



EMPOWERING EUROPE THROUGH ELECTROCHEMISTRY

The role of European partnerships under Horizon Europe
October 23rd 2025 – Slovenia's Perm Rep to the EU

Dr Fabrice STASSIN – BEPA Secretary General
fabrice.stassin@umicore.com
<https://bepassociation.eu/about/bepa/>

Global highlights & painpoints in 2024

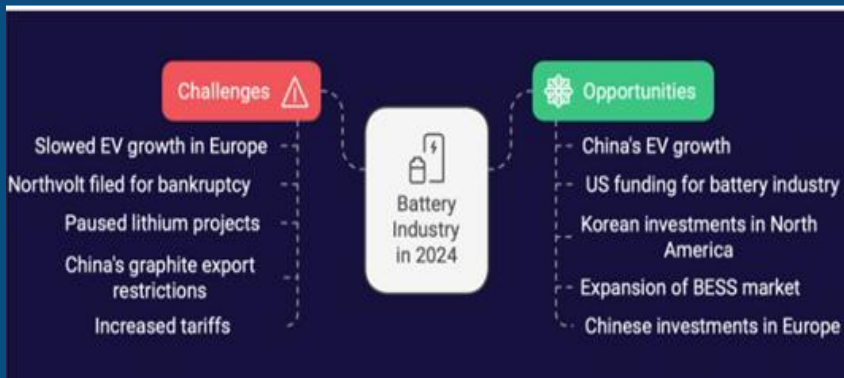


Christopher Chico • Following

I help battery professionals stay ahead with actionable trend analyse...

4w • 🌐

The battery industry didn't rest in 2024.



Trends for the European battery ecosystem in 2025?

Social

- Can people afford / do they want EVs now?

Legal

- Patchy recharging infrastructure
- Unclear & uncertain EU battery regulation
- Fines for OEMs or not, or less?

Economic

- EV demand incentives across EU?
- Funding of EU's industrial ambitions?

Political

- What about 2035 deadline for ICEs?
- Trade tariffs / EU vs US vs China?

Technology

- Innovation & competitiveness gap between EU and Asia - "Wake up" Europe !
- LFP vs NMC, design-to-cost vs design-to-performance, solid-state batteries

R&I & industrialization are key to address “4S” battery challenges ... But it needs the right enabling policy framework & “MONEY”

SCOPE of operations & technologies

- Design-to-cost battery chemistries
- Design-to-performance battery chemistries (incl. solid-state batteries)

SCALE of investments & their profitability

- Less CAPEX-intensive & more agile manufacturing processes
- Less energy-intensive & cleaner production processes

Illustrative

SPEED of industrialization & innovation

- AI-enabled digital twins for production lines
- Platforms for accelerated discovery of battery chemistries



SUSTAINABILITY of operations & products

- Cost-optimized recycling processes for batteries with low metal value
- Alternatives to PFAS & derivatives

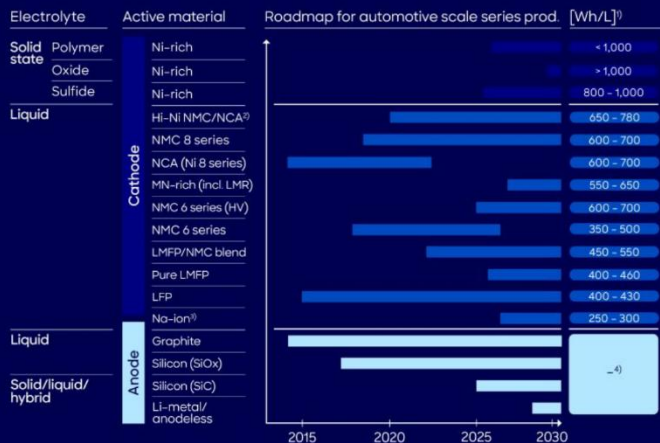
No money = no discovery = no autonomy = no security for Europe

