

# GLOBAL BATTERY ALLIANCE

BATTERIES POWERING  
SUSTAINABLE DEVELOPMENT

## GBA BATTERY PASSPORT

An Overview



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# 1

## Introduction and Global Battery Alliance Vision

The Global Battery Alliance (GBA) is built on the vision of a circular, responsible and just battery value chain in 2030. We are a pioneering partnership. Together with the World Economic Forum and other collaborators, we spearheaded the battery passport concept in 2019.<sup>1</sup> Since then, this concept has spread worldwide.



Directly referencing the Global Battery Alliance,<sup>ii</sup> the EU Batteries Regulation (2023) calls for the mandatory introduction of battery passports in the EU by 2027. Other jurisdictions including the USA and China are now also considering battery passport legislation.

The EU Batteries Regulation sets minimum rules for information disclosure in a battery passport. It focuses on technical and usage data, allowing batteries to be used and reused efficiently in a circular economy, and on due diligence of environmental and social impacts in battery manufacturers' supply chains.

The GBA Battery Passport provides a sustainability framework for companies in the battery value chain to meet legislative expectations and go beyond compliance. Production of battery raw materials is set to skyrocket in the years ahead – demand for nickel, graphite and lithium for batteries is projected to grow by 20, 19 and 14 times respectively by 2040, from 2020 levels.<sup>iii</sup> Battery demand is forecast to grow from 937 gigawatt-hours in 2023 to 7.4 terawatt-hours in 2040, requiring a global investment of US\$ 1.6 trillion.<sup>iv</sup> The Global Battery Alliance aims to ensure that this industrial boom does not repeat the patterns of global inequality seen in previous economic transitions, where prosperous nations have benefitted while environmental and social costs have fallen mostly on poorer resource producing and processing nations. We believe that the clean energy transition should also be a just transition.

Our vision is galvanising and mobilising stakeholders in the battery value chain. Each member commits to ten GBA Guiding Principles as necessary conditions for a sustainable and responsible battery value chain,<sup>v</sup> and the GBA has more than doubled its size in two years, from 80 members in 2022 to 175 members in 2024. The GBA now counts some of the largest companies in the global battery valuechain among its membership, alongside leading civil society organisations, government and United Nations bodies and others.

Major milestones achieved by the GBA Battery Passport to date include: the publication of a comprehensive Greenhouse Gas Rulebook for calculating battery carbon footprints, which supports the development of methodology for the EU Commission Delegated Regulation on battery carbon footprinting, and exceeds legislative requirements for data assurance and comparability; the publication of prototype child labour, human rights, biodiversity loss, circular design, forced labour and Indigenous Peoples' rights rulebooks, which identify baseline expectations and metrics for relevant due diligence processes; and the successful delivery of two piloting programmes, launching the world's first battery passport proof-of-concept in January 2023, and in 2024 conducting the world's largest, pre-competitive effort by battery cell manufacturers to establish comparable battery passports. This effort has involved 11 pilot consortia, which include cell makers representing over 80% of global electric vehicle battery market share.

We are motivated to push forward because of the urgency of the challenge before us. The transition to a clean energy economy represents the greatest imperative for coordinated action in the history of our species. This brochure provides an introduction to the purpose, structure and activities of the Global Battery Alliance Battery Passport, and its role in supporting a responsible and just global battery value chain that truly serves the best interests of people and planet.

**German Chancellor  
Olaf Scholz described the  
GBA as the “most important  
global partnership” to scale  
sustainable, responsible value  
chains for batteries.<sup>vi</sup>**

# 2

## What the GBA Battery Passport does

The Global Battery Alliance (GBA) Battery Passport will produce a cohesive framework that sets expectations for sustainability performance in the battery supply chain, guides supply chain companies to demonstrate their sustainability performance, assures the credibility of sustainability performance data, and allows the measurement and comparison of supply chain sustainability performance - at the company and site level, and at the level of individual, physical batteries.

The GBA builds these frameworks on the foundation of Digital Product Passport infrastructure. **It operates closely with technical providers of battery passport solutions but will not, itself, launch a battery passport solution.** Rather, it adds enhanced sustainability metrics to the technical and usage data that is the focus of most battery passport solutions that are under development and on the market.

The GBA Battery Passport scoring system will recognise sites' adoption of strong management systems for sustainability performance, and their attainment of voluntary sustainability standards. These sustainability performance indicators will be benchmarked against a comprehensive set of principles developed in the GBA's multistakeholder working groups, which include representatives from the full battery value chain, civil society organisations, international organisations, academia, representatives of Indigenous Peoples, labour unions, governments, United Nations bodies and others.

**Site-level scoring will be coupled with supply chain traceability frameworks and digital technology, to provide detailed insight into supply chain sustainability performance at the individual battery level. This wealth of data will allow physical batteries to be graded for their sustainability attributes and to achieve GBA sustainability certification.**



# 3

## The value proposition of the GBA Battery Passport for its stakeholders

The vision of the GBA Battery Passport is to 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 for consumers

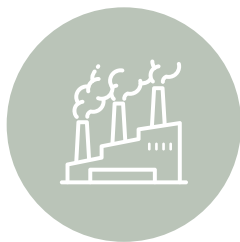


The GBA Battery Passport will enable the benchmarking and comparison of supply chain sustainability performance, at the level of individual batteries. This will contribute to a marketplace where products can compete on independently validated and verifiable sustainability performance, and companies can differentiate themselves to customers, investors and end consumers with robust and trustable green claims. Ultimately, this scoring system will incentivise improved sustainability performance throughout the battery supply chain.

