

# BATTERIES EUROPE

European Technology and Innovation Platform

Status April 2019



# The European Battery Alliance. An industrial policy for Europe

## Huge potential for Business, Investment, Innovation and new jobs

European battery market estimated at 250 billion EUR per year – and 4 million new jobs



Matthias Machnig

German State Secretary, Federal  
Ministry for Economic Affairs and Energy

Brune Poirson

French Minister of State, Minister for  
the Ecological and Inclusive Transition

Jadwiga Emilewicz

Polish Deputy Minister of  
Economic Development

Maroš Šefčovič

European Commission Vice-President  
in charge of the Energy Union

*“The lack of a domestic, European cell manufacturing base jeopardises the position of EU industrial customers because of the security of the supply chain, increased costs due to transportation, time delays, weaker quality control or limitations on the design.”*

*“So, we need to act fast – and collectively – to overcome this competitive disadvantage and capitalise on our leadership in many sectors of the battery value chain, from materials to system integration and recycling.”*

*“No single actor can build Europe’s battery market alone. But if we act together across Europe, we can capture an emerging battery market of 250 billion EUR per year!”*

*“The European Battery Alliance provides an umbrella for prospective partnerships throughout Europe’s battery value chain.”*

Maroš Šefčovič

European Commission Vice-President in charge of the Energy Union  
Brussels, 11. October 2017

# Strategic Action Plan on Batteries

## Strategic Action Plan on Batteries

### I. Policy context

Batteries development and production is a strategic imperative for Europe in the context of the clean energy transition and is a key component of the competitiveness of its automotive sector.

In October 2017, the European Commission launched the '**European Battery Alliance**'<sup>1</sup> cooperation platform with key industrial stakeholders, interested Member States and the European Investment Bank.

The immediate challenge to create a competitive and sustainable battery manufacturing industry in Europe is immense, and Europe has to move fast in this global race. According to some forecasts, from 2025 onwards Europe could capture a batteries market of up to EUR 250 billion a year, served by at least 10 to 20 Gigafactories (battery cells mass production facilities)<sup>2</sup> to cover EU demand. Given the scale and speed of investment needed, this strategic challenge cannot be dealt with in a fragmented manner.

With this Strategic Action Plan, the Commission aims to put Europe on a firm path towards leadership in a key industry for the future, supporting jobs and growth in a circular economy, whilst ensuring clean mobility and an improved environment and quality of life for EU citizens.

The Commission is promoting a **cross-border and integrated European approach** covering the **whole value chain** of the batteries ecosystem, and focusing on **sustainability**, starting with the extraction and processing of raw materials, the design and manufacturing phase of battery cells and battery packs, and their use, second use, recycling and disposal in a circular economy context.

### Batteries Value Chain



Such an approach will promote the production and use of high-performing batteries and set sustainability benchmarks throughout the value chain.

<sup>1</sup> [https://ec.europa.eu/growth/industry/policy/european-battery-alliance\\_en](https://ec.europa.eu/growth/industry/policy/european-battery-alliance_en)

<sup>2</sup> Source: European Institute of Innovation and Technology (EIT) Inno-energy <http://www.innoenergy.com/>

This Strategic Action Plan has been developed in close consultation with stakeholders including industry and Member States in the framework of the 'European Battery Alliance', and builds on the industry-led approach whereby EU industry players have themselves adopted and are starting to implement targeted actions.

More than 120 industrial and innovation actors have participated in this exercise and collectively endorsed recommendations for priority actions, which are being implemented. <http://www.innoenergy.com/eitinnoenergys-role-within-the-european-battery-alliance/>

