

Resilux 
The power of PET



Resilux

The power of PET for a circular economy

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WE **PET** PEOPLE
PLANET
PRODUCT

Resilux Story

We create sustainable PET solutions that serve products, people and our planet by connecting high quality, safe use and no compromise on excellent re-use.

Inspired by people. Safe for the planet. Protecting your product.



Inspired by People

Every day our clients, the consumers and our employees inspire us to create the best packaging solutions. Their health and convenience are the starting point for everything we do.



Safe for the Planet

We are down with earth and passionate about collecting, re-using and recycling. We contribute to people's wellbeing and act in the interests of our planet.



Protecting your Product

As a **dynamic and flexible partner**, we serve our clients with innovative packaging solutions. We take full responsibility for ensuring the best protection of our clients' products and the health of their consumers.

Worldwide commercial presence & Production locations

Resilux is a worldwide producer and supplier of PET preforms, bottles, jars, r-PET flakes and r-PET pellets, with over 1.000 customers. We are a Belgian family-owned company, founded in 1994, listed on the Brussels Stock Exchange (Euronext) and one of the most outstanding companies in the market, due to high quality, reliability and innovation.

United States



- Preforms production
- Bottles production
- Bottles Inhouse production
- Sales office
- Recycling

Northern Atlantic Ocean



Key figures 2020



Turnover:
€ 375 million



Employees (FTE):
927 worldwide



Recycled Bottles:
Approx. 1.0 billion units



Preform sales:
7.350 million units



Bottle/Jars sales:
400 million units

All stakeholders care about litter, recycling and reuse

Policy makers

EU circular economy package, SUP directive, waste framework directive, plastics strategy
National legislation

Brand owners, retailers and converters

Sustainability action plans with high % rPET, recyclability, collection & reuse targets

Voluntary commitments

Circular plastics alliance, plastic pacts

Investors

Care about sustainability

Consumers, NGO's, Media

Less litter, less plastics, more recycling and reuse



EU PLASTICS STRATEGY



European
Commission

01-2018

EU single used plastics directive

The EU directive aims to tackle the 10 most commonly found single use plastic items in marine litter (*adopted 21/05/2019*)

Together they account for 49 % of all waste on European beaches. Plastic fishing equipment accounts for a further 27% of marine litter



Product bans

- Plastic straws and stirrers
- Plastic cutlery and plates
- Cotton bud and balloon sticks



Plastic beverage bottles

- Collection rate of 77% by 2025; 90% by 2029
- Recycle content of 25% by 2025; 30% by 2030
- Product redesign to tether caps



Consumption reduction

- Food containers and beverage cups
- Marking requirements on sanitary towels, wet wipes and balloons



End producer responsibility

- Tobacco filters
- Fishing gear

TABLE 1: PET Bottle Collection Systems in EU28+EFTA

Country	Deposit Return Scheme (green = Y)	Predominant Household Collection System		PET Bottles Sorted for Recycling Rate 2017 (green = >80%)*
		Collection System	Collected With	
AUSTRIA	N	Door-to-Door	Light packaging (Light plastic & metal packaging, often including cartons)	73%
BELGIUM	N	Door-to-Door	Light packaging	85%
BULGARIA	N	Bring	Light packaging and glass	22%
CROATIA	Y	Bring	Light packaging	86%
CYPRUS	N	Door-to-Door	Light packaging	Not reported
CZECH REPUBLIC	N	Bring	Plastic packaging	67%
DENMARK	Y	Door-to-Door	Light packaging, in some regions glass	86%
ESTONIA	Y	Door-to-Door	Light packaging	86%
FINLAND	Y	Bring	n/a	92%
FRANCE	N	Door-to-door	Light packaging, and in some regions paper/card	47%
GERMANY	Y (excl. juices)	Door-to-door	Light packaging	95%
GREECE	N	Bring	Co-mingled material: Metals, glass, paper	28%
HUNGARY	N	Door-to-door	Light packaging	42%
ICELAND	Y	Bring	n/a	83%**
IRELAND	N	Door-to-door	Co-mingled material: Metals, glass, paper	62%
ITALY	N	Door-to-door / Bring	Light packaging, sometimes with glass	46%
LATVIA	N	Bring/ door-to-door	Plastic packaging	43%
LITHUANIA	Y	Bring, some door-to-door	Plastic packaging	92%***
LUXEMBURG		Door-to-door	Light packaging	58%

