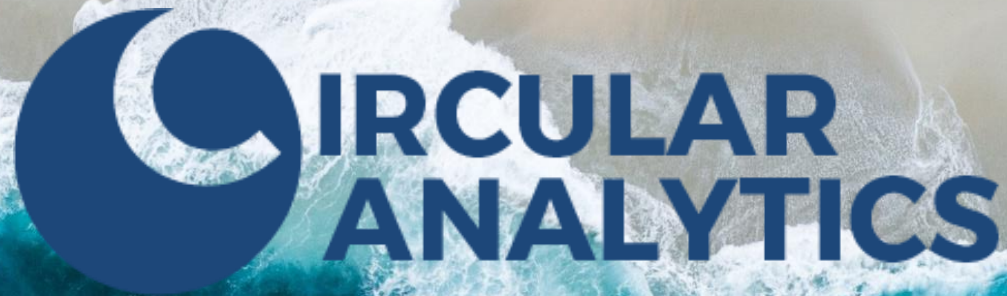


Strategies for a Transition to Circular Economy

**PROPOSAL FOR A
PACKAGING AND PACKAGING WASTE REGULATION**

PACKAGING UPDATE 02.03.2023



Strategies for a Transition to Circular Economy

We analyse and develop sustainable solutions for packaging and articles of daily use

SERVICES

In order to implement the provisions of the Circular Economy Package, enterprises need a specific combination of skills, Circular Analytics provides you with:

- A comprehensive assessment methodology for circular design
 - Skills and expertise for optimising packaging recyclability
 - Building up supply chain partnerships and project for product development
 - Sales and implementation expertise for circular design projects
- Packaging Assessment
 - Life Cycle Assessment
 - Regulatory Research
 - Market Analysis
 - Circular Packaging Training
 - Research and Industry Projects

