

ETIPWind Steering Committee – Online meeting



Objectives of the meeting

- Create the new working groups that will update the Strategic R&I Agenda (SRIA).
- Discuss the methodology, the roles and the timeline to update the SRIA.
- Give you an overview of the activities for Q3-Q4 2023.

EU policy update

Final deal on EU permitting rules (in RED)

Revision of the Renewable Energy Directive

#EUHaveyourSay



- Overriding public interest
- Faster permitting in and outside “acceleration” areas
- Clarity on deadlines: deadlines & content
- Population based approach

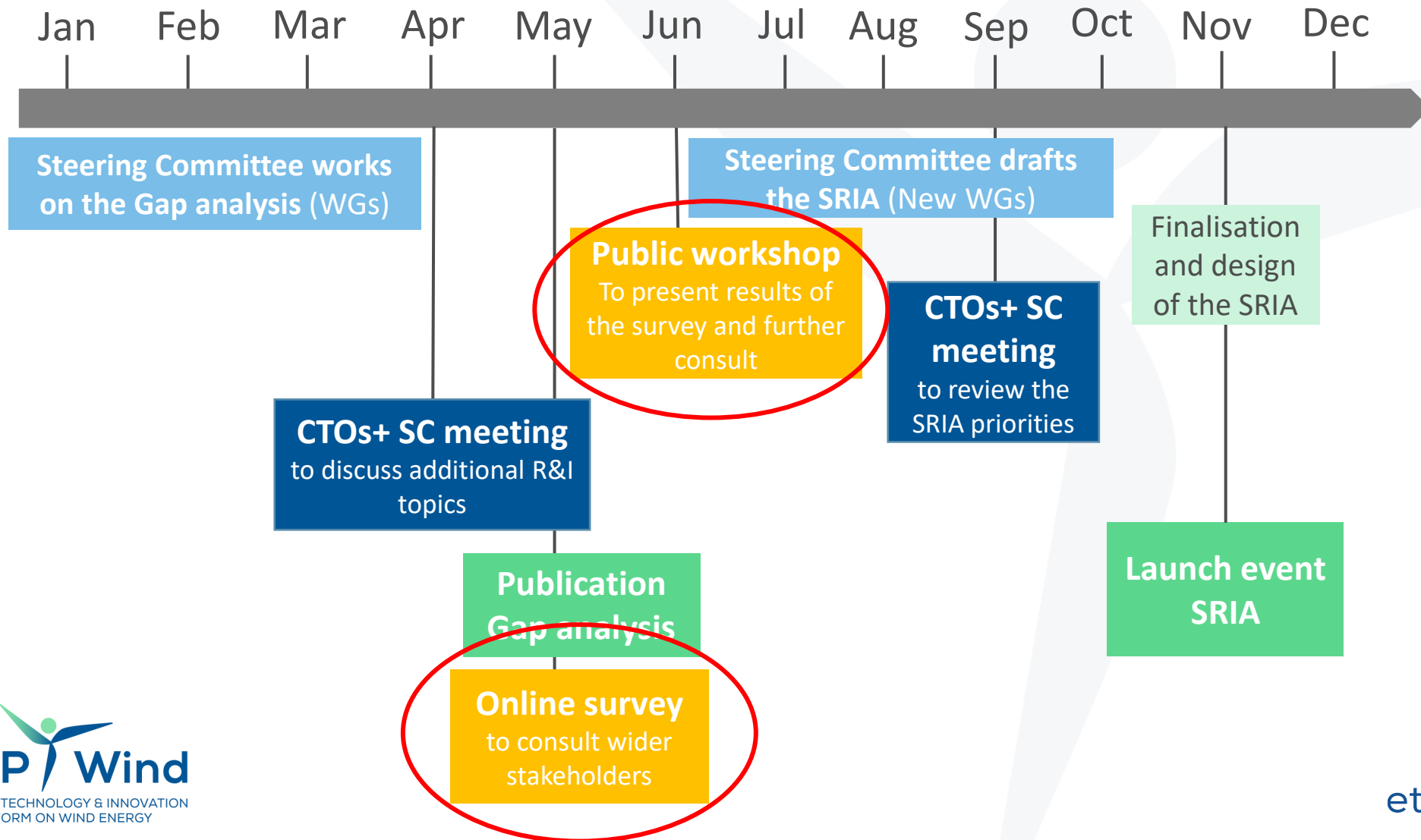
EU proposes STEP programme for priority technologies



- Strategic Technologies for Europe Platform (STEP): to boost investment in critical technologies in Europe
- The STEP program takes the place of the Sovereignty Fund previously announced.
- **€10bn shared among existing programs** (€3 billion for InvestEU, €500,000 for Horizon Europe, €5 billion for the Innovation Fund and €1.5 billion for the European Defence Fund).
- Sovereignty seal (EU quality label for EU projects that haven't received funding yet)

Results from the online survey and public workshop

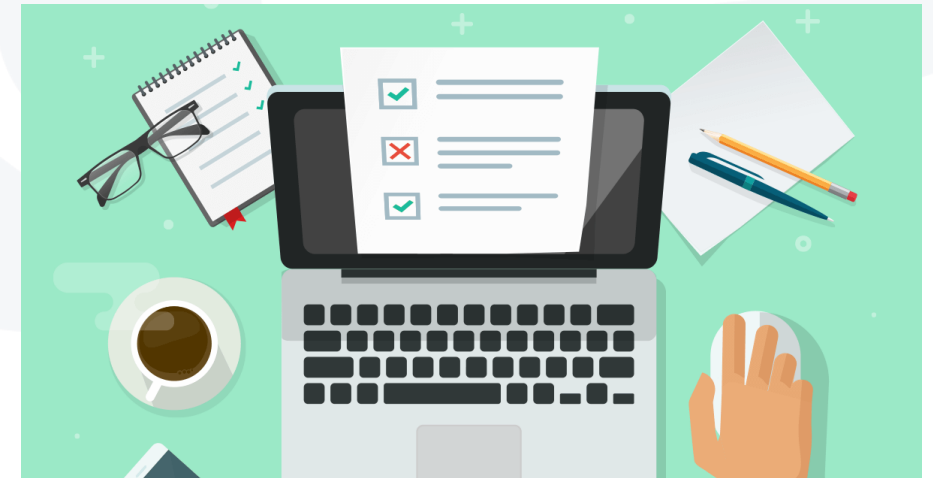
Consultation process for updating the SRIA