MALTA	Planned (2020)	Door-to-door	Metals, glass, paper	Not Reported
NETHERLANDS	Partial	Door-to-door / Bring	Plastic packaging	65%
NORWAY	Y	Door-to-door / Bring		88%
POLAND	Planned (tba)	Door-to-door	Co-mingled material: Metals, glass, paper	43%
PORTUGAL	Planned (2022)	Bring, some door-to-door	Packaging	35%
ROMANIA	Planned (2022)	Bring	Paper, glass, plastic, metal (additional fraction: wood)	52%
SLOVAKIA	Planned (tba)	Bring	Plastic packaging	Not Reported
SLOVENIA	N	Door-to-door	Light packaging and paper/card	41%
SPAIN	N	Bring/ door-to-door	Light packaging	37%
SWEDEN	Y	Door-to-door / Bring	Light packaging and paper/card	84%
UNITED KINGDOM	Planned (Scotland 2021, England/ Wales 2023/24)	Door-to-door	A mixture, often co-mingled (Paper & cardboard, plastic, glass, metal)	59%

Sources: ICIS and Petcore Europe (2019) Annual Survey on the European PET Recycle Industry 2017; BiPRO/CRI (2015), Assessment of separate collection schemes in the 28 capitals of the EU; Eumonia (2018), Early Warning Country Reports; other expert contributors.

*Based on PET Bottle bales, so may contain some PET trays depending on collection system

**Recycling rates reported for 2018 as reported by CITEO and Enduroinnslan hf, the Estonian DRS operator.*

*** Lithuania's reported rate increased following the introduction of a deposit return system. The 92% return rate for PET is reported by the Lithuanian DRS.

West Europe rPET balance

3,4 MT of
PET bottles
consumption



Of 2.1 MT
collected PET,
1.9 MT is
reprocessed

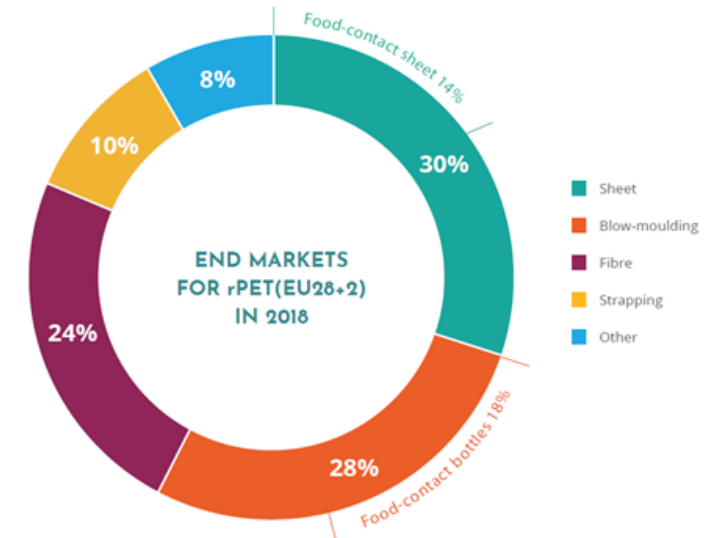


= 1,35 MT
rPET output



*Eunomia | PET market in Europe: state of play | 2020
Figures 2018*

-0,55 process losses



Only 18 % (0,24 MT) of the rPET is used for food-approved bottle-to-bottle recycling. This is about 7 % of the PET bottle consumption.

How to achieve the targets ?

