



JTC 24 – Digital Product Passport – Framework and System

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Digital product passports (DPP) as part of European broader regulatory

European Green Deal

EU Plan: climate-neutral by 2050, safeguard biodiversity, establish a circular economy and eliminate pollution, while boosting the competitiveness of the European industry

agreed

Ecodesign for Sustainable Product Regulation (ESPR)

- Proposed in Mar 2022, as central part to the Commission's strategy for eco-friendly and circular products
- Aims to promote environmental sustainability across a broader range of products

Requires **digital product passports based on harmonized European Standards (hEN)**

Entered into force

Battery Regulation

- Entered into force in Aug 2023 replacing the EU Battery Directive
- Provides a legal framework aiming to promote sustainability, circularity, safety and transparency

Mandates a **battery passport** for all EV, LMT, and industrial (>2kWh) batteries starting Feb 2027

Proposal

End-of-Life Vehicle Regulation

- Proposed in Jul 2023
- Will replace the End-of-life Vehicle Directive
- Governs the entire vehicle lifecycle, from design to end-of-life treatment

Mandates a **circularity vehicle passport**

Most product groups require a DPP and are affected by JTC 24

Main Regulations
ESPR
Batteries (Traction and industry)
Toys
Detergents
Construction Materials
Critical Raw Materials

Iron & steel
Aluminium
Textile, notably garments and footwear
Furniture, including mattresses
Tyres
Detergents
Paints
Lubricants
Chemicals
Energy related products
ICT products and other electronics

European Standard (EN) / harmonized European Standard (hEN)

When a product is not compliant with hEN then it can be expelled from the market

EN

**Increase
Products safety and quality**



**Lower
Transaction costs and prices**



hEN

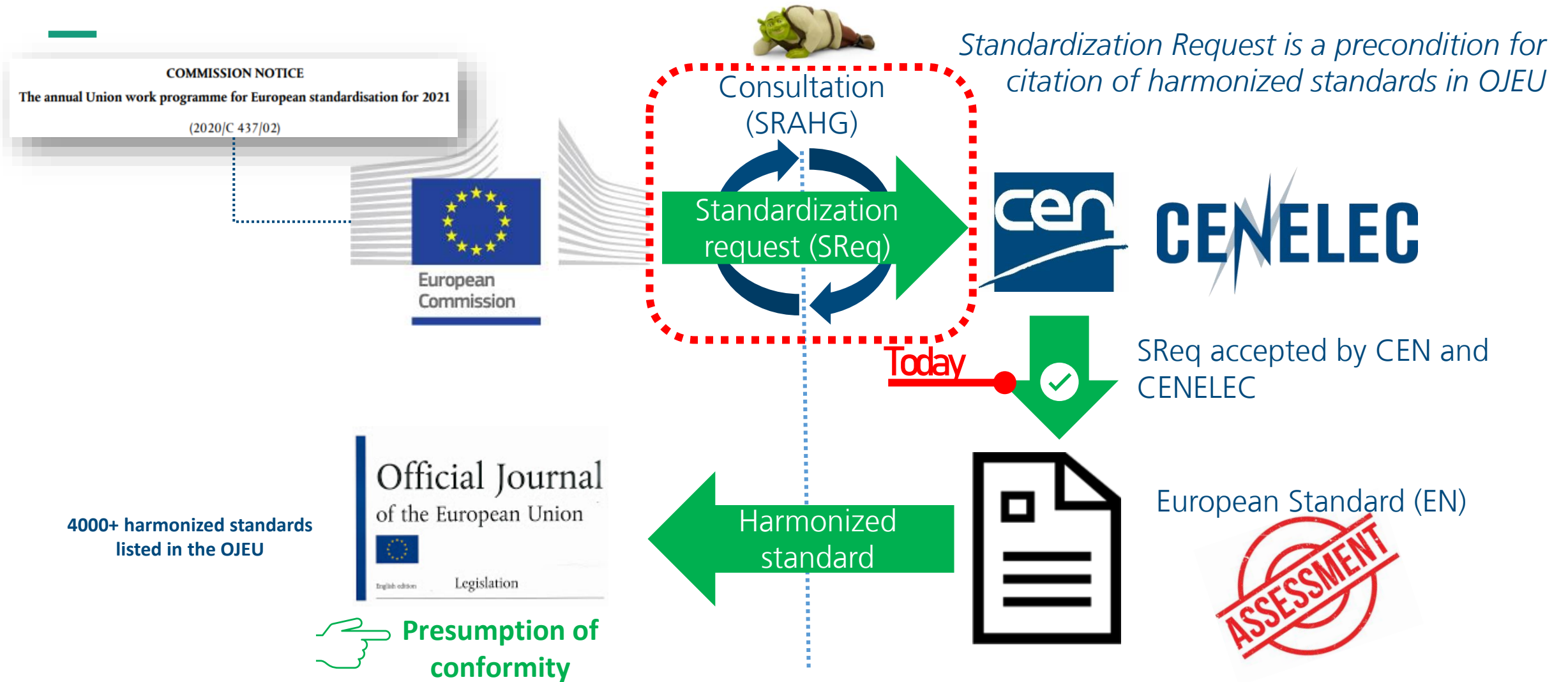
To demonstrate that
Products, Services and Processes

