



# How to reduce e-waste

404 SNF



# REDUCE E-WASTE BY CONSUMERS



A small campaign could be started to help raise awareness and teach consumers about the topic.

Many people don't know that appliances such as microwaves can be recycled, or don't know how to dispose of them safely.

Electric appliance drop points where consumers would dispose of unwanted machines that would later be picked up by specialized companies.

## Magnetron

- Main component
- Radar systems
- Extra care required when handling (contains beryllium oxide)
- Reuse (very expensive)
- If not feasible, scrap for the copper, aluminium and laminated iron core

## High Voltage Transformer

## Circuit boards

1. Shred and crush into small pieces
2. These are sorted using air separators and electrostatic separators
3. The metals and non-metals now have close to no impurities and can be sold or reused

Can be dismantled with the use of a machine that removes the cast iron casing and automatically collects the value inside (copper and aluminium).

## Small electric motors

## Wires

- Reuse
- If not possible, strip down manually or with a machine that strips and collects the contents in one motion

# SWOT analysis



The solution we came up with is quite simple and most stages can be performed manually to reduce costs if needed.

The resulting materials can also be sold generating profit or reused to reduce spending.

However there are two potentially deadly risk when recycling microwave ovens:

- The toxic material inside the magnetron
- The potential electric shock from capacitors if they are not discharged