

# The Global Battery Alliance Battery Passport: Giving an identity to the EV's most important component

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GLOBAL  
BATTERY  
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BATTERIES POWERING  
SUSTAINABLE DEVELOPMENT

in partnership with the  
World Economic Forum



Batteries do much more than just power electric vehicles (EVs) – they also help determine their performance, service life, charging speed and costs.

That is, however, only part of a battery's much longer journey along the value chain, which starts with the extraction of raw materials and extends into the second phase of each battery's life as stationary energy storage or recycling sources.

Each battery, in other words, has its own story – a story that the Battery Passport will be able to tell.

There are a number of stakeholders in the value chain, ranging from businesses, to civil society and non-governmental organizations, to governments. Each has a role to play. The Battery Passport, an initiative of the Global Battery Alliance (GBA), reflects this plurality and aims to align interests throughout the value chain using a framework for pre-competitive engagement, collective incentives and accountability.

It also aims to strengthen trust in environmental, social and governance (ESG) obligations, setting relevant benchmarks, against which it will transparently track and validate performance while protecting proprietary interests.

## Why is the GBA Battery Passport needed?

The Battery Passport helps align the transport and power industries with the goals of the Paris Agreement by 2030. A circular value chain for batteries can enable the 30% reduction in power and transport sector emissions required to stay on track to meet the 2°C goal of the Paris Agreement, according to GBA research. With 188 states and the European Union signed up to the Paris Agreement, governments will increasingly rely on electrification and batteries to help meet these goals. It could also play an important role in demonstrating to governments the authenticity of greenhouse gas (GHG) emissions claims and potentially form a basis for GHG credits.

The development of the Battery Passport, grounded in the [GBA Guiding Principles](#), is a positive step in creating a

sustainable battery value chain and helping ensure that batteries can live up to their tremendous potential.

## What is the GBA Battery Passport?

The Battery Passport is a digital representation of a battery that conveys information about all applicable ESG and life-cycle requirements based on a comprehensive definition of a sustainable battery. For efficiency and compliance reasons, the GBA will base this definition of requirements on existing relevant standards, laws and regulations. Each Battery Passport will be a digital twin of its physical battery enabled by the digital Battery Passport platform, which offers a global solution for securely sharing information and data. This platform aims to go beyond enabling the performance management of just one battery to that of all batteries across the full industry value chain. It is not a commercial product but a means to enable confidence that transactions adhere to all pertinent requirements.

The Battery Passport will enable the following outcomes:

- **Provide transparency** in practices and impact of the battery along the value chain to all relevant stakeholders in the battery value chain
- **Create a framework for benchmarking** batteries along criteria by identifying those that are best and worst in class and providing minimum acceptable **standards** for a sustainable and responsible battery
- **Validate and track progress** on the pathway to sustainable, responsible and resource-efficient batteries.

## From an individual battery to the entire value chain

Demand for electrification, which is the future of transportation, is rapidly accelerating. Governments around the world have already committed to major policies that will transform the way people travel, while also demanding GHG claim authentication and responsible sourcing assurance.

Through the Battery Passport, each battery will receive its own identity, or stamp, detailing individual features – information that value chain stakeholders will be able to access depending on their specific needs. Stakeholders will receive this data on a discretionary basis, with a view to extending the life of batteries for EV purposes, enabling a safe second life, reducing the costs of recycling, and ensuring the closed-loop management of batteries. Governments and the public would receive the necessary information that demonstrates alignment with public goals.

Beyond collecting and verifying important information through an accountable and transparent process, the Battery Passport will be a valuable resource for the supply chain to collectively act more sustainably. This will strengthen indicators, including life-cycle information, governance, and environmental and social standards, aiming ultimately to change behaviour towards sustainable and ethical practices and improve multiple ESG parameters. It will also enable governments and the public to use the information to scrutinize company performance.

## Timeline

- Ahead of launch: year-long multistakeholder consultation that laid out the rationale and need for the initiative
- January 2020: The Battery Passport concept launched at the World Economic Forum’s 50th Annual Meeting, along with the GBA’s Ten Guiding Principles
- By Q2 2021: Expected launch of the Battery Passport Vision Demonstration, which companies, governments and organizations from the entire value chain and from different regions are working on
- By Q4 2021: Version 1.0 of the Battery Passport complete
- By Q4 2022: Battery Passport launches with full functionality
- GBA Vision 2030: Battery Passport drives achievement of the goals of the Paris Agreement.

## A standard-setting quality seal

The Battery Passport is rooted in transparency and relies on the willingness and ability of entities throughout the value chain to credibly contribute and assess information. While the Battery Passport will make different volumes and layers of information available according to the needs of the user, it will also generate a quality seal in the long term, enabling the clear and intuitive comparison of batteries.

## Contact

The GBA is a public-private partnership of 80 businesses, governmental and non-governmental organizations founded in 2017 to help establish a sustainable battery value chain by 2030. To find out more about the alliance and the GBA Battery Passport, contact [gba@weforum.org](mailto:gba@weforum.org).

Vision Demonstration: Battery Passport conceptual interfaces for different stakeholders

