



DPPs for the Transition to a Circular Economy

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27.11.2025

Global Risks

FIGURE C Global risks ranked by severity over the short and long term

"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."



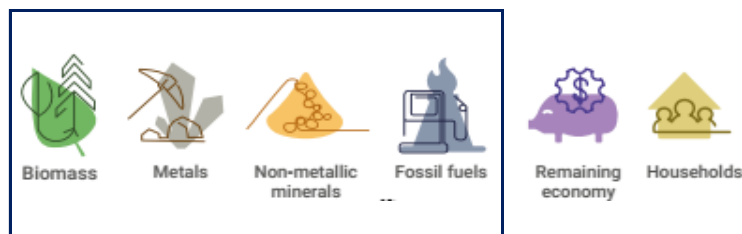
Source: WEF
Global Risk
Perception
Survey 2024-
2025

- Half of the top 10 risks seen by global experts from academia, business, government, the international community and civil society on a 10-year horizon relate to Environmental Risks

[\(World Economic Forum\)](#)

Resource consumption drives triple crisis

Environmental impacts of materials in the value chain in extraction and processing phase

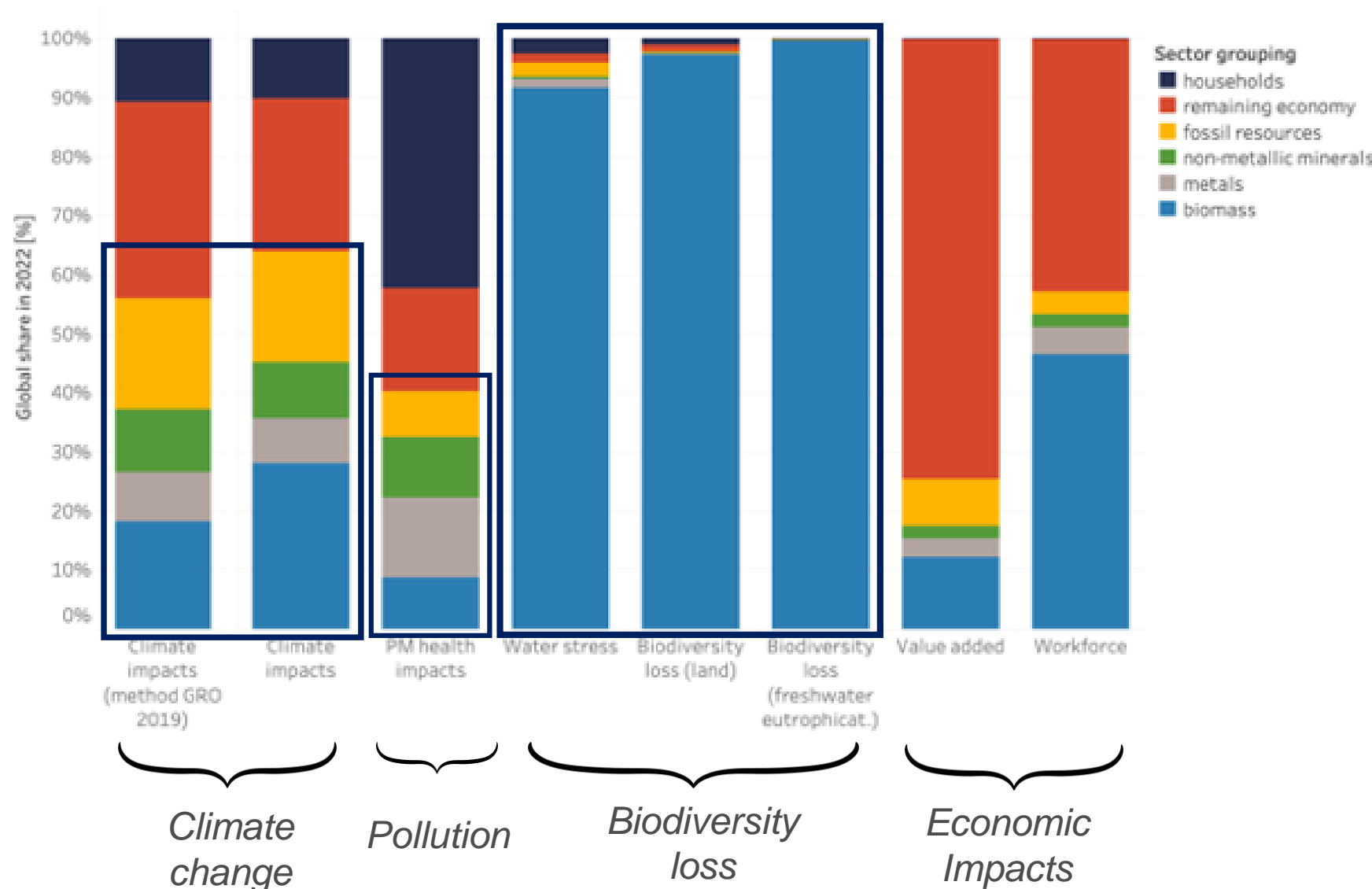


60% of global climate change impacts including land use change

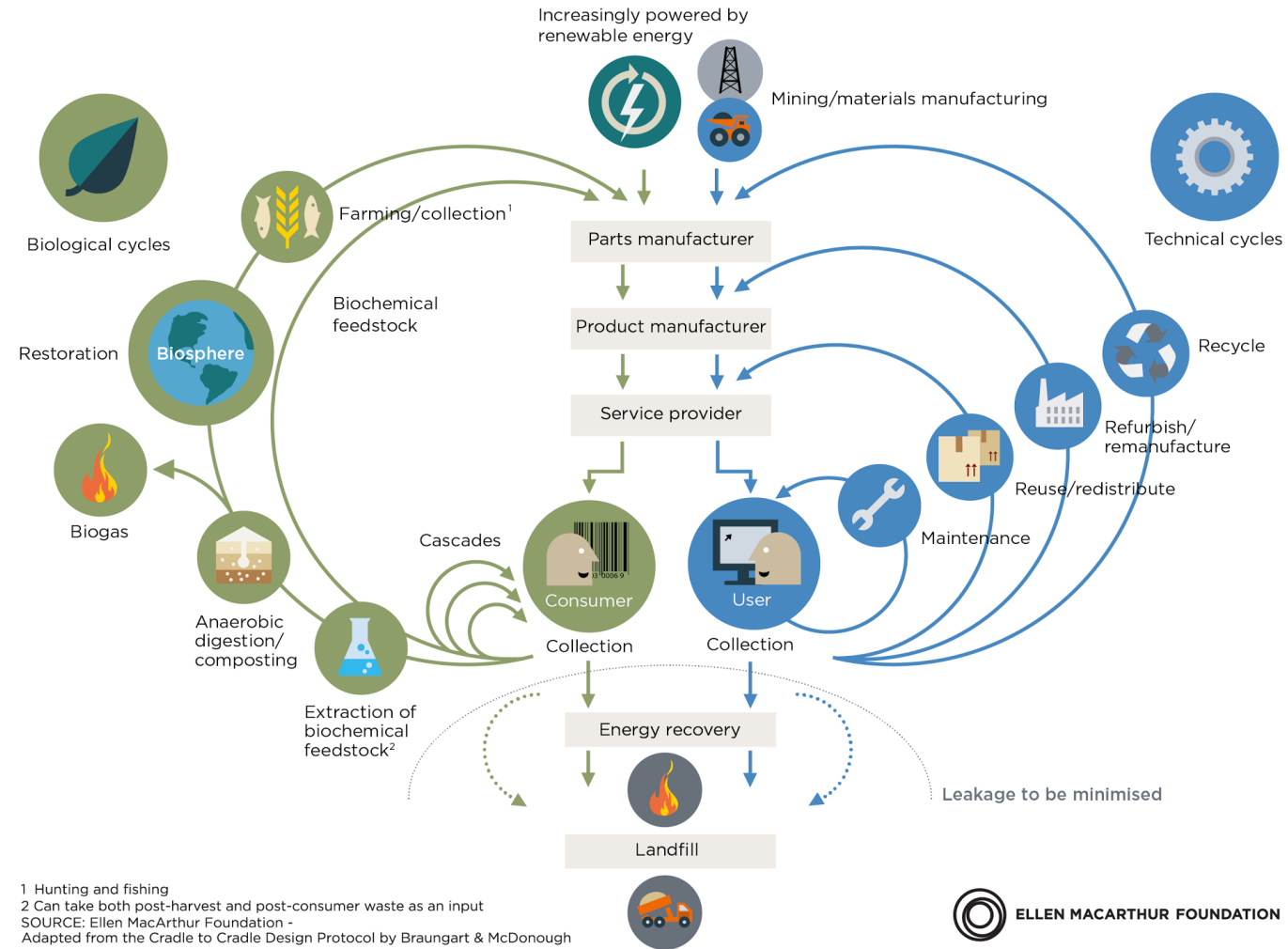
40% of air pollution health impacts

More than 90% of water stress and global land and water eutrophication related biodiversity loss

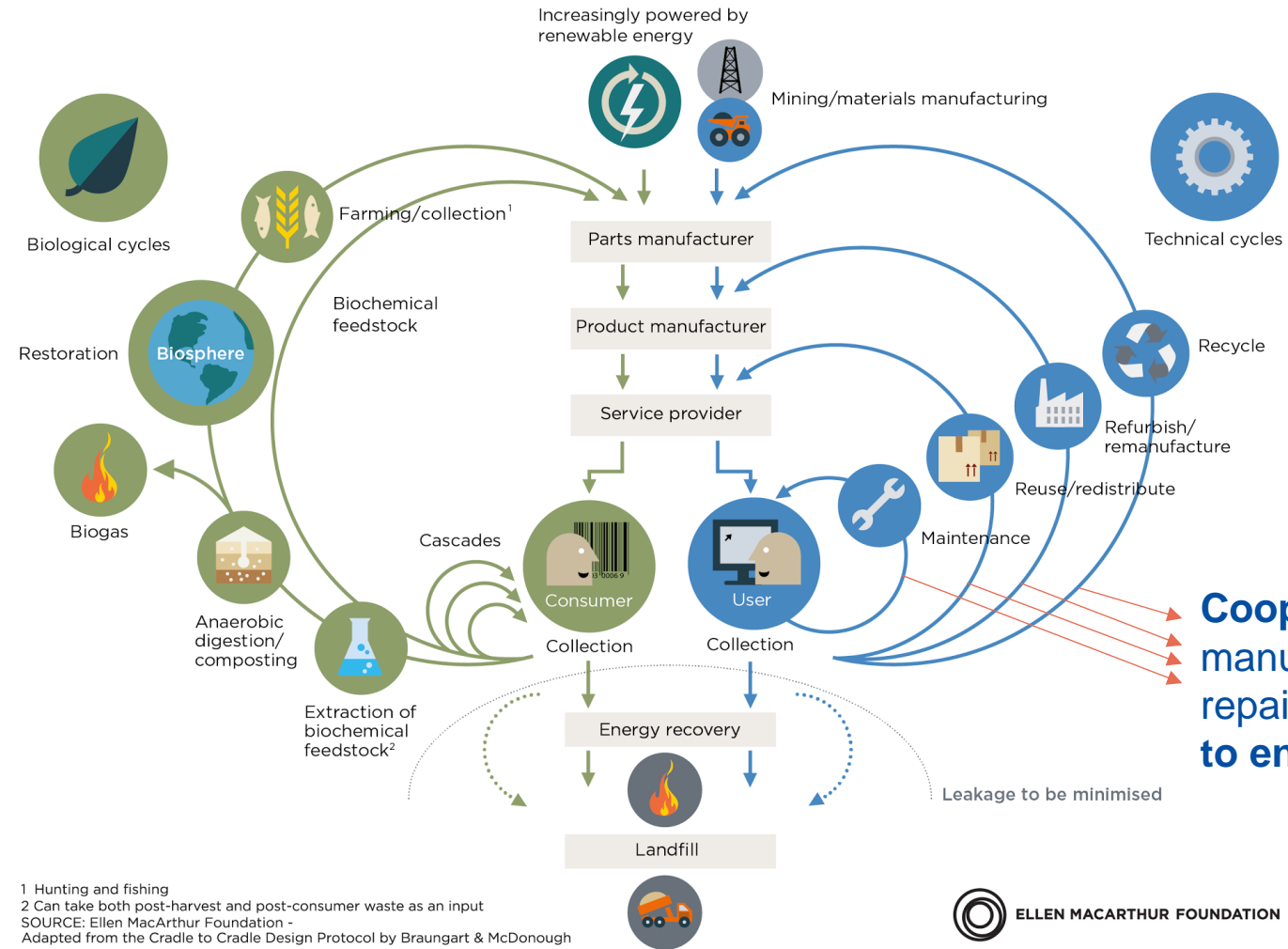
[\(Global Resources Outlook 2024\)](#)



