

# **Future ESPR (Europe)**

## **AMCA 2024 European Fan Symposium**

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- 1. Ecodesign for Sustainable Products Regulation**
- 2. Ecodesign & EPDs/LCAs/PEFs**
- 3. Digital Product Passports (DPPs)**

# 1. Ecodesign for Sustainable Products Regulation

© European Commission



Making  
sustainable products  
the norm in Europe

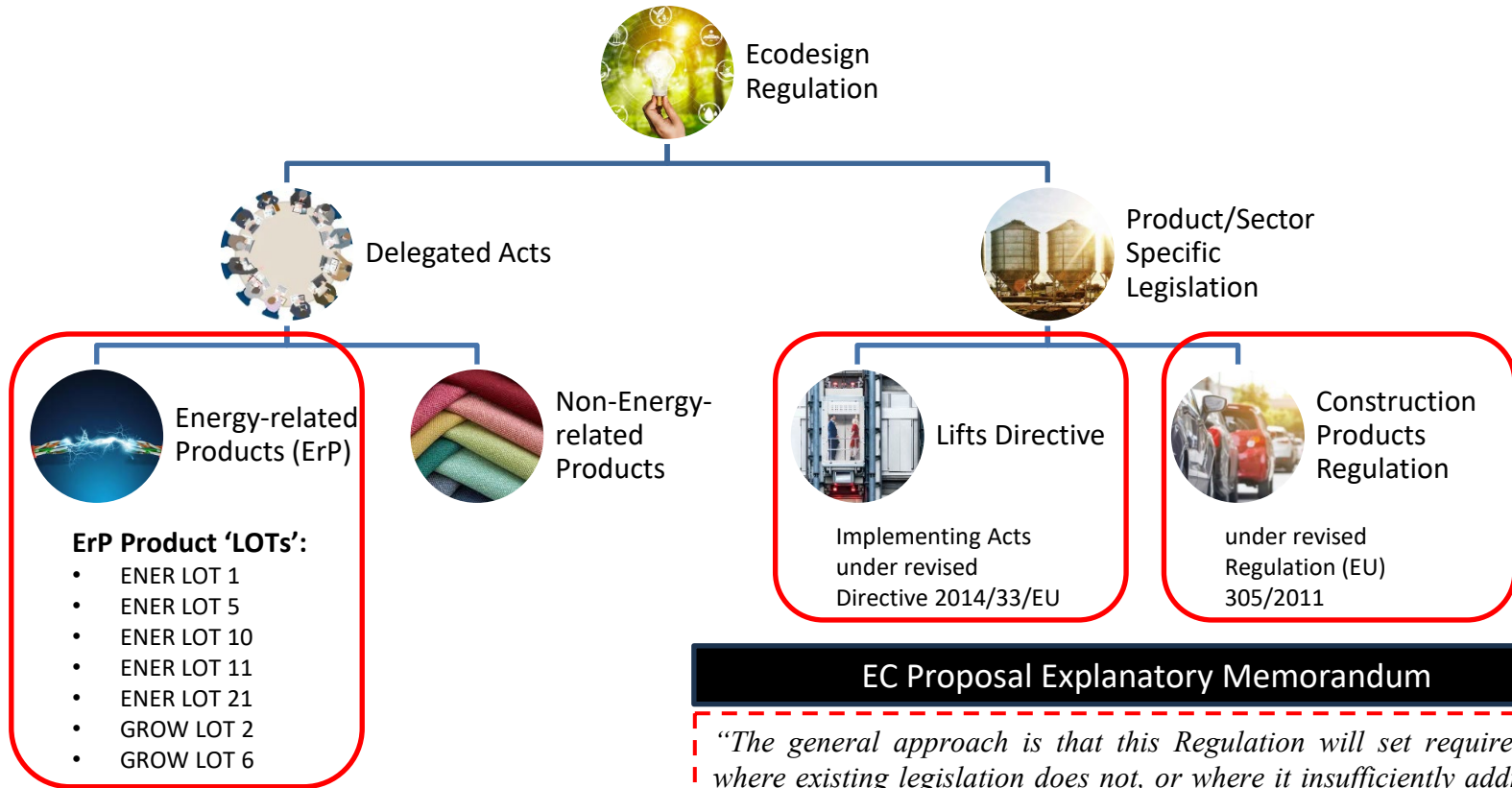


This Regulation applies to ***any physical good that is placed on the market or put into service, including components and intermediate products.***

Except for food, feed, medicines, living plants and animals, and products of human origin.