Results of the online survey and public workshop

1. Online survey:

- Open from 10 May to 9 June
- **Consultation at 3 levels:**
 - Main challenges faced by the sector today
 - R&I topics that will help solving the challenges
 - R&I activities and projects to be implemented
- + **Prioritisation** exercise
- **71 answers** (56% coming from industry, 40% form research)



Results of the online survey and public workshop

2. Public workshop:

- 20 June, online and in DG RTD.
- **80 participants** (30 in-person, 50 online)
- **Opening speech from Helene Chraye (DG RTD):**
 - Adoption of the Horizon Europe strategic plan 2025-2027 early 2024.
 - Next Horizon Europe work programme 2025: **only urgent needs and topics that need continuity in terms of funding.**
 - Adjustments according to the needs of the **new college of Commissioners in 2024.**
 - **Key points:** All RES needed, security of the energy system, strategic autonomy, inclusion of all citizens.



The 5 R&I challenges



Challenge 1 – Wind energy system integration



Challenge 2 – Industrialisation, scale-up and competitiveness



Challenge 3 – Operation & Maintenance and Digitalisation



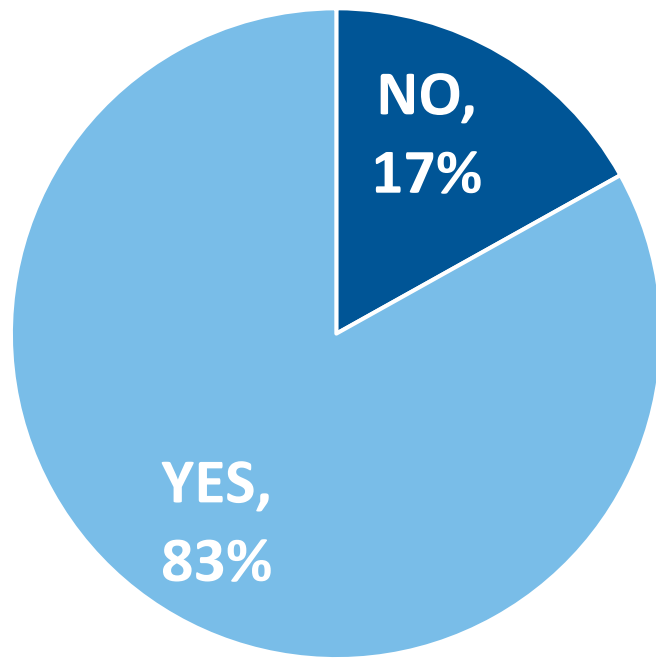
Challenge 4 – Sustainability and Circularity



Challenge 5 – Skills & Coexistence

No additional topic as standalone challenge

Question: Do you think the 5 R&I challenges accurately capture the reality of the wind energy sector?



Additional topics mentioned by the respondents:

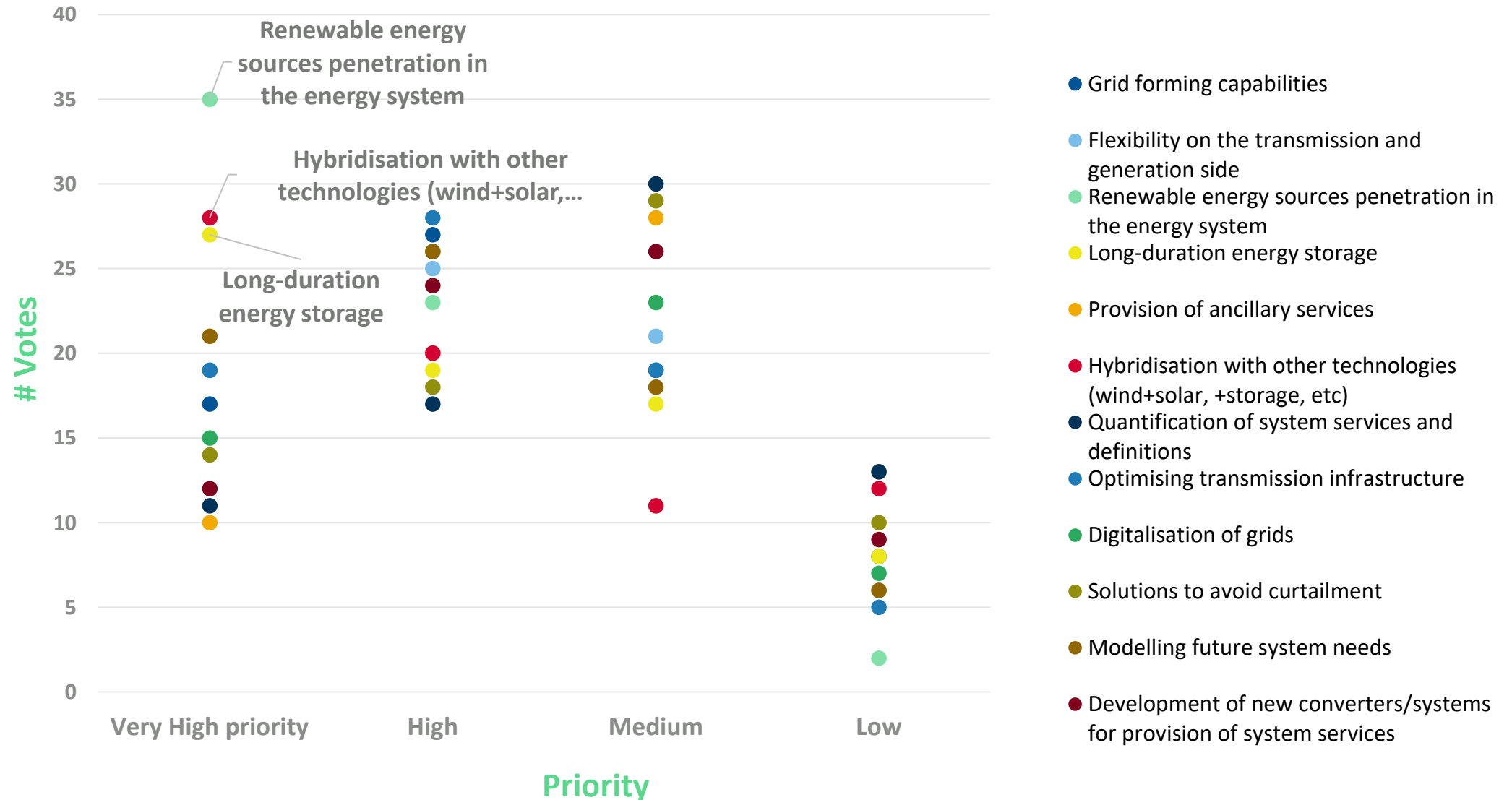
- Forecasting, weather conditions and adaptation to climate change of wind operations. *Challenge 3*
- Energy system dynamics (sector coupling, increase role of demand). *Challenge 1*
- Logistics and supply chain *Challenge 2*
- Degradation, corrosion, fatigue, performance *Challenge 3/4*
- Offshore infrastructure development (energy islands, offshore grids)
- Repurposing *Challenge 4*

