

European Standardization Organizations

JTC24 – Digital Product Passport – Framework and System

CEN CENELEC JTC24

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Secretary CEN CENELEC: Carolina Müller, Secretary DIN: Katharina Sehnert

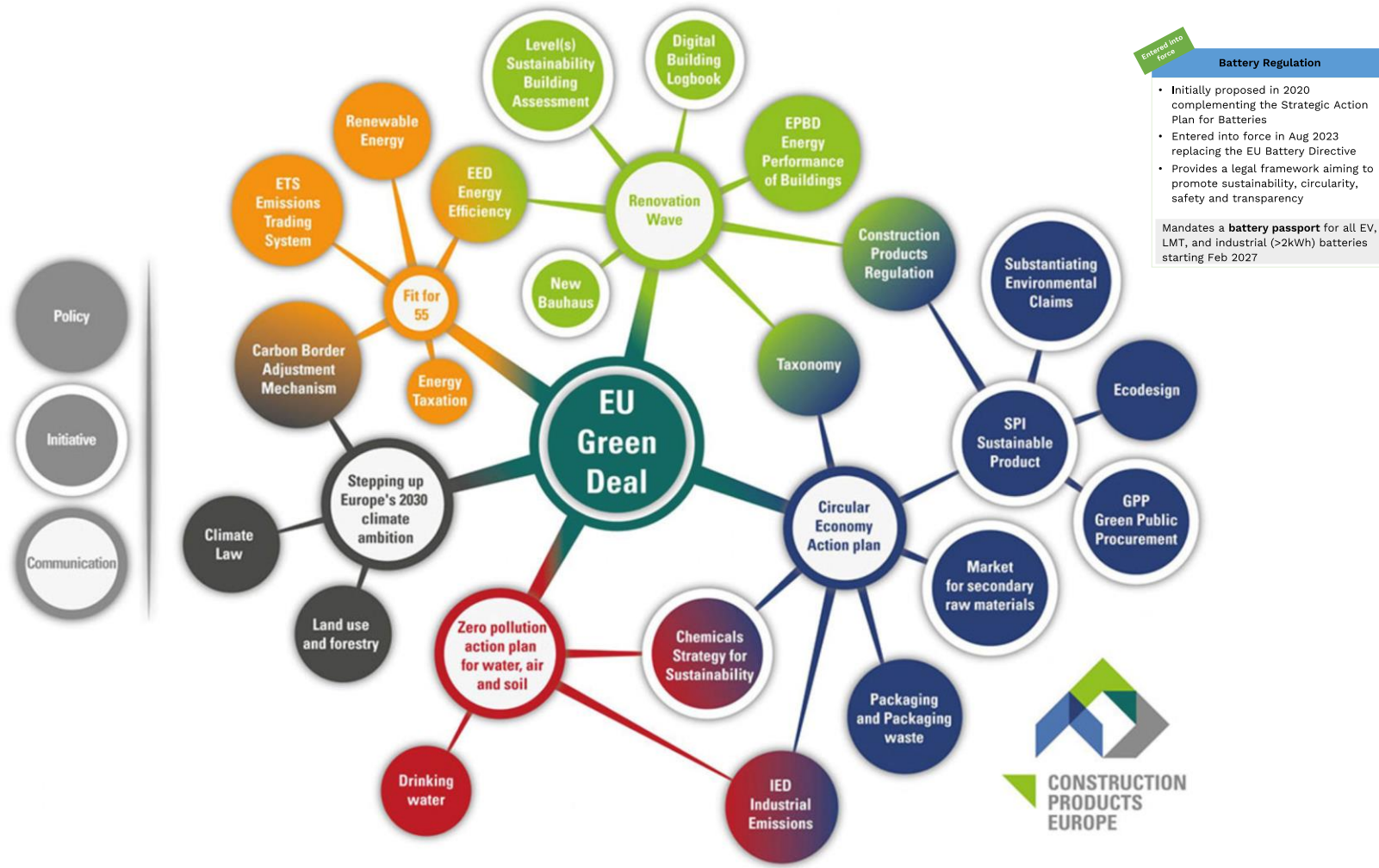
Martin Schreck

- ▶ **DiBK - Specialist Director for CPR Acquis**
 - Revision of the Construction Products Regulation, standardisation of construction products and participant in industry collaboration on product data templates.
- ▶ **Background**
 - Norwegian representative to the EU Commission DG GROW
 - Work within standardization in several groups, member of SN/K027
 - Manages a number of expert groups within various product groups as well as associated horizontal groups on sustainability and hazardous substances
 - Participant in JTC24 AHG