# Ecodesign for Sustainable Products Regulation

## Framework Regulation



### EC Proposal Explanatory Memorandum

*“The general approach is that this Regulation will set requirements where existing legislation does not, or where it insufficiently addresses environmental sustainability aspects. The legal principle that more specific rules will prevail over more general rules will therefore apply”.*

*“In addition, when formulating working plans, the Commission should take into account that, in continuation of current practice, the construction products Regulation[(CPR)], gives prevalence to sustainability requirements set under [ESPR] for energy-related products that are also construction products. This should be the case for instance for heaters, boilers, heat pumps, water and space heating appliances, fans, cooling and ventilating systems ... The [CPR] can apply to those products in a complementary manner where needed, mainly in relation to safety aspects, also taking account of other Union law on products such as on gas appliances, low voltage equipment and machinery”.*

# Ecodesign for Sustainable Products Regulation

**‘ecodesign requirement’** means a **performance requirement** or an **information requirement** aimed at making a product more environmentally sustainable;

The Commission shall, as appropriate to the relevant product groups and **with due consideration for all stages of their life cycle**, establish ecodesign requirements to improve the following product aspects:

- (a) durability;
- (b) reliability;
- (c) reuseability;
- (d) upgradability;
- (e) reparability;
- (f) possibility of maintenance and refurbishment;
- (g) presence of substances of concern;
- (h) energy use or energy efficiency;
- (i) resource use or resource efficiency;
- (j) recycled content;
- (k) possibility of remanufacturing and recycling;
- (l) possibility of recovery of materials;
- (m) environmental impacts, including carbon and environmental footprint;
- (n) expected generation of waste materials.



# Transitional Regime

**Recital:** “In order to preserve the preparatory work, it is therefore necessary to provide for **transitional rules allowing implementing measures on the products [below] mentioned to be adopted pursuant to Directive 2009/125/EC at the latest by 31 December 2026.** In addition, and in order to ensure the proper functioning of implementing measures adopted under article 15 of Directive 2009/125/EC, the adoption of amendments addressing the necessary technical issues should be done if relevant in accordance with the relevant provisions of the Ecodesign Directive at the latest by 31 December 2030”.

## ► Transitional regime

|                                |                                      |
|--------------------------------|--------------------------------------|
| <b>Industrial fans</b>         | Cooking appliances                   |
| Space and combination heaters  | Professional refrigeration equipment |
| Water heaters                  | Power transformers                   |
| External power supplies        | Imaging equipment                    |
| Photovoltaic panels            | Circulators                          |
| Water pumps                    | Air heating / cooling products       |
| Air conditioners inc. A-A HPs  | <b>Ventilation units</b>             |
| Vacuum cleaners                | Computers                            |
| Solid fuel local space heaters | Servers and data storage products    |
| Solid fuel boilers             |                                      |

## ► ESPR WP

|  |
|--|
| Electronic displays                              |
| Light sources and separate control gear          |
| Welding equipment                                |
| <b>Electric motors and variable speed drives</b> |
| Household dishwashers                            |
| Household washing machines and washer-dryers     |
| Refrigerating appliances (household)             |
| Refrigerating appliances with sales function     |
| EV charging boxes                                |
| Professional laundry                             |
| Professional dishwashers                         |

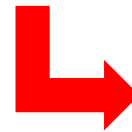
 **2030ish**

\* The timing of the ESPR implications for ‘Transitional’ LOTs will be determined by the deadlines in the respective Review Clauses.

# Prioritisation & Planning

## Ecodesign Working Plan 2025-2028+

- (a) iron and steel;
- (b) aluminium;
- (c) textiles, in particular garments and footwear;
- (d) furniture, including mattresses;
- (e) tyres;
- (f) detergents;
- (g) paints;
- (h) lubricants;
- (i) chemicals;
- (j) energy related products for which ecodesign requirements are to be set for the first time or for which existing measures adopted pursuant to Directive 2009/125/EC are to be reviewed under this Regulation; and
- (k) information and communication technology products and other electronics.



