



Funded by the  
European Union

# EBA Battery Academy in a nutshell

June 2021



WE ARE THE  
**TRUSTED**  
INNOVATION  
ECOSYSTEM  
FOR  
**SUSTAINABLE**  
ENERGY  
IN EUROPE

THE LARGEST  
**SUSTAINABLE**  
ENERGY ACCELERATOR  
IN THE **WORLD**

**330+**  
STARTUPS

MORE THAN **500**  
**PROJECT**  
**ASSOCIATES**  
& **PARTNERS**



# THEMATIC FIELDS & TECHNOLOGY FOCUS



Smart and efficient  
buildings and cities



Nuclear  
instrumentation



Energy efficiency



Energy storage



Energy for transport  
and mobility



Renewable energies



Smart  
electric grid



Energy for  
circular economy



# THE KNOWLEDGE TRIANGLE



- Strengthen EU innovation
- Creates tomorrow's entrepreneurs
- Increases sustainable growth
- Encourages global competitiveness
- Cultural and social transformation

## Making connections: the power of the network

6 regional offices

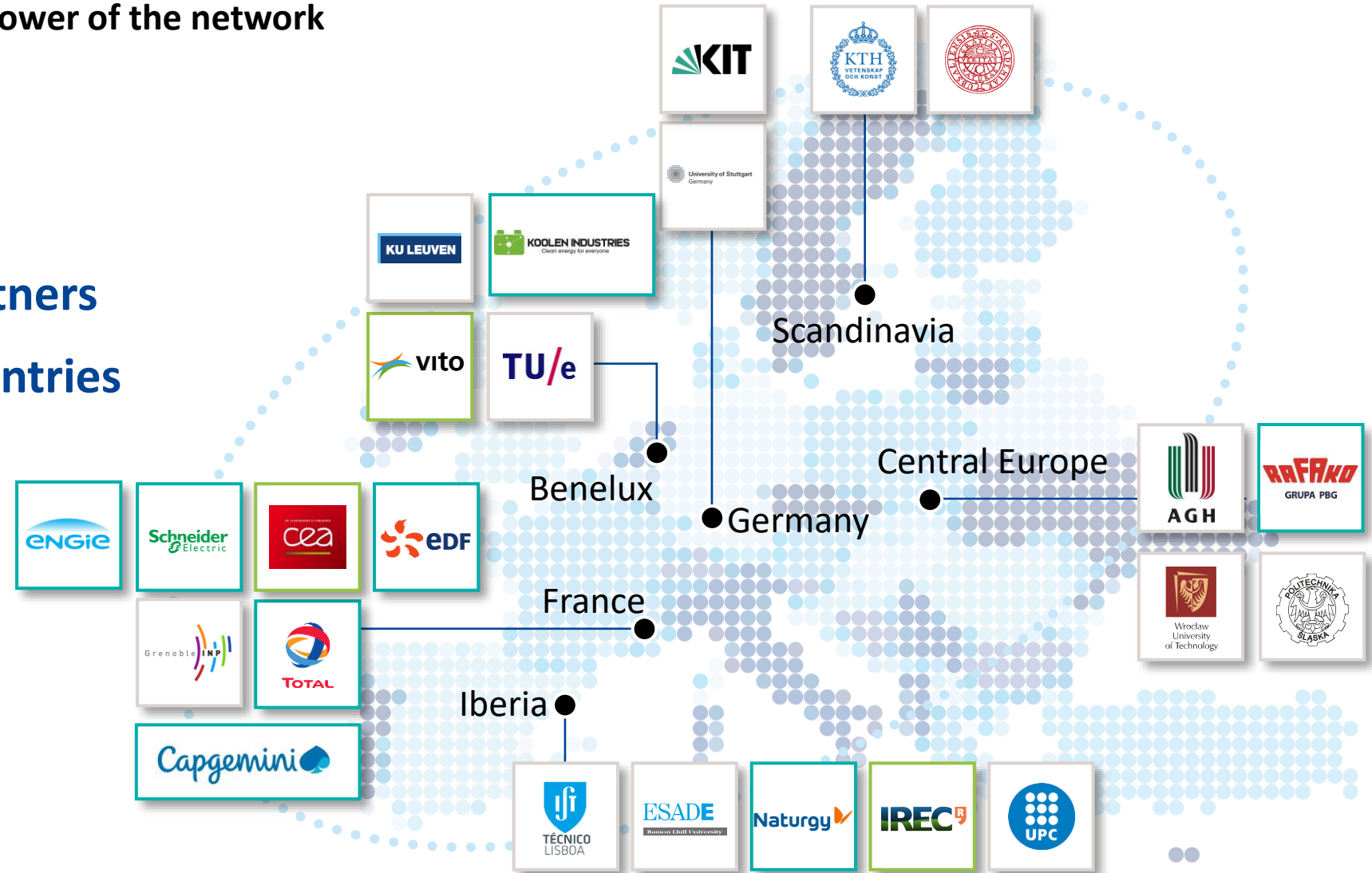
24 shareholders

+400 additional partners

Activities in +24 countries

### Our Shareholders

-  Research Institutes
-  Universities
-  Industry Partners
-  Regional offices



## Partners in the ecosystem





## Bringing the *Knowledge Triangle* to life

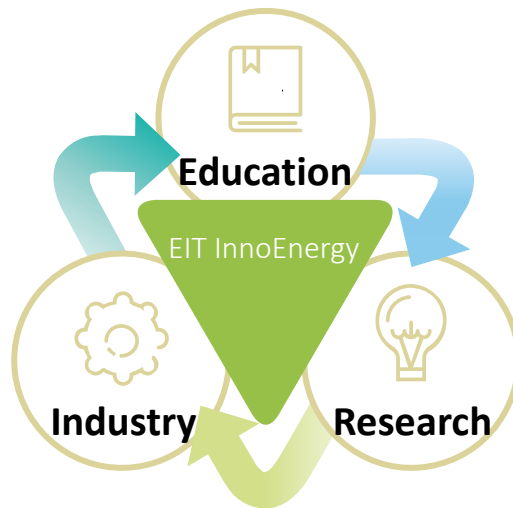
**Strengthen EU innovation**

**Creates tomorrow's entrepreneurs**

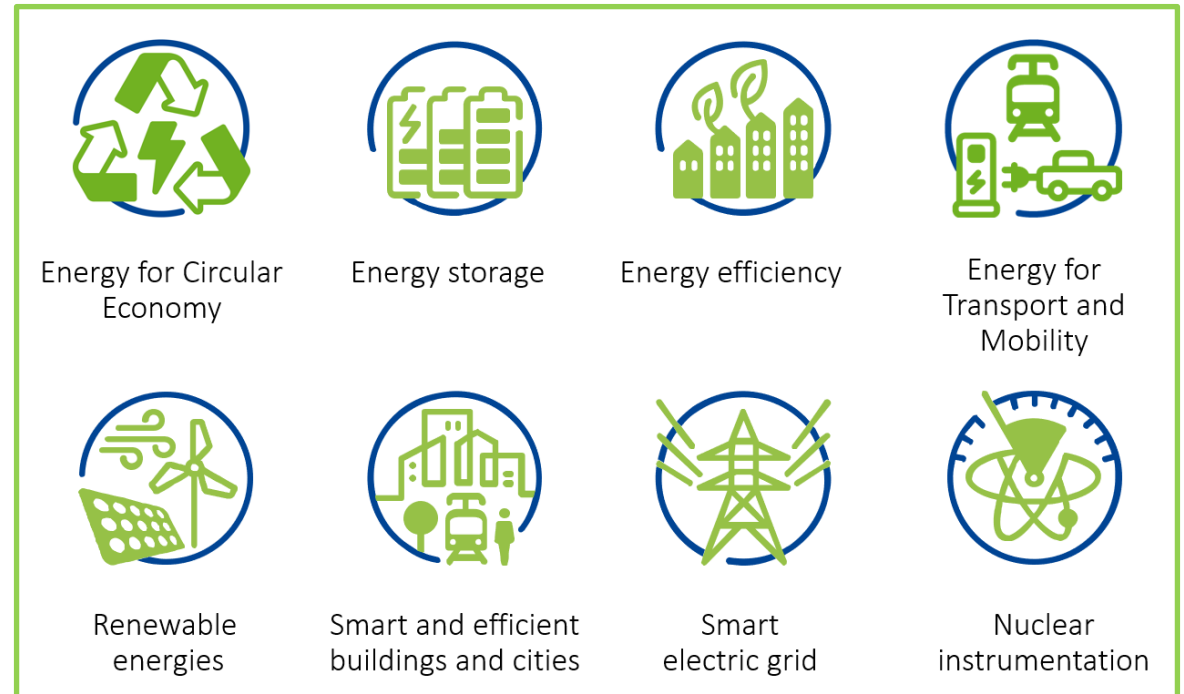
**Increases sustainable growth**

**Encourages global competitiveness**

**Cultural and social transformation**



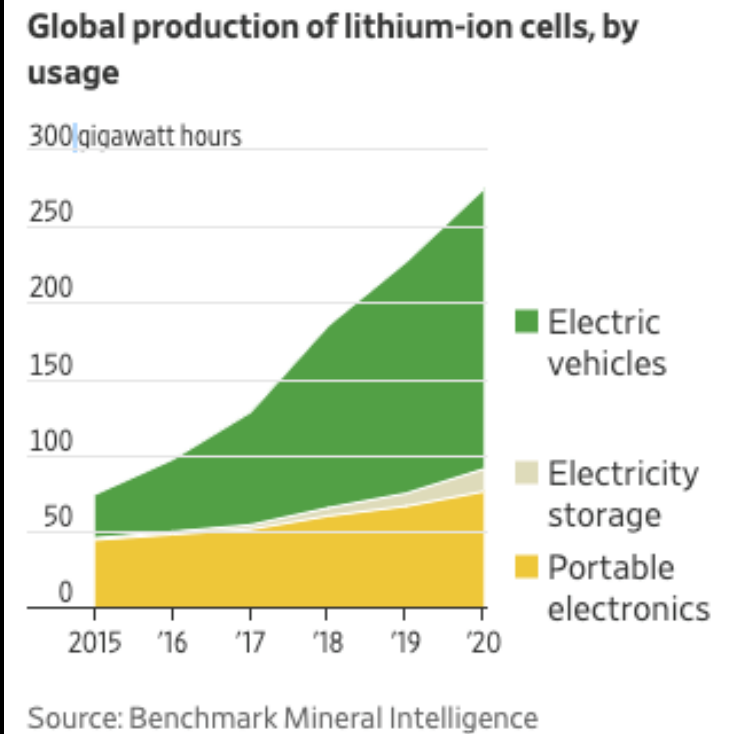
## Thematic fields and technology focus



# The Green Battery Boom



WE WILL PUT A  
GREEN BATTERY  
IN EVERYTHING  
YOU KNOW



The **EBA250 network** includes organizations from both the public and private sectors. A collaboration of more than 600 participants, covering the entire battery value chain.

The European battery value chain is undergoing rapid development, attracting €60 billion investments on

New projects across the value chain are expected to create 3 to 4 million direct and indirect jobs by 2025.

Among them, it is estimated that **800.000 direct workers will need to be trained, upskilled, or reskilled by 2025** to serve the needs of the European battery industry. This amounts to an average of 160.000 workers to be trained every year.





