



The Digital Product Passport (DPP) as a tool to promote sustainability and circularity

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Why an initiative on Sustainable Products?



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

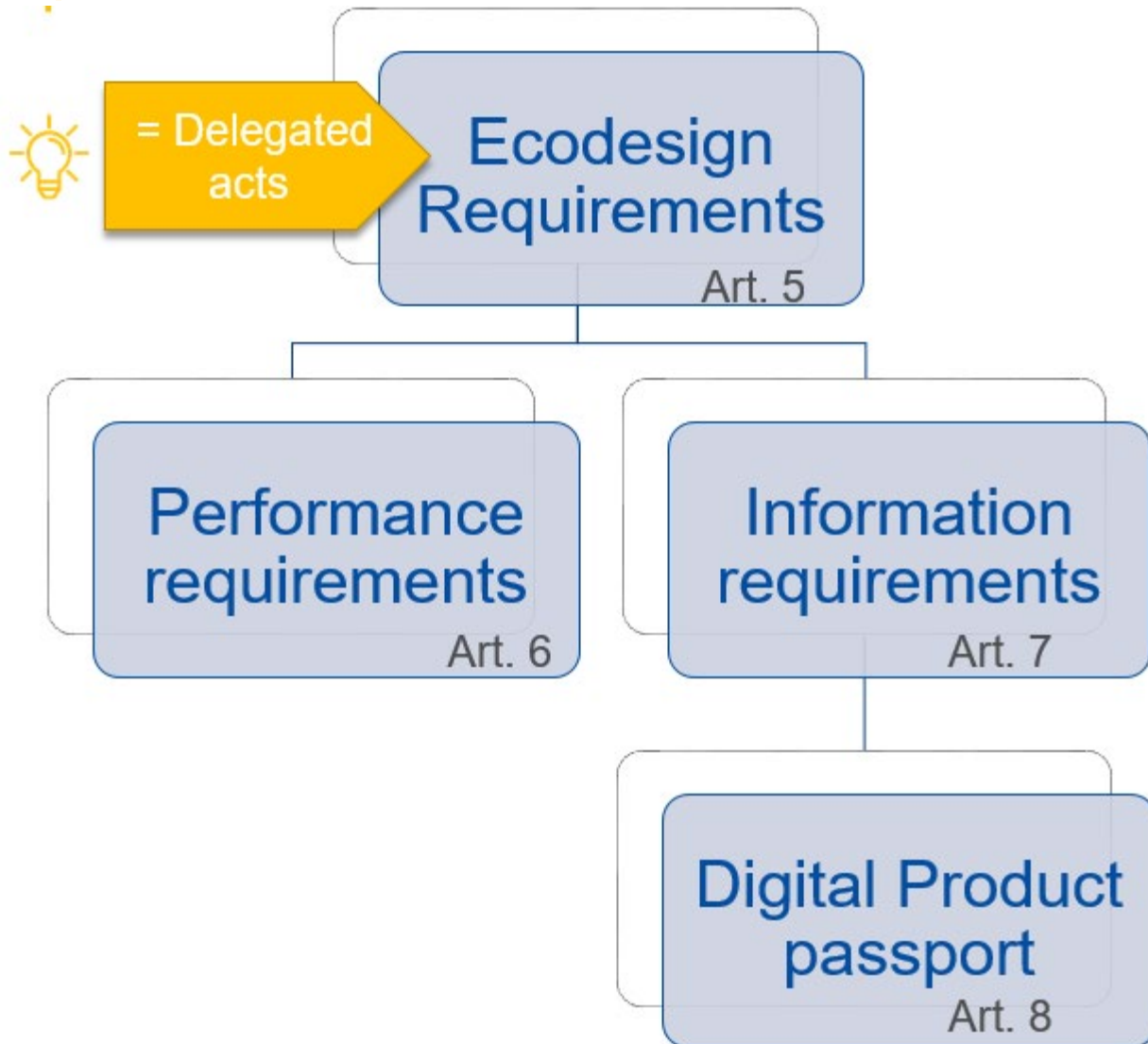
- EU has less than 10% of world population, yet its **consumption-based impacts are close to or exceed boundaries** for climate change, particulate matter, land use and mineral resources (Sala et al, 2020)



New business opportunities

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

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.

Legal ‘architecture’ of the DPP in ESPR

There are 3 ‘milestone’ introduced ahead of the full operationalisation of the DPP:

1. Introduction of the **concept**, description of the **scope**, identification of some **key features** already in the ESP Regulation
2. Identification of **essential technical requirements** to be developed through standardisation process. A safety clause is introduced in case of delays or quality of the standards not ‘fit for purpose’. In such case the Commission shall adopt **common specifications** with the technical requirements needed
3. Identification of the **specific information** to be included in the DPP for each product regulated when developing the corresponding Delegated Act