Circular Economy – Key for Sustainability



Circular Economy – Key for Sustainability



¹ Hunting and fishing

² Can take both post-harvest and post-consumer waste as an input

SOURCE: Ellen MacArthur Foundation -

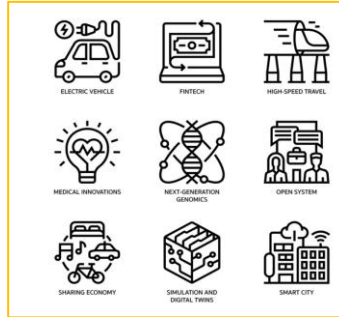
Adapted from the Cradle to Cradle Design Protocol by Braungart & McDonough



Digital Product Passport – Expected Benefits



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



Enable **manufacturers** to link information to products (e.g. products **digital twins**, embedding all the information required)



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



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



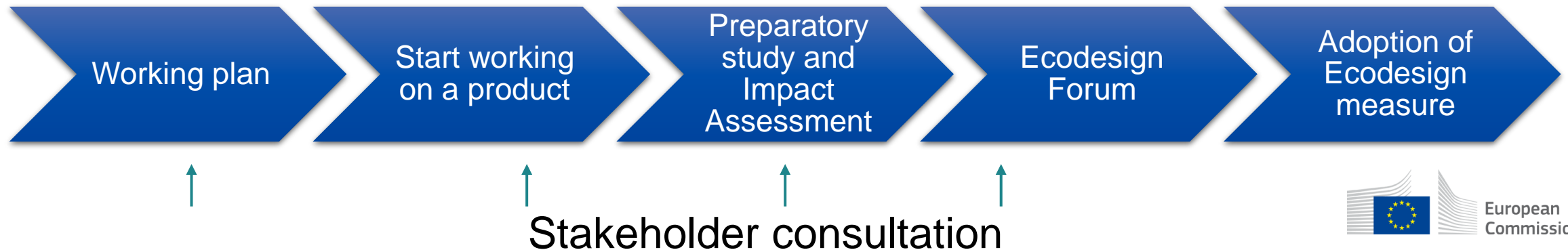
Make available to **public authorities and policy makers** reliable information. Enable to link **incentives** to **sustainability performance**



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)

Building on the Ecodesign Framework

- **Key features of the Ecodesign Directive approach maintained:**
 - ✓ **Framework legislation:** a new Regulation on Ecodesign for sustainable products
 - ✓ Regularly updated **multiannual working plans** setting out priorities
 - ✓ **Product-specific measures** based on dedicated impact assessment



