

Draft EU Battery Regulations: Brief Introduction

August 31, 2022

Rajat Rajbhandari, PhD
Working Groups Lead, MOBI

Agenda

1. Overview of battery regulations and its impact on the industry
2. Compliance requirements for battery suppliers/manufacturers
3. Need for open standards and compliance frameworks
4. Opportunities for the industry
5. Various initiatives
6. Challenges

Regulations (Proposals)

- EU Battery Regulation - broad regulation to harmonize the standards to introduce batteries in the EU market.
- [California Air Resources Board \(CARB\) - labeling of EV battery SOH in new vehicles.](#)
- US (Congress) Interests - gov funding for EV battery development needs transparent supply chain (US IRA 2022??).
- United Nations Working Group (??) - recycling and transport (hazmat)/ US (EPA) is the lead agency.
- ??

Overview of Proposed EU Battery Regulation

- 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.
- Landing page: https://ec.europa.eu/environment/topics/waste-and-recycling/batteries-and-accumulators_en
- Summary document: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/689337/EPRS_BRI\(2021\)689337_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/689337/EPRS_BRI(2021)689337_EN.pdf)
- Detailed proposal: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0798>

Problems Being Addressed

- “The proposal tackles a number of key problems related to the single market. These include:
 1. an uneven playing field for batteries placed on the market since applicable rules are subject to interpretation;
 2. barriers to the functioning of recycling markets;
 3. uneven implementation of the Batteries Directive;
 4. the pressing need for large-scale investment to respond to the changing market;
 5. the need for economies of scale; and
 6. the need for a stable and fully harmonized regulatory framework.”

EU's Key Objectives of the Proposal

- “The proposal’s objectives are threefold:
 - 1) strengthening the functioning of the internal market (including products, processes, waste batteries and recyclates), by ensuring a **level playing field** through a **common set of rules**;
 - 2) promoting a **circular economy**; and
 - 3) **reducing environmental and social impacts** throughout all stages of the **battery life cycle**. These three objectives are strongly interlinked.”

“This proposal introduces progressive requirements to minimise the carbon footprint over the life cycle of batteries.”

Implication of Non-Compliance

- Chap 1/Article 1-1:
 - This Regulation establishes requirements on sustainability, safety, labelling and information **to allow the placing on the market or putting into service** of batteries, as well as requirements for the collection, treatment and recycling of waste batteries.
- Chap 1/Article 3-2:
 - At trade fairs, exhibitions, demonstrations or similar events, Member States shall not prevent the showing of batteries, which do not comply with this Regulation, provided that a visible sign clearly indicates that such batteries do not comply with this Regulation and **that they are not for sale until they have been brought into conformity.**
- Chap 1/Article 4-1:
 - Batteries **shall only be placed on the market** or put into service if they meet:
 - the sustainability and safety requirements set out in Chapter II;
 - the labelling and information requirements set out Chapter III.

Thirteen (13) Impact Measures and Medium Level of Ambitions

- Classification and definitions
- Second life of industrial batteries
- Collection rate for portable batteries (65% by 2025)
- Collection rate for automotive and industrial batteries
- Recycling efficiency and recovery of materials (Recycling efficiency = 65% Lithium, Recovery rate = 90%/CO, 90% Ni by 2025)
- Carbon footprint for industrial and EV batteries (Mandatory by 2025)
- Performance and durability of rechargeable, industrial and EV batteries
- Non-rechargeable portable batteries
- Recycled content (Mandatory declaration of levels of recycled content by 2025)
- Extended producer responsibility
- Design requirements for portable batteries
- Provision of information about batteries (labels and Battery Passport)
- Supply chain due diligence for raw materials in industrial and EV batteries