Challenge 1 – Wind energy system integration

R&I topics identified by ETIPWind experts (in roadmap 2020)	<ul style="list-style-type: none"> -Grid forming capabilities -Flexibility on the transmission and generation side -Renewable energy sources penetration in the energy system -Long-duration energy storage -Provision of ancillary services -Hybridisation with other technologies (wind+solar, +storage, etc) -Quantification of system services and definitions -Optimising transmission infrastructure -Digitalisation of grids -Solutions to avoid curtailment -Modelling future system needs -Development of new converters/systems for provision of system services
Online survey	<ul style="list-style-type: none"> - DC grids, intra-array HVDC grids -Wind Turbine design digitalisation as enabler of system integration. -System integration of Wind + Hydrogen, Power to X, sector coupling -Airborne wind -Integration impacts (unwanted resonant conditions and control interactions) -Grid codes -Standards for SCADA data -Standards for grid equipment
Public workshop	<ul style="list-style-type: none"> -Time domain to be considered to cover both old and new technologies -System integration of Airborne wind energy -Market design -Wind + Hydrogen, Power-to-X, sector coupling, etc. -Digitalisation of the grids

Challenge 1 priorities according to survey respondents

Challenge 1 - Wind energy system integration

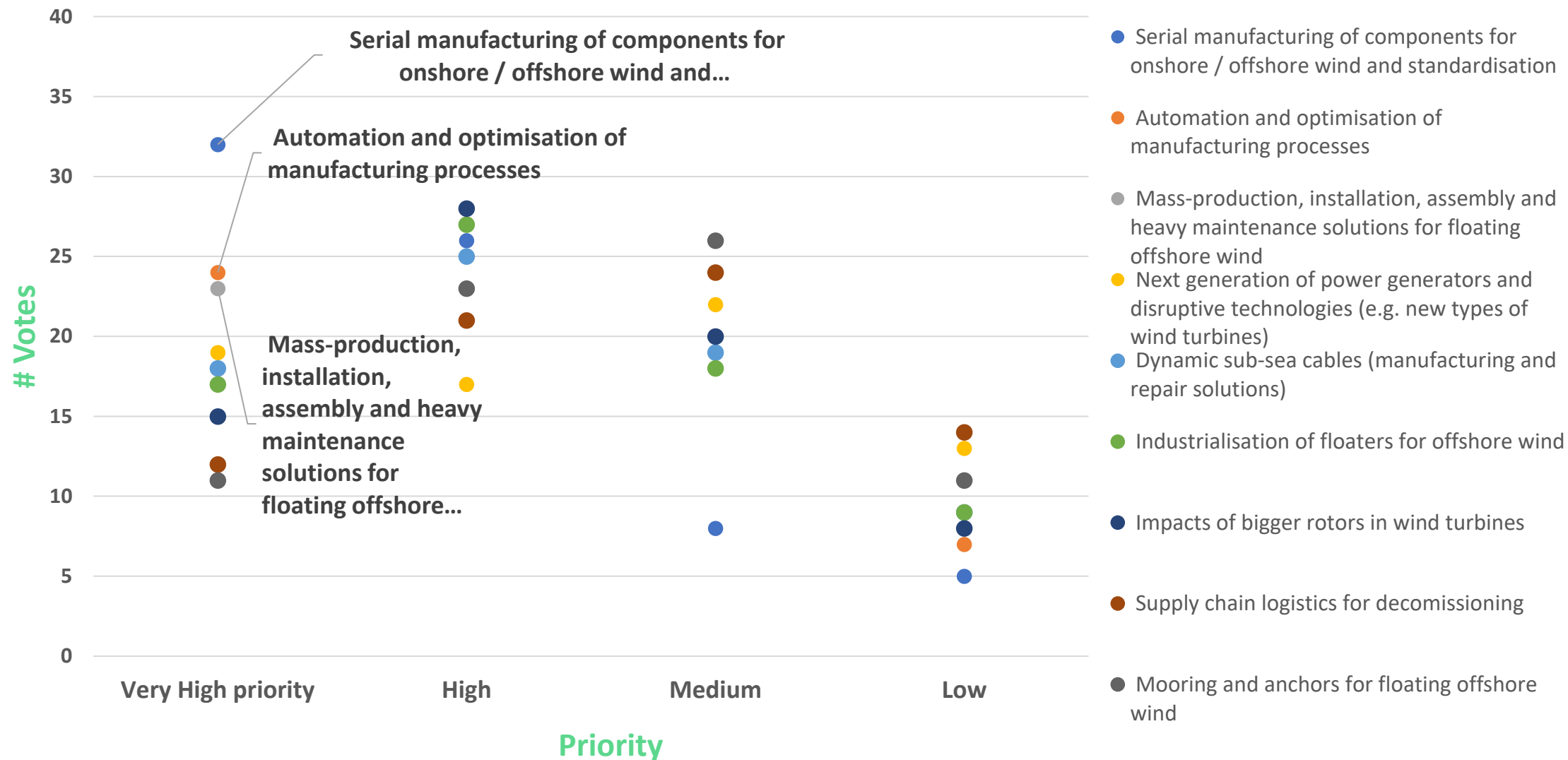


Challenge 2 – Industrialisation, scale-up and competitiveness

R&I topics identified by ETIPWind experts	<ul style="list-style-type: none"> -Industrialisation of floaters for offshore wind -Serial manufacturing of components for onshore / offshore wind and standardisation -Automation and optimisation of manufacturing processes -Dynamic sub-sea cables (manufacturing and repair solutions) -Mooring and anchors for floating offshore wind -Next generation of power generators and disruptive technologies (e.g. new types of wind turbines) -Supply chain logistics for decommissioning -Mass-production, installation, assembly, and heavy maintenance solutions for floating offshore wind -Impacts of bigger rotors in wind turbines
Online survey	<ul style="list-style-type: none"> -Testing and validation -More specific design challenges and impacts of bigger rotor -Infrastructure for scale up -Design methods for scaling up, probabilistic design approaches -Limits to scale components -20+MW generators -Onsite manufacturing
Public workshop	<ul style="list-style-type: none"> -Need to help innovators to present safer projects to potential investors to support market uptake (compliance with regulatory framework, sustainability, and circularity aspects, etc). -Need to set requirements for projects to develop business cases and exploitation plans -Mass-production for airborne wind -Analysis of the seabed and its impact on costs (for floating and bottom-fixed), to be included in the Maritime Spatial Plans -Optimisation of wind turbine design -Construction and transport of large components