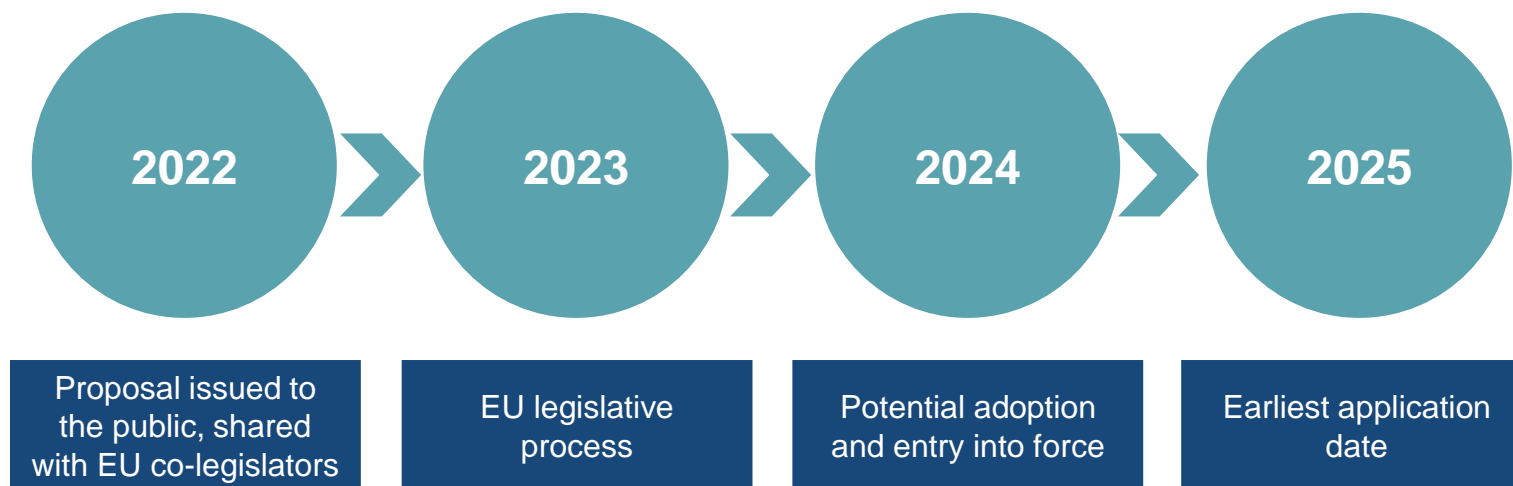


**PPWR –
THE REORGANISATION OF THE
PACKAGING LANDSCAPE**

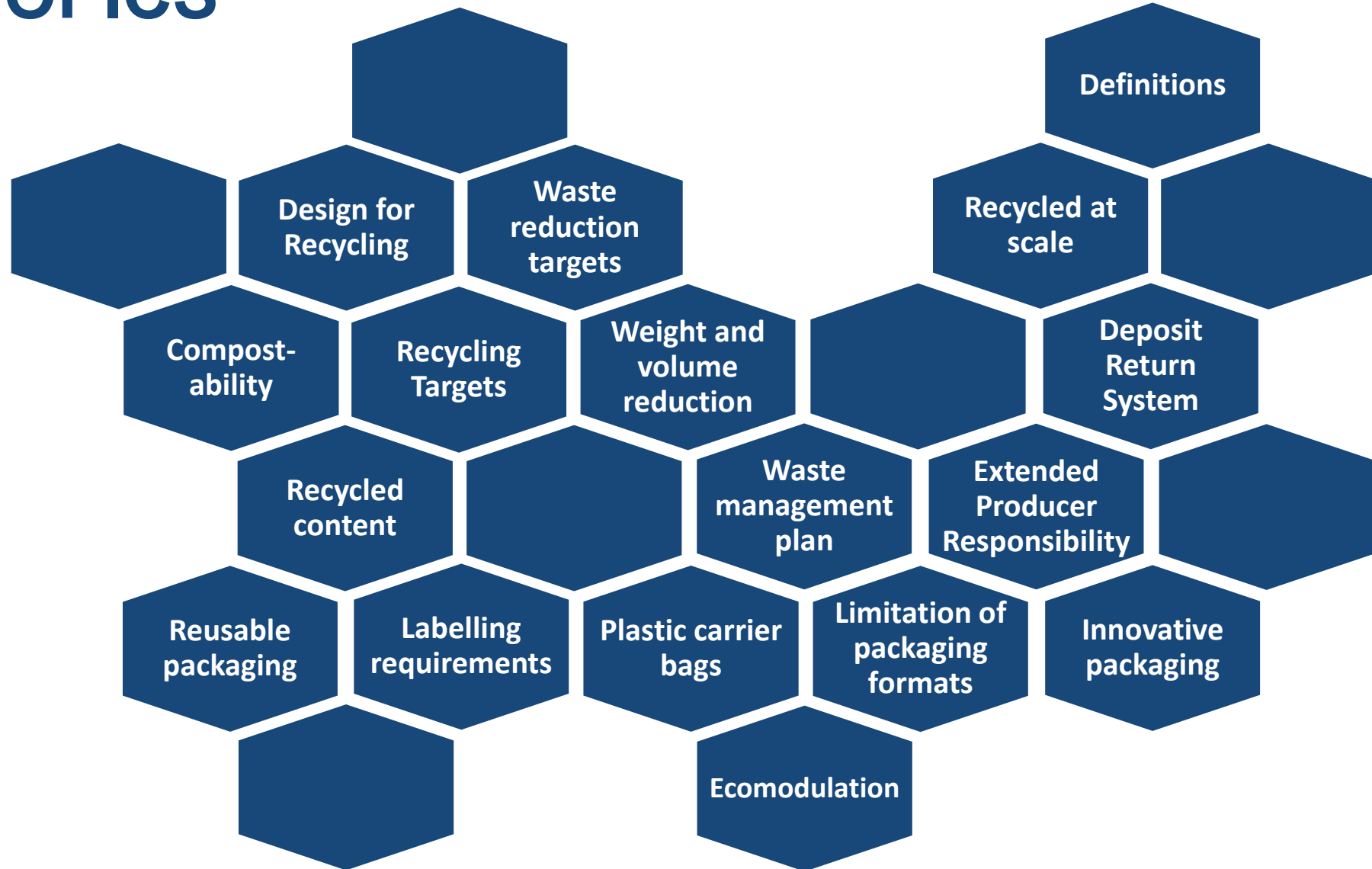
LINA WIMMER

Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on packaging and packaging waste, amending Regulation (EU) 2019/1020 and Directive (EU) 2019/904, and repealing Directive 94/62/EC

- part of package II of measures under the New Circular Economy Action Plan
- planned as a regulation → no transposition into national law necessary, immediately effective

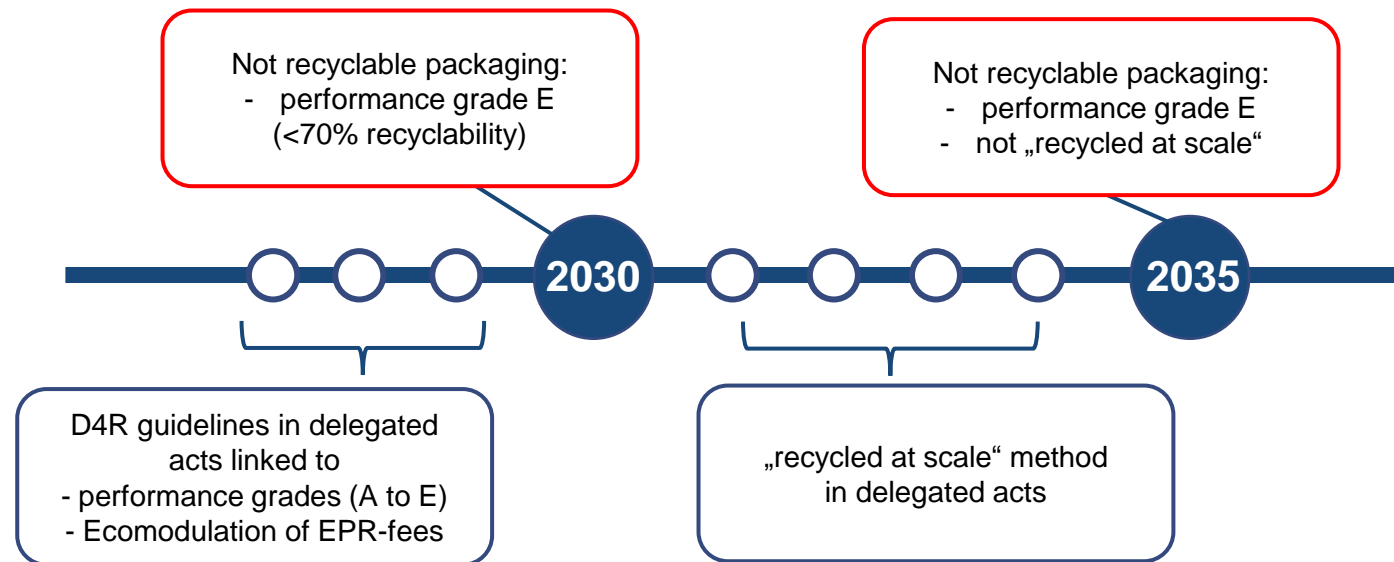


KEY TOPICS



RECYCLABLE PACKAGING (ART. 6)

- Packaging has to be recyclable **by 2030**
- Two-stage approach:
 - from **2030** packaging must meet **Design for Recycling** criteria
 - from **2035** packaging must be additionally be effectively collected, sorted and recovered („**recycled at scale**“)
- Exemptions:
 - until **2035** specific packaging (e.g. pharmaceutical and medical products)
 - from **2030** innovative packaging (max. period of 5 years after being placed on the market)



RECYCLABLE PACKAGING (ART. 6)

Design for Recycling Criteria

- Defined in delegated acts

Annex II

1. Table 1: List of 30 packaging materials, types und categories

- Amounts of packaging placed on the EU market and in each member state have to be reported
- Recycling rates for all 30 defined packaging have to be reported

2. Table 2: Recyclability Performance Grades

- Classification according to DfR-criteria and weight of packaging unit
- Grades A to E
- **Ecomodulation:** Harmonization of criteria based on performance grades
 - starting 2035
 - Fees not yet determined

Recyclability Performance Grades	Assessment of recyclability per unit, in weight
Grade A	$\geq 95\%$
Grade B	$\geq 90\%$
Grade C	$\geq 80\%$
Grade D	$\geq 70\%$
Grade E	$< 70\%$

Annex II, Table 2

MINIMUM RECYCLED CONTENT IN PLASTIC PACKAGING (ART. 7)

- Plastic packaging must contain a minimum recycled content (PCR) starting in **2030**
- Planned: Implementing act for the methodology of calculation and verification of percentage PCR recycle.

Packaging Type	2030	Packaging Type	2040
Contact sensitive packaging with PET as main component	30%	Contact sensitive packaging (except for single-use plastic beverage bottles)	50%
Contact sensitive packaging (except for PET and single-use plastic beverage bottles)	10%		
Single-use plastic beverage bottles	30%	Single-use plastic beverage bottles	65%
other plastic packaging	35%	Other plastic packaging	65%

RE-USE/ REFILL (ART. 10 UND ART. 26)

Reusable Packaging

- must be conceived, designed and placed on the market in such a way that it can be reused or refilled
- has to be part of a reuse system

Re-use and Refill Targets

Product	immediate	2030	2040
Cold or hot beverages (POS for take-away)	-	20%	80%
Take-away ready-prepared food (immediate consumption)	-	10%	40%
alcoholic beverages (excl. wine and spirits) & non-alcoholic beverages (excl. milk)	-	10%	25%
Transport packaging and grouped packaging	-	10-30%	25-90%
Transport packaging used between different sites on which the operator performs its activity and other linked enterprise *	100%	100%	100%
Transport packaging delivering goods from one economic operator to another economic operator within the same Member State *	100%	100%	100%

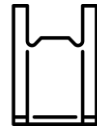


*Applies to: pallets, boxes, excluding cardboard, trays, plastic crates, intermediate bulk containers, drums and canisters, of all sizes and materials, including flexible formats

COMPOSTABLE PACKAGING (ART. 8)

by **24 months** after entry into force

Compostable under industrially controlled conditions:



- Very light plastic carrier bags,



- adhesive labels attached to fruit and vegetables,



- Tea or coffee bags,



- Coffee or tea single-serving unit

RESTRICTED PACKAGING FORMATS (ART. 22)

Single-use plastic packaging

Restricted by entry into force

- grouped packaging*
(e.g. collation films, shrink wrap)
- packaging for fruit and vegetables under 1.5 kg
(e.g. nets, bags, trays, containers)

