PET Market in Europe: State of Play Update 2022

PETCore Conference , 10.06.2022

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Current Circularity

Introduction

This presentation is based on the published report “PET State of play 2022” published by Plastics Recyclers Europe (PRE) in partnership with PETCORE Europe, NMWE and UNESDA

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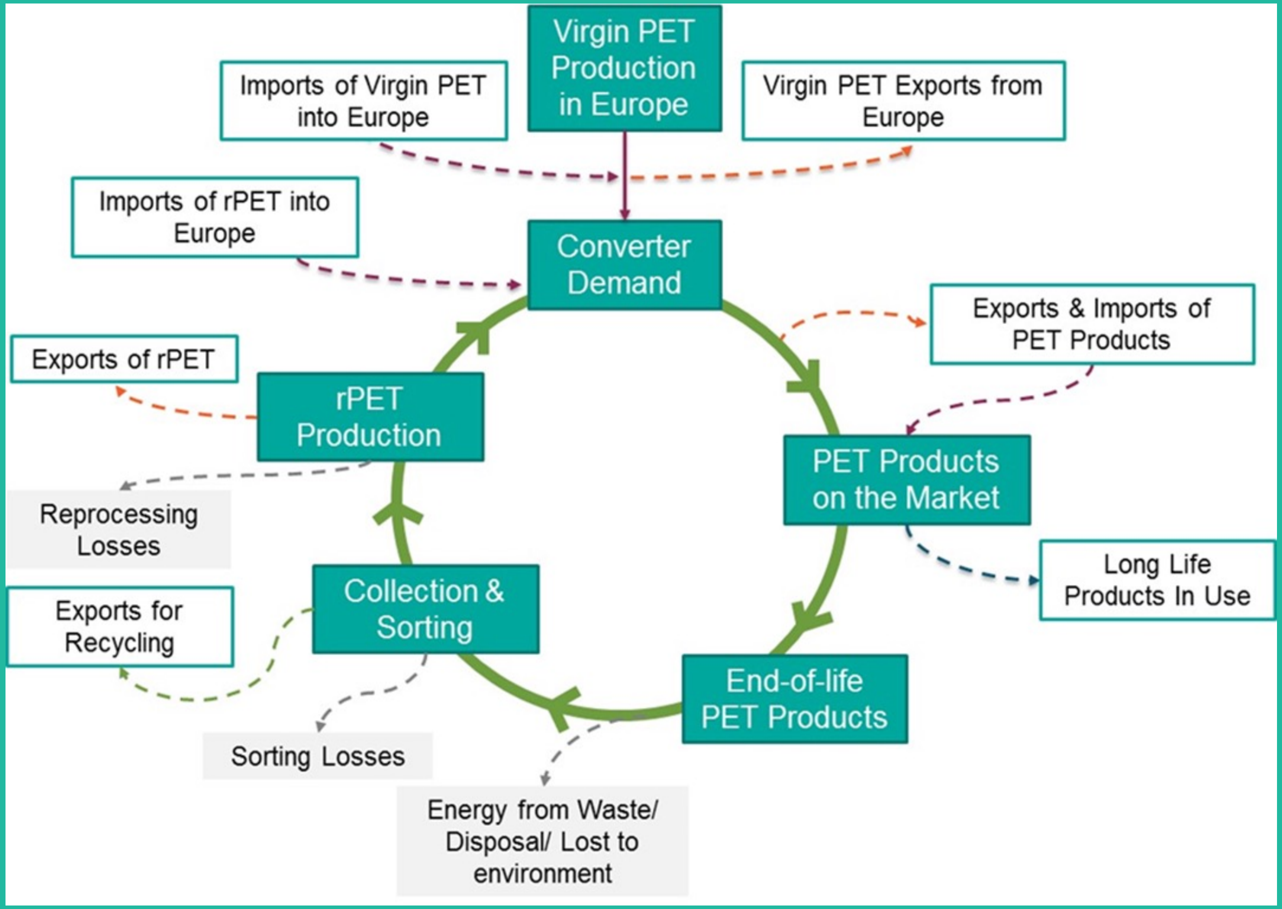
Overview of the Market



- *Covering the EU27+ the UK for PET*
- *Scope is focused on PET with a viscosity number of >= 78 ml/g (39076100)*
- *Therefore generally excluding virgin production and import for polyester production*