Challenge 2 priorities according to survey respondents

Challenge 2: Industrialisation, scale-up and competitiveness

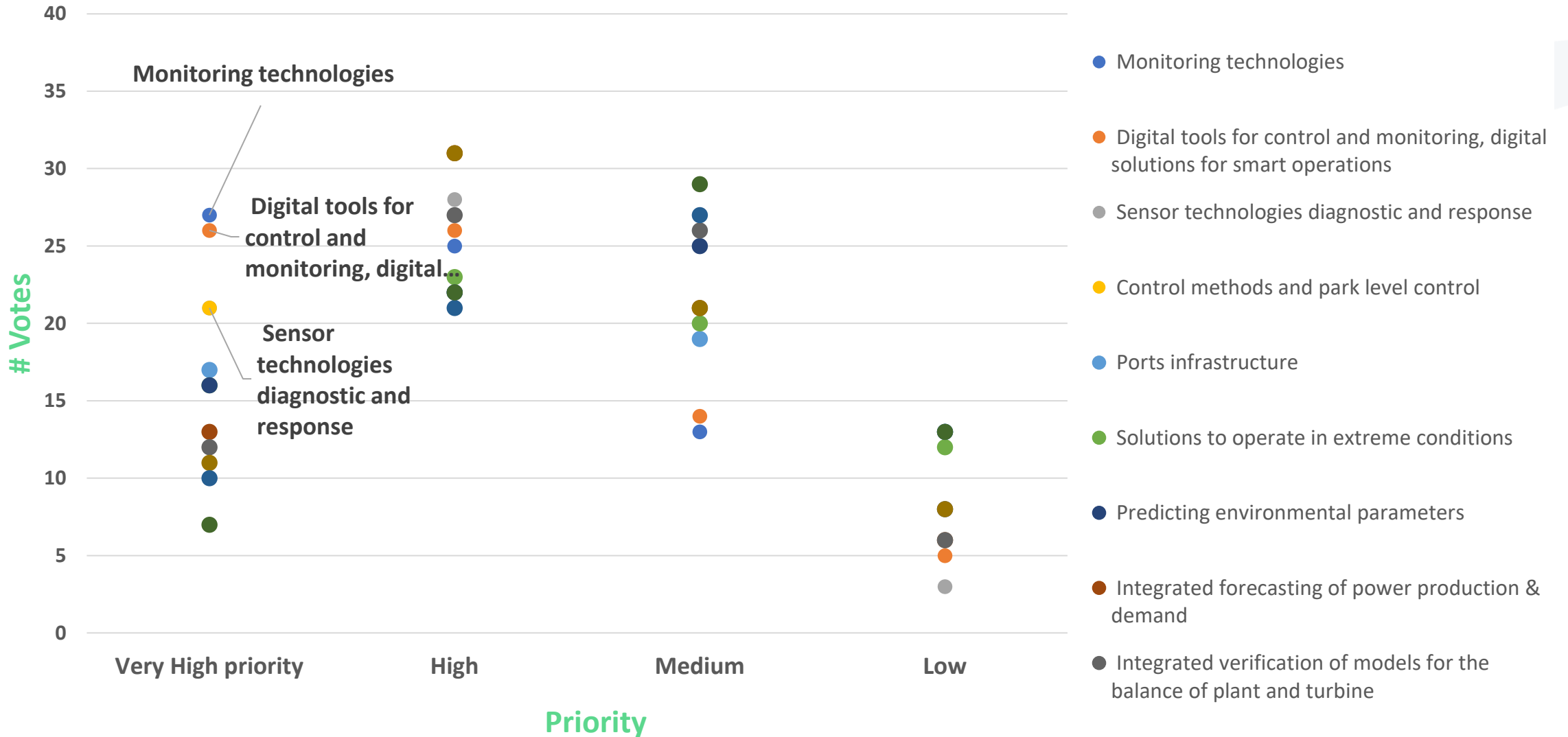


Challenge 3 – O&M and Digitalisation

R&I topics identified by ETIPWind experts	<ul style="list-style-type: none">-Monitoring technologies-Cross-border transport and transport of large components-Ports infrastructure-Automation for O&M and installation for offshore wind-Integrated forecasting of power production & demand-Digital tools for control and monitoring, digital solutions for smart operations-Solutions to operate in extreme conditions-Predicting environmental parameters-Sensor technologies diagnostic and response-Integrated verification of models for the balance of plant and turbine.-New installation methods or processes including low noise foundation installation technologies-Control methods and park level control
Online survey	<ul style="list-style-type: none">-Cybersecurity-Disruptive component replacement methods offshore-Erosion prediction tools-Reliability models for maintenance and failure prediction-Structural health monitoring-Use of drones
Public workshop	<ul style="list-style-type: none">-Artificial Intelligence to support O&M-Cluster optimisation (instead of wind farm optimisation)-Monitoring technologies (decision-making for operation, programming maintenance, health monitoring of components)-Cybersecurity-Optimisation of turbines, modelling (e.g. consideration of vibrations)

