

# BATTERY 2030+



This project has received funding from the European Union's research and innovation programme Horizon 2020 under grant agreement No. 957213

## At the heart of a green and connected society

### Status Report



**Director: Prof. Kristina Edström, Uppsala University, Sweden**

**[Kristina.edstrom@kemi.uu.se](mailto:Kristina.edstrom@kemi.uu.se)**

**Deputy director: Dr. Simon Perraud, CEA, France**

BATTERY  
2030+

# THE EU BATTERY LANDSCAPE TODAY

TRL 1      TRL 2      TRL 3      TRL 4      TRL 5      TRL 6      TRL 7      TRL 8      TRL 9

Scope

Long-term research

Short- to medium-term research

Industrialisation

Actors

The European Battery  
Community



EUROPEAN  
BATTERY  
ALLIANCE | EBA250

Roadmap

A long-term research  
roadmap

SET-Plan

Industrial roadmaps

BATTERY  
2030+

S3 battery materials

IPCEI

# BATTERY 2030+ ROADMAP

The BATTERY 2030+ roadmap presents three overarching research themes and six research areas needed to invent the sustainable batteries of the future. Short-, mid- and long-term goals for each area are also identified.

- I. Accelerated discovery of battery interfaces and materials – Battery Interface Genome (BIG) Materials Acceleration Platform (MAP)
- II. Integration of smart functionalities – sensing and self-healing
- III. Cross-cutting areas – manufacturability and recyclability



Vice president Šefčovič at the BATTERY 2030+ roadmap conference Nov 2019



This project has received funding from the European Union's research and innovation programme Horizon 2020 under grant agreement No. 957213

BATTERY  
2030+

# ROADMAP – LONGER THAN 10 YEAR PERSPECTIVE

Develop theoretical and experimental platforms and tools

Short term:

Six BATTERY 2030+ research projects and a CSA project started September 1, 2020

Integration of the different parts

Medium term:

New R&I actions suggested now  
Also to M-ERA.NET

Battery materials acceleration platform + smart battery functionalities established

Long-term:

Our dream!  
We work for it with your help!

