

Consorzio Nazionale per la Raccolta, il Riciclo e il Recupero degli Imballaggi in Plastica

### **Thermoforms Conference 2024:** Towards Circularity of PET thermoformed packaging

The Italian experience: an update



Granada, 25-26 June 2024



Sent to Energy Recovery

513.329

**Total Recycling** 

741.041



To Landfill

1.818

**Total Recovery** 

1.254.370

### **COREPLA Strategy vs European Challenging target**



### **Sorting Centers in Italy**





### **Sorting Process**

- Small fraction separation of non selectable material (< 5x5 cm)
- Separation of flexible packaging from rigid packaging
- Automating sorting by polymer/colour into homogeneous flows
- Possible mistakes correction to be made by operators





## **Improving PET Circularity**

• Small fraction separation of non selectable material (< 5x5 cm)

- Sorting small PET containers from other materials
- Separation of flexible packaging from rigid packaging
- Automating sorting by polymer/colour into homogeneous flows
- Possible mistakes correction to be made by operators



# **Improving PET Circularity**



- Separation of flexible packaging from rigid packaging
  - Improve performance of rotational vibrating screen and ballistic separators
  - . Improve the **removal of lightweight** materials
- Automating sorting by polymer/colour into homogeneous flows
- Possible mistakes correction to be made by operators



# **Improving PET Circularity**

- Small fraction separation of non selectable material (< 5x5 cm)
- Separation of flexible packaging from rigid packaging
- Automating sorting by polymer/colour into homogeneous flows
- Possible mistakes correction to be made by operators



### **PET Trays Sorting Process**



### **Improving Circularity for non-bottle PET Streams**

#### COUNTRIES WITHOUT DRS

- Separate **Trays from Bottles.**
- Separate mono-material from multi-material or multi-layer Trays.
- Separate food grade trays from other thermoformed products.
- Sorting a proper Mix PET suitable for **Chemical Recycling and De-polymerization**.

#### COUNTRIES WITH DRS or RVM SELECTIVE PET BOTTLES COLLECTION

- **Flexibility in feeding** standard sorting plant (if needed).
- Separate mono-material from multi-material or multi-layer Trays.
- Separate food grade trays from other thermoformed products.
- Al and Robot for sorting non-bottle Mix PET suitable for Chemical Recycling and De-polymerization



### **Corepla's milestones in PET containers**

Launch of sorting tests by Corepla covering PET containers only.

recyclers, Corepla resumes sorting and recycling tests.

2015 - 2016 2017 - 2019 2020

2014

2021 - 2022 2023

2024

Launch of extensive sorting at most Corepla SSCs, with about 9,000 tonnes of containers sent for recycling.

Through a collaborative project with ProFood, Conai, Unionplast, SSCs and

#### 11,000 tonnes to be sorted for recycling

4,000 tonnes sent for recycling.

The industry is moving fast...

### **Barriers and opportunities for recycling PET Trays**

...to consolidate recycling we need support from the entire value chain



#### Technical/quality barriers

Can be overcome thanks to equipment designed for dealing with PET, and specifically for trays.



#### Large retail marketing support

Promote recycled content even if the packaging looks less "transparent". Recycling step must be an added value!

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#### Economic barriers

Recycling costs are incompressible: they must be sustained even in a market slowdown.

#### Large Downs

Large retail support

Downstream, demand driven by recycling should be encouraged.



### Eco modulation – Recyclability will pay-back



Thermoform PET packaging (e.g. boxes, jars, trays and blister packs) transparent and non-metallic or laminated with other packaging materials. Multi-layer plastic solutions are tolerated, as long as PET is the primary material.

#### 2018 – 2022 Category C

Packaging for which there are not recyclable at scale or which cannot be sorted/recycled using current technology



#### Since 2023 Category B2.3

Other **selectable/recyclable packaging** from the Household Channel and/or Retail & Industry Channel with **experimental and consolidating recycling processes** 

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### Thanks!

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