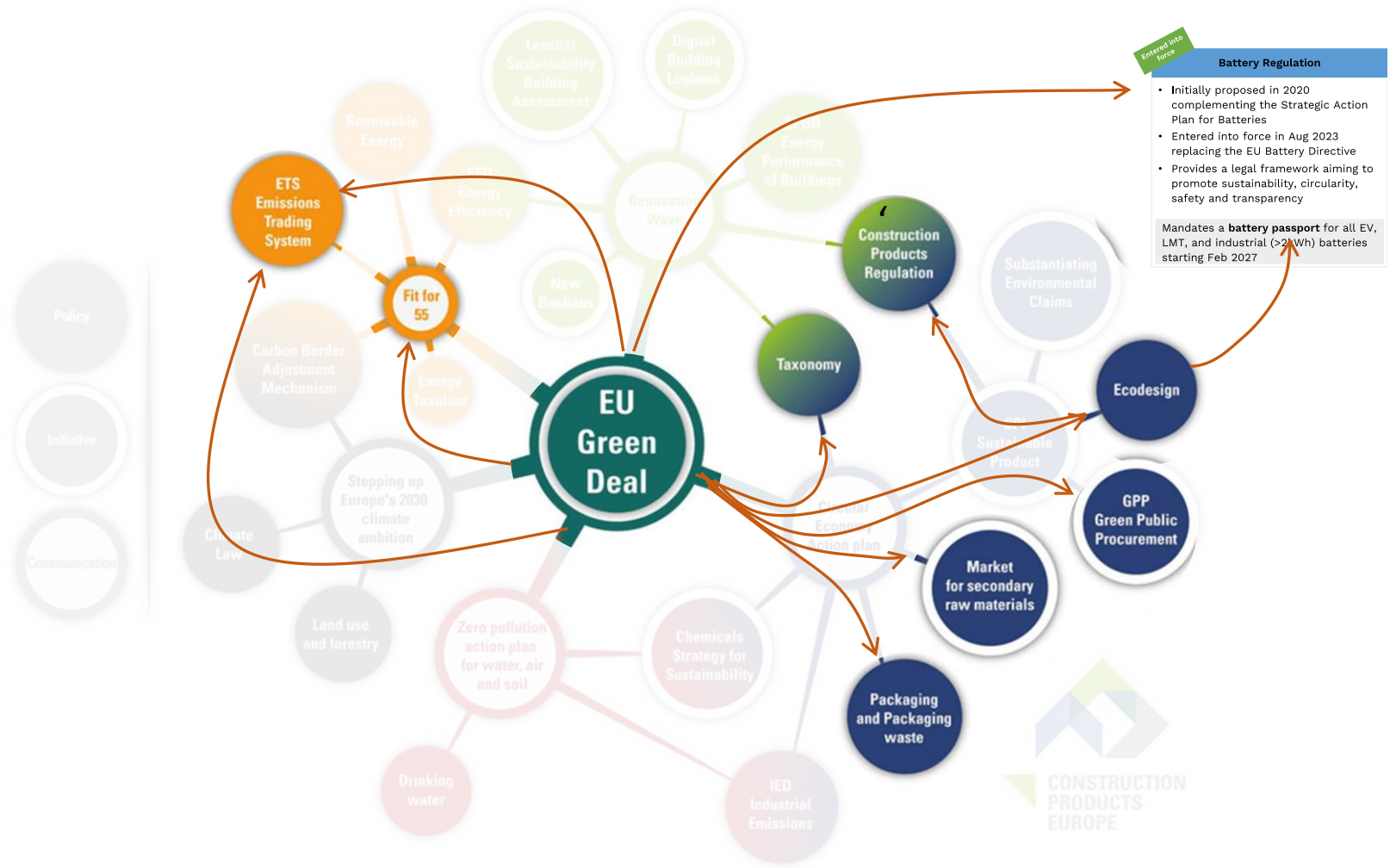
Espen Schulze

- ▶ **Cobuilder – Group VP Research**
 - Head of the Research department
 - Advisor to various digitalization projects in Europe
- ▶ **Background**
 - Expert in numerous standardization projects in CEN/TC 442 and ISO/TC 59
 - Project leader – EN ISO 23387 – Data templates for construction objects
 - JTC 24 – Liaison representing CEN/TC 442
 - Task leader in a Feasibility Study on an EU Database for Construction Products
 - Member of buildingSMART International Product Domain Steering Committee

What is the European strategy on sustainability and market competitiveness?



