



# Ecodesign for Sustainable Products Regulation & Digital Product Passport

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# Why DPP in ESPR

The ESPR Impact Assessment clearly indicated that some of the problems hindering more **circularity** of our economy and higher **environmental sustainability** of the products placed on the market are connected to lack of consistent access to relevant information, where the relevancy is a function of different stakeholders' interest

The Digital Product Passport (DPP) is a tool designed to address this problem. In particular:

- It will exploit the great potential that digital solutions provide to collect, organise, and store information in efficient and secure ways
- It will include **product-specific** information relevant to promote circularity, sustainability and related legal compliance.
- The final objective is for the DPP to become the “**one entry point**” to have access to all existing information related to a product during its entire life cycle

# ESPR

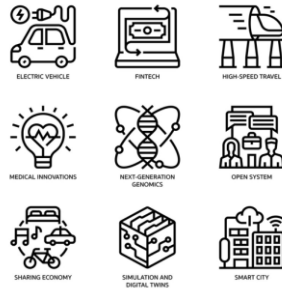
## Digital Product Passport (DPP)



Tracking of **raw materials extraction/production**, supporting due diligence efforts



Benefit **market surveillance authorities and customs authorities**, by making available information they would need to carry out their tasks



Enable **manufacturers** to create products **digital twins**, embedding all the information required



Make available to **public authorities and policy makers** reliable information. Enable to link **incentives** to **sustainability performance**



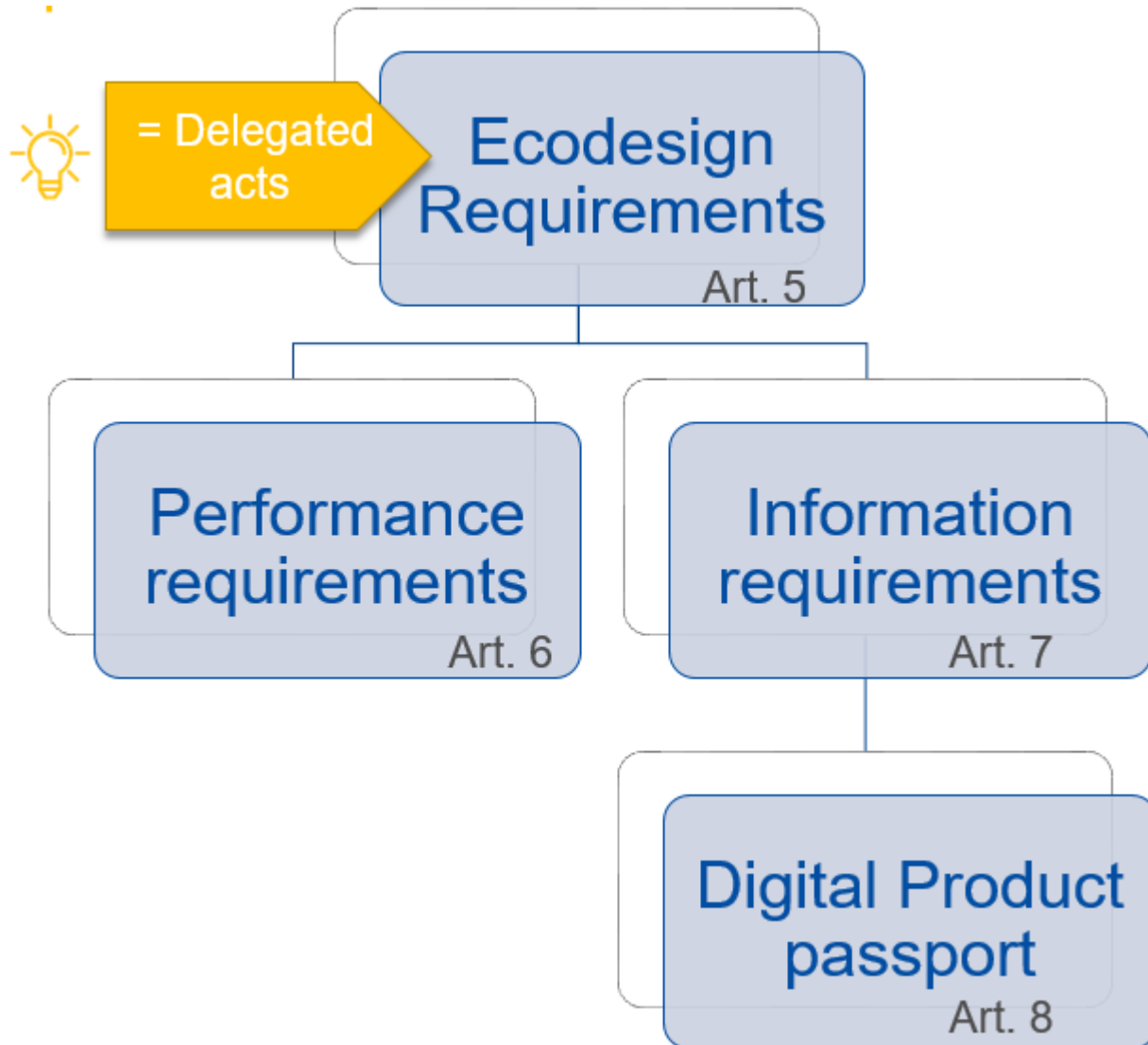
Tracking the life story of a product, enabling services related to its **remanufacturing, reparability, re-use/re-sale/second-life, recyclability**, new business models



