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PACKAGING
ORGANISATION

Better quality of life, through better
packaging, for more people



PPWR Update: Carbon Footprint & Packaging Minimisation

WPO
WEBINAR



Open webinar. Prior registration required.
Webinar Registration - Zoom.



22 February 2024, 9.30am (UTC+01:00 – Central European Time)

Partners



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Better quality of life, through better packaging, for more people



ESG

Legislation & Regulatory

February 2024

Regulation and legislation



Sustainability Reporting

Drivers

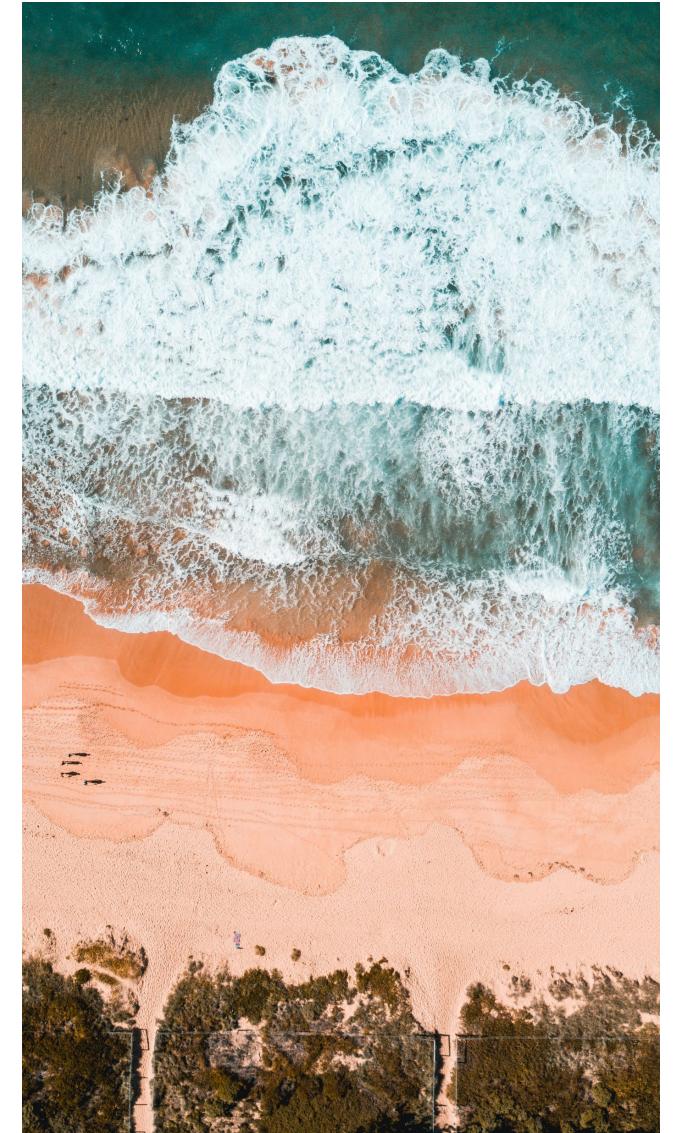
Regulatory | With the adoption of the EU Green Deal, the EU Taxonomy Regulation and the CSRD, the topic is moving further to the forefront of entrepreneurial activity.

Transparency | Effective sustainability reporting is one of the best for ensuring the increasing demand for transparency.

Stakeholders | Institutional investors, in particular, are attaching increasing importance to the topic of sustainability and are basing their investment decisions on the sustainability commitment of organizations.

Reputation | Transparency in communication and reporting on sustainability issues increases trust in companies. 46% of Austria's top companies, banks and insurance companies publish a sustainability report.*

Employee Retention | Last but not least, sustainability reports can contribute to employee retention and internal awareness-raising. They are also an advertisement for job, who increasingly attach importance to their employers' commitment to sustainability.



* Sustainability reporting of top Austrian companies, study 2022, EY

CSRD - Corporate Sustainability Reporting Directive

(Directive published on 16.12.2022 > transposition into national law by 06 June 2024)



What's new?

- Extension of the **reporting obligation** (also information according to EU taxonomy mandatory)
- Precise definition of materiality ("**double materiality**")
- **Mandatory disclosure**
- **External audit** (limited assurance)
- Introduction of uniform EU reporting standards **ESRS** - European Sustainability Reporting Standards



How do I have to report?

- Disclosure in the management report of the annual report based on the uniform EU reporting standard.



Period of application

- from 01.01.2024: Companies that are already subject to reporting obligations under the NaDiVeG ¹
- from 01.01.2025: all large companies ²
- from 01.01.2026: all capital market-oriented SMEs
- from 01.01.2027: Non-EU companies with EU branches or subsidiaries
- Opt-out option for capital market-oriented SMEs: Use of a two-year transition period, i.e. first application possible in the 2028 financial year

¹ all capital market-oriented companies > 500 employees

² Large companies (if 2 of the 3 criteria are met):

- Total assets > EUR 25 million
- Net revenue > EUR 50 million
- Employees > 250 on an annual average

ESRS - European Sustainability Reporting Standards

Cross-sectoral standards

(Drafts 11/22 released > delegated act COM June 9, 2023)

Cross-section standards

ESRS 1
General Requirements

ESRS 2
General Disclosures ¹

Topics-Standards



Environment



Social



Governance

Climate change

Own workforce

Business Conduct

Pollution

Workers in the value chain

Water and marine resources

Affected communities

Biodiversity and ecosystems

Consumers and end-users

Resource Use and
Circular Economy



Mandatory to report

Coming later

Sector-specific standards
(Delegated act presumably Q2 2024)

SME-proportionate standards *

Standards for companies from third
countries

* Reporting for listed SMEs from 2026 (with opt-out by 2028); proposal for voluntary ESRS developed by EFRAG in Jan 2024.

¹ Reporting areas in general disclosures:

- Basic Requirements
- Governance
- Strategy
- Managing impacts, risks and opportunities
- Key Figures & Targets

Roadmap for CSRD Reporting

Example of the roadmap to the ESG Report 2026



2024

- Setting the level of ambition
- Creating awareness
 - Building a team
 - Involving relevant people
- Materiality analysis
 - High-level
 - Inside-out & outside-in impacts
- Gap analysis & readiness check
 - Collect available data and compare with CSRD requirements
 - Procedure for data preparation
 - Prioritization of requirements



2025

- Double materiality analysis
 - Detailed analysis along the value chain
 - Identification of IROs
- Developing a CSRD-compliant strategy
 - Establish targets and KPIs
- Establish organization & processes
 - Roles and responsibilities
 - Adapt internal systems (data management software)
- Governance
 - Involve supervisory board
 - Set up internal control system



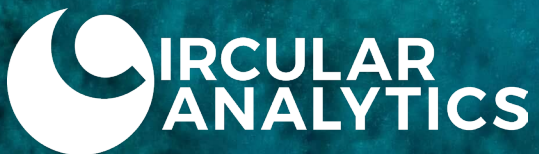
2026

- Reporting with the annual report
 - Implementing ESRS requirements
 - Implementation of formal requirements (digital tagging)
- Monitoring and continuous improvement
 - Improvement of data & information
 - Review reporting process & learnings