STRATEGIC RESEARCH & INNOVATION AGENDA

February 2024



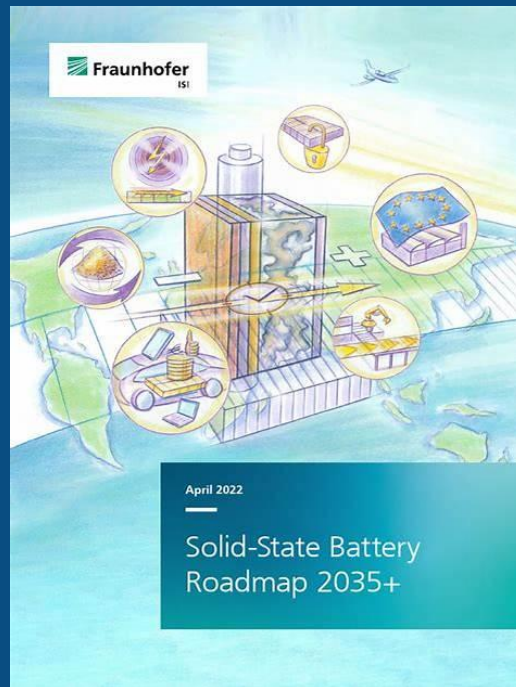
Battery innovation roadmap



¹⁾ Target values for supplier of pouch or prismatic cell; ²⁾ Ni 9 series; ³⁾ Not only cathode chemistry per se but listed for simplification; ⁴⁾ Primarily driven by cathode



Source: Roland Berger Battery Monitor 2024/2025



Bloomberg

Subscribe

The AI Race: New AI Billionaires | Monopolies | Google

Technology | Asia

iPhone Supplier TDK Rolls Out New Batteries to Keep Pace With AI

- New tech has 15% greater energy density than conventional cell

MIT Technology Review

Subscribe

ARTIFICIAL INTELLIGENCE

China's EV giants are betting big on humanoid robots

Technical know-how and existing supply chains give Chinese electric-vehicle makers a significant head start in the sector.



The Defense Industry's Rising Demand for Reliable Batteries

electrek

HYUNDAI EVTOL

Hyundai unveils its electric air taxi at CES, which could be powered by solid-state batteries

Peter Johnson | Jan 9 2024 - 2:51 pm PT

15 Comments



Batteries + Add to myFT

China and South Korea extend battery battle from EVs to grid storage

China has upper hand on technologies but fresh tariffs mean rival can better exploit US market



Huawei showed off its energy storage systems at Shanghai's Smart Energy Expo last year © Bloomberg



