

The European Battery R&I Community

Working Groups

Terms of Reference

The European Technology and Innovation Platform BATTERIES EUROPE and the European Partnership BATT4EU are two of the main initiatives steering the European Battery R&I Community.

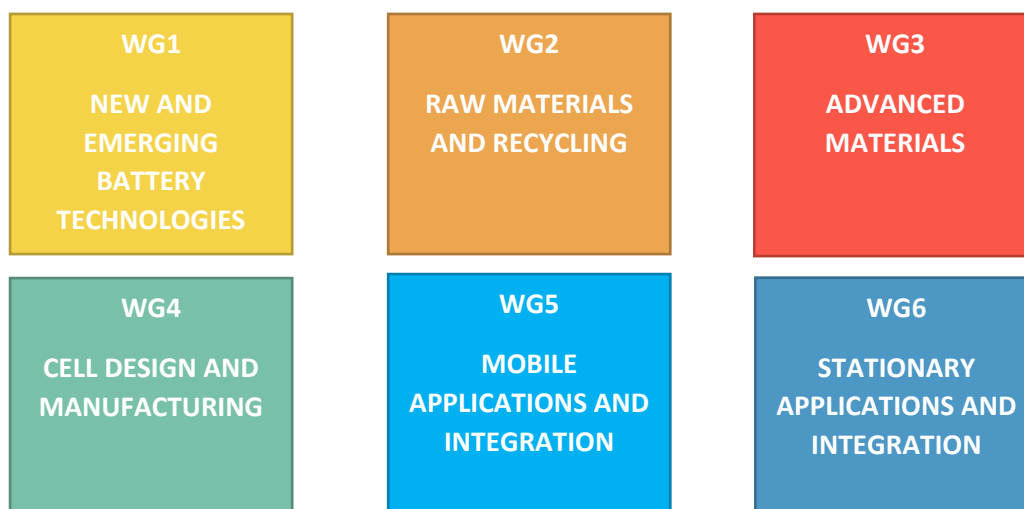
To maximise the impact of these two initiatives in the most efficient way for the benefit of the entire European battery community, different expert groups (the “Working Groups”) are jointly established by the Office of BEPA – the Battery European Partnership Association – and by the BATTERIES EUROPE Secretariat. These Working Groups will be the main discussion fora for experts of the European battery value chain to provide techno-scientific inputs on key strategic and technical topics.

The following Terms of Reference set out the scope, the objectives, the deliverables, the structure, the composition and the method of working of the Working Groups.

STRUCTURE AND SCOPE OF THE WORKING GROUPS

Six permanent Working Groups are established, which should be in operation for the whole duration of the BATT4EU Partnership.

These six Working Groups correspond with six distinct R&I areas that are key to achieve a competitive, sustainable European battery industrial manufacturing capability and to enable zero-emission mobility and renewable energy storage integration. Together, these groups shall cover **all segments of the battery value-chain**. These six areas are:



The scope of each Working Group is envisaged as follows:

WORKING GROUP 1 – NEW AND EMERGING BATTERY TECHNOLOGIES

This Working Group will focus on a long-term vision of the expected emerging and new battery technologies reaching as far as 2050, including new chemistries and the themes supported by the BATTERY 2030+ initiative.

WORKING GROUP 2 – RAW MATERIALS AND RECYCLING

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

WORKING GROUP 3 – ADVANCED MATERIALS

This Working Group will focus on advanced materials for battery cells, modules and packs (with an emphasis on active materials and electrolytes).

WORKING GROUP 4 – CELL DESIGN AND MANUFACTURING

This Working Group will focus on cell design and manufacturing aspects, including on the need to develop in Europe battery mass production manufacturing capabilities through all the value chain.

WORKING GROUP 5 – MOBILE APPLICATIONS AND INTEGRATION

This Working Group will focus on different battery end-uses for transport and mobility applications (road, waterborne, airborne, rail, etc.), including off-road and mobile machinery applications (logistics, mining, etc.), 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).

WORKING GROUP 6 – STATIONARY APPLICATIONS AND INTEGRATION

This Working Group will focus on different battery systems for stationary applications (ESS, static industrial machinery, 2nd life, etc.), 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).

OBJECTIVES, TASKS AND DELIVERABLES FOR THE WORKING GROUPS

The main objectives for the six Working Groups will be:

- 1) to provide scientific-based reviews (roadmaps) on the different relevant technologies, including gap analysis, benchmarking, KPIs, etc.;
- 2) To contribute to other relevant technical deliverables
- 3) to shape a joint, unique, comprehensive strategic research and innovation agenda (SRIA) for the European battery value chain;
- 4) to provide recommendations on research and innovation priorities and draft topics for the Horizon Europe work programmes of the BATT4EU Partnership.

