

BEPA Technical Working Groups Terms of References

STRUCTURE OF BEPA WORKING GROUPS & TASK FORCES

In order to organise the work within the Batteries European Partnership Association (BEPA) and to achieve the objectives of the Batt4EU Partnership, different expert groups will be established.

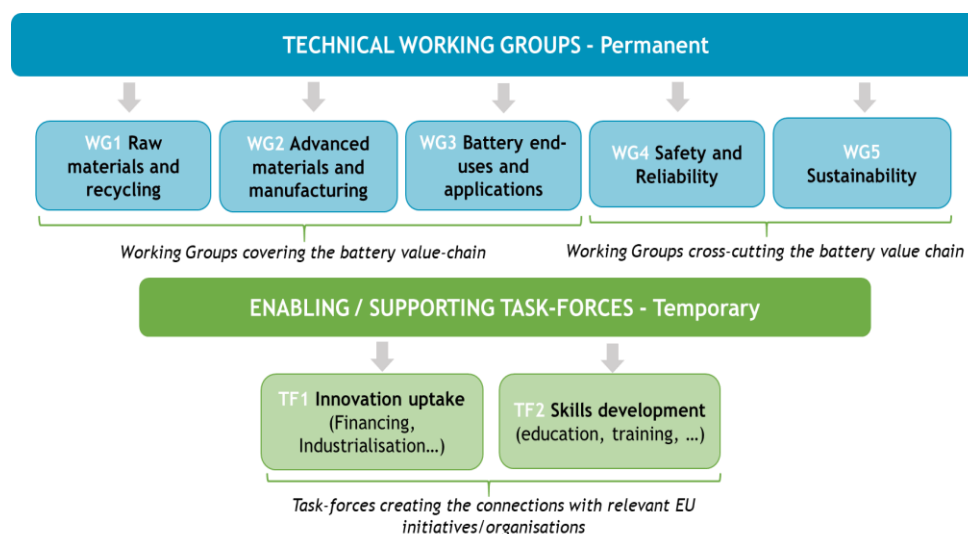
The 5 technical, permanent Technical Working Groups (TWGs) correspond to five of the six distinct R&I areas that have been identified in the BATT4EU Strategic Research & Innovation Agenda (SRIA) as key to achieve a competitive, sustainable European battery industrial manufacturing capability and to enable zero-emission mobility and renewable energy storage integration. The five areas are:

- Raw Materials and Recycling
- Advanced Materials and Manufacturing
- Battery End-uses and Applications
- Safety and Reliability
- Sustainability

The sixth area (Collaboration) will be part of the activities of each Working Group, as described below. Each specific R&I area is contributing to the achievement of the Specific objectives (SO) as well as the Technical objectives (TO) of the Partnership

Furthermore, at least 2 supporting Task Forces will be created (more information about these Task Forces will be shared before September 2021).

The following figure illustrates the structure of the TWGs and Task Forces that was elaborated in coordination with BEPA Executive Board.



SCOPE AND OBJECTIVES

1. OBJECTIVES

The main task of the 5 **TWGs** will be to identify, prioritise and draft the key battery R&I topics for the Horizon Europe Work Programmes. These groups shall cover **all the segments of the battery value-chain**; they will allow an efficient identification of priorities, especially in the perspective of the update of the Partnership strategic documents.

These groups will have a **strong link with the ETIP Batteries Europe** to ensure consistency in the identification of the high-priority topics. While the ETIP Technical Working Groups are gathering holistically all the research and innovation needs across the battery value-chain at every TRL level, BEPA's TWGs will identify, within the strategic input provided mainly by the ETIP, **the most urgent and strategic R&I priorities to be addressed within the work programmes of the Battery Partnership under Horizon Europe**. Knowing that battery related research needs will also be addressed within other EU, national or regional programs, these TWGs will also **coordinate with other initiatives, in particular with other European Partnerships** to confront and discuss R&I priorities identified in BEPA and elaborate potential joint calls (e.g. with the 2ZERO Partnership on road transport) within Horizon Europe Work Programmes.

Additionally, the **outcomes of the EU-funded projects will be monitored and assessed** within these TWGs with a double objective:

- (i) identify battery "Success stories" to be reported by the Partnership; and
- (ii) provide adequate feedback to ETIP BE in order to align future R&I priorities with the observed maturity of ongoing battery technology developments; and contribute to the periodic update of the Partnership's SRIA

Finally, as experts involved in the TWGs are also involved or have at least knowledge of the progresses made within other EU initiatives on batteries, the TWGs should have a key role in elaborating and monitoring the **BEPA annual Additional Activities Plan**.