## The Commission will:

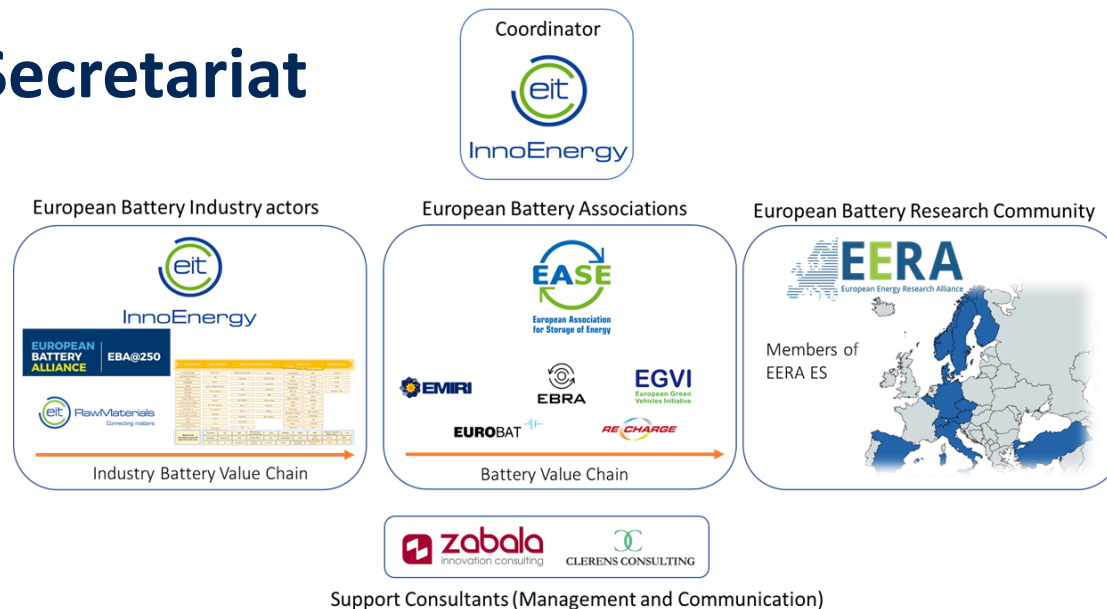
support the creation of a new European Technology and Innovation Platform to advance on battery research priorities, define long-term visions, elaborate a strategic research agenda and road-maps. The leadership of the European Technology and Innovation Platform will be taken by the industrial stakeholders, research community and Member States, while Commission services will support the setting-up process and contribute in their respective areas of responsibility.

## Batteries Europe – the ETIP for Batteries

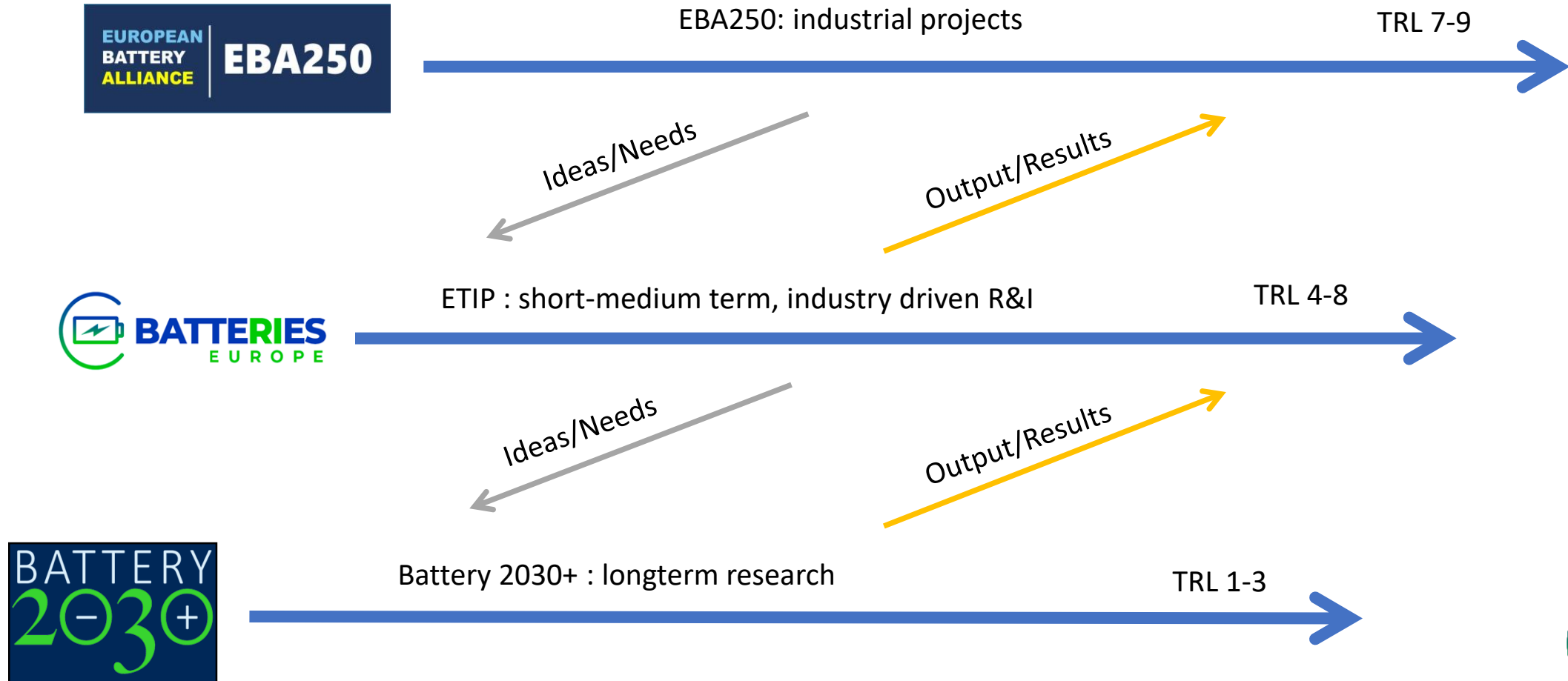
ETIPs support the implementation of the SET Plan by bringing together EU countries, industry, and researchers in key areas. They promote the market uptake of key energy technologies by pooling funding, skills, and research facilities.