The electrification of global vehicle fleets is a critical component of the clean energy transition. **The Battery Passport helps to ensure that this transition is also a just and equitable transition**, for people who are involved in battery supply chains or impacted by them.

Some highlights of the GBA Battery Passport value proposition for specific stakeholder groups are below. Further details on the value of GBA membership are given in Section 10.





## For battery manufacturers and companies in the battery minerals supply chain

For battery manufacturers and companies in the battery minerals supply chain, the GBA Battery Passport is a widely-recognised framework for **reporting and showcasing sustainability performance to stakeholders**, which provides robust and credible recognition to strong sustainability performers. The GBA Battery Passport is unique as the future provider of a sustainability assurance framework with **comparable scoring throughout the supply chain, leading to a certification on physical batteries**. Engagement in the programme as a GBA member offers companies **opportunities for sustainability leadership**, foresight of the future shape of our frameworks and a role in developing these frameworks within a multistakeholder setting.

In the absence of a common framework for showcasing sustainability performance to stakeholders, companies in the battery supply chain would have a much 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

For automotive companies and other battery purchasers, the GBA Battery Passport is **a powerful resource for supply chain due diligence**, which provides deep insight into suppliers' sustainability performance and a structure for identifying and prioritising salient ESG risks. This, in turn, **aids companies to fulfil the due diligence requirements of the EU Batteries Regulation and other legislation**. The GBA Battery Passport is unique as the future provider of a sustainability assurance framework that overlays digital supply chain traceability solutions, provides a wealth of supply chain sustainability performance data and **issues a certification on physical batteries**. Engagement in the programme as a GBA member offers companies opportunities for sustainability leadership, foresight of the future shape of our frameworks and a role in developing these frameworks within a multistakeholder 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.



### For technology companies that provide supply chain track and trace solutions and digital battery passports

For technology companies that provide supply chain track and trace solutions and digital battery passports, the GBA Battery Passport is an **authoritative framework** for incorporating sustainability data and analytics into existing products, which **significantly enhances the value of these products for customers**. The GBA Battery Passport is unique as the foremost global multistakeholder platform for battery supply chain sustainability. Engagement in the Passport as a GBA member offers companies **foresight of the future shape of our frameworks** and a role in developing these frameworks within a multistakeholder setting. It paves the way for companies to become **GBA-accredited solution providers**, in future.

In the absence of a harmonised framework for incorporating sustainability data and analytics into battery passport products, technology companies may find it challenging to convince customers that sustainability indicators they develop individually are credible, trustable and normative.



### For the financial community

For the financial community, which makes and influences investment decisions, the GBA Battery Passport is an **evaluation framework that provides comparable ESG metrics and sustainability certifications at the product level, in turn informing sustainability assessments at the site and organisational level**. It enhances decision-making on sustainable financing. The GBA Battery Passport is unique as a **provider of transparent, robust, validated and assured ESG scoring and certification for the battery supply chain**, and engagement in the programme as a GBA member offers financial bodies a key role in the development of our scoring systems, and **opportunities to ensure compatibility with existing and planned 'green financing' frameworks**.

In the absence of a harmonised evaluation framework, each investor would need to develop its own framework in house. This would lead to large-scale duplication of effort and a highly complex expectation landscape for companies seeking investment.





## For corporate and public procurement departments, and individual purchasers of electric vehicles

For organisational procurers, such as public or private fleet operators, and individual purchasers of electric vehicles, the GBA Battery Passport offers a credible and trustworthy system for sustainability assurance. It provides **a certification on physical batteries, underpinned by a wealth of supply chain sustainability performance data.** The GBA Battery Passport is unique as the future provider of a comprehensive system for sustainability scoring and assurance at the battery level, developed through an extensive and careful process of multi-stakeholder consultation. Engagement in the programme as a GBA member offers procurement bodies **a key role in the development of our scoring systems, and enhanced opportunities to benefit from our assurance frameworks.**

In the absence of a credible, harmonised system for sustainability assurance, the due diligence burden for companies would be significantly more onerous, and purchasers of batteries and electric vehicles would be severely limited in their ability to make informed green choices.



## For civil society organisations

For civil society organisations, the GBA Battery Passport plays a norm-setting role that **raises the sustainability ambitions of companies throughout the battery supply chain, and can provide deep insight into supply chain companies' sustainability performance.** The GBA Battery Passport is unique as the future provider of a sustainability assurance framework that is applicable throughout the battery supply chain, and is developed in a multi-stakeholder setting. It leverages existing best-practice frameworks where possible, and convenes action partnerships to enhance existing frameworks and create new ones when necessary. Engagement in the programme as a GBA member offers civil society organisations **a key voice in the shaping of our frameworks, and ensuring that battery supply chain companies meet the highest environmental and social standards, underpinning a just and equitable clean energy transition.**

In the absence of a common set of articulated sustainability expectations and ambitions for the battery supply chain, and an associated measurement framework, civil society's ability to encourage supply chain companies toward progressively higher sustainability performance would be undermined.