Which ones are most relevant for DPP today?



The EU introduces digital product passports (DPP) as part of its broader regulatory ambition towards sustainability with the first being required for batteries from 2027



European Green Deal

Comprehensive plan to make the EU climate-neutral by 2050, safeguard biodiversity, establish a circular economy and eliminate pollution, while boosting the competitiveness of the European industry and ensuring a just transition for the regions and workers affected.

Circular Economy Action Plan

Initiative promoting the sustainable use of resources, especially in resource-intensive sectors with high environmental impact.

Provisional agreement

Ecodesign for Sustainable Product Regulation (ESPR)

- Proposed in Mar 2022, as central part to the Commission's strategy for eco-friendly and circular products
- Extends beyond current Ecodesign Directive, which exclusively addresses energy-related products
- Aims to promote environmental sustainability across a broader range of products

Introduces **digital product passports** as a general concept

Entered into force

Battery Regulation

- Initially proposed in 2020 complementing the Strategic Action Plan for Batteries
- 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

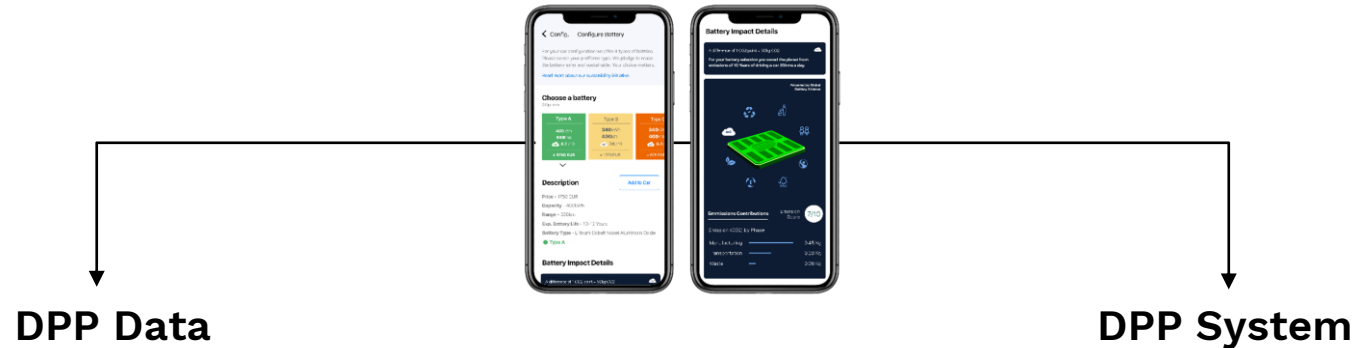
Proposal

End-of-Life Vehicle Regulation

- Proposed in Jul 2023, as result of the review of the End-of-life Vehicle Directive
- Will replace the End-of-life Vehicle Directive as well as the Type-approval Directive
- Governs the entire vehicle lifecycle, from design to end-of-life treatment

Mandates a **circularity vehicle passport** starting 7 years after entry into force of the regulation

A DPP consist on data and system



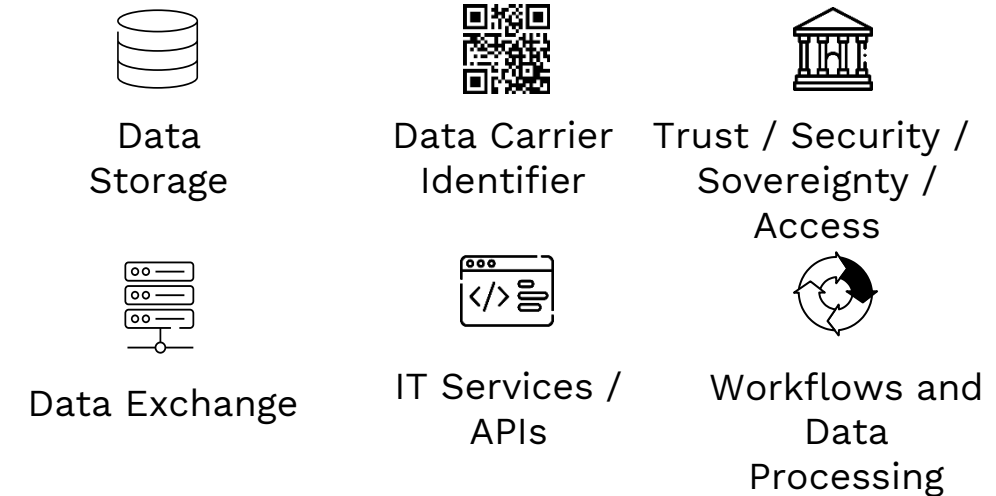
DPP data sector specific for:

- Batteries
- Electronics
- Textiles
- Construction Materials

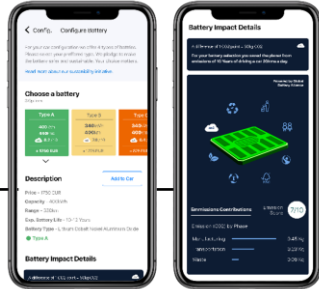
→ Defined in different regulations (e.g., the Battery Regulation with further information available in the Battery Passport Content Guidance)



Harmonized technical system for all DPPs:



System Scope of JTC24 is to deliver harmonised standards for the DPP System



DPP Data /Bransjeavhengig

DPP System /Europeisk

Passport Data is out of Scope in JTC24

Harmonized technical system for all DPPs:



Data Storage



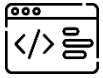
Data Carrier Identifier



Trust / Security / Sovereignty / Access



Data Exchange



IT Services / APIs



Workflows and Data Processing

Example of a DPP – the Battery Pass





Up to 90 data attributes, clustered into seven categories

Not exhaustive







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




General information

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

Labels and certifications¹

-  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




Materials and composition

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

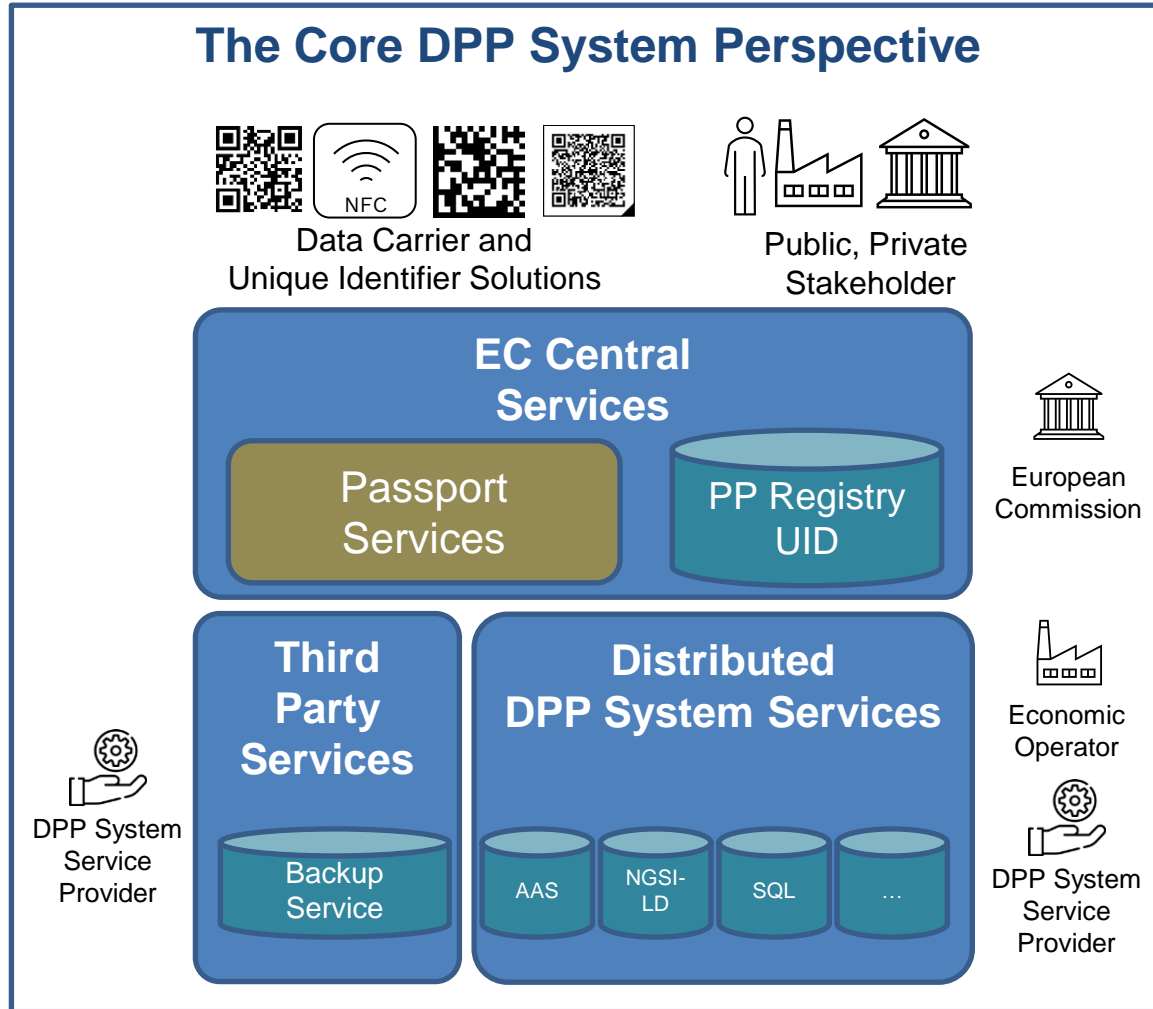
Circularity & resource efficiency

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

Performance & durability

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

Who should be interested into JTC24



European Commission and National Authorities
(e.g. Market Surveillance)

Economic Operators, brings products on the market
(e.g. manufacturers, importers)

DPP System and Service Providers
(e.g. for operating services, backup services)

DPP System Component Suppliers
(e.g. for Data Carrier)

Partners in the value chain (e.g. supplier, dealer, recycler)
to know how data has to be provided, how to get access

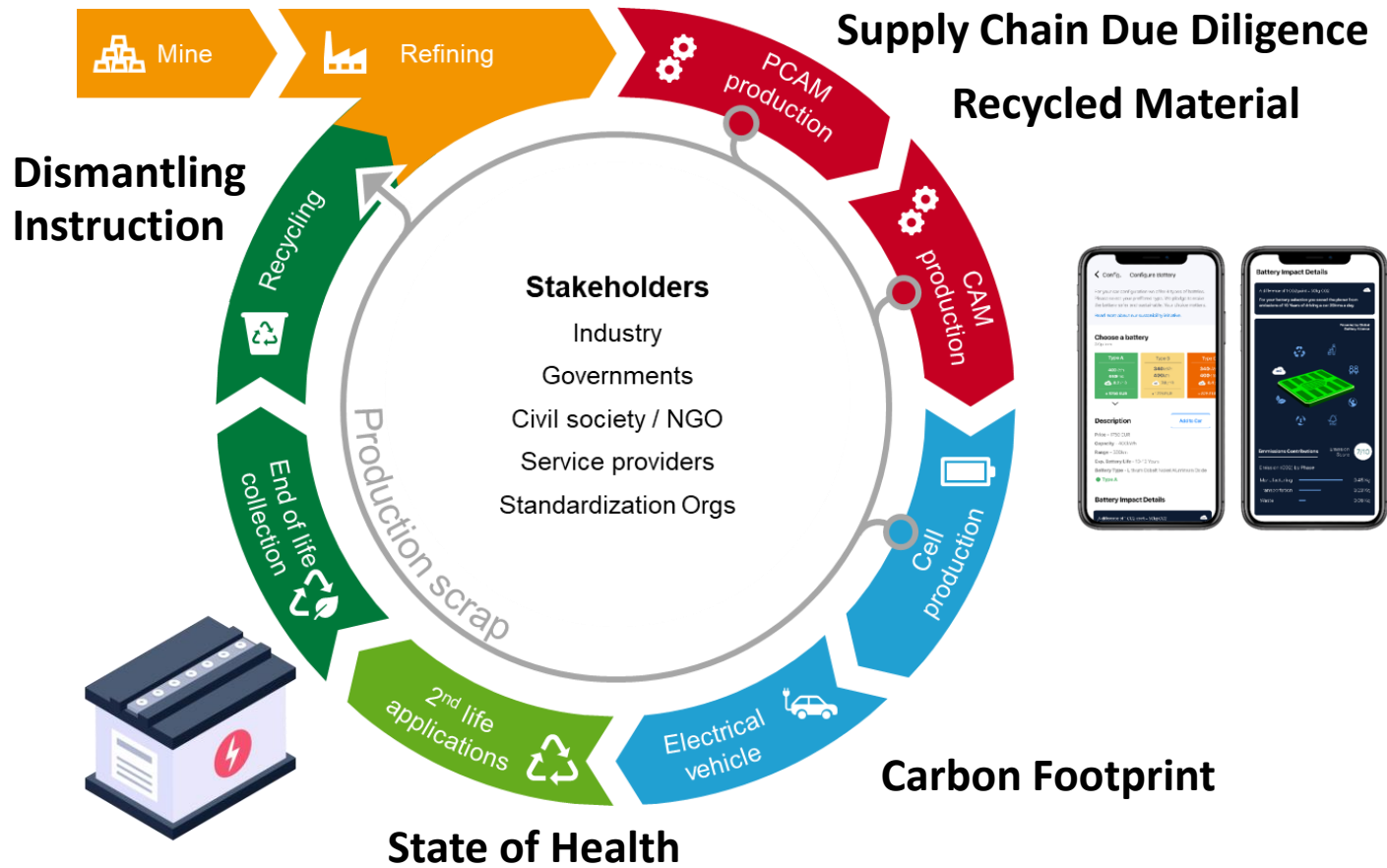
Standardisation Bodies
(e.g. for sector specific data standardisation)