Challenge 3 priorities according to survey respondents

Challenge 3: Operation & Maintenance and Digitalisation

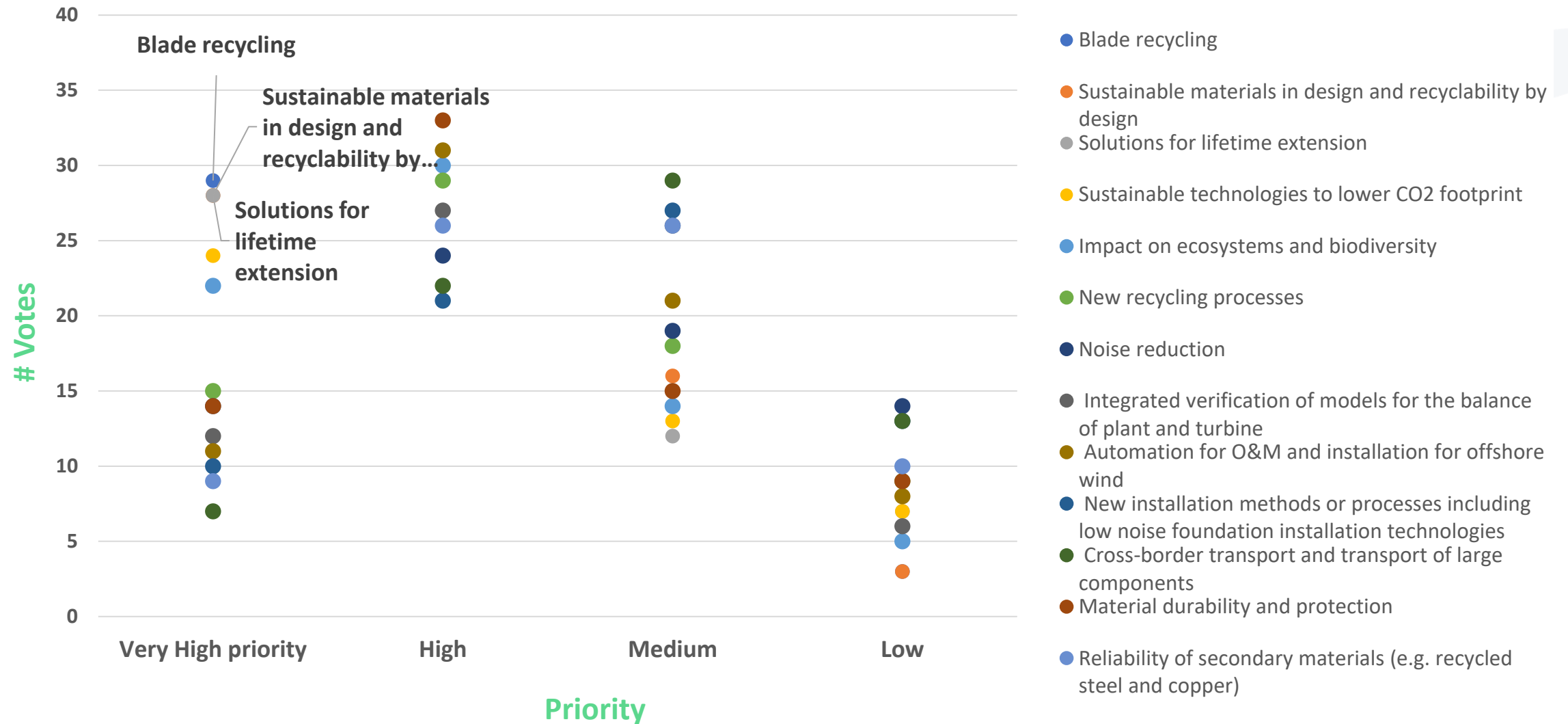


Challenge 4 – Sustainability and Circularity

R&I topics identified by ETIPWind experts	<ul style="list-style-type: none">-Sustainable materials in design and recyclability by design-Blade recycling-Sustainable technologies to lower CO2 footprint-Impact on ecosystems and biodiversity-Solutions for lifetime extension-Development and validation of new components and materials (e.g. replacement of carbon-fibre)-Reliability of secondary materials (e.g. recycled steel and copper)-New recycling processes-Noise reduction-Material durability and protection
Online survey	<ul style="list-style-type: none">-Sustainable raw materials and components (steel, cement, grid equipment)-Supply chain ESG reporting-Sustainability assessments (modelling, methods)-Sustainable decommissioning processes-Manufacturing waste reduction strategies.
Public workshop	<ul style="list-style-type: none">-Repowering and access to materials-2nd life use of components-Learnings from aviation industry for re-purposing and use of waste in other products-O&M Vessels decarbonisation-Co-existence studies (e.g. floating solutions)