### Deadline

| April 2025 |    |    |    |    |    |    |
|------------|----|----|----|----|----|----|
| M          | T  | W  | T  | F  | S  | S  |
|            | 1  | 2  | 3  | 4  | 5  | 6  |
| 7          | 8  | 9  | 10 | 11 | 12 | 13 |
| 14         | 15 | 16 | 17 | 18 | 19 | 20 |
| 21         | 22 | 23 | 24 | 25 | 26 | 27 |
| 28         | 29 | 30 |    |    |    |    |

### ► ESPR WP

|  |
|--|
| Electronic displays                          |
| Light sources and separate control gear      |
| Welding equipment                            |
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| Household dishwashers                        |
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| Refrigerating appliances (household)         |
| Refrigerating appliances with sales function |
| EV charging boxes                            |
| Professional laundry                         |
| Professional dishwashers                     |



## 1. Reparability Scoring:

- **GROW LOT X:** Smartphones and tablets

Table 4

Reparability classes of smartphones and slate tablets

| Reparability Class   | Reparability Index (R) |
|----------------------|------------------------|
| A (most repairable)  | $R \geq 4,00$          |
| B                    | $4,00 > R \geq 3,35$   |
| C                    | $3,35 > R \geq 2,55$   |
| D                    | $2,55 > R \geq 1,75$   |
| E (least repairable) | $1,75 > R \geq 1,00$   |

## 2. Self-monitoring Requirements:

- **ENER LOT 1:** Space heaters

- The heater shall determine and store, either on the heater and/or on remote devices, the following information. The information shall be determined and stored for each heating function (space and/or water heating) for each calendar year as cumulative values per day, per month, and per year. The information referred to in points a), b), and c) shall be determined and stored also as real-time values.
  - real-world final energy consumption* expressed in kWh for electricity and/or in any other unit for fuels consumed;
  - real-world heat delivered*, expressed in kWh for electricity and/or in any other unit for fuels consumed;
  - real-world energy efficiency*;
  - real-world operating times expressed in days, hours and minutes*;
  - number of on/off cycles*;

## 3. Critical Raw Materials:

- **ENER LOT 30: Review Clause:**
  - “setting additional resource efficiency requirements for products in accordance with the objectives of the circular economy, including identification and reuse of rare earth in permanent magnet motors”.
- **GROW LOT 9:**
  - Information Requirement:
    - indicative weight range (less than 5 g, between 5 g and 25 g, above 25 g) at component level, of the following critical raw materials:
      - (a) Cobalt in the batteries;
      - (b) Neodymium in the HDDs

## 4. Substance of Concern Restrictions:

- **ENER LOT 5:**
  - 4. Halogenated flame retardants
    - The use of halogenated flame retardants is not allowed in the enclosure and stand of electronic displays.

## 5. Recycled Content:

## 6. Carbon Footprint/Product Environmental Footprint:

- **Batteries Regulation**
- **Ecodesign for Photovoltaics:** Preparatory study
  - Using PEF methodology