Consumer Organisations
to ensure applicability of DPP

Why Circularity requires Digital Product Passport (DPP)?

Combine circularity with the other sustainability aspects – example batteries

Mandatory Data in Battery Passport

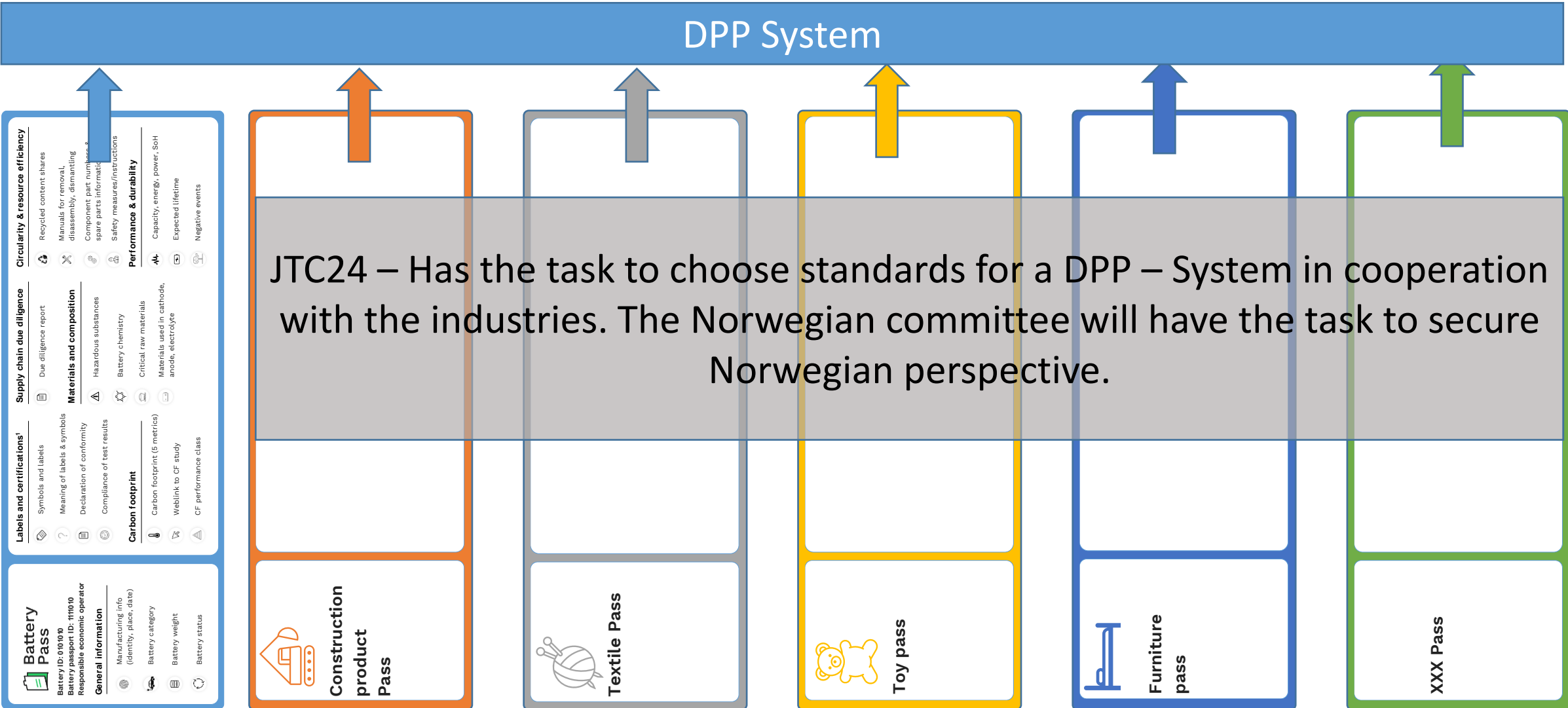


A grid of six images and icons representing key sustainability aspects:

- Metal Supply**: Image of children mining with a building icon.
- Strong Growth requiring massive Investments**: Image of an industrial facility with a globe icon.
- Carbon Footprint**: Image of a river in a forest with a leaf icon.
- Occupational Health & Safety**: Image of workers in a factory with a recycling icon.

Source: BASF, Torsten Freund