### For regulatory bodies

For regulatory bodies, the GBA Battery Passport provides a cohesive framework for assuring sustainability performance, which can be reflected in regulations that seek to **raise the bar for battery supply chain sustainability, both domestically and for foreign importers and others**. The GBA Battery Passport is unique as the future provider of a sustainability assurance framework that is applicable throughout the battery supply chain, is developed in a fully multi-stakeholder setting, and offers both **a certification on physical batteries and detailed underlying supply chain sustainability data**. Engagement in the programme as a GBA member offers regulators an opportunity to demonstrate national sustainability leadership, and to work in partnership to develop **sustainability frameworks that operate in harmony with existing and planned regulatory requirements**.

In the absence of a generally-accepted framework for assuring sustainability performance, regulators would each need to develop sustainability performance expectations separately, leading to a disharmonious global regulatory landscape and weaker sustainability outcomes.



### For voluntary sustainability standard setting organisations

For voluntary sustainability standard setting organisations, the GBA Battery Passport offers a **prominent, globally-recognised system through which their frameworks can contribute to companies' sustainability scores**, providing organisational exposure and **incentivising the further uptake of their standards**. Through coverage gap analysis, the GBA Battery Passport also provides standards setters with insight toward continuous improvement and strengthening of their frameworks. The GBA Battery Passport is unique as the future provider of a sustainability assurance framework that recognises existing standards, builds on them where necessary, minimises duplication of effort and **transparently converts standards attainment throughout the supply chain into sustainability indicators and a certification** at the physical battery level. Engagement in the programme offers standard setting organisations **a key voice in determining how we recognise and score companies' attainment of voluntary standards**, including those of their own organisations.

In the absence of such a standards recognition framework, robust leading-practice standards may find it challenging to differentiate themselves to battery supply chain stakeholders, in a crowded standards landscape.



# 4

## How our sustainability indicator framework functions

The GBA Battery Passport measures indicators of sustainability performance in 22 ESG issue areas. The taxonomy of ESG issues that is used by the GBA aligns with the ESG scope of the EU Batteries Regulation, and goes significantly beyond it. In accordance with the GBA's 2030 vision to support a just transition, our frameworks measure indicators of positive economic impact, as well as risks of negative ESG impacts.

Figure 1, below, shows the GBA taxonomy of covered ESG issues, and how they combine to provide aggregated scoring at the environmental, social and governance levels.

**FIGURE 1. Battery Passport indicator framework**

Cross-Cutting		
<b>Due Diligence</b> 1. Presence and quality of environmental & human rights due diligence and risk management systems		
Environmental	Social & Economic	Governance
<b>Energy and GHG</b> 2. EGE emissions 3. Energy efficiency  <b>Environmental Degradation</b> 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)  <b>Circularity</b> 8. Material consumption/usage 9. Circular design	<b>Human Rights</b> 10. Child labor 11. Forced labor  <b>Workers' Rights</b> 12. Freedom of association and collective bargaining 13. Worker health and safety  <b>Community Impacts and Rights</b> 14. Respect for Indigenous Peoples' rights 15. Community life 16. Diversity  <b>Local Economy</b> 17. Contribution to local economic development (payments to governments and local supplies and employment) 18. Engagement with artisanal and small-scale miners  <b>Product Cost</b> 19. Total cost of ownership	<b>Compliance &amp; Good Governance</b> 20. Product quality and safety 21. Data security and privacy 22. Occurrence of corruption and bribery  <div> <b>Legend:</b>            ■ ESG issues corresponding to the risk categories of the EU Battery Regulation            ■ Additional salient ESG issues         </div>



With the exception of greenhouse gas reporting, which relies on quantitative primary data, the GBA Battery Passport uses companies' site-level management systems as proxy measures for their sustainability performance. **High sustainability scores are attainable when a site's management systems reflect leading global principles for sustainability ambition and the effective implementation of those management systems is assured by a 3rd party assessor.**

