Fraunhofer ISC

Fraunhofer R&D Center Electromobility Bavaria

14.02.2025

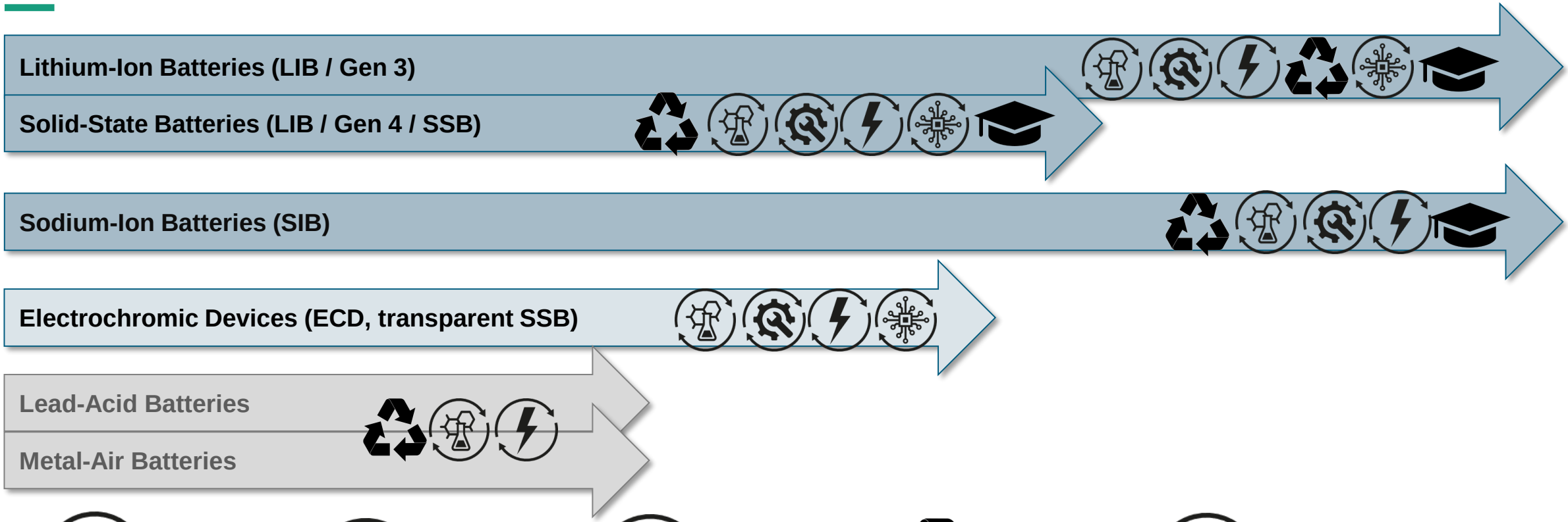
Victor Trapp

Highlights of the EU Battery Ecosystem

BAYFOR workshop “Future EU Funding Opportunities in the BATTERY Sector – Information and Participation Opportunities"

Fraunhofer R&D Center Electromobility in Würzburg

Key Topics



Materials | Processing | Analytics/Testing | Recycling | Digitalization | Education/Training

Impact Logic

From EU Priorities (the Strategic Plan) to Work Programmes

Quelle:
Science | Business Report Horizon Europe – The 1st assessment, 09.02.2022

Implementation via Partnerships

Strategic Plan

Work Programmes

EU Policy priorities → **Key Strategic Orientations & Impact Areas** → **Expected Impacts** → **Destinations** → **Calls** → **Topics**

Batteries European Partnership Association
Strategic Process

Working Groups

1 new emerging battery technologies	2 Raw materials/ recycling	3 advanced materials	4 cell design & manufacturing	5 mobile applications, integraton	6 stationary applications, integration

Working Groups are bringing together industry, research and other organisations' experts from specific R&I areas. THEIR MAIN MISSION IS TO IDENTIFY, PRIORITISE AND DRAFT THE R&I TOPICS WHICH WILL BE SUBMITTED TO THE EUROPEAN COMMISSION AS RECOMMENDATIONS FOR THE NEXT HORIZON EUROPE WORK PROGRAMMES!

Complemented by **task forces**:

digitalization, education & skills, safety, standards, sustainability, social science & humanity, innovation uptake

Batteries European Partnership Association

Strategic Process Example: Stakeholder Battery2030+

FCEB c/o Fraunhofer ISC

BATTERY 2030+ Contributing to The European Batteries R&I Community

Other stakeholders

Draft Work Programme 2026-2027

Cluster 5
Climate, Energy and Mobility

Proposals for R&I Actions (Ms 2.2.)	RESEARCH AND INNOVATION PRIORITIES ACROSS THE BATTERY VALUE CHAIN	Total number of votes
Development of sodium-based (gen 4) batteries for storage and mobility applications;	Advanced Materials	11
Accelerated battery material discovery and interface engineering;	Advanced Materials	10
Creating a European Battery Hub to accelerate multi-modal battery characterization with large-scale facilities;	Transversal topics	9
Development of Gen 4c & Gen 5;	Advanced Materials	9
Low cost sensors embedded in the battery cells for monitoring cell state of health and state of safety. Sensors should possess the possibility to trigger self-healing or protection against thermal runaway;	DESIGN	9
Development of anode-free batteries;	DESIGN	8

requested topics from B2030+

Working Groups

1 new emerging	2 RM recycling	3 advanced materials	4 cell design, manufacturing	5 mobile applications	6 stationary applications