Frame work system foundation for sectorspecific digital product passport

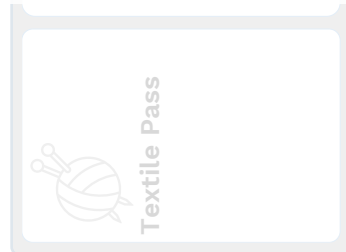
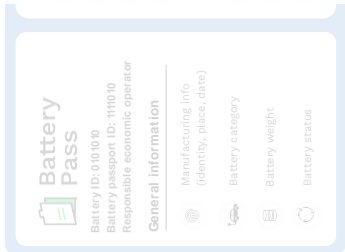


The task for JTC 24

DPP - System

Creating a Unified Passport System for European Industries

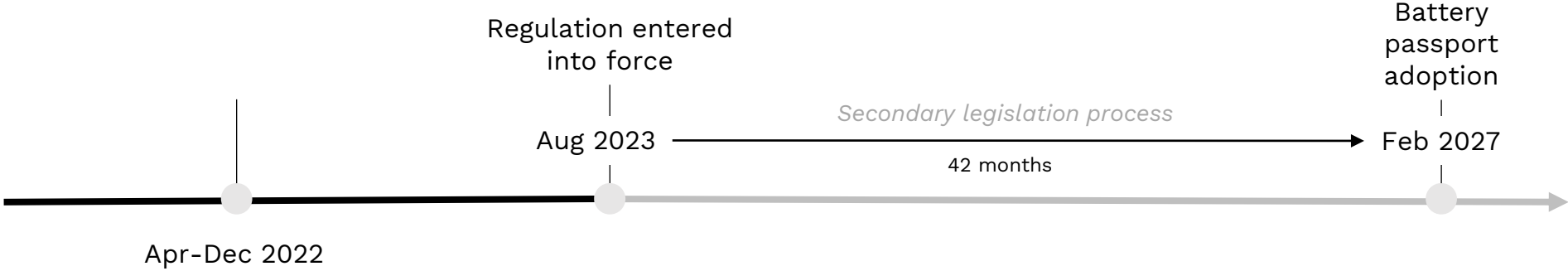
- **Collaborative Input:** Industries must contribute to develop a cohesive framework.
- **Starting Point:** The battery industry's approach to serve as an initial model.
- **Cross-Industry Synthesis:** Merging battery industry practices with insights from other sectors.
- **DPP Standard:** To be built upon existing industry standards, not from scratch.
- **Industry Integration:** Inclusion of standards from construction, BIM, and more.