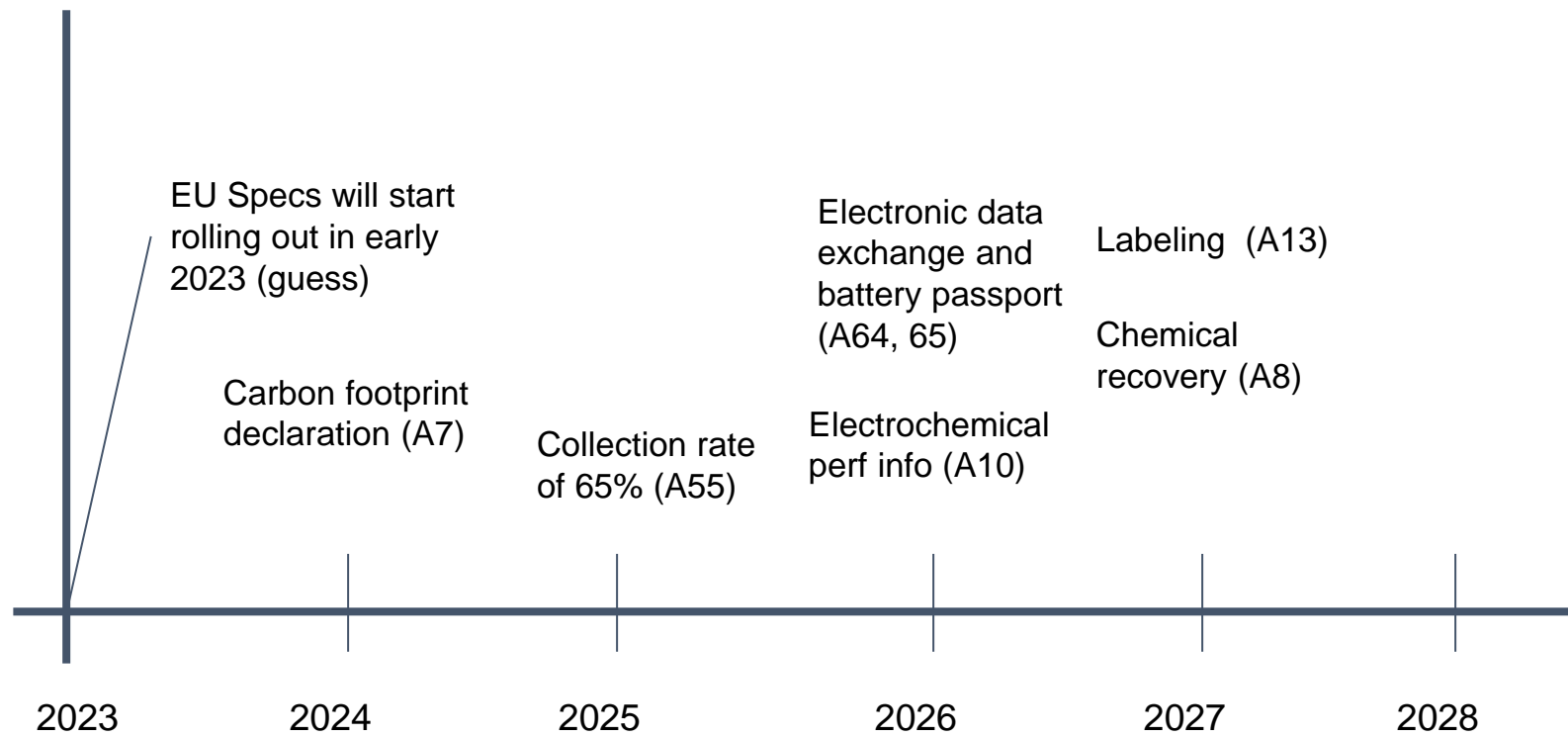
Urgency: If EU regulation is enacted on schedule

- The first requirement will come into force July 1, 2024.
 - Carbon footprint declaration of new batteries placed in the market.
- Other requirements will progressively come into force every year.

Regulation Articles

- Article 7 – Declaration of carbon footprint of batteries.
- Article 8 – Declaration of amount of CO, LE, LI in batteries (first time and recovered.)
- Article 46 – Monitoring of end-of life management of batteries.
- Article 47 – Waste management obligations of producers.
- Article 48, 49 – Set up collection points, collect, transport of used batteries from the end users.
- Article 55 - Sets out the collection rates to be obtained by Member States of waste portable batteries.
- Article 56 - Sets forth requirements to be met by treatment facilities for all collected waste batteries to undergo proper treatment and recycling.
- Article 57 - Concerns recycling efficiencies and material recovery targets and lays down that all waste batteries collected shall enter a recycling operation.
- Article 59 - Requirements to facilitate second life of EV batteries.
- **Article 65 - Battery passport.**

EU Regulation Enforcements



Compliance obligation

- Chap 1/Article 2-19: Definition of ‘economic operator’ means the manufacturer, the authorised representative, the importer, the distributor or the fulfilment service provider who is subject to obligations in relation to manufacturing batteries, making them available or placing them on the market or putting them into service in accordance with the present Regulation;
- Chap 1/Article 2-37: “Producer” means any manufacturer, importer or distributor who, irrespective of the selling technique used, including by means of distance contracts as defined in Article 2(7) of Directive 2011/83/EU, supplies a battery for the first time for distribution or use, including when incorporated into appliances or vehicles, within the territory of a Member State on a professional basis.