## 7. Removability & Replaceability:

- **Batteries Regulation:** Article 11

**BE PREPARED**



# Horizontal Initiatives

## Reparability Scoring System Product relevance scoping study

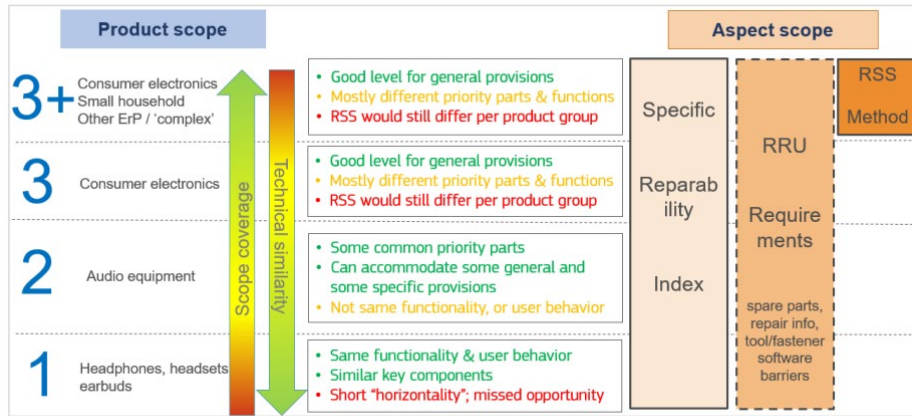
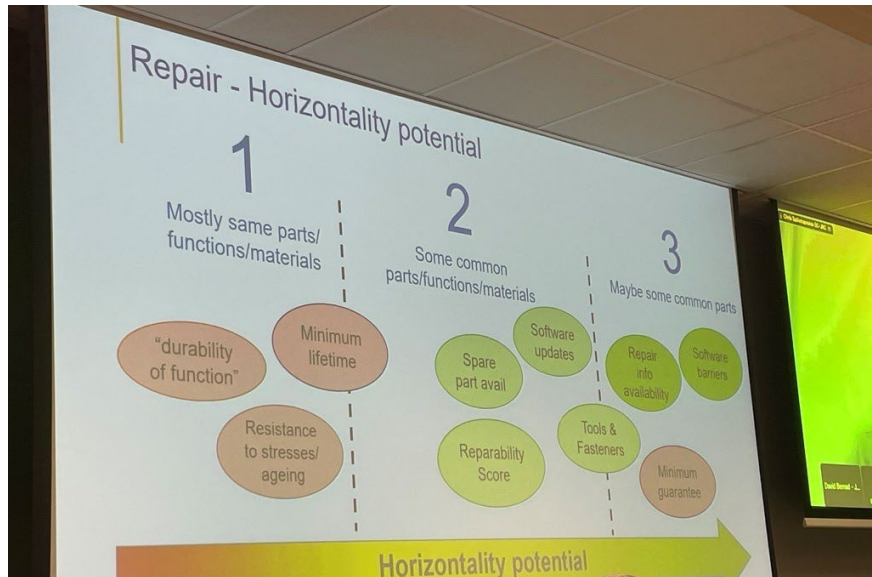


Figure 15: Options of different "horizontality" levels for regulating Reparability Scoring. Source: JRC own elaboration



## Preparatory study on CRMs and on Recycled Content

Table 3: Recommended five product-material bins with details relevant to the prioritisation

| Product-material bin   | Environmental ranking   | Supply risk ranking CRM   | Legislative feasibility             | Life-time | Comments  |
|--|---|---|-------------------------------------|-----------|---|
| Household refrigerators and freezers (white goods) / Plastics    | Plastics: 1<br>All materials: 7<br>3 highest amounts of materials:<br>- Ferro: 49%<br>- Bulk plastics: 19%<br>- Technical plastics: 15%                           | 15<br>Top 5:<br>- Bauxite/Al<br>- Silicon metal<br>- Palladium<br>- Coking coal<br>- Copper | Review due December 2025 under ESPR | 16.0      | Results from this study would need to await the review.   |
| Imaging equipment (ICT / electronics) / Plastics                 | Plastics: 2<br>All materials: 3<br>3 highest amounts of materials:<br>- Ferro: 40%<br>- Bulk plastics: 31%<br>- Technical plastics: 11%                           | 9<br>Top 5:<br>- Palladium<br>- (Tin)<br>- Bismuth<br>- Bauxite/Al<br>- Antimony            | Preparatory study ongoing under ED  | 5.3       |   |
| Electric motors (industrial /B2B) / Ferrous & non-ferrous metals | Ferrous metals: 1<br>Non-ferrous metals: 1<br>All materials: 6<br>3 highest amounts of materials:<br>- Ferro: 75%<br>- Non-ferro: 22%<br>- Technical plastics: 2% | 13<br>Top 5:<br>- Bauxite/Al<br>- Silicon metal<br>- Palladium<br>- Coking coal<br>- Copper | Due for review under ESPR           | 9.3       | No other industrial / B2B are relevant. Results from this study would need to await the review. |



## 2. Ecodesign & EPDs/ LCAs/PEFs



## Methodological Diversity Leads to Fragmentation + Non-Comparability

Home > The International Journal of Life Cycle Assessment > Article

**Same product, different score: how methodological differences affect EPD results**

LCA COMMUNICATION AND LCA FOR ISO LABELS | Open access | Published: 30 November 2023  
Volume 29, pages 291–307, (2024) | Cite this article




Journal of Cleaner Production  
Volume 375, 15 November 2022, 133999

### Assessing the completeness and comparability of environmental product declarations

Flávia Bittencourt Moré<sup>a</sup>, Bruno Menezes Galindro<sup>b</sup>, Sebastião Roberto Soares<sup>a</sup>

“Numerous different but at the same time compliant EPDs can be obtained for the same product, highlighting a serious harmonisation issue within the EPD system. EPDs are thus not necessarily accurate, and it remains doubtful whether EPD comparability can be achieved. This weakness of the EPD system can in the worst case be exploited by producers to obtain lower results and undermines the system”.