European batteries fit for purpose

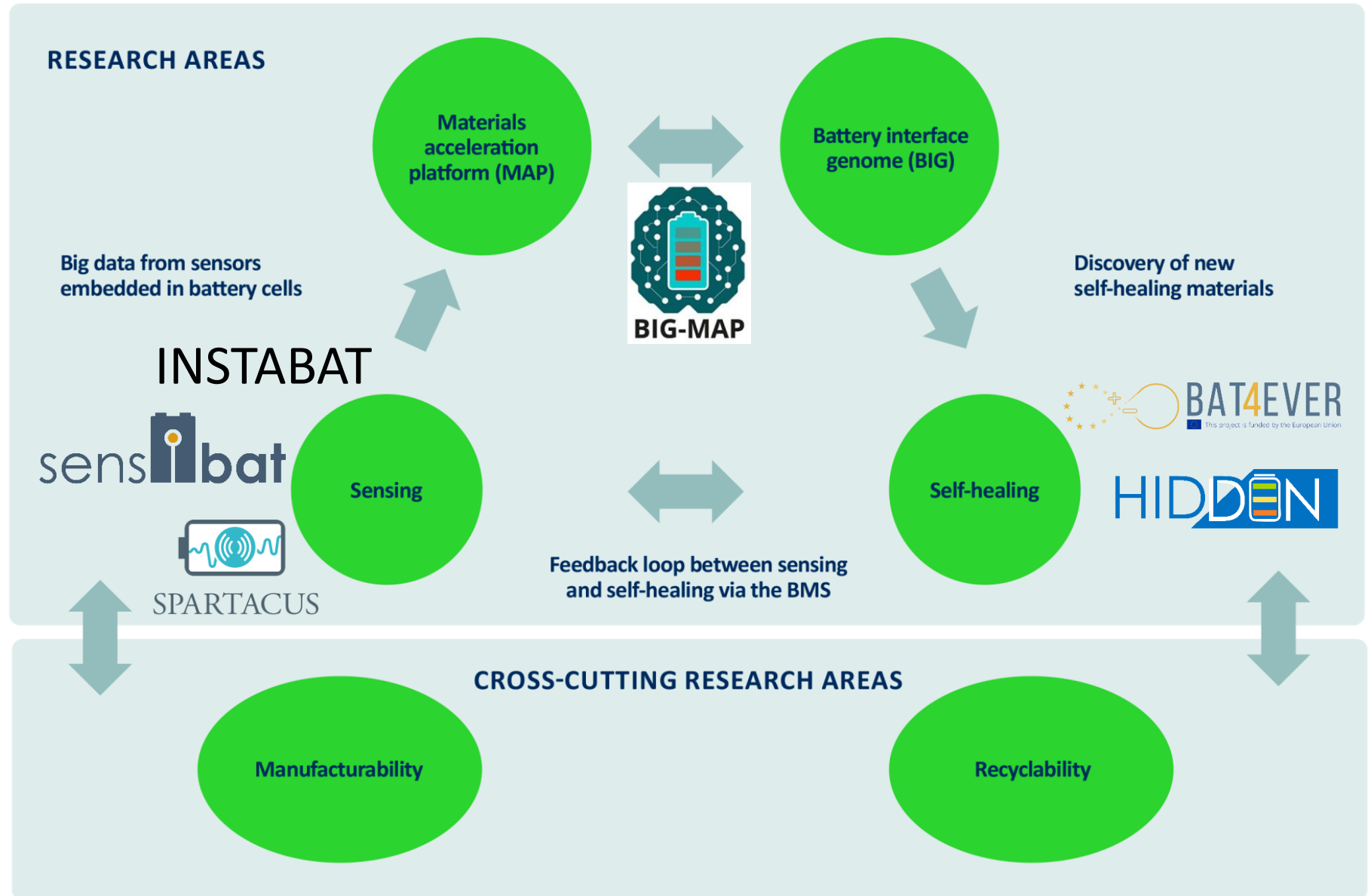


BATTERY  
2030+

# Six research areas



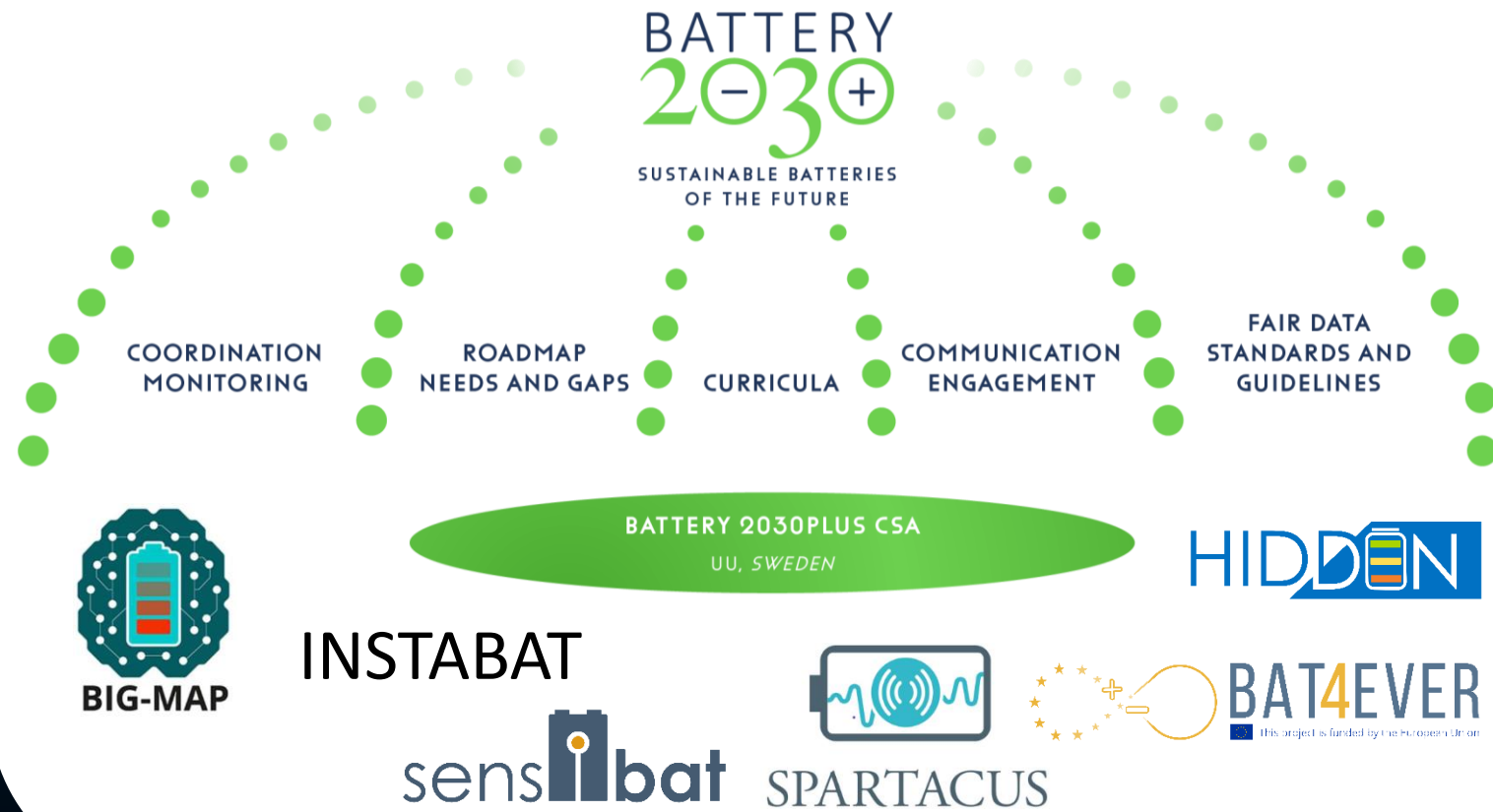
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 957213.





# WE HAVE STARTED THE REAL WORK NOW!

## LARGE-SCALE RESEARCH INITIATIVE



7 projects

Collaboration  
Agreement in  
place



This project has received funding from the European Union's research and innovation programme Horizon 2020 under grant agreement No. 957213

