



Generalitat de Catalunya
Government
of Catalonia



**Traceability and
circularity of electrical
and electronic devices
and their waste**

**EUROPEAN GREEN WEEK
2020**

Background

- **WEEE:** Waste from **E**lectrical and **E**lectronic **E**quipment
- **EEE:** Equipment reliant on electric currents or electromagnetic fields for any intended function and the equipment necessary to generate, transmit and measure these currents and fields.

Principle: **Polluter pays**

Principle: Extended **producer** responsibility

Producer: **Manufacturer or importer**

Obligations:

- **Prevention**
- Collection targets. Very **significant increase**
- Recovery targets. **Preparing for re-use**
- Information
- Funding



Background



Background

Domestic EEE put on the Catalan market* (2019)	t/year	units/year
(1) Temperature exchange equipment	27,337	733,786
(2) Monitors and screens	6,942	1,532,623
(3) Lamps	889	11,097,823
(4) Large equipment	48,188	3,161,540
(5) Small equipment	17,309	39,562,911
(6) Small IT and telecommunication equipment	4,318	19,173,970
TOTAL	104,982	75,262,653

10 units EEE / inhab-yr.

* Data estimated on the basis of Spanish market data in proportion to the Catalan population



Background

- **105 million kg** of domestic electrical and electronic equipment were put on the market in Catalonia in 2019
- **14 kg per inhabitant and year**
- We do not know how many of these kg become WEEE
- **45 million kg of domestic WEEE (6 kg per inhabitant and year)** were collected in Catalonia in 2019



The need

TRACEABILITY: Aware of this problem, European legislation, and subsequently Spanish legislation, have incorporated major controls in the management of WEEE, ranging from the creation of a platform for the traceability of WEEE to new requirements for the provision of information by manufacturers to waste handlers:

Free **information** for waste **handlers** regarding recycling and Preparing for Re-use (components, materials, hazardous substances, etc.):

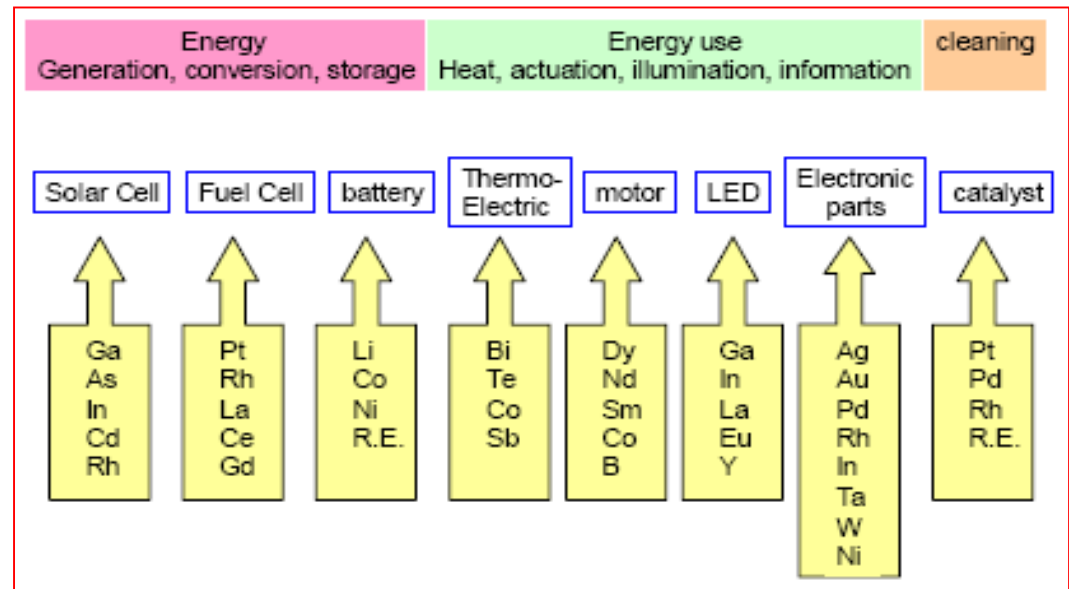
- **New** EEE: within **1 year** of being put on the market
- **Existing** EEE: within **1 month** of receiving a request from waste managers or PfR centres



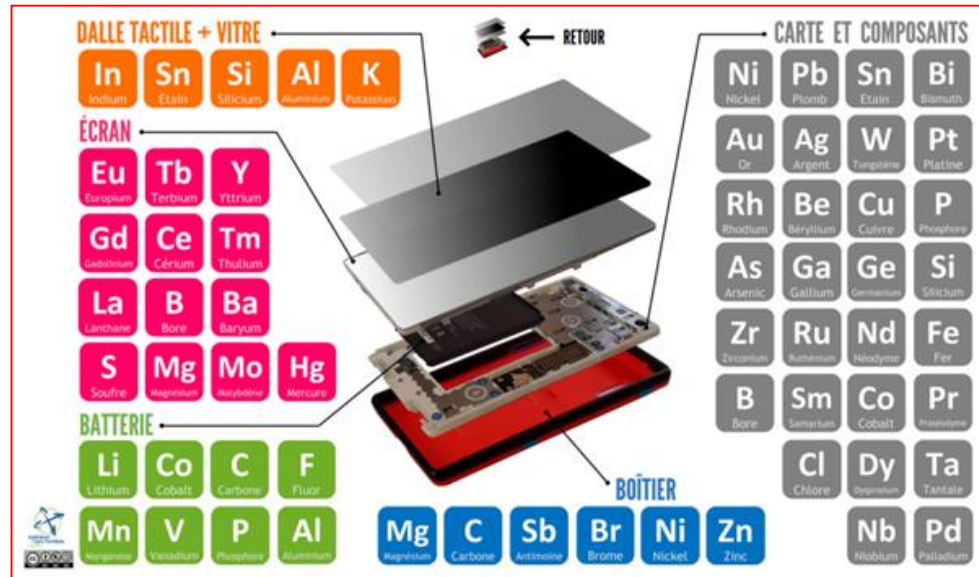
The need

Largely due to the **valuable components** contained by WEEE, its handling often diverges from legal channels and it ends up being **exported** to third countries and/or handled by informal collectors (and often without the necessary permits).