**Batteries Europe is the one-stop shop for the battery-related R&I Ecosystem** and will gather research and industry to identify and prioritise the main research and innovation needs for the whole battery value chain in Europe.

### The Secretariat



Batteries Europe linking basic research to industrial projects



## General Assembly

The strategic decision body  
of the ETIP

Input

- *Plenary open to all ETIP members, Chair to be elected by all members*
- Defines and decides on the strategic orientation of the ETIP
- Approves decisions prepared by Executive Committee
- Adopts key technical and policy papers prepared by Executive Committee

## Executive Committee

The operational driving engine  
of the ETIP

Input

- *Composed of the chairpersons of each WG along with the core members of the Secretariat*
- In charge of coordinating the work of the working groups
- Establish the agenda and prepare decisions for the General Assembly
- Drafting key technical and policy papers for approval by the General Assembly
- Reporting back to WG members on decisions of the General Assembly
- Coordinate activities for reinforced collaboration and knowledge sharing

## Working Groups

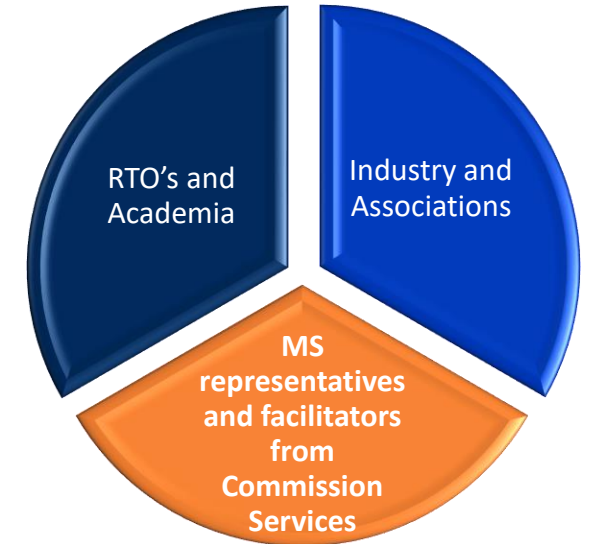
The expertise pool  
of the ETIP

- *Composed of experts from industry, academy and associations, MS and Commission Services*
- Define scope and themes to be addressed in each WG
- Ensure that R&I activities are inline with relevant industrial opportunities
- Share knowledge and expertise of existing R&I activities in their relative sector
- Examine methodologies for implementation of concrete actions, especially SET Plan Action 7
- Provide clear and concise recommendations for actions to reach those goals