BATTERY  
2030+

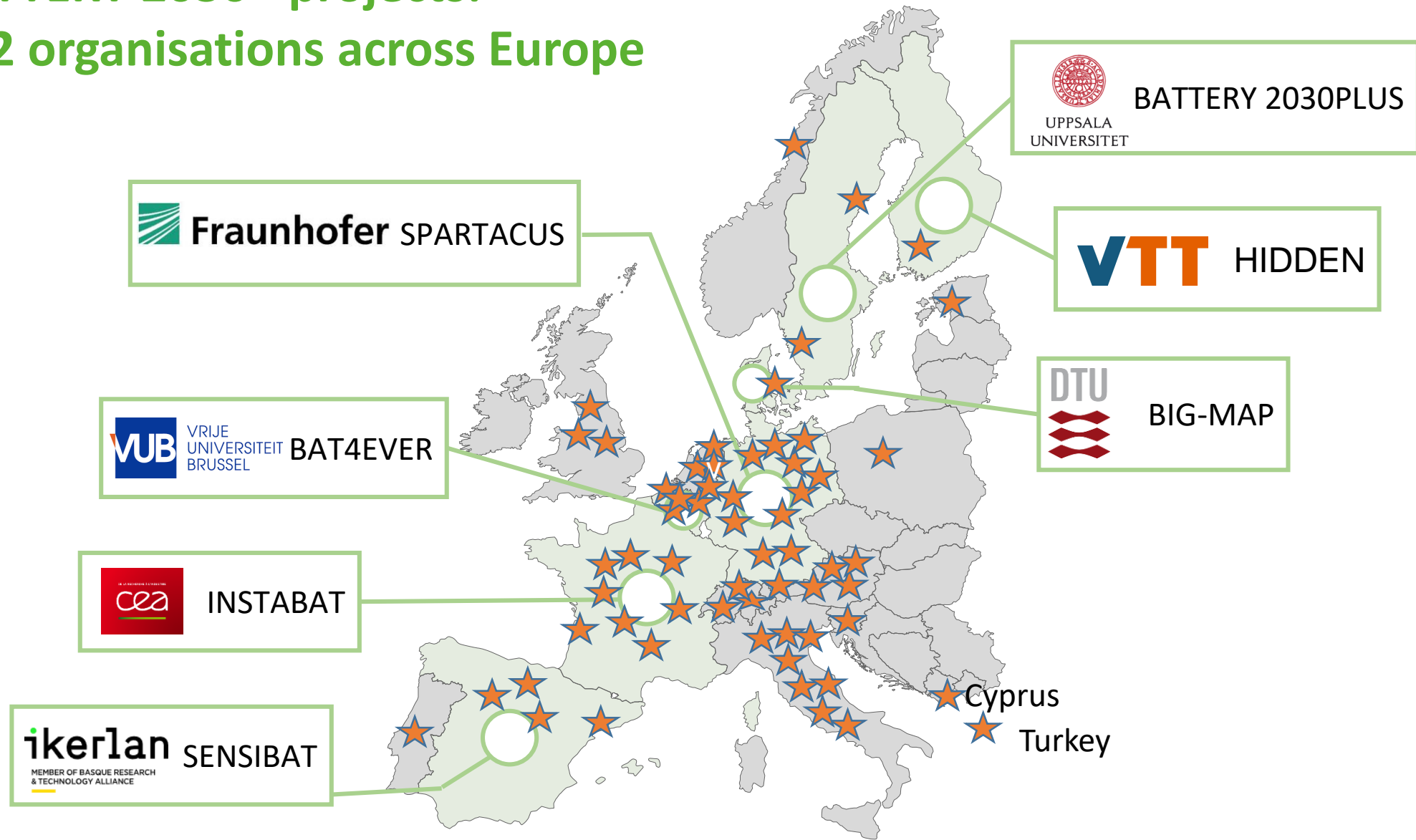
BATTERY  
2030+

# BATTERY 2030+ projects: 102 organisations across Europe

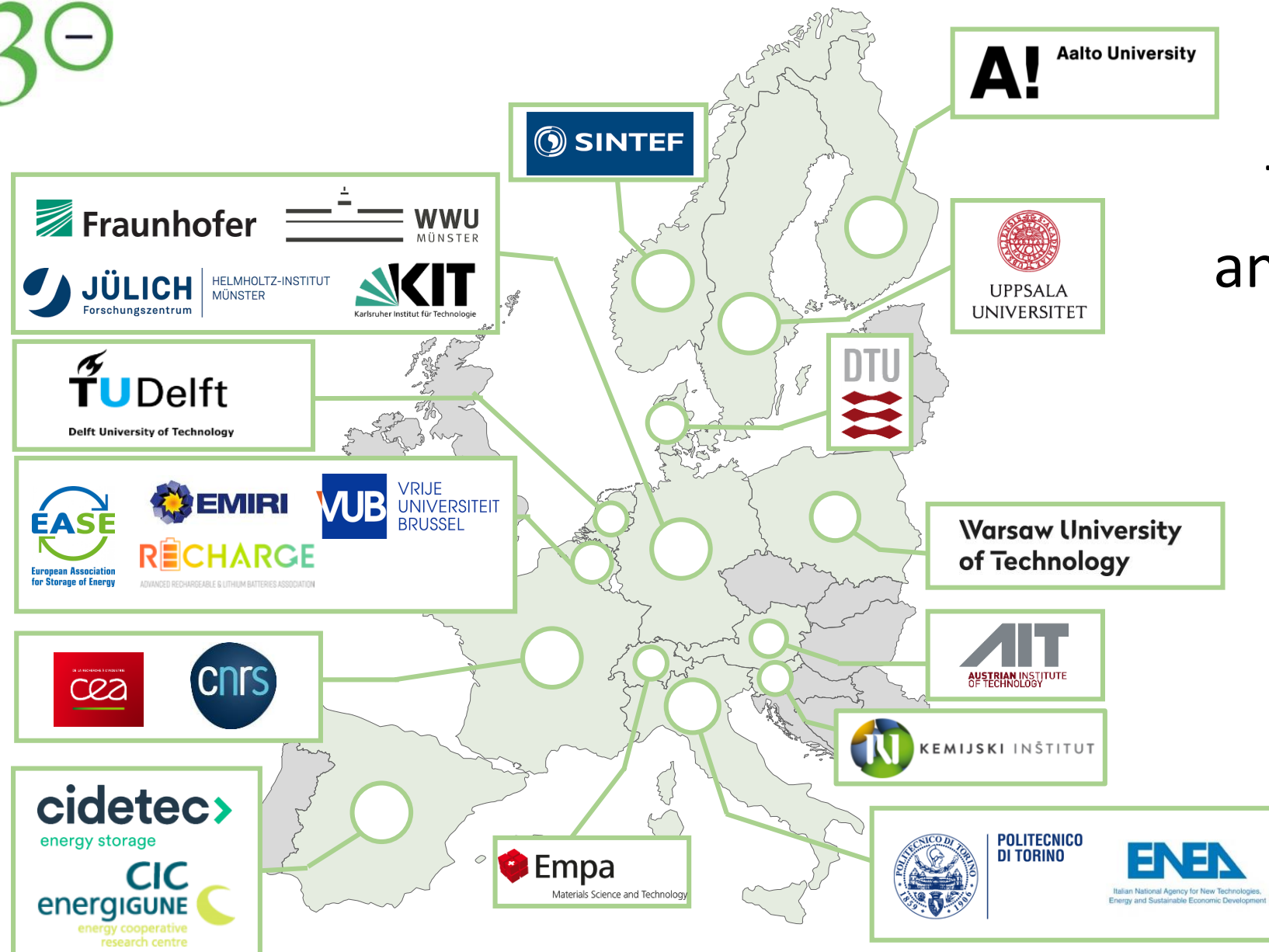
Starting  
configuration  
of the  
BATTERY  
2030+  
initiative!



[www.battery2030.eu](http://www.battery2030.eu)



This project has received funding  
from the European Union's Horizon 2020  
research and innovation programme  
under grant agreement No. 957213.