ESPR and Energy Labelling Working Plan

- Based on 2 elements:
 1. “New products” to be included in the working plan:
- **Final products:**
 - Textiles/Apparel (2027)*
 - Furniture (2028)*
 - Tyres (2027)*
 - Mattresses (2029)*
- **Intermediate products:**
 - Iron & Steel (2027)*
 - Aluminium(2028)*
- **Horizontal requirements:**
 - Repairability (including scoring) (2027)*
 - Recycled content of EEE (2029)*

[ESPR and Energy Labelling
Working Plan 2025-30 |
Environment](#)

[List of already covered
product groups](#)

* Estimated timeline for adoption

ESPR and Energy Labelling Working Plan

- Based on 2 elements:
 1. “New products” to be included in the working plan
 2. Energy-related products from Ecodesign and Energy Labelling working plan for 2022-2024

- **Energy-related products**

- Low temperature emitters (2026)*
- Displays (2027)*
- EV chargers (2028)*
- Household dishwashers (2026)*
- Household washing machines and household washer-dryers (2026)*
- Professional laundry (2026)*
- Professional dishwashers (2026)*
- Electric motors and variable speed drives (2028)*
- Refrigerating appliances (including Household fridges and freezers) (2028)*
- Refrigerating appliances with a sales function (2028)*
- Light sources and (only for ecodesign) separate control gears (2029)*
- Welding equipment (end 2030)*
- Mobile phones and tablets (end 2030)*
- Local space heaters (Energy Label: 2026; Ecodesign requirements: mid 2030)*
- Tumble dryers (end 2030)*
- Standby and off mode consumption (end 2030)*

[ESPR and Energy Labelling
Working Plan 2025-30 |
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Digital Product Passport – Design



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

Digital Product Passport

(the “**WHAT**”. To be developed through product-group specific dedicated legislation)

- The DPP registry (Article 13 ESPR)
- The DPP web portal (Article 14 ESPR)
- All standards and protocols related to IT architecture:
 1. Unique identifiers
 2. Data carriers and links between physical product and digital representation
 3. Access rights management, information security, and business confidentiality
 4. Interoperability (technical, semantic, organisation)
 5. Data processing , data exchange protocols, and data formats
 6. Data storage, archiving, and data persistence
 7. Data authentication, reliability, integrity
 8. APIs for the DPP lifecycle management and searchability

Information to be included in the DPP will be **product-group specific** and identified in delegated act process.

