

BATTERY SYSTEM

The Global Battery Alliance

November 2024

**GLOBAL
BATTERY
ALLIANCE**

BATTERIES POWERING
SUSTAINABLE DEVELOPMENT

The world's largest multistakeholder organisation for battery value chain sustainability

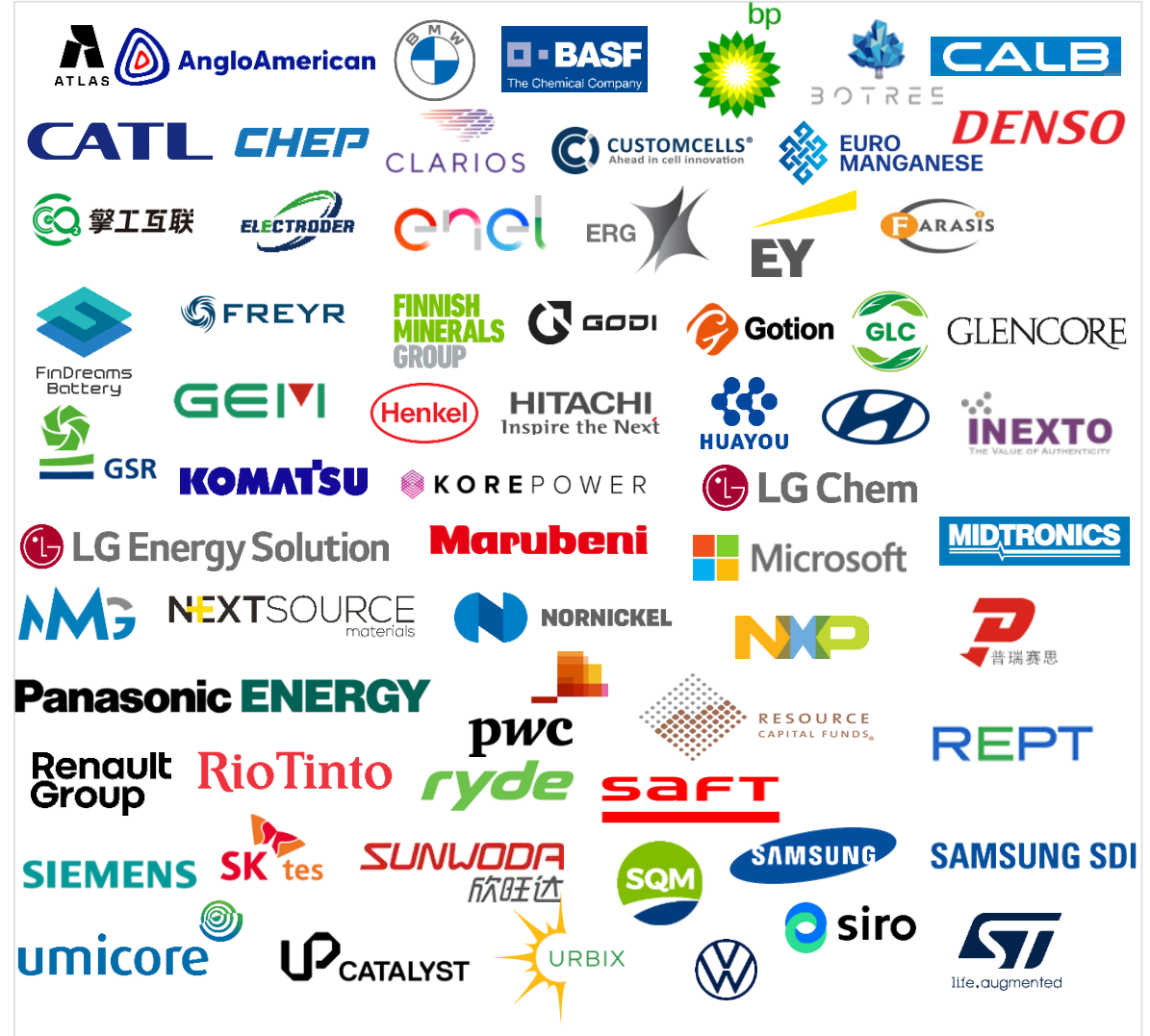
Public organizations



Technology Partners



Industry and business



NGOs and foundations



Associations



The Global Battery Alliance is the global public-private platform to enable sustainable battery value chains by 2030

Vision

The GBA vision is that batteries power sustainable development towards three overarching outcomes:

1. Establish a **circular battery value chain** as a major driver to achieve the Paris Agreement
2. Establish a **low-carbon economy** in the value chain, create new jobs and additional economic value
3. **Safeguard human rights** and economic development consistent with the UN Sustainable Development Goals

Mission

- Establish trusted criteria, data, and benchmarks for a sustainable and transparent battery market
- Mobilize collective action to improve the environmental, social, and governance footprint across the value chain
- Communicate with one voice and with strong media visibility