2. SCOPE

The scope of the Technical Working-Groups is envisaged as follows:

Working Group 1 – Raw materials and recycling

This TWG will focus on raw materials (from sourcing, extraction and sustainable processing), end-of-life and recycling aspects (collecting, sorting, recycling processes etc).

More details can be found in the Part 4.1 "Area 1: RAW MATERIALS AND RECYCLING" of the [Strategic Research and Innovation Agenda](#).

Working Group 2 – Advanced materials and manufacturing

This TWG will focus on advanced materials (from cathode, anode, separator to electrolyte materials), development of new chemistries and on the development of more cost-efficient, better performing, safer and more sustainable battery cells. It also focuses on cell design and manufacturing aspects, including on the need to develop, in Europe, battery mass production manufacturing capabilities through all the value chain.

More details can be found in the Part 4.2 “Area 2: ADVANCED MATERIALS AND MANUFACTURING” of the [Strategic Research and Innovation Agenda](#).

Working Group 3 – Battery end-uses and applications

This TWG will focus on different battery end-uses and applications including transport and mobility applications (road, waterborne, airborne, rail) and battery systems for stationary storage applications (including 2nd life), exploiting synergies between the different applications by developing new technologies at the battery system level (considering mechanical, electrical and thermal engineering aspects, as well as battery management software and hardware).

More details can be found in the Part 4.3 “Area 3: BATTERY END-USES AND OPERATIONS” of the [Strategic Research and Innovation Agenda](#).

Working Group 4 – Safety & Reliability:

The scope of this Working Group is cross-cutting and should focus only on safety aspects not covered in the other TWGs such as: safety assessment and methodologies to assess the state of safety (e.g. during operations), understanding of events leading to safety issues, needed evolution of processes and protocols for evolving / innovative battery technologies.

More details can be found in the Part 4.4 “Area 4: SAFETY” of the [Strategic Research and Innovation Agenda](#).

Working Group 5 – Sustainability:

The scope of this Working Group is cross-cutting and focuses on sustainability aspects along the whole value chain: development of LCA tools (including societal LCA), methodologies for full supply-chain analysis, traceability and data management issues.

More details can be found in the Part 4.5 “Area 5: SUSTAINABILITY” of the [Strategic Research and Innovation Agenda](#).

COMPOSITION OF THE TWGS

The number of participants in the TWGs is not limited but stakeholders should indicate that they are willing to commit time and effort for their active participation. Participants in the TWGs are expected to actively contribute to the TWG objectives.

Every BEPA member can nominate up to 2 employees¹ with the appropriate technical expertise in every TWG. These contributors are nominated by the main representative.

The composition of each TWG should reflect the main stakeholders involved in BEPA with respect to the research area of the TWG. A reasonable balance between Industry and Research members should be respected: TWG Leaders are responsible for ensuring this balance, by liaising with the different BEPA members and by inviting the necessary experts.

BEPA members' representatives already involved in the **Association Delegation** are expected to take an active (preferably leading) role in the TWGs to ensure continuity in the discussions within the Partnership Board.

Delegates from the European Commission and from Member States (involved in the ETIP NRCGs) can attend the TWG meetings as Observers. These Observers may be invited to give specific inputs for the preparation of a document and can provide suggestions on the TWG's work.

Non-BEPA members technical advisors with specific expertise may be invited by the TWG's Core Team on specific topics.

GOVERNANCE OF THE TWGS

BEPA TWGs are permanent and should be in operation for the whole duration of the Batt4EU Partnership.

- Each TWG is coordinated by a Core Team which includes up to 3 representatives:
- a TWG Leader (ideally coming from the Industry),
- a TWG Co-leader (ideally coming from the Research)
- a Technical Advisor.

The Core Team is responsible for:

- Coordinating the TWG's activities with the support of the BEPA Office;
- Chairing the meetings and moderating the discussions of the TWG;
- Drawing up the agenda of each meeting in consultation with the BEPA Office;
- Reviewing the minutes of the meetings prepared by the BEPA Office;
- Reporting and providing the consolidated inputs of the TWG to BEPA Association Delegation;

¹ According to Art.5.2.2 AoA, only the "Secretariat" of associations enjoy the rights of associate membership. An association cannot be represented in Technical Working Groups by one of its members.