Batteries Europe continues the work started by the IWG7 from the SET Plan

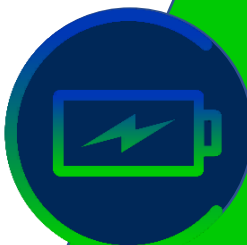
### Leadership

- The work of each WG will be driven forward and coordinated by three Chairs, one Chair and 2 supporting Co-chairs
- Ideal composition – 1 Representative from industry, 1 representative representing Research and one 1 Association Representative



### Members

- **Today's lists of stakeholders is non exhaustive- open call to participate in the WG will be launched in the coming weeks**
- Each WG member should have expertise in the WG field and capacity to engage stakeholders in their field.
- Members are expected to come from RTO's and Academia, Industry and Associations, including Member State representatives and relevant Commission Services





# Working Group Structure and topics to be addressed





## Ideas we would like to foster



Each WG set workshop topics to be addressed each year



Workshops and meeting to be hosted at various industry and R&I stakeholders facilities to both showcase and enhance cooperation.



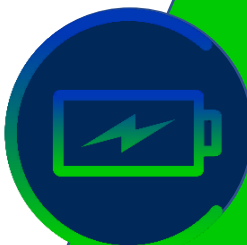
Workshops and Meetings to be coordinated in order to reduce meeting frequency and reduce strain on stakeholder community



Involve a wider diversity of stakeholders in our workshops



Deeper involvement and better communication with member state and regional representatives and funding bodies

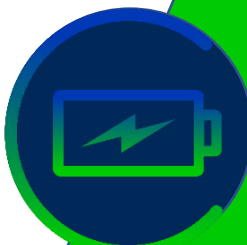


**Note:**

- ❖ Those are preliminary descriptions, that will be further defined and developed by the WG Leader and Members
- ❖ There will also be subtopics, some of them cross-cutting in the working groups note addressed here



- **GOAL**
  - Engage the member states and assist in aligning their R&I activities concerning batteries
- **TASKS**
  - Engage an extensive network on MS representatives
  - Mutual flow of information between MS and ETIP on ongoing R&I activities
  - Provide guidance for alignment of national funding to avoid duplication of efforts
- **STAKEHOLDERS**
  - Chair : Pascal Newton
  - Member states representatives, SET plan steering group, Horizon Europe



## GOAL

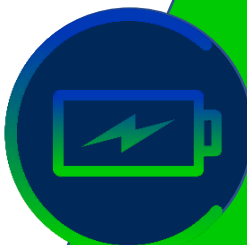
- Focus on supporting the creation of long-term research initiatives with low starting TRL which will in time give Europe a cutting edge competitive advantage

## TASKS

- Technology watch: To create an awareness of new concept technology developments worldwide
- Support R&D initiatives by co-hosting workshops on specific topics
- Supporting SME's with new concepts to connect with industry
- Inform stakeholders
- Updating and consolidating existing Research Agenda and Roadmaps- there is a need for a common view

## STAKEHOLDERS

- Chair : Kristina Edström, Uppsala University, Battery 2030+
- Co-Chairs: Stefano Passerini, TU Ulm/KIT, TBC and one industrial partner TBC
- Battery 2030+ members, EERA, Faraday Challenge, ALI Store ERI, SAFT Alliance and REA (Research Executive Agency) .....
- National, regional or European initiatives which are developing R&I roadmaps and research programs concerning low TRL battery technology
- Broaden industrial participation of material producers



### GOAL

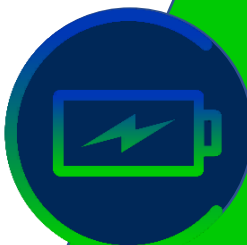
- Address raw materials supply including recycling issues to support European Battery industry

### TASKS

- Further develop the work started by IWG7
- Main focus on producing and refining materials- active material is handled in WG 3
- Eco design and Eco labelling
- Implement actions defined in SET plan
- Address sustainability and public acceptance issues
- 2<sup>nd</sup> Life to be included
- Design for recycling : cross-cutting topic with WG 4 (Manufacturing and Cell Design)