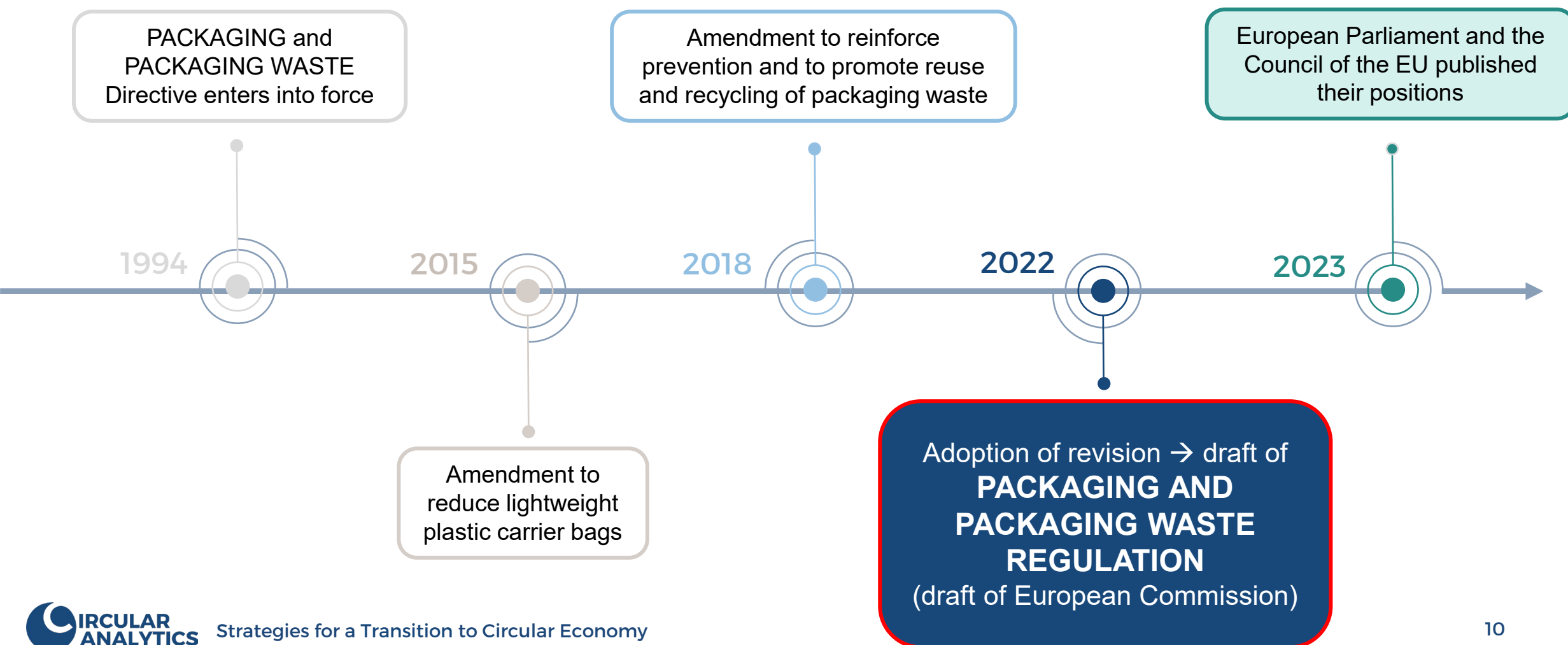
Navigating the Landscape: General Requirements of PPWR with a Focus on Packaging Minimization

Lina Wimmer



PACKAGING AND PACKAGING WASTE

LEGISLATION IN EUROPE



Recyclable Packaging (Art. 6)

- All packaging has to be recyclable **by 2030**.
- 2-stage approach:
 - from **2030** packaging must meet **Design for Recycling** criteria
 - from **2035** packaging must be additionally effectively collected, sorted and recovered („**recycled at scale**“)
- Exemptions: until 2035 special packaging
from 2030 innovative packaging

(max. 5 years)

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**
- Per **packaging unit** (EC)
- Planned: Implementing act for the methodology of calculation and verification of percentage PCR recycle.

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

Reuse and Refill (Art. 10, Art. 26 und Art. 27)

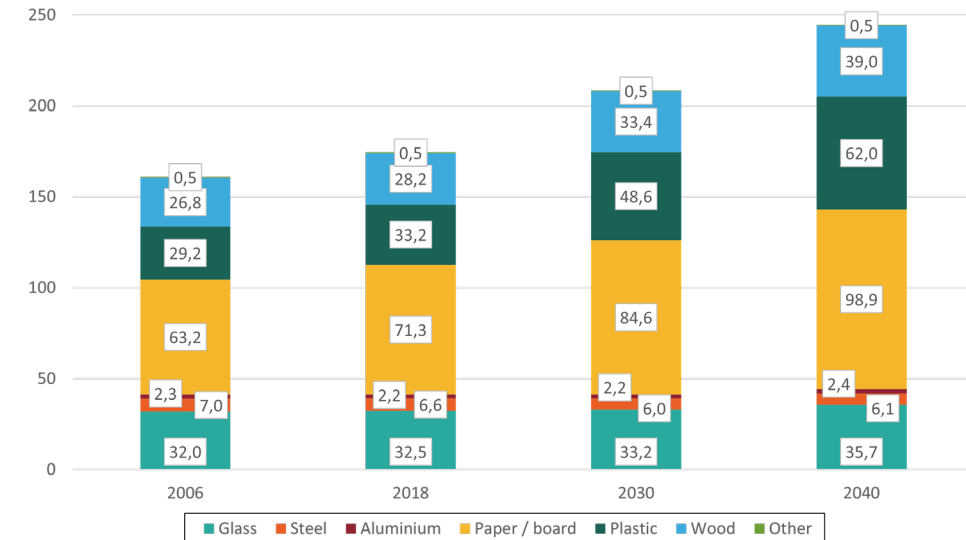
- reusable packaging must be conceived, designed and placed on the market in such a way that it can be reused or refilled
- has to be part of a reuse system

Product	2030	2040
Cold and Hot beverages	20%	80%
Take-away ready-prepared meals	10%	40%
Non-alcoholic beverages (excl. milk)	10%	25%
alcoholic beverages (excl. wine and spirits)	10%	25%
Transport and grouped packaging	10-30%	25-90%
Transport packaging for transport between different sites/ the same Member State	100%	

Waste Prevention (Art. 38)

Member States' packaging waste reduction targets (per capita, base year 2018):

- 5% until 2030 (→ effective reduction by **19%**)
- 10% until 2035 (→ effective reduction by **29%**)
- 15% until 2040 (→ effective reduction by **37%**)



Packaging Minimisation (Art. 9/ Art. 21/ Annex IV)

By 01 January 2030

- Packaging **weight** and **volume** as **low** as necessary
- The safety and functionality of the packaging must continue to be guaranteed
- Empty space must be reduced to the necessary minimum (**empty space ratio 40%** - per packaging unit)
- **Prohibition** of misleading packaging (double walls, double bottoms...)
- **Reusability** of the packaging must be considered
- Applies also to e-commerce, transport and collective packaging



Packaging Minimisation (Annex IV part 1 and part 2)

PART 1 – Performance Criteria

- Product Protection
- Packaging manufacturing processes
- Logistics
- Information requirements
- Hygiene and safety
- Legal Requirements
- Recycled content, recyclability and re-use

PART 2 – Assessment methodology and determination of the minimum packaging volume and weight

- Must be explained in technical documentation
- Must include at least the following:
 - For each performance criterion, a list of design requirements → method of determination
 - Description of the results of the assessment
 - Any test results, market studies or investigations

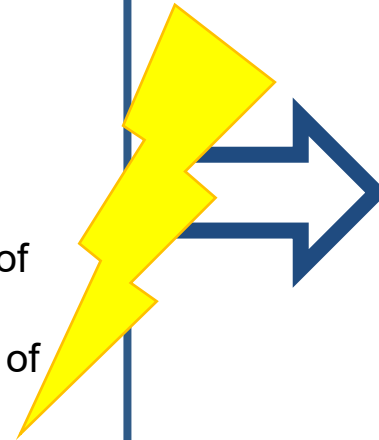
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NEXT STEPS – EU PPWR



06-09 June 2024
European election



22-25 April 2024
Last session of parliament before the election
(PPWR must be passed)

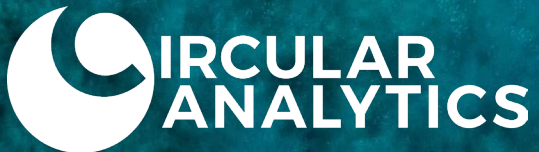


Currently: Trilogue Discussions
(Commission, Parliament, Council)



Sustainable Packaging: Sustainability Indicators and Packaging Design

Manfred Tacker



Packaging and Packaging Waste Regulation

Packaging minimisation

- Weight and volume
- Empty space
- Ensure safety and functionality

Packaging waste reduction

- Reduction target (per capita, vs. 2018):
 - 5% till 2030
 - 10% till 2035
 - 15% till 2040

PPWR – KPIs & Design

NEW SET OF KPIs

- ✓ Weight
- ✓ Recyclability (70% min)
- ✓ DfR criteria fulfilled -> exact composition
- ✓ Carbon footprint
- ✓ Recyclate quality (circularity vs. recyclability)
- ✓ Recyclate content
- ✓ Emptiability

CSRD – Impact

- Corporate Sustainability Reporting Guideline

- Requirements
 - Carbon Footprint („cradle to gate“ – scope 1,2,3)
 - Waste reduction – Development of a packaging strategy
 - Set sustainability goals (emission and waste reduction) and communication