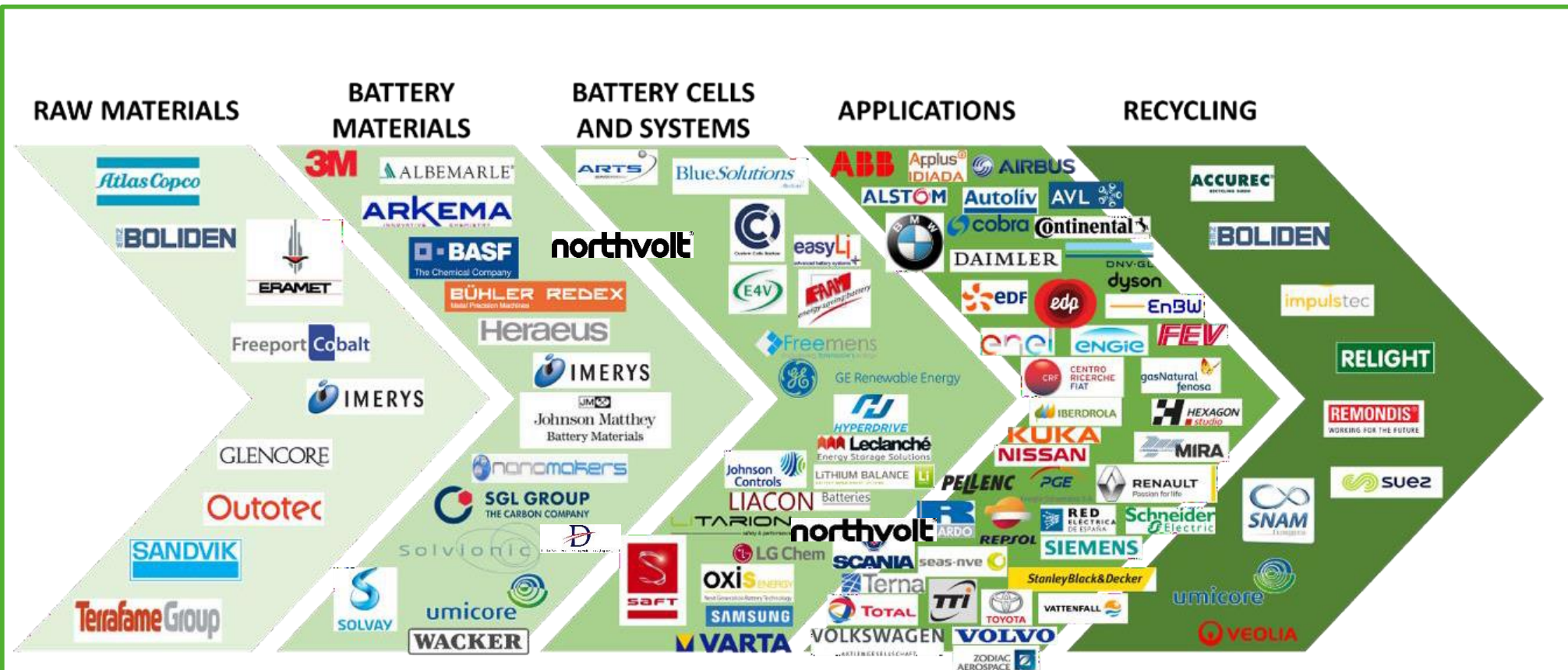
## Core partners The Coordination and Support Action



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 957213.



# BATTERY 2030+



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 957213.

# EU BATTERY ECOSYSTEM



This project has received funding from the European Union's research and innovation programme Horizon 2020 under grant agreement No. 957213

Now 500 companies along the full value chain

**EUROPEAN  
BATTERY  
ALLIANCE** | **EBA250**

Curricula and skills

Long-term research

ETIP network with 550 participants



Dissemination and communication

Future projects

Protocols for reporting, FAIR data, data sharing

National  
Regional S3  
European University  
Networks  
IPCEI  
Skill Pacts – ALBATTs

The European large scale facilities:

High Performance  
Computing: EuroHPC  
The synchrotron  
facilities and neutron  
facilities in Europe

