



THE LCA CENTRE

PACKAGING LIFE CYCLE ASSESSMENT

Guilty free consumption
Green perception v/s gray reality

29th | APRIL | SERVING SOCIETY INNOVATIVE
SYMPOSIUM | PERSPECTIVES ON PACKAGING
ON PACKAGING



Koninklijke
Paardekooper

Eco-friendly packaging ?





“The most sustainable packaging is no packaging at all”



Recycled paper*
(32,83 gram)



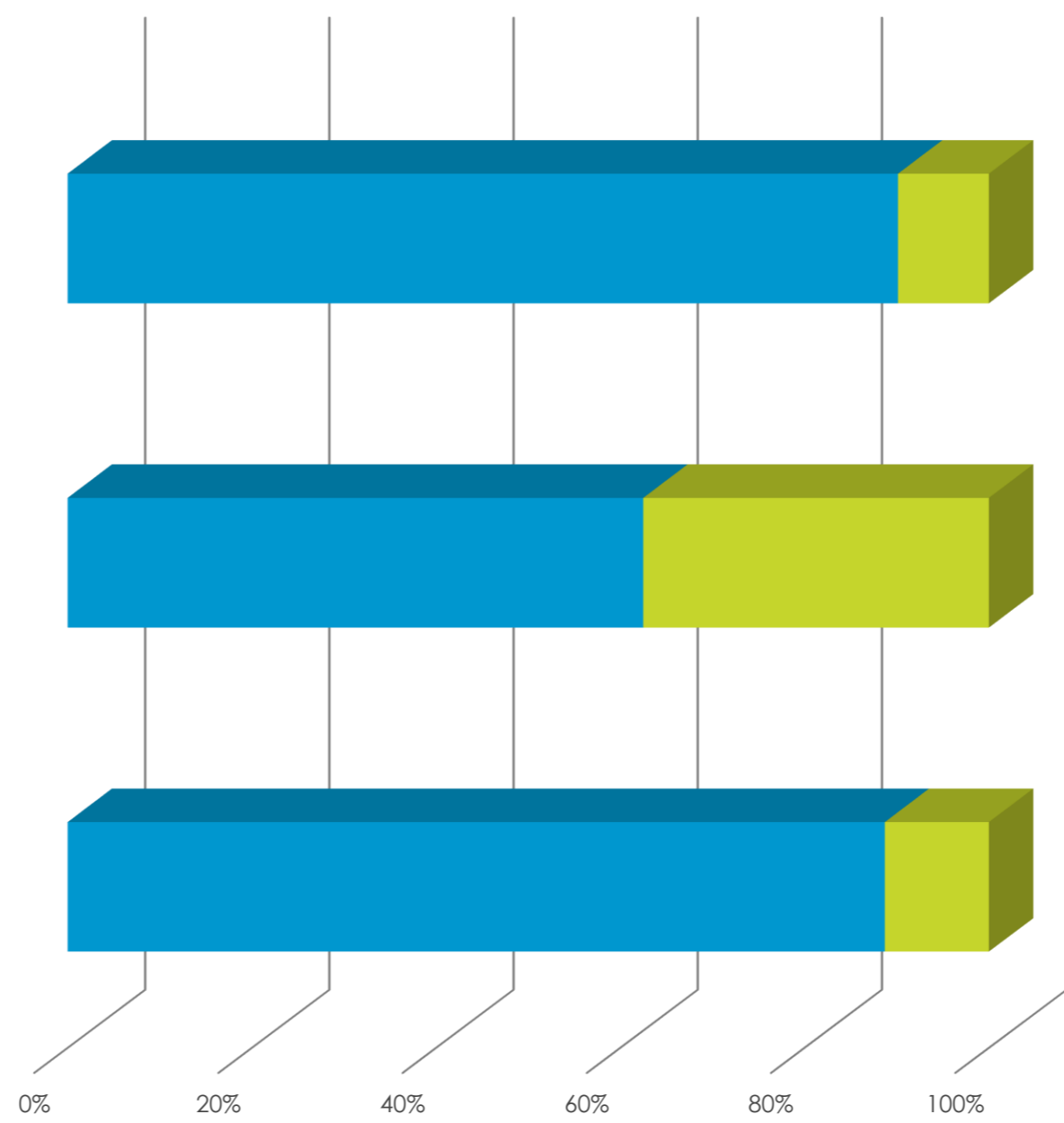
Carbon footprint =
driving **0,05 km**
in a small car

water usage
ltr / bag

carbon footprint in
km driven /
bag

weight

■ Paper bag ■ Plastic bag



HDPE**
4,17 gram



Carbon footprint =
driving **0,03 km**
in a small car

DISCLAIMER

(*/**) based on a typical take out bag (snack bag) in Holland, inventory is based on samples provided by Paardekooper Verpakkingen. The above result are not applicable to any other bags and are not intended for publication or issuing an environmental claim statement. For any questions please contact THE LCA CENTRE