WIRED

SUBSCRIBE

FEATURED

REVIEW: MINIMAL PHONE NOISE-CANCELING HEADPHONES TIKTOK MICS

JOHN VOELCKER

GEAR MAY 13, 2025 10:00 AM

GM's New Battery Tech Could Be a Breakthrough for Affordable EVs

MIT News

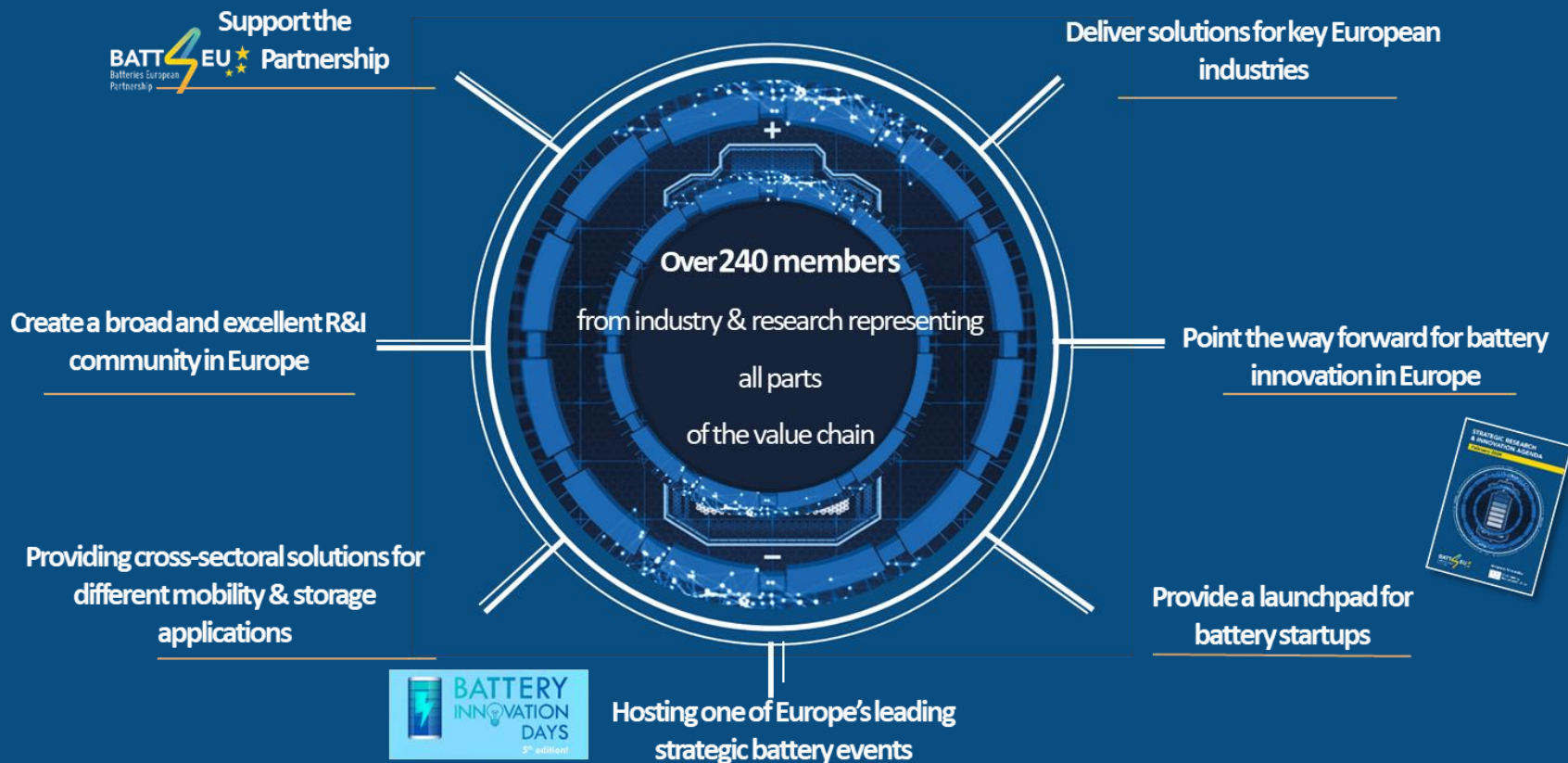
ON CAMPUS AND AROUND THE WORLD

SEARCH NEWS

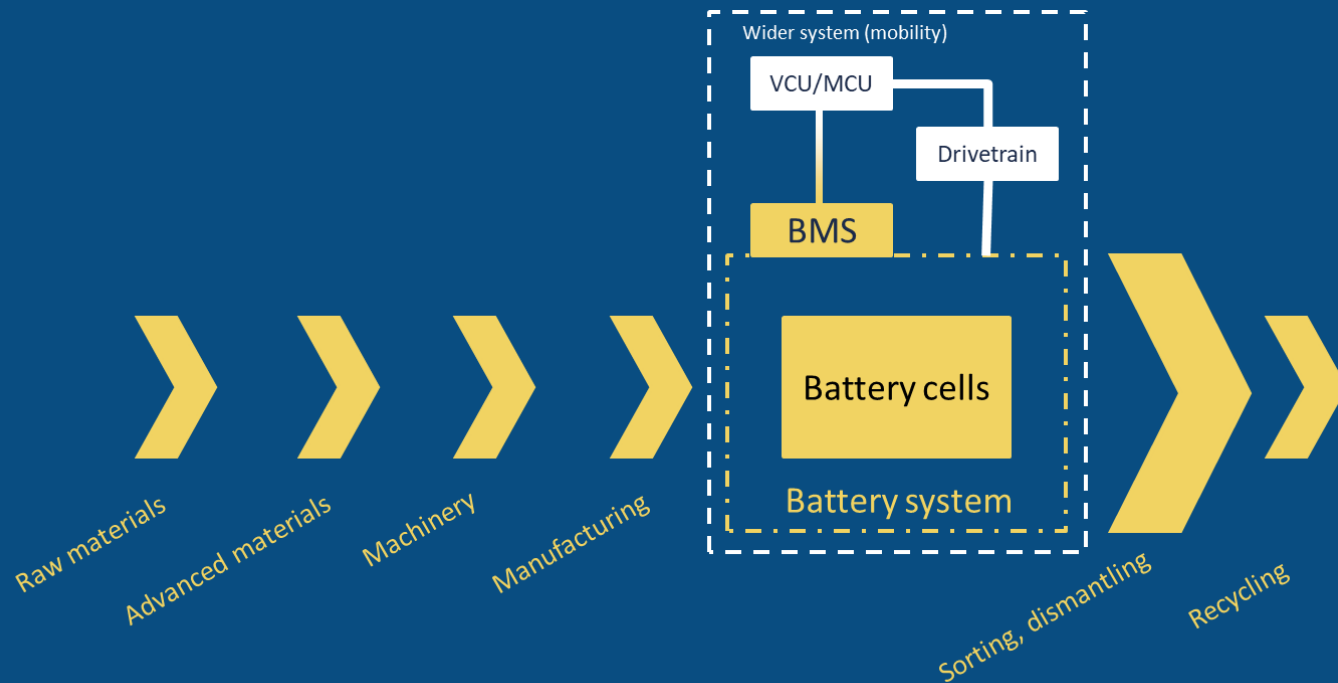
MIT engineers design tiny batteries for powering cell-sized robots