- Part of EU Green Deal

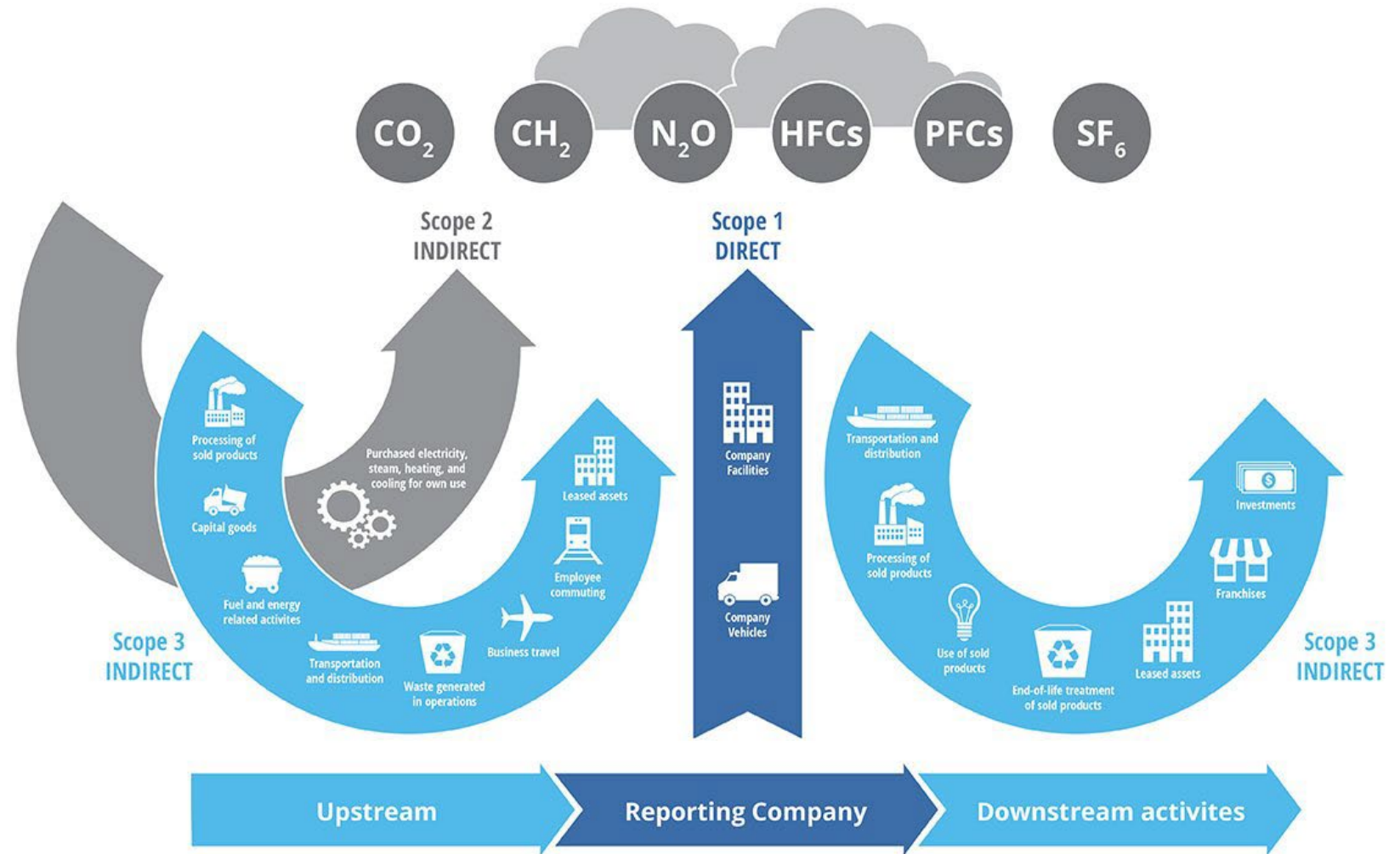
- Publication of sustainability information required with management report

- Timescale:

- 2024: Large companies (> 500 MA)
- 2025: Companies > 250 Employees / Sales > 40 Mio EUR

Scope 1-2-3

- **Scope 1:** Emissions that occur within the company's system boundaries.
- **Scope 2:** Indirect emissions from purchased energy produced outside the system boundary.
- **Scope 3:** Indirect emissions that occur along the value chain: From facilities not owned or directly controlled by the company - upstream and downstream.



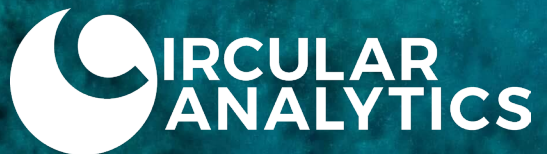
CSRD – Strategie

1. **Impact assessment (materiality assessment)**
 - Identify impacts, risks and opportunities
2. **Define strategy, targets, KPIs**
 - Reduction of GHG-emissions
 - Waste reduction
 - Reduction of water consumption...
3. **Measure and report**