The overall collection rate has to increase (volume x 2 for 90%)

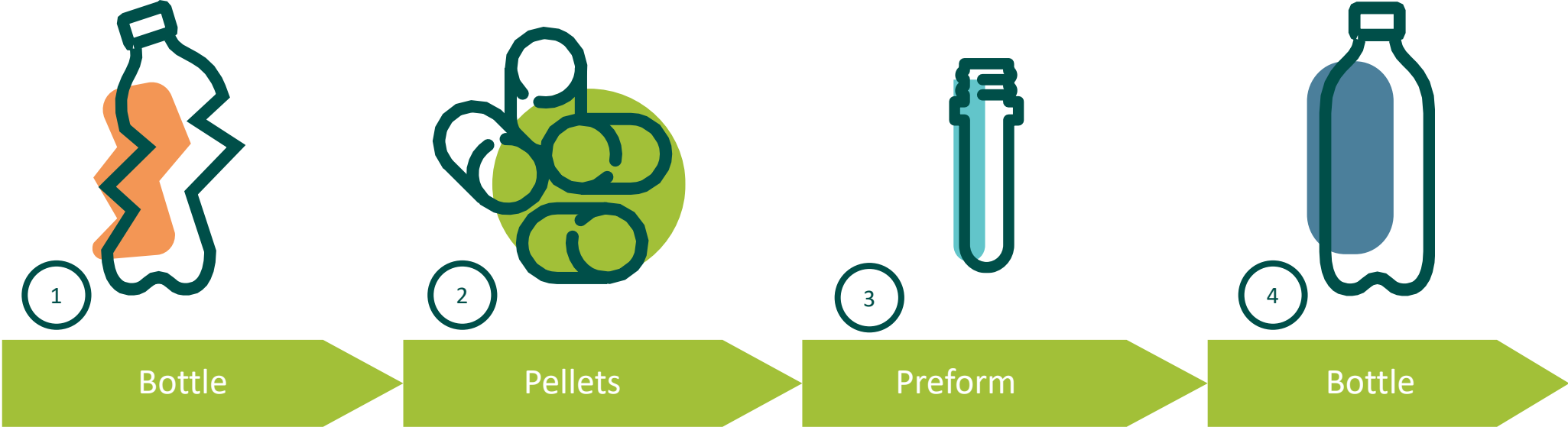
Higher capacity is required to reprocess (+70 avg reprocessing plants)

More rPET has to return into the loop of **food approved bottle-to-bottle** recycling (volume x 7 for 50% rPET)