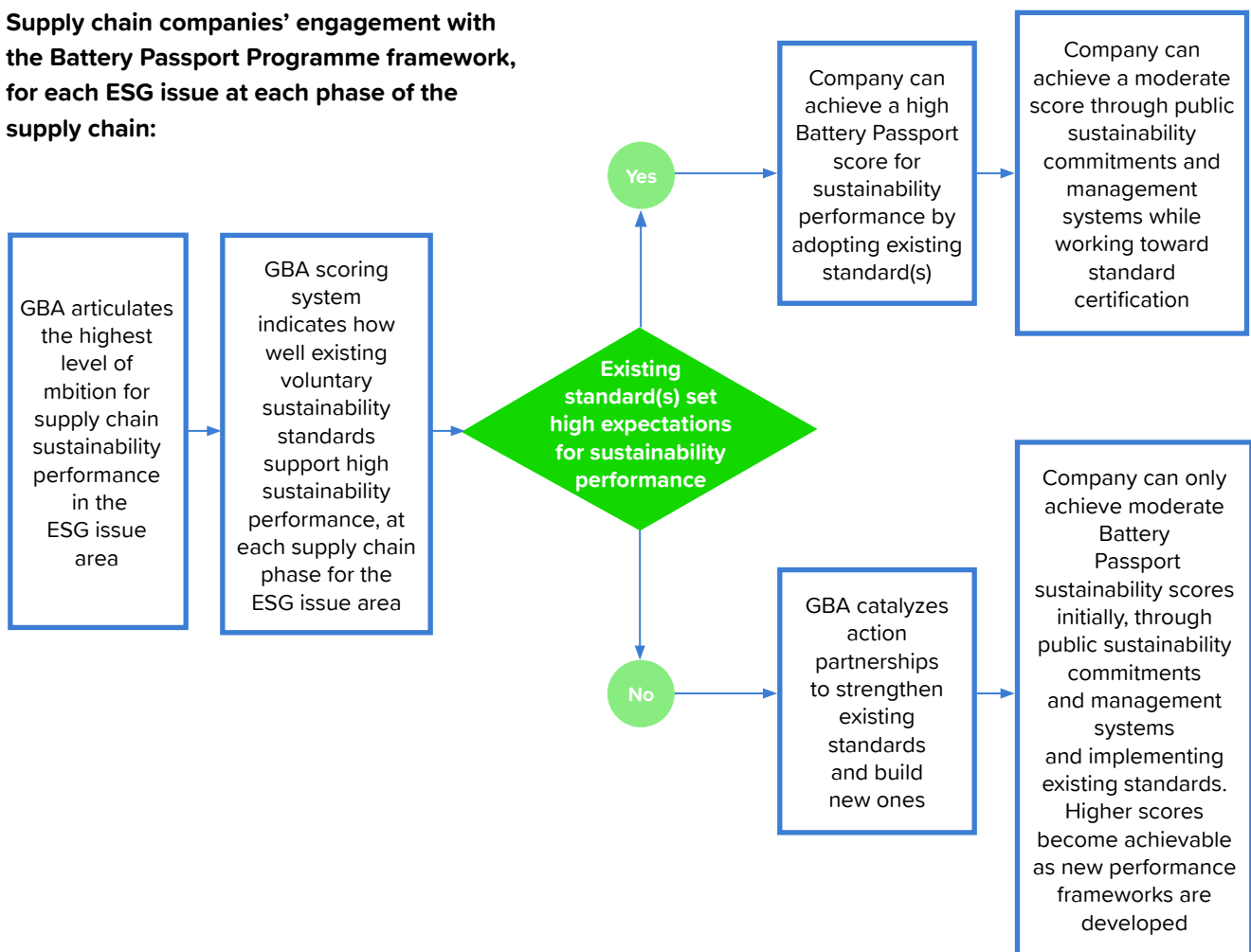
In practice, this means that high scores are attainable by sites that adopt voluntary sustainability standards that are recognised by the GBA as representing a high level of sustainability ambition.

For some areas of the supply chain, and some ESG issues, existing voluntary sustainability standards may not offer a sufficient level of sustainability ambition. In these cases, the GBA will convene and catalyse action to develop new frameworks and fill gaps.

Figure 2, below, illustrates the high-level logic of sustainability performance measurement that is employed by the GBA Battery Passport. This approach to sustainability performance measurement is underpinned by detailed benchmarking of performance expectations against existing standards and frameworks. Significant benchmarking work was undertaken for the Battery Passport in 2023-24, and will continue into 2025.

**FIGURE 2: The logic of the GBA Battery Passport sustainability performance indicator framework**

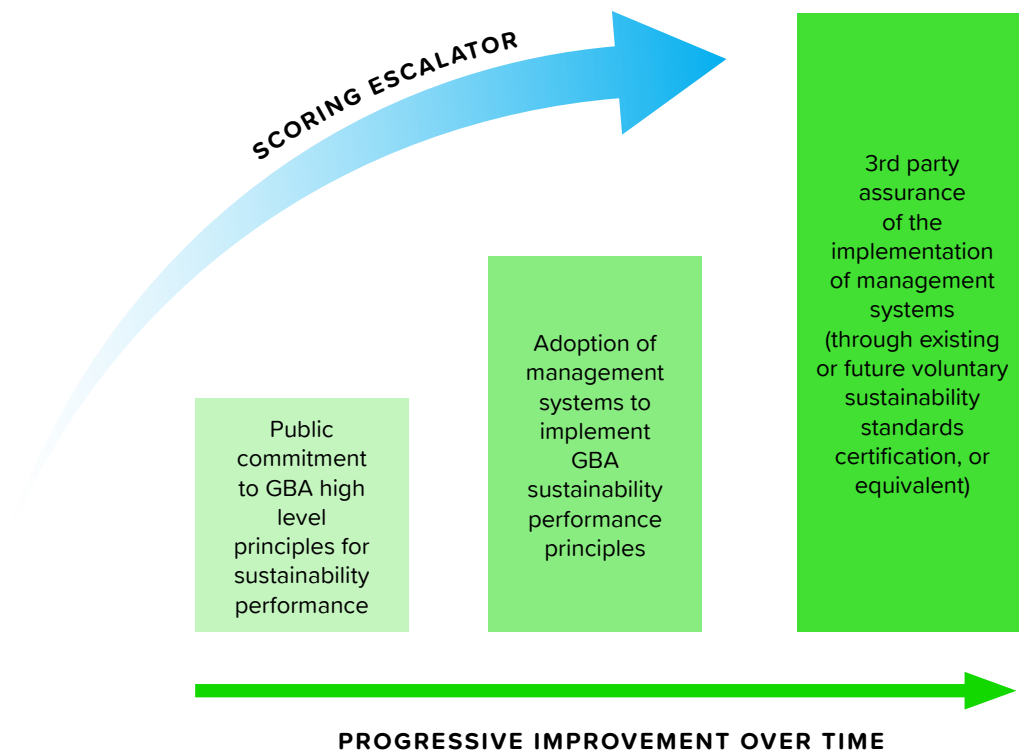
**Supply chain companies' engagement with the Battery Passport Programme framework, for each ESG issue at each phase of the supply chain:**