<https://link.springer.com/article/10.1007/s11367-023-02246-x>

“From four product categories, 436 EPDs were selected, each based on one PCR/sub-PCR. Only 5.04% of the EPDs presented all the mandatory information required; this lack of information affected comparability, since items that are not reported cannot be compared. This, together with flexible definitions of some elements (such as functional/declared units, allocation procedures, and cut-off rules) in the PCRs led to low rates of comparability. Of all the potential comparisons, 8.06% of the documents could not be compared in any aspect, 89.15% were considered incomparable, 2.75% could be compared with caution, and only 0.04% were comparable”.

<https://www.sciencedirect.com/science/article/abs/pii/S0959652622035715>

# The ESPR Promise: Life-Cycle Environmental Performance



2030

Revised EPBD life-cycle GWP declaration for ALL new buildings (2028: X < 1000 m2)

Total GWP is communicated as a numeric indicator for each life-cycle stage expressed as kgCO2e/m2.y (of useful floor area) averaged for one year of a reference study period of 50 years.

The data selection, scenario definition and calculations shall be carried out in accordance with [EN 15978 \(EN 15978 - 'Sustainability of construction works'](#).



The scope of building elements and technical equipment is as defined in the Level(s) common EU framework for indicator 1.2.

By 31 December 2025: The Commission is empowered to adopt delegated acts in accordance with Article 29 to amend Annex III to set out a Union framework for the national calculation of life-cycle GWP.



**RE2020**, the new 'environmental regulation', covers the entire life cycle of the building. Total emissions caps for new buildings - depending on the type of building (single-family house, multi-family house) and climate zone – which will be gradually tightened over time. The environmental impact of each material, piece of equipment and unit of energy consumed is assessed in a building's Life Cycle Assessment (LCA).

Where a national calculation tool or method exists or is required for making disclosures or for obtaining building permits, that tool or method may be used to provide the required disclosure. Other calculation tools or methods may be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework.

## Product Environmental Footprint (PEF)/LCA Scoring/Classes of Performance/Labelling

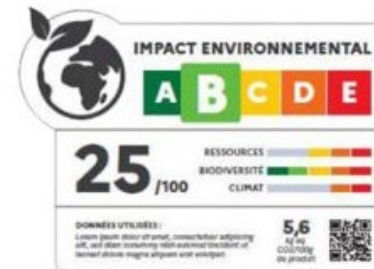


[EU COM 2012: Study on different options for communicating environmental information for products](#)

**Under the revised EPBD:** Where product-specific regulations for energy-related products adopted under the ESPR include specific product information requirements for the purpose of the calculation of ... life-cycle GWP under the EPBD, national calculation methods shall not require additional information for the life-cycle contribution of that product to the building's GWP.



ADEME launched a [public consultation](#) (French only) on w/c 6 February 2023 on the future "environmental score" for products ([Textiles/Food as priorities](#)).



2030

Revised EPBD life-cycle GWP declaration for



Scope 3 - Category 1:  
Purchased goods &  
Services (Upstream)

Scope 3 - Category 11:  
Use of sold products  
(Downstream)

Scope 3 - Category 12: End-  
of-Life treatment of sold  
products (Downstream)

**Under the revised EPBD:** Where product-specific regulations for energy-related products adopted under the ESPR include specific product information requirements for the purpose of the calculation of ... life-cycle GWP under the EPBD, national calculation methods shall not require additional information [for the life-cycle contribution of that product to the building's GWP].