**€250bn**

estimated annual value by 2025

**4m**  
new jobs

Ind. applications

ESS

E mobility

Raw  
materials

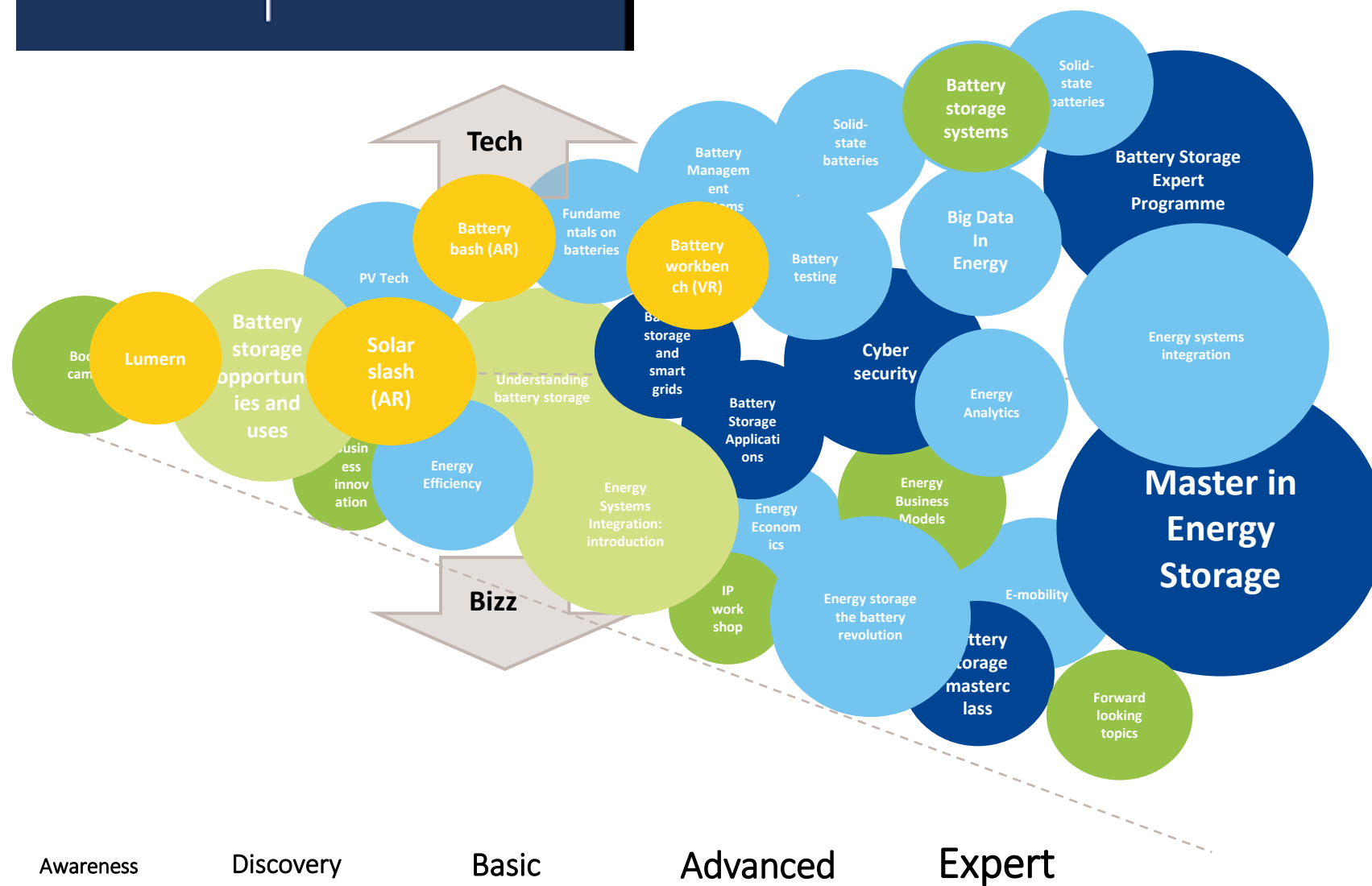
Active  
materials

Battery cells  
and packs

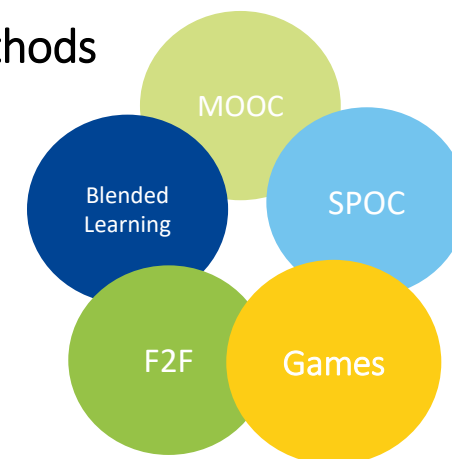
Applications

Recycling /  
2<sup>nd</sup> life

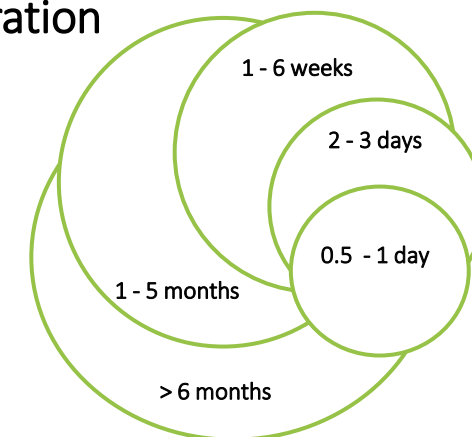
**800.000**  
to upskill & reskill



## Methods



## Duration



## Raw Materials

## Active Materials

## Battery Cells and Battery Packs

## Applications

## Recycling/2<sup>nd</sup> life

### “White collars”

Electrochemistry ★  
Material refinement & purification processes ★  
Environmental management

Electrochemistry ★  
“Wet chemistry” processes ★  
Clean room processing ★  
Integrating processes in the environment  
Material Synthesis ★

Inorganic chemistry ★  
Material science (polymer, membranes, solvents, ...) ★  
Electrochemistry and cell design  
Electrochemical energy storage ★  
Power & energy density ★  
Energy conversion efficiency ★  
Performances factors & optimisation ★  
Modelling, simulation & design ★  
Data science & statistics ★

Packaging and Safety  
Battery Testing and Monitoring ★  
Data Science  
Mechanical engineering  
Battery management systems ★  
DC system design  
Thermodynamic & Kinetic properties ★

EV types & technology ★  
Recharging infrastructure ★  
Vehicle to Grid ★  
Sustainable mobility ★  
Business models ★  
Policy & Regulation ★  
Batteries in trains & aircrafts

Smart buildings  
Sustainable living  
Energy management ★  
Power plants & VPP ★  
Smart grids, off grid systems, micro grids ★  
Battery banks  
Business models ★  
Policy & Regulation ★

Battery storage for solar power ★  
Control and regulation of wind turbines  
Coupling to fuel cells ★  
System optimization ★  
Cost calculation ★  
& life cycle analysis  
Policy & Regulation

Material properties & life cycles  
Rare resources processing & recovery ★  
Resource Chemistry  
Separation processes & technology ★  
Electrochemistry  
Control & process engineering  
Circular economy models  
Environmental management & legislation ★  
