



CBI: Multi-Technology Battery Organisation

Independent, industry-backed battery research

Who We Are

35+ years of trusted, pre-competitive battery research

1992

Founded as ALABC

2019

Rebranded to CBI

35+

Years of research

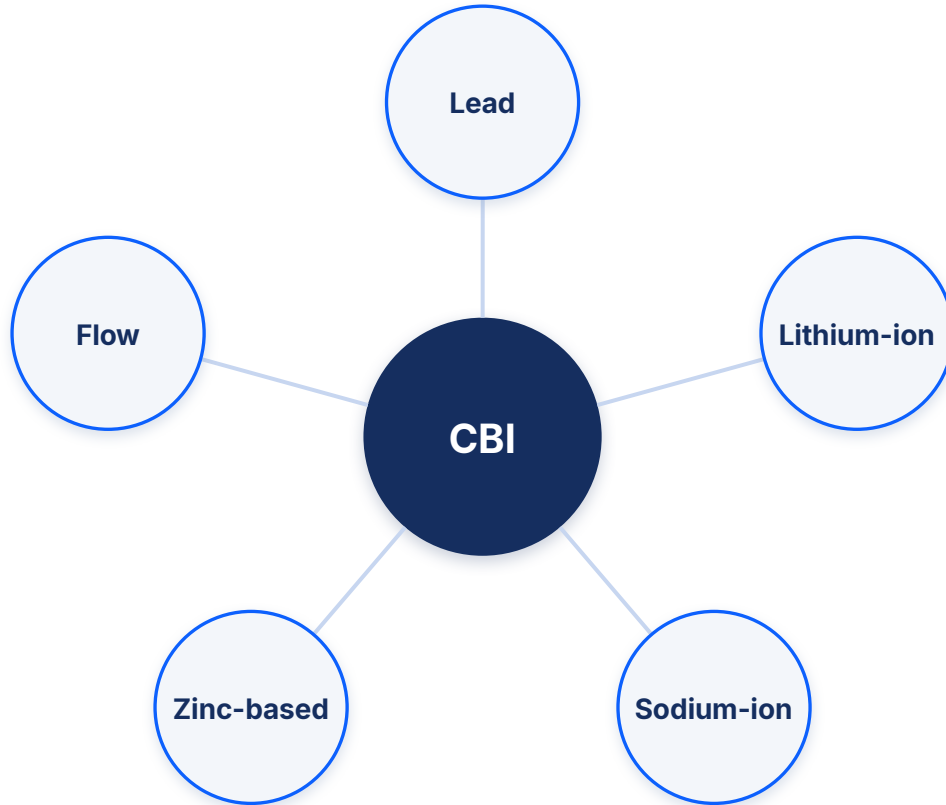
110+

Members worldwide

The Consortium for Battery Innovation began in 1992 as the Advanced Lead Acid Battery Consortium (ALABC), rebranding to CBI in 2019 to reflect a broader mission. For over three decades, CBI has run collaborative, pre-competitive research on behalf of its members — building the technical evidence base the lead battery industry relies on, and the trusted foundation the next chapter is built on.

What Is a Multi-Technology Organisation?

One CBI, multiple technology programmes — not separate organisations



Shared infrastructure

Global capability, staff and infrastructure shared across all technology programmes



Technology-specific priorities

Each chemistry, including zinc, keeps its own roadmap, KPIs and ring-fenced funding



Broader financial resilience

A larger, more diversified membership and revenue base



Greater industry influence

A stronger independent technical voice in standards, policy and legislation

World-Leading Scientific Expertise

PhD scientists and industry veterans, drawn from the world's leading battery companies and universities

Dr. Christian Rosenkranz

Chairman

PhD in Electrochemistry. 22 years in the battery industry; leads European industry & government relations for Clarios. Extensive experience in Li, Na, and Pb 12V systems.

Dr. Alistair Davidson

Executive Director

PhD in Chemistry, University of Edinburgh; studied at Oxford. Has lectured at Washington State University and the University of Chongqing. Long-standing expertise in battery sustainability.

Dr. Matt Raiford

Senior Technical Director

PhD Chemistry, UT Austin. Former process engineer at RSR Technologies; expert in dynamic charge acceptance and cycle life with extensive experience with stationary battery systems including Pb and Li.

Dr. Carl Telford

Research & Innovation Director

PhD in Materials Engineering. 20+ years in strategic research, engineering and R&I; vital role in ELV consultancy in EU, expert in project concept development and coordination.