Challenge 4 priorities according to survey respondents

Challenge 4: Sustainability and Circularity



Challenge 5 – Skills & Coexistence

R&I topics identified by ETIPWind experts	<ul style="list-style-type: none">-Education, skilling, re-skilling and upskilling (focused on turbines but also planning, transport, etc)-Solutions to improve acceptability and empowerment of citizens-Coexistence with other communities (e.g. fishing) and demonstration of the benefits of windfarms for society-Higher degree specialisation for wind energy research.
Online survey	<ul style="list-style-type: none">-Integration of acceptance into techno-economic wind farm optimisation and design-Accelerated permission process by improved policy and regulation-Social value of wind energy-Early age education on wind (primary school)-Financial and other participation schemes for energy communities-Energy communities and micro-grids
Public workshop	<ul style="list-style-type: none">-Involvement of public authorities in the process-Development of skills for public authorities (legal knowledge, social knowledge, logical thinking, communication, etc)-Need to adapt wind industry to attract more young people and invest in re-skilling activities-Empowerment of citizens is maybe not so much about research but more about implementation and sharing of best practices.-Need to provide solutions to public authorities to accelerate permitting (e.g. standardised environmental assessment)Co-existence with other sectors (military, radars, etc)

Challenge 5 priorities according to survey respondents

Challenge 5 – Skills and Coexistence



Questions / Remarks?

Methodology and timeline to update the SRIA

Methodology to update the SRIA

SRIA scope:

- **Objective:** Define what R&I topics need to be funded now (2025-2027) to achieve our targets by 2030 and 2050.
- **3 levels:**
 - Description of the main challenges faced by the wind industry today
 - List of R&I topics needed to answer these challenges
 - Short descriptions of R&I topics (what is needed concretely)
- **Prioritisation:** Focus on competitiveness of the supply-chain, what are the needs to accelerate wind energy installations. But also cross-cutting issues (skills, digitalisation, acceptability).

Methodology to update the SRIA

SRIA structure:

- **Format:** 20-25 pages.
- Foreword by **Rosalinde van der Vlies** and Introduction by **Adrian Timbus**

1) Vision 2050

- **Wind energy in the clean energy transition:** pictograms with indicators on economic value, jobs, etc. Need to safeguard EU leadership.
- **What we need to achieve:** targets by 2030: manufacturing, recycling, deployment/installations, jobs, etc. +in the long-term by 2050.
- **What will be the enablers:** permitting, reskilling/upskilling, education, acceptability.
- **Alignment with EERA JP Wind (visual)**
-> Research & Innovation is key to achieve this vision. Not because we have mature technologies that R&I is done.

2) Funding for wind energy and why it needs to increase:

- **Wind energy in the EU funding landscape:** diagrams, evolution of funding and investments, etc.
- **Gap analysis:** a short summary of the conclusions
- **EU / national / private investments**

-> If we want to achieve our targets: targeted EU investments in wind energy R&I are essential.

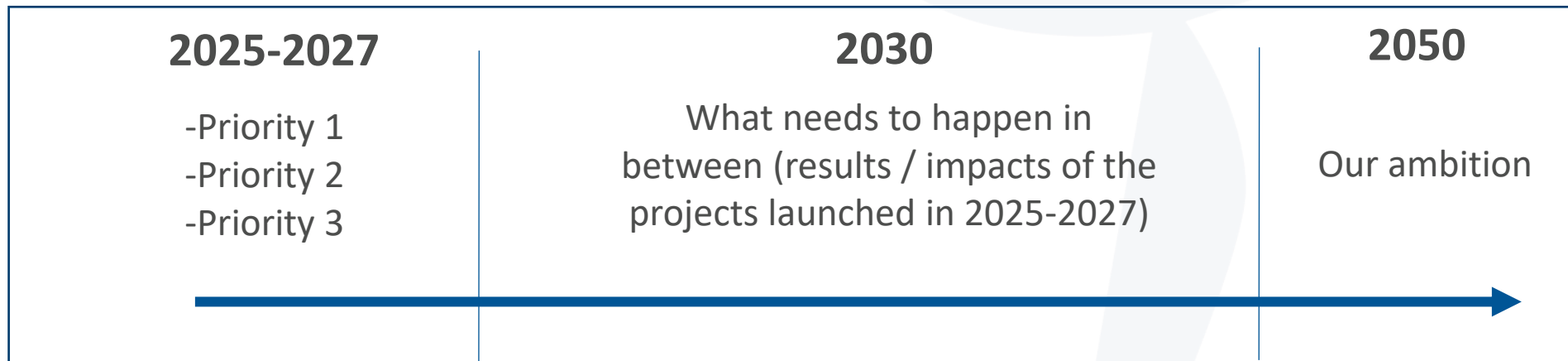
3) R&I priorities 2025-2027

- **Challenge 1:** Topic 1, Topic 2, Topic 3...
 - **Challenge 2:** Topic 1, Topic 2, Topic 3...
 - **Challenge 3:** Topic 1, Topic 2, Topic 3...
 - **Challenge 4:** Topic 1, Topic 2, Topic 3...
 - **Challenge 5:** Topic 1, Topic 2, Topic 3...
- > Visual recap of our priorities (Low, Medium, High) across the supply-chain