Vision reports



The multistakeholder governance of the GBA has been the principal contributor to our credibility and impact

The GBA community has developed 10 Guiding Principles for a sustainable battery value chain

Establish a circular battery value chain as a major driver to achieve the Paris Agreement



- 1 Maximizing the productivity of batteries in their first life
- 2 Enabling a productive and safe second life use
- 3 Ensuring the circular recovery of battery materials

Establish a low carbon economy in the value chain, create new jobs and additional economic value



- 4 Disclosing and progressively decreasing greenhouse gas emissions
- 5 Prioritizing energy efficiency measures and substantially increase the use of renewable energy as a source of power and heat when available
- 6 Fostering battery-enabled renewable energy integration and access with a focus on developing countries
- 7 Supporting high quality job creation and skills development

Safeguard human rights and economic development consistent with the UN Sustainable Development Goals



- 8 Immediately and urgently eliminating child and forced labour, strengthening communities and respecting the human rights of those employed by the value chain
- 9 Fostering protection of public health and the environment, minimizing and remediating the impact from pollution in the value chain
- 10 Supporting responsible trade and anti corruption practices, local value creation and economic diversification

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Circularity & Critical Minerals Advisory Group

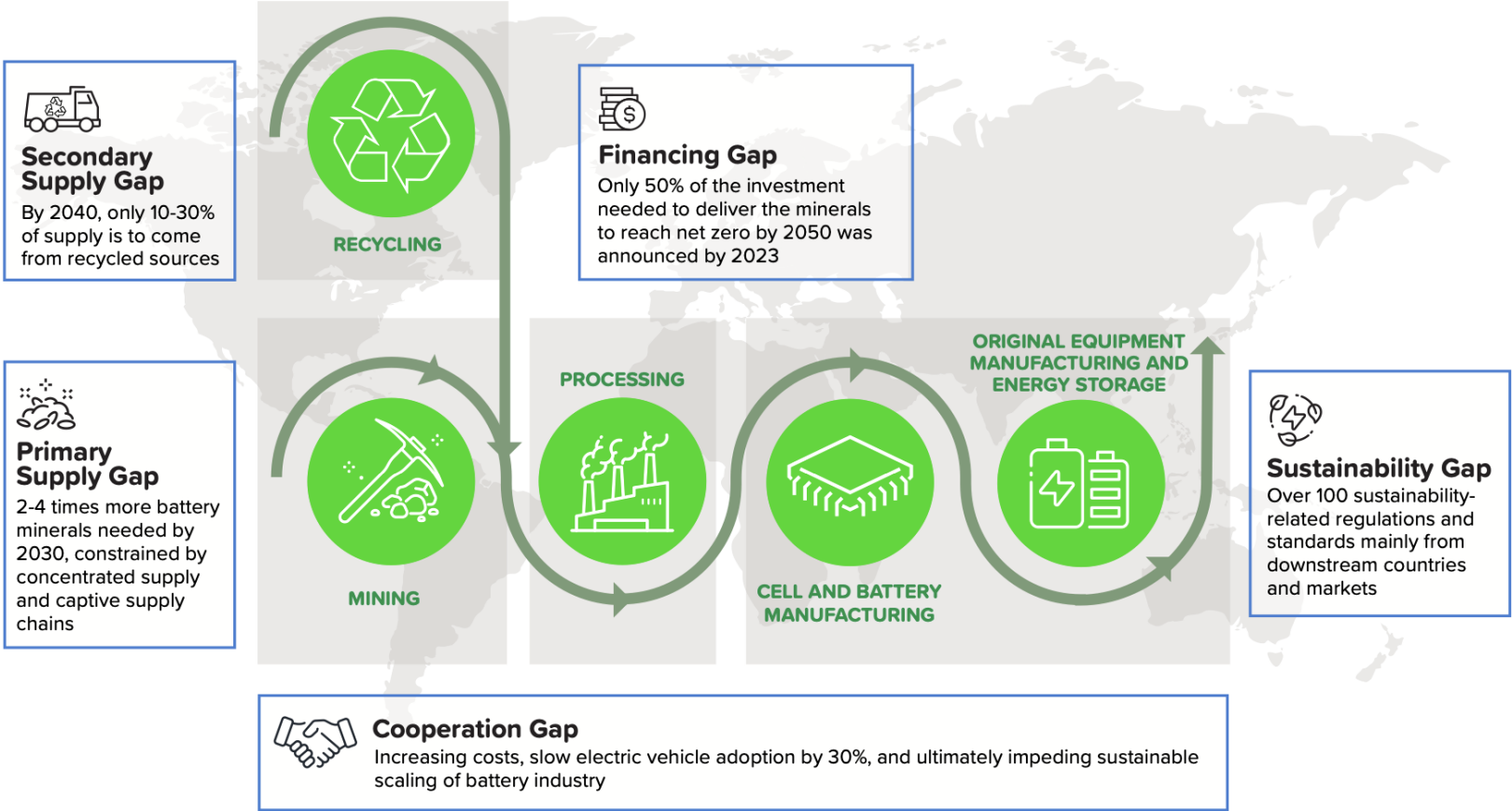
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Circularity and Critical Minerals Advisory Group: A Call to Action to Policymakers to bridge the cooperation gap in critical battery minerals

