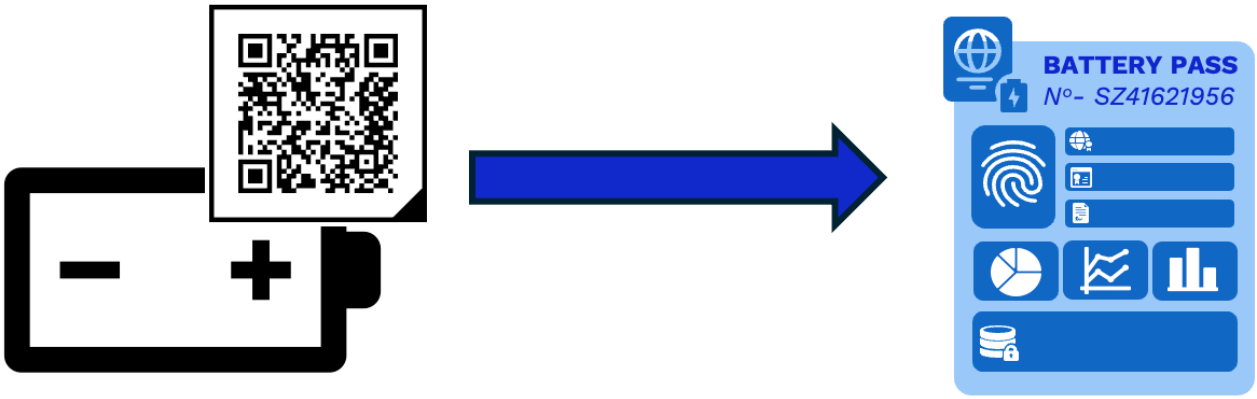
Factsheet Digital Battery Passport



Implementing EU Digital Battery Passport with AAS

- Fulfilling EU Battery Regulation (EU)2023/1542
- Standardized and open technology
- Semantics from Catena-X, ECLASS, IEC CDD

Based on the EU Battery regulation (EU) 2023/1542, specific types of batteries such as

- EV batteries
- Light Means of Transport (LMT) batteries, such as those for E-bikes, E-scooters, etc.
- Industrial batteries with a capacity greater than 2 kWh, such as stationary energy storage systems

are required, starting from February 2027, to include a QR code that provides access to a Digital Battery Passport (DBP).

This proposed technological framework provides economic operators (e.g., battery manufactors, OEMs, Tier-1 suppliers, etc.) with an open and standardized approach to implementing the battery regulation. The required data is organized into different Submodels of the Asset Administration Shell (AAS), depending on the specific context (e.g., material composition, circularity, product condition). Based on the standardized AAS API, the DBP can be offered through a well-defined interface, enabling stakeholders (e.g., battery value-chain actors, conformity authorities, public users) to access the relevant DBP content according to the respective stage of the battery lifecycle (e.g., placement on market, use phase, repair).

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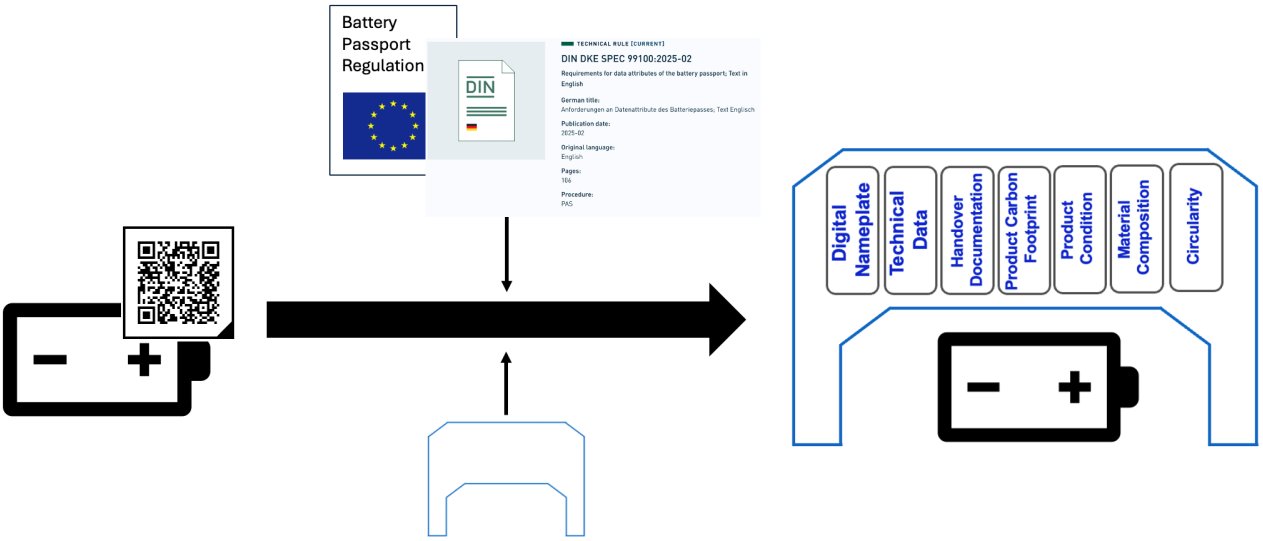
Regulatory Compliance with Harmonized Submodels

The developed Submodels for the DBP are a joint activity between IDTA and Catena-X, together with experts from The Battery Pass project. The work strictly follows DIN DKE SPEC 99100 to cover all required attributes mandated by the EU Battery Regulation.



It is recommended to start with the Digital Battery Passport Guideline document published by IDTA and Catena-X to gain an overview of the specified Submodels and the corresponding design decisions.

Guideline Digital Battery Passport: Use Case Guideline of the Asset Administration Shell

Submodels used:

- Digital Battery Passport - Part 1: Digital Nameplate 1.0 (IDTA-02035-1)
- Digital Battery Passport - Part 2: Handover Documentation 1.0 (IDTA-02035-2)
- Digital Battery Passport - Part 3: Product Carbon Footprint 1.0 (IDTA-02035-3)
- Digital Battery Passport - Part 4: Technical Data 1.0 (IDTA-02035-4)
- Digital Battery Passport - Part 5: Product Condition 1.0 (IDTA-02035-5)
- Digital Battery Passport - Part 6: Material Composition 1.0 (IDTA-02035-6)
- Digital Battery Passport - Part 7: Circularity 1.0 (IDTA-02035-7)