comply with **relevant**

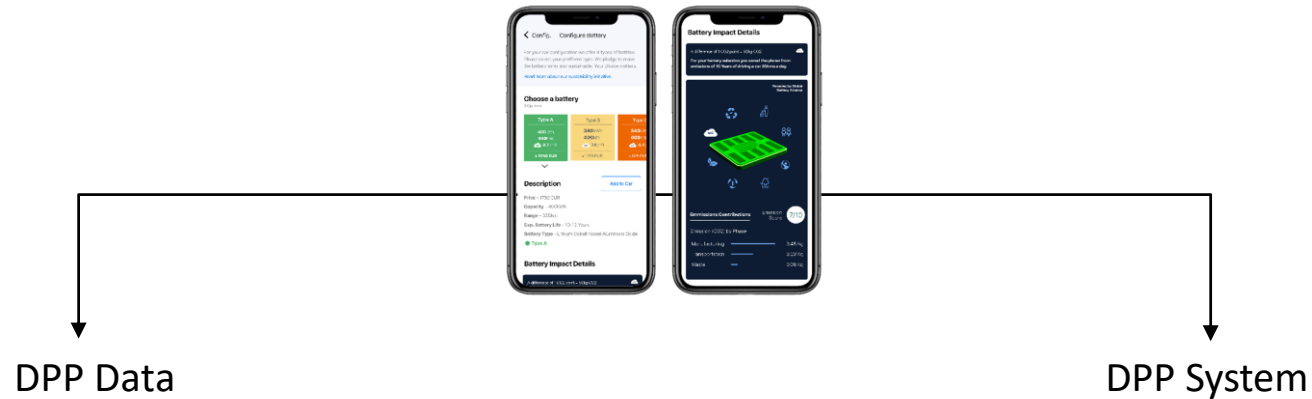
EU legislation.