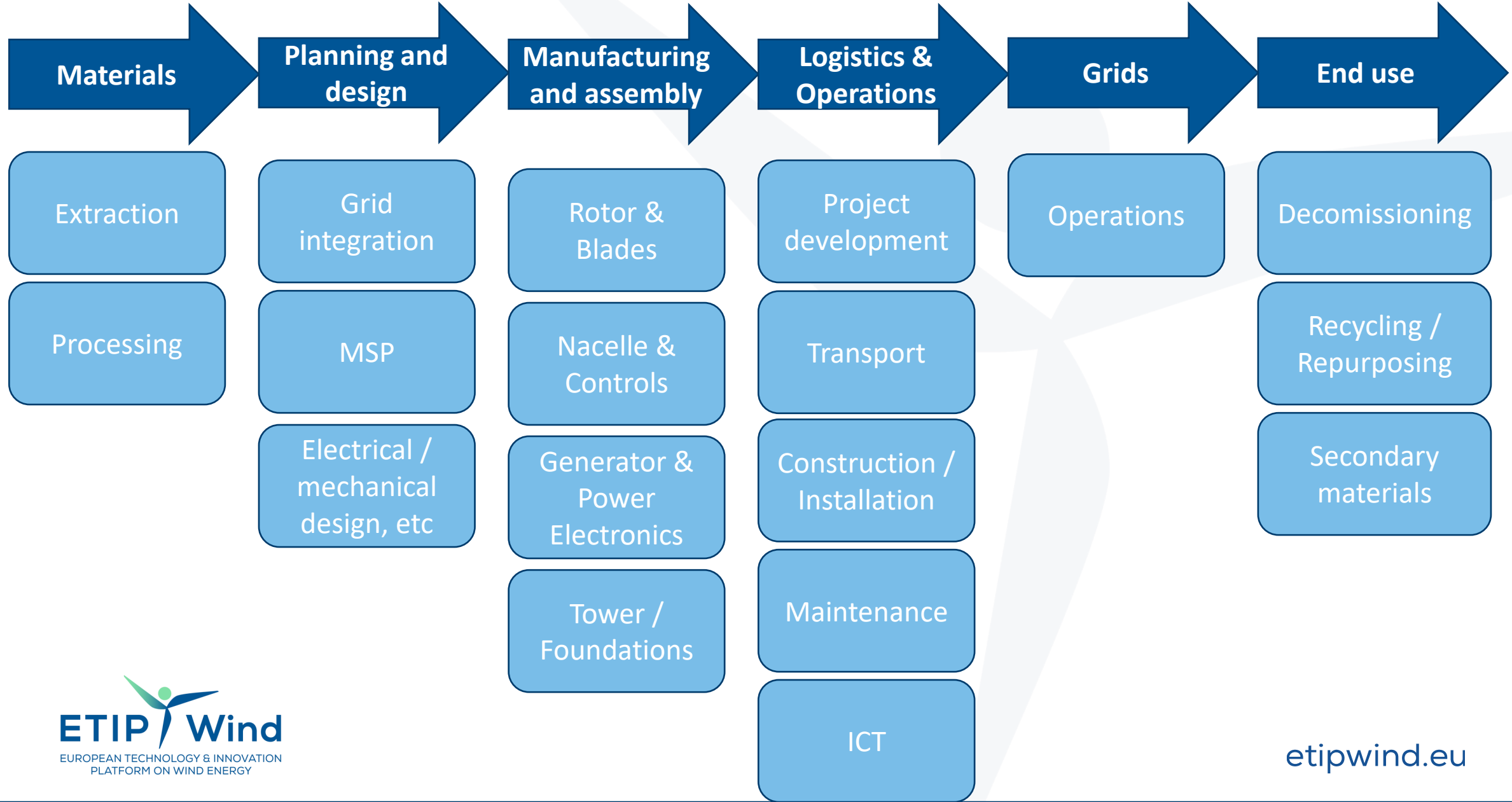
Methodology to update the SRIA

For each challenge:

- Description of the challenge and what are the needs to reach our targets by 2030 and 2050.



➤ Visual to explain where R&I is the most needed in the value-chain.

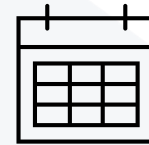


Methodology to update the SRIA

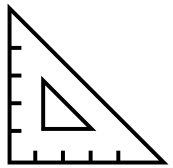
For each R&I topic:



Short description of R&I activities needed



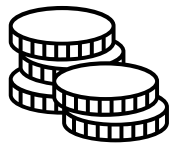
HEU Work Programme targeted (2025 or 2026-2027)



Technology Readiness Level (ambition level)



Already addressed or should be addressed by other ETIPs or by Horizon Europe



Estimated budget in €m

Working group composition and roles

5 Working Groups:

Working Group 1
Wind energy system
integration

Working Group 2
Industrialisation, scale-
up and competitiveness

Working Group 3
Operations &
Maintenance and
Digitalisation

Working Group 4
Sustainability and
Circularity

Working Group 5
Skills & Coexistence

Working Group 1
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Working group composition and roles

We need you to:

- Choose the R&I topics that are priorities for 2025-2027
- Write the descriptions of the R&I topics
- Review the full document when it'll be ready

The Secretariat will provide you:

- A drafting template for each challenge
- A summary of all the input we received for now (CTOs, online survey, public workshop)
- Support to organise WG meetings, consolidate the input from the WGs and share useful documentation