The GBA Battery Passport is an inclusive initiative, which draws together companies in the battery supply chain no matter what their level of progress is on their sustainability journey. For companies that have not yet attained strong voluntary sustainability standards, or which are operating at a point in the supply chain where comprehensive voluntary sustainability standards have not yet

been developed, scoring is possible on the basis of public commitments and management systems. As Figure 3 demonstrates, adoption of progressively stronger management systems, leading to eventual certification against relevant standards, will allow companies to incrementally increase their sustainability performance scores within the GBA system over time.

**FIGURE 3: The scoring escalator approach, for companies that have not yet adopted strong voluntary sustainability standards**



The overall scoring concept of the Battery Passport, as outlined above, is designed with the oversight of the Battery Passport Steering Committee and ultimately approved by the GBA Board of Directors. Detailed approaches to indicator content and scoring

are developed through the GBA's working groups. **These multistakeholder governance bodies ensure that the concept is highly aspirational, in line with the GBA's 2030 vision.**



# 5

## How our sustainability indicators provide assurance

For downstream companies conducting due diligence, investment bodies setting and applying criteria for green finance, and others, data assurance is crucial. Stakeholders in the battery supply chain need to know that sustainability performance data is reliable, and reflective of realities ‘on the ground’.

**The GBA Battery Passport has data assurance at its core.** Once operational, the Battery Passport will accredit third party assessors to verify passport data in two distinct and complementary ways:

1. Verification that companies reporting against GBA sustainability performance frameworks are doing so correctly, and that any certifications provided for sustainability assurance are valid.
2. Verification that digital battery passport solution providers are legitimately aggregating supply chain sustainability data, and accurately applying the GBA scoring framework to battery passports.

The need to ensure that sustainability claims are transparent and verifiable is concretely established in the EU's upcoming Green Claims Directive, and the GBA Battery Passport will work to ensure alignment with this legislation as it is developed.



# 6

## How data is safeguarded

Data gathered from the supply chain within the Battery Passport is held decentrally. Technology companies that provide digital battery passport solutions collect and consolidate data from the supply chain, and apply strict controls to data exchange and data sharing.

In future, the GBA will collect aggregated data from digital battery passport solution providers, in order to develop high-level analysis of the sustainability performance of the global battery supply chain as a whole. **Neither the GBA nor any other organisation will have full visibility of all the detailed company-level data collected within the GBA Battery Passport.**

Several initiatives are currently developing data exchange frameworks, to ensure that information on battery supply chain sustainability performance (and other battery data) can be passed through the supply chain securely and accurately by digital battery passport solution providers. These initiatives include the UN Transparency Protocol, JTC24 in the European Union, and Catena X. The Global Battery Alliance liaises regularly with these organisations to ensure the interoperability of our frameworks.





# 7

## The GBA Battery Passport and the EU Batteries Regulation

The EU Batteries Regulation applies to all economic operators that place batteries on the European market.

It requires these operators to take the following steps for electric vehicle, industrial, and other types of batteries<sup>vii</sup>:

1. Display a carbon footprint declaration by January 2025 and comply with carbon footprint maximum thresholds by December 2027.
2. Comply with due diligence requirements for social and environmental risks in supply chains of critical raw materials used to make batteries, by July 2025. Critical raw materials are specified in this context as cobalt, natural graphite, lithium and nickel, subject to revision.
3. Label batteries with the CE quality mark for conformity with EU health, safety and environmental protection standards.
4. Meet progressive recycling efficiency targets from December 2025 to 2030, and recycled content from 2028 to 2036.
5. Provide batteries with a digital product passport and a QR code containing full labelling and product information, carbon footprint, responsible sourcing, battery composition, recycled content, state of health, and other technical and usage data by January 2027.

The GBA Battery Passport provides companies with resources to fulfil steps 1) and 2), above, and to connect relevant data content to full digital product passport solutions.

The GBA publishes a Greenhouse Gas Rulebook, which provides detailed and rigorous guidance for carbon footprint calculation in battery supply chains. As the EU proceeds to finalise its carbon footprint calculation and reporting rules, under the Batteries Regulation, the GBA will seek full alignment of its Greenhouse Gas Rulebook and the EU requirements, as well as exceeding these requirements in many areas.

The supply chain sustainability performance indicators of the Battery Passport will be an invaluable resource for companies conducting due diligence in line with the EU Batteries Regulation. By measuring the strength of supply chain companies' management systems, our indicators allow the identification of high- and low-risk areas of the supply chain, for potential negative ESG impacts. This is a foundational component of risk-based due diligence, as envisioned in the UN Guiding Principles on Business and Human Rights, the OECD Due Diligence Guidance for Responsible Business Conduct, and other frameworks that underpin the EU Batteries Regulation.

