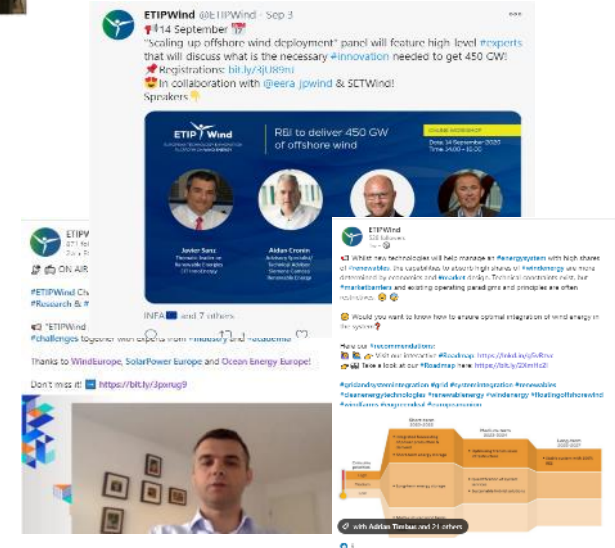
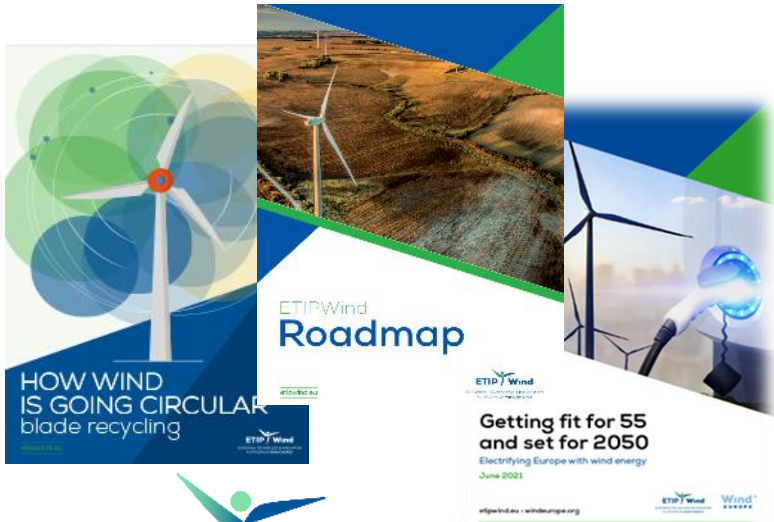
FOSTER COLLABORATIONS

ALIGN R&I PRIORITIES

WORKSHOPS & EVENTS

PUBLICATIONS

COMMUNICATION ON INDUSTRY'S PRIORITIES



ETIPWind Strategic R&I Agenda 2025-2027

- Establishes a vision for wind energy in Europe.
- Summarises short-term R&I priorities for industry and academia.
- Estimates public investments needed to address effectively the recommended R&I priorities.



ETIPWind Strategic R&I Agenda 2025-2027

- 5 Working Groups
- Reviewed and endorsed by Chief Technology Officers
- Consultation process
- Close collaboration with EERA JP Wind
- Overall, more than 190 experts consulted



Vision:

Wind energy - the leading solution to deliver the resilient, affordable and sustainable energy transition in Europe .

Challenges

- Deploying wind power at scale
- Manufacturing in Europe
- Wind power in the energy system
- Sustainability of wind energy
- Workforce and skills

Strategies/Actions

Speed-up: Actions needed to sustain and fast-track the immediate future growth of wind in Europe

Scale-up: Actions needed to maintain competitiveness and deliver the volumes we need.

Expand: Actions needed to make wind viable in more places.

Enhance: Actions needed to continue improving its impact in society and the environment.

R&I priorities

- Industrialisation, scale-up and competitiveness
- Optimisation and further digitalisation of O&M
- Wind energy system integration
- Sustainability and circularity
- Skills and co-existence