- CHEAP
- LIGHTWEIGHT
- VERSETILE
- NOT EASY DEGRADABLE – HENCE SUITABLE FOR DURABLE PRODUCTS
- CAN BE MADE OF A VARIETY OF RAW MATERIALS



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**PLASTIC BAGS ARE KILLING
OUR MARINE LIFE**

IT'S TIME TO BAN THE BAG



Copyright Troy Mayne

GREENPEACE

DIRECTIVE (EU) 2015/720 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 amending Directive 94/62/EC as regards reducing the consumption of lightweight plastic carrier bags

To promote sustained reductions of the average consumption level of lightweight plastic carrier bags, Member States should take measures **to significantly reduce the consumption of lightweight plastic carrier bags** in line with the overall objectives of the Union's waste policy and the waste hierarchy as provided for in Directive 2008/98/EC of the European Parliament and of the Council

- Reduce
- **Reuse**
- Recycle



It is not a ban on plastic bags



FreeFromPlasticsPackaging
@expopackaging

Volgen

The plastic aversion triggers adoption of compostable alternatives...
Source: packaginginsights.com

Tweet vertalen

Inspirai Crispy BEETROOT & ACEROLA KALE CHIPS
Spain, Aug 2018
CLAIMS 94% raw. 100% organic. Natural. Gluten free. Source of protein. Suitable for vegans. **Compostable packaging. Produced using renewable electricity.**

Fruandes Banano Organico Deshidratado: Dehydrated Organic Banana
Colombia, Jul 2018
CLAIMS Certified B Corporation. USDA organic. Certified organic. Certified kosher. **Compostable.** GMO free. Gluten free. Recyclable packaging.

Bio-Organic Stone Ground Tortilla Chips With Paprika Flavor
Netherlands, Jun 2018
CLAIMS **7P0466 Compostable.** Certified organic. NL-BIO-01. USDA Organic.

INNOVA MARKET INSIGHTS



Bristol Life Mag @BristolLifeMag · 23 u









Huge thanks to @pieminister for helping to sustain us through deadline week with a delivery of their delicious new patties range - in **plastic-free** packaging made from wood pulp ❤️

Tweet vertalen



IT LOOKS LIKE
PLASTIC... BUT IT ISN'T.
IT'S MUCH MORE!

EKOPLAZA LAB
**SHOP
PLASTIC
FREE
NOW!**

 <p>PLASTIC FREE</p> <p>3,09</p> <p>Dadels gedroogd zonder pit Ekoplaza - 250 gram</p> <p>+</p>	 <p>PLASTIC FREE</p> <p>5,29</p> <p>Teffvlokken Meesters van de Halm - 400...</p> <p>+</p>	 <p>PLASTIC FREE</p> <p>3,59</p> <p>Krokante muesli rozijnen Meesters van de Halm - 500...</p> <p>+</p>	 <p>PLASTIC FREE</p> <p>4,17</p> <p>Half om half gehakt St. Hendrick - 300 gram</p> <p>+</p>
 <p>PLASTIC FREE</p> <p>2,29</p> <p>+</p>	 <p>PLASTIC FREE</p> <p>5,15</p> <p>+</p>	 <p>PLASTIC FREE</p> <p>2,55</p> <p>+</p>	 <p>PLASTIC FREE</p> <p>2,45</p> <p>+</p>



IF IT LOOKS LIKE A DUCK,
WALKS LIKE A DUCK AND
QUACKS LIKE A DUCK ...



Definition of plastic



&



&









Single Use Plastic (SUP) item

a product made **wholly or partly from plastic** that is **not** conceived, designed and placed on the market to accomplish within its lifecycle **multiple trips or rotations** by being refilled or re-used for the same purpose for which it was conceived”.