### STAKEHOLDERS

- Chair : Ilkka Kojo, Outotec with support from Mari Lundström, Aalto university
- Co-Chairs: Olli Salmi, EIT Raw materials and EBRA, Alain Vassart
- EIT Raw materials, BATCIRCLE, EBRA,
- Industry , mining, refining, recycling, reverse logistics, environmental assessment, etc
- **Next meeting Milano 13-14 of June**



## GOAL

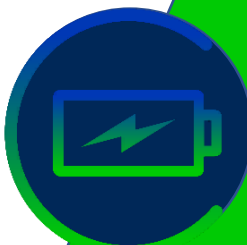
- To support and promote R&I activity "high" TRL materials developments which can be deployed in short to medium term.
- Enhance communication between materials producers and cell manufactures

## TASKS

- First priority should be to enlarge the existing group to active materials value chain stakeholders
- Define better boundary towards WG 1- which technologies to be handled in which WG
- Benchmarking of various battery chemistries as well as on full cell level (important and absolutely needed)
- Standardisation for reporting of materials performance
- Workshops between materials producers and cell manufacturers eg electrode design

## STAKEHOLDERS

- Chair : Fabrice Stassin with support from Marcel Meeus (Umicore/EMIRI)
- Co-Chairs: representative from EERA ES and industrial player TBC
  - EMIRI, RECHARGE and many European industrial stakeholders



## GOAL

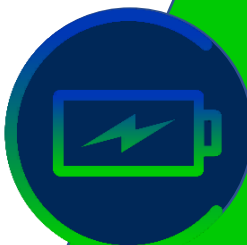
- To strongly support the development and success of European large scale battery cell production in Europe
- Enhance discussion between materials producers and manufacturers

## TASKS

- Address issues in relation to intellectual property rights
- Carry out studies wrt sustainability
- Battery System manufacturing industry to be included!!!

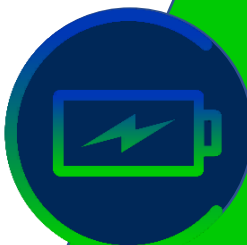
## STAKEHOLDERS

- Chair: Pilot Line Network, Oscar Miguel, Cidetec with support from Arno Kwade, TU Münster
- Co-Chairs: Northvolt, TBC and industrial player TBC
- EUROBAT, EMIRI, EAMA
- Battery cell producers, machine manufacturers, German Research Factory, KLIB and Pilot Line Network (the Pilot Line Network links human and instrumental resources); etc...





- GOAL
  - To support electrification of the transport sector, including yellow machines etc, through increased battery performance and development of charging solutions. The STRIA roadmaps among others will be used as a basis material for this group. Social acceptance and LCA analysis of vehicles will be addressed
  - Enhance discussion between materials producers and manufactures
- TASKS
  - Address SoA studies regarding Charging solutions and Infrastructure
  - Battery Performance – connected to V2G as well
- STAKEHOLDERS
- Chair : Simon Perraud, CEA
- Co-Chairs: BMW and EGVIA
  - EGVIA, EARPA, STRIA
  - Battery cell producers, car industry, industry for charging infrastructure, ETIP SNET, maritime industry
- **Next meeting on sub-topic Fast Charging: Munich Airport, 14 of May**



## GOAL

- Develop solutions for grid integration and stationary applications for batteries as well as assist in the benchmarking of the state of the art technologies, including Research, Regulation, Business models
- Provide a working forum for second-life batteries R&I discussion

## TASKS

- Explore the role of batteries for stationary applications
- Address technological issues (e.g. battery management systems including performance) and market design hurdles
- Explore the regulatory barriers that could avoid the deployment of battery stationary storage
- Study the potential development of business models that allow monetisation of services

## STAKEHOLDERS

- Chair : Luigi Lanuzza, ENEL with support from Rachele Nocera, ENEA
- Co-Chairs: representatives from industry and academy TBC
  - EASE, EUROBAT
  - TSOs, DSO, Renewable energy sector representatives...



# BATTERIES EUROPE

European Technology and Innovation Platform

Thank you for your attention!

Contact us if you do want to get involved in Batteries Europe:

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