HORECA Sector

Restricted by entry into force

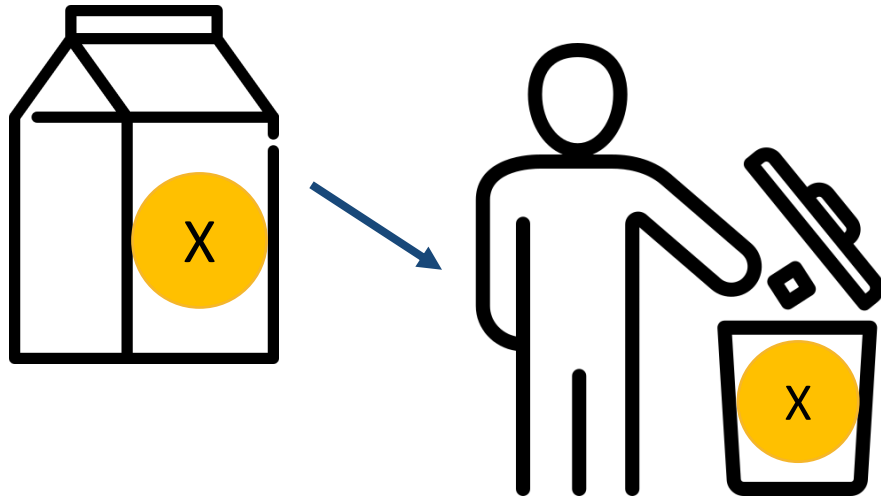
- Miniature packaging for sauces, coffee creamer, sugar, shampoo etc.
(e.g. sachets, tubs, trays, boxes)

Restricted by 2030

- single-use packaging for foods and beverages filled and consumed within the premises in the HORECA sector
(e.g. trays, disposable plates and cups, bags, foil, boxes)

* Excluded: grouped packaging necessary to facilitate handling in distribution

LABELLING (ART. 11 AND ART. 12)



01.01.2028

- harmonised label and uniform sorting instructions for consumers on packaging and waste containers

other requirements

- Label with information on material composition on packaging
- Label with recycled content
- Label for reusable packaging → QR-Code

DEPOSIT RETURN SCHEMES (ART. 43 AND ART. 44)

Mandatory

- Single-use plastic beverage bottles
 - Single-use metal beverage containers
- ➔ up to 3 liters



Obligatory

- Single-use glass beverage bottles



Exception

- Products: wine, aromatised wine products, spirit drinks and milk products
- Existing collection systems



by 01.01.2029

PACKAGING MINIMISATION (ART. 9 AND ART. 21) & WASTE PREVENTION (ART. 38)

Packaging Minimisation

- Weight and volume of a package as low as possible
- Safety and functionality of the packaging has still to be guaranteed
- Empty space is to be reduced to the necessary minimum
- New **empty space ratio of 40%** for grouped, transport and e-commerce packaging

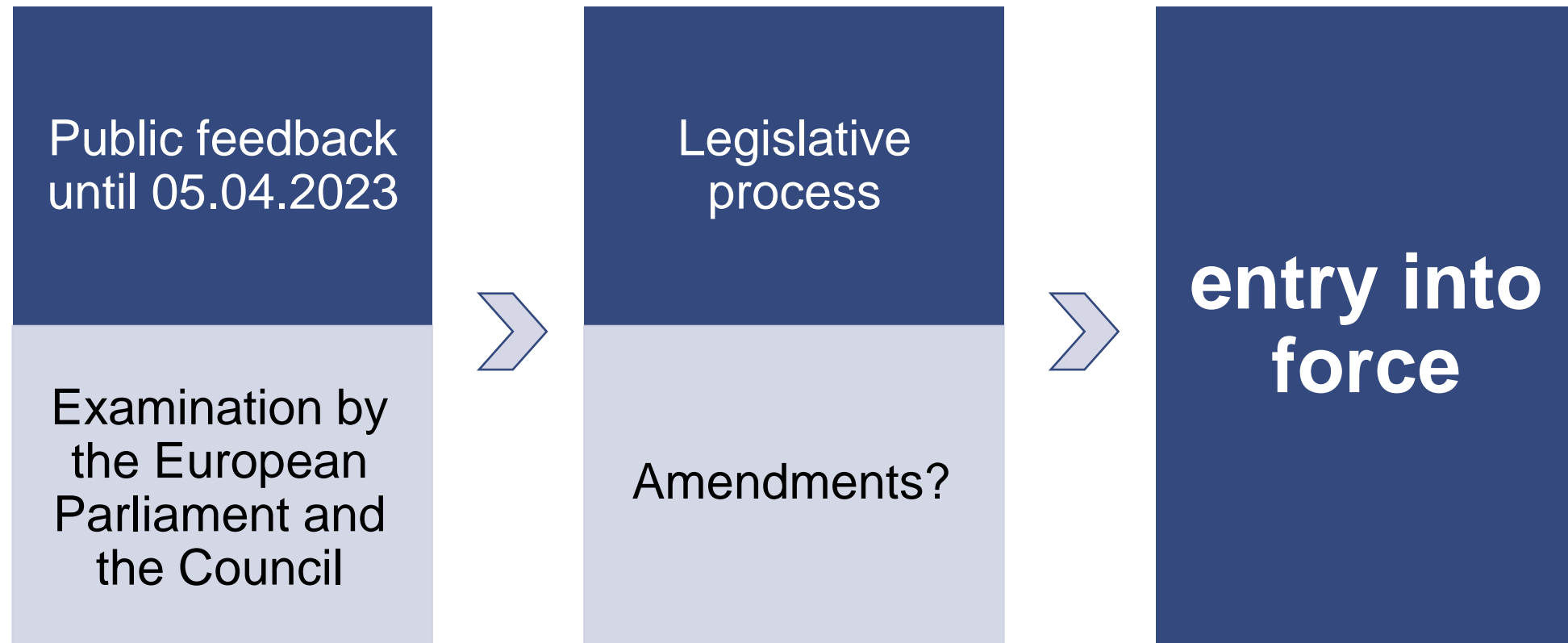


Waste Prevention

- Member States' packaging **waste reduction targets** (per capita, base year 2018):
 - 5% by 2030
 - 10% by 2035
 - 15% by 2040
- Member States are responsible for:
 - avoiding packaging waste
 - Minimization of environmental impacts from packaging



NEXT STEPS AND REACTIONS



REQUIREMENTS AND CONSEQUENCES FOR THE INDUSTRY

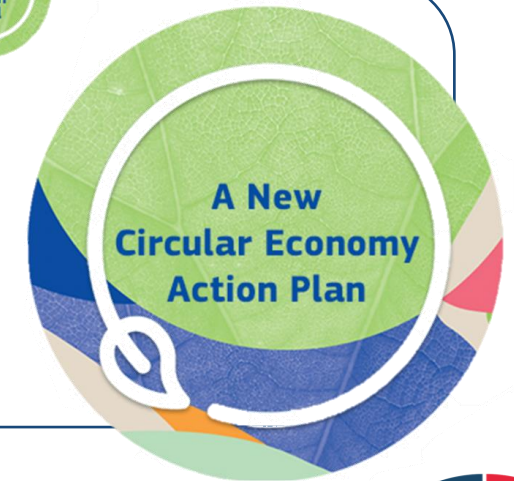
MANFRED TACKER

PPWR – GOALS AND POLITICAL CONTEXT

Green Deal: transition to a low-carbon circular economy

Circular Economy Action Plan / New Circular Economy Action Plan (2021)

