Ecodesign for Sustainable Products Regulation (ESPR) and Digital Product Passport (DPP)

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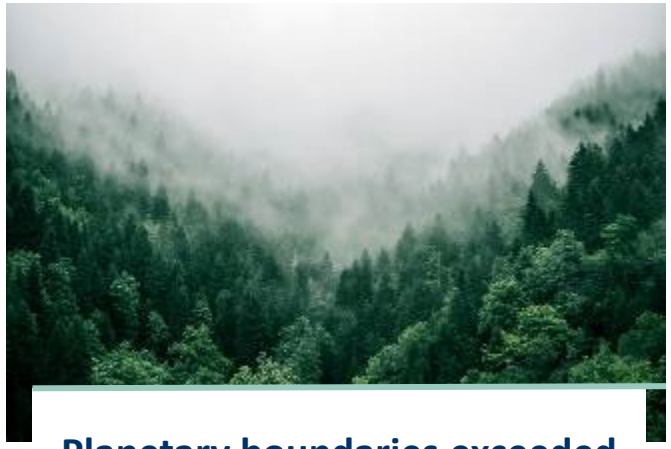
A new Regulation on Sustainable Products (ESPR)

Inefficient use of resources

- **Global extraction of materials tripled** since 1970; **waste generation** set to increase **70%** by 2050;
- Over **90% of biodiversity loss and water stress** from resource extraction and processing



Planetary boundaries exceeded

- EU has less than 10% of world population, yet its **consumption-based impacts are close to or exceed boundaries** for climate change, particulate matter, land use and mineral resources (Sala et al, 2020)

New business opportunities

- **Better functioning** of the **Single Market**
- **Reduce material use** and **expenditure**
- **Level playing field**

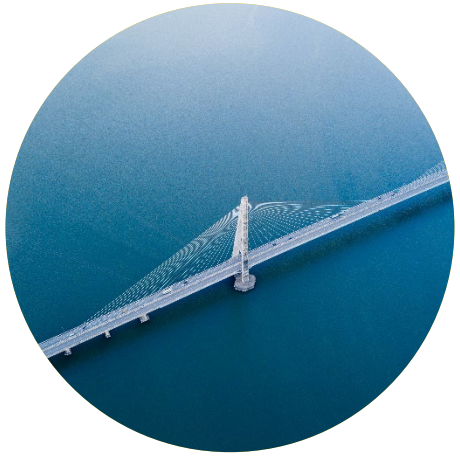
How will ESPR work?
2. By extending the Ecodesign approach

Scope extension

Moving beyond energy-related products to a wide product scope

New requirements

Plus clarification of existing requirements



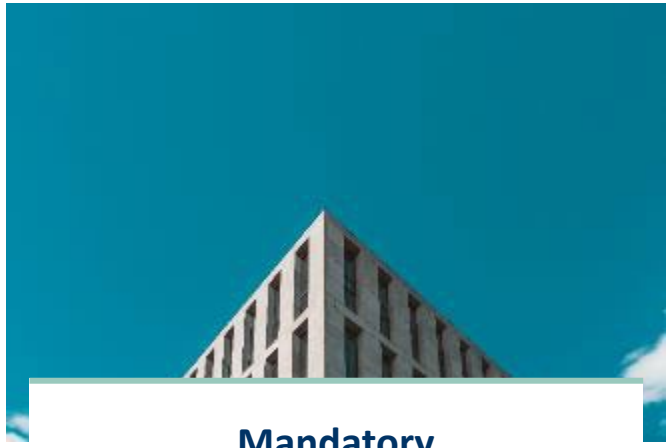
Horizontal approach

Requirements in addition to product-specific requirements

Increased focus on product information

e.g. Digital Product Passport; labels

How will ESPR work?
3. By adding new tools



Mandatory Green Public Procurement

ESPR will enable mandatory GPP criteria to be set in delegated acts for public contracting authorities

Prevention of destruction of unsold consumer goods

Transparency requirements for those choosing to discard unsold goods, and possibility to ban their destruction for relevant product groups.