Allow **citizens** to have access to **relevant and verified information** related to the characteristics of the products they own or are considering to buy/rent (e.g. using apps able to read the identifier)

# 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.

# 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 (**art. 2, 8, 9, 11, 12, 13**)
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 (**art. 10, 35**).
3. Identification of the **specific information** to be included in the DPP for each product regulated when developing the corresponding Delegated Act (**art. 7, Annex III**)

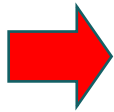
# DPP main characteristics

- ✓ **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 (**art. 9, 10**)
- ✓ Information included in the DPP should be **specific** to a product group (**art. 8**)
- ✓ Technical solutions should be developed in close collaboration with stakeholders through a **standardisation process** (**art. 10**)
- ✓ The DPP should rely, to the maximum extent technically possible, on information already provided and included in other databases (e.g. EPREL, SCIP, etc) (**art. 8, 10**)
- ✓ 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) (**art. 8**)

# DPP architecture

## Decentralised system (information stays where it belongs)

Economic operator



- Product related data
- Circularity/sustainability information
- Supply-chain related information
- Certificates/manuals
- Identifiers (these go also to the registry)



Accessible by



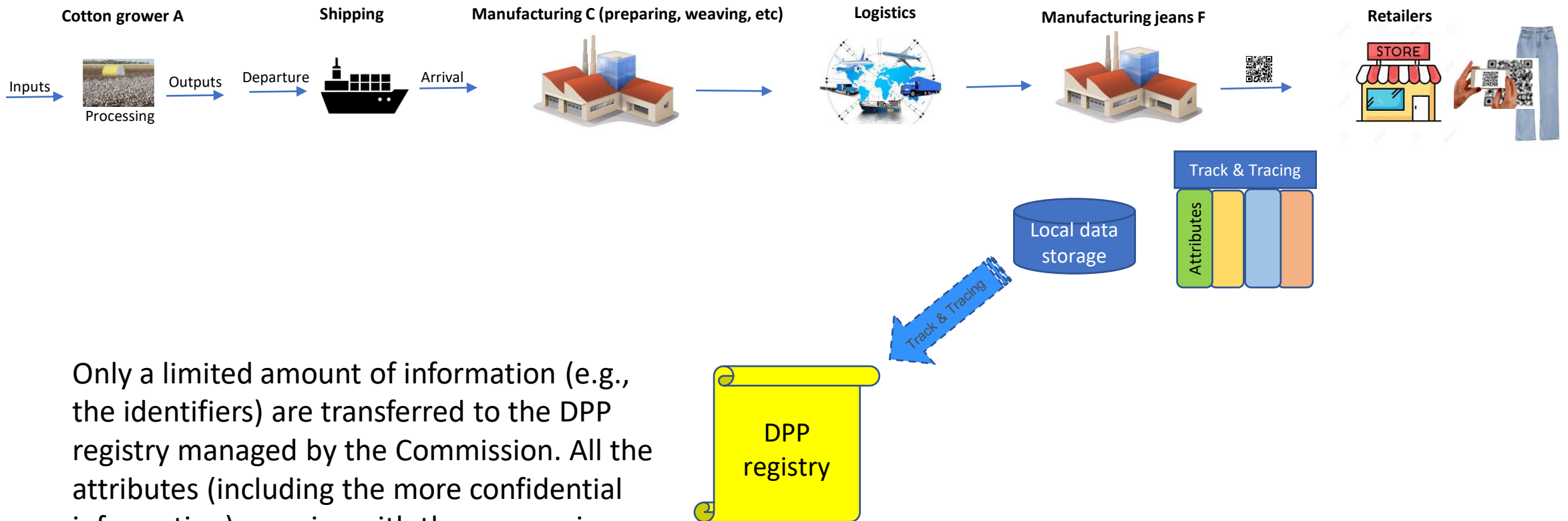
- Market surveillance authorities
- Customs authorities via the EU Single Window Environment for Customs
- EC and Member States (statistical analyses)