- Reduce overpackaging
- Reduce packaging waste
- Promote reuse
- Recyclability of plastics packaging
- Increase recycled content



EU commitment to UN – 17 Sustainable Development Goals

- SDG 12: Sustainable consumption and production – EU has very low score



PACKAGING SUSTAINABILITY – STATUS QUO

Packaging waste in EU grows faster than GDP

- 66 mio t (2009) to 78,5 mio t (2019)
- Fastest growth: paper/carton and plastics

Significant contributor to climate change

Commission early warning report

- 19 MS are at risk to achieve 50% plastics recycling target 2025

Recycling is often downcycling – low quality of recyclates

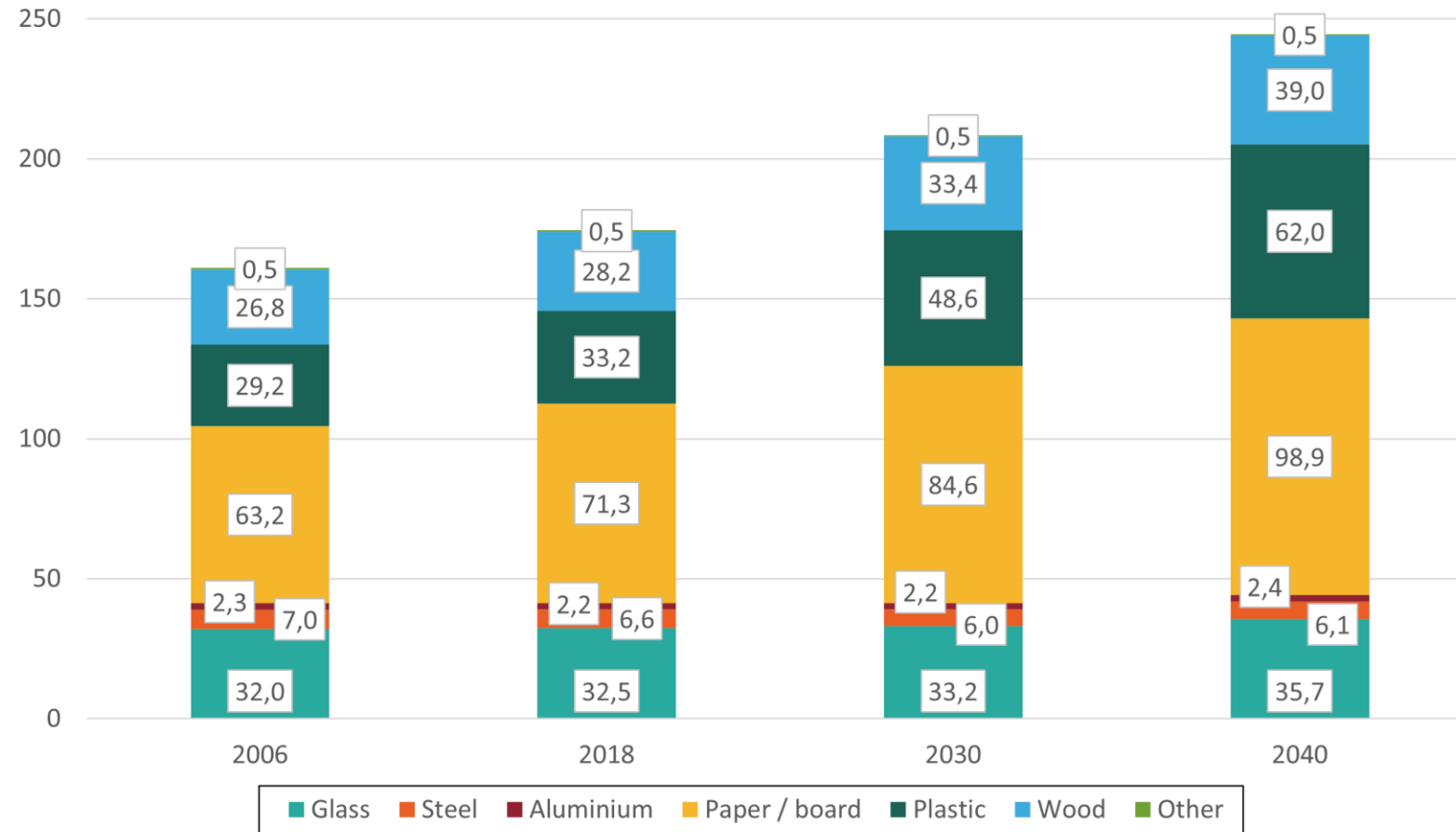
Recycled content (of plastic packaging) is low for PP / PE / PS

17% of packaging (all materials) is currently non recyclable

44 % of plastics packaging have major design issues (RecyClass)






PACKAGING WASTE PER CAPITA - EU

Trend in Packaging Waste Generation per capita for the packaging materials (EU-27 countries)



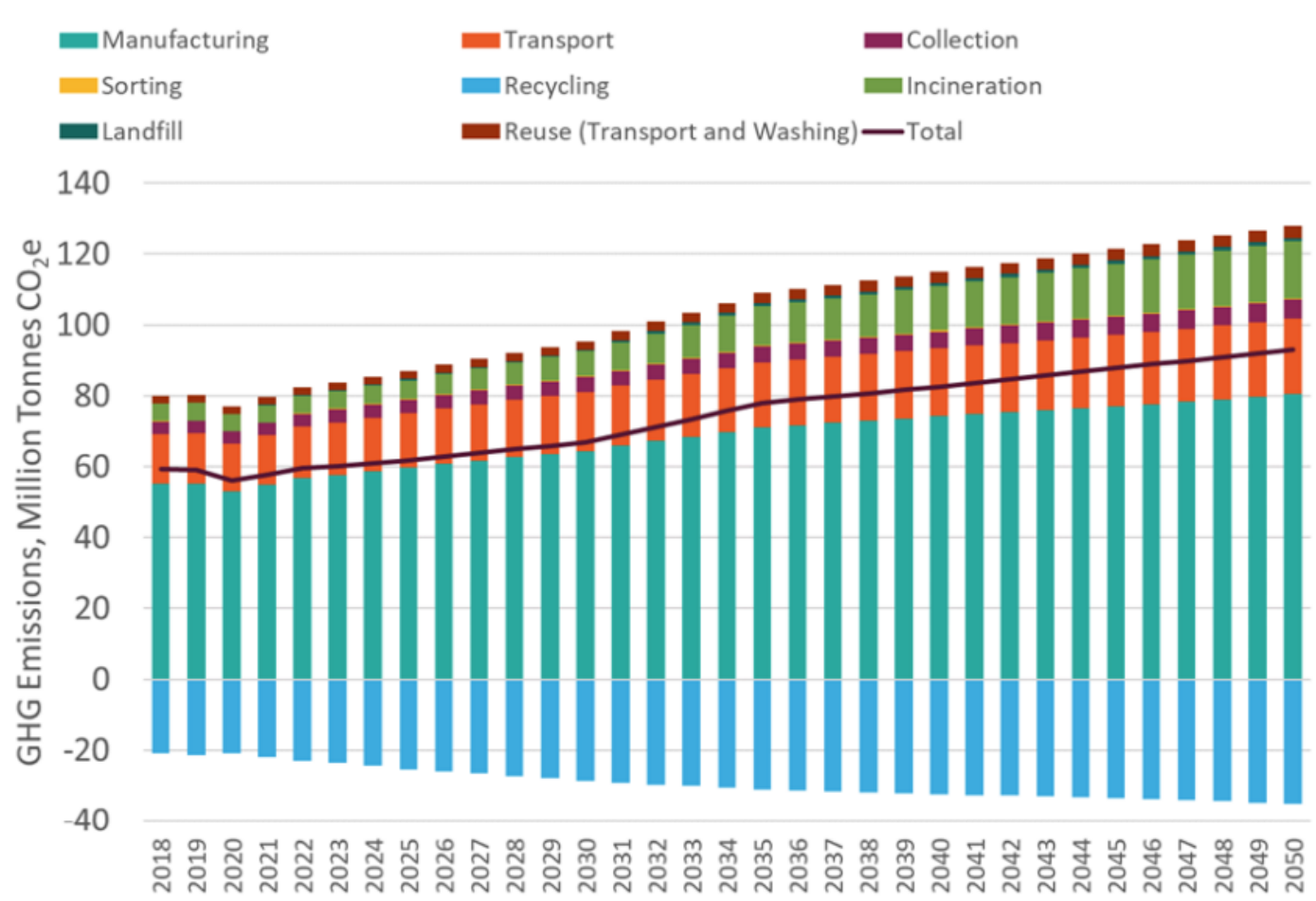
Source: PPWR Impact Assessment Report (2022)