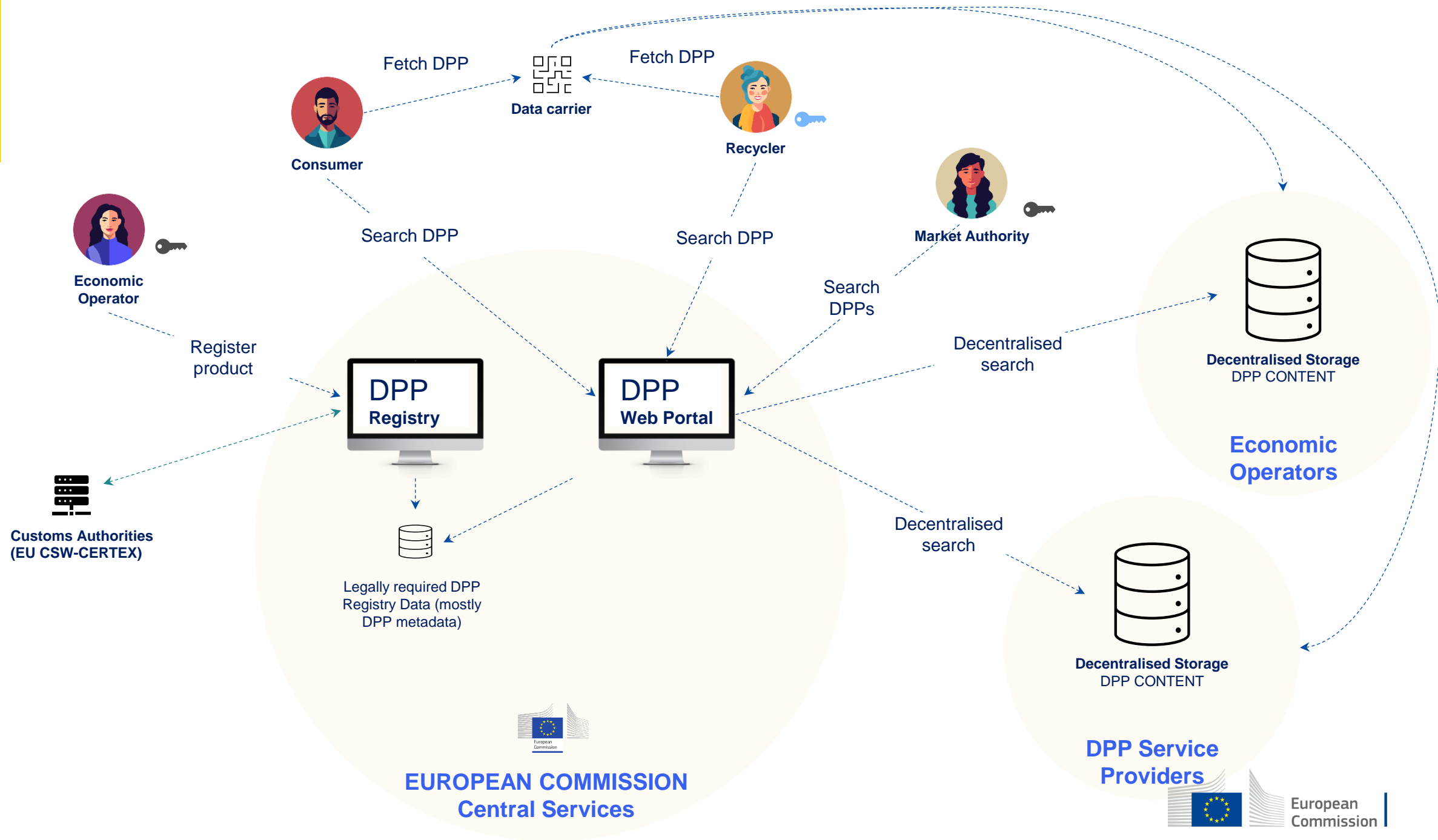
It may include information/data on one or more of the following areas:

- Technical performance
- Environmental sustainability performance
- Circularity aspects (durability, reparability, etc)
- Legal compliance
- Product-related information (e.g., manuals, other labels)

Standardization request

Digital Product Passport – Design

- DPP is based on a **decentralised** approach for data storage.
- The DPP will be linked to a product or component.
- Access to data will take place through a **product unique identifier**, embedded in a **data carrier and** relying on a **look-up mechanism**.
- 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
- 4 unique identifiers will always be required:
 - Product identifier
 - Facility identifier
 - Economic operator identifier
 - Registration identifier (not public)
- Economic operators shall make also available a back-up copy of the DPP through a [certified] independent third-party DPP service provider



Roadmap to the operationalisation of the DPP

DPP STANDARDISATION MILESTONES (CEN-CENELEC)