Industrialisation, scale-up and competitiveness

MASS PRODUCTION SUPPORTED BY AUTOMATION AND RELIABLE SUPPLY CHAIN

IMPACT

- Speed-up ●
- Scale-up ●
- Expand ○
- Enhance ○

DESIGN FOR LARGE VOLUME MANUFACTURING / DEPLOYMENT

IMPACT

- Speed-up ●
- Scale-up ●
- Expand ○
- Enhance ○

DESIGN FOR RELIABLE AND LASTING PRODUCTS

IMPACT

- Speed-up ○
- Scale-up ●
- Expand ○
- Enhance ●

IMPROVE CONSTRUCTION AND INSTALLATION METHODS INCLUDING PORTS INFRASTRUCTURE

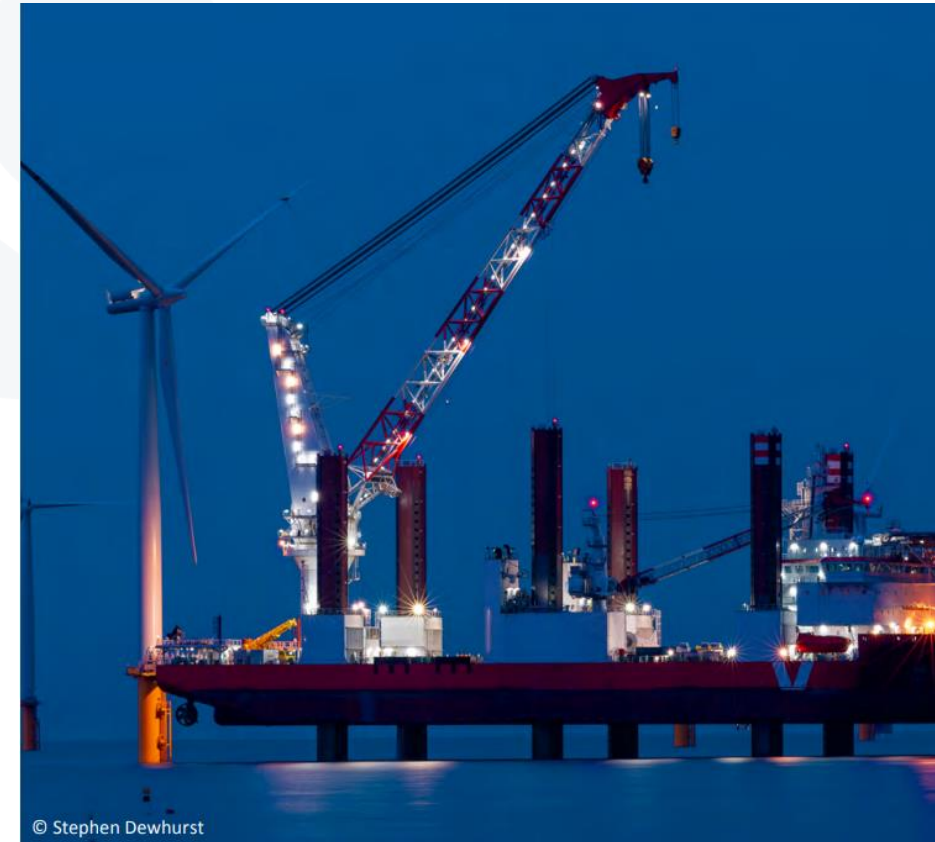
IMPACT

- Speed-up ○
- Scale-up ●
- Expand ●
- Enhance ●

RESEARCH ON INNOVATIVE ECONOMICS TO SCALE UP WIND

IMPACT

- Speed-up ●
- Scale-up ○
- Expand ●
- Enhance ○



Optimisation and further digitalisation of Operations & Maintenance

DIGITALISATION OF MAINTENANCE AND OPTIMISATION TOOLS FOR OPERATIONAL EFFICIENCY

IMPACT

Speed-up ●
Scale-up ○
Expand ●
Enhance ○

AUTONOMOUS OPERATIONS & MAINTENANCE (TOOLS, ROBOTS, VEHICLES)

IMPACT

Speed-up ○
Scale-up ●
Expand ●
Enhance ○

ENABLE DIGITAL ECOSYSTEMS

IMPACT

Speed-up ●
Scale-up ○
Expand ○
Enhance ○

REPLACEMENT AND TRANSPORT OF MAJOR COMPONENTS

IMPACT

Speed-up ○
Scale-up ●
Expand ●
Enhance ●



Wind energy system integration

DEFINITION AND MODELLING OF FUTURE SYSTEM NEEDS	IMPACT	Speed-up ● Scale-up ● Expand ○ Enhance ○
ADVANCED GRID CAPABILITIES FOR WIND POWER GENERATED UNITS	IMPACT	Speed-up ● Scale-up ○ Expand ● Enhance ●
INTEROPERABILITY - STANDARDISATION OF DATA STRUCTURE AND COMMUNICATIONS	IMPACT	Speed-up ● Scale-up ● Expand ○ Enhance ○
SOLUTIONS TO EFFECTIVELY MANAGE CURTAILMENT	IMPACT	Speed-up ● Scale-up ○ Expand ● Enhance ○
SYSTEM INTEGRATION OF CO-LOCATED RENEWABLES, OFFSHORE HYBRIDS AND WIND POWER-TO-X	IMPACT	Speed-up ○ Scale-up ● Expand ○ Enhance ●
DIRECT CURRENT (DC) GRID SOLUTIONS FOR WIND POWER	IMPACT	Speed-up ○ Scale-up ○ Expand ● Enhance ○



Sustainability and Circularity

DEVELOPMENT OF MATERIAL SUBSTITUTION
ENABLING DECARBONISATION AND REDUCING THE
USE OF RARE-EARTH MATERIALS

IMPACT

- Speed-up ●
- Scale-up ○
- Expand ○
- Enhance ●

DEVELOPMENT AND DEMONSTRATION OF RECYCLING
METHODS FOR WIND TURBINE MATERIALS,
MANUFACTURING WASTE AND COMPONENTS

IMPACT

- Speed-up ○
- Scale-up ●
- Expand ○
- Enhance ●

LIFETIME EXTENSION VIA RE-USING, REFURBISHING,
RE-PURPOSING

IMPACT

- Speed-up ○
- Scale-up ○
- Expand ○
- Enhance ●

NEW DECOMMISSIONING TOOLS AND METHODS

IMPACT

- Speed-up ○
- Scale-up ○
- Expand ○
- Enhance ●

BIODIVERSITY SOLUTIONS

IMPACT

- Speed-up ●
- Scale-up ●
- Expand ●
- Enhance ●



Skills and Coexistence

ENSURE A WORLD-CLASS EDUCATION FOR WIND ENERGY AND EXPAND IT

IMPACT

Speed-up
Scale-up
Expand
Enhance

SKILLING, RE-SKILLING AND UPSKILLING ACTIVITIES

IMPACT

Speed-up
Scale-up
Expand
Enhance

INCREASE PUBLIC ENGAGEMENT OF CITIZENS AND COEXISTENCE WITH OTHER STAKEHOLDERS

IMPACT

Speed-up
Scale-up
Expand
Enhance





Wind energy
the leading solution to deliver the resilient, affordable and sustainable energy transition in Europe.

5 R&I areas

23 R&I priorities

€1.8bn of public investment needed (from 2025 to 2027)

THANK YOU

Contact: secretariat@etipwind.eu