Dr. Begüm Bozkaya

Senior Technical Manager

PhD Chemistry, Fraunhofer ISC; MSc Materials Science, TU Munich. Specialist in carbon additives and dynamic charge acceptance. Well-versed in 12V systems and lithium-ion battery science.

Dr. Alyssa McQuilling

Research & Innovation Manager

Doctorate and Master's, Carnegie Mellon University. 10+ years across energy storage, air quality and advanced agriculture. Experience with flow battery systems and second-life lithium ESS.

Dr. Geoffrey May

Battery Science Consultant

MA & PhD, University of Cambridge. Chartered Engineer; former CTO of Hawker Batteries (EnerSys) and FIAMM. Broad expertise across many types of automotive and stationary battery systems.

Why Join CBI

For All Members

- A larger, diversified organisation with stable shared technical resources
- Direct end-user engagement and partnerships across industry, universities and research institutes
- Legislative, advocacy and communications support across multiple technologies
- Targeted technical support for lead (Pb) batteries within the wider multi-technology model supporting Li, Na, Zn, and flow technologies.

For Universities and RTOs

- Access to a larger, cross-technology research and funding pipeline, rather than a single-chemistry programme
- New partnership opportunities with battery manufacturers and suppliers across multiple technologies.
- Opportunities to present research at global battery events, to key industry producers and users of batteries.

For Battery Companies

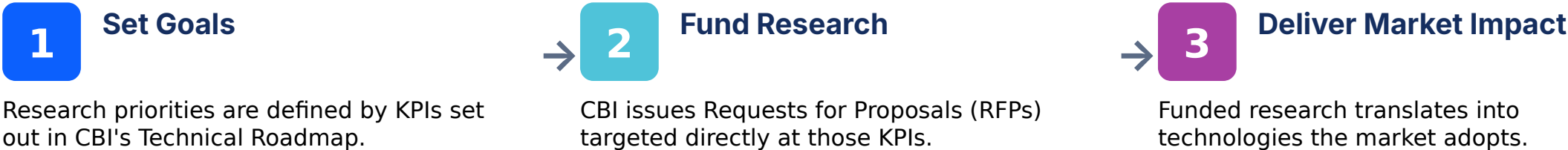
- Pre-competitive forum for research and development on multiple battery technologies
- Access to the Battery Benchmarking Programme, including zinc, and future cross-technology research
- Support developing funding bids to governments and key stakeholders across multiple technologies
- A single, independent technical voice in standards and policy discussions, backed by a 35+ year track record

For Industry Suppliers

- One membership giving access to CBI's full membership base, growing across multiple battery technologies
- Opportunities to promote products and services to a broader industry audience through CBI's events, workshops and communications
- Understand the technical drivers for your battery manufacturing customers by interacting with end-users.

A Track Record of Setting Goals and Delivering Results

Since 1992, CBI research has been roadmap-driven — and has shaped the market



30+ Years of Continuous, Goal-Driven Research

1992–2002	2003–2013	2014–2018	2019–2026
Active material, grid alloys and separator optimisation for VRLA batteries	Development of the Ultrabattery® and carbon-additive research for cycle life	Carbon-enhanced VRLA performance for Start/Stop and ESS duty cycles	Continued KPI-driven research; new RFPs now span Pb, Na, Li, Zn and flow batteries, with zinc from 2027

Result: research funded through this roadmap-driven process has translated directly into technologies adopted across the industry today.

CBI Members

A truly global membership spanning the battery value chain



What Does Change

Applying CBI's proven expertise and process to new battery technologies



New Technology Tracks

Zinc, lithium-ion and sodium-ion programmes launch alongside lead, each with its own roadmap and KPIs; flow to follow



Wider Membership and Funding Base

Recruitment opens across every battery chemistry and the wider value chain, diversifying CBI's membership and revenue



Multi-Technology Benchmarking

A new Battery Benchmarking Programme applies CBI's process across technologies, giving independent, comparative evidence



Evolving Governance

New technology committees are seated as tracks launch, and Board composition evolves to represent the growing membership

What Doesn't Change – Protecting Lead Battery Work

Our transition protects by continuing lead battery activities and strengthens lead-battery manufacturers' capabilities