Multiple gaps on the road to meeting critical battery mineral demand for the energy transition in a sustainable way



www.globalbattery.org/media/publications/gba-cmag-communique-final-june24.pdf

CCMAG creates impact and fosters collective action across four priority themes identified in the Call to Action



Joint Responsibility
for Due Diligence



Circular
Minerals



Sustainable
Financing



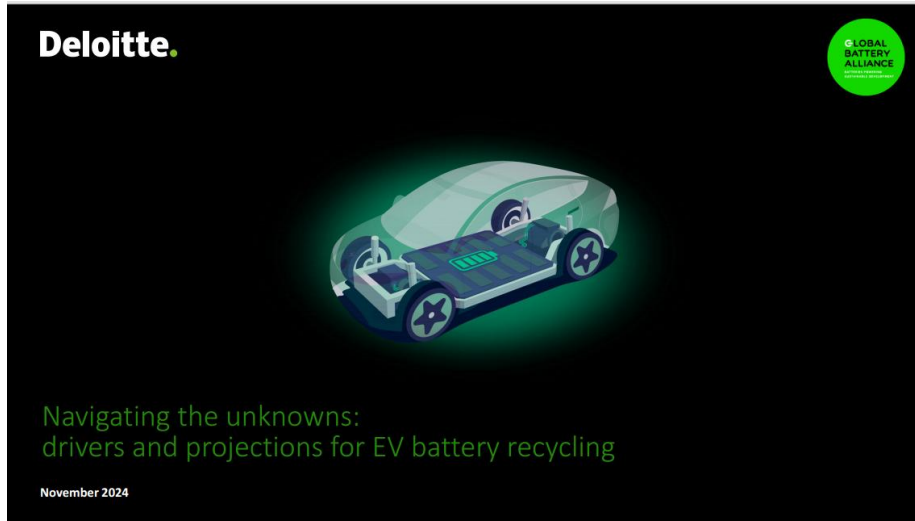
Social and Environmental
License to Operate

- **#1** Offer a platform for pre-competitive collaboration, peer-learning, sharing, dialogue & debate across the value chain
- **#2** Engage with, consult and build capacity of mineral producing country governments and suppliers
- **#3** Initiate and progress dialogue toward understanding and consensus on new issues on the battery value chain sustainability

Participating in CCMAG is an opportunity for multi-stakeholder sharing, knowledge production and achieving impact on the ground across key bottlenecks toward sustainable battery value chains themes.

Circularity White Paper series

Navigating the unknowns: drivers and projections for EV battery recycling



Powering the Future: Overcoming Battery Supply Chain Challenges with Circularity



Hot off the press:
<https://www.globalbattery.org/publications/>

Forthcoming in January, to be published at World Economic Forum in Davos, 2025



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Battery Passport methodology and indicator framework