PACKAGING PROBLEMS AND POLICY OPTIONS

Context	Green Deal – Transition to a lower carbon, circular economy, Plastic Strategy, Circular Economy Action Plan, Zero Pollution Action Plan	
 Drivers	Market failures <ul style="list-style-type: none"> - Externalities and fragmented market - Information failures (unclear labelling) - Suboptimal market structure along the waste value chain 	Regulatory failures <ul style="list-style-type: none"> - Delayed / incorrect transposition of current Directive - Essential Requirements poorly designed, unenforceable, and unevenly applied - Difficulties of the Member States to ensure compliance with national recycling targets - SUPD and ORD only cover plastic packaging, and this partly
 Problems (highly interrelated)	High level of and growing packaging waste: <ul style="list-style-type: none"> - High levels of avoidable packaging - Increasing single use packaging 	Barriers to packaging circularity: <ul style="list-style-type: none"> - Packaging design features that inhibit recycling - Cross contamination of compostable recycling stream - Reuse systems not cost efficient - Inconsistent and confusing labelling
 Consequences	Environmental impacts <ul style="list-style-type: none"> - Climate impacts - Littering - Landfill / incineration / export at end life - Presence of hazardous substances 	Economic impacts <ul style="list-style-type: none"> - Inefficient use of resources - High costs of packaging - Inefficient and costly waste management
 Objectives	General objective to reduce negative environmental impacts of packaging and packaging waste and improve the functioning of the internal market Specific objectives to meet this general objective is: <ol style="list-style-type: none"> 1. Reduce the generation of packaging waste 2. Promote a circular economy for packaging in a cost-efficient way 3. Promote the uptake of recycled content in packaging 	
 Policy options	<i>Option 1 – Better standardisation and clearer Essential Requirements</i> <i>Option 2 – Mandatory targets for waste reduction, reuse and minimum recycled content in plastic packaging, requirements to ensure full recyclability by 2030 and harmonised product rules</i> <i>Option 3 – Higher mandatory targets and additional product requirements</i>	

Source: PPWR Impact Assessment Report (2022)

GREENHOUSE GAS EMISSION PACKAGING



2018: 59 Mio t CO₂-equ. (Hungary)
2030: 66 Mio t CO₂-equ.



Inconsistency with 2050 goal
of carbon neutral Europe

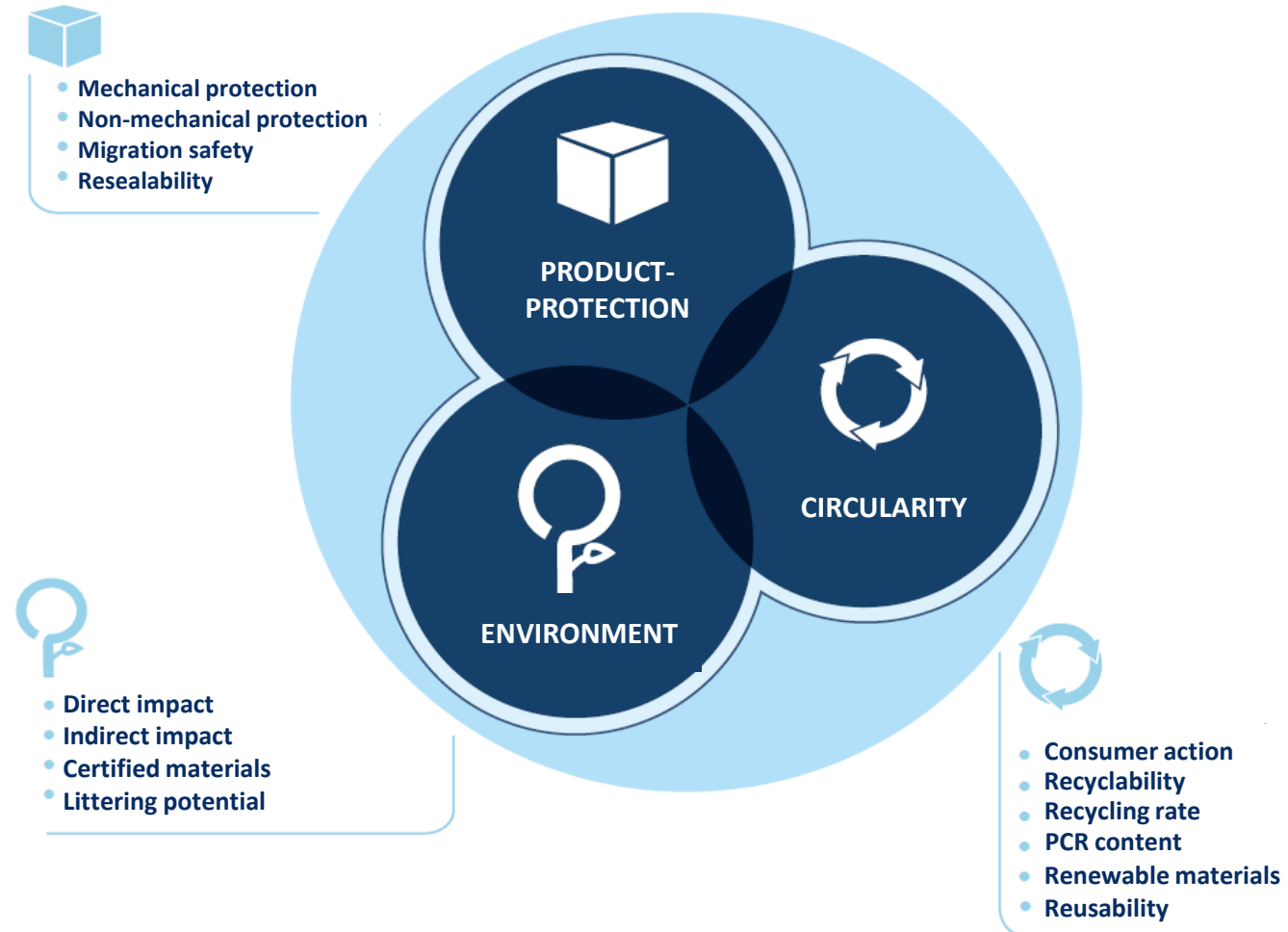
Source: PPWR Impact Assessment Report (2022)