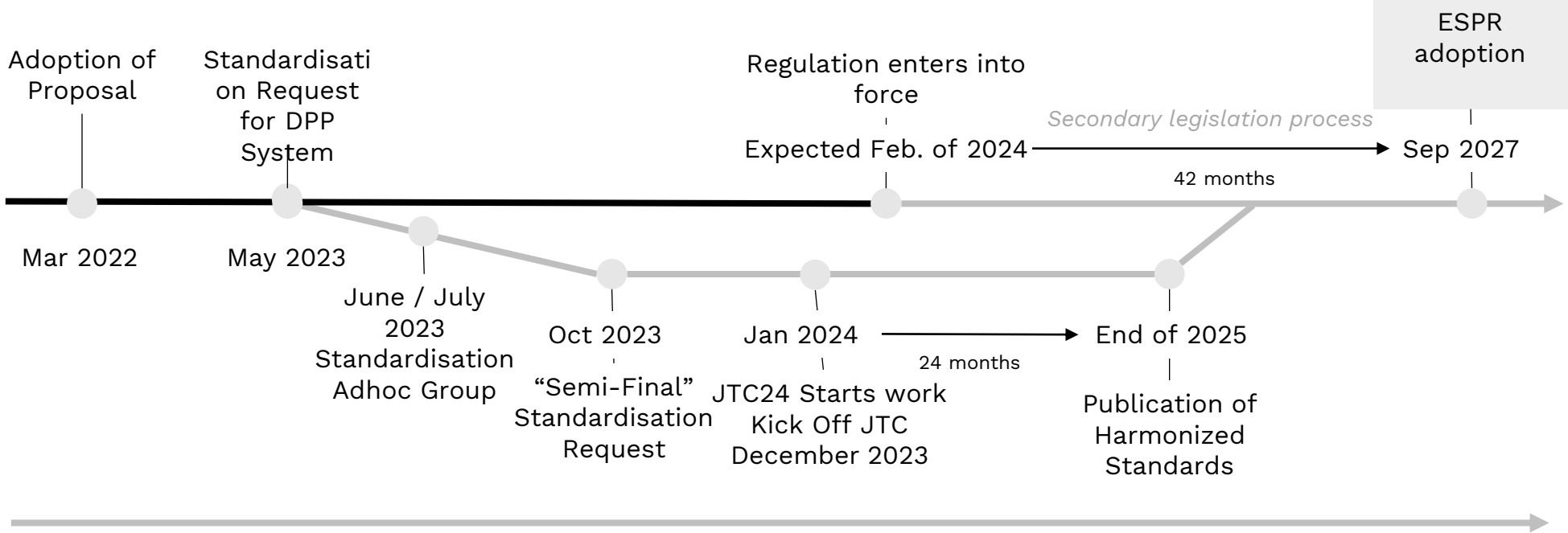
Tough Timeline for Standardisation



Battery Regulation



ESPR



Others Regulation

List of Standards to be delivered by JTC24

List of European standards to be drafted and deadlines for their adoption as referred to in Article 1

	Reference information	Deadline for the adoption by the ESOs
1.	European standard(s) on unique identifiers	31 December 2025
2.	European standard(s) on data carriers and links between physical product and digital representation	31 December 2025
3.	European standard(s) on access rights management, information, system security, and business confidentiality	31 December 2025
4.	European standard(s) on interoperability (technical, semantic, organisation)	31 December 2025
5.	European standard(s) on data processing, data exchange protocols and data formats	31 December 2025
6.	European standard(s) on data storage, archiving, and data persistence	31 December 2025
7.	European standard(s) on data authentication, reliability, integrity	31 December 2025
8.	European standards on Application Programming Interfaces (APIs) for the product passport lifecycle management and searchability	31 December 2025

How to participate into JTC24



Provisional Work Group Overview

Advisory group	Technical coordination	System elements		
<u>Work group 1</u>	<u>Work group 2</u>	<u>Work group 3</u>	<u>Work group 4</u>	<u>Work group 5</u>
Facilitate, coordinate and exchange between working groups	Use cases	Unique Identifier for Product	Individual decentral Data Repository	API for CRUD (Create, read, update, delete) of data
allocation of new work	System architecture	Unique Identifier for Economic Operator	System for (role /function/attribute-based) access rights management	Querying of Passport Data
coordinate the development of work program	Liaisons	Unique Identifier for Facilities	Verification of authentication	Back Up Data Base
Progress monitoring	Interaction with sector specific data standardisation	Data Carrier	Verification of DPP conformance	Data Modelling:
clarify non-technical issues	Interaction with EC	Registry	Cryptographic verification of DPP (digital signature check)	DPP Issuing Service
		Routing Services	Data verification of data integrity and originality	Data modelling services
			Logging Monitoring	Schema Definition

Technical Expert for elaborating harmonised standards (hEN) for system elements

- Select and adopt existing standards
- Elaborate interoperability solutions
- Elaborate new standards

Convener of Working Groups (WG)

Part of Liaison Organisations (e.g. ETSI)

Meetings

Plenary Meeting – 4 times/year – Decisions
 Work Group Meetings - Elaboration

Time Frame

JTC24 – 5 Years
 Delivery of hEN until end of 2025