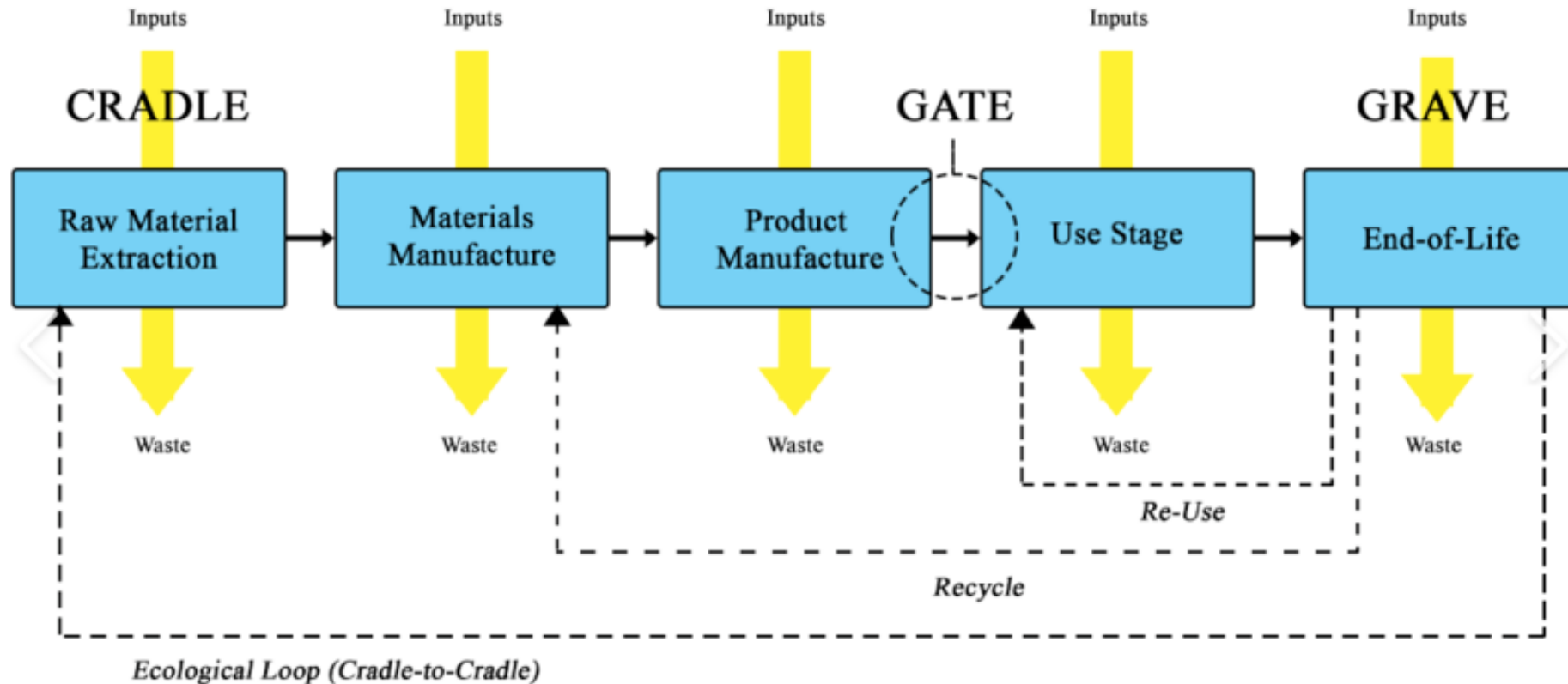


Process optimisation: Streamlined cradle-to-gate LCA

Manfred Tacker

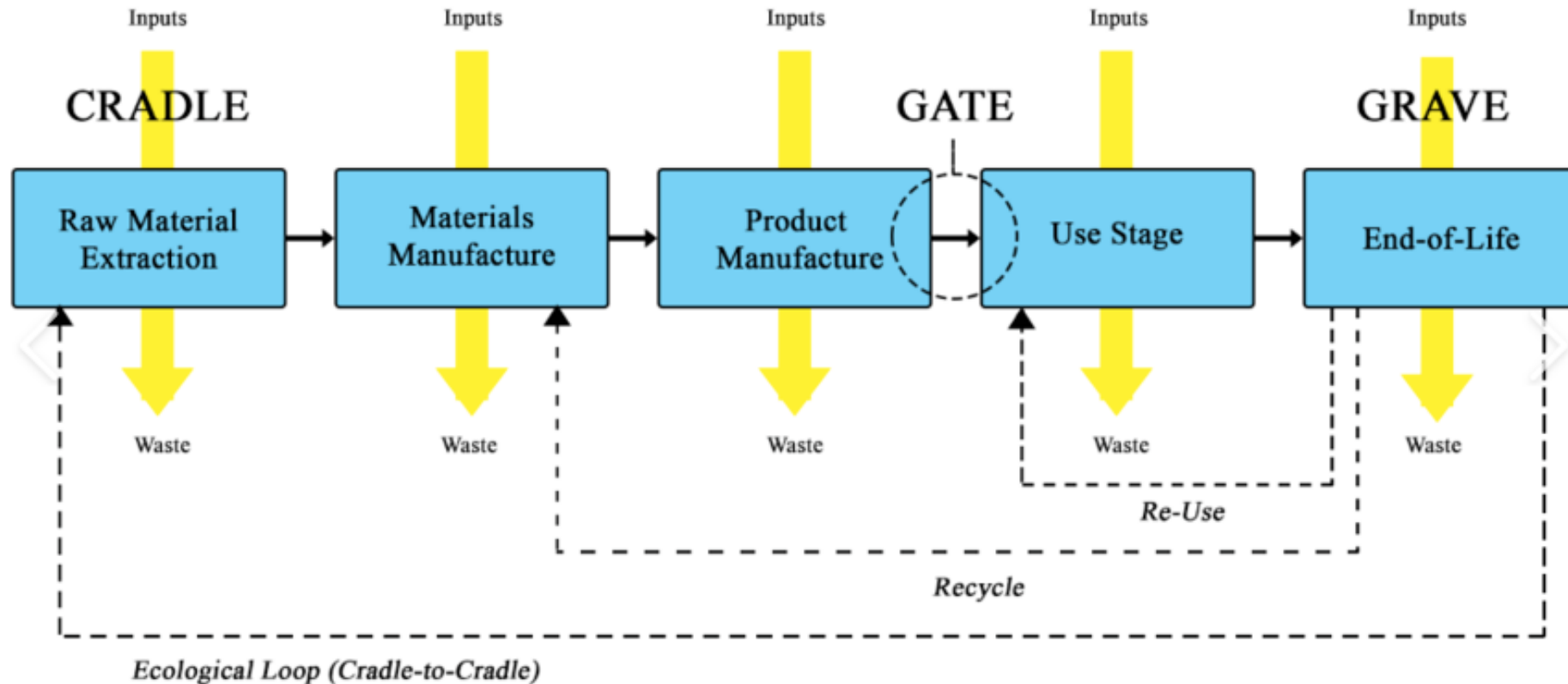


Cradle-to-Gate vs. Cradle-to-Grave



Cradle-to-Gate vs. Cradle-to-Grave

Company specific Cradle-to-Gate-Tool

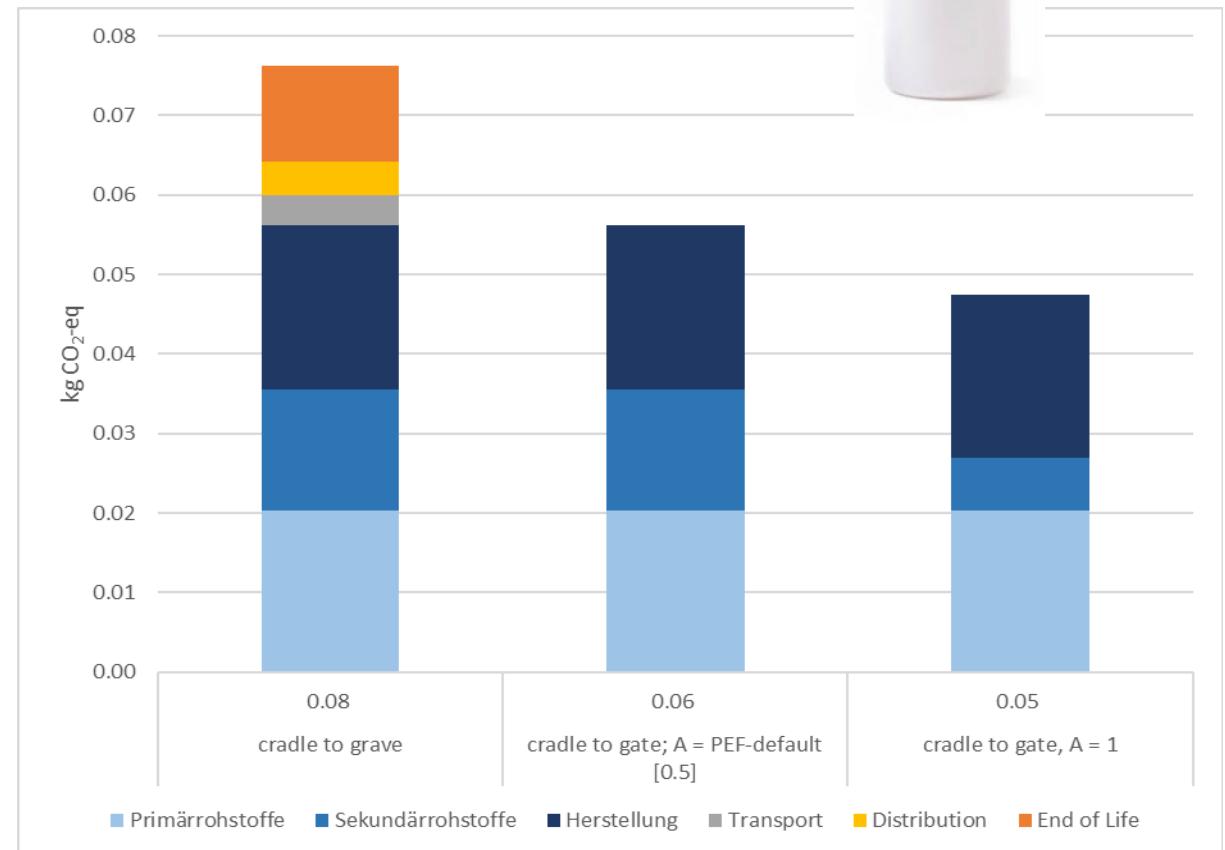


Packaging Cockpit

HDPE-bottle with PP closure

- 70% recycle content HDPE
- 2 possibilities for A-factor in CFF (PEF)
 - A = default
 - A = 1 (for hotspot-analysis)