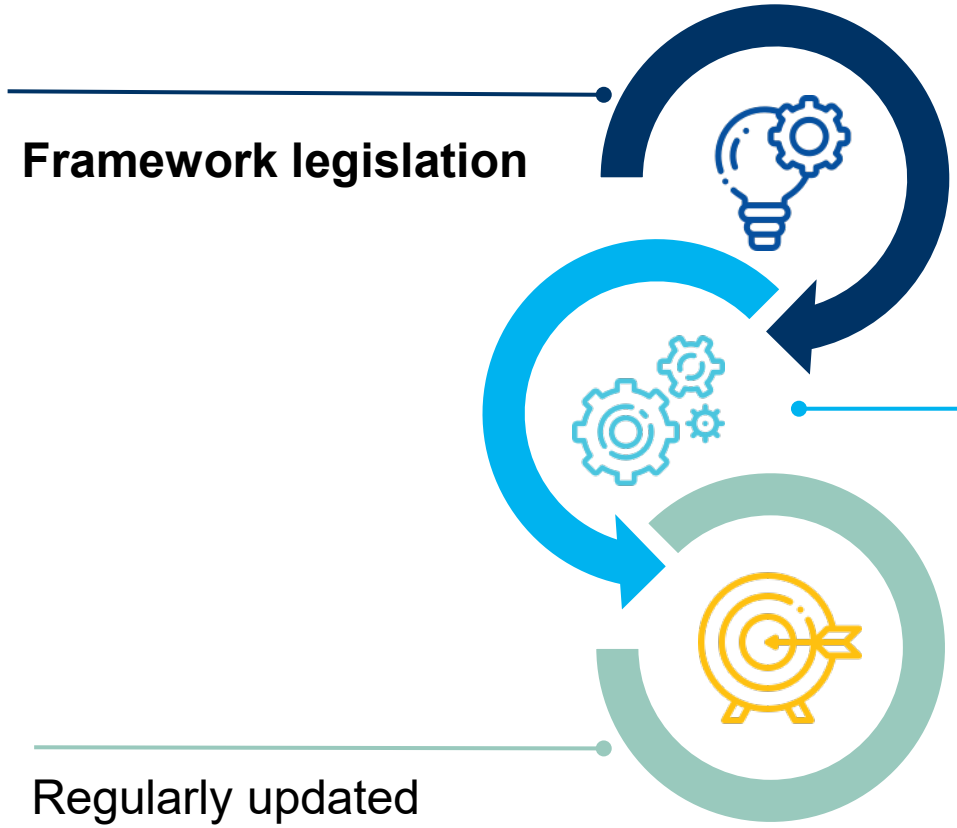
Market surveillance and customs controls

Reinforcing controls on regulated products, including market surveillance implementing plans, possible targets on checks, support to common projects and investments

How will ESPR work?

