

SELECTION AND RECYCLING OF PLASTIC MATERIALS

May 2023

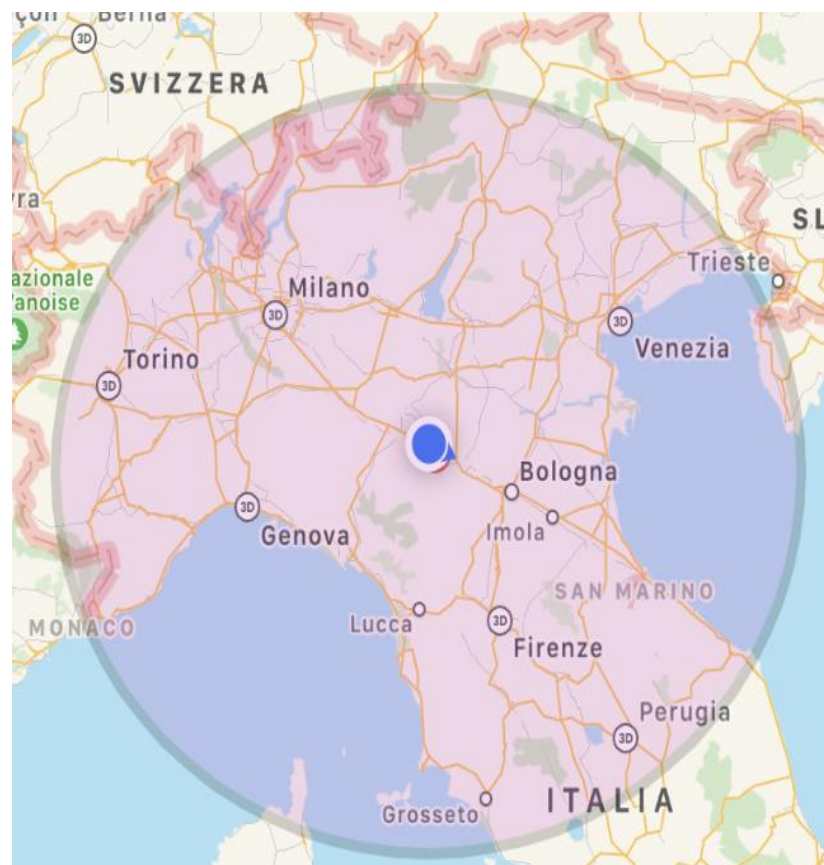
#2 COMPANY PRESENTATION



I.Blu is a company that deals with selection and recycling of plastic materials after consumption (separate collection).

One of the **I.Blu** systems is situated in our territory, in **Cadelbosco di Sopra (RE)**.

Since 2020, the company belongs to **Iren** (that also manage the garbage collection of our area).



Every person produce on average 25/30 kg of plastic waste per year.