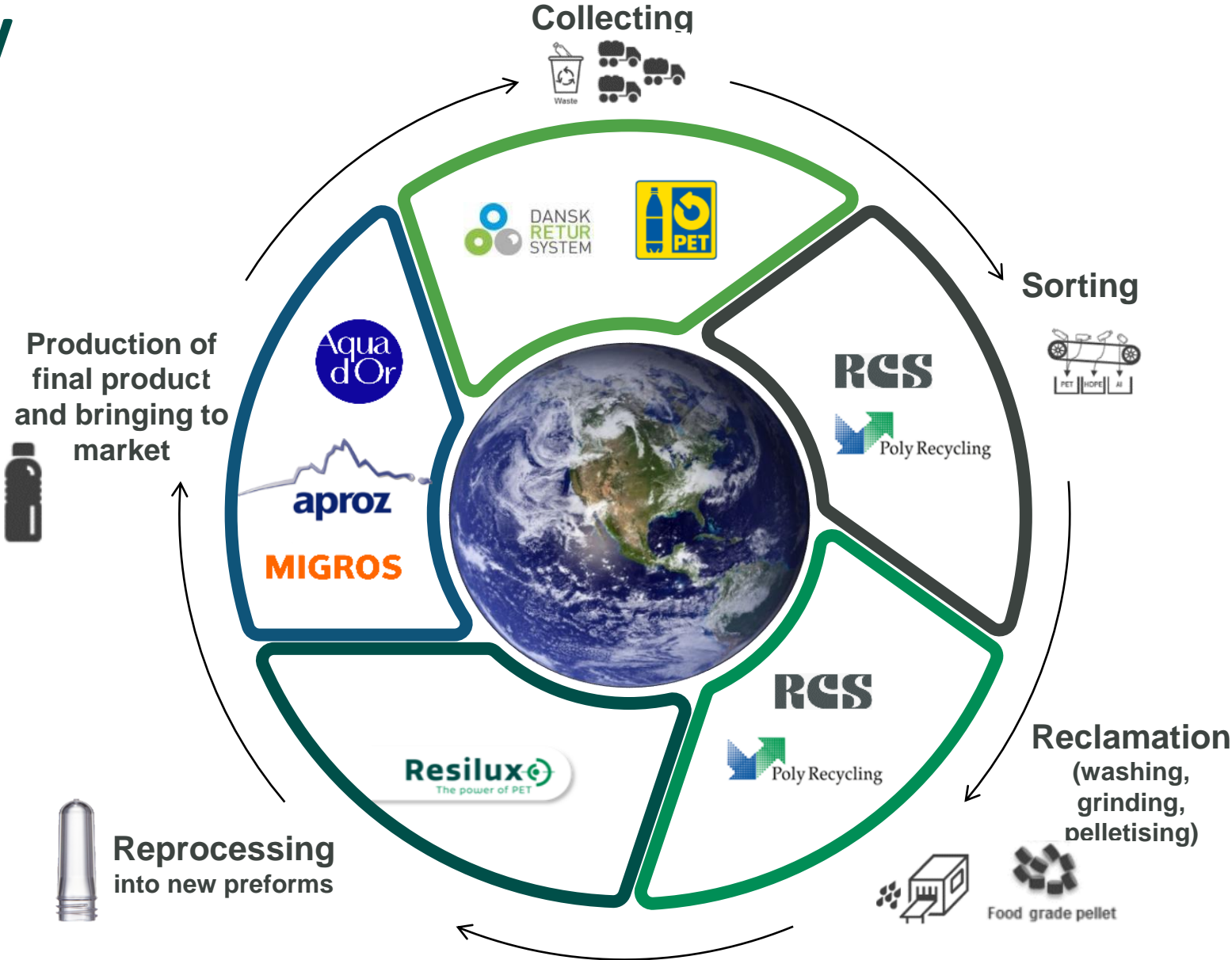
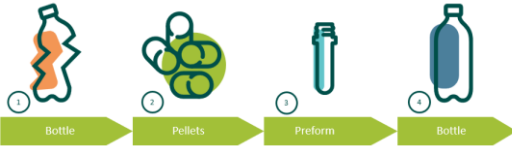
PET is the best in class plastic !

Circular economy !

Process bottle-to-bottle recycling



Circular economy



The Resilux PET Recycling plant, Poly Recycling

Collection & Sorting

- Choice of feedstock
- PET Recycling Schweiz closed loop



Flake production

- Flotation tanks and caustic wash



Decontamination & Solid State

- High vacuum conditions + N₂
- Colour control
- IV controlled
- EFSA certified



Compounding

- Extruders with multiple vacuum degassing and melt filtration
- Colour controlled