PPWR – IMPACTS ON PACKAGING DESIGN

Need of an updated
**SET OF
SUSTAINABILITY
INDICATORS**
for packaging to reach
targets

- Packaging weight
- Detailed packaging composition
- Recyclability
- Recycling rates
- Recyclate quality
- Recyclate content
- Carbon footprint
- Emptiability of packaging

PPWR & HOLISTIC SUSTAINABILITY ASSESSMENT



BENCHMARKING OF PACKAGING

Packaging sustainability across DACH

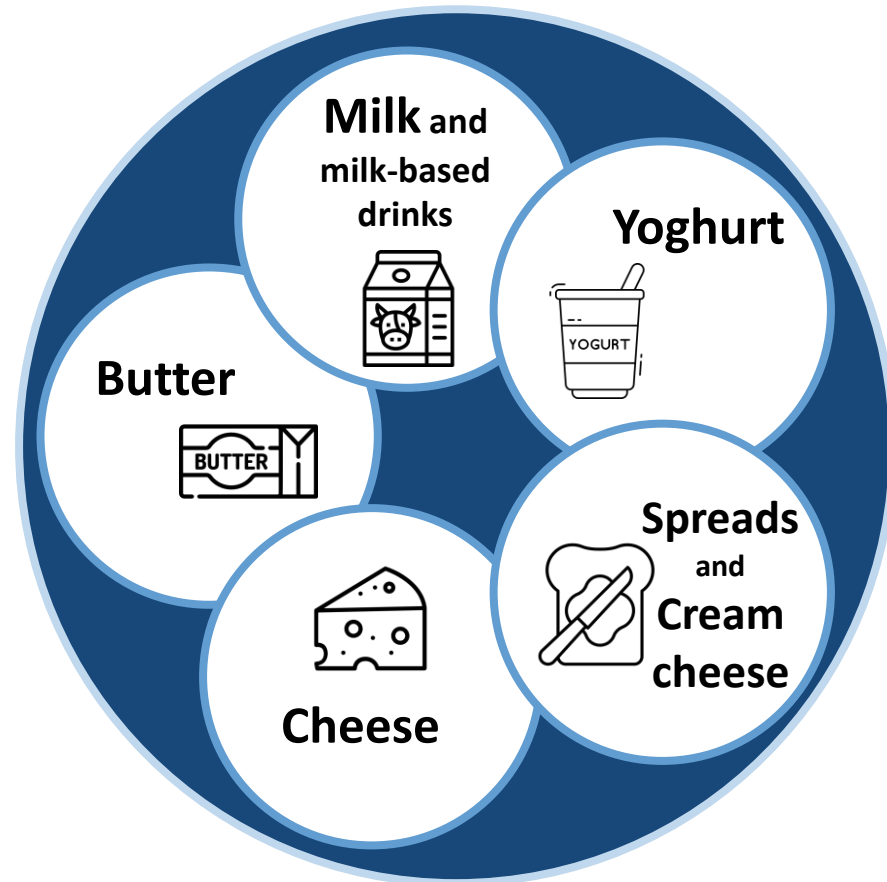
- Packaging weight & distribution
- Recyclability & distribution
- Carbon footprint & distribution
- Emptiability & distribution
- Recyclate content
- Identification of best practice solutions

Benchmarking

- Ranking of own packaging solutions
- Proposals for optimisation
- Overpackaging?