Protect and Grow Lead Battery Research



Continued Lead Battery Expertise



Communicating the Benefits of Lead Batteries



Lead Battery Market and Growth



Standards Work



Advocacy Support



Collaboration Platform for the Lead Battery Industry



Lead Battery Events

The current Lead Battery work remains unchanged

- **Continuity** — Every ongoing lead battery project continues
- **Ring-Fenced Funding** — Lead battery research keeps its own funding and roadmap, not shared with other tracks
- **Same KPIs** — Same KPIs and technical standards apply: this programme is additive, not a replacement

Work Programme

The expanded organisation builds on CBI's existing strengths across six core areas

7.1

Research

Protect existing lead battery research; launch the multi-technology Battery Benchmarking Programme

7.2

Stakeholder Funding

Build government and industry funding partnerships across all battery technologies

7.3

Standards

Independent input to standards bodies (UL, NFPA, IFC, IEEE) a new focus

7.4

Communications & Marketing

New multi-technology brand and website; promote research

7.5

Events

Continue ELBC, ALBA, BattCon and ABC support; expand workshops into new technology areas

7.6

Advocacy Support

Independent technical support

Where Our Research Goes

Chemistries mapped to real-world applications, and the topics being developed for 2027

Applications & Chemistries

Application	Battery Chemistry
Automotive (Micro-hybrid and Auxiliary)	Lead, Sodium and Lithium Batteries
ESS	Sodium, Zinc, Flow and Lead Batteries
UPS	Lithium, Zinc, Nickel and Lead Batteries
Telecom	Lead Batteries
Motive Power	Lithium and Lead Batteries
Low Speed Electric Vehicle (e-bike, e-rickshaw)	Lithium and Lead Batteries

2027 Research Topics

MULTI-TECHNOLOGY PROJECTS

Benchmarking Study • AI Data Center Test Standard • BMS Comparison • UL / NFPA / IEEE / ASHRAE Guides • Failure Mechanisms

Lead Batteries

- Hybrid Capacitor Study
- BMS for Data Centers
- Performance Improvements across Automotive, Motive Power and Stationary Applications

Lead & Sodium

- TCO Comparison in Motive Power and Industrial Applications
- Charge Acceptance & Cycle Life in Low- and High-Temperature Profiles

Sodium-Ion Batteries

- Failure Analysis in Float Applications
- Performance Comparison of Different Sodium Chemistries

Zinc Batteries

- Failure Analysis in Microcycling Applications
- Benchmarking in AI Duty Cycles
- Codes and Standards Guidance

Lead & Lithium

- E-Bike Testing
- Hybrid Technology for Stationary Applications

Lithium-Ion Batteries

- E-Bike Durability Tests for Two- and Three-Wheeled Vehicles
- BMS Optimization in Motive Power

OEM Outreach

Building relationships with automotive, stationary and motive power end users

2027: End User Committees

In 2027 CBI will set up end user committees to determine our new multi-technology strategy for engaging automotive, stationary and motive power end users. Each sector will have its own committee, so members hear what is relevant to them. This will involve identifying key messages and the correct contacts in key companies.

AUTOMOTIVE

- Leverage the work CBI has done through the ALBA Plus initiative
- Build on the ALBA Plus projects CBI has funded
- Draw on all of CBI's past automotive work
- Add multi-technology work, such as benchmarking
- Create a centralised educational white book, videos and presentations

STATIONARY

- Leverage BattCon, which is attended by end users in this sector, to help determine the battery work programme
- Create a centralised educational white book, videos, standards and codes explanations for AHJs, and related topical presentations
- Use benchmark data with end users
- Discuss issues arising in large-scale ESS and data centres

MOTIVE POWER

- E-mobility, forklifts, golf carts and industrial trucks
- Create a centralised educational white book, videos and presentations
 - Discuss the value proposition, and how best to convey to industrial truck and e-mobility manufacturers the pros and cons of each battery type
 - Discuss short-term projects helpful to motive power applications

Being multi-technology opens significantly more doors than being lead only.

A Track Record of Winning Research Funding

From Europe to North America — and now across more technologies

SELECTED RESEARCH PROJECTS WON OR IN DELIVERY



Proven Success in Lead Battery Research

CBI has a strong track record of winning government and research funding for lead battery projects across Europe and North America, backed by deep, recognised expertise in bid-writing.