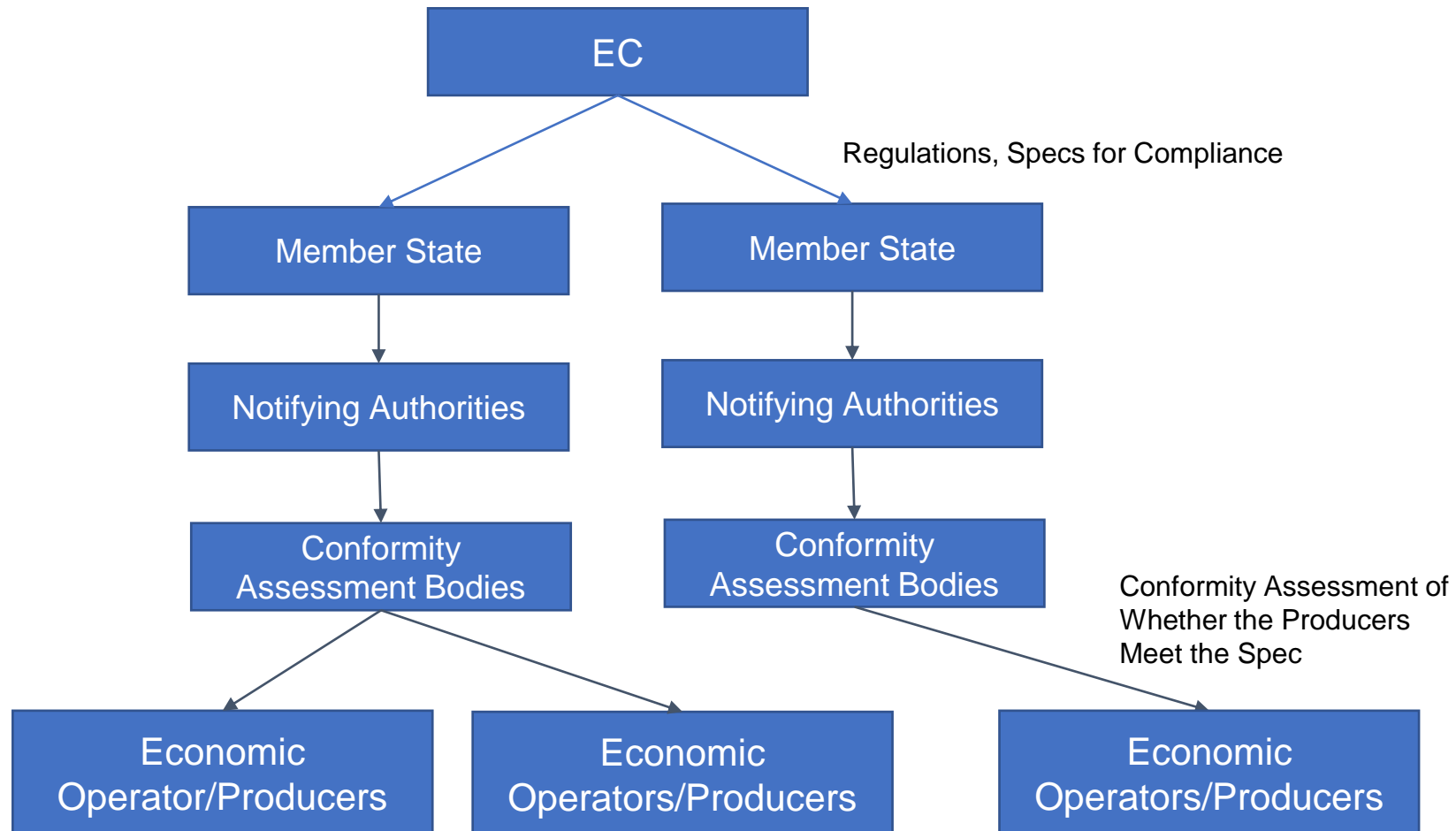
Does this definition include OEMs?