Complemented by **task forces**: e.g. digitalization, education & skills, safety, standards…

B2030+ project ReUse: Efficient direct recycling for low value LFP battery for circular and sustainable waste management

Fraunhofer
université de BORDEAUX
ElevenEs
KYBURZ
sortbat
DTI
FENIX.TNT
ARKEMA
CellCircle
Battery Recycling
Empa
vito
MORROW
IMERYS
Graphite & Carbon

Project duration: 2024 – 2026

Consortium: 13 partner from 8 countries

Coordinator: Fraunhofer ISC

ReUse Top goals

Global objective:

ReUse aims to improve and demonstrate **circularity of sorted, dismantled, and pre-treated low-value LFP battery waste feeds**. The proposed recycling concepts address waste stream(s) in a comprehensive manner, aiming at the **maximal recovery of input elements and components**, rather than selected fractions only.

Objective 1: Develop automated EoL-battery sorting and optimized discharge schemes.

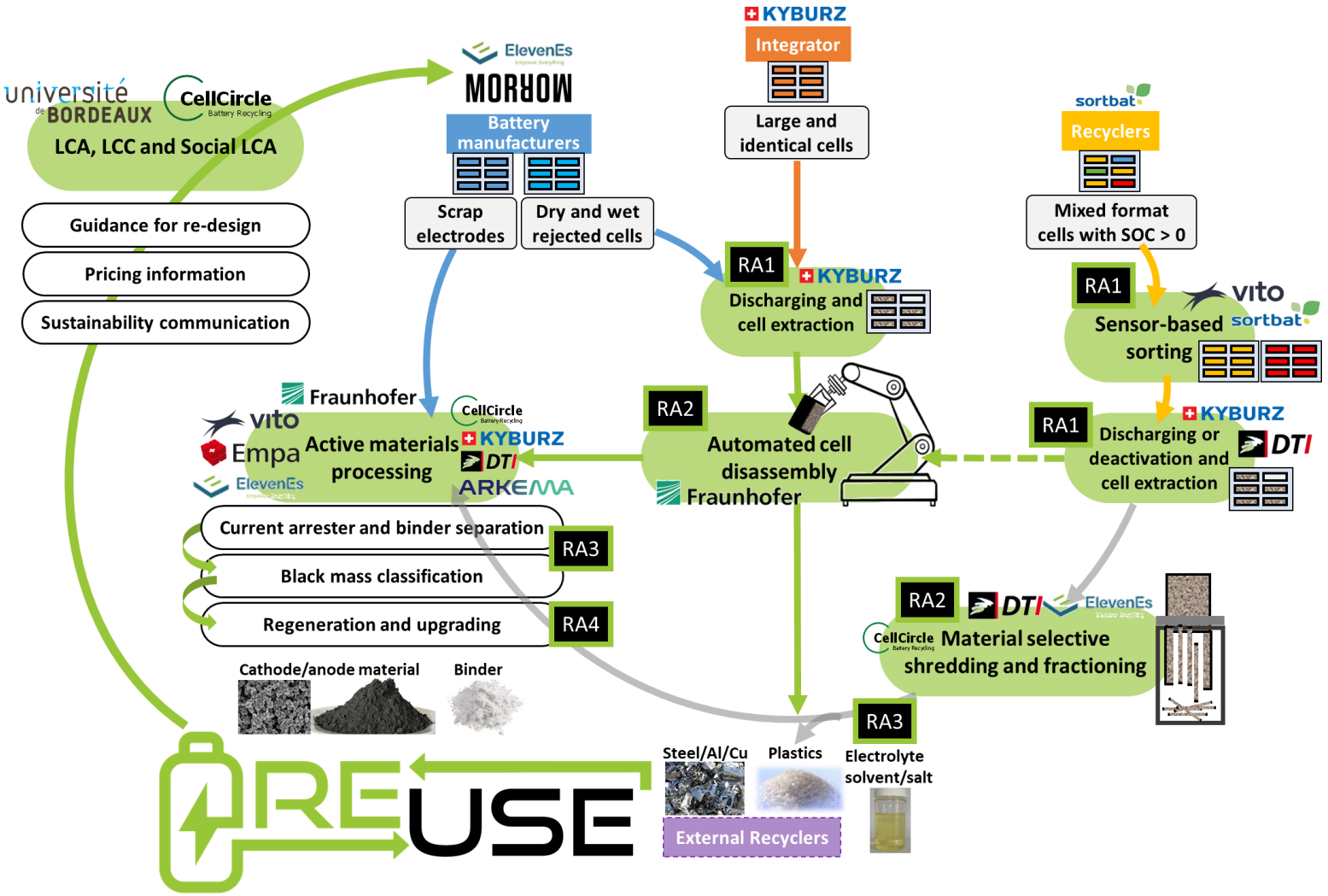
Objective 2: Develop automated disassembly/deconstruction strategies for LFP battery cells.

Objective 3: Improve recycling efficiency and direct re-use of battery active materials, conductive carbon and binders through improved separation and regeneration methods.

Objective 4: Ensure sustainability of ReUse concept by LCA, LCC, and Social Impact studies.

BATTERY 2030+

ReUse overall methodology and concept



EU Project Portfolio of Fraunhofer ISC / FZEB

Thank you for your attention!