These stock-taking and prioritisation objectives can be schematically split up into three distinct sets of tasks, as illustrated in figure 1:

1. To publish technology reviews (roadmaps), define KPIs and benchmarks and develop common reporting methodologies. These activities, highly relevant for both initiatives, will be mainly supported by BATTERIES EUROPE Secretariat, as a result of their commitments in the awarded CSA under call HEU-CL5-2021-D2-01-07.
2. To elaborate the Strategic Research and Innovation Agenda for the European battery Community. Initial steps on the structure and outline of the SRIA are limited to BEPA's members and the BATTERIES EUROPE Steering Board; detailed drafting is open to both BATTERIES EUROPE's and BEPA's members.
3. To identify, prioritise and draft the key battery R&I topics for the Horizon Europe Work Programmes of the BATT4EU Partnership. This activity is restricted to BEPA's members.

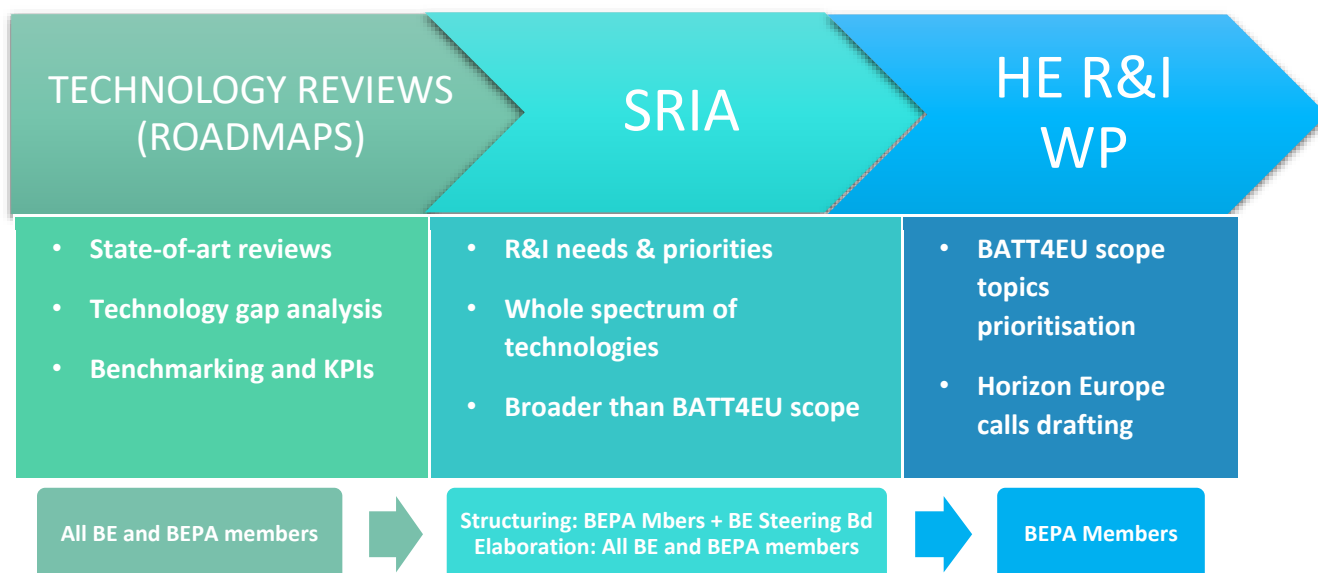


Figure 1: The three sets of tasks executed by the Working Groups

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

- (i) To identify battery “Success stories” to be reported by the Partnership.
- (ii) To provide input for the next round/update of the technology reviews, as well as for the update of the SRIA.

Knowing that battery-related research needs will also be addressed within other EU, national or regional programs, the Working Groups will also **coordinate with other initiatives, in particular with other European Partnerships** to confront and discuss R&I priorities identified in the SRIA and elaborate potential joint calls within the Horizon Europe Work Programmes.

As illustrated in figure 1, the Working Groups will convene in 2 possible configurations:

- in broad sessions, involving both BATTERIES EUROPE’s and BEPA’s members, when working on tasks relevant for both initiatives;
- in restricted sessions, with BEPA’s members only, when working on tasks specific to the BATT4EU Partnership.

The different tasks and respective configurations are further specified in the table below:

Objective	Output	Members involved
Technology reviews	scientific-based reviews (technology benchmarking, KPI values set up, gap analysis, etc.)	BATTERIES EUROPE and BEPA members
SRIA	Outline and structure	BEPA Members + BATTERIES EUROPE Steering Board
	Full Strategic Research and Innovation agenda	BATTERIES EUROPE and BEPA members
HE R&I WP	<ul style="list-style-type: none"> • Proposed topics for the next HEU BATT4EU Work Programmes (incl. prioritisation and budget allocation) • Joint calls with other European Partnerships • Updated BATT4EU Monitoring Framework and KPIs 	BEPA Members Only

COMPOSITION OF THE WORKING GROUPS

Participation in the Working Groups is open to representatives from any organisation that is a member of BEPA and/or of BATTERIES EUROPE.

The composition of each Working Group should reflect the main stakeholders involved with respect to the research area of the Working Group. A reasonable balance between Industry and Research members should be respected: the Working Group Core Team is responsible for ensuring this balance, by liaising with the different stakeholders in the European battery ecosystem and by inviting the necessary experts in case the balance is disturbed.