COCA-COLA BOTTLES GET 2ND LIVES



	EPR / AWARNNESS	REDESIGN	REDUCTION	MARKING	COLLECTION	RECYCLED CONTENT
	✓	✓	✓	✓		
	✓	✓			✓	✓
	✓	✓				
	✓					
	✓		✓			
	✓					

BAN







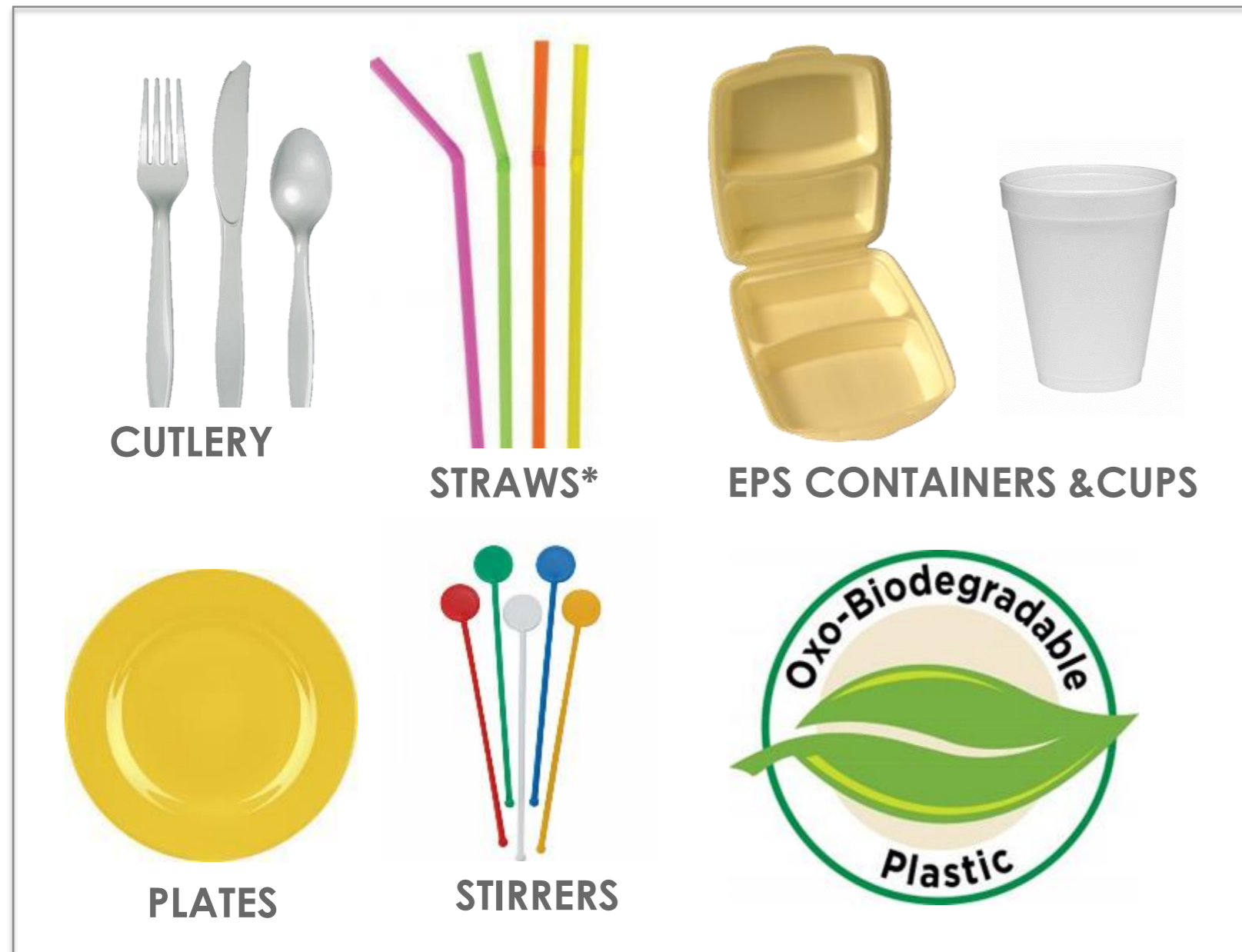








Market restriction (ban)