- Representing the TWG at external meetings and events.

The roles and responsibilities within the Core Team are as follows:

TWG Leader	Responsible for the delivering on the objectives of the TWGs. The TWG Leader will chair the TWG meetings and represent the TWG towards external parties.
TWG Co-leader	The TWG Co-Leader will support the TWG Leader with their work and replace the Leader in case of absence.
TWG Technical Advisor	The TWG Technical Advisor will support the TWG Leader by providing technical input for the drawing up of the agenda, provide relevant technical background materials to aid TWG discussions, oversee technical discussions within the TWG and give technical recommendations to the TWG leader in case the TWG fails to reach consensus.

Any BEPA member can express interest to be part of the Core Team as Leader, Co-leader or Technical Advisor.

A single expert can be elected only for one Core Team position in one TWG. Only 2 candidates from a single BEPA member can be elected in the Leader and Co-leader positions (considering all TWGs).

The list of potential candidates will be approved by the BEPA Executive Board, based on the following criteria:

- Membership category (Industry or Research)
- Relevance of their work to the scope of the specific TWG
- Years of experience in the relevant field experience

The Core Team will be then elected during the first meeting of each TWG. They will be nominated for a period of 2 years, can be reappointed and may be replaced if the scope of activities of the TWG is changed.

The final deliverables which are drawn up within the TWGs will be sent to the Association Delegation for final approval. The Association Delegation will then present the deliverables to the European Commission in the Partnership Board.

The BEPA Office ensures a permanent logistic support to organise meetings, taking minutes and interacting with the Core Team, as well as following-up the execution of decisions taken.

METHOD OF WORKING:

The TWG Leaders will call for TWG meetings when judged necessary for the preparation of the documents they are responsible for. In practice, one TWG meeting per month is foreseen.

TWG meetings may be organised by teleconferencing, and consultation on drafts documents and requests for input may be done via email. The working documents of the TWG will be shared and accessible via the BEPA repository (a restricted area for each TWG will be created).

The TWGs will work by consensus. In case of critical matter, the TWG Core Team will call the Executive Board to receive guidance on the way forward.

Members involved in a Working Group not showing activity for more than one year will be removed from the mailing list of the TWG if no reaction is given to invitations.

The Working Group membership will be made available publicly. The list of member organisations and nominated persons will be available on the BEPA website.

The results and minutes of the TWGs are published on the BEPA repository and will also be available to members who have not participated in the TWG.

KEY ACTIVITIES AND DELIVERABLES

Key activities:

- Analysis, impact assessment and prioritisation of R&I topics, based on the input from the ETIP and other stakeholders.
- Follow-up, assessment and dissemination of the outcomes of the EU funded projects (e.g. assessment of the TRL level achieved at the end of a project), identification of battery R&I “Success stories” among the EU funded projects, and feedback to ETIP Batteries Europe
- Development and regular update of the Partnership strategic documents (SRIA, Monitoring Framework)
- Coordination with other European Partnerships and other relevant initiatives to ensure alignment of R&I priorities and potentially define relevant topics for joint calls.
- Identification, prioritisation and drafting of the topics for the next Horizon Europe Work Programmes (incl. budget allocation).
- Contributing to the elaboration and monitoring the BEPA annual Additional Activities Plan.

Deliverables:

- Updates of the long-term Strategic Research and Innovation Agenda (SRIA)
- Battery R&I topics for the calls of the Horizon Europe Work-Programmes
- Potential joint calls with other European Partnerships
- Deliverables that will follow from the monitoring and reporting

TIMELINE OF THE ACTIVITIES OF THE TWGS

May 2021	Establishing active TWGs through an open invitation to all BEPA members in line with the general working arrangements of the Batt4EU Partnership.
June 2021	Kick-off of the TWGs, election of the Core Team's representatives and first brainstorming on the key issues and R&I priorities.
September 2021 to December 2021	Update of the Partnership's Strategic Research and Innovation Agenda as pre-requisite to Horizon Europe Work Programme 2023-24 topics elaboration process.
January/February 2022	Identification, prioritisation and elaboration of the battery R&I topics for the Horizon Europe Work Programmes 2023-24.

Please note that the above-mentioned objectives and timeline might slightly deviate according to the implementation of the work of each Working Group.