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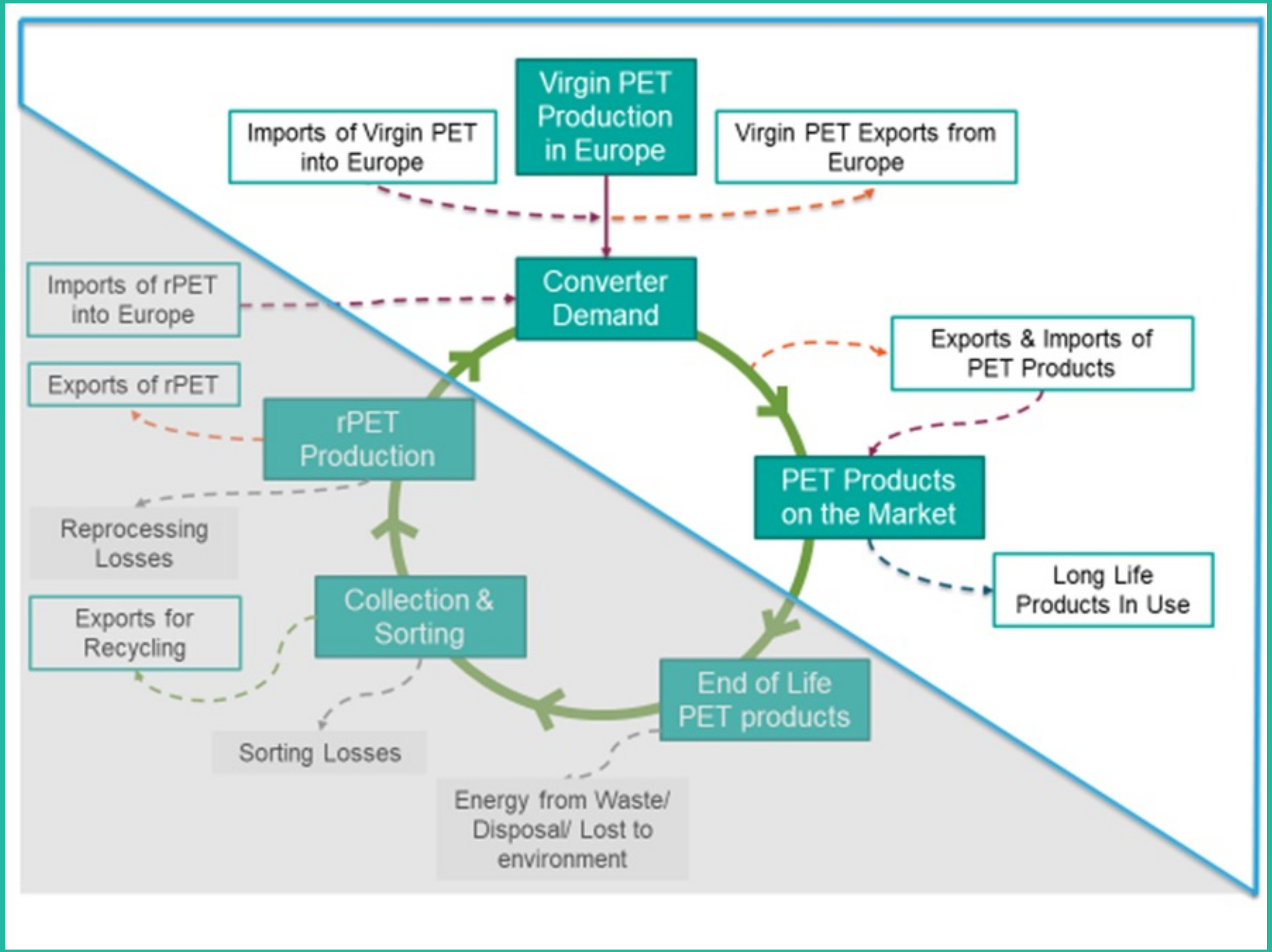
Production and Conversion



- *Production and conversion figures derived from Eurostat Prodcom and data kindly provided by CPME*
- *An improvement on data from the previous report but still room for improvement – particularly placed on on the market data by application*

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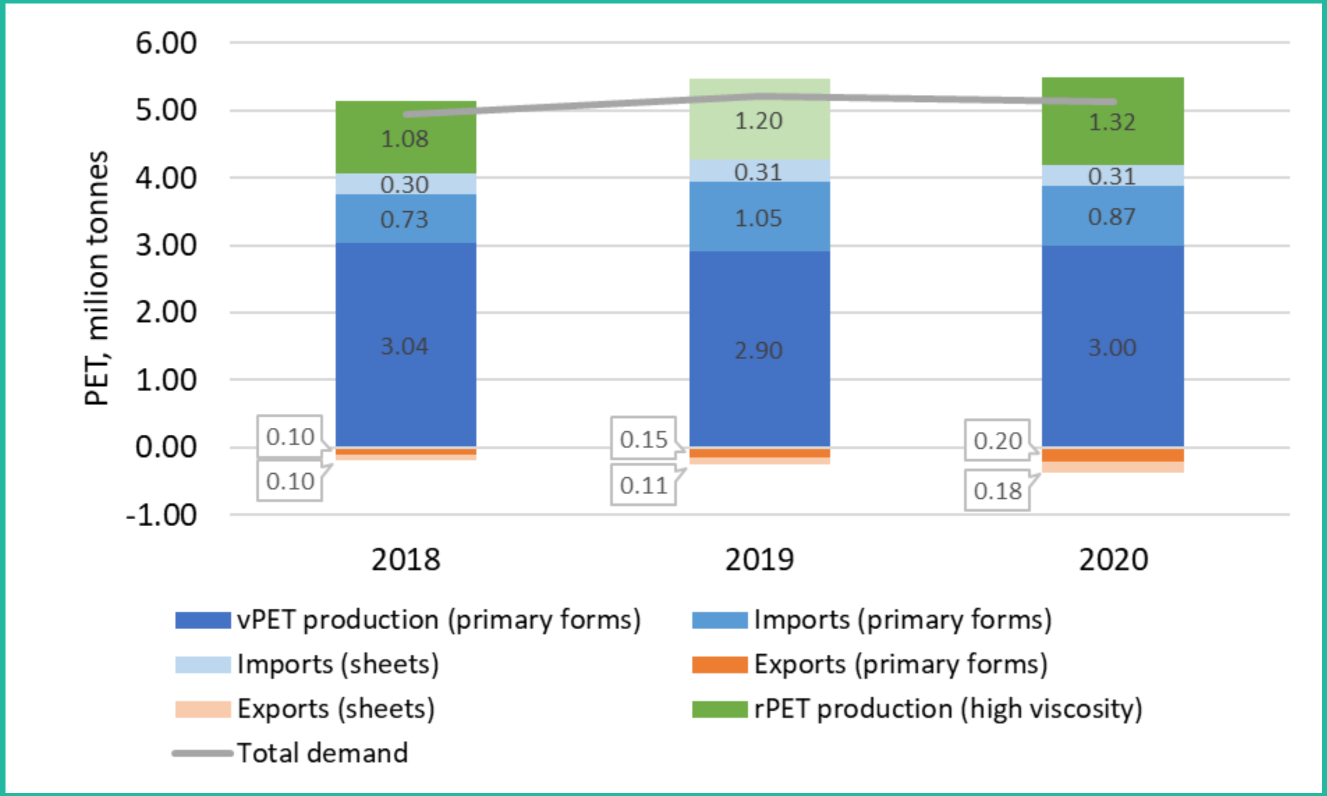
PET Production and Demand