** Except those for medical applications*

WHEN

2 years after entering into force: **mid 2021**

ISSUES

- The definition of a plate in relation to (soup) bowls
- Food safety of wooden utensils



Redesign



the caps and lids shall remain attached to the container during the product's intended use stage

WHEN

5 years after entering into force - **mid 2024**

ISSUES

- Need for harmonised EU standards relating to the redesign requirement
- Metal caps and lids are excluded from this requirement

Separate collection for recycling + recycled content requirement



WHEN

- **From 2025** beverage PET bottles contain at least 25% recycled plastic,
- **From 2030** all beverage bottles contain at least 30% recycled plastic
- **From 2029** at least 90% of all plastic beverage bottles shall be separately collected for recycling

ISSUES

- Availability of food grade rPE and rPP
- Guidelines for verification of the recycled content

Additional EPR obligations



*Supplementary to the already existing obligations,
including the costs of awareness raising campaigns,
and litter clean up*

WHEN

From 05-01-2023

ISSUES

- Need for EU guidelines
- Clarity regarding the specific roles and responsibilities of all stakeholder groups should be aligned with EU 94/62/EC Packaging & Packaging Waste Directive

Marking requirements



Beverage cups - plastic content and negative effect of litter

WHEN

2 years after entering into force: **mid 2021**

ISSUES

- Harmonized EU design for the warning labels

**This cup
contains
plastics**



Please recycle.
Littering or incorrect
disposal damages
the environment

**Stop using
plastics**



Please recycle.
Littering or incorrect
disposal damages
the environment



Consumption reduction targets



*This also includes making the **re-usable** alternatives available for the consumers*