RECHARGE, a battery consortium of Europe has a similar question.

Need for open standards and frameworks

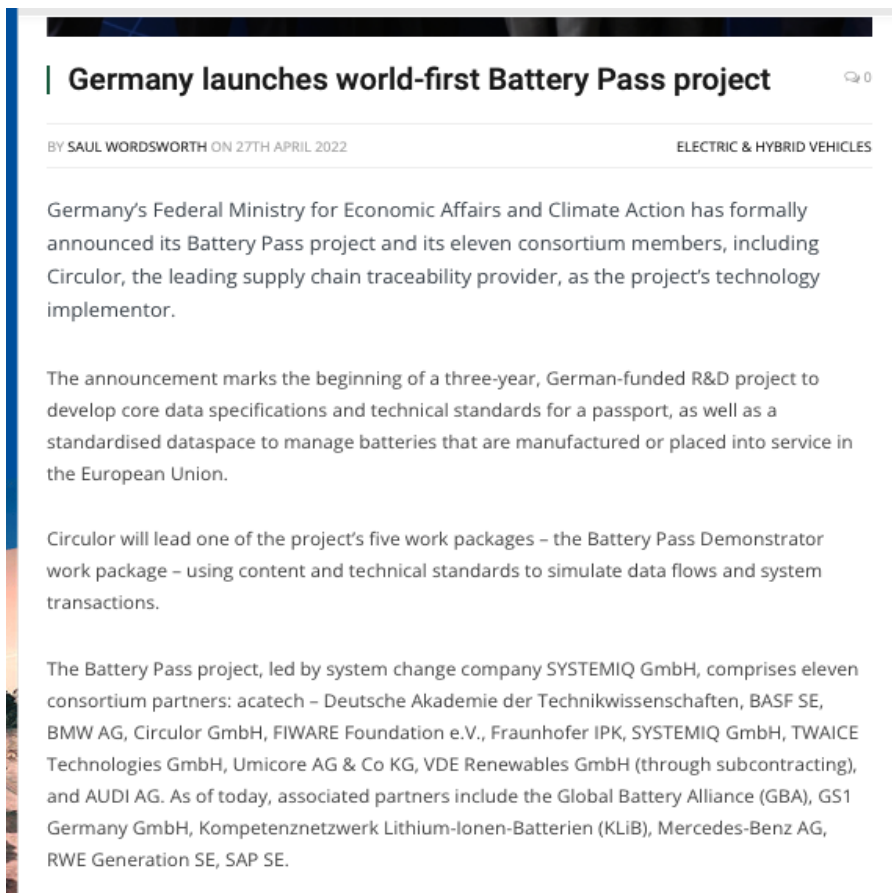
- “It is essential to ensure that manufacturers, importers and economic operators more broadly **are subject to harmonized requirements that must be met** when (i) placing a battery on the Union market and (ii) supplying information to customers across the single market. Recyclers must also be able to **operate with uniform requirements** that apply to all recycling businesses in the same way across the EU.
- The development of a sustainable battery value chain is **capital intensive and requires economies of scale** that go beyond what national economies can provide. Achieving this requires a **harmonized** and well-functioning single market across all Member States where all economic operators of the battery value chain are subject to the same rules.
- In addition, **common rules** are required for the transition to a circular economy. ”

Structure of Compliance Enforcement



Opportunity for the Industry

- The regulation will transform Euro 250B European rechargeable battery market.
- Matter of time before similar regulation is introduced in North America and Asia.
- From the industry side, activities have started in response to the EU proposal (e.g., GBA, Everledger, Germany Battery Pass, Catena-X, MOBI)