	2018	2020	DIFFERENCE (2020 – 2018)
EUROPEAN VIRGIN PRODUCTION	61.3%	58.6%	-2.7%
NET IMPORTS	16.8%	15.7%	-1.1%
RPET PRODUCTION	21.9%	25.7%	+3.8%

- *Demand for PET exceeds production (within EU27+3 boundaries). i.e. Net Importer*
- *The trend shows small growth in PET demand between 2018 and 2020*
- *rPET production not available for 2019 so assumed straight-line growth*
- *rPET assumed to be >=78mg/l IVN is equivalent to 26% of the overall production*
- *Some rPET into market where vPET is not assessed in this study (IVN < 78 ml/g)*

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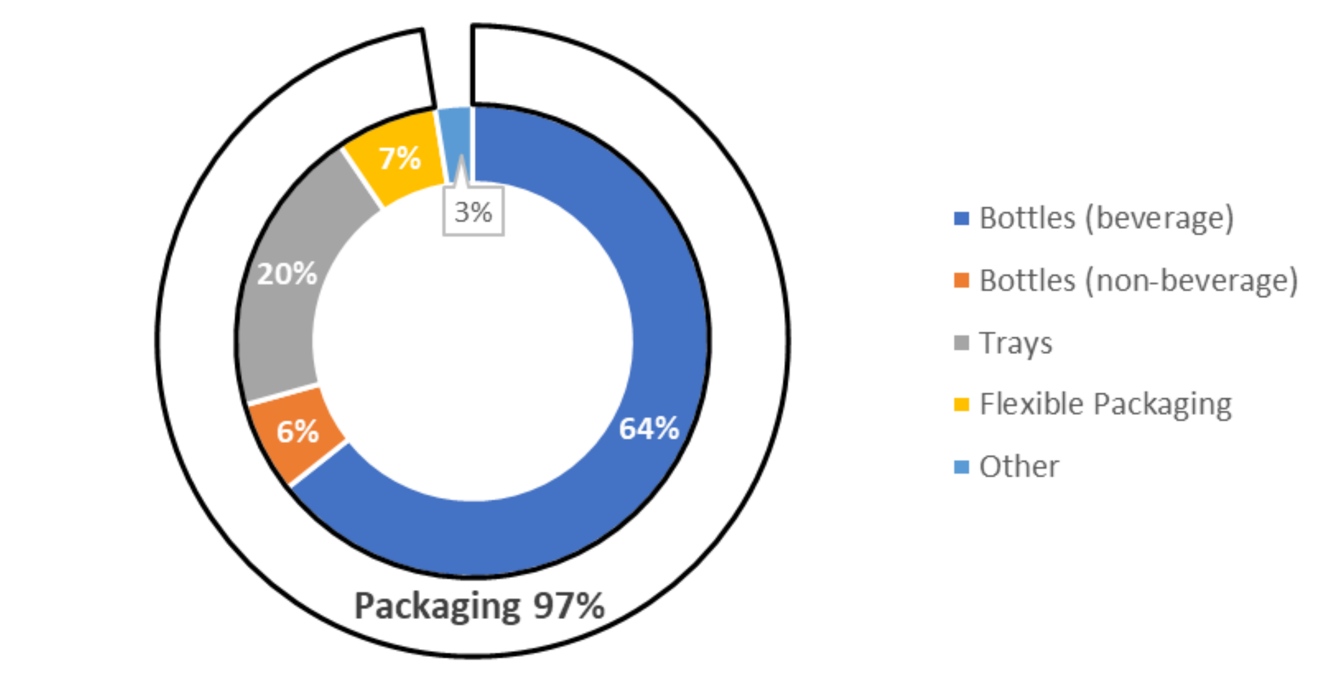
PET Production and Demand