PEF-method and A-Faktor have to be provided

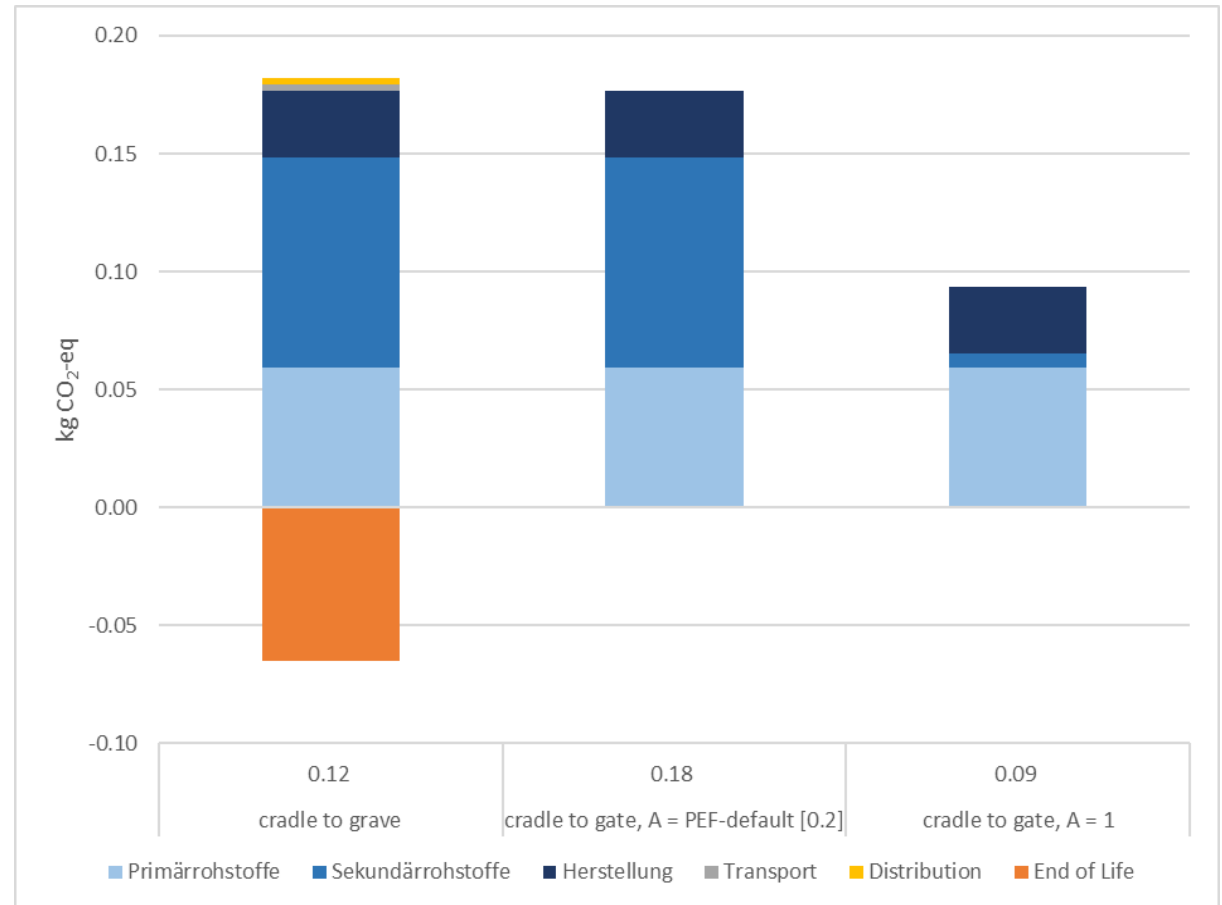


Aluminium tray



- 70% recycle content
- 2 possibilities for A-factor in CFF (PEF)
 - A = default
 - A = 1 (for hotspot-analysis)

PEF-method and A-Faktor have to be provided



Cradle-to-Gate LCA for Packaging Manufacturers

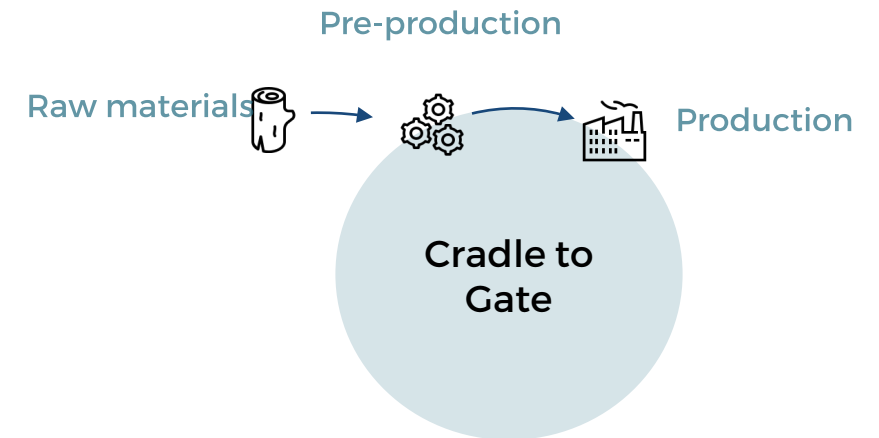
Streamlined **cradle-to-gate** LCAs for packaging- and label manufacturers and printers – company specific

1. stage: Streamlined LCA with published data(ecoinvent)

2. stage: Refinement with company-specific data

- Energie mix (green electricity ...)
- Reduced energy consumption
- Low carbon materials
- Reduced scrap-rate
- Increased recycling rate ...

Improved efficiency / carbon footprint reduction made visible



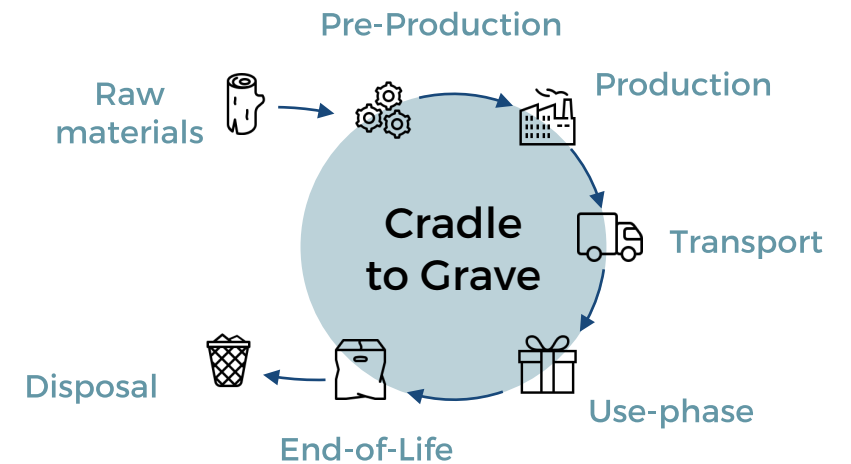
Cradle-to-Grave LCA for Brand Owners & Retailer

Streamlined **cradle-to-grave** LCAs

1. stage: Streamlined LCA with Packaging Cockpit (ecoinvent based)

2. stage: Refinement with company-specific data

- Energy mix (green energy ...)
- Reduced energy consumption
- Low carbon raw materials
- Reduced scrap rate
- Increased recycling rate...



Improved efficiency / carbon footprint reduction made visible

Design for Sustainability - Rules

1. Ensure product protection
2. Calculate packaging - KPIs for packaging (holistic sustainability assessment)
 - Recyclability
 - Packaging weight
 - Carbon Footprint
 - Emptiability
 - Others: recycle content, renewables content ...
3. Benchmark – calculate against competitive packaging
4. Optimize packaging against KPIs

Conclusion

PPWR – requires set of sustainability indicators

- ☉ Sustainable packaging – holistic concept
 - ☉ Recyclability + Minimisation of environmental footprint (LCA)
- ☉ Packaging minimisation
- ☉ Harmonisation of recyclability assessment (CEN)
- ☉ Data flow along the whole supply chain

CSRD – new requirements for sustainability reporting

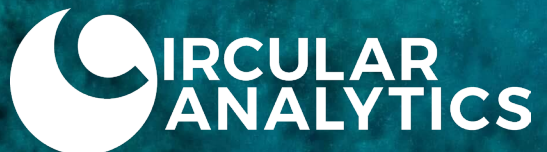
- ☉ Cradle-to-gate carbon-footprint for packaging manufacturers
- ☉ Cradle-to-grave carbon-footprint for brand owner / retailer
- ☉ Sustainability strategy – reduction of carbon-footprint / waste / water ...
- ☉ LCA-methodology must be clearly defined!



A Roadmap to Compliance

Guidance on ensuring fitness for PPWR and CSRD

Charlotte Werner



New legal requirements: challenges for the European industry

Expansion of sustainability reporting to a wider range of companies

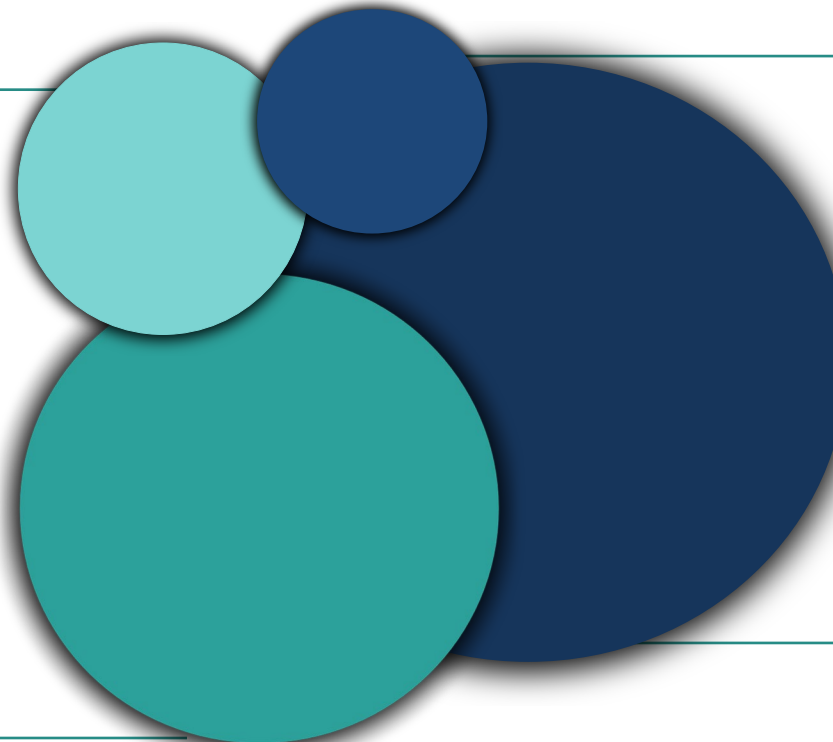
- Sustainable corporate management
- Environmental aspects
- Social issues
- Double materiality and due diligence

Data collection and reporting becomes mandatory and extends beyond the boundaries of your own company.

Assessment of the packaging portfolio based on sustainability indicators.

