Battery Pass

Battery Pass *ready*

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NATIONAL ACADEMY OF SCIENCE AND ENGINEERING

Supported by:
Federal Ministry for Economic Affairs and Climate Action
on the basis of a decision by the German Bundestag

Ready to Comply … with the battery passport?

Dr. Johannes Simböck, Division manager
acatech – National Academy of Science and Engineering

Battery Pass and BatteryPass-Ready

Advancing battery passport readiness

The “Battery Pass” is a consortium of 11 partners from industry, science, technology and beyond, co-funded by BMWK aiming to provide guidance on the EU battery passport

CONSORTIUM LEAD

Key facts on the Battery Pass Consortium

- Evolved from the Circular Economy Initiative Germany (CEID)
- 11 consortium partners from industry, science, technology and beyond
- Co-funded by the German Federal Ministry for Economic Affairs and Climate Action (BMWK) with EUR 8.2 mn
- Aiming to advance the implementation of and provide guidance on the EU Battery Passport
- Five work packages including:
  - Project coordination and stakeholder engagement
  - Guidance on content requirements
  - Guidance on technical battery passport system
  - Development of a physical and software demonstrator
  - Value assessment of individual use cases and overall
- 3-year timeframe from April 2022 to April 2025

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FIWARE FOUNDATION

Fraunh

Kick-off event of

BatteryPass-Ready

Delivering a test system to advance battery passport readiness

Key Facts on BatteryPass-Ready

Pre-competitive project to **support industry & SMEs** in implementing battery passports **by delivering a test system & guidance**

Four **work packages** including:

1. System requirements and stakeholder needs
2. Test system specification and implementation
3. Deployment, application and optimization
4. Project management and stakeholder involvement

2-year timeframe from April 2025 to March 2027

Evolved from the **Battery Pass** project

CONSORTIUM LEAD

Fraunhofer IPK

CONSORTIUM PARTNERS

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GEFEG Passion for Standards

Technische Universität Berlin

ASSOCIATED PARTNERS

bitkom VDA VDMA ZIV

Kick-off event of the BatteryPass-Ready project in Berlin in May 2025

Gefördert durch: Bundesministerium für Wirtschaft und Klimaschutz
aufgrund eines Beschlusses des Deutschen Bundestages

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Digital Battery Passport

A pioneer of digital product passports in the European Union

Digital Battery Passport

Battery Regulation:
Battery Passport mandatory from **18 Feb 2027** for:

- Electric vehicle (EV) batteries;
- Light means of transport (LMT) batteries;
- Industrial batteries > 2 kWh.

Responsibility:
- Economic operator[1] placing the battery on the market
- Indirectly: suppliers

DPPs in the EU

Ecodesign for Sustainable Products Regulation (ESPR) sets the technical framework + several other legislations include DPPs

Single Market Strategy :
- "The EU needs a paradigm shift from a document-based to a **data-based Single market** […]
- **DPP** will become the main tool across **all future product legislation**

Objectives of DPPs

Drive digitalisation in B2B, B2C and B2G (incl. burden reduction)

Enable shift from linear to circular economies

Drive sustainable and transparent value chains

1. or an authorized representative

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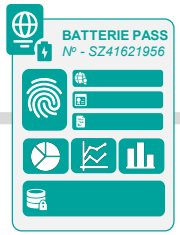
The DPP can be separated into data and the technical system



DPP-Data

DPP data sector-specific for:

- Batteries
- Electronics
- Textiles
- Construction industry

→ Defined in ESPR and various other regulations

DPP-System

Harmonized technical system for all DPPs:

- Data storage
- Data carrier Identifier
- Trust/Security Access
- Data exchange
- IT services API
- Processes

JTC-24: Drafts for standards just published for consultation on DIN-ONE

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[1] Source: Battery Pass; https://thebatterypass.eu/;

Battery Passport Data

Data categories for the battery passport[1] (select data attributes shown below)
Various data points are not defined in detail or still being specified through delegated acts and standardization efforts

Battery Pass

Battery ID: 0101010
Battery passport ID: 1111010
Responsible economic operator

Identifiers & product info

- Manufacturing info (identity, place, date)
- Battery category
- Battery mass
- Battery status

Labels and conformity

- Symbols and labels
- Meaning of labels & symbols
- Declaration of conformity
- Compliance of test results

Carbon footprint

- Carbon footprint (5 metrics)
- Weblink to CF study
- CF performance class

Supply chain due diligence

- Due diligence report[2]

Materials & composition

- Hazardous substances
- Battery chemistry
- Critical raw materials
- Materials used in cathode, anode, electrolyte

Circularity & resource efficiency

- Recycled content shares[2]
- Manuals for removal, disassembly, dismantling
- Component part numbers & spare parts information
- Safety measures/instructions

Performance & durability

- Capacity, energy, power, SoH
- Expected lifetime
- Negative events

[1] Battery Pass; https://thebatterypass.eu/; DIN DKE SPEC 99100
[2] Applies at a later point in time