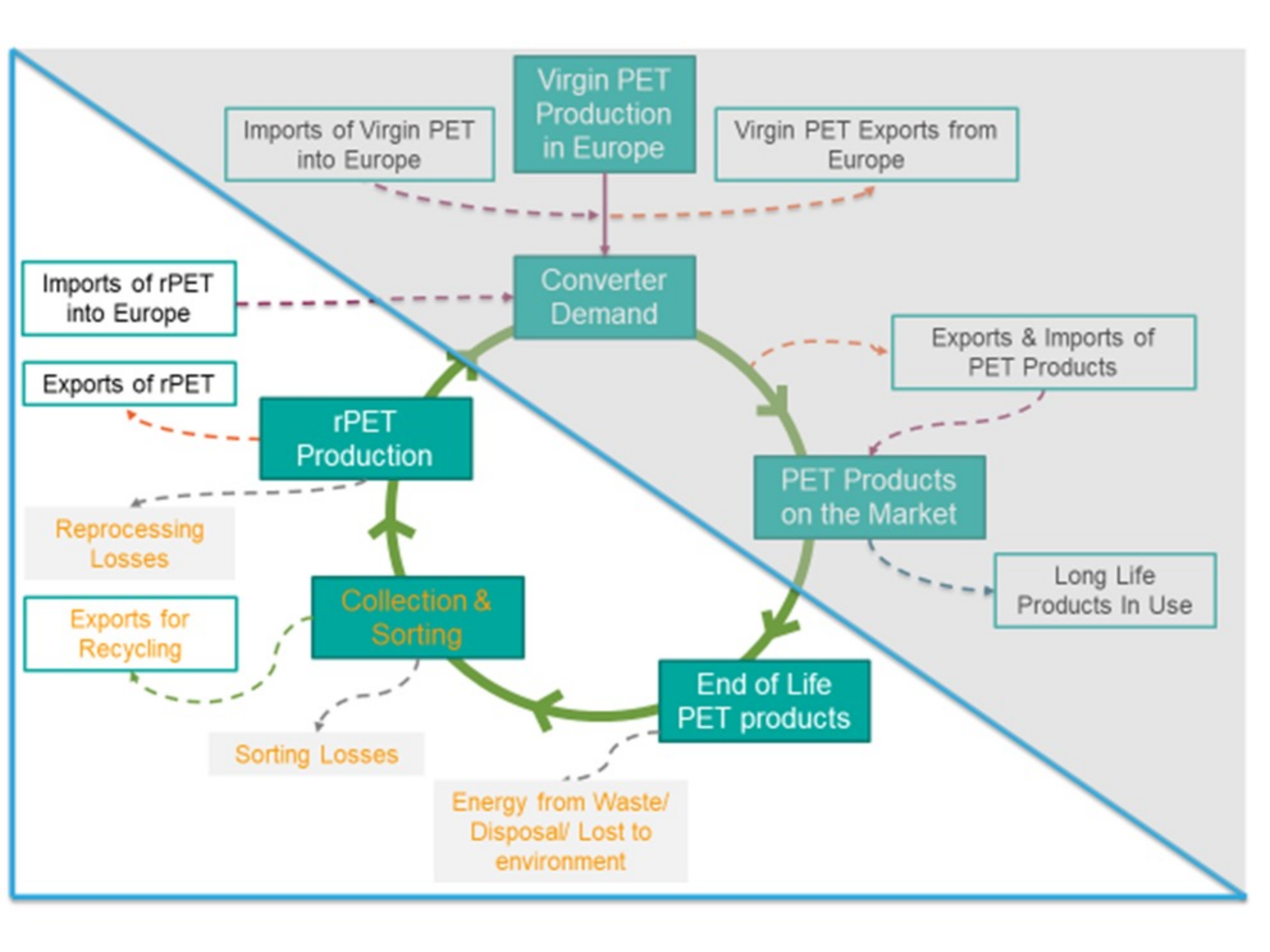
- *70% used in bottle production (64% beverage)*
- *Compared with 2018:*

  Bottle production up by 5%

  Thermoforms (trays) up 27%

  Other applications are down.

End of life and Recycling



- *End of life PET products are assumed to equal the same quantities placed on the market in each year*
- *Amber signifies issues with data provision*

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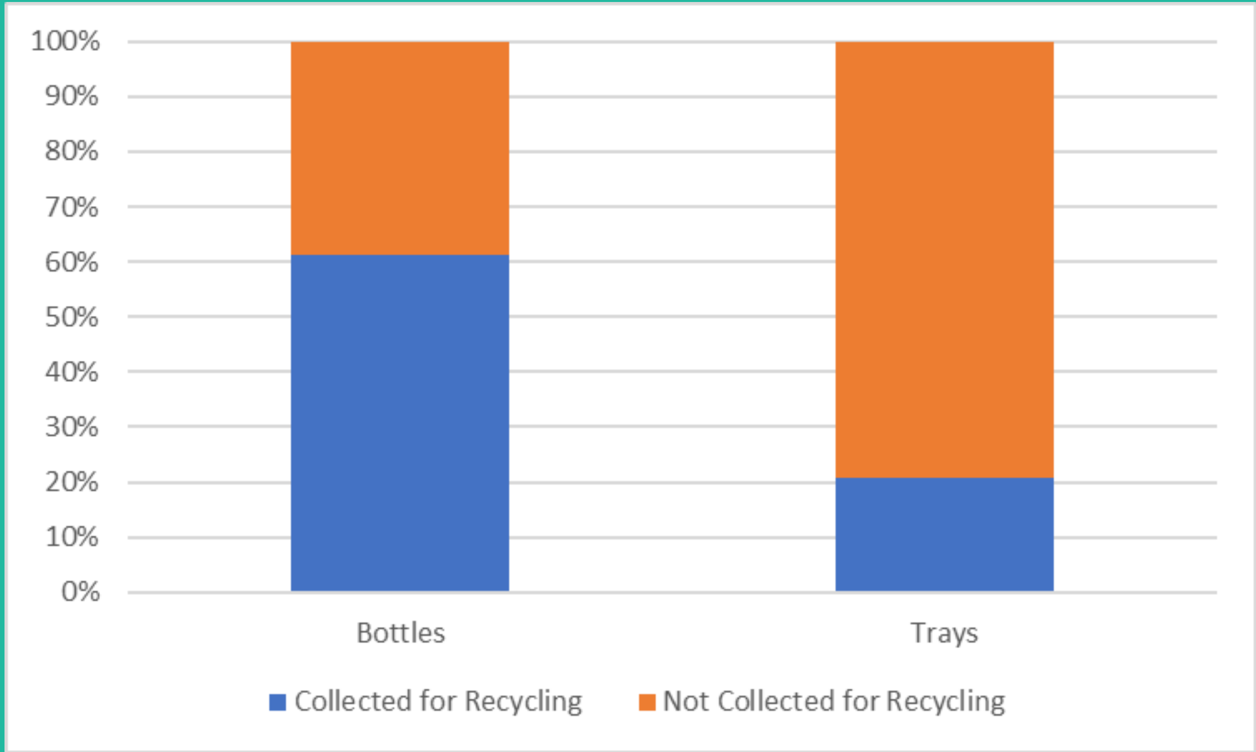
Collection Rates - Recycling Tonnage



- *Bottle into recycler reasonable approximation of a collection rate for all bottles is estimated at 61%*
- *This is probably a slight underestimate of beverage performance. However, may also include some stock from previous year.*
- *However still short of the 77% 2025 target. As this is EU average means that a number of member states will need to substantially improve collections to meet this target.*