1. By building on the existing Ecodesign Directive

Key features of Ecodesign Directive approach maintained



Framework legislation

Product-specific measures based on detailed impact assessment

Regularly updated **multiannual working plans** setting out priorities

The scope

Out of the scope of ESPR

Medicinal and veterinary products

Food and feed

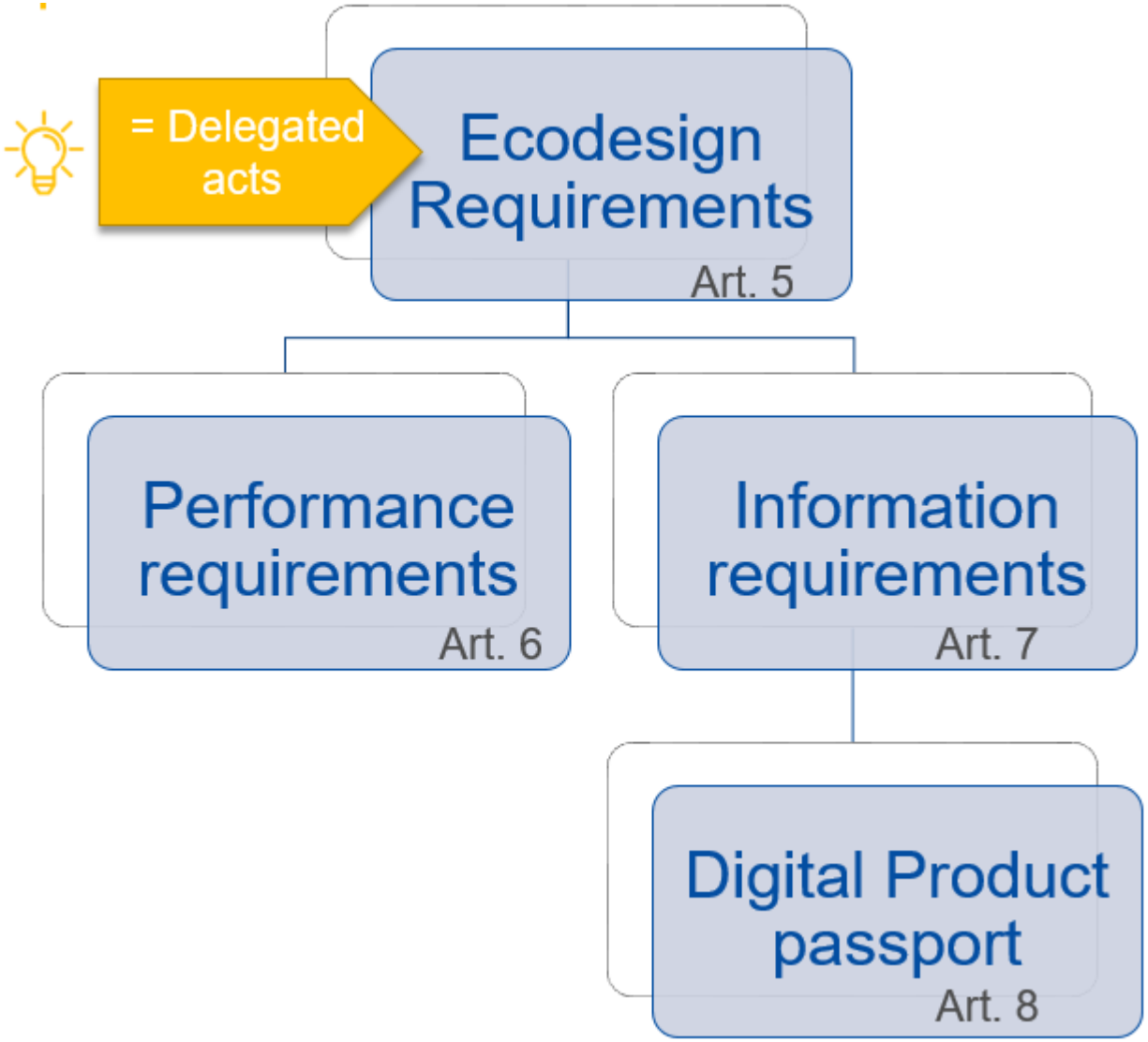
Living plants and micro-organisms

In scope of the existing Ecodesign Directive

Energy related products

In scope of new Ecodesign (ESPR)

ESPR
Key Ecodesign product aspects



- **durability**, **reliability**; **reusability**; **upgradability**;
- **reparability**; possibility of **maintenance** and **refurbishment**;
- presence of **substances of concern**;
- **energy use** or **energy efficiency**;
- **resource use** or **resource efficiency**;
- **recycled content**;
- possibility of **remanufacturing** and **recycling**;
- possibility of **recovery** of materials;
- **environmental impacts**, including carbon and environmental footprint;
- expected generation of **waste** materials.

DPP – a tool to support three policy objectives

Increase environmental sustainability - Promote circularity - Support legal compliance

- The DPP is a key deliverable to digitalise our economy
- DPP-system will be designed to be potentially used by any legislation that would require the provision of digital information
- The DPP-system shall build on existing best practices at international level, while also allowing the possibility of using new technologies and approaches
- By **February 2027** the first DPPs (batteries for e-vehicles) shall be operational. Later in the same year also the first Delegated Acts on ESPR regulated products should become enforceable (including requirements on DPPs)

DPP design

DPP-system

Digital Product Passport

DPP-data

*(the "**HOW**". To be developed horizontally for all product groups and legislations)*

*(the "**WHAT**". To be identified when developing product-group specific secondary legislation)*

- All **standards** and **protocols** related to the IT architecture (**8** areas)
- The DPP registry

- Information will be **product-group specific** and identified through dedicated legislation.
- It may include information/data on one or more of the following areas:
  - Technical performance
  - Environmental sustainability performance
  - Circularity aspects
  - Legal compliance
  - Product-related information

DPP key elements

- DPP is based on a **decentralised** approach for data storage.
- The DPP shall be uniquely linked to a product.
- Access to data will take place through a **data carrier**.
- Access to DPP-data based on a **need-to-know** basis (there will be public and restricted data)
- **3** possible levels of **granularity**: (i) model, (ii) batch, (iii) item
- Existing data already provided digitally should be linked whenever technically possible (e.g., to SCIP database, ICSMS, EPREL, etc)

Tier 3 suppliers

Tier 2 suppliers

Tier 1 suppliers

Economic operator placing the product on the market

Consumers/procurers

Other end-users (e.g. recyclers)

DPP registry

Digital Product Passport (DPP)

Unique product identifier
Unique economic operator identifier
Unique facility identifier
Additional data for automatic checks by custom authorities

Circularity data accessible to **consumers**
Circularity data accessible to other **end-users** (e.g. recyclers)
Circularity data accessible to **authorities**

Sustainability data accessible to **consumers**
Sustainability data accessible to other **end-users** (e.g. recyclers)
Sustainability data accessible to **authorities**

Other product-related data accessible to **consumers**
Other product-related data accessible to other **end-users** (e.g. recyclers)
Other product-related data accessible to **authorities**

Compliance related documents accessible to **consumers**
Compliance related documents accessible to other **end-users** (e.g. recyclers)
Compliance related documents accessible to **authorities**

DPP

Repairers/remanufacturers

European Commission

Standardisation request in support of DPP

- Basis for future **harmonised standards**

- **8 new areas of harmonised standards to be drafted** to support the implementation of the proposed **DPP-system**. In particular:
  - a) Unique identifiers
  - b) Data carriers and links between physical product and digital representation
  - c) Access rights management, information security, and business confidentiality
  - d) Interoperability (technical, semantic, organisation)
  - e) Data processing , data exchange protocols, and data formats
  - f) Data storage, archiving, and data persistence
  - g) Data authentication, reliability, integrity
  - h) APIs for the DPP lifecycle management and searchability

Thank you

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