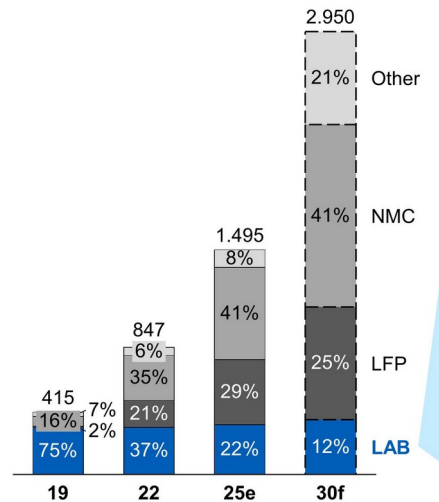
Now Expanding Across Technologies

As CBI becomes multi-technology, this same expertise extends to help members win funding for research spanning lead, zinc, sodium-ion and lithium-ion.

Market Analysis Is Central to CBI's Work

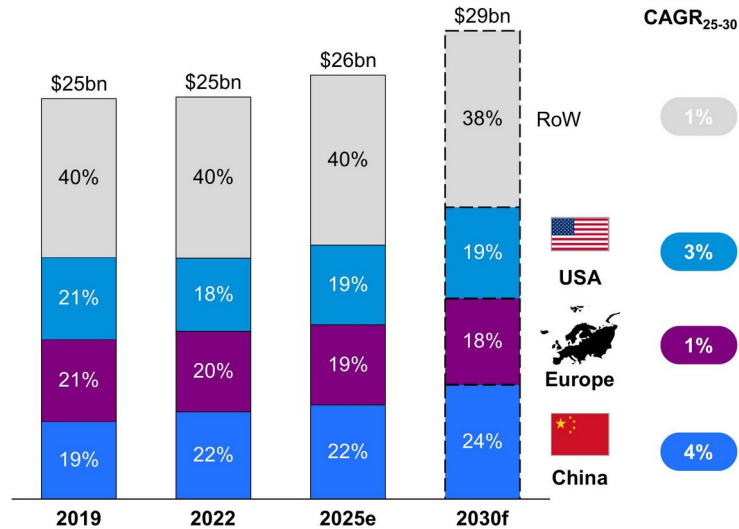
Market direction shapes every area of CBI's programme

Battery demand for passenger and commercial vehicle [Global, GWh]



By technology, 2019–30f

Lead battery demand for passenger cars and commercial vehicles [Global, \$bn]



Automotive lead battery demand by region, 2019–30f

Source: KPMG research and analysis, Battery Market Report 2030 Outlook (2025)

- **Market-driven.** Every area of CBI's work programme is shaped by the direction of the market.
- **Trusted analysis, every year.** Members receive market data compiled annually with leading analysts, including KPMG.
- **Regular briefings.** Seminars share the latest market intelligence directly with members throughout the year.
- **Full technology and regional coverage.** Lead, lithium-ion, sodium-ion, zinc and more — all major regions, all applications.
- **Members-only.** This market intelligence is exclusive to CBI members and is not shared with the wider industry.

Engaging the Industry, Worldwide

CBI connects with members and the wider industry at events across every region

EUROPE



The world's leading lead battery innovation conference, co-organised by CBI and ILA in Vienna.

NORTH AMERICA



Battery Council International's flagship annual convention for the battery industry, with a zinc session proposed.

EUROPE

ALBA

CBI's own Automotive Low-Voltage Battery Alliance workshop, connecting members with OEMs.

ASIA-PACIFIC



The Asian Battery Conference, bringing together the region's battery manufacturers and suppliers.

CBI Puts Your Innovation in the Spotlight

Membership doesn't just fund your research — it promotes it



Innovation Spotlights

CBI profiles member innovations to the wider battery industry



Video Features

Our team produces videos showcasing your technology and story



Social Media Reach

Regular posts across CBI's LinkedIn and other channels, reaching thousands of followers



Named at Every Podium

Referenced by name in CBI's conference presentations and end-user meetings worldwide



CBI on LinkedIn — 12,000+ followers and growing

2027 Fee structure

Companies pay a single annual fee per technology stream they participate in, sized to their turnover in that technology, and may join one or several streams, but must join the stream representing their largest battery technology by turnover, so a company cannot select only lower-cost streams while excluding its main business

Membership Band	Annual Fee
Start-up, Research and Testing Institute	US\$10,000
Under US\$100 million	US\$15,000
US\$100 million – US\$250 million	US\$30,000
US\$250 million – US\$500 million	US\$40,000
US\$500 million – US\$750 million	US\$60,000
US\$750 million – US\$1 billion	US\$85,000
Over US\$1 billion	US\$100,000