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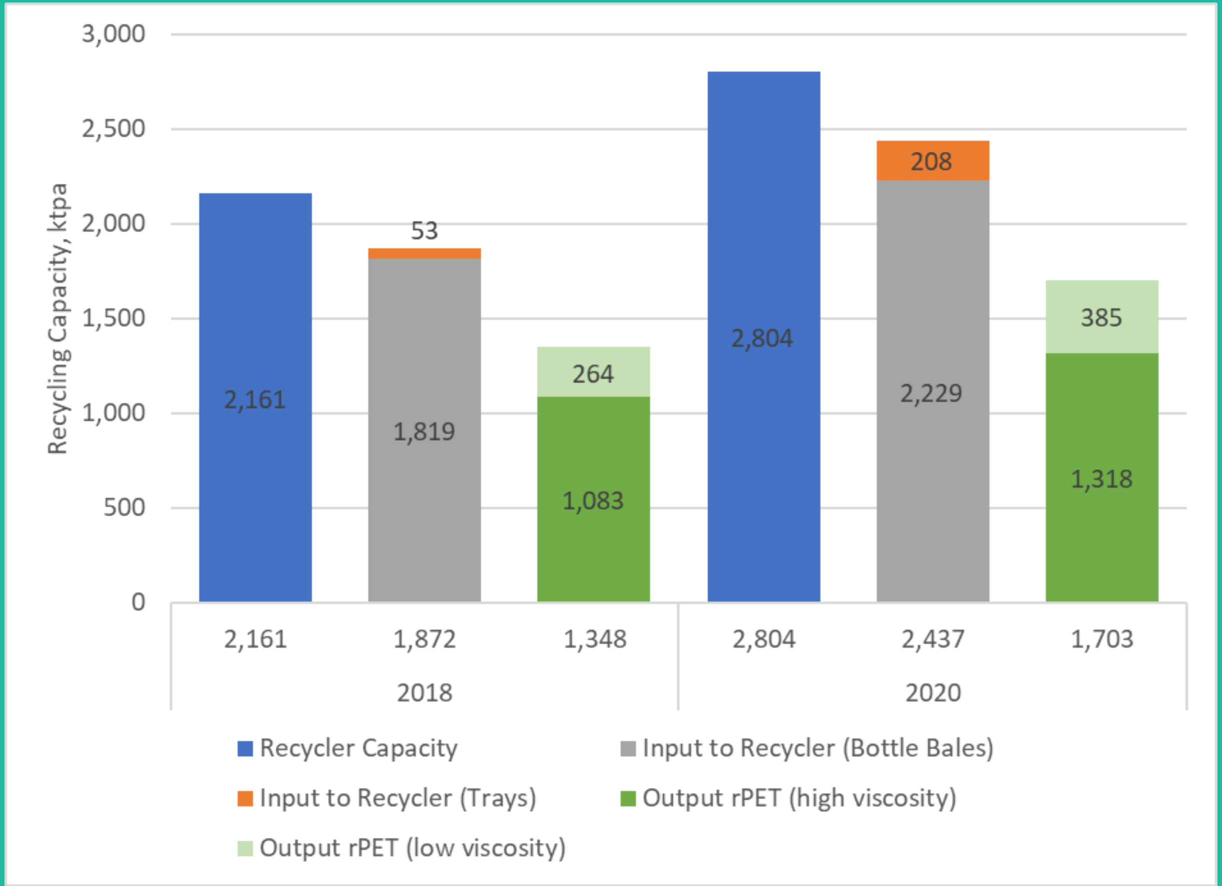
End of life and Recycling



Improved data on recycling capacity and production results in increases in all categories from 2018.

rPET production up 26% from 2018

Yield of flake versus input has remained similar at around 71% of input

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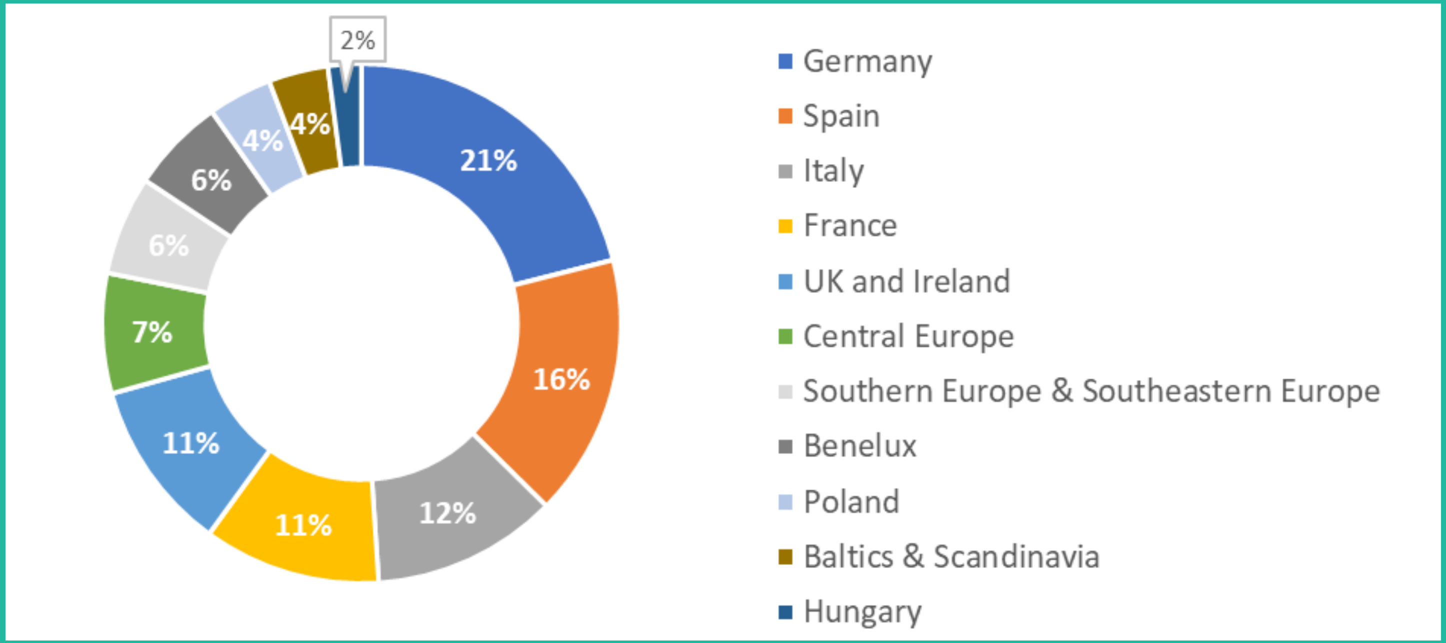
PET Recycling Capacities by location



