The Management of Electrical, Electronic and Battery Waste in Spain and Europe as a Model of Success: Cooperation with Chinese Companies

MACAO 27th March

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ecopilas

recyclia

SUMMARY

1

Introduction And Presentation

→ **Short Personal Introduction**

→ **Objective:**

- To present successful models that have contributed to solving the ever-growing problem of electronic waste and batteries in cities and industry.

- Analyze these successful models from the experience of ECOPILAS, ECOECHE, and RECYCLIA.

- Collaboration with Chinese companies.

2

Recycling of Electrical, Electronical Products and Batteries in Spain and Europe

1. Initial situation. Origin of the problem
2. Strategy and Method:
    - Extended producer responsibility.
    - Circular Economy
3. Operational and Treatment
4. Communication
5. Results

Starting Situation

The Chaos

Lack of Control and Data

Uncontrolled landfills

Irregular Management and Hazard

The citizen assumes the cost.

Strategic and Method

From Chaos to Order

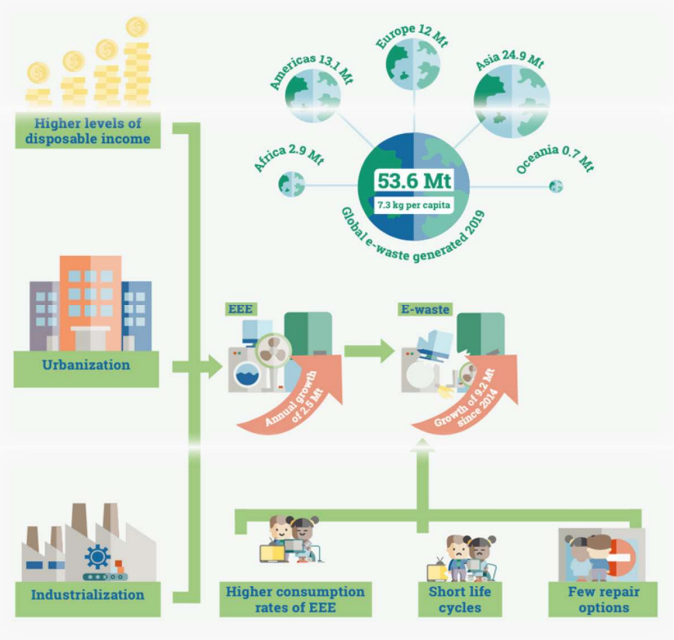
Circular Economy Concept

The Circular Economy is a new model of production and consumption whose main objective is to maintain the value of products for as long as possible through the reuse, repair, renewal or recycling of the materials that make up the product.

This model has opened another interesting line of research: urban mining, a concept based on extracting raw materials from waste, especially electronic waste, and not from nature.

Circular Economy
Electrical and electronic sector

The circular economy is a model that offers a solution to the global problem of electronic waste and batteries. In 2019, 53.6 million tons of this waste were discarded worldwide. It is estimated that by 2030 this figure will grow to 74.0 million tons.



Strategic and Method

From Waste to Strategic Asset

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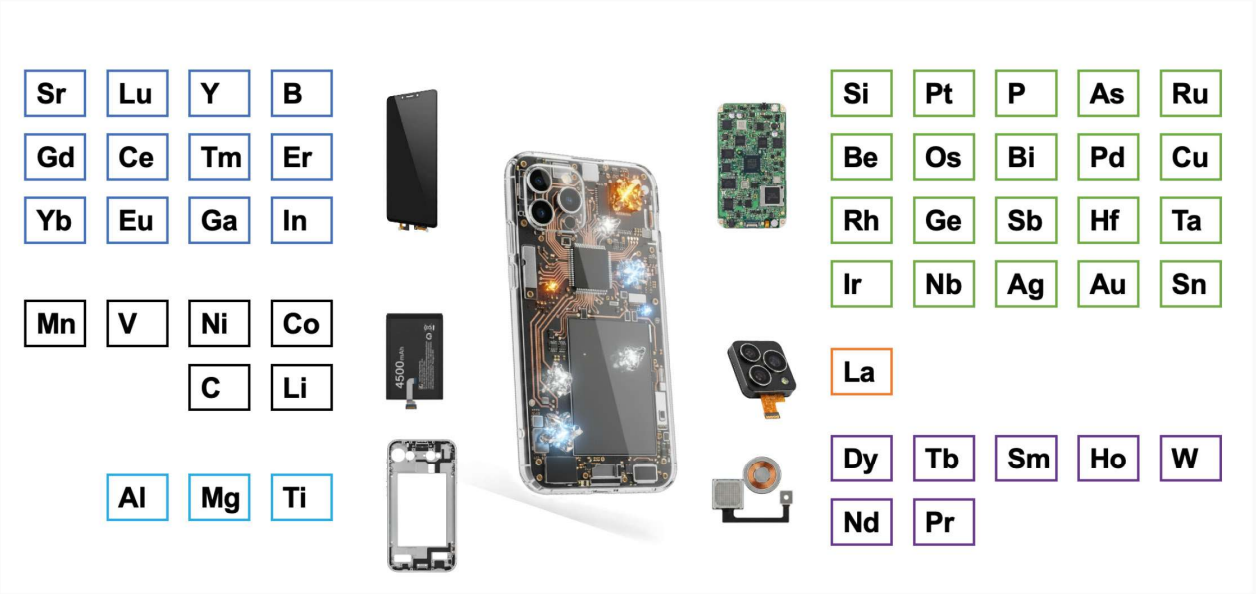