Guidance is currently being developed for companies to fulfil the due diligence requirements of the EU Batteries Regulation.<sup>viii</sup> The Battery Passport's frameworks will remain fully compatible with this guidance, as it continues to evolve. The Battery Passport also provides a powerful tool for companies conducting due diligence that goes beyond compliance with the EU Batteries Regulation, as it includes battery and vehicle manufacturers in scope, covers all relevant mineral and metal types and incorporates ambitious goals for a just clean energy transition, developed in a multi-stakeholder context.

The EU will accredit schemes through which companies can demonstrate conformance with the Batteries Regulation due diligence requirements, allowing them to achieve certificates of regulatory compliance from relevant national notified bodies. The GBA may consider developing such a scheme in future, which would be separate from and complementary to the Battery Passport. The Battery Passport provides a tool to aid conformance with the EU Batteries Regulation, rather than an attestation of conformance itself.

# 8

## The Battery Passport piloting programme

The GBA has successfully conducted two waves of Battery Passport piloting, with consortia of companies in the upstream electric vehicle supply chain contributing pro bono to advance our shared sustainability agenda.

**In 2023**, the GBA launched the world's first proof of concept of a Battery Passport. This effort demonstrated that it is possible to combine material provenance data, technical and usage data of a battery, with sustainability indicators related to greenhouse gas emissions, human rights, and child labour. Piloted by three vehicle manufacturer-led consortia, the exercise led to insights for the manufacturers on mapping and taking measures to improve the sustainability of their supply chains.<sup>ix</sup>

**In 2024**, the GBA implemented a second set of pilots, to expand on the scope of the first piloting wave and trial real-world sustainability data gathering in the Battery Passport ecosystem. With the participation of 11 consortia, each led by a digital solution provider and a battery cell maker, with participating cell-makers together accounting for 80% of global electric

vehicle battery manufacturing capacity, this was the world's largest pre-competitive effort to establish transparency and measurement of sustainability performance in the battery value chain.<sup>x</sup> The 2024 pilots tested and generated feedback on:

- Four additional prototype ESG issue rulebooks (Biodiversity Loss, Circular Design, Forced labour and Indigenous Peoples' Rights),
- The gathering of real-world sustainability data from the supply chain.
- Elements of data verification and assurance (not all data of the second wave pilots has been third-party verified)
- Approaches to, and options for, measurement of sustainability performance, score calculation and aggregation methodologies

## Results of the 2024 Piloting Exercise

The 2024 piloting exercise concluded in October 2024, with the following high-level results:

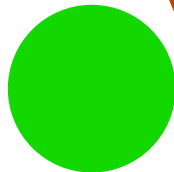
Number of consortia that participated in the piloting programme	<b>13</b>
Proportion of global cell manufacturing capacity accounted for by piloting companies	<b>80%</b>
Number of piloting consortia that successfully completed the core reporting requirements	<b>10</b>
Number of piloting consortia that engaged in additional trials of data verification	<b>5</b>
Number of cell manufacturers considered “on track” to meet due diligence expectations of EU Batteries Regulation based on piloting results	<b>3</b>
Average number of supply chain companies that participated, per successful consortium	<b>6.1</b>
Total number of supply chain sustainability reports gathered	<b>~200</b>



Real-world sustainability data was gathered from supply chain companies through the 2024 Piloting Exercise. This data provided valuable insights for participating companies, on their own sustainability performance and the sustainability performance of their supply chains.

Because of the exploratory nature of the exercise, it would not be possible to draw sound conclusions about the comparative sustainability performance of the consortia, from the data gathered. The GBA will therefore not be publishing sustainability scoring results in a format that invites comparison between consortia.

The ultimate intention of the GBA is to allow direct comparison of supply chain sustainability performance at the battery level. The interim intention of the piloting exercise is to provide lessons learned for the continued development of the GBA Battery Passport, highlights of which are presented in the next subsection.



## 2024 Piloting Exercise – highlighted lessons learned

**Reporting requirements:** During the piloting exercise, the value was recognised of articulating progressively more ambitious performance expectations, having guidance to meet supply chain due diligence requirements, and converging the understanding of reporting requirements across value chain consortia. The piloting exercise also identified opportunities to streamline the reporting requirements and reduce the reporting burden for participating companies, without compromising the integrity or ambition of the Battery Passport's benchmarking of supply chain sustainability performance. These opportunities include distilling granular performance expectations into higher-level goals, further embedding the risk-based approach to due diligence, and more explicitly leveraging site-level certifications against existing voluntary sustainability standards. For greenhouse gas reporting, opportunities include revisiting current rulebook provisions around primary and secondary data reporting, and around the currently mandatory two-track reporting of electricity use under the Physically Modelled Approach and the Harmonised Market Approach.<sup>xi</sup>

**Integration with digital battery passport solutions:** Digital solution providers were instrumental in driving forward the 2024 Piloting. In many cases, they played a coordinating role within their consortia. While digital solution providers gained valuable insight from the pilots for the development of their products, much of the data transfer and processing for the pilots was conducted with human intervention, using off-the-shelf spreadsheet and digital communications packages. Going forward, the GBA will develop a Data Assurance Guidebook that sets expectations for traceability and supply chain modelling, sustainability data formatting, structuring and verification. Other organisations will develop data exchange protocols for digital battery passports (see Section 7). Combined, these resources will allow digital solution providers to continue to develop their products for

interoperability and maximal value addition, while making battery passport solutions increasingly automated and efficient. Digital solution providers will also play an important role in data assurance and disclosure, safeguarding anonymity and commercially sensitive data and acting as trusted gate keepers to data for different audiences, according to commonly agreed rules.