Standardization

### Vocational & Professional

Material extraction, refinement ★  
Sourcing  
Logistics ★  
Measurement & control  
Chemical safety, waste handling  
Environment management (waste water handling)

Chemical processes ★  
Physical processes ★  
Chemical equipment design  
Measurement & control  
Chemical safety, waste handling

Physical processes (clean & dry room) ★  
Mixing, coating, drying ★  
Measurement & control ★  
Chemical safety, waste handling  
High speed mechanical assembly

Electro-mechanical manufacturing  
Automation Engineering  
Vehicle technology ★  
Power electronics ★  
Electrical safety

Electric vehicle fundamentals. ★  
Operation, diagnosis, and repair  
Batteries & Battery systems ★  
Electric motor controllers, invertors ★  
Diagnostic tools and equipment ★  
Troubleshooting

Energy installations, (incl. photovoltaic) ★  
Electric vehicle charging ★  
Automation/control  
Power electronics ★  
Digital skills  
Electrical safety ★

Robotics & automation  
Renewables & Electrical grids ★  
Digital skills  
Electrical safety ★

Material extraction, Refinement  
Chemical/physical processes ★  
Logistics ★  
Digital skills  
Chemical/electrical safety,  
Waste handling





**Maroš Šefčovič**  
European Commission Vice-  
President for Interinstitutional  
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Coordinating the  
#EUBatteryAlliance.

[View full profile](#)



**Maroš Šefčovič** • 2nd  
European Commission Vice-President for Interinstitutional Relations and #Fore...  
1w • 🌐

Hats off! The #EUBatteryAlliance continues to deliver on the ground.

I am thrilled to be in #Spain for the first-ever MoU to implement our EU Battery Academy, a public-private partnership on learning services by industry for industry covering the entire #battery value chain.

Set to train 150,000 people in es by 2025.



# Stay competitive

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[www.innoenergy.com](http://www.innoenergy.com)



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a body of the European Union