European Batteries Partnership



# SOME HIGHLIGHTS

BATTERY  
2030+

Newsletter  
November, 2020

Seven Kick-offs to start creating a BATTERY 2030+ identity

Over 1400 endorsements

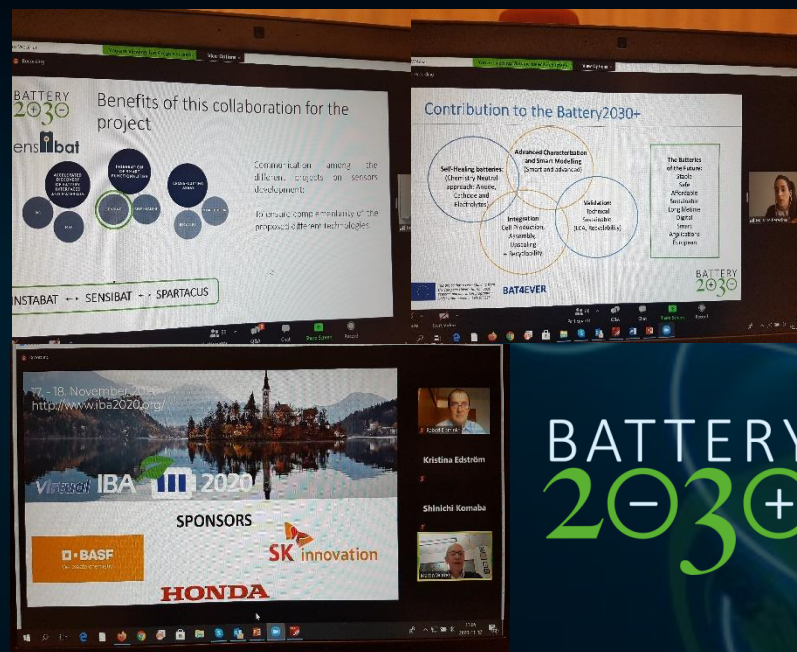
## International and European visibility

Silvia Bodoardo Polito: IWLIME South American workshop organised by Chile

Simon Perraud CEA: Dessault workshop

European Conference on Batteries 24-27 Nov.

Kristina Edström UU, Martin Winter WWU Munster, Philippe Jacques EMIRI, Oscar Miguel CIDETEC



Workshop on data sharing and data handling. To be held in February

Green Deal now an open call on energy storage: BATTERY 2030+ is an attractive partner

BATTERY  
2030+

Link to different skill pacts and skills-networks in Europe: ALBATS, MESC, DESTINY



This project has received funding from the European Union's research and innovation programme Horizon 2020 under grant agreement No. 957213

M.ERA-NET  
Call now  
prepared! Will  
be announced  
early spring

# THE NEXT PHASE: 2021 AND ONWARDS

Green  
Deal

## European Batteries Partnership



**C5-D2-BAT-05-2021:** Interface and electron monitoring for the engineering of new and emerging battery technologies

**C5-D2-BAT-06-2022:** Furthering the development of a materials acceleration platform for sustainable batteries (combining AI, big data, autonomous synthesis robotics, high throughput testing, for accelerated discovery of high performing battery technologies)

**C5-D2-BAT-13-2022:** Embedding smart functionalities into battery cells (embedding sensing and self-healing functionalities to monitor and self-repair battery cells)

**C5-D2-BAT-19-2022:** Coordination of large-scale initiative on future battery technologies

**2023 with  
ETIPs**

**C5-D2-BAT-10-2023:** Development and implementation of advanced digital twins for optimisation of current battery cell production lines and to accelerate the set-up of effective manufacturing processes for the next generation battery cells

BIG MAP

# SUMMARY BATTERY 2030+



This project has received funding from the European Union's research and innovation programme Horizon 2020 under grant agreement No. 957213

We do research implementing the long-term BATTERY 2030+ research roadmap to invent the sustainable batteries of the future  
(<http://battery2030.eu>)

We support Europe to reach the UN sustainable development goals

We foster European research excellence for the benefit of the European battery industry throughout the battery value chain

We suggest new R&I actions





# FOLLOW US AND READ MORE!



This project has received funding from the European Union's research and innovation programme Horizon 2020 under grant agreement No. 957213

[www.battery2030.eu](http://www.battery2030.eu)

Twitter: @2030Battery, #battery2030

More than 2300 followers

LinkedIn: BATTERY Initiative

Endorse us:

<https://battery2030.eu/engage/endorse-us/>

More than 1450 endorsers

Read more about the research themes and download the roadmap:

<https://battery2030.eu/research/roadmap/>



BATTERY  
2030+