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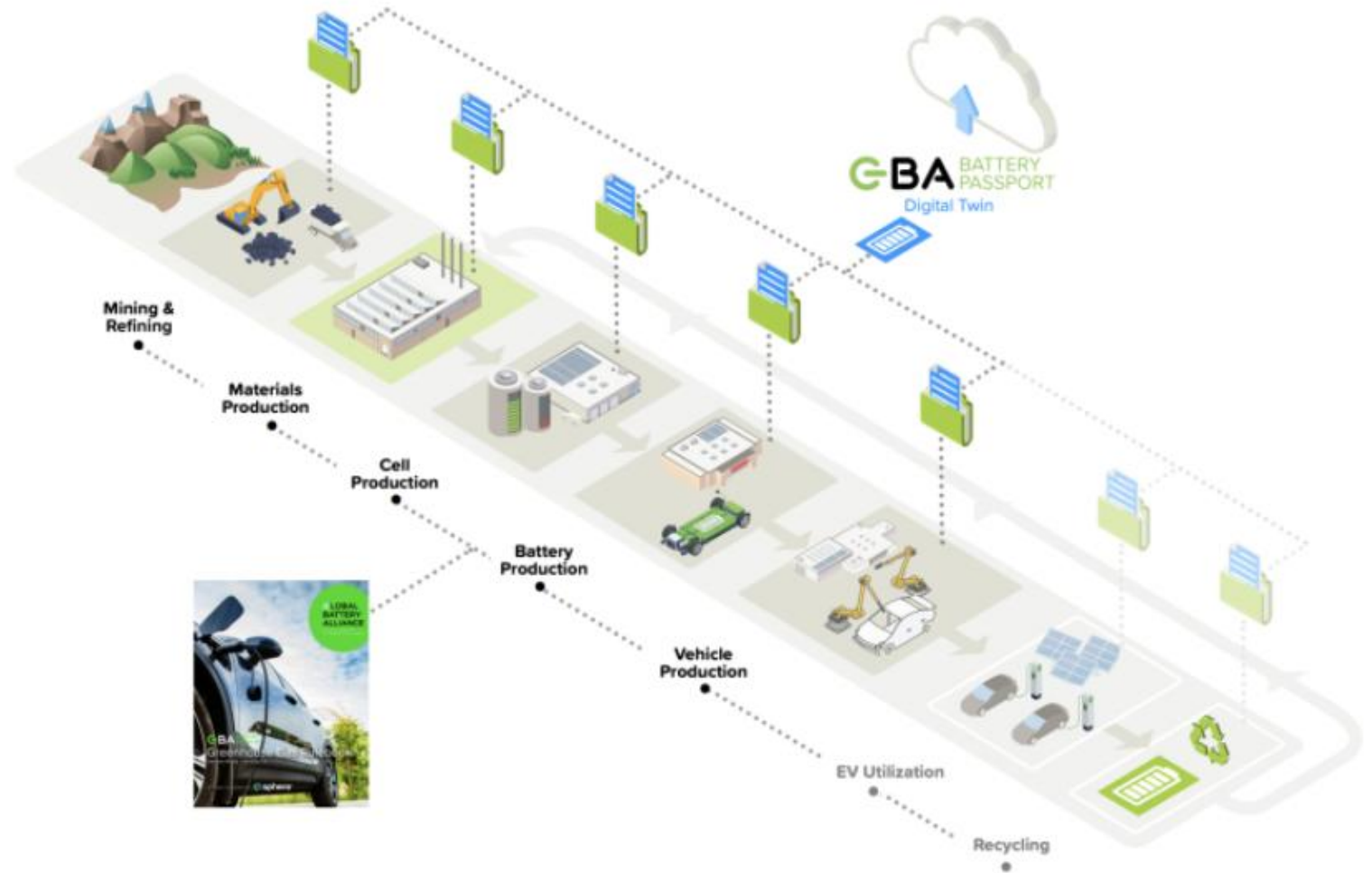
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The GBA Battery Passport vision

Battery Passport Vision:

Accelerate the scaling of sustainable, responsible, and circular battery value chains by:

1. Establishing a **global battery passport ecosystem**, including harmonized sustainability performance expectations for batteries
2. Making **company efforts** measurable, trusted and comparable
3. Tracking and rewarding **improvement actions** across the value chain with a comprehensive ESG score

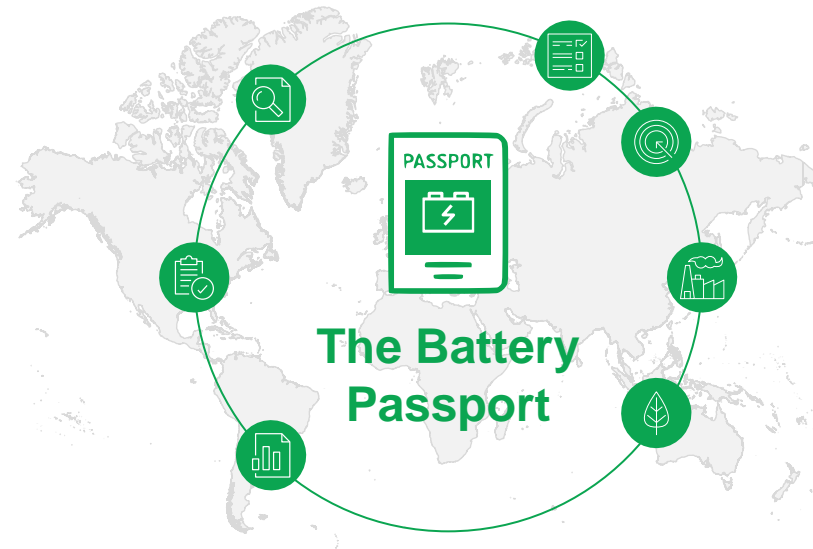


Establishing trust, comparability and independent validation represent the unique value of the GBA Battery Passport

The GBA Battery Passport is a cohesive framework for supply chain sustainability

GBA operates closely with digital product passport solution providers, but will not, itself launch a battery passport solution. The GBA Battery Passport will feature:

1. An indicator framework for **benchmarking sustainability performance** throughout the battery value chain.
2. A scoring framework to allow high-level readouts of sustainability performance, and a **sustainability certification** at the individual battery level.
3. A data assurance framework to ensure that battery sustainability data is **accurate** and **trustable**.
4. Associated data platform, performance tracking and stakeholder engagement, to incentivise **continuous improvement in sustainability performance** throughout the value chain.