From Waste to Strategic Asset

Operational and treatment

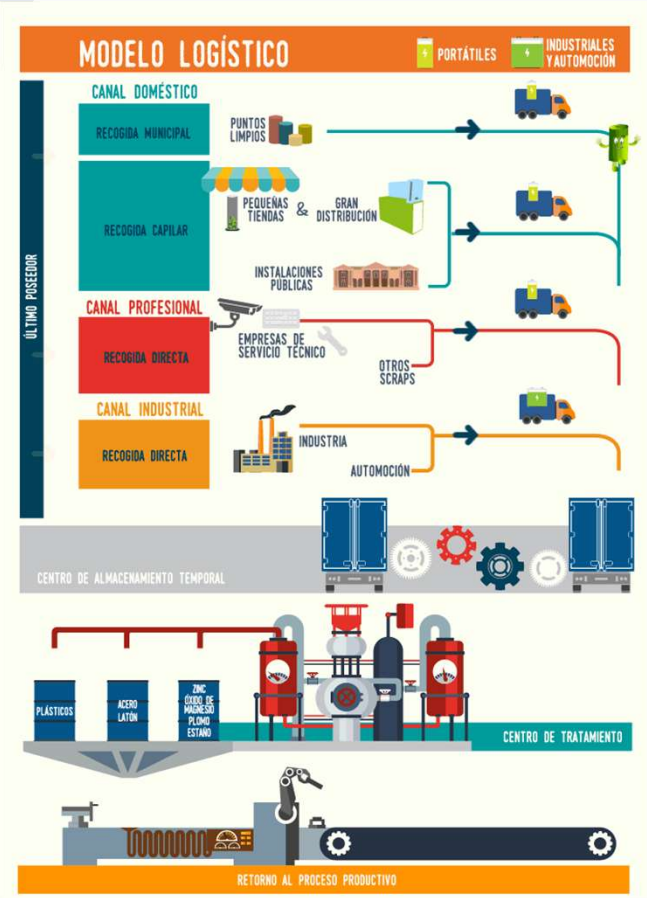
Different types of containers Ecopilas/Recyclia

Differents types of points of collection Ecopilas/Ecoeche

Operational

Products Scope

Operational



- 75% of the components of a household battery are reusable.

- From each battery, 5 grams of iron, 6 grams of zinc, and 6 grams of copper-manganese are recovered.

- ECOPILAS Foundation recovers approximately 350,000 used batteries per day.

- This translates to 1.5 tons of iron and two tons of zinc per day.

- This material is then reintroduced for various manufacturing applications.

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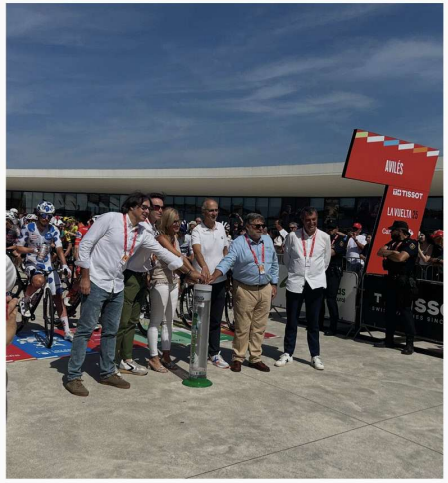
Communication

➔ A fundamental factor in achieving adequate collection levels and meeting legal and environmental objectives.

➔ The importance of communication campaigns.



Results

The Order

Data, control, and traceability

Selective and professional collection

Safe and professional treatment

The producer assumes the cost

European system: 3 Fundamental pillars:

Legal: obligation to collect and treat waste

Financial: The producer finances the entire system

Organizational: Expert systems (SCRAP) for efficient and transparent management

III Concrete succes stories for waste reduction

➔ Figures
- Ecopilas (Ecoeche)
- Recyclia

➔ Investigation Projects

Main figures

ecopilas

KG MANAGED 2024 — **11,114,014 kg**

2,745 — **NO. MEMBER COMPANIES**

COLLECTION REQUESTS — **39,935**

51,110 — **TOTAL COLLECTION POINTS**

NUMBER OF CALLS PROCESSED BY ECOPILAS CALL CENTRE — **98,872**

Main figures

recyclia

76,840,380 kg
QUANTITY OF WEEE MANAGED

11,114,014 kg
QUANTITY OF BATTERIES AND ACCUMULATORS MANAGED

3,583
MEMBER COMPANIES

105,090
COLLECTION POINTS OF RECYCLIA FOUNDATIONS

679,503,360 kg
KG MANAGED BY RECYCLIA FOUNDATIONS
SINCE START OF ACTIVITY (WEEE + BATTERIES)

Examples of innovation applied to the circular economy

Example of innovation applied to the circular economy.

Valorization and reuse of toner powder.

Objective of the study: To explore the possibilities for reusing the materials contained in used toner and ink cartridges, with particular attention to toner powder.

The test demonstrated the ability of toner powder to decontaminate water from heavy metals (Zin, Nickel and Cadmium) and to separate ferrite microparticles, which is a raw material that has high demand in different markets.

4

Collaboration with Chinese Companies

→ Collaboration with Chinese companies operating in Spain:
- Representation
- Compliance with legal obligations

PRO-ECOECHE

→ Market for operational services companies.

5

Conclusions

➔ The recycling of electrical and electronic equipment is a fundamental factor in achieving the goal of zero waste and eliminating improper waste from household garbage.

➔ Recycling is no longer presented as a "good environmental practice" but as a necessary strategy, an environmental and economic strategy.

Thank you. Good bye!!