| Germany launches world-first Battery Pass project 🗨️ 0

BY SAUL WORDSWORTH ON 27TH APRIL 2022 ELECTRIC & HYBRID VEHICLES

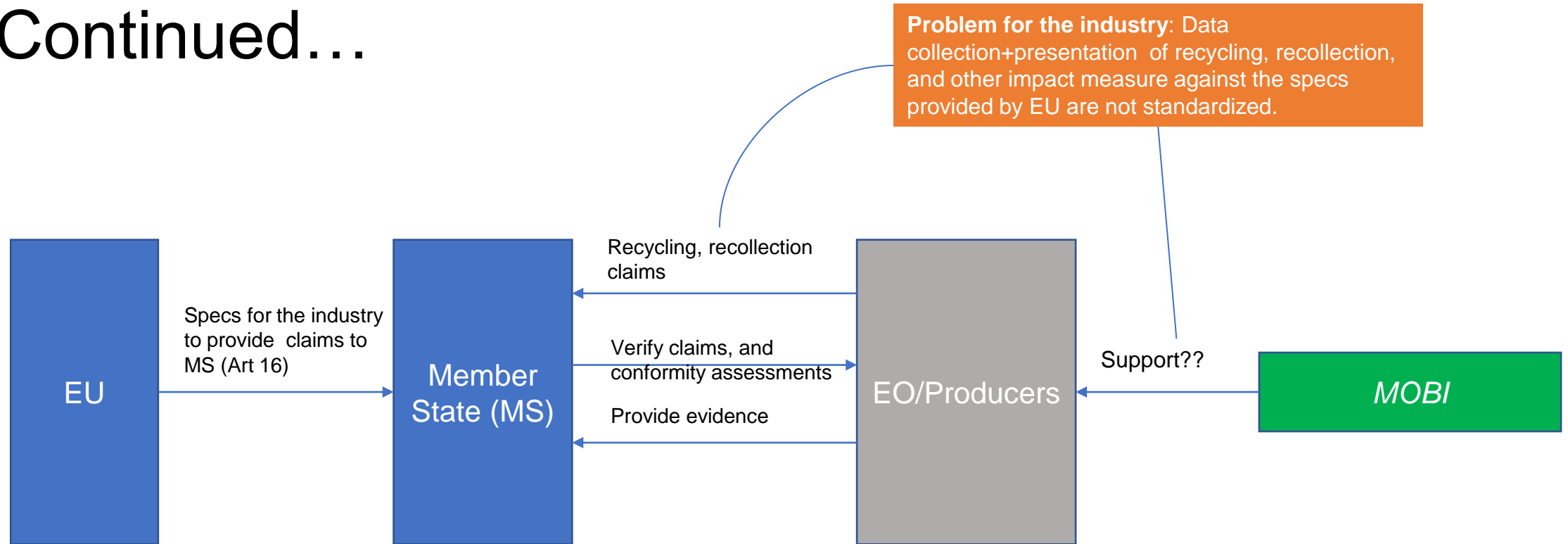
Germany's Federal Ministry for Economic Affairs and Climate Action has formally announced its Battery Pass project and its eleven consortium members, including Circular, the leading supply chain traceability provider, as the project's technology implementor.

The announcement marks the beginning of a three-year, German-funded R&D project to develop core data specifications and technical standards for a passport, as well as a standardised dataspace to manage batteries that are manufactured or placed into service in the European Union.

Circular will lead one of the project's five work packages – the Battery Pass Demonstrator work package – using content and technical standards to simulate data flows and system transactions.

The Battery Pass project, led by system change company SYSTEMIQ GmbH, comprises eleven consortium partners: acatech – Deutsche Akademie der Technikwissenschaften, BASF SE, BMW AG, Circular GmbH, FIWARE Foundation e.V., Fraunhofer IPK, SYSTEMIQ GmbH, TWAICE Technologies GmbH, Umicore AG & Co KG, VDE Renewables GmbH (through subcontracting), and AUDI AG. As of today, associated partners include the Global Battery Alliance (GBA), GS1 Germany GmbH, Kompetenznetzwerk Lithium-Ionen-Batterien (KLiB), Mercedes-Benz AG, RWE Generation SE, SAP SE.

Continued...



Note: Need to check if the Specs are available or not. Article XX mentions that the EU will fund the development of such specs.

Supporting Initiatives

- [Catena – X](#) (German govt. funded consortium of OEMs and other providers) to create open data standards for various use cases including battery passport.)
- Battery Pass – (Also German govt. funded)
- [Global Battery Alliance](#) – building battery passport and track n trace rule books.
- [MOBI](#) – Global mobility consortium developing components for battery passport and track n trace.