German Chancellor Olaf Scholz described the GBA as the “most important global partnership” to scale sustainable, responsible value chains for batteries.^{vi}

GBA's Battery Passport measures indicators of sustainability performance in 22 ESG issue areas

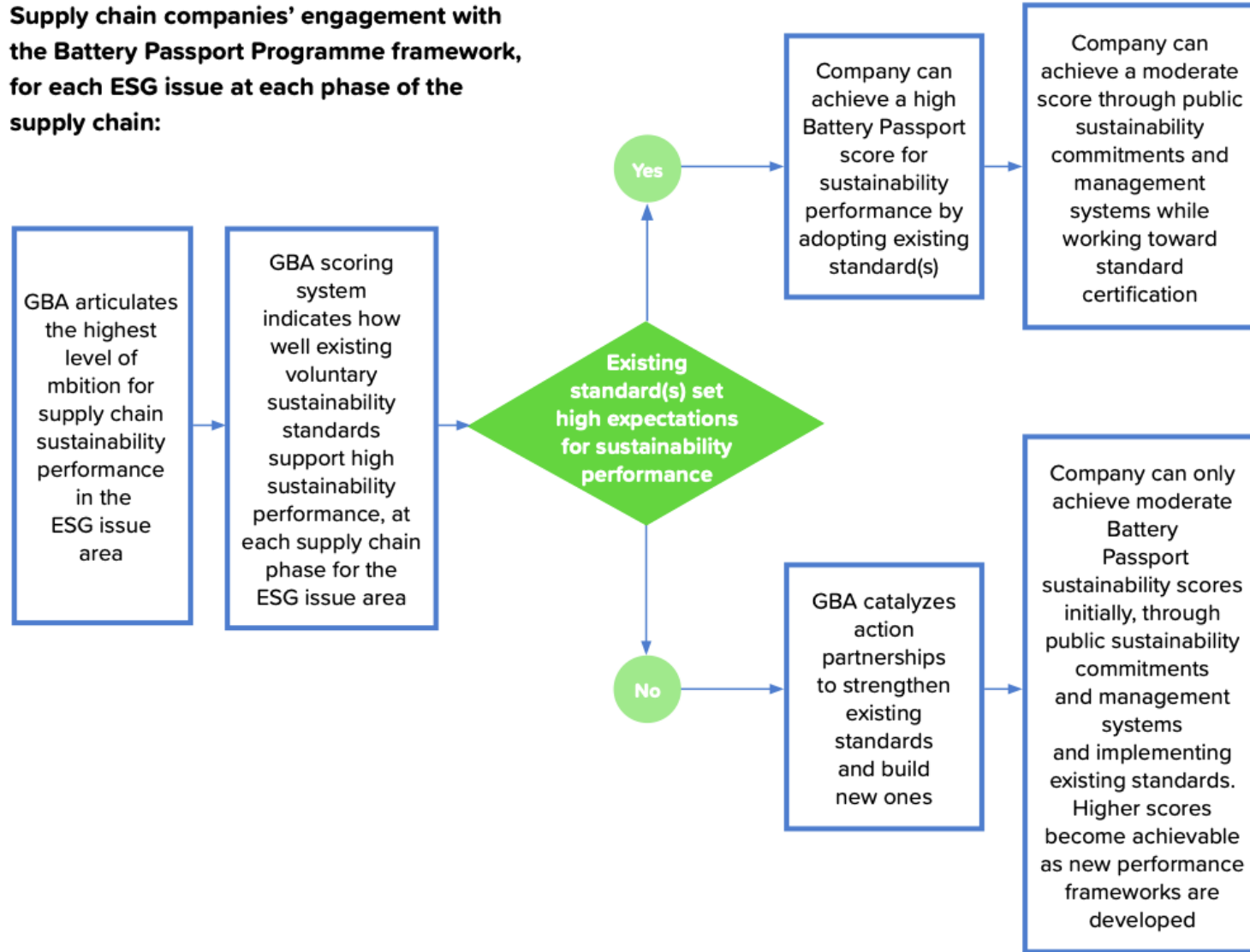
ESG Rulebooks are developed in GBA's unique multistakeholder environment:

1. 7 ESG Rulebooks were trialed in the 2024 MVP pilots through ~200 sustainability reports
2. Greenhouse Gas Rulebook for calculating battery carbon footprinting exceeds EU legislative requirements for data assurance and compatibility
3. In 2025, the BP framework will be finalized to meet EU BR due diligence requirements, for issue coverage and data assurance