Investment announced to double the capacity

Quality and certification



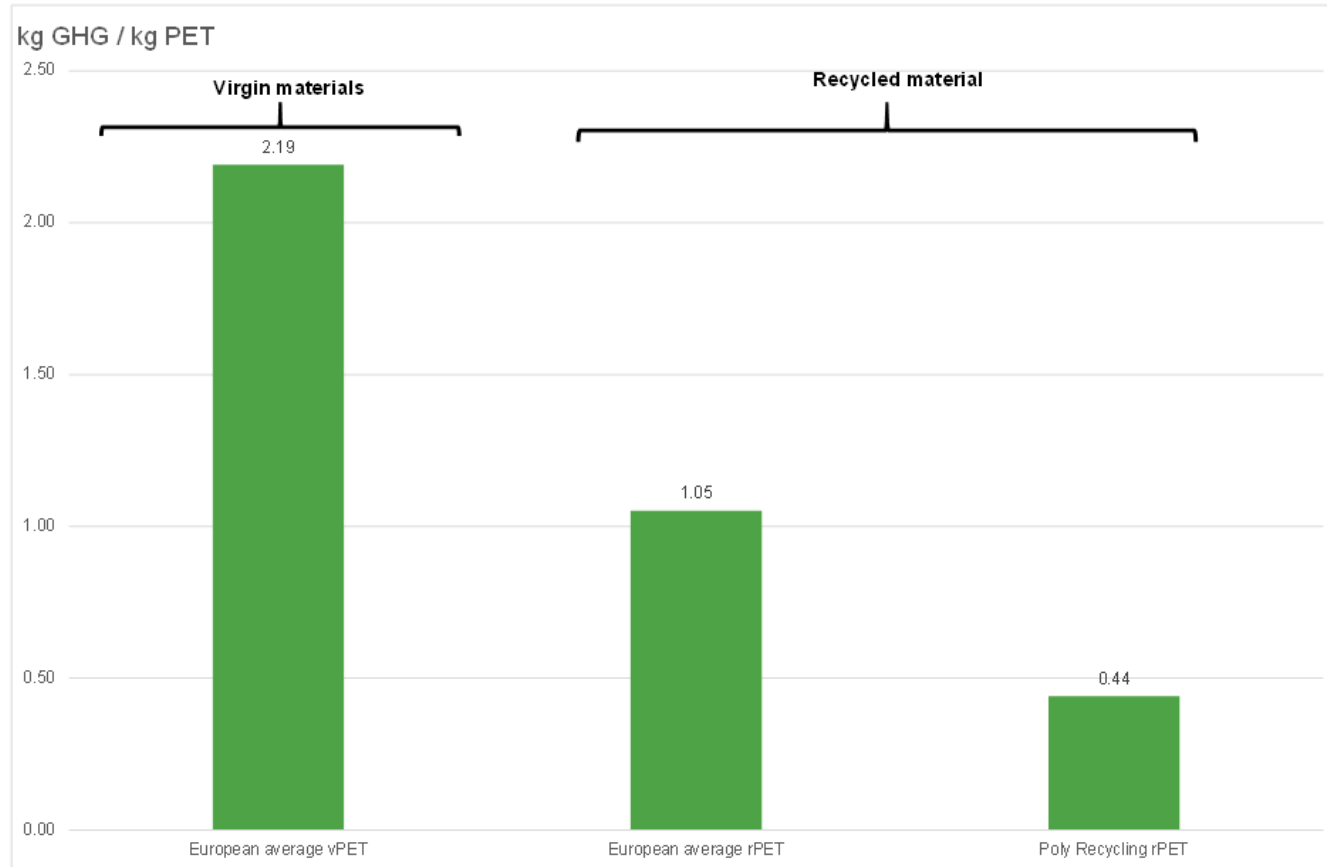
Certificate for food approved rPET from Poly Recycling
quality assurance on the traceability for the recycling process & mass balance of input/output streams.

Recycled content traceability certificate

Independent auditors confirm the rPET %, sourced in a transparent and responsible way.



Influence rPET on carbon footprint



Chemical recycling for PET

- Chemical recycling can be **complimentary to mechanical recycling** for hard to recycle PET products
- Need to be in tandem with mechanical recycling, **not in competition** for sorted bale supply
- Currently in pre-commercial stage, industrial scale still is 5-10 y away
- Unknowns : environmental impact, yield, legal status, expense
- Further development surely to be followed

PET is a great environmentally friendly packaging material



100% Recyclable



100% Re-useable closed loop



Light weight



Most recycled plastic
(2 out of 3 bottles)



Low carbon footprint

WE LOVE PEOPLE
PLANET
PRODUCT

Thank you for your attention