1

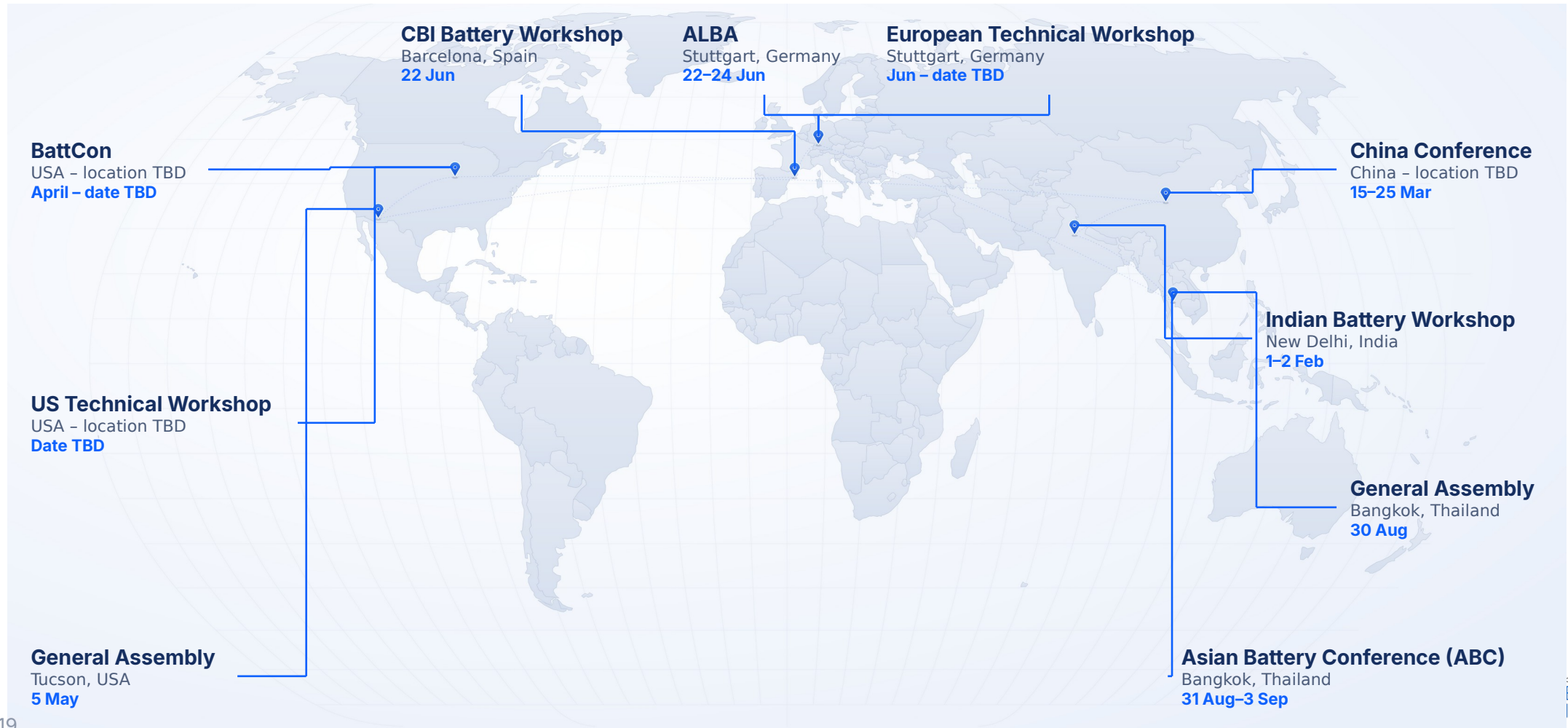
**fee per technology
track**

No hidden tiers, no per-technology surcharge — one transparent, turnover-based fee scales membership fairly as CBI grows.

Fees are based on annual turnover in US dollars, applied per battery technology stream. Lead producing companies would become members of CBI through membership of ILA. Zinc companies join the Zinc track through IZA.

2027 Global Meeting Calendar

Many of these dates are tentative and will be confirmed to membership shortly



Get Involved

Join the Multi-Technology Battery Organisation

- Talk to the CBI team about membership and which technology track fits your business
- Get in touch to discuss next steps for your organisation

Contact: anita.wright@batteryinnovation.org