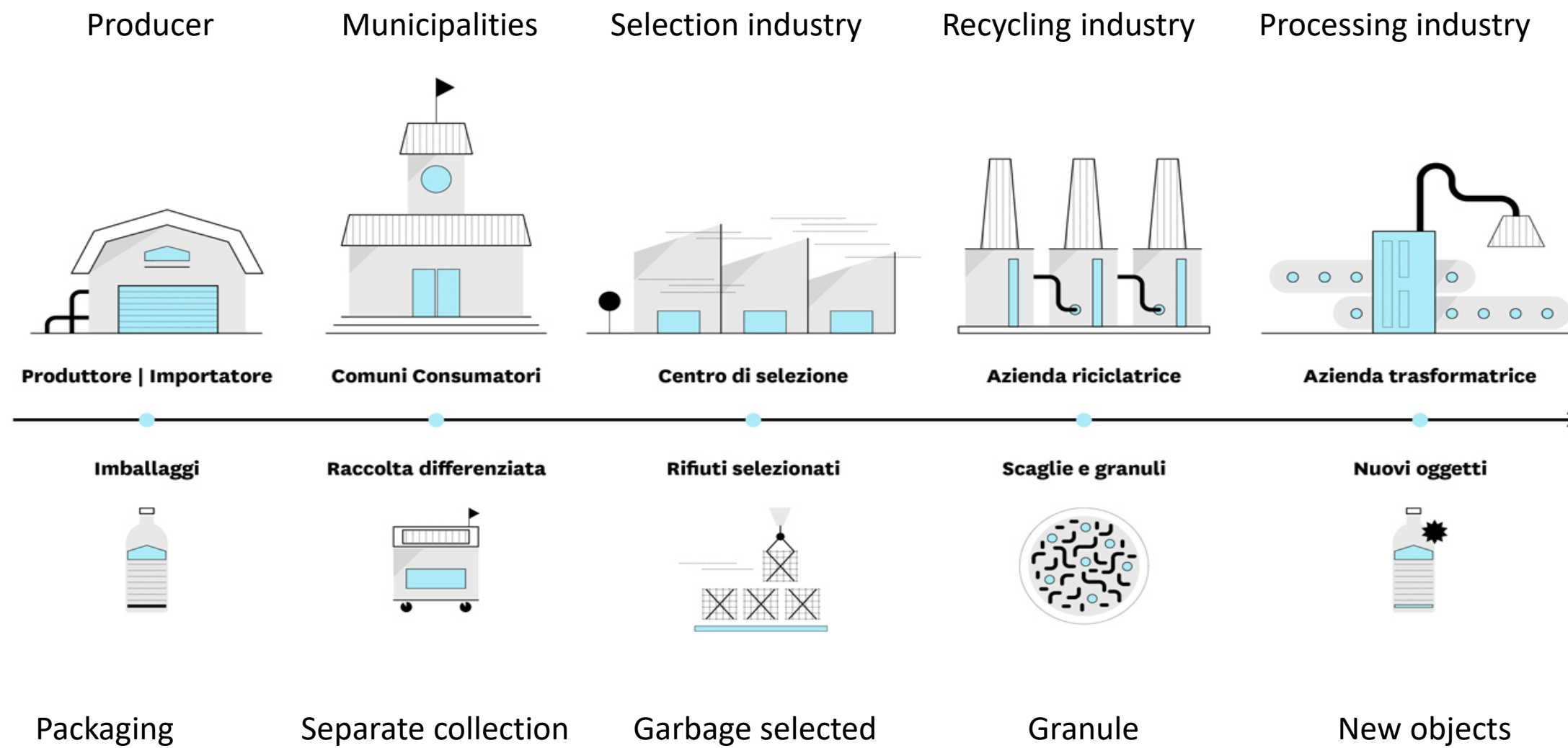
In Cadelbosco we manage around 100.000 tons of plastic materials per year.

It is about of what 4.000.000 people produce every year.

The material comes from different places far away up to 500 km from Reggio Emilia.

#3 FROM PACKAGING TO RECYCLING

Recycling is possible only if production chain exist



#4 COLLECTION AND SELECTION

When a packaging become useless and we throw it away, we can start to consider it a GARBAGE.

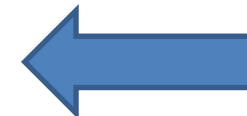


Making a correct waste sorting, citizen can be sure that every GARBAGE will catch the right way.

In Italy, every kind of plastic materials are collected together, sometimes with aluminium and iron packaging too.



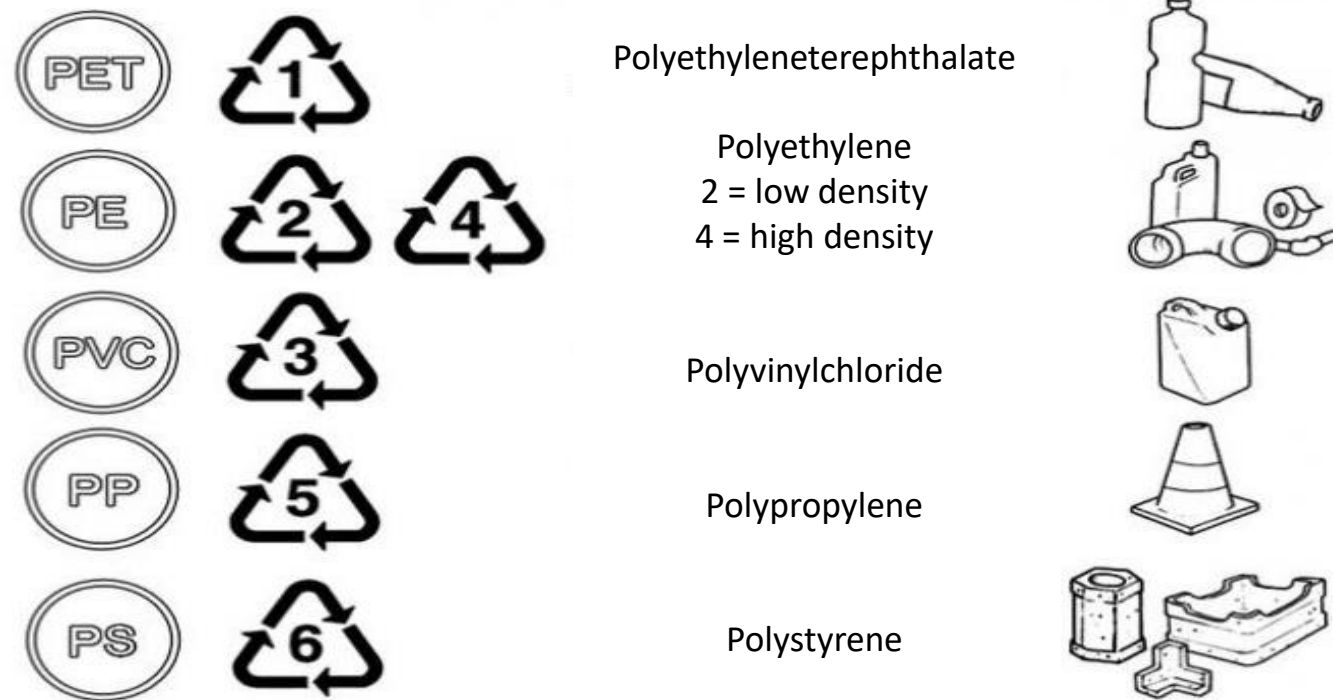
Plastic materials arrive in those systems that can select them between different type of polymers and colors.



