EU approach to product design

Overview of selected legislative proposals

INC-3 webinar: Designing and producing plastic products for circularity
Why is the EU acting?

• “take-make-dispose” model

• The circular material use rate has been growing, but progress remains very slow (8.2% in 2004 to 11.8% in 2019)

• Demand for recycled materials remains low: only 9.5% (0.7 billion tonnes) of materials processed from 2010-2018 were from recycled materials

• The share of market demand met by secondary materials differs starkly: 50% or over for lead and copper, while for plastics it is only 6%

• 70% increase in waste generation is foreseen by 2050

• Up to 80% of a product’s environmental impacts can be determined at the design phase!
What is the EU doing?

(I) The European Green Deal (2019)

Announced a “Circular Economy Action Plan” that would include a “sustainable products’ policy to support the circular design of all products.”
What is the EU doing?

The Circular Economy Action Plan (2020)

- Make sustainable products the norm in the EU
- Empower consumers and public buyers
- Sustainable production processes

- Electronics and ICT
- Batteries and vehicles
- Packaging
- Plastics
- Textiles
- Construction and buildings
- Food, water and nutrients

35 actions

- Reduce Waste
- Reduce Waste Exports
- Boost market for high quality and safe secondary raw materials
Overview of selected legislative proposals

• Proposal for a Regulation on ecodesign for sustainable products (ESPR) *
• Proposal for a Regulation on packaging and packaging waste (PPWR) *

* Legislative proposals made by the Commission, currently undergoing ordinary legislative procedure where they are subject to amendments by the Council of the EU and the European Parliament.
ESPR - Overview

- Objective: to reduce negative environmental impacts of products along their lifecycle and improve the availability of information on products characteristics
- Scope: ecodesign requirements on all physical goods placed on the market or put into service, including components and intermediate products (exemptions!)
ESPR - How will it work?

Key features of Ecodesign Directive approach maintained

Framework legislation
It does not set specific measures, but enables their adoption at a later stage

Product-specific measures
based on detailed impact assessment & stakeholder consultation

Regularly updated multiannual working plans setting out priorities
Key product aspects under ESPR

- 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
Digital Product Passport (DPP) - the concept

• Will allow access to product information throughout the product life cycle, on a need-to-know basis

• Should contain, as relevant to the product:
  • For consumers: data on e.g. environmental impact, circularity, substances of concern etc.
  • For value retention: information to facilitate for reuse, remanufacturing or recycling
  • For authorities: compliance information (e.g. technical documentation, DoC)
Public Consultation on new product priorities under ESPR (Jan-May 2023)

Based on the Commission’s preliminary identification of a number of products and horizontal measures that may be suitable for first action under the ESPR:

- **End-use products**: Textiles and Footwear; Furniture; Ceramic Products; Tyres; Detergents; Bed Mattresses; Lubricants; Paints and Varnishes; Cosmetic Products; Toys; Fishing Nets and Gears; Absorbent Hygiene Products
- **Intermediate products**: Iron and Steel; Non-Ferrous Metals; Aluminium; Chemicals; Plastic and Polymers; Paper, Pulp Paper and Boards; Glass
- **Horizontal measures**: Durability; Recyclability; Post-Consumer Recycled Content

Analysis of feedback ongoing: results will feed into preparation of first ESPR working plan
Expected outcomes of ESPR

Environment
- Help achieve EU’s environmental goals and SDGs
- Target product-related environmental impacts

Consumers
- Improved product performance and longer lifetimes
- More informed decision making
- Financial savings (longer life and less energy)

Supply chain actors
- Reduced material costs
- Reputational benefits
- Increased transparency across supply chain
Packaging waste generation has been increasing in the EU in absolute terms and on a per capita basis and trends indicate a further steep decline in re-use and refill of packaging amplified by increased on-the-go consumption and e-commerce.

40% of plastics and 50% of paper used in the EU is destined for packaging and accounts for 36% of municipal solid waste.

Objective: reduce the negative environmental impacts of packaging and packaging waste, while improving the functioning of the internal market.