Development and adoption CEN-CENELEC Standards

LEGAL MILESTONES

DPP system secondary legislation

Product-specific rules

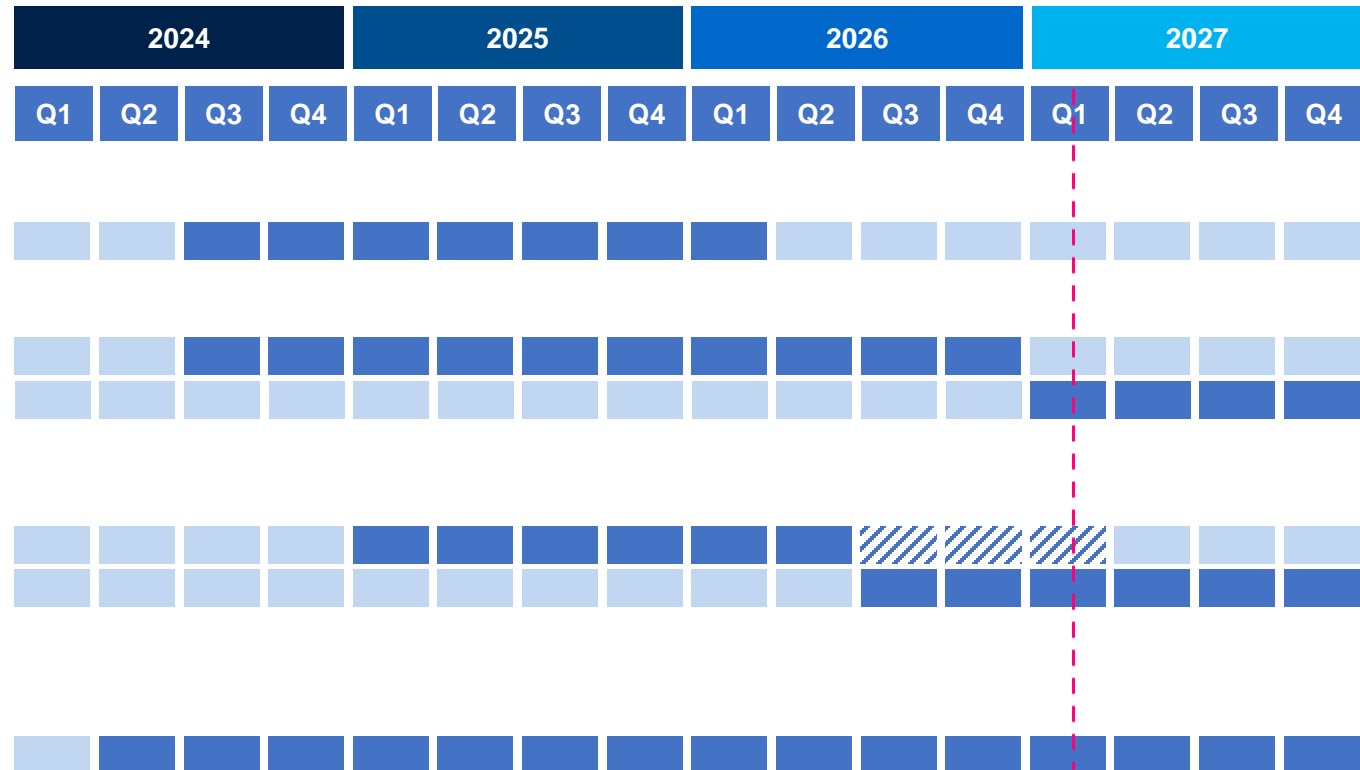
DPP DIGITAL IMPLEMENTATION MILESTONES

DPP Registry

Web portal

STAKEHOLDERS ENGAGEMENT AND COMMUNICATION

Engage stakeholders



Registry established & testing activities with industry

Legal framework and main aspects

Standalone legislation also refer to the DPP:



Legal basis

The DPP's original legal basis can be found in the **Ecodesign for Sustainable Products Regulation (ESPR)** ([EU 2024/1781](#)).

+ *Product specific delegated acts (textiles, steel and aluminium, tyres, furniture, ICT, energy related products)*

Battery Regulation ([EU 2023/1542](#)),
Critical Raw Material Act ([EU 2024/1252](#))

Construction Products Regulation ([EU 2024/3110](#))

Packaging and Waste Packaging Regulation ([EU 2025/40](#))

Toy Safety Regulation([COM/2023/462 final](#)) – [agreement](#),

Detergent Regulation ([COM/2023/217 final](#))

End-of-life vehicles ([COM/2023/451 final](#))