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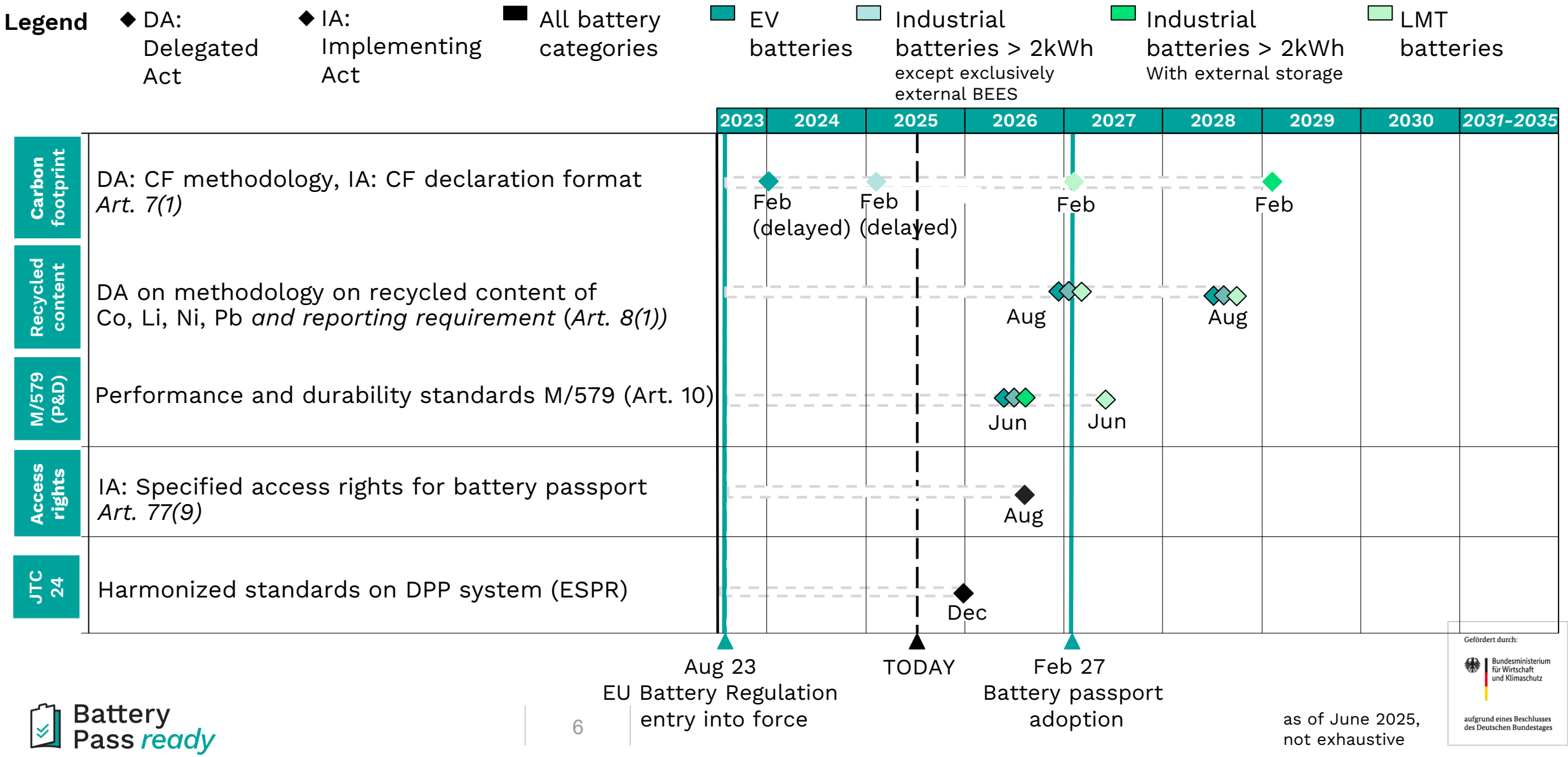
Battery Passport specification is ongoing at Commission and standardisation



as of June 2025, not exhaustive

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BatteryPass-Ready builds a test system

Based on the work of Battery Pass

Battery Pass

Content Guidance
WHAT data is included?

Technical Guidance
HOW to build it technically?

Demonstrator
HOW can it look in practice?

Value Assessment
WHY is it a value creator?

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HOW to TEST my solution?

Data and technical system requirements

Test system, optimized with stakeholders

Guidance for policy & industry

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BatteryPass-Ready creates a test system

Responding to Key Challenges

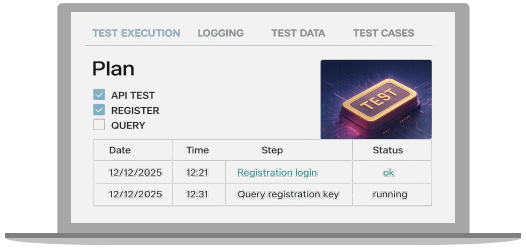
Challenges in the DPP Ecosystem

High complexity of overall system
- Automated multi-organisation collaboration;
- High system load conditions.

Tight time frame
- Technical standards (JTC 24) by end 2025;
- Delegated acts ongoing for data standards.

Dynamic ecosystem and moving targets
- Changing system specification & data;
- Frequent validation needed.

Purpose of BatteryPass-Ready test system



- **Validate data completeness and plausibility**
- **Verify system functions, consistency and interoperability**
- **Make stakeholder perspectives count**
- **Guidance for policy and implementers**

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To maximise value creation, businesses need to take urgent action

Assess implementation requirements

- Initial battery passport software development and hard-ware set-up
- Data collection and management
- Battery passport operations

Identify strategic opportunities

- Assess which benefits are possible (revenue, cost, funding, resilience, emissions, materiality, social benefit optimisation)
- Establish a business case and model impact metrics
- Define an implementation roadmap

Select implementation strategies

- by leveraging and enhancing internal capabilities, sourcing capabilities, and/or joining forces with industry peers. E.g. SMEs may benefit from 3rd-party passport providers

Source: Battery Pass Value assessment; https://thebatterypass.eu/;

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Want to keep informed or get involved?

We appreciate your interest in „BatteryPass-Ready“ and welcome contributions. If you would like to learn more about the „BatteryPass-Ready“ project, follow us on LinkedIn, subscribe to our newsletter or contact us.

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Scan to Follow **BatteryPass-Ready on LinkedIn**

Webinar on July 14th 10-11.30 am

Scan for **Battery Pass resources:**

(BatteryPass-Ready will soon host resources here, too)