- Unique product identifier (what)
- Unique operator identifier (who)
- Unique facility identifier (where)
- Additional information (when relevant)

- Better protection of confidential and sensitive information
- Size of a central database would be enormous and very difficult (and costly) to set up and manage
- Dynamicity of product-specific information can be better managed locally

# Working principles

The economic operator organise the information in his/her own web-page and store it on an own server or through an external service provider



Only a limited amount of information (e.g., the identifiers) are transferred to the DPP registry managed by the Commission. All the attributes (including the more confidential information) remains with the economic operator.

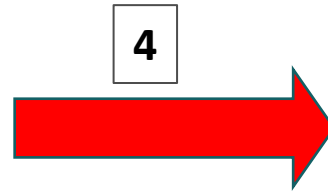


# Working principles

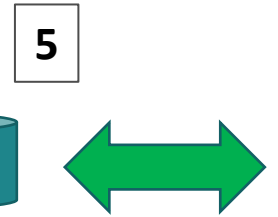
Access to information is enabled through a data carrier and the corresponding unique identifier



2  
<https://{domain}/identifier1>



Local storage system



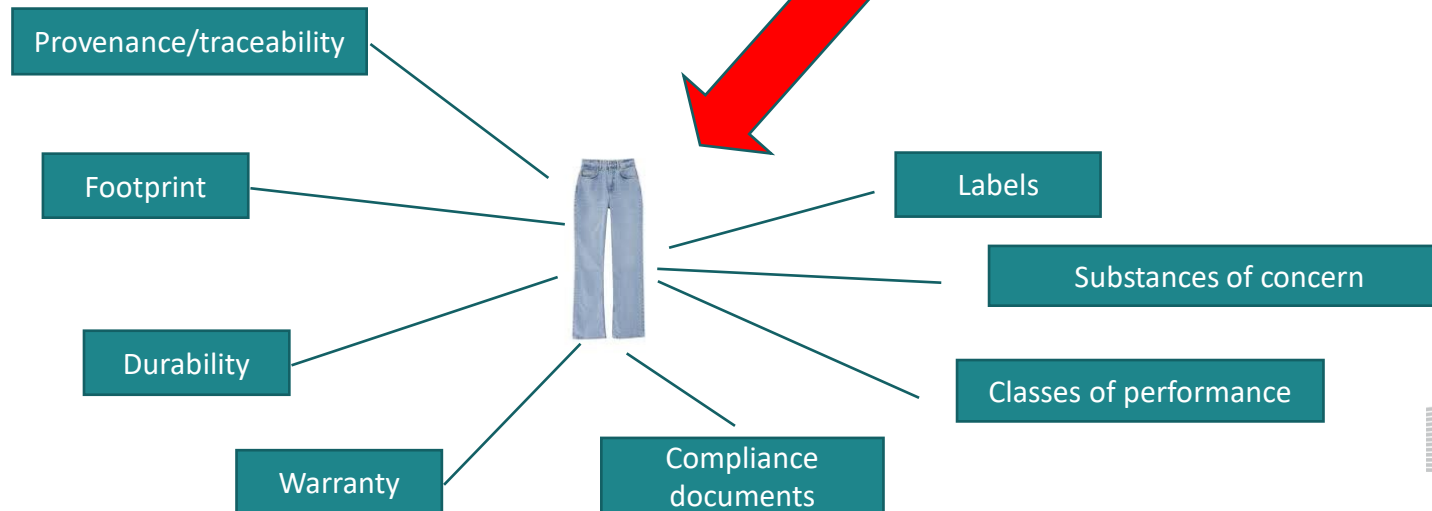
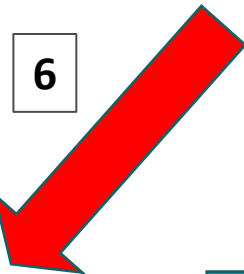
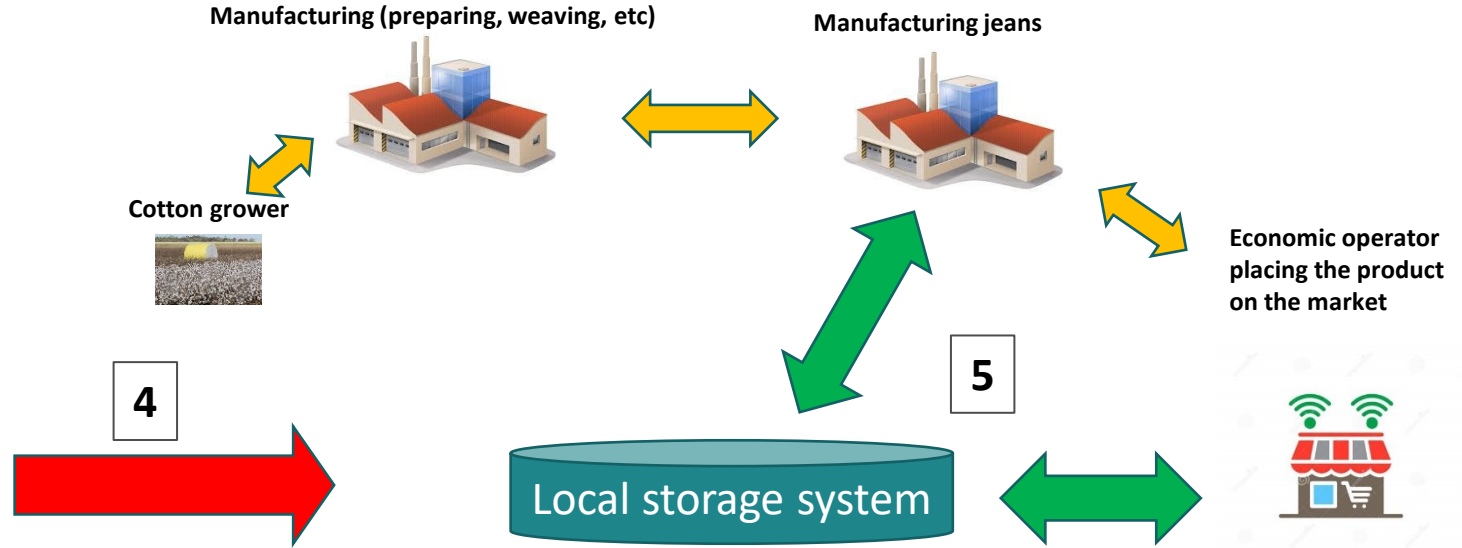
Economic operator placing the product on the market



Manufacturing (preparing, weaving, etc)

Manufacturing jeans

Cotton grower



# DPP – article 10: technical design and operation

DPP-system

*(to be developed before DPP deployment)*

- 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

# Thank you



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