- Recyclability
- Recycle content
- Minimisation requirement
- Reuse/-filling

Revision of the packaging strategy and actualization of targets in accordance with the PPWR



Compliance with PPWR



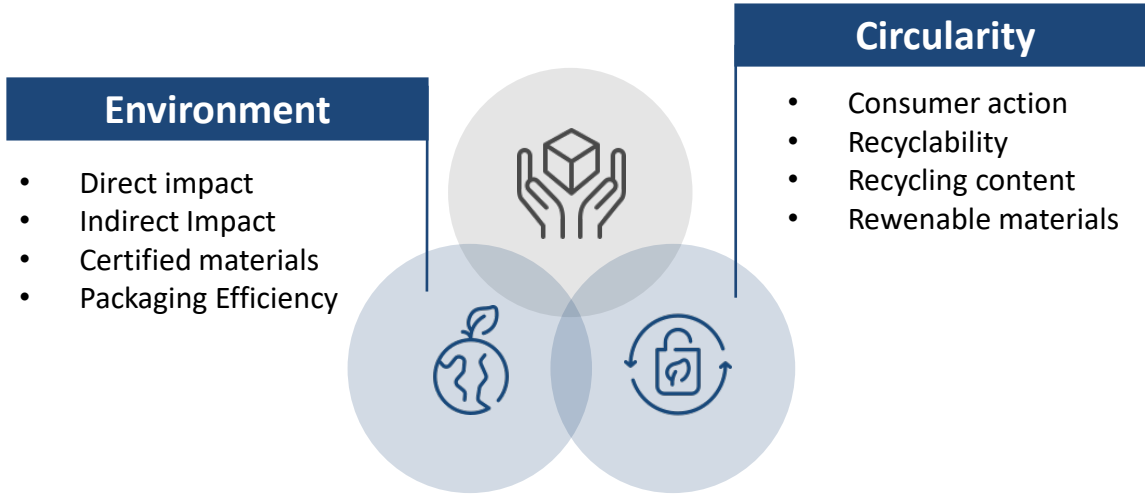
Evaluation of the **performance of packaging** based on the required sustainability indicators.

Comprehensive optimisation of packaging

- Minimisation of resource consumption
- Improvement of emptiability

Continuous monitoring of sustainability parameters will become essential.

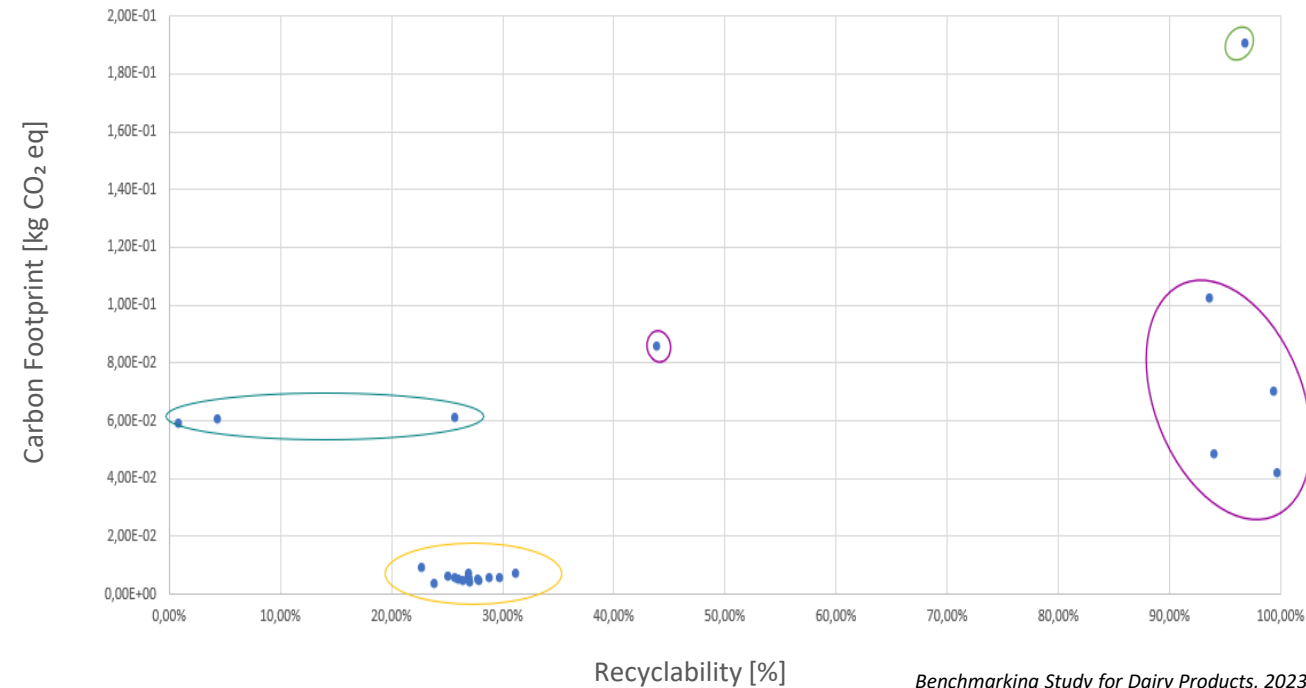
Packaging Benchmarking



PACKAGING BENCHMARKING APPROACH

By implementing this benchmarking approach, the industry can gain insights into its sustainability performance, facilitating compliance with the new regulation and contributing to a circular future.

Butter-packaging: juxtaposition Recyclability / Carbon Footprint



Benchmarking Study for Dairy Products, 2023
© Circular Analytics

Fibre-based aluminium
compounds

Rigid PP-Trays

Glass

Rigid plastic trays
with cardboard decoration

Actions CSRD

Large companies that fulfil 2 of the following 3 criteria:

- 40 million euros in net sales
- More than 20 million euros balance sheet total
- More than 250 employees

I

Evaluation of the environmental impact of suppliers' products.
Attention! Cradle-to-gate approach

II

Evaluation of the carbon footprint of the entire company including
the product portfolio (Scope 1-3)

III

Development of a sustainability strategy based on the CSRD requirements

How to act?

Unveiling and analyzing data

- Assessing the current status of packaging using sustainability KPIS for benchmarking
- Evaluating environmental impacts of supplier products

Reporting

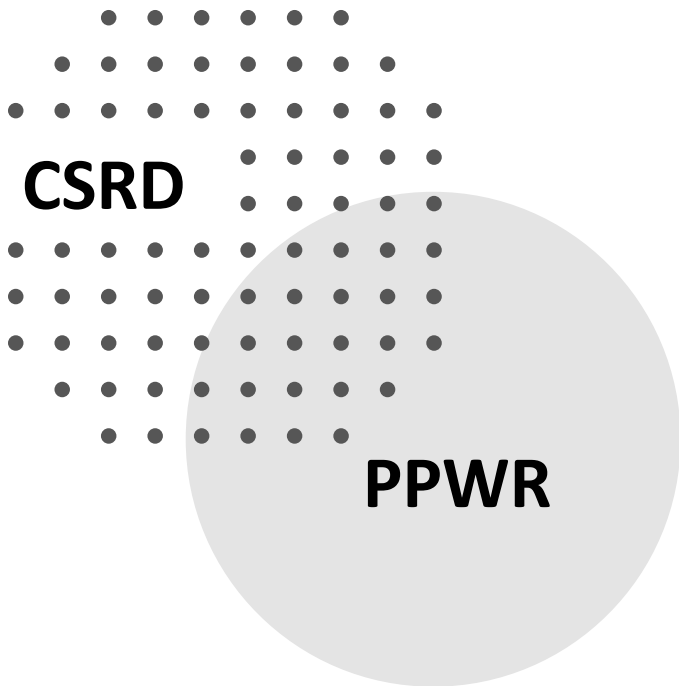
- Calculating and interpreting key sustainability parameters (recyclability, carbon footprint)
- Conducting cradle-to-gate life cycle assessments (LCA) for supplier products

Strategy formation

Crafting a Sustainability Strategy Aligned with current European requirements

Monitoring

- Continuous evaluation of sustainability parameters
- Ensuring alignment with regulatory demands



Take Home Message

Transparency of environmental impacts is essential throughout the entire supply chain.

Holistic packaging optimization

- Minimizing resources
- Enhancing circular economy principals and easy of recyclability

Continuous monitoring of sustainability parameters will become essential over time.