Cross-Cutting		
Due Diligence 1. Presence and quality of environmental & human rights due diligence and risk management systems		
Environmental	Social & Economic	Governance
Energy and GHG 2. EGE emissions 3. Energy efficiency Environmental Degradation 4. Pollution (air including GHG emissions, water, soil, hazardous substances, noise and vibration, plant safety) 5. Biodiversity loss 6. Water management (usage, recycling, depletion) 7. Waste management (generation, recycling/reuse) Circularity 8. Material consumption/usage 9. Circular design	Human Rights 10. Child labor 11. Forced labor Workers' Rights 12. Freedom of association and collective bargaining 13. Worker health and safety Community Impacts and Rights 14. Respect for Indigenous Peoples' rights 15. Community life 16. Diversity Local Economy 17. Contribution to local economic development (payments to governments and local supplies and employment) 18. Engagement with artisanal and small-scale miners Product Cost 19. Total cost of ownership	Compliance & Good Governance 20. Product quality and safety 21. Data security and privacy 22. Occurrence of corruption and bribery <div style="border: 1px solid gray; padding: 5px;"> Legend: ■ ESG issues corresponding to the risk categories of the EU Battery Regulation ■ Additional salient ESG issues </div>

Logic of sustainability performance measurement is underpinned by detailed benchmarking

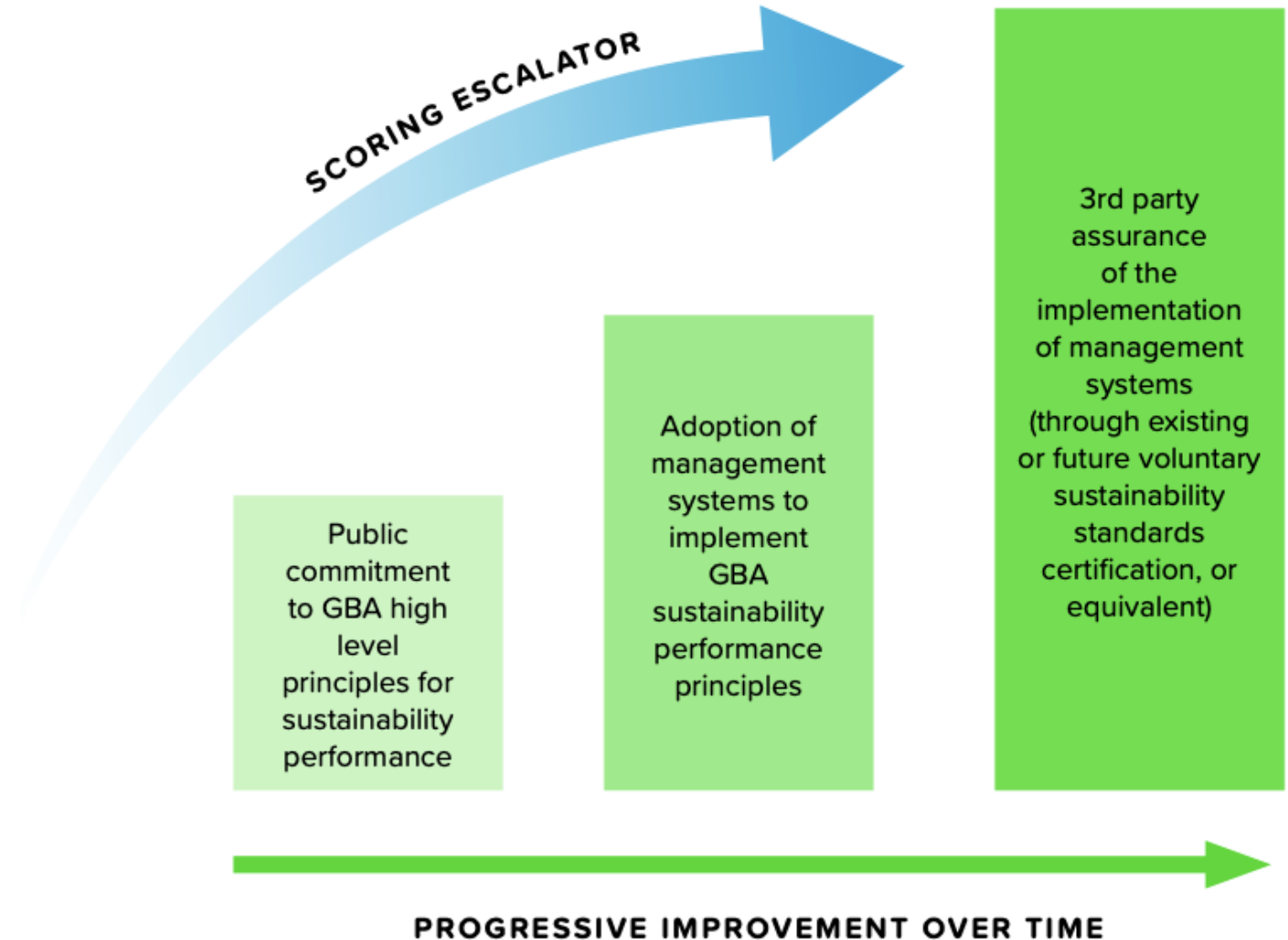
Supply chain companies' engagement with the Battery Passport Programme framework, for each ESG issue at each phase of the supply chain:



BP's scoring escalator incentivizes progressive improvement in data gathering and disclosure

GBA's Battery Passport is inclusive and suitable for all companies, irrespective of their progress on their sustainability journey:

1. For companies that have not yet attained strong voluntary sustainability standards
2. For companies that are operating at a point in the supply chain where comprehensive sustainability standards have not yet been developed
3. For companies that are preparing to enter new markets with strong sustainability reporting requirements



Safeguarding data and ensuring data assurance is at the core of GBA's Battery Passport



GBA will accredit third-party assessors to verify passport data and ensure that it is reliable

1. Certifications provided for data assurance are checked for validity
2. Track and trace solution providers aggregate supply chain data and apply GBA scoring framework
3. The GBA BP will align with EU's upcoming Green Claims Directive to ensure claims are transparent and verifiable



Data gathered from the supply chain within the Battery Passport will be held decentrally

1. GBA will collect only aggregated data from digital battery passport solution providers
2. Neither GBA nor any other organization will have full visibility of company-level data
3. The GBA BP regularly interacts with other initiatives to ensure interoperability



GBA's Data Assurance Rulebook sets the guidelines for data verification and assurance

1. The Rulebook is being developed in consultation with the Data Assurance working group and will be published in 2025
2. The Rulebook will set out accreditation requirements for 3rd party assessors and track and trace solution providers, and define roles and responsibilities for data assurance in the Battery Passport ecosystem

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GBA Battery Passport Value Proposition

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GBA's Battery Passport interacts with several stakeholder groups and offers a tailored value proposition for every constituency

GBA's Battery Passport will contribute to a marketplace where products can compete on independently validated and verifiable sustainability performance, and companies can differentiate themselves to customers, investors and consumers with robust and trustable green claims.



For battery materials/component producers and cell manufacturers

GBA Battery Passport is a widely-recognised framework for reporting and showcasing sustainability performance to stakeholders

1. Provides robust and credible recognition to strong sustainability performers
2. Comparable scoring across the supply chain, leading to a certification of physical batteries
3. Engagement in the programme as a GBA member provides opportunities for sustainability leadership
4. GBA members shape our frameworks and play an important role in our multistakeholder pre-competitive setting

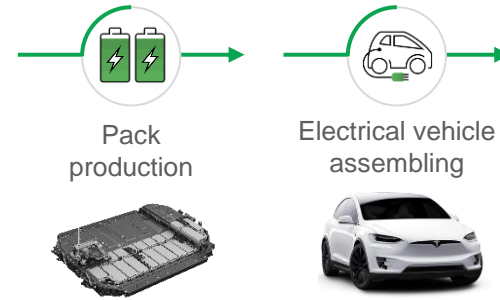


In the absence of a common framework for showcasing sustainability performance to stakeholders, companies will have a more complex landscape of stakeholder expectations to navigate, and strong sustainability performers would struggle to differentiate themselves from the crowd

For automotive companies and other battery purchasers

GBA Battery Passport is a powerful resource for supply chain due diligence:

1. Aids companies to fulfil the due diligence requirements of the EU Batteries Regulation and other upcoming legislations
2. Comparable scoring across the supply chain, leading to a certification of physical batteries
3. Engagement in the programme as a GBA member provides opportunities for sustainability leadership
4. GBA members' shape our frameworks and play an important role in our multistakeholder pre-competitive setting



In the absence of common due diligence resources, automotive companies and other battery purchasers would have to put greater individual effort into developing relevant tools and assuring stakeholders – including regulators – that their supply chain due diligence met expectations

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GBA Battery Passport Value Piloting

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What we've done on piloting so far

The world's first BP proof of concept in 2023...



-  2 major OEMs
-  2 minerals traced
-  3 cell producers
3 T&T solutions

In 2022/23, we delivered Wave 1 Proof of Concept pilots.

Three separate pilots demonstrating the integration of material flow data with ESG performance **along the whole (cradle-to-gate) value chain.**



Uplifting our ambition in 2024

Objectives of the 2024 pilot – what were we hoping to achieve?