BENCHMARKING OF PACKAGING

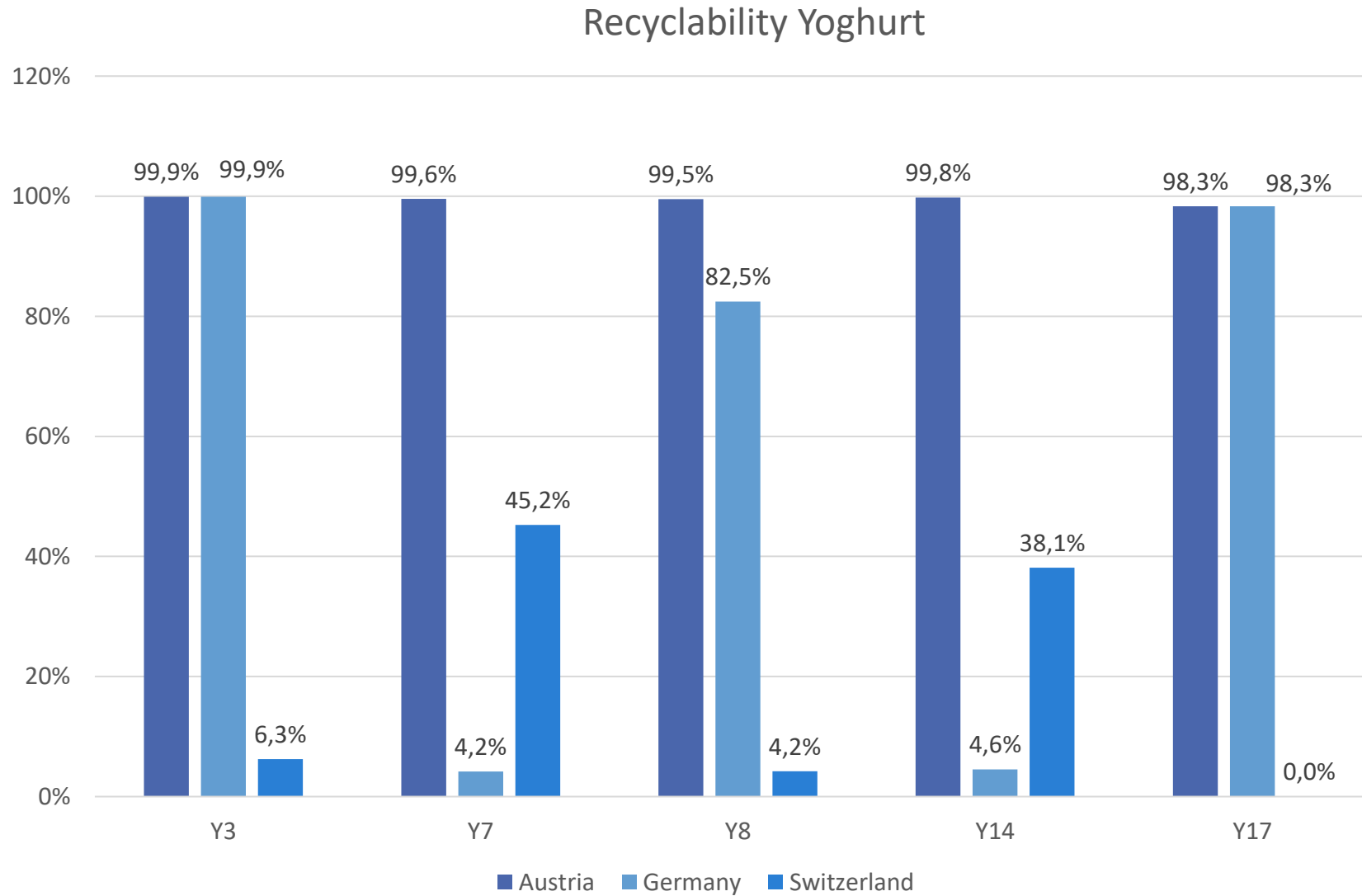
Dairy Product Packaging



Cosmetic Product Packaging

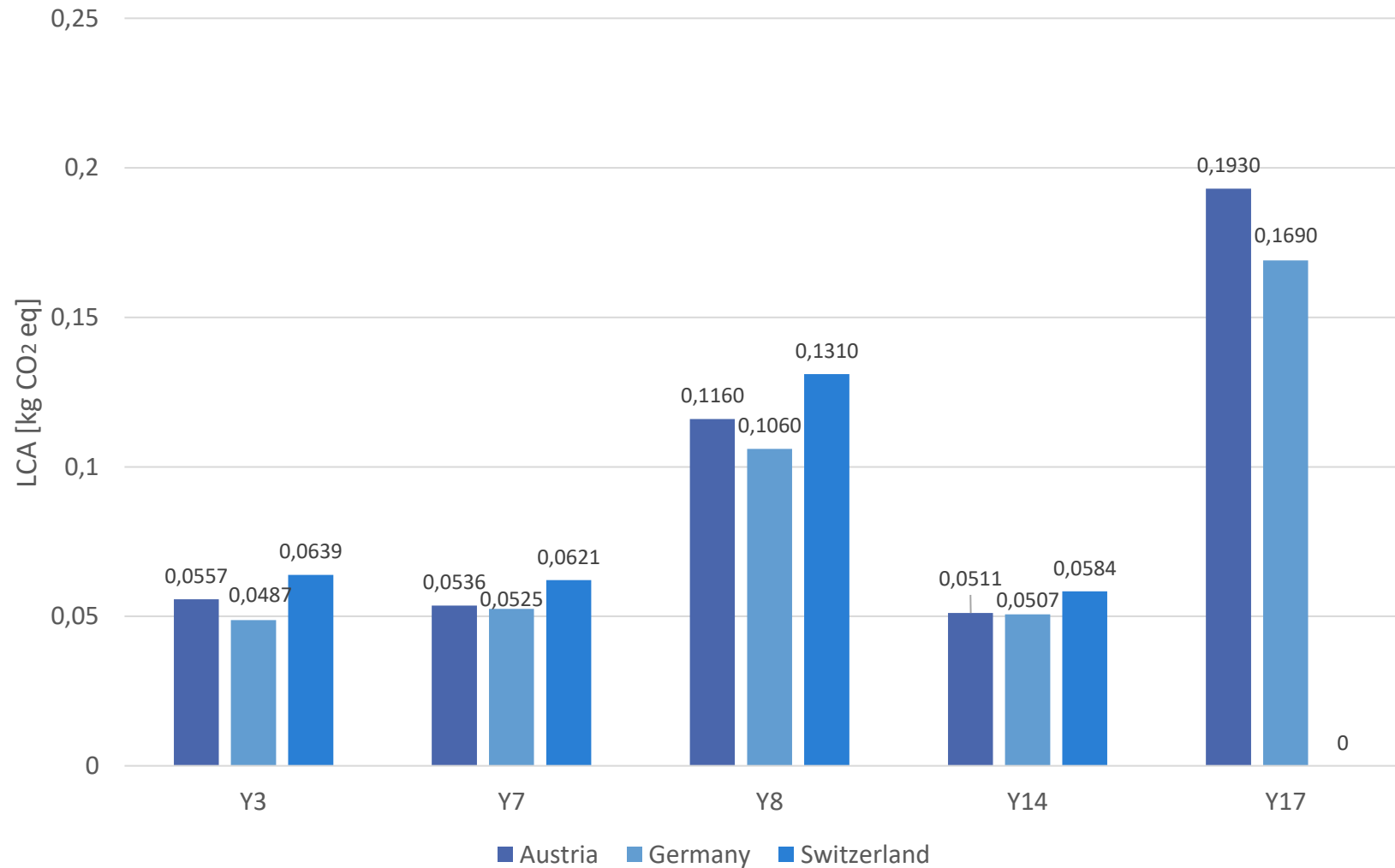


PRELIMINARY RESULTS: RECYCLABILITY / YOGHURT



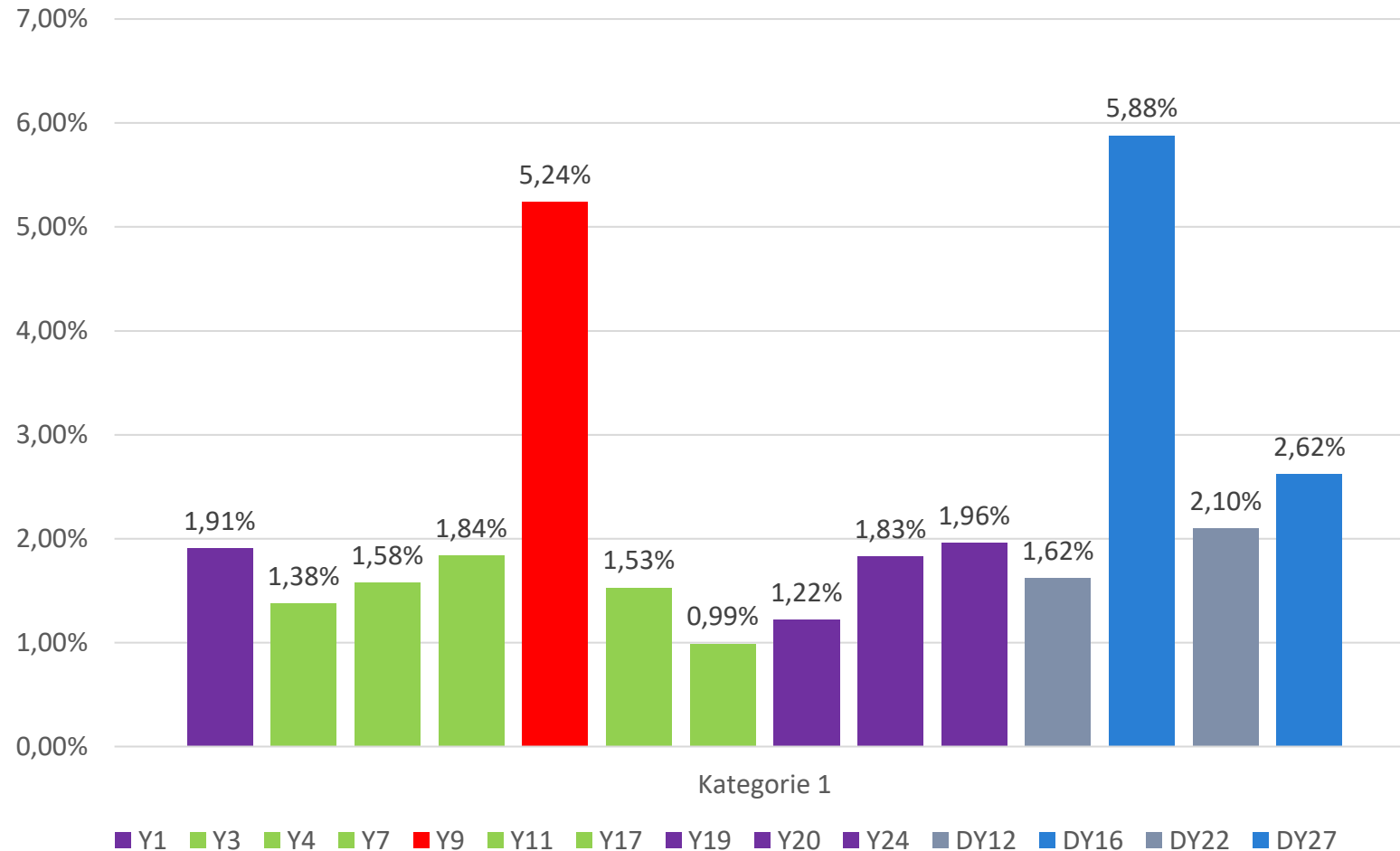
PRELIMINARY RESULTS: STREAMLINED LCA / YOGHURT

