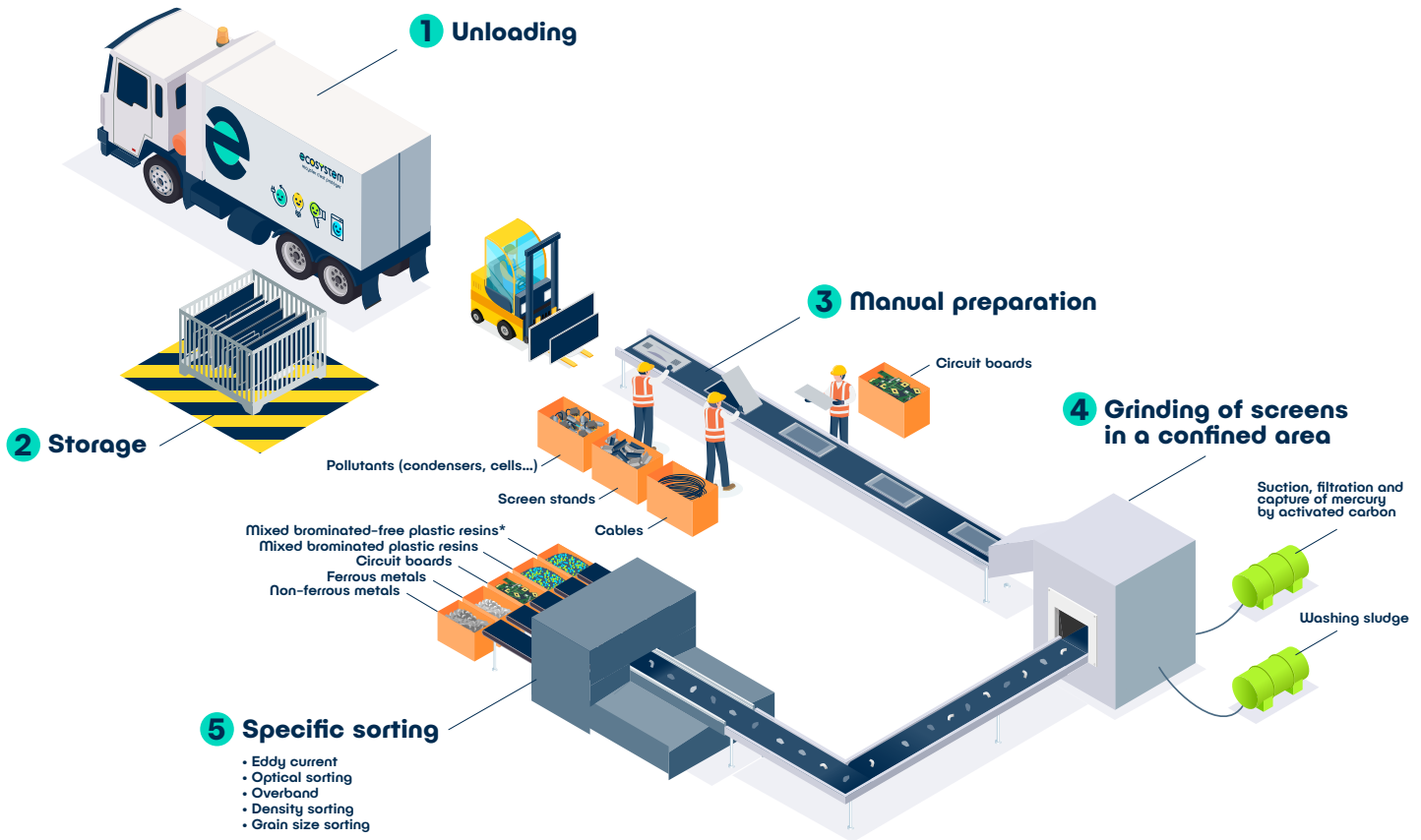


# AUTOMATED TREATMENT OF FLAT SCREENS



\* The following steps for processing and sorting non-brominated plastic resins are available in the diagram "Specific treatment of mixed plastic resins"

## 1 Unloading

Flat screens are carefully unloaded in dedicated secure areas.

## 2 Storage

Flat screens are stored pending treatment. Storage takes place in such a way as to ensure the line is regularly supplied, and to handle the volumes to be treated.

## 3 Manual preparation

Operators manually remove different fractions (such as cables and screen stands), or equipment that do not need to, or must not enter the grinding machine.

## 4 Grinding of screens in a confined area

Screens pass through a confined zone where a grinding machine crushes them. This containment system is designed to capture and remove mercury from backlight lamps using activated carbon. Grinding in a humid atmosphere also enables the remaining mercury to be fixed in washing sludge, which is specially treated.

## 5 Specific sorting

- **Eddy current:** non-ferrous metals are separated using magnetic fields.
- **Optical sorting:** different optical instruments (such as infra-red systems and x-rays) are used to detect different types of fractions including plastic, cards, wires, etc.
- **Magnetic separation of ferrous metals:** an Overband, or permanent magnet attracts and removes magnetic fractions (from ferrous metals).
- **Density sorting:** for example, using a vibrating screen, which separates light and heavy fractions, or the floating technique, which sorts materials according to their density and ability to float.
- **Grain size sorting:** different fractions are separated according to their size, density or surface property.

- All extracted fractions are then treated in three different ways:
- Recycling in order to produce new materials ( preferred solution),
  - Energy or material recovery,
  - Disposal in compliance with the relevant regulations.