Simplification and DPP

- To boost competitiveness and safeguard economic, social and environmental goals, the European Commission aims to reduce regulatory burdens and simplify EU laws. ([Simplification](#))
- Four “Omnibus” proposals have been adopted:
- [Omnibus I](#) on sustainability (26.02.2025):
 - simplification in the fields of sustainable finance reporting, sustainability due diligence, EU Taxonomy, carbon border adjustment mechanism (CBAM)
- [Omnibus II](#) on investment simplification (26.02.2025):
 - aims to reduce administrative burdens in investment, such as on the InvestEU programme and EFSI Regulations.
- [Omnibus III](#) “Common Agricultural Policy simplification package” (14.05.2025):
- [Omnibus IV](#) “Simplifying the Single Market” (21.05.2025)
- [Omnibus V](#) “Defence Readiness Omnibus” (17.06.2025)
- [Omnibus VI](#) “Simplification of certain requirements and procedures for chemical products” (08.07.2025)
- ...

Digitalisation and Simplification Omnibus

- [Omnibus IV](#) “Simplifying the Single Market” (21.05.2025)
 - [Extension of certain mitigating measures available for small and medium sized enterprises to small mid-cap enterprises and further simplifying measures](#)
 - [Digitalisation and alignment of common specifications](#)
 - [Obligations of economic operators concerning battery due diligence policies](#)
- Together with Omnibus IV the [Single market strategy](#) was adopted which includes:

“The Digital Product Passport (DPP) will become the main tool for disclosing and sharing product information across all new and revised product legislation. Introduced by the Ecodesign for Sustainable Products Regulation, the DPP will serve as a digital container for digital labels, conformity documentation, instructions and manuals, certain safety information, technical documentation, and other information required under EU law and has already been included in several new EU legal acts.”

Digitalisation and Simplification Omnibus

- [Digitalisation and alignment of common specifications](#) includes:
 - – EU **declaration of conformity**, must be drawn up in **electronic form** and made accessible through an internet address or machine-readable code
 - – addition of a '**digital contact**' to **facilitate communication** between economic operators and national authorities. (Once the European Business Wallet is available, the digital address it provides to economic operators could constitute the “digital contact”)
 - – **instructions** accompanying products **may be provided in electronic form** (except safety information which should be provided on paper or marked on the product for consumers;
 - – **reporting obligations** to national authorities require a '**electronic form**' only
 - – **obligation for exchanges by electronic means** between economic operators and competent authorities;
 - – provision on **common specifications** as an alternative to harmonised standards;
 - – An **obligation to provide the information** contained in the EU declaration of conformity and instructions **on the digital product passport** when the product is subject to another Union legislation that requires the use of such a digital product passport.

What are CIRPASS and CIRPASS-2 ?



- Funded by the European Commission under the **Digital Europe Programme**
- **Duration:** 18 months (from Oct 2022 to March 2024)
- **Coordination and Support Action**
- **2M euros funding**
- **31 partners**



Build consensus on a standards-based DPP system

- Funded by the European Commission under the **Digital Europe Programme**
- **Duration:** May 2024 – April 2027
- **Innovation Action**
- **6M euros funding**
- **50 partners**



Deploy at scale Digital Product Passports in four target value chains and demonstrate data-enabled B2B activities that promote circularity

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Build consensus on a standards-based DPP system



Deploy at scale Digital Product Passports in four target value chains and demonstrate data-enabled B2B activities that promote circularity

CIRPASS-2 DPP Pilots – Enabling Circular Economy



Circular workwear



Textiles lifecycle



Circular garments



Textile sorting



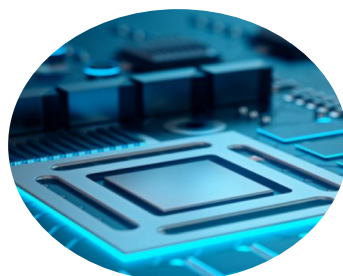
Mattresses



Down-feather bedding



Cordless vacuum cleaners



AAS-based for electronic products



Audio equipment



IT second-hand market



Tumble-dryers

<https://cirpass2.eu/>



Tyres



Construction sector

Thank you



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