EU product harmonization - Workflow

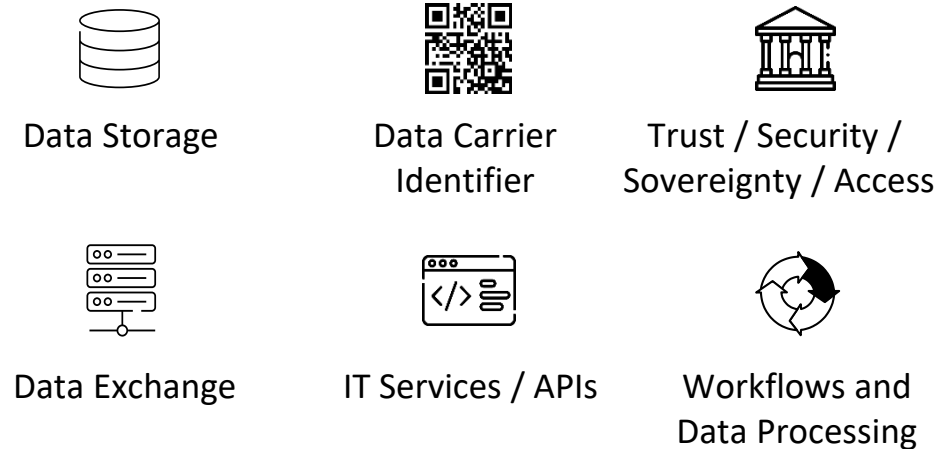


System Scope: JTC 24 is to deliver hEN for the DPP System

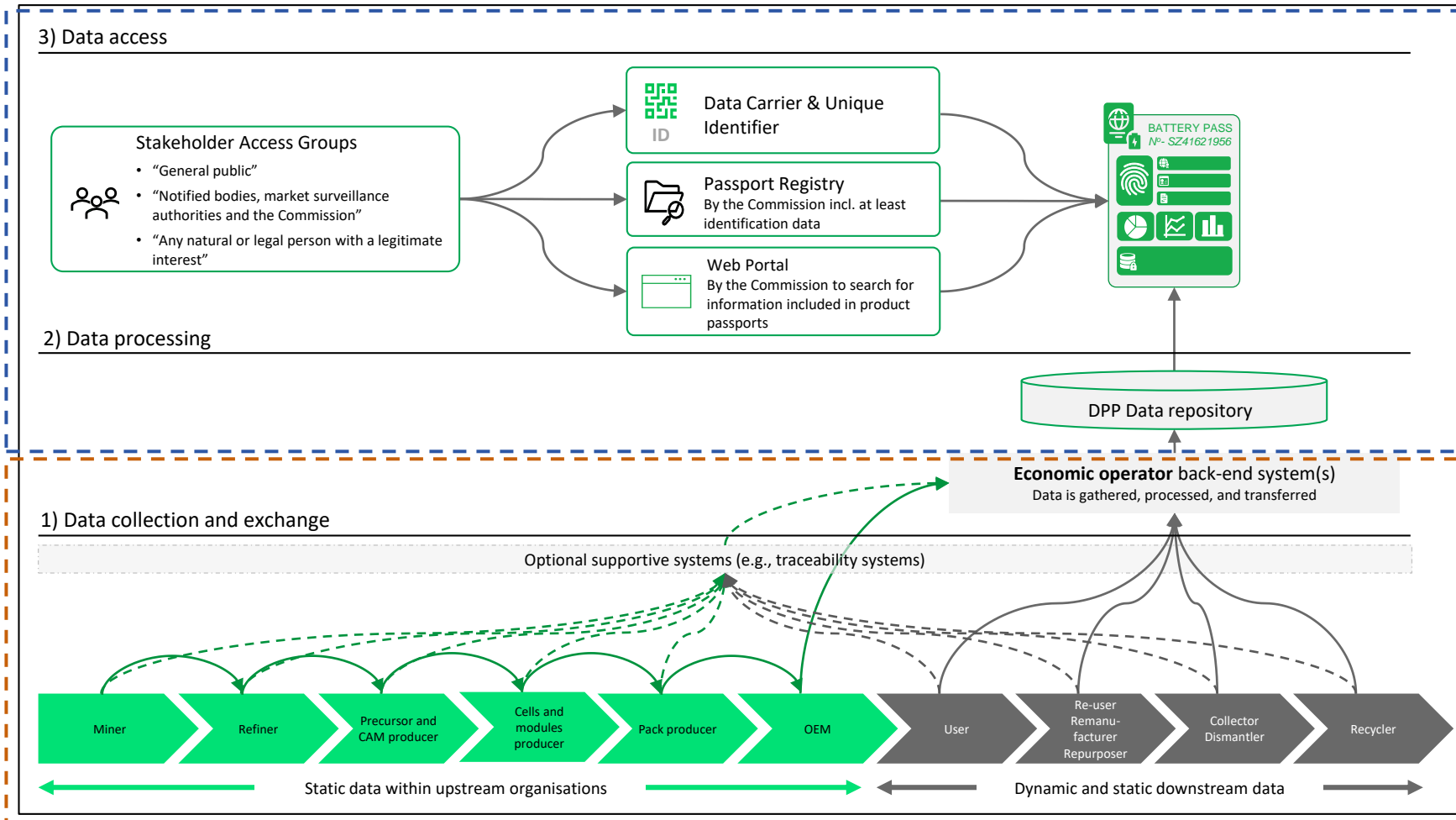


Passport Data is out of Scope in JTC 24 and part of other Regulations and Standards e.g. M/ 579 for the Battery or potentially the TC442 for construction material

Harmonized technical system for all DPPs:



Process Scope of JTC24 – Example from Battery

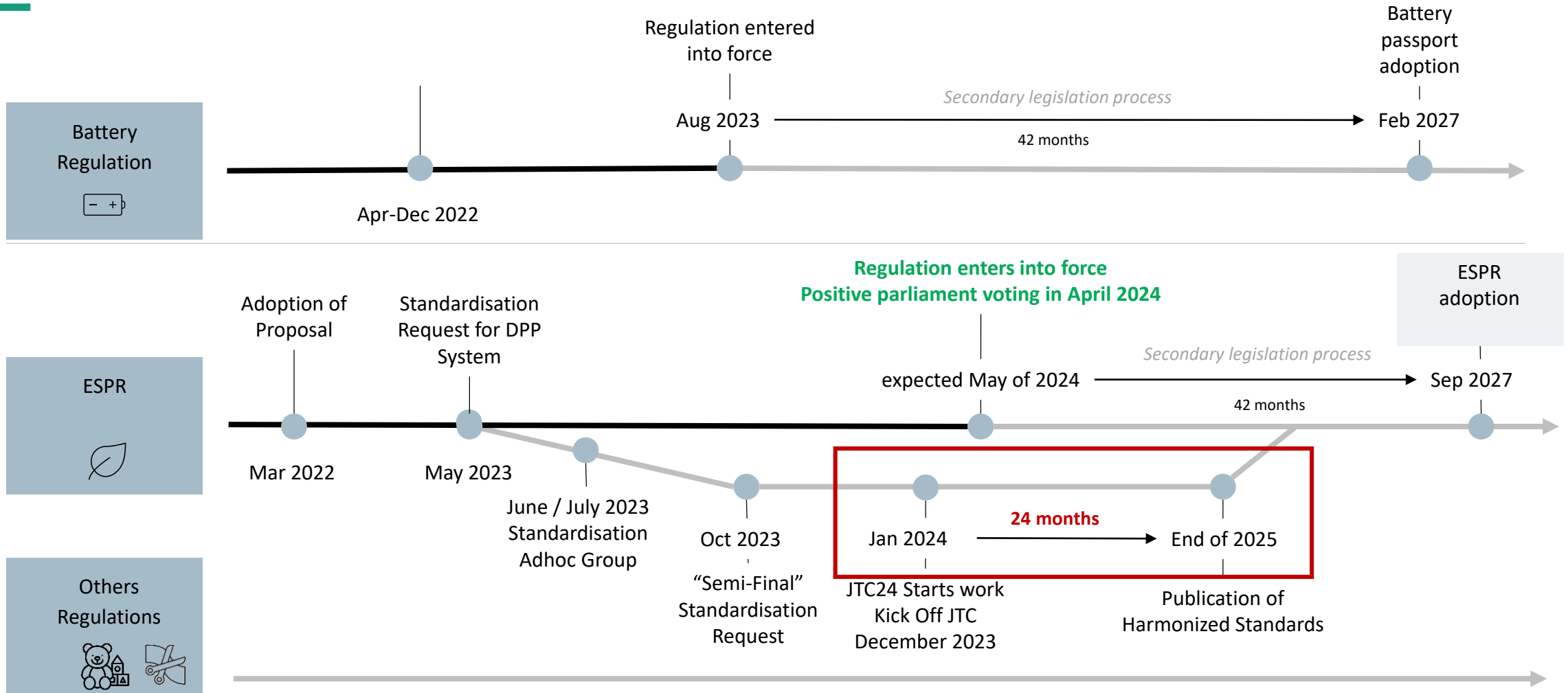


Scope in JTC 24:
Data Access,
Data Processing

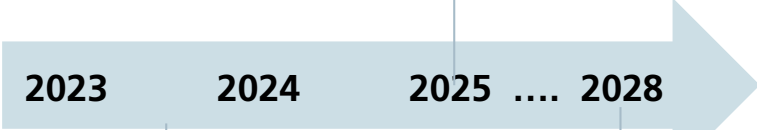
Out of Scope in JTC 24:
Data Collection and aggregation

Finally, Tough Timeline for Standardisation

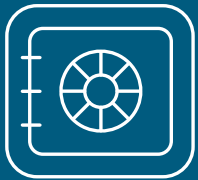
Just 2 years from start to deadline



CEN CLC JTC 24 "Digital Product Passport Framework and System"

Objectives	Participants	Timing
<p>Fulfill the Standardization Request (SReq) to define harmonized standards according to</p> <p>Ecodesign for Sustainable Products Regulation (ESPR)</p> <p>Battery Regulation + ...</p>	<p>Appr. 130 Experts in Delegations from 20 Member States + Switzerland</p> <p>Appr. 15 Liasons requests (e.g. from US, China, Korea, Japan)</p>	<p>Deadline to deliver hEN for 8 Modules Dec. 31st, 2025</p>  <p>2023 2024 2025 2028</p> <p>Dec. 18th, 2023 Kick Off Meeting</p> <p>Planned End of JTC 24</p>