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Position Paper

Sustainability perspectives across the globe

www.worldpackaging.org



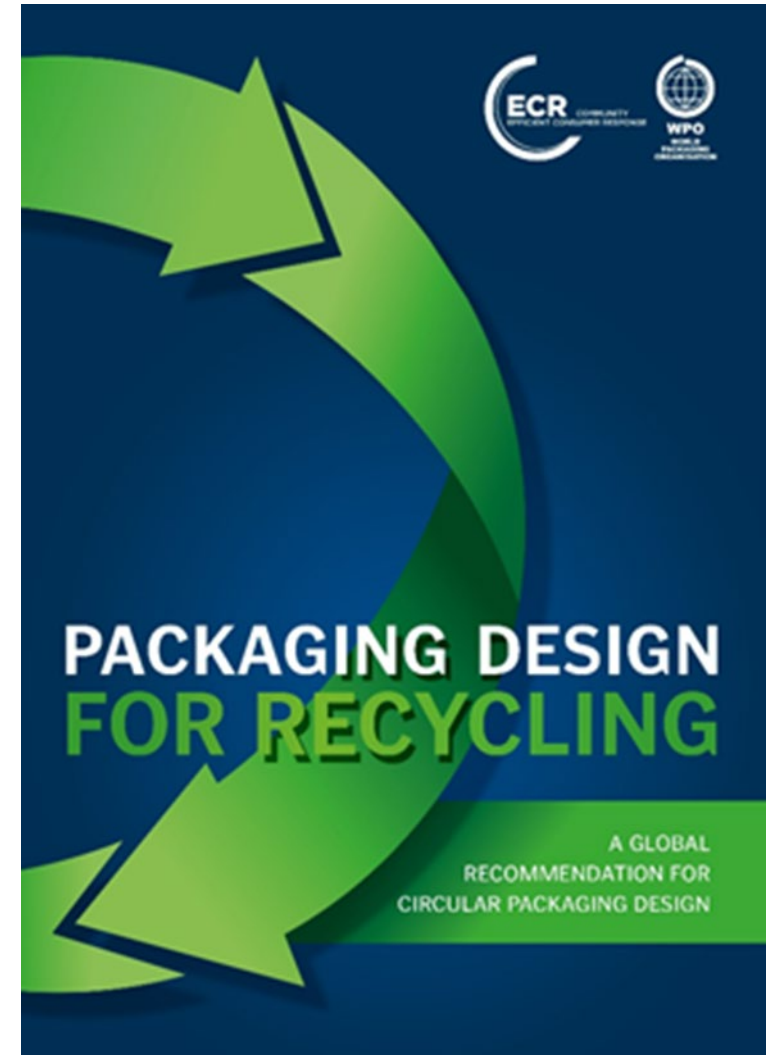
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https://worldpackaging.org/Uploads/2023-02/ResourcePDF51_1675967696.pdf

Global Packaging Design for Recycling Guide

- Increase recyclability and recycling rate of packaging
- Create a common understanding of Circular Packaging Design
- Provide a practical design tool - easy to use and understand
- International harmonisation of design standards
- Stimulate global education and training in Circular Packaging Design



Material-Specific recommendations

2.3.1 Plastics



- Use materials that are as widely available as possible (**PP, PE, PET**).
- Recyclable material combinations (ideally **mono-materials**).
- The surface area of the base material should, at best, be covered to a max. 50 %² with the sleeve/label/banderole.
- Easy mechanical separability of the individual components in the sorting process.
- If possible, use transparent materials.
- As few additives as possible.
- Adhesives recyclable or washable under certain conditions.
- No barrier layers, but if necessary: **carbon plasma coating**³, **SiOx**- or **Al₂O₃** barrier.



- Avoid small parts that can be separated by the last consumer (**Littering**).
- Non-recyclable material composites (see specific design recommendations).
- Density-changing **additives** (for example, density-increasing additives in PE and PP packaging lead to problems in sorting).
- Use of **Carbon black**-based inks



German



Arabic



Japanese



Spanish



Portuguese



English



Thai



Czech



Georgian



Hungarian



Latvian

WASTE STREAM MAPPING TOOLS

31 COUNTRIES



AUSTRALIA



AUSTRIA



BELGIUM



BRAZIL



CHINA



COTE D'IVOIRE



CZECHIA



DENMARK



FINLAND



FRANCE



GERMANY



GREECE



HUNGARY



IRELAND



ISRAEL



ITALY



JAPAN



KENYA



LATVIA



LUXEMBOURG



NETHERLANDS



NEW ZEALAND



NEW ZEALAND



RUSSIA



SINGAPORE



SLOVAKIA



SPAIN



SWEDEN



SWITZERLAND



UNITED KINGDOM



UNITED STATES OF AMERICA



VANUATU

Waste Stream Mapping Guides Available

WASTE STREAM MAPPING TOOLS



JAPAN

Packaging waste streams Japan		
Composite beverage carton		✓
Paper		✓
Aluminium		✓
Tin plate		✓
Glass		✓
PS	rigid	✓
	flexible	✓
PVC	rigid	X
	flexible	X
PE	rigid	✓
	flexible	✓
PP	rigid	✓
	flexible	✓
PET	blow moulded	✓
	thermoformed	✓
	flexible	✓

Legend	Rating	Description
Packaging waste stream infrastructure	✓	There is an area-wide collection of the material (> 50%)
available	✓	
limited available	—	The material is collected in some regions or municipalities, but the total amount is 10–50%
not available	X	In this country is no waste stream for that material available or the collected waste amount for that material is < 10%
No information	n.i.	No information is available for this country at the time. There will be further research.

*according to Plastic Recyclers Europe
For further information, please contact: info@worldpackaging.org



SINGAPORE

Packaging waste streams Singapore ¹		
Composite beverage carton		✓
Paper		✓
Aluminium		✓
Tin plate		✓
Glass		✓
PS	rigid	X ²
	flexible	X
PVC	rigid	✓ ³
	flexible	✓ ³
PE	rigid	✓
	flexible	✓
PP	rigid	✓
	flexible	✓
PET	blow moulded	✓
	thermoformed	✓
	flexible	✓

¹ Singapore has a commingled recycling collection system, in which all its recyclables are collected together and sorted in a material recovery facility

² Rigid PS bottles are in the recyclables stream; foam PS food containers are not collected in the recyclables stream

³ Not found in recyclables stream



CZECHIA

Packaging waste streams Czechia		
Composite beverage carton		✓
Paper		✓
Aluminium		✓
Tin plate		~
Glass		✓
PS	rigid	✓
	flexible	✓
PVC	rigid	X
	flexible	X
PE	rigid	✓
	flexible	✓
PP	rigid	✓
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For further information, please contact: info@worldpackaging.org



<https://worldpackaging.org/wpo/45/>

31 COUNTRIES

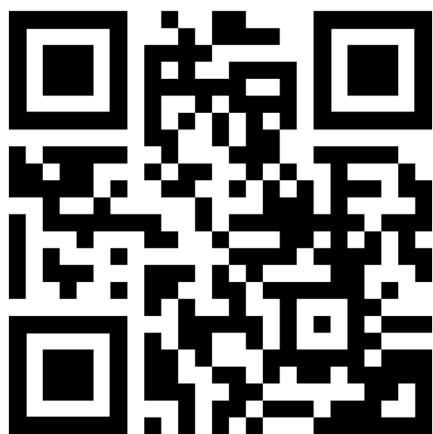
Australia • Austria • Belgium • Brazil • China • Cote d'Ivoire • Czechia • Denmark • Finland • France • Germany • Greece • Hungary • Ireland • Israel • Italy • Japan • Kenya • Kenya • Latvia
Netherlands • New Zealand • Russia • Singapore • Slovakia • Spain • Sweden • Switzerland • United Kingdom • United States of America • Vanuatu

Sustainable Packaging Special Award



Better quality of life, through better packaging, for more people

PACKAGING THAT SAVES FOOD SPECIAL AWARD



Coordinated by



NEW Sustainability & Save Food Case Studies



IceCoat - Mini fridge without electricity
WINS 2022 WORLDSTAR PACKAGING THAT SAVES FOOD SPECIAL AWARD

KEY FEATURES

- Minimises food waste
- Developed with renewable and recyclable materials
- Mono Material FSC Certified Materials
- Ideal for Cold Chain transportation
- Withstands the rigours of transport
- Protects the product
- The unique ice jacket maintains the temperature
- Ideal for E-Commerce

STREIFF Gruppe
STREIFF Gruppe specialises in high-quality packaging, table-top packaging solutions and creative packaging developments and are award-winning suppliers in the packaging industry. They are characterised by continuity and innovative strength in their complete portfolio of high-quality packaging and industrial packaging. STREIFF Gruppe produces and develops packaging at the European and industrial sites in Germany. Their customers appreciate and demand know-how, experience and agility. STREIFF Gruppe work at the pulse of time, select trends at lightning speed and produce at the highest level. As a recognised specialist in logistics and fulfilment, they can offer you the advantages of real one-stop shipping: high-quality packaging, state-of-the-art fulfilment, individual industrial packaging and fully automated packaging. The STREIFF Group includes the packaging companies Streiff & Reinhold GmbH and Richard Reinhold GmbH.

dvi **WORLD PACKAGING ORGANISATION** **WORLDSTAR AWARDS** **WORLDSTAR AWARDS** **WORLDSTAR AWARDS** **WORLDSTAR AWARDS**

Junee Prime Lamb
WINS 2022 WORLDSTAR PACKAGING THAT SAVES FOOD SPECIAL AWARD

KEY FEATURES

- Most contributes 20% of the carbon footprint in lamb
- No more leaking packs
- No more food & water waste due to leaks
- Whitened ripens of storage & transport
- Packaging life is improved
- Australian Recycling Label (AFL compliant)
- Vacuum, shrink barrier bags increase shelf life to 90 days
- Ideal for export market
- Tear, puncture, tear and abrasion resistant design
- High oxygen barrier properties
- Built in bone guard protection in areas that need it the most
- Bone Guard can be purposefully positioned in bag

Junee Prime Lamb
Junee Prime Lamb & SEE

Family owned and operated since 1937, Junee Prime Lamb has quickly grown to become one of the leading producers of premium quality Australian lamb. From humble beginnings processing lamb, beef and pork for local customers, they now specialise exclusively in prime Australian lamb and supply to many parts of the world.