- BEPA is the voice of European research & innovation across the battery value chain
- We facilitate and accelerate research & innovation across the battery value chain to ensure EU's strategic autonomy
- By advocating for the best policy framework & instruments to fund & finance ambitions across the battery value chain
- Going from research to first industrial deployment and later industrialization across the various battery applications
- Defending technology priorities of our startups, scaleups, grownups in the industry as well as universities, research & technology organizations, and associations
- Collaborating with all other relevant initiatives to keep Europe on the global battery map
- We do so by building on the expertise built over the years in running Horizon Europe's battery partnership (Batt4EU)

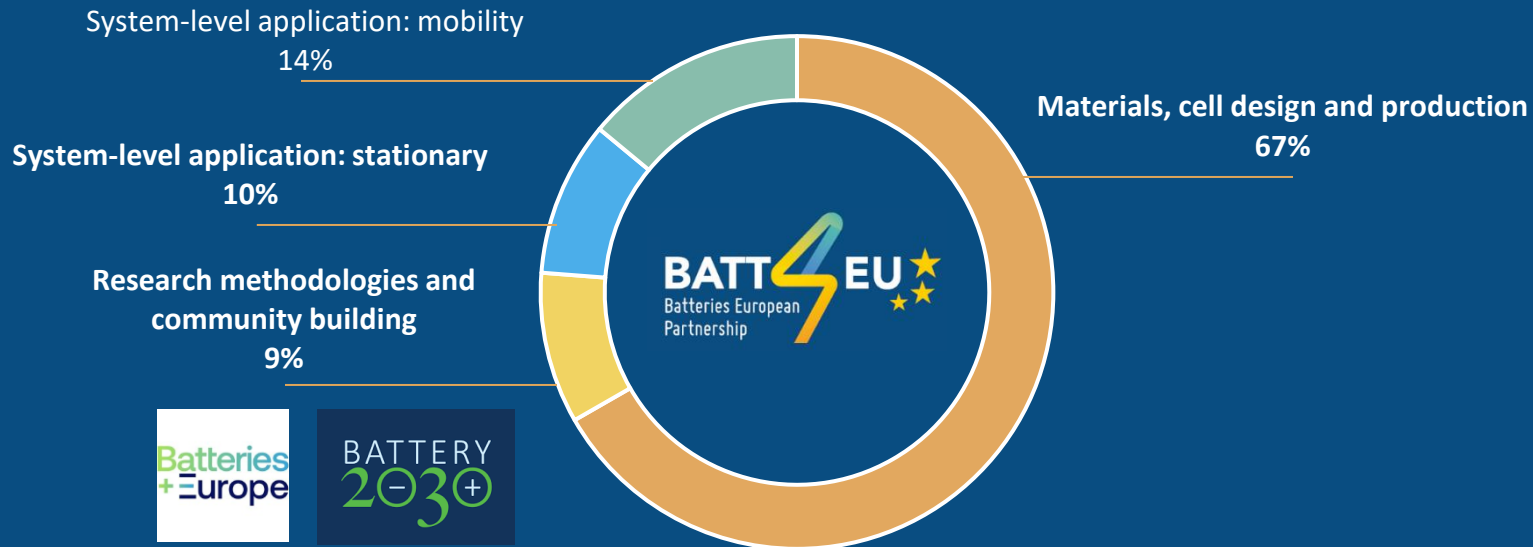
Our key activities



What is BATT4EU funding?



What has BATT4EU funded?



- 2 key EU projects
- Batteries Europe project is finished
- Battery 2030+ runs till Q3 2026



EU's Competitiveness

Compass (late January 2025)