Why interoperability is the key in this regulatory based standardisation



Safe
existing investments



Avoid dependencies
on proprietary
solutions



Enable
technical
progress

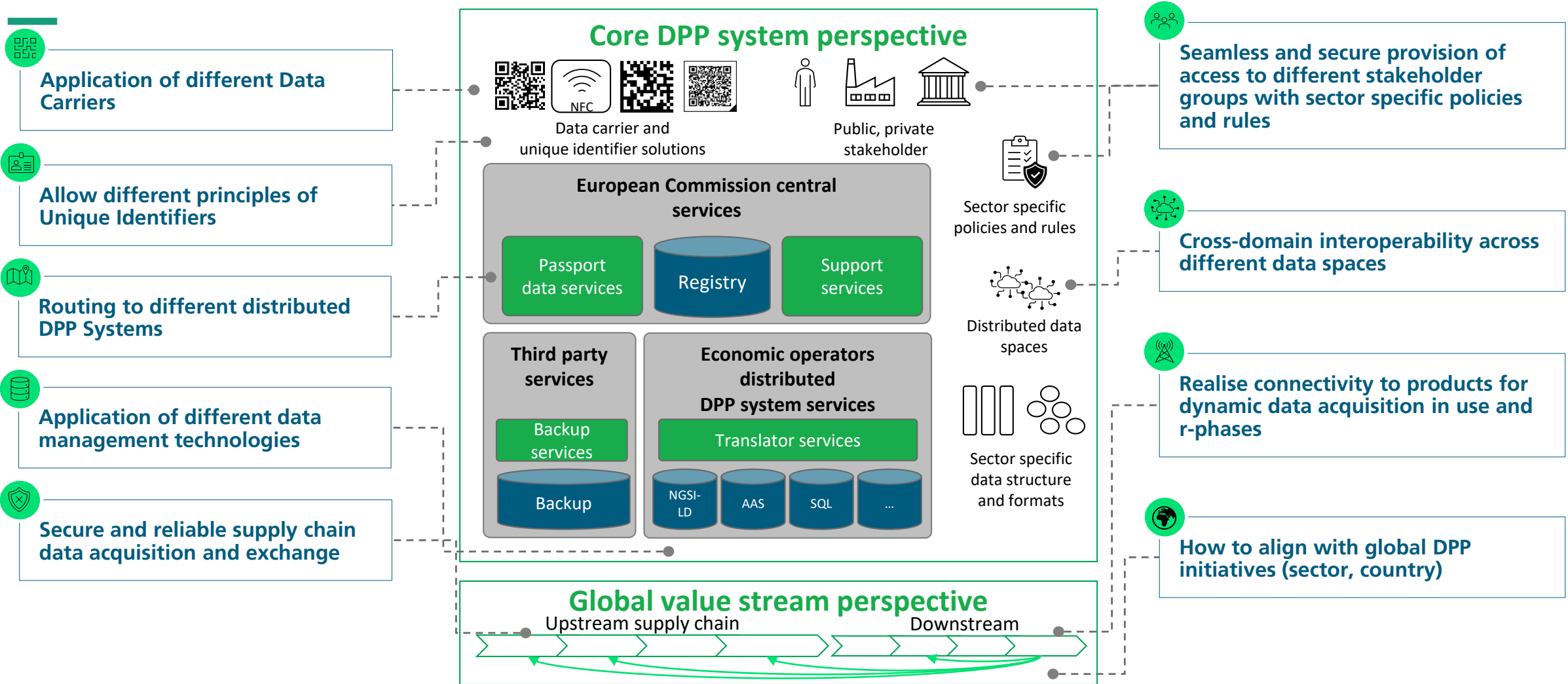
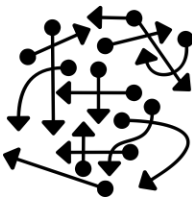