**Data assurance and disclosure:** The piloting exercise highlighted the need to reconcile stakeholder interests, in comprehensive data transparency and assurance, with supply chain companies' constraints, regarding disclosure of sensitive commercial data and the risk that disclosed sustainability data could be negatively interpreted. Going forward, the GBA will develop detailed guidance on reporting and interpretation of sustainability performance data, clear guidelines for public data disclosure, and a framework to assure the correctness of reported sustainability data. These resources will help to align stakeholder and commercial expectations on data reporting, disclosure and interpretation. They will give supply chain companies greater clarity on the benefits, opportunities and challenges associated the GBA Battery Passport, and provide confidence to engage.

**Supply chain inclusivity:** The significant resource requirements of participation in the 2024 Piloting exercise indicate that future engagement with the GBA Battery Passport is likely to be challenging for smaller companies, which may not have the same capacity to conduct detailed sustainability reporting as do their larger peers. The GBA will work to develop adjusted reporting and scoring frameworks for smaller companies, to mitigate the risk that the Battery Passport could unintentionally act as a *de facto* market access obstacle for small, micro and artisanal enterprises in the supply chain.

# 9

## Delivery timeline

The GBA Battery Passport is advancing on a three-year timeline. By 2027, the GBA plans to make certification available on physical batteries available for purchase.

It will be underpinned by a wealth of assured and trustable sustainability data drawn from the battery's supply chain. Some elements of aggregated data will be hosted on a GBA-run data platform and publicly available. Also by 2027, the GBA will be playing a leading role in the identification of sustainability shortfalls in global battery supply chains, coordinating efforts to address the root causes of environmental and social issues, and **catalysing positive change for communities affected by mineral, metal and battery production and processing**. A breakdown of milestones in this journey to 2027 is given below, in Figure 4.

**FIGURE 4: The timeline for delivery of the Battery Passport from 2024 to 2027**

	2024	2025	2026	2027
<b>Battery Passport Vision and Impact</b>	Battery Passport vision updated and published: The GBA BP is built on triple foundation of <b>a robust indicator framework, trustworthy ESG score and credible data assurance</b>	<b>A GBA BP impact framework is in place</b> to measure BP impact according to the strategic objectives	The post-2030 roadmap is established: The GBA BP is the preeminent global tool for delivering harmonized sustainability performance expectations for batteries, with <b>trust, accountability, global comparability and continuous improvement</b> as its unique value proposition	
<b>Battery Passport Content</b>	New rulebooks piloted in wave 2  ESG score framework developed  Indicator framework scope finalized	Public consultation and release of Indicator framework, ESG score and data assurance guidelines: The <b>GBA BP can be used as a tool for compliance with the EU Battery Regulation due diligence requirements</b>	Full indicator framework, ESG score rulebook & data assurance guidelines published: The <b>GBA BP incorporates regulatory requirements from other important jurisdictions in the battery value chain</b>	Model for regular updates in place: The <b>GBA BP continues to address root causes of ESG impacts and incorporates best practices</b> for addressing them, developed in a sequential manner and building on existing standards
<b>Battery Passport Systems and rollout</b>	Launch and presentation of wave two pilots <b>establishing Minimum Viable Product</b>  First version of data assurance guidelines published	GBA platform development launched  Battery Passport Implementation Strategy developed and launched	Product level ESG score is available  The GBA implementation model is in place, including platform launch  Possible wave 3 pilots	Passports connected to GBA platform: GBA <b>generates insights on sustainability performance of batteries</b>  BP ecosystem expands to data auditors & solution providers
<b>Battery Passport Stakeholders</b>	Stakeholder engagement strategy and active engagement with standard setters in place	<b>Collaboration with strategic partners</b> accelerates delivery of the Battery Passport  The finance community is actively engaged	The <b>GBA routinely engages with selected standard setters and regulators</b> on the indicator framework	The <b>GBA drives active discussions</b> on BP with key stakeholder group with focus on utilization of BP

# 10

## Engagement opportunities with the GBA Battery Passport

As a multistakeholder organisation, the GBA works to have effective representation of all our constituencies (businesses, civil society, academia, public sector, labour, etc.) in each of our governance forums.





Our Board of Directors and the Battery Passport Steering Committee are mandated to have balanced representation between two membership groups; the private sector, and public and non-profit organisations.<sup>xii</sup> The Battery Passport Steering Committee is the principal technical advisory body for the Battery Passport, while the Board of Directors is responsible for decision making on strategy, budgets, growth, ambition, objectives and development of the GBA as an organisation.

Taking an active role in the GBA's governance provides unique opportunities to ensure the perspectives of organisations and their stakeholders are taken into account and to help shape the future of the GBA. Nominations for the Board of Directors for the following calendar year typically close in early October, while nominations for the Battery Passport Steering Committee typically close around the end of November. For more information on the nomination process, contact [secretariat@globalbattery.org](mailto:secretariat@globalbattery.org).