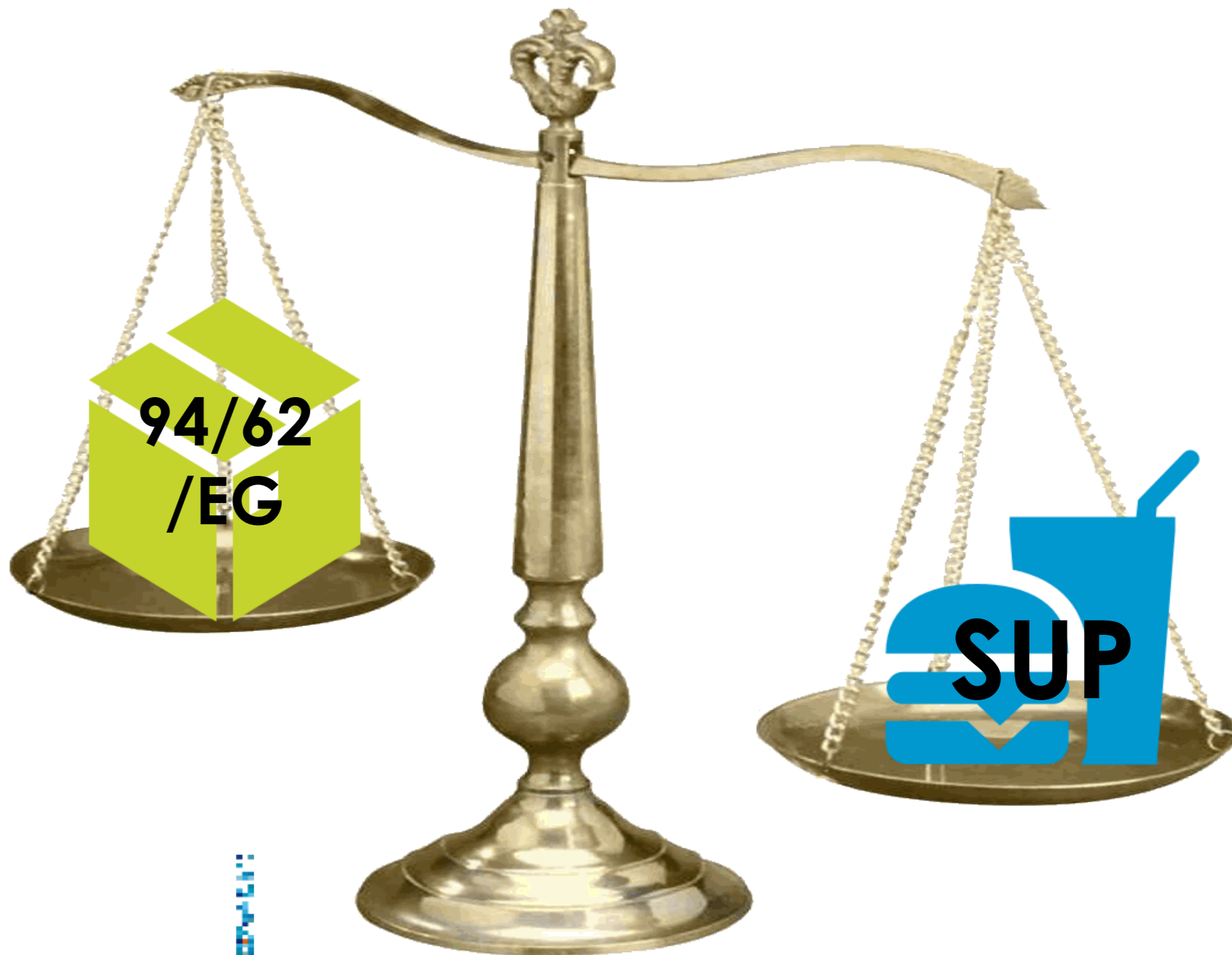
WHEN

Reduction according to yet to be conformed targets, realized in **2026** compared to **2022**

ISSUES

- EU needs to provide a reporting format
- Member States are to provide description of the measures by the end of 2010
- First reporting in 2022
- Room for national bans
- Focus on alternatives defined by **LCA calculations**

Lex Specialis



Packaging & Packaging waste directive 94/62/EC
Amended with Directive 2018/852 from 30-05-2018)



REUSE

“systems to reuse packaging” must operate in “an environmentally sound manner” and “without compromising food hygiene or the safety of consumers”



RECYCLE

“where single use packaging is indispensable to guarantee food hygiene and the health and safety of consumers, Member States should take measures to ensure recycling of such packaging”



COMPOSTING

as recycled when generates output with a similar quantity of recycled content in relation to input, which is to be used as a recycled product, material or substance. When output is used on land as recycled only if this use results in benefits to agriculture or ecological improvement



ENERGY RECOVERY

the reprocessing of biodegradable packaging waste into materials which are to be used as fuels or other means to generate energy [...] should not be counted towards the attainment of the recycling targets.

*Packaging & Packaging waste directive 94/62/EC
Amended with Directive 2018/852 from 30-05-2018)*



**BIOBASED
BIODEGRADABLE**

Bio-based recyclable packaging and **compostable biodegradable** packaging could represent an opportunity to promote renewable sources for the production of packaging, **where shown to be beneficial from a life-cycle perspective.**

4 Criteria that a plastic product needs to meet in order to be considered recyclable:

1. The product must be made with a plastic that is collected for recycling, has market value and/or is supported by a legislatively mandated program
2. The product must be sorted and aggregated into defined streams for recycling processes.
3. The product can be processed and reclaimed/recycled with commercial recycling processes
4. The recycled plastic becomes a raw material that is used in the production of new products.