Streamlined LCA Yoghurt



PRELIMINARY RESULTS: EMPTIABILITY YOGHURT UND DRINKING YOGHURT

Emptiability Yoghurt and Drinking Yoghurt



PP Cup :
0,99 - 1,84 %

PS Cup:
1,22 - 1,96 %

Pouch:
5,2%

Beverage Carton:
2,62 - 5,88 %

Plastic Bottles:
1,62 - 2,10 %

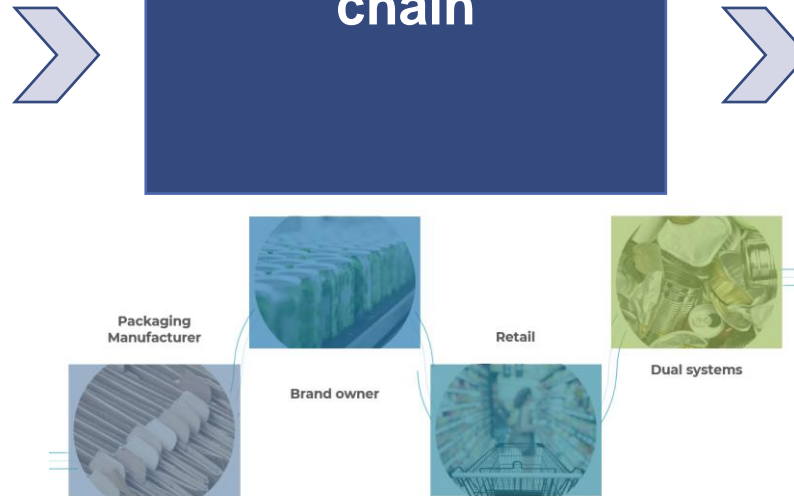
PPWR CHALLENGES & SUMMARY

Analysis of status quo of packaging portfolio

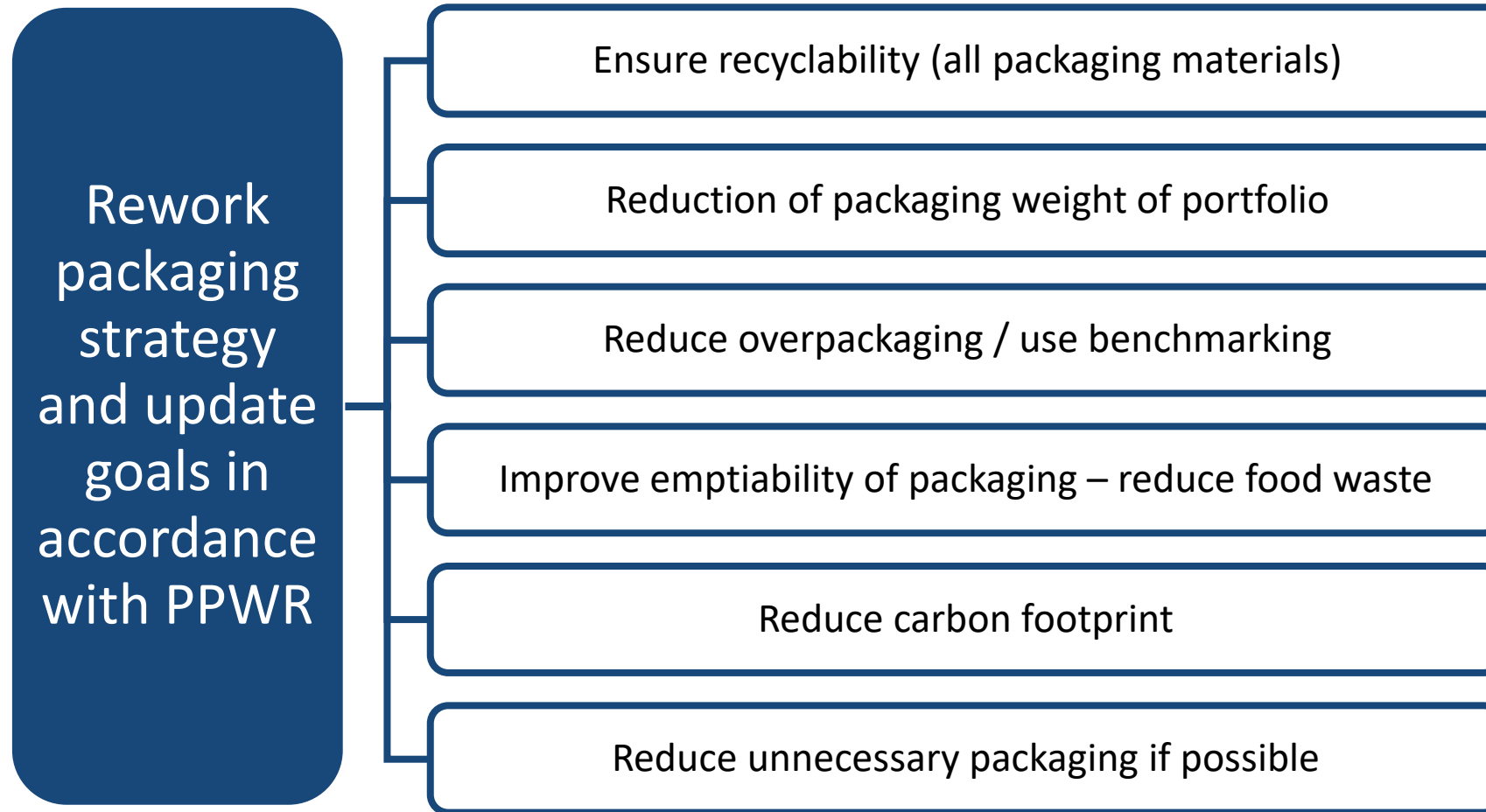
- Set of standardized packaging master data
 - ECR / GS 1
- Standardized sustainability assessment

Ensure data flow along the supply chain

Digitalization and automatization



PPWR CHALLENGES & SUMMARY





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