Scope: all packaging, regardless of the material used, and to all packaging waste, whether such waste is used in or originates from industry, other manufacturing, retail or distribution, offices, services or households.
PPWR – key measures

- Reduction target on MS for reduction of packaging waste by 5% by 2030, 10% by 2035 and 15% by 2040 compared to 2018 complemented by EU harmonised supporting measures on:
  
  **waste prevention**
  
  - **Minimisation** of and bans on excessive packaging (Art. 9)
  - Bans on **unnecessary** packaging (Art. 22-Annex V)
  - **Void space** in e-commerce and transport packaging (Art. 21)

  **reuse**

  - Establishment of efficient **reuse and refill systems** (Art. 10 et al)
  - Sector specific **reuse targets** on economic operators (Art. 26)
PPWR- Full recyclability of all packaging by 2030

- 2030: **all packaging** items have to be **recyclable**
- To that end, it will have to meet the **design for recycling criteria** (by 2030) and be **recyclable at scale** (by 2035)
- DfR criteria consider separability, quality of recyclates, established collection, sorting and recycling processes (incl. their efficiency and expected evolution)
- Modulation of **EPR** fees based on harmonized **recyclability** performance grade and, for plastic, on recycled content

<table>
<thead>
<tr>
<th>Performance Grade</th>
<th>Score of compliance with DfR criteria of a unit of packaging</th>
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<tbody>
<tr>
<td>A</td>
<td>95%</td>
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<tr>
<td>B</td>
<td>90%</td>
</tr>
<tr>
<td>C</td>
<td>80%</td>
</tr>
<tr>
<td>D</td>
<td>70%</td>
</tr>
<tr>
<td>E</td>
<td>Less than 70%</td>
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</tbody>
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* in terms of weight of the unit of packaging
# PPWR - Packaging materials

| Packaging materials | 1 Glass | 2 Composite | 3 Paper/cardboard | 4 Composite | 5 Steel | 6 Composite | 7 Rigid | 8 Flexible | 9 Composite | 10 Bottles clear/blue | 11 Bottles coloured | 12 Rigid clear | 13 Flexible | 14 HDPE rigid clear | 15 HDPE rigid coloured | 16 PE flexible clear | 17 PE flexible coloured | 18 Rigid clear | 19 Rigid coloured | 20 Flexible clear | 21 Flexible coloured | 22 Crates and pallets | 23 PS | 24 EPS | 25 XPS | 26 Rigid | 27 Flexible | 28 Wood/cork | 29 Textile | 30 Ceramics/porcelain |
|---------------------|---------|------------|------------------|-------------|---------|-------------|---------|------------|-------------|---------------------|---------------------|-----------------|-------------|------------------|-----------------------|---------------------|------------------------|------------------------|-----------------|-----------------|-----------------|------------------|----------------|----------------|-------------|----------------|-----------------|-----------------|-----------------|----------------|----------------|------------------|
PPWR- Recycled content targets for plastic packaging

- **Minimum inclusion rates** of *recycled content in plastic packaging* (for 2030 and 2040) imposed at *product level* (market access requirement), distinguishing beverage bottles / contact sensitive / non-contact sensitive

<table>
<thead>
<tr>
<th>Packaging</th>
<th>2030</th>
<th>2040</th>
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</thead>
<tbody>
<tr>
<td>Plastic Beverage bottles</td>
<td>30%</td>
<td>65%</td>
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<tr>
<td>Contact sensitive packaging:</td>
<td></td>
<td></td>
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<tr>
<td>PET as major component</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Other than PET</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Other plastic packaging</td>
<td>35%</td>
<td>65%</td>
</tr>
</tbody>
</table>

- **Exemptions** for packaging for medicinal products, medical devices and compostable packaging
- EU harmonised **methodology for RC calculation** (by 2027) to avoid green washing
- Commission empowered to review the targets for specific packaging types

=> 2030 targets *save app. 3 mio t fossil fuel* for plastic production
PPWR- Other measures

- Requirements for reusable packaging
- Reuse/refill targets on economic operators
- Compostable plastic packaging
- Labelling (harmonisation)
- EPR (harmonisation)
- Deposit Return Systems (obligatory for plastic bottles and cans)
- Waste collection
- Recycling targets
Thank you

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