The GBA convenes several multistakeholder working groups, to help develop, debate and validate key decisions and milestone documents in the evolution of the Battery Passport. These working groups cover topics such as sustainability performance expectations, scoring methodologies, data assurance protocols, interoperation with voluntary standards, and rules for greenhouse gas calculations.

Becoming a GBA member offers organisations the opportunity to engage fully in our working groups, both through regular online group meetings and through bilateral dialogue with the Secretariat. These conversations play a shaping role in how the Battery Passport evolves, and we welcome input from the full breadth of our membership.

Becoming a GBA member is free for civil society organisations and non-profit entities. Membership fees for commercial organisations vary according to organisational size. For more information on membership fees and the joining process, we encourage you to contact the GBA Secretariat: [secretariat@globalbattery.org](mailto:secretariat@globalbattery.org)

# Endnotes

- <sup>i</sup> Global Battery Alliance & World Economic Forum. (2019). *A vision for a sustainable battery value chain in 2030: Unlocking the full potential to power sustainable development and climate change mitigation*. Retrieved from: [https://www.globalbattery.org/media/publications/WEF\\_A\\_Vision\\_for\\_a\\_Sustainable\\_Battery\\_Value\\_Chain\\_in\\_2030\\_Report.pdf](https://www.globalbattery.org/media/publications/WEF_A_Vision_for_a_Sustainable_Battery_Value_Chain_in_2030_Report.pdf)
- <sup>ii</sup> European Commission. (2020). *Proposal for a regulation of the European Parliament and of the Council concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020* (COM (2020) 798 final). Retrieved from: [https://eur-lex.europa.eu/resource.html?uri=cellar:4b-5d88a6-3ad8-11eb-b27b-01aa75ed71a1.0001.02/DOC\\_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:4b-5d88a6-3ad8-11eb-b27b-01aa75ed71a1.0001.02/DOC_1&format=PDF)
- <sup>iii</sup> Raw Materials Information System. (n.d.). *Lithium-based batteries supply chain challenges*. Retrieved from: <https://rmis.jrc.ec.europa.eu/analysis-of-supply-chain-challenges-49b749>
- <sup>iv</sup> Benchmark Minerals. (2024, August 14). *\$1.6 trillion investment needed in battery industry by 2040*. Retrieved from: <https://source.benchmarkminerals.com/article/1-6-trillion-investment-needed-in-battery-industry-by-2040>
- <sup>v</sup> Global Battery Alliance. (n.d.). *About the GBA*. Retrieved from: <https://www.globalbattery.org/about/>
- <sup>vi</sup> Scholz, O. (2024, October 7). *Rede bei der Hamburg Sustainability Conference*. Die Bundesregierung. Retrieved from: <https://www.bundesregierung.de/breg-de/service/newsletter-und-abos/bulletin/rede-von-bundeskanzler-olaf-scholz-2313702>
- <sup>vii</sup> Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020 and repealing Directive 2006/66/EC. Accurate as of October 2024. Retrieved from <http://data.europa.eu/eli/reg/2023/1542/oj>. For additional obligations by Battery Associates, Circular, Infyos, and other GBA members and partners, see <https://www.batteryregulation.eu/>.
- <sup>viii</sup> Kumi. (n.d.). *Kumi appointed to develop the Due Diligence Guidelines for the EU Battery Regulation*. Retrieved from: <https://kumi.consulting/insights/kumi-appointed-to-develop-the-due-diligence-guidelines-for-the-eu-battery-regulation/>
- <sup>ix</sup> Global Battery Alliance. (n.d.). *GBA Battery Passport: Proof of Concept Pilots - Setup, Learning, Next Steps*. Retrieved from: <https://www.globalbattery.org/media/pilot/documents/gba-bp-pilot-master.pdf>
- <sup>x</sup> Global Battery Alliance. (2024, June 20). *Global Battery Alliance launches second wave of Battery Passport pilots*. Retrieved from: <https://www.globalbattery.org/press-releases/gba-launches-second-wave-of-battery-passport-pilots/>. Interim rulebooks and templates (June 2024). Retrieved from: <https://www.globalbattery.org/media/publications/Content%20pack%20MVP%20final%20part%20one-updated.zip> and <https://www.globalbattery.org/media/publications/Content%20pack%20MVP%20final%20part%20two.zip>. GBA MVP Pilots; questions and answers. Retrieved from: <https://globalbattery.sharepoint.com/sites/BPPoCPilotswave2/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2FBPPoCPilotswave2%2FShared%20Documents%2FGeneral%2FGBA%20MVP%20Pilots%20Q%26A%202024%2D08%2D20%2Epdf&parent=%2Fsites%2FBPPoCPilotswave2%2FShared%20Documents%2FGeneral&p=true&ct=1730300354206&or=Teams%2DHL&ga=1&LOF=1>.
- <sup>xi</sup> Global Battery Alliance. (2023). *GBA Battery Passport: Greenhouse Gas Rulebook, Generic Rules - Version 1.5*. Retrieved from: <https://www.globalbattery.org/media/publications/gba-rulebook-v1.5-master.pdf>
- <sup>xii</sup> Global Battery Alliance. (2021, March). *Global Battery Alliance Charter*. Retrieved from: <https://www.globalbattery.org/media/publications/gba-charter.pdf>