SEE partners with its customers to solve their most pressing resource challenges by delivering new solutions derived from its unmatched industry knowledge and expertise. These solutions create a more efficient, secure and sustainable global food supply chain and enhance e-commerce through fulfillment and packaging solutions to protect the worldwide movement of goods.

OSEE

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PAPACKS® Fiber Bottle
WINS 2022 WORLDSTAR SUSTAINABLE PACKAGING SPECIAL AWARD

KEY FEATURES

- Unique Fiber Bottle
- Plastics Free Bottle neck
- Renewable Materials
- Moulded Fiber Solution
- PAPACKS® Plant-Based Coating to line the inside
- Recyclable and Recoverable
- Eliminates Single Use Plastic

PAPACKS® Fiber Bottle
PAPACKS® Sales GmbH.

PAPACKS®
PACKAGING BY NATURE

PAPACKS® is a sustainable packaging company specialising in environmentally friendly moulded fiber packaging solutions, made from virgin fiber. With its current know-how, PAPACKS® is pioneering as the innovator of the moulded fiber industry, introducing renewable raw materials, plant-based coatings and unique solutions which are directly applicable in modern circular economy concepts.

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PAPACKS® Refill Caps
WINS 2022 WORLDSTAR SUSTAINABLE PACKAGING SPECIAL AWARD

KEY FEATURES

- Refillable & Reusable Design
- Moulded Fiber Renewable Material
- Closed Loop Collection Program
- Eliminates Problematic Materials
- Reduces Single Use Plastics
- Minimises Product Waste
- Recyclable Tubes

PAPACKS® Refill Caps
PAPACKS® Sales GmbH.

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iPET SCHOOL MILK CUP
WINS 2022 WORLDSTAR SUSTAINABLE PACKAGING SPECIAL AWARD

KEY FEATURES

- Closed Loop Collection program
- Unique solution for fresh milk for schools
- Recycled PET that is Food Safety Approved
- Can be recycled over and over again into more school milk cups
- Mono Material Recyclable Design
- Minimises Food & Product Waste
- Minimises the use of single use plastics
- Collaborative solution for the wider industry

iPET school milk cup
PETMAN, Starlinger viscotec, Greiner Packaging, Schmilchbaum Oberösterreich

The packaging solution and recycling loop have been realised in a cooperation between three companies: recycling technology provider, sheet producer, packaging producer and Austrian school milk producers, who established a closed recycling loop for yogurt cups.

Starlinger
PETMAN is an Austrian technology and machinery provider, that produces machines and parts for the refinement of recycled PET for food contact and extrusion into PET sheet. Their main products are made from 100% rPET. www.starlinger.at

PETMAN
PETMAN is a converter who supplies food-grade and environmentally friendly PET sheet, made from post-consumer material. www.petman.at

greiner
The clients (and project partners) are the Upper Austrian school milk producers, who provide children with fresh products obtained directly to schools and kindergartens.

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LifeSpan Copper Based Film
WINS 2023 WORLDSTAR PACKAGING THAT SAVES FOOD SPECIAL AWARD

KEY FEATURES

- Contains Copper microparticles
- The microparticles inhibit the development of microorganisms
- Extends shelf life by up to 250%
- Ideally suited for cheese and fresh processed meat such as ham, bacon and fresh chicken
- Preserves and protects products through the all value chain

amcor
Amcor is a global leader in developing and producing responsible packaging solutions for food, beverage, pharmaceutical, medical, home and personal care, and other products. Amcor works with leading companies around the world to protect their products and the people who rely on them, differentiate brands, and improve every choice they make a range of flexible and responsible packaging, primary, secondary, and services. The company is focused on making packaging that is increasingly lighter weight, recyclable and reusable, and truly using an increasing amount of recycled content.

COPPERPROTEK
Copperprotek is a leading Chinese biotechnology company in the use of biomaterials to examine the food production and marketing chain. They believe that their technological developments are a scalable and cost-efficient solution to ensure that your food reaches your markets and consumers in the best possible condition.

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Plant Fibre Pulp Hot & Cold Lids
WINS 2023 WORLDSTAR SUSTAINABLE PACKAGING SPECIAL AWARD

KEY FEATURES

- Meets 2025 National Packaging Targets & Sustainable Packaging Design Principles
- Eliminate Hazardous Materials
- Design for Recovery
- Provide Consumer Information on Sustainability
- Hot & Cold Lids
- Home & Commercially Compostable
- AS4736 certifications (Commercial) & AS5810 (Home)
- Plant-based renewable materials
- No Added PFAs
- Drop test to hold the lid firmly
- Unique 4-1 design

Plant Fibre Pulp Hot & Cold Lids
BioPak

Based in Sydney, BioPak specialises in designing, producing and distributing packaging made from rapidly renewable plant-based materials. The company's business is in the development of products oriented to the market in Japan and research into quality control methods.

BioPak

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Coca-Cola Label-Free PET Bottle
WINS 2023 WORLDSTAR SUSTAINABLE PACKAGING SPECIAL AWARD

KEY FEATURES

- 100% recycled PET materials
- Label-free
- Attractive bottle shape having brand equity
- User-friendly; no hassle to peel label off and easy to crush bottle for disposal
- Drinkable size of 300ml
- Lightweight bottle

Coca-Cola Label-Free PET Bottle
Coca-Cola Tokyo Research & Development Company, Limited

Coca-Cola
Coca-Cola Tokyo Research & Development Company, Limited is a research and development subsidiary in Japan of The Coca-Cola Company whose headquarters are located in Atlanta, U.S.A. The Company's business is in the development of products oriented to the market in Japan and research into quality control methods.

JPD **WORLD PACKAGING ORGANISATION** **WORLDSTAR AWARDS** **WORLDSTAR AWARDS** **WORLDSTAR AWARDS** **WORLDSTAR AWARDS**

ThermoShield Temperature Monitoring System - Food
WINS 2023 WORLDSTAR PACKAGING THAT SAVES FOOD SPECIAL AWARD

KEY FEATURES

- Design for Product Waste
- Design for Accessibility
- Design for Transport Efficiency
- Ideal for food loss & waste
- Tracking via cold chain
- Colour determines when temperature rises above set parameters
- Thermochromic dye technology
- Changes colour as environment changes
- Optical system - dynamically changes appearance at preselected temperatures
- Allows for colour changes - black to orange to red as pack gets warmer
- Extends Shelf Life

ThermoShield Temperature Monitoring System - Food Caps & Closures

CAPS & CLOSURES
Caps and Closures is an Australian owned and operated company that has been designing and manufacturing award-winning innovative plastic packaging solutions for over 25 years. Caps & Closures maintains a global industry and research leaders network to ensure that their in-house design team is in tune with the packaging industry's latest developments.

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Modified Atmosphere Technology
WINS 2023 WORLDSTAR PACKAGING THAT SAVES FOOD SPECIAL AWARD

KEY FEATURES

- Modified Atmosphere material solution
- Sensor spot technology to measure oxygen, humidity rates
- Transforms Flexible Intermediate Bulk Containers
- Extends shelf life of products
- Optimises storage
- Improves shipping efficiencies
- Live tracking and trace of products

Modified Atmosphere Technology
Masterpack Group/Somix

MASTERPACK GROUP
Masterpack is the leading expert in innovative packaging solutions. With their unique and fully integrated solution to create Modified or Controlled Atmosphere in FIBCs, they provide increased protection and extended shelf life of products, decreasing waste and loss of product and improving the quality of products.

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