DPP main characteristics

- ✓ **Interoperability** should be the driving design criterion. This requires, amongst other things, the DPP to rely on **global open standards** (no proprietary solutions). Interoperability is meant both along one value chain and between different value chains
- ✓ Information included in the DPP should be **specific** to a product group
- ✓ Technical solutions should be developed in close collaboration with stakeholders through a **standardisation process**
- ✓ The DPP should rely, to the maximum extent technically possible, on information already provided and included in other databases (e.g. EPREL, SCIP, etc)
- ✓ Access to information should be granted depending on different “access rights”, depending on the role of each stakeholder in the product value chain (need-to-know principle)

DPP design



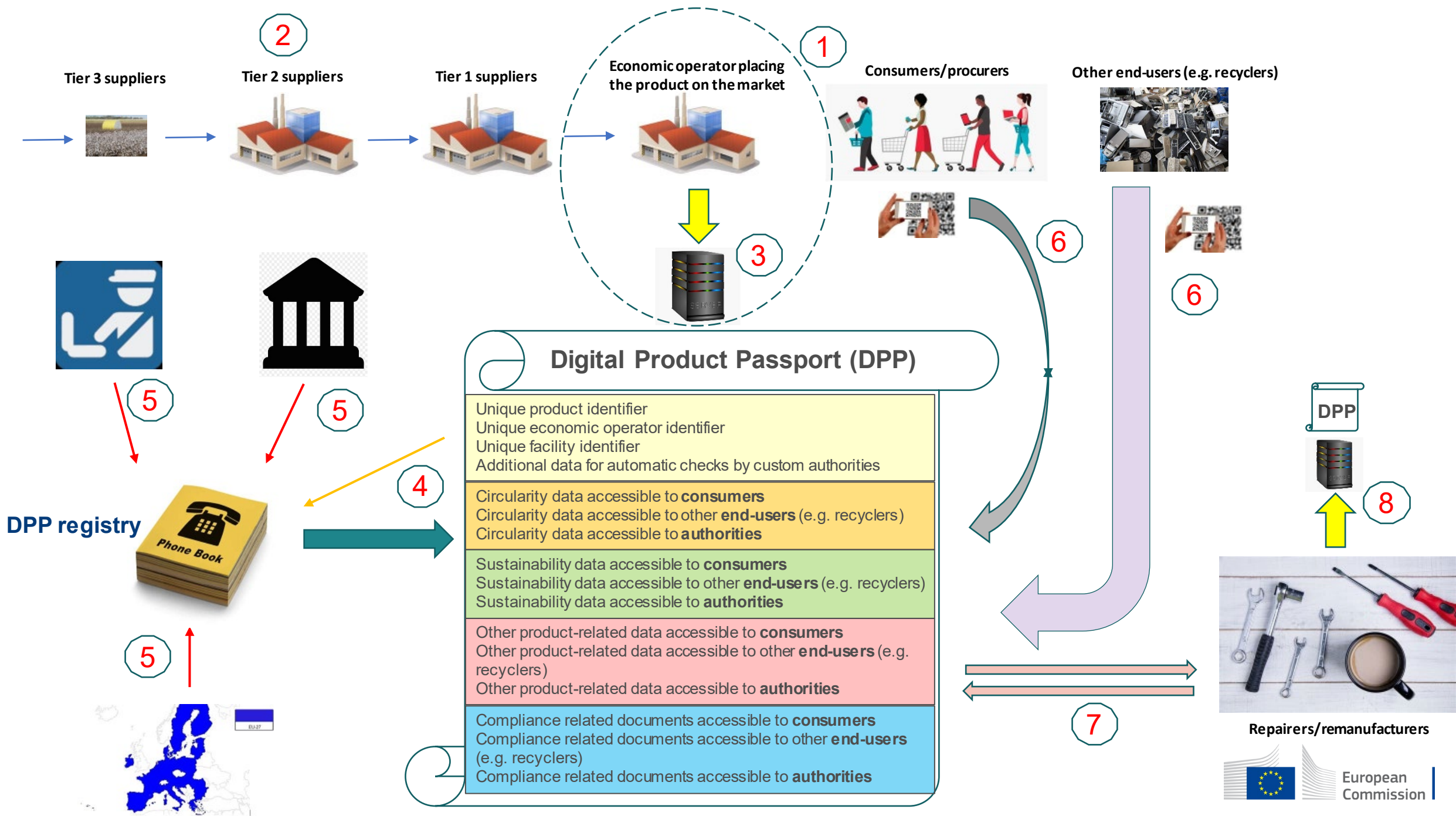
- All **standards** and **protocols** related to the IT architecture, like standards on:
 - Data carriers and unique identifiers
 - Access rights management
 - Interoperability (technical, semantic, organisation), including data exchange protocols and formats
 - Data storage
 - Data processing (introduction, modification, update)
 - Data authentication, reliability, and integrity
 - Data security and privacy
- The DPP registry

Possible Track & Trace identifiers

- Economic operator's name, registered trade name
- Global Trade Identification Number or equivalent
- TARIC code or equivalent
- Global location number or equivalent
- Authorised representative
- ...

Example of potential attributes

- Description of the material, component, or product
- Recycled content
- Substances of concern
- Environmental footprint profile
- Classes of performance
- Technical parameters
- ...



Thank you



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