Move from realistic to **real data** reporting



Expand the **scope of sustainability reporting** to include Biodiversity, Indigenous Peoples' Rights, Forced Labour and Circular Design in addition to previously tested rulebooks on Environmental and Human Rights Due Diligence, Child Labour and Greenhouse Gas Emissions



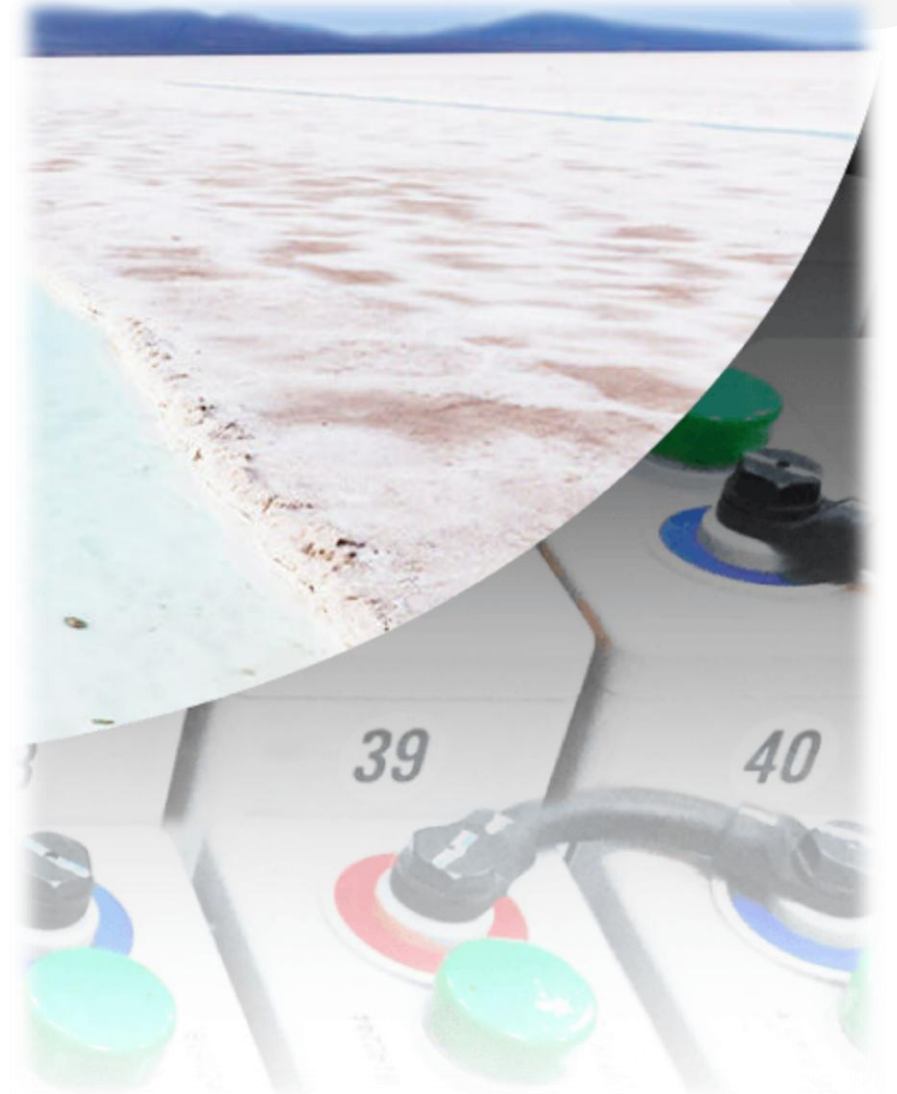
Introduce elements of **data verification** for the first time



Apply a **scoring methodology** to benchmark products

In order to:

1. To demonstrate the viability of driving supply chain sustainability performance through a Battery Passport structure.
2. Prepare participants for incoming Battery Passport requirements.
3. Create learnings to allow the GBA to take the Battery Passport to scale and issue a sustainability certification in the future.



Key facts and figures of the piloting exercise



Seven materials



Aluminium



Cobalt



Copper



Graphite (artificial)



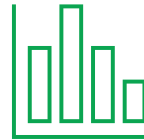
Iron phosphate



Lithium



Nickel



Key figures

80% of global electric vehicle battery manufacturing represented

10 successful piloting consortia

200 sustainability reports

5 consortia engaged in data verification by **3** independent verifiers



Five continents



Australia



Brazil



Chile



China



Poland



Singapore



South Korea



Zimbabwe

Live data on the GBA website



The road ahead



Scaling uptake of the GBA Battery Passport across battery-makers' operations and their value chains.



Refining, streamlining and clarifying our existing rulebooks, and extending rulebook coverage to 22+ ESG issues.



Continuing to develop a cohesive Battery Passport framework, tied to our shared vision of a sustainable battery value chain, and embedding risk-based due diligence throughout.



Building our multi-stakeholder alliance, demonstrating the value of the Battery Passport for sustainability, helping companies to achieve compliance and go beyond.



Achieving a circular, responsible and just battery chain by 2030!