ecomatters

NRVU

RVU - BVU

RVU - UVU

Fan



# 3. Digital Product Passports

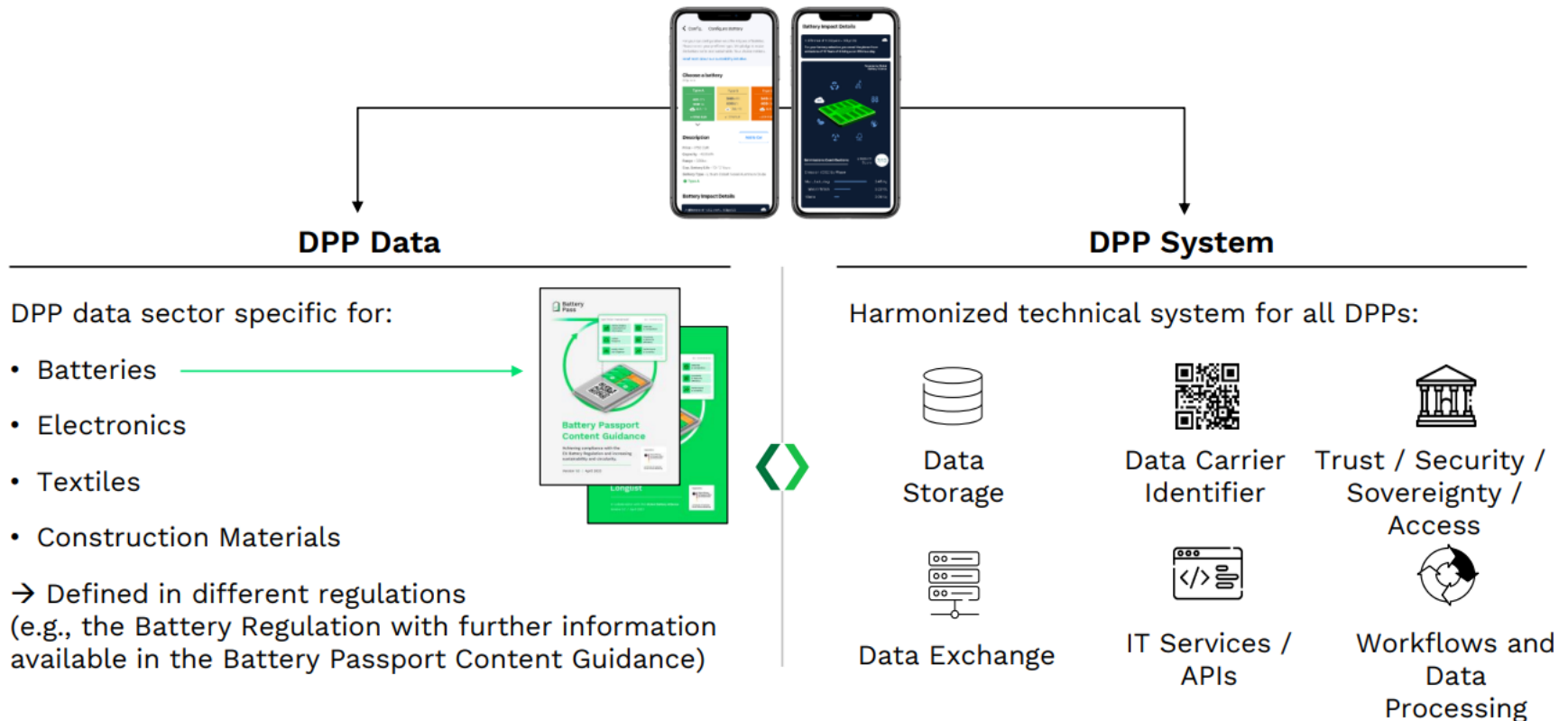


# Digital Product Passports (DPP)

“The information requirements shall provide that **products can only be placed on the market or put into service if a digital product passport is available** in accordance with the applicable delegated acts ... and [with the DPP essential requirements] ... The data in the digital product passport shall be accurate, complete and up to date”.



## A DPP consist on data and system



## Draft standardisation request (sReq)

### ANNEX I

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                      |

## CEN/CENELEC JTC 24

### PROPOSAL(S)

BT,

- having considered the DIN and DKE proposal for a new field of technical activity on 'Digital Product Passport' as described in Annex;
- considering that the following Members have expressed commitment to participate: <Members>
- decided to create a new CEN-CLC/JTC XXX with the following preliminary title and scope:

Title: *Digital Product Passport (DPP)*

Scope: *Development of deliverables for the deployment of the Digital Product Passport (DPP) and the data delivering ecosystem while ensuring cross sectoral and cross system interoperability.*

*The new JTC does not develop sector specific standards and standards to be used for DPP-system or DPP-data which are already covered by the scope of other CEN and CENELEC TCs.*

- allocated the secretariat of CEN-CLC/JTC XXX to DIN;
- asked the new CEN-CLC/JTC XXX to submit its final title and scope for BT approval, following its first kick-off meeting.