Over 70% of recycling capacity is distributed through Germany, Spain, Italy, France, UK and Ireland.

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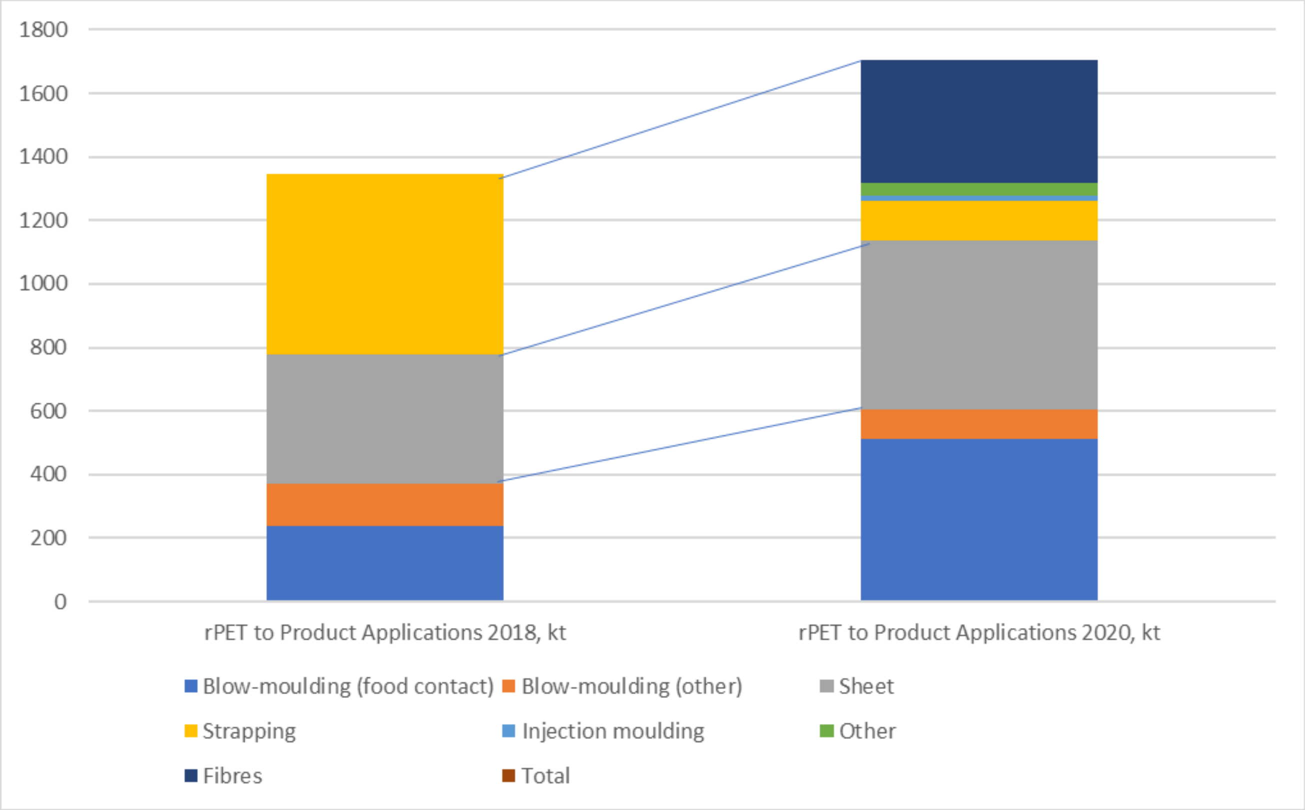
End of life and Recycling