**Working Group members are the main authors.
Secretariat provides copywriting and editing support.**

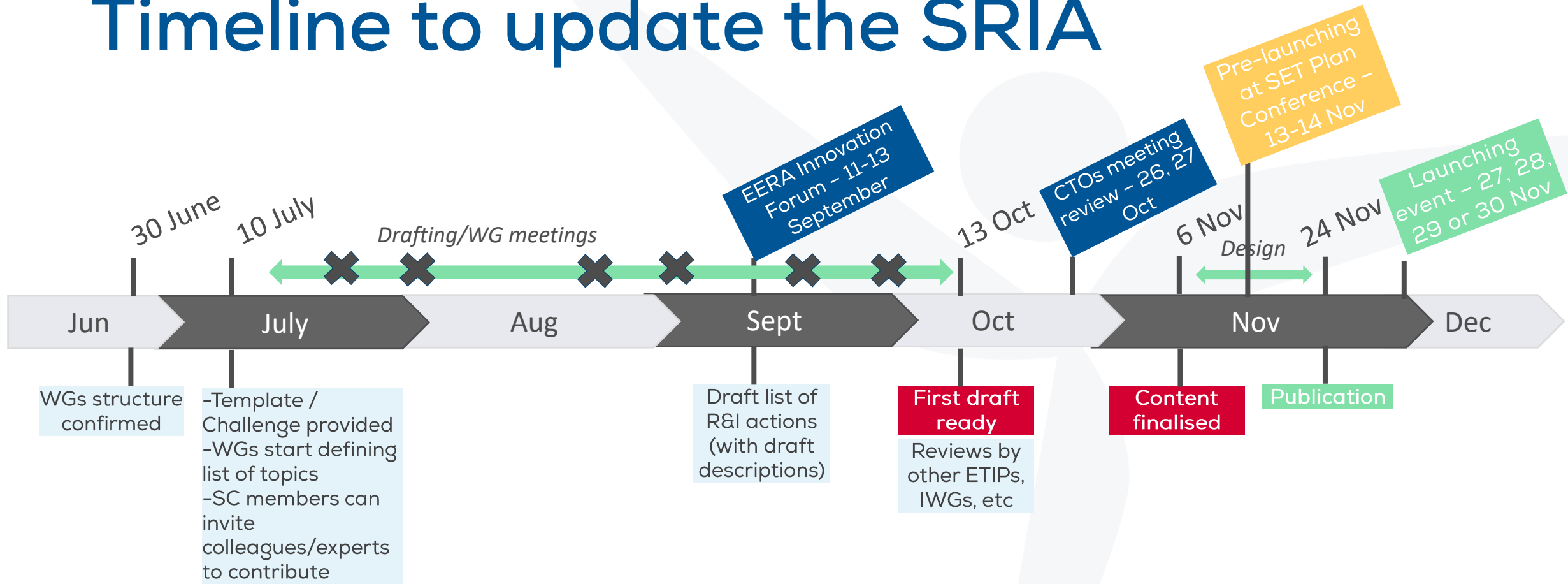
Working group composition and roles

Practical aspects:

- **Several online meetings** will be organised via Teams.
- The drafting work will be done through **shared files** (MS Teams sharepoint).
- If needed, Working Group members are free **to invite their colleagues** that have relevant expertise during the meetings.
- The **WG Chair** (nominated during 1st meeting) will take decisions if compromise cannot be found.

Questions / Remarks?

Timeline to update the SRIA



Next steps to update the SRIA

- You can register in one or several Working Groups from now **until Wednesday 5 July**.
- A first kick-off WG meeting should be scheduled **by end of July** (doodle will be shared).
- The Secretariat will send you **all the material needed** (template, input, etc.)

Questions / Remarks?

**Short break! We'll be back
at 10:20**

Introduction to the NeWindEERA project

- Introduction of the project by EERA JP Wind.
- **3 options:**
 - one single document
 - 2 separate documents
 - 2 documents but strongly interlinked

Brainstorming – Skills in the wind industry

- Renewable Energy Skills Partnership will soon consult ETIPs on:
 - emerging skills needs
 - jobs profiles
 - views on R&I for skills
 - policy recommendations / regulations
- Each ETIP will provide **3-5 pages** by 8 September to feed a report.

Brainstorming – Skills in the wind industry

- **Key positions that face shortages:** project managers, engineers, and O&M technicians.
- **Missing skills:** digital literacy (including big data analysis, artificial intelligence, and robotics), health and safety knowledge, project design expertise, and foreign language proficiency.
- **What we can do:** Raise awareness among institutions and Member States, funding for training initiatives, common set of minimum knowledge, skills and competences, standardised framework for workers.

Overview of Q3-Q4 activities

Alignment with EERA JP Wind on our R&I documents	September 2023	Handled by Secretariat and Core Team
Meetings with EU policymakers to disseminate conclusions from our Gap analysis and SRIA R&I topics	September – December 2023	Handled by Secretariat and Core Team
Update of the SRIA	July - November 2023	SC members: Participation in WGs and writing content
SRIA launching event	27, 28, 29 or 30 November	SC members: Participation and speaking
Recommendations for the revision of the NECPs	September – October 2023	SC members: Feedback on the draft NECPs and input for recommendations
Joint communication campaign with other ETIPs (including meetings with policymakers)	September – October 2023	SC members: Support to organise meetings with national policymakers

Conclusion and next steps

- Please register in one or several Working Groups by next Wednesday.
- Our main activity until the end of the year will be the **update of the SRIA** and the dissemination of our SRIA.
- We'll align with **EERA JP Wind** on our R&I document(s).
- Our **next SC meeting** will be on **12 September (afternoon)** in Amsterdam (in parallel of EERA's Innovation Forum).
- First **European Wind Energy Competitiveness Report** now available.

An aerial photograph of a beach with turquoise water and white foam waves crashing onto the sand. The text is overlaid in the center.

THANK YOU
and enjoy the
summer break!