MOBI – Battery Initiatives

WS1: Gain firsthand knowledge on policy discussions

- GBA and Catena-X
- *EU Commission*
- *CEN/CENELAC*
- *UN Working Group*
- *US Congress*
- *EPA/CARB*

WS2: Identify and release specific standards

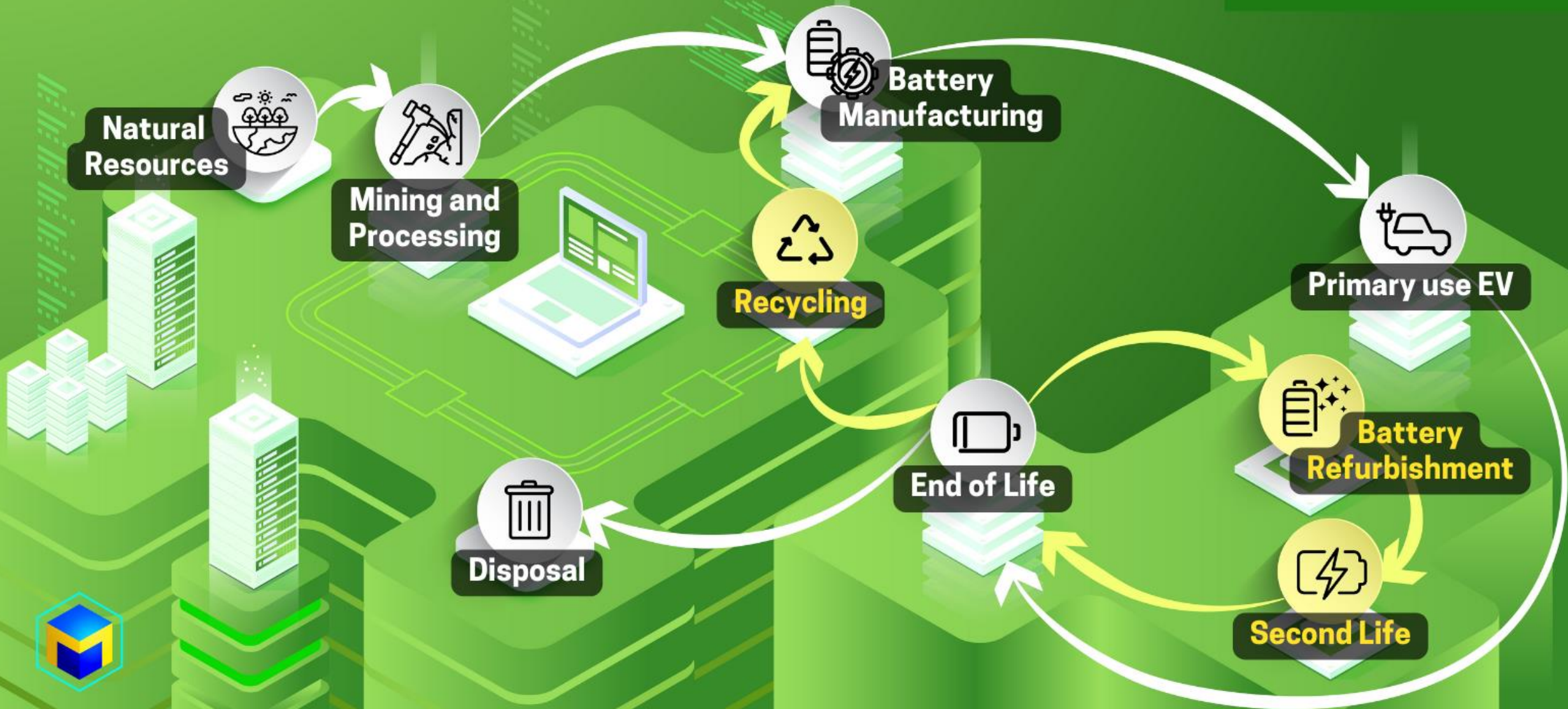
- SOH White Paper
- SOH Value Chain Mapping
- Battery Identity Number
- Battery Birth Certificate

WS3: Perform technical POCs/pilots

- Battery Pack Track and Trace – Phase 1
- Working group is prioritizing Phase 2

Battery Lifecycle

MOBI
Dashboard



Challenges

- The EU regulation hasn't been approved.
- Negotiations are happening about the level of ambition.
- EU needs to provide specifications on meeting requirements.
- There are several consortiums to build standards and guidebooks.
- We don't know at this point if these standards will meet EU requirements.

rajat@dlt.mobi