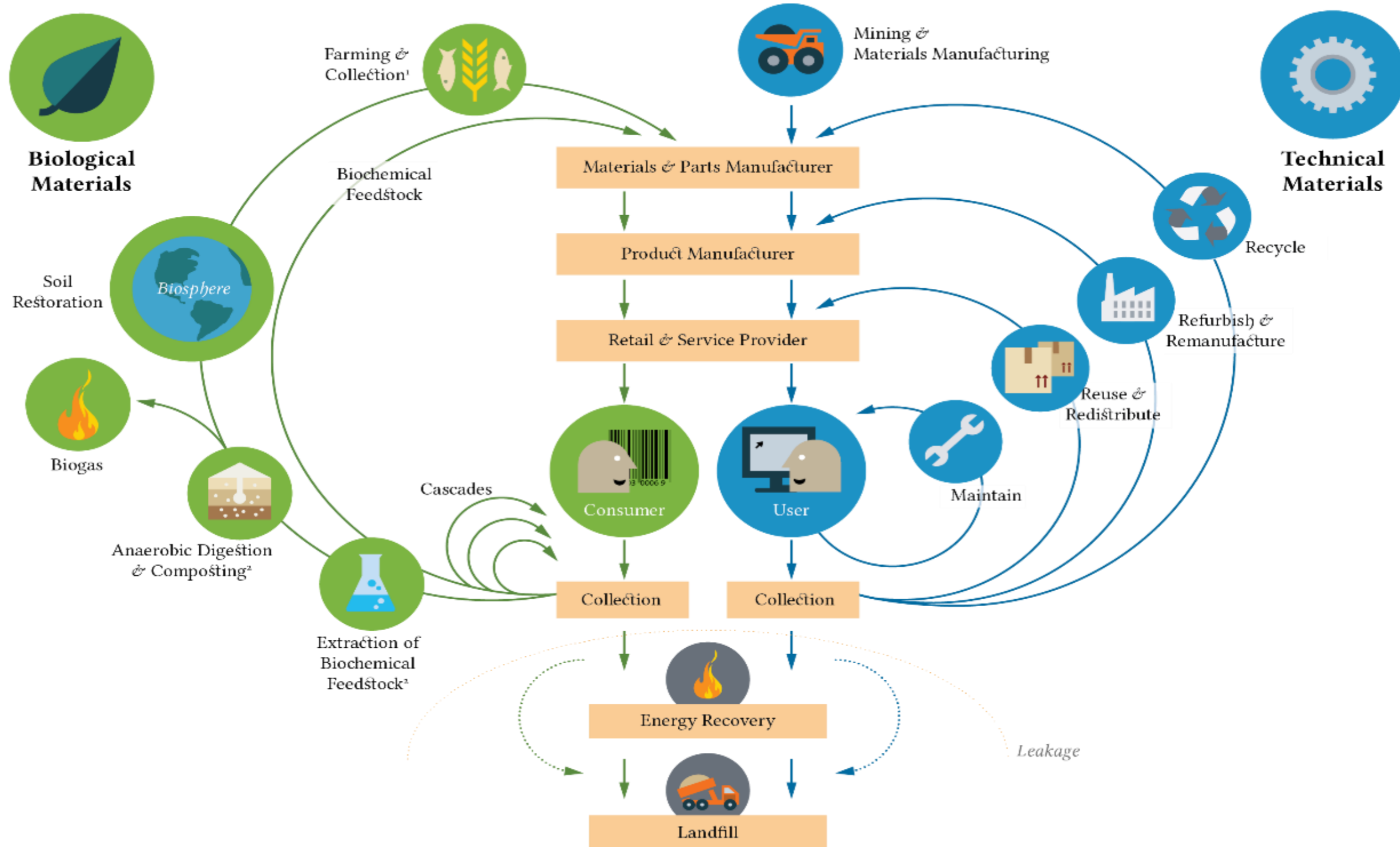
This Directive promotes **circular approaches** that prioritise sustainable **non-toxic re-usable products and re-use systems** over single-use products, aiming first and foremost at a reduction of waste generated.



To this end this Directive lays down measures aimed, as a **first priority, at preventing the production of packaging waste and, as additional fundamental principles, at reusing packaging, at recycling** and other forms of recovering packaging waste and, hence, at reducing the final disposal of such waste.

THE LCA CENTRE

PACKAGING LIFE CYCLE ASSESSMENT



25 cent korting op alle warme dranken
met een HEMA koffie beker to-go of je eigen beker.



echt **HEMA**



Kijk eens! De NS KeepCup. Een duurzame, innovatieve beker waarmee bij alle winkels op het station koffie of thee gekocht kan worden. Zo helpen we mee om de afvalberg aan wegwerpbekers te verminderen en maken we samen een verschil.

LOST & FOUND
REIZEND RECYCLER



met je eigen beker

OP ALLE WARMER DRANKEN

0.25
KORTING

We have a new partner in reducing cup waste. You.

A small step makes a huge difference.

\$1 Reusable Cup
Save 10c every time you use it.

Starbucks is committed to decreasing waste and now you can play a part.