Connect
to global
developments



Cross
sector
application

Complex System - Technical interoperability challenges are huge

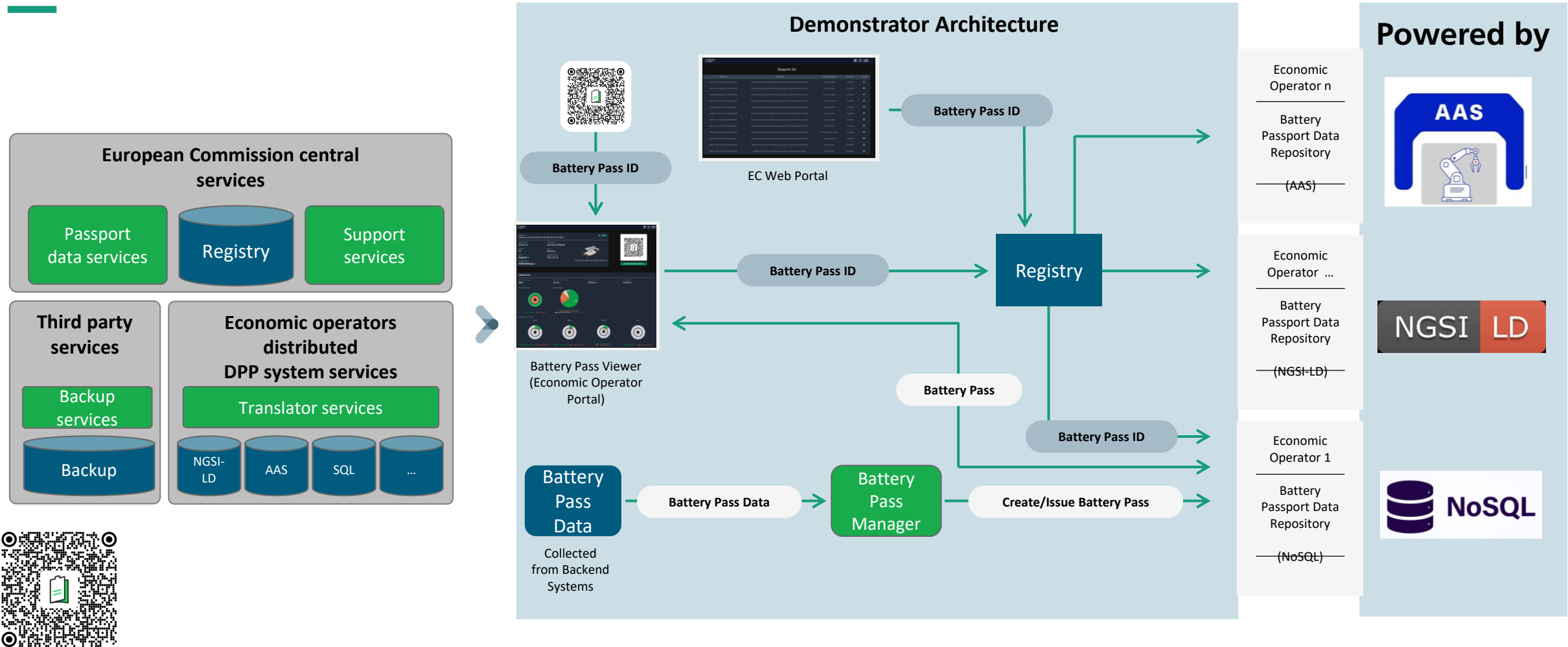


Initial assignment of DPP system components to workgroups

System architecture and stakeholder interaction group	System elements identified from ESPR and SReq			
WG 1 - Strategic advisory group	WG 2	WG 3	WG 4	
no Standardisation Work	<i>Data Carrier and Unique Identifier</i>	<i>Security</i>	<i>Interoperability Framework</i>	
Use cases	Unique Identifier for Product	Revocation Service	Product passport registry API	
System architecture	Unique Identifier for Economic Operator	System for (role /function/attribute-based) access rights management	EC Web Portal with different Access Functions for Stakeholder	
Liaisons	Unique Identifier for Facilities	Verification of authentication	DPP Frontend (display)	
Interaction with EC	Registry Unique Identifier	Verification of DPP conformance	Individual decentral Data Repository	