Thanks to an efficient management of waste sorting, plastic materials arrive to the right destination plant.



#5 TYPES OF PLASTIC MATERIALS



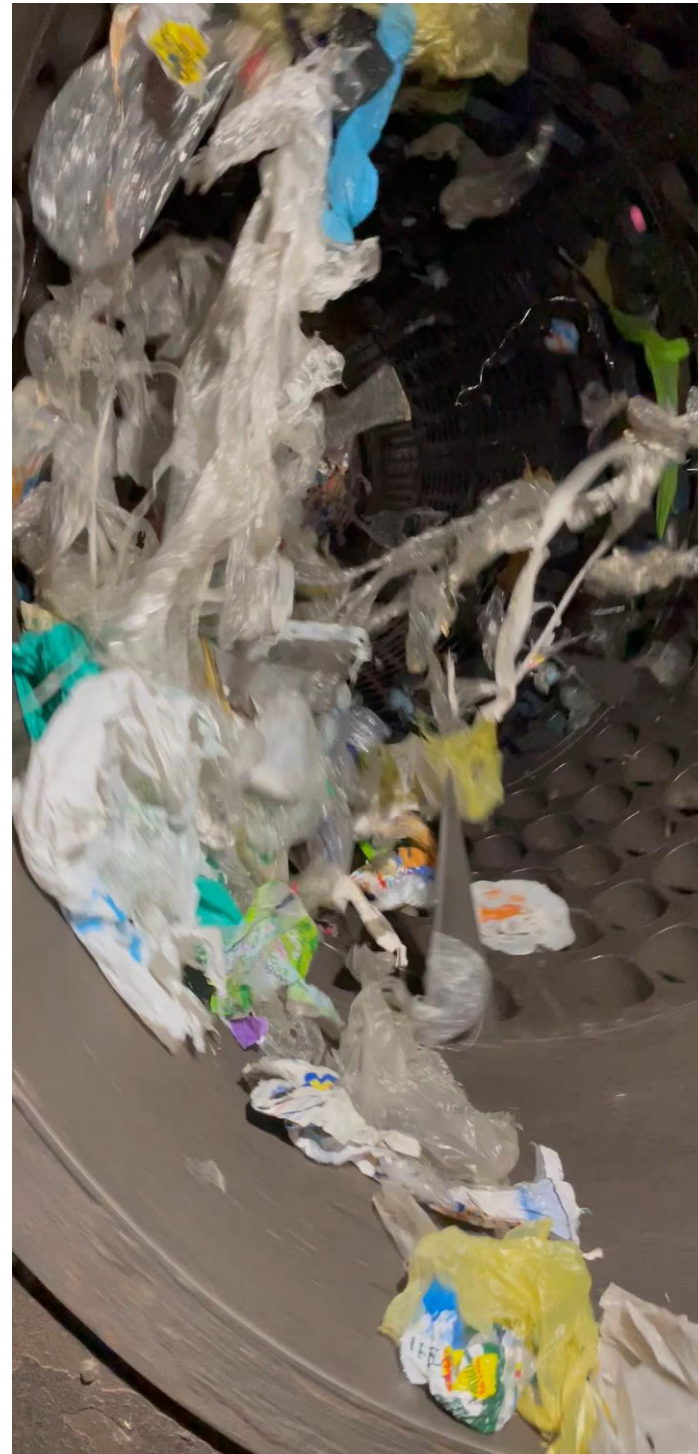
Plastic can be made of different types, shapes and colors.