Participants in the Working Groups are expected to actively contribute to the Working Group objectives. Accordingly, stakeholders are invited to indicate that they are willing to commit their expertise, time and effort for their active participation.

The total number of participants in each Working Group is not limited but to keep them at a manageable size, every partaking organisation can nominate no more than up to 3 employees¹ with the appropriate technical expertise per Working Group.

Applications have to be submitted to BEPA's Office (for members of BEPA) or to BATTERIES EUROPE Secretariat (for organisations which are a member of BATTERIES EUROPE but not of BEPA), who will check their admissibility.

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

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

Non-members with specific expertise may be invited by the Working Group's Core Team on specific topics on an ad hoc basis.

Members involved in a Working Group not showing activity for more than one year will be removed from the mailing list of the Working Group 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/BATT4EU and BATTERIES EUROPE websites.

¹ According to the BEPA Articles of Association (Art.5.2.2), only the "Secretariat" of associations enjoys the rights of associate membership. An association cannot be represented in Working Groups by one of its members.

GOVERNANCE OF THE WORKING GROUPS

Each Working Group is coordinated by a Core Team which includes up to 3 representatives:

- an Industry Chair;
- a Research Chair;
- a Technical Advisor (they can come from any kind of organisation, including Associations).

The members of the Core Team are nominated for a period of 2 years, can be reappointed without limit, and may be replaced if the scope of activities of the Working Group is changed.

The Core Team is responsible for:

- coordinating the working group’s activities;
- chairing the meetings and moderating the discussions of the working group;
- drawing up the agenda of each meeting;
- reviewing the minutes of the meetings;
- reporting and providing the consolidated inputs of the Working Group to the BATTERIES EUROPE Steering Board and/or the BEPA Association Delegation;
- representing the Working Group at external meetings and events.

The Core Team will be assisted by an administrative and technical support provided by the BATTERIES EUROPE Secretariat and BEPA’s Office.

As per BATTERIES EUROPE ToR, the members of the Core Team of each Working Group are automatically appointed as BATTERIES EUROPE Steering Board members.

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

Position	Responsibilities
Working Group Industry Chair	Responsible for delivering on the objectives of the Working Groups. The Working Group Industry and Research Chairs will co-chair the Working Group meetings and jointly represent the Working Group towards external parties.
Working Group Research Chair	
Working Group Technical Advisor	The Working Group Technical Advisor will support the Working Group Chairs by providing technical input for the drawing up of the agenda, provide relevant technical background materials to aid Working Group discussions, oversee technical discussions within the Working Group and give technical recommendations to the Working Group Chairs in case the Working Group fails to reach consensus.

To ensure proper continuity of the overall work of the Working Groups, from technology reviews up to the drafting of the Work Programmes, all members of the Core Team have to be members of BEPA:

- The Industry and Research chairs are reserved for individuals from organisations from these respective constituencies within BEPA.
- The technical advisor position is open to individuals from any BEPA member, including Associate Members².

To ensure diversity and appropriate representation among the stakeholders,

- an individual can be elected only for one Core Team position in one Working Group;
- an organisation can have only 2 individuals elected in a Core Team (considering all Working Groups);
- individuals from the same organisation as the technical support provided by BATTERIES EUROPE Secretariat in a WG are also excluded from running for a Core Team position.

Admissibility of an application for a core team position will be assessed jointly by BEPA's Executive Board and BATTERIES EUROPE Secretariat, based on the following criteria:

- BEPA membership;
- membership category;
- relevance of the applicant's expertise with the scope of the specific WG;
- years of experience in the relevant field;
- ability to represent the entire scope of the WG;
- track record of previous work in the European battery community.

Elections will take place through an online process organised by BEPA's office. Each registered participant³ of a working group will be eligible to vote for its core team.

METHOD OF WORKING

The Working Group Core Team will call for Working Group meetings when judged necessary for the preparation of the documents they are responsible for. In practice, no more than one Working Group meeting per month is foreseen, except in exceptional cases. The Working Group Core Team will rely on the organisational support provided by BEPA's Office and BATTERIES EUROPE Secretariat, (with a Technical Expert assigned to each WG), that will take care of sending out invitations and registration forms, taking minutes, drafting proceedings, following up on the main action points, managing and updating the WG participants' lists.

Working Group 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 Working Group will be shared and accessible online via repositories with appropriate access rights.

² According to the BEPA Articles of Association (Art.5.2.2), only the "Secretariat" of associations enjoys the rights of associate membership. An association cannot be represented in Working Groups by one of its members.

³ As a reminder, participation in each working group is limited to 3 employees per organization.

The Working Groups will work by consensus. In case of critical matter, the Working Group Core Team will call on the BEPA Executive Board and the BATTERIES EUROPE Steering Board to receive guidance on the way forward.

The Working Groups will submit their draft deliverables to the relevant governing bodies of BEPA and/or of BATTERIES EUROPE for approval before finalisation. In particular, deliverables regarding **the SRIA and the Horizon Work Programme recommendations drawn up within the Working Groups** will be sent to BEPA's Association Delegation for final approval. The Association Delegation will then present the deliverables to the European Commission in the Partnership Board.