2023-06-26 – CMU

### JTC 24 - 'Digital Product Passport - Framework and System'

- **Convenor:** Fraunhofer Institute (Germany)
- **Secretariat:** DIN (Germany)



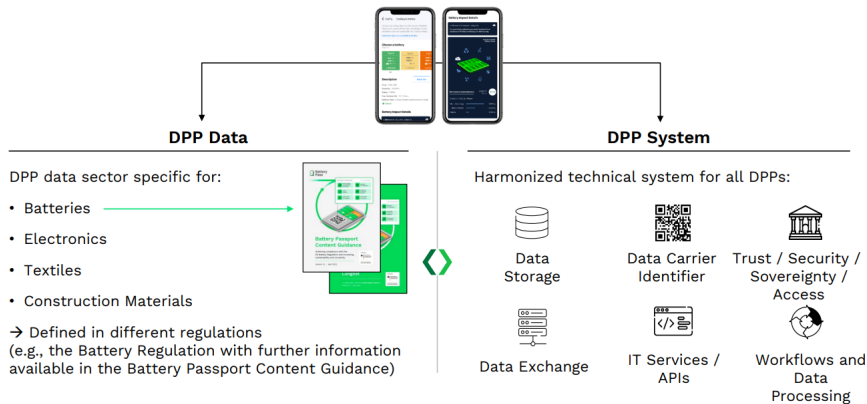
# Digital Product Passports (DPP)

## ?Exemption?

“When establishing the requirements related to the product passport, **the Commission may exempt product groups from the requirement to have a product passport** where:

(b) **other Union law includes a system for the digital provision of information** related to a product group for which the Commission considers that it achieves the objectives referred to in paragraph 3, points (a) and (b)”.

A DPP consist on data and system



**Energy Labelling (Framework)  
Review Deadline – August 2025**

# Other New ESPR 'Tools'



## Mandatory Green Public Procurement

Mandatory GPP criteria to be set for contracting authorities or contracting entities

The Commission is empowered to adopt implementing acts setting out minimum requirements in the form of technical specifications, award criteria, contract performance conditions or targets.

Those minimum requirements shall be based on the ecodesign requirements in product LOTs and be based on the two highest performance classes, the highest scores or, when not available, on the best possible performance levels as set out in the product LOTs.



## Prevention of destruction of unsold consumer goods

Transparency requirements for those discarding unsold goods, and possibility to ban destruction for relevant product groups

Ban on destruction of **apparel** and **footwear** after 2 years

**Scope:** Any product, excluding components and intermediate products, primarily intended for consumers

**Application Data:** First full financial year from ESPR Eif.

By 12 months from ESPR Eif, the Commission shall adopt implementing acts setting out the details and format, including the delimitation of product types or categories and a verification methodology.



## Market surveillance and customs controls

Strong focus on controls of regulated products, incl. planned market surveillance activities

Support to common projects and investments

National market surveillance strategy must include a section on ESPR market surveillance activities that are planned to ensure that appropriate checks, including, where appropriate, physical and laboratory checks, are undertaken.

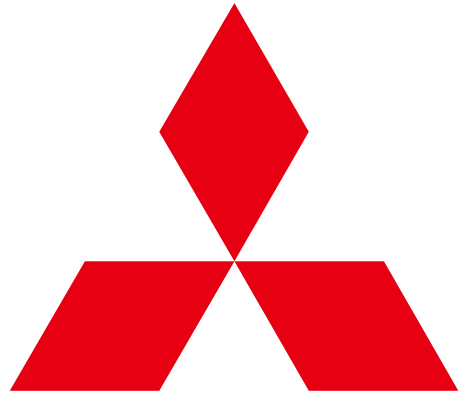
Every 4 years Commission public report, including indicative benchmarks for MSA on frequency of checks, and a list of priorities in terms of products and requirements.

On ADCO priorities, Commission to organise joint testing projects and joint investment in testing capacity.

COMMISSION IMPLEMENTING DECISION (EU) 2024/1456

of 27 May 2024

designating a Union testing facility for eco-design and energy labelling in accordance with Regulation (EU) 2019/1020 of the European Parliament and of the Council



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*Changes for the Better*