*How do we close the
EU competitiveness gap ?*



EU's Clean Industrial Deal

(late February 2025) &

EU's industrial action plan for
automotive sector



*What does it mean in
terms of industrial policy?*



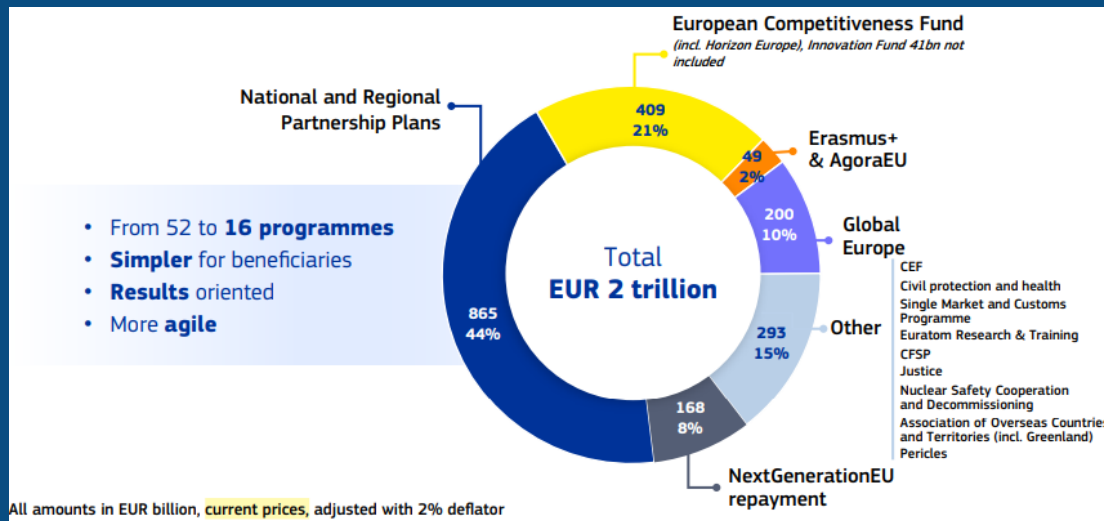
EU's Competitiveness Fund

(2028-2034 – and before?)

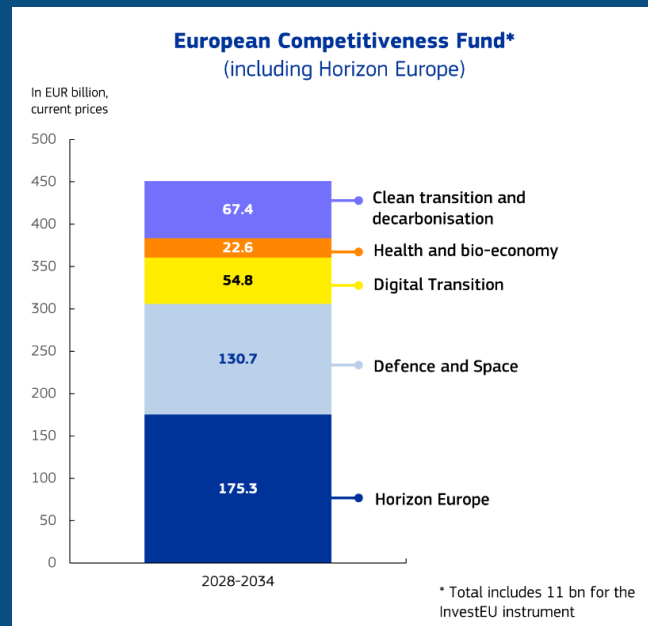


*What is the role of innovation &
its industrialization,
and how do we fund it?*

New Multiannual Financial Framework (MFF) 2028-2034



European Competitiveness Fund



Horizon Europe 2028-2034

Pillar I Excellent Science	Pillar II Competitiveness and Society	Pillar III Innovation	Pillar IV European Research Area
European Research Council	Competitiveness (ECF)	European Innovation Council	European Research Area Policies
Marie Skłodowska-Curie Actions	1. Clean Transition and Industrial Decarbonisation 2. Health, Biotech, Agriculture and Bioeconomy 3. Digital Leadership 4. Resilience and Security, Defence Industry and Space	Innovation Ecosystems and The Knowledge Triangle	Research and Technology Infrastructures
Science for EU Policies (JRC)	Society		Widening Participation and Spreading Excellence
	1. Global Societal Challenges 2. EU Missions 3. New European Bauhaus Facility		
From €25b to €44b	From €53.5b to €75.8	From €13.6b to €38.7b	From €3.4b to €16.2b

Batteries are key to Europe ... More support is needed!

Will Brussels' next MFF recognize our needs?

Key to competitiveness of leading European sectors like rail, aviation and waterborne

Crucial for European energy security and decarbonization

Other mobility

Stationary

In scope of BATT4EU

Currently out of scope of BATT4EU

EV batteries

Core battery research

Defence

Essential for European security and strategic autonomy

Micro-batteries / wearables

Robotics/ Internet of Things

Cutting edge of scientific research with potential for European leadership

Industries of the future



THANK YOU!

info@bepassociation.eu

BEPA
Batteries European
Partnership Association