The most common plastic materials are divided in six typologies and they are recognized with a personal code.

Plastic is light: with a little bit of this material we can obtain long-lasting and resistant packaging, that is why is very important to recycle it.



#6 HOW SELECTION WORKS: THE SIFTERS



THE PHASES

**EXCAVATOR:
MIXTURE**

**ROTATING TROMMEL SCREEN:
SEPARATION BY DIMENSION**

**BALLISTIC SEPARATOR:
SOLID / FLEXIBLE SEPARATION**

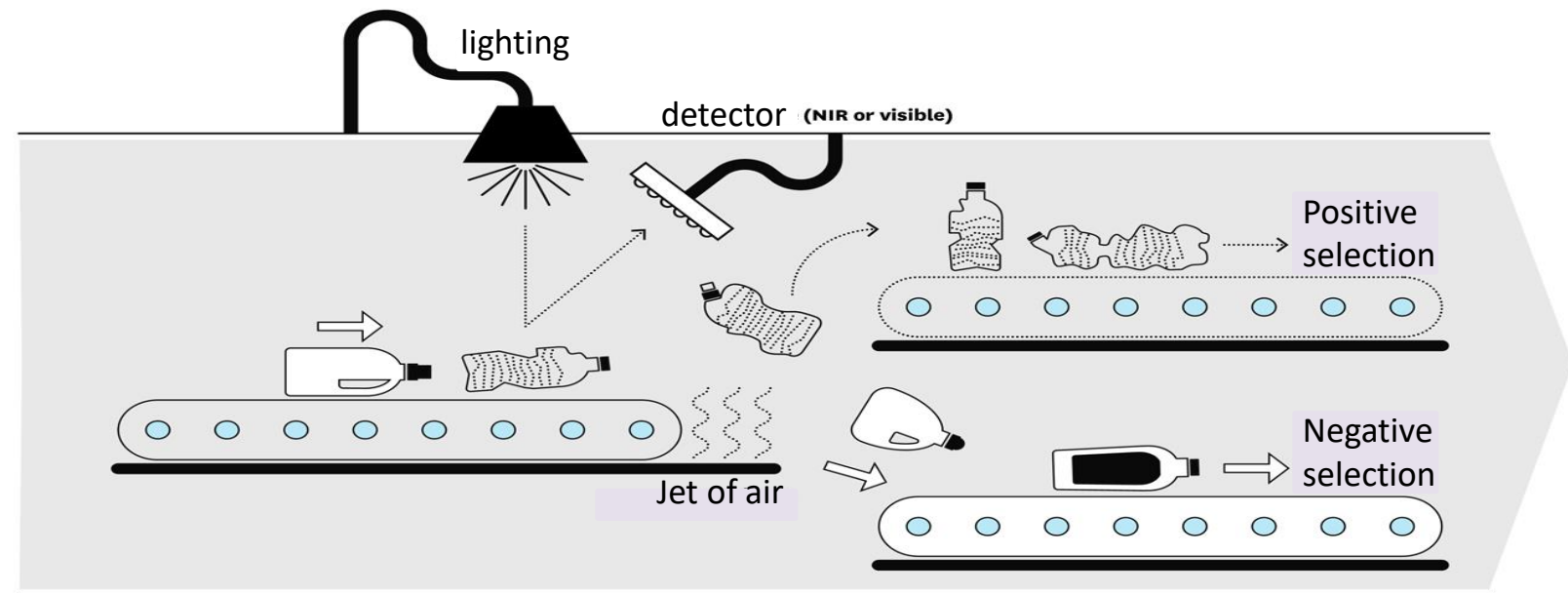


#7 HOW SELECTION WORKS: THE OPTICAL READER

THE OPTICAL SELECTION AND THE MANUAL CONTROL



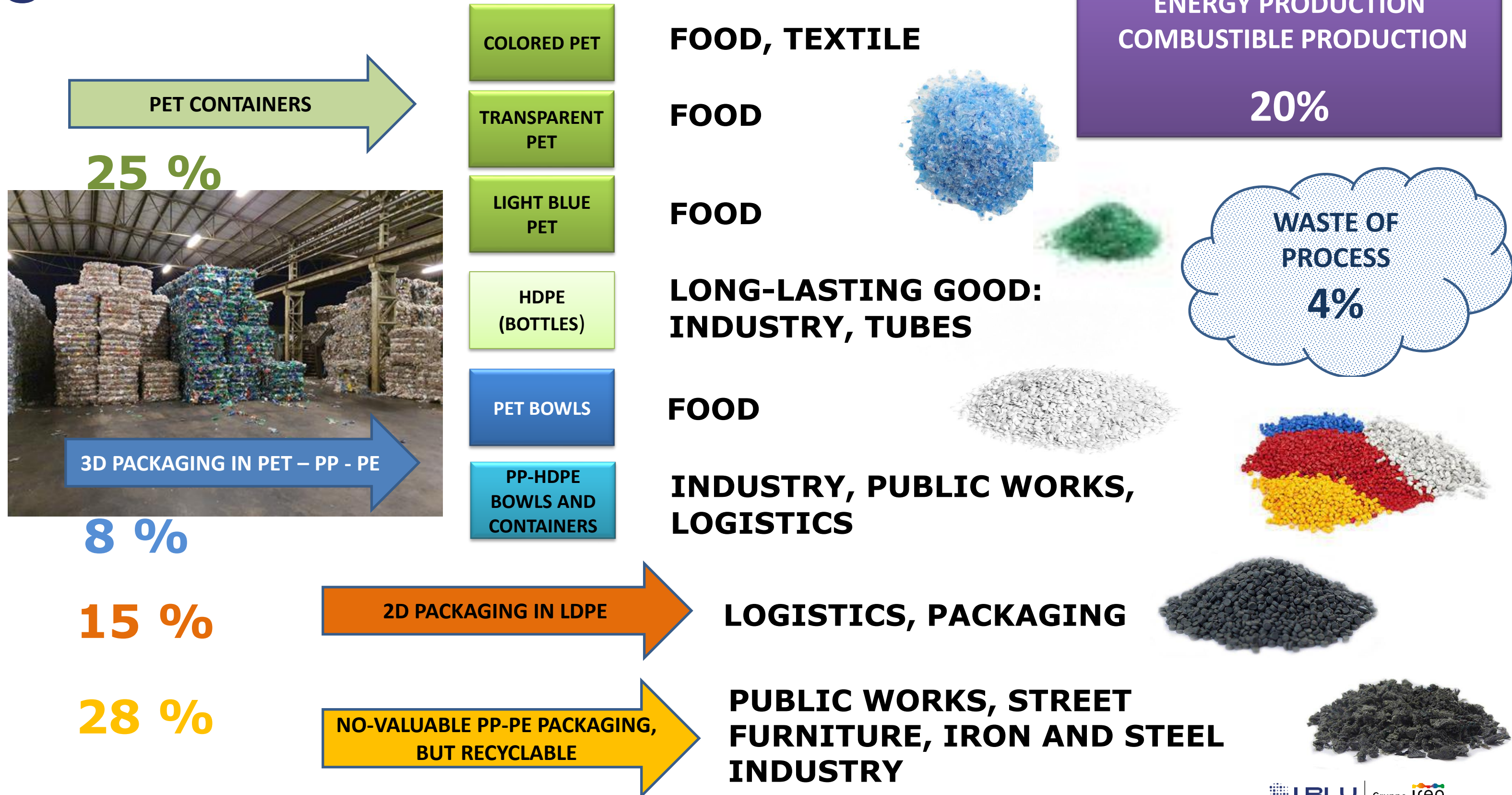
Exemple of selection process



AFTER REMOVING FLEXIBLE COMPONENTS, THE OPTICAL READER SEPARATE PET BOTTLES FROM ALL OTHERS MATERIALS USING A «NIR» TECHNOLOGY. WITH A PROCESS OF SEQUENTIAL SELECTION WE CAN OBTAIN DIFFERENT PRODUCTS.

PET CONTAINERS ARE OBTAINED IN A DIFFERENT PRODUCTION LINE COMPARED TO BOTTLES.

#8 TOWARDS RECYCLING...

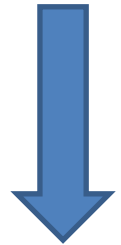


#9 THE ACTIVITY OF CONSORTIUMS IN ITALY

In Italy there are different organisations that take care about the exploitation of products obtained with waste sorting of plastic materials.



These organisations «buy» from municipalities (that manage waste collection) the materials. Usually, it happens through selection systems that can own to the same company that carry out the collection or to others companies.



Thanks to the recycling industry, plastic materials can have a correct work process. From modern recycling systems we can obtain flakes, granule or semifinished products that can begin a new life.



Once that organisation bought the materials from municipalities, they use systems like I.BLU to make products available to recycle. For this activity, these systems receive a compensation, but materials own to the consortiums. That is why they take care of the commercial promotional activities and sale products.



iblu.it - gruppoiren.it