rPET into bottles is up from 2018

rPET into Sheet is up from 2018

rPET into other applications is broadly similar

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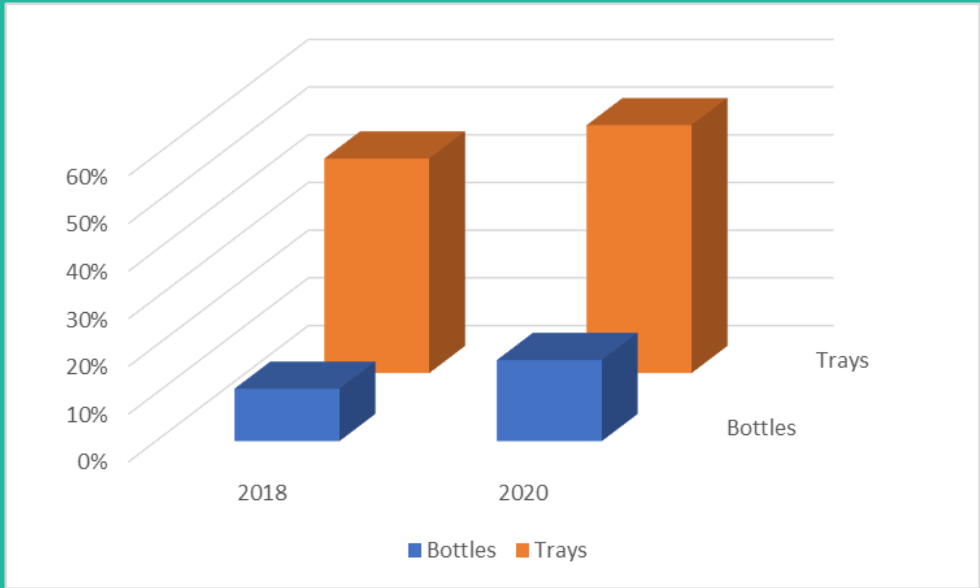
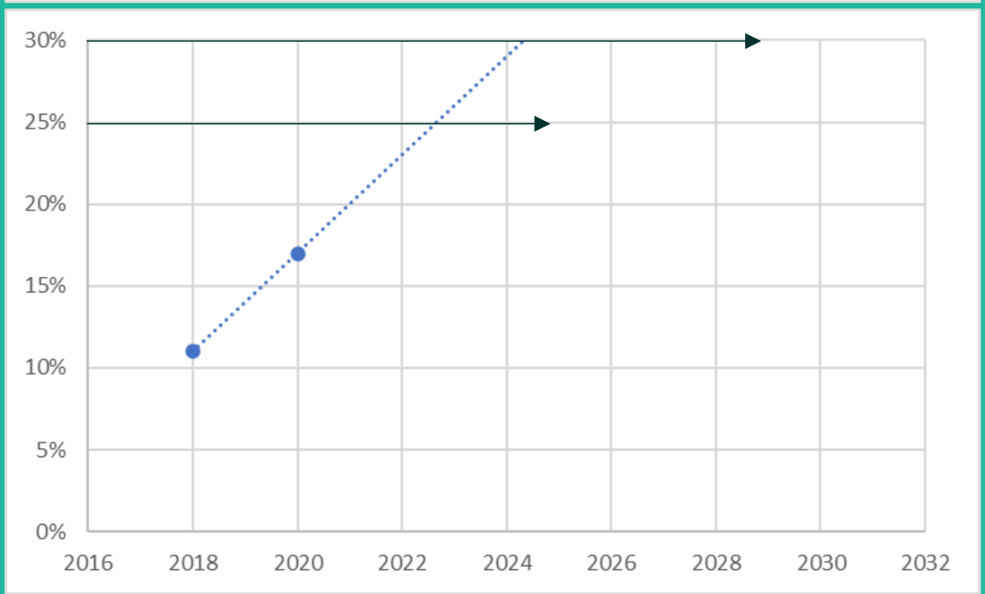
Recycled Content





Average recycled content up in bottles from 11% to 17%

Average recycled content in trays up from 45% to 52%

As an EU average it seems likely that the industry is on track for the SUPD recycled content targets

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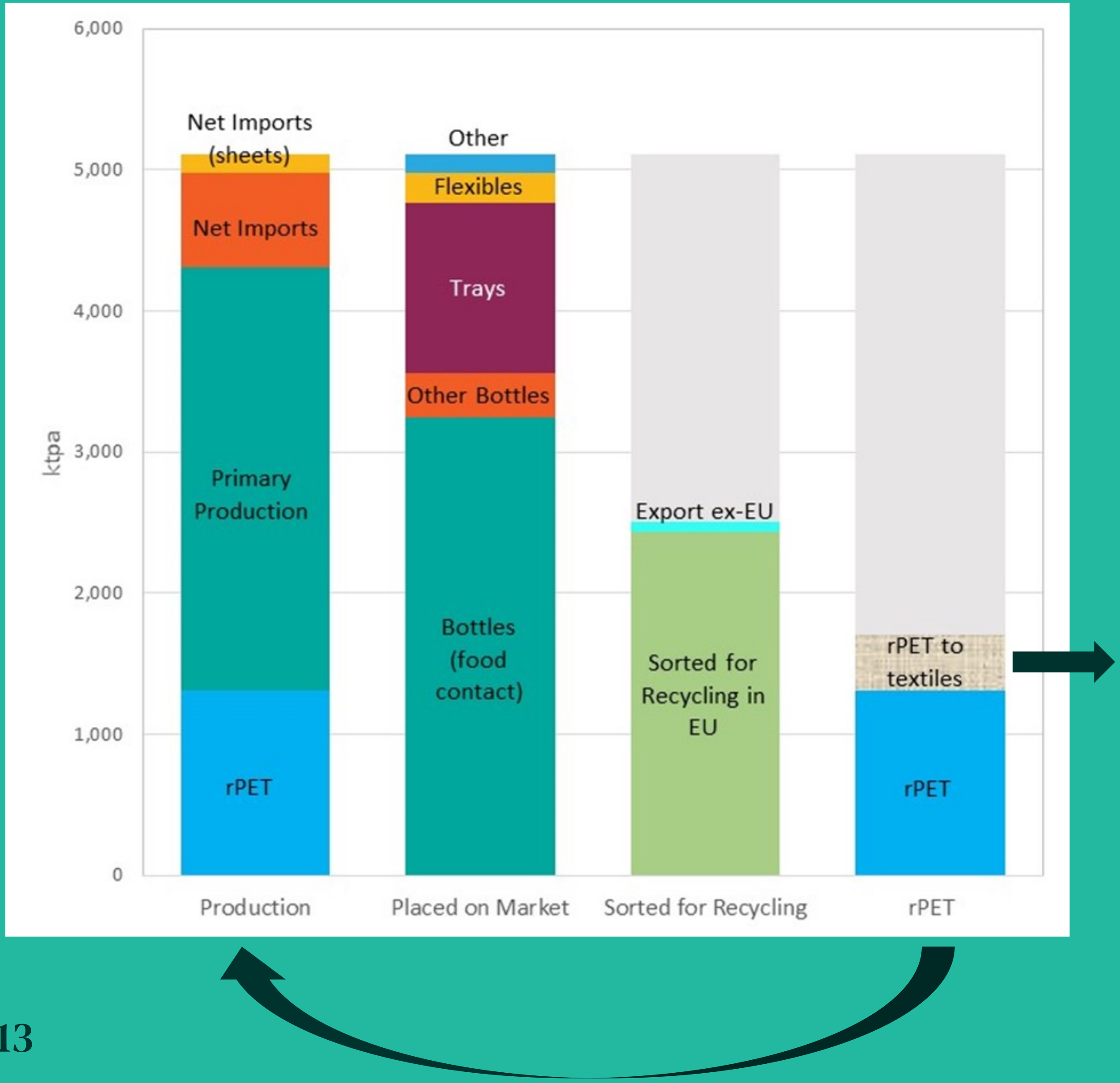
Putting it Together