Interaction with sector specific data standardisation	Unique Identity Resolver	Cryptographic verification of DPP (digital	API for CRUD of data	
	Data Carrier	Data verification of data integrity and originality	Querying of Passport Data	
	DPP Front end (read)	Logging and Monitoring	Back Up Data Base	
	Unique identifier		Data Modelling: Modelling Language	
			DPP Issuing Service	
			Data modelling services	
			Schema definition	
			Data exchange network and protocols and APIs	

Interoperability is possible

Battery Pass Demonstrator – showing the application of co-existing standards on data management



Contact Data

Interested in more detailed considerations? Download Technical Guidance of Battery Pass

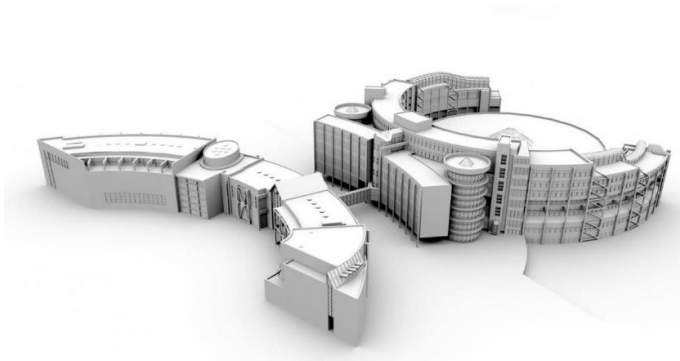


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Battery Passport

Battery Passport Technical Guidance

Technical challenges, standards and recommendations for a battery passport system

Version 1.0 / March 2024

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