The challenge of reusable coffee cups



Even with positive and negative incentives applied at the same time

only 24%*

Of consumers are willing to use their own multiuse cup

**) Promoting the Use of Reusable Coffee Cups through Environmental Messaging, the Provision of Alternatives and Financial Incentives / Wouter Poortinga 1,2,* ID and Louise Whitaker 3 ; 2018*

Disadvantages of most reusable, “bring your own type” cups



Relatively expensive (€3,5 -12,0)
high costs of replacement on a
large scale



Not stackable



Relatively high
environmental impact



Not dishwasher safe



Not recyclable – composite
materials difficult to separate



Not suitable for use in a re-
use system

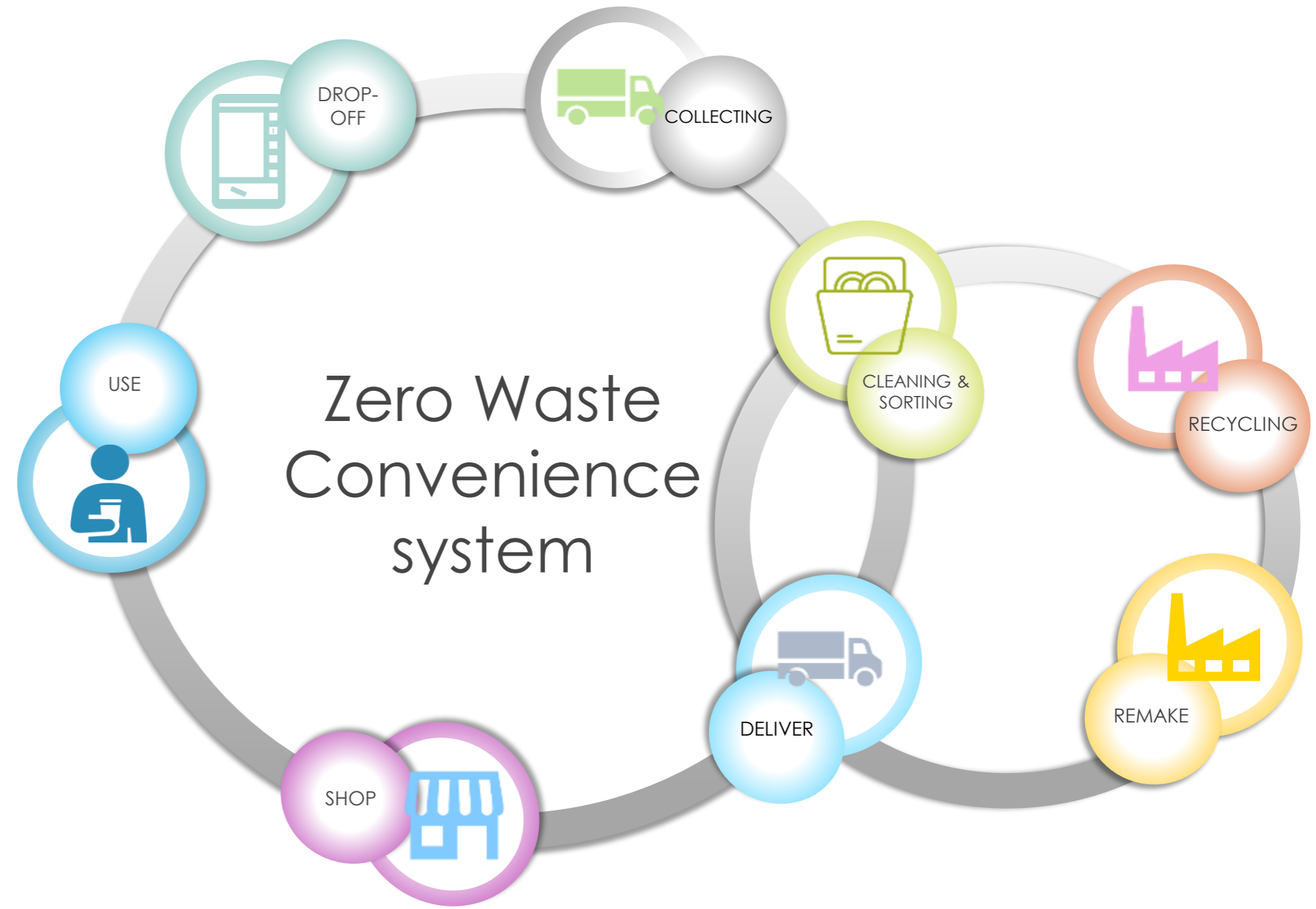


Festival
cups –
system
orientated
approach
works





&



Proof of concept



Not only food service



In the nutshell, the packaging returns
to it's core purpose and becomes ...

a **FUNCTIONALITY**



Thank you for
your time

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