- *Moving to a circular model*
- *Collection rates need to improve on all applications*
- *Tray recycling rates need to improve*
- *More rPET returned to same source applications*

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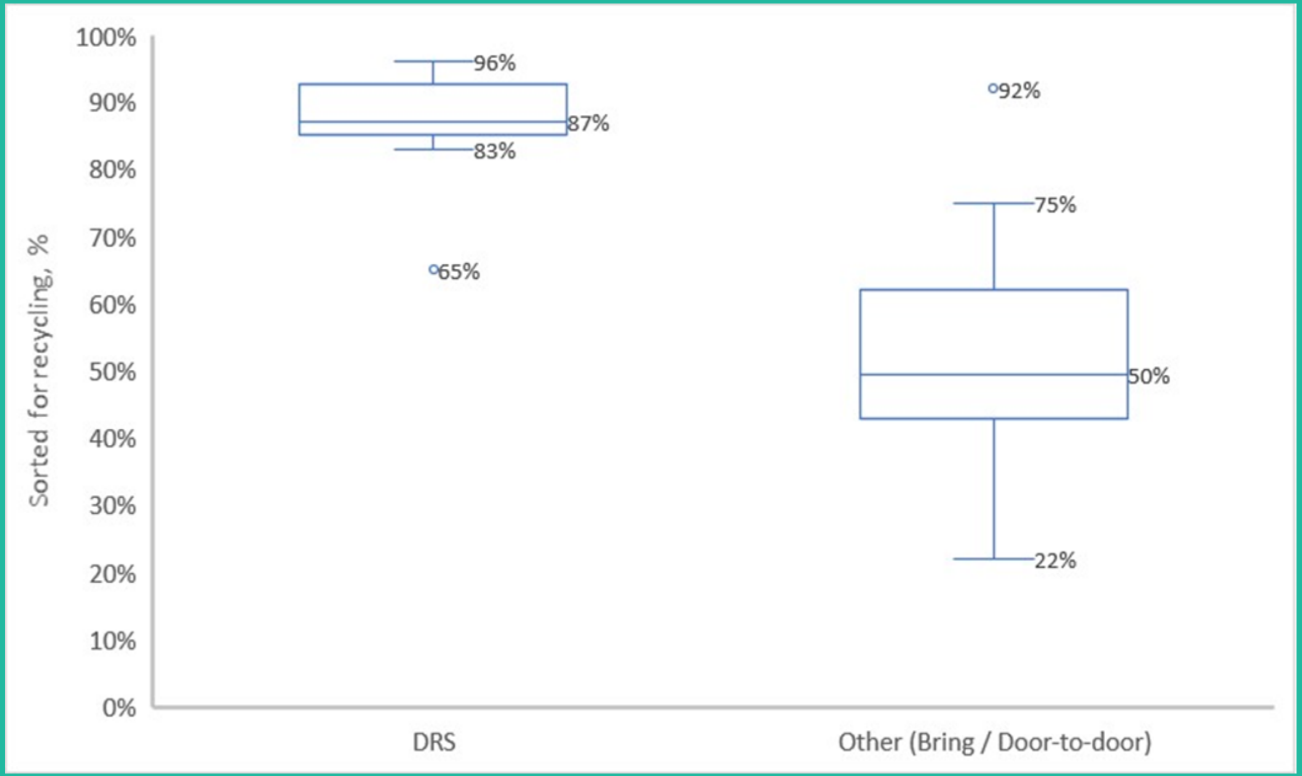
Future Challenges

Collection Rates – Scheme Comparison

- *Demand for food grade rPET for bottle production exceeds supply and there will need to be an expansion in both recycling capacity of this grade and supply of sorted bottles of sufficient quality to feed this capacity.*
- *Tray recycling capacity will need to substantially expand for this application group to be considered recyclable.*
- *The quality of the supply of collected PET varies significantly between and among Member States. Factors contributing to differences include collection methods, bale quality, and approach to mixed PET waste.*
- *Further improvements in Design for Recyclability practices are likely to be needed to facilitate more rPET being used within its own application cycle.*

Collection Rates – Scheme Comparison



- *DRS schemes continue to demonstrate performance necessary for SUP collection rate targets*
- *Bar a few exceptions – separate collections not achieving performance necessary for SUPD targets*

Collection Outlook- DRS

	DRS status
	Established
	Political decision taken
	DRS in discussion
	Currently unknown
	Not included within this study

Depolymerisation Outlook

Depolymerisation is still a young industry

The plants treating PET waste in Europe are at various stages of development with current input capacity of 68kt per annum of prepared post-consumer PET flake

Ambitions of are likely to result in a fast growth of this technology over the next few years. Some of this will be through expanding and building their own plants and some will come via offering licences for use of their technologies

It is reasonable to forecast that by 2025 there could be capacity for circa 350kt per annum of collected post-consumer PET flake into depolymerisation processes in Europe which would produce an estimated 345kt per annum of regenerated PET monomers or virgin quality PET resin.

Thank you.