WEEE **valuable components**
WEEE **scarce components**
WEEE **hazardous components**



The need



A mobile telephone contains 70 elements, of which 50 are metal, and most of which are not available in the EU (**critical materials**)

200 grams of gold are obtained from each metric ton of mobile phones.
By comparison, 5.6 grams of gold are obtained from each metric ton of gold ore.



The need

250,000 metric tons of WEEE are illegally
taken out of Europe
(European Environment Agency)

There is a broad **network of WEEE handlers** in Catalonia, with plenty of potential in order to commit to and achieve a **high degree of efficiency in the separation of the valuable components contained by WEEE**, which in some cases could be returned to the producers of EEE in the form of raw material.



The proposal

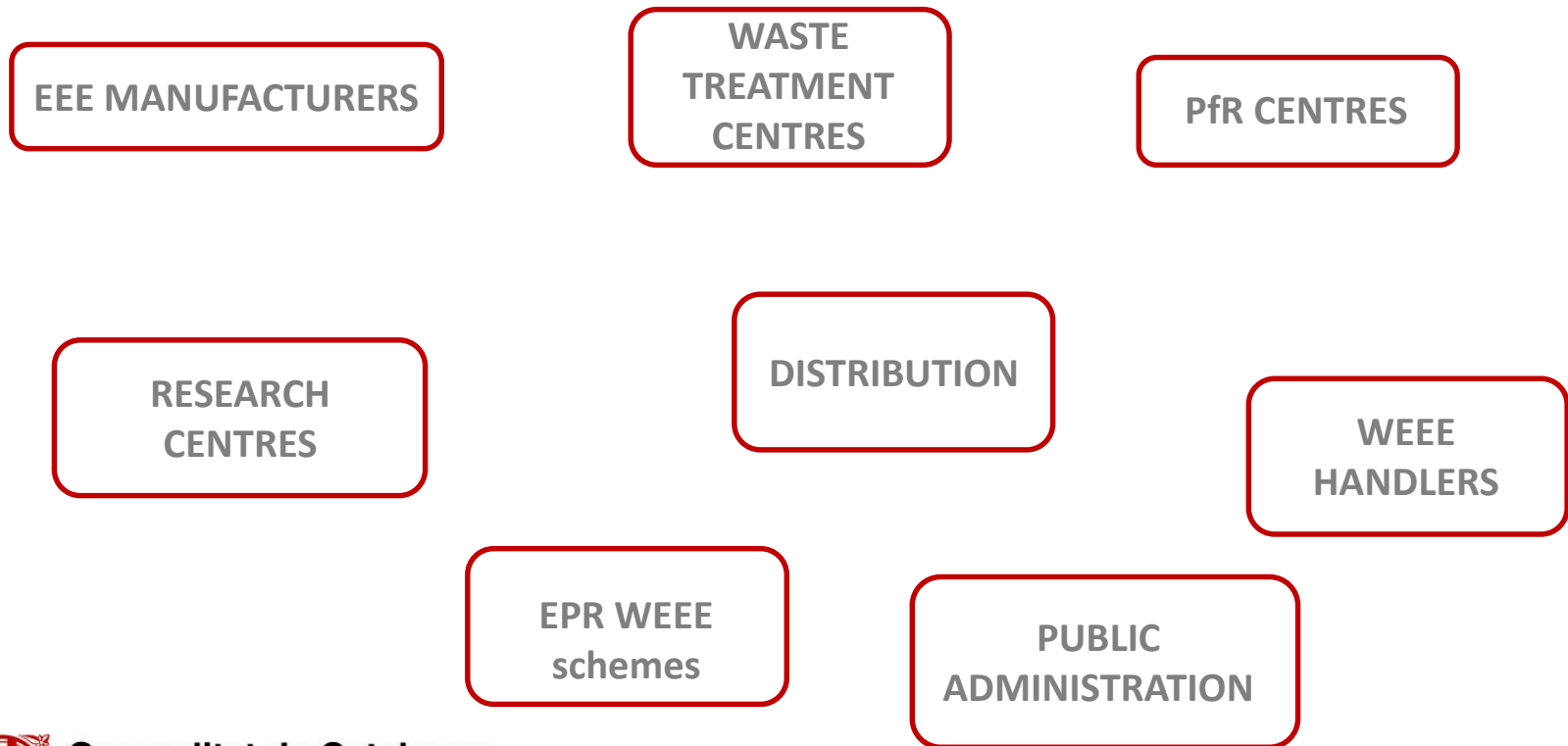
The aim of the proposal: The aim is to develop a project that shows the feasibility of implementing a **system through which to trace and locate the EEE sold in Catalonia from the moment it is manufactured**. This traceability system would include **accurate information on the components** defined as strategic and contained by certain EEE.

The project also aims to create a **chain of trust** so that the economic resources that EEE manufacturers must provide for the proper handling of WEEE are distributed safely and honestly between the various agents involved.



The proposal

The goal is to carry out a **pilot test**, in which it is considered **essential** to have the active collaboration of the **agents involved along the chain**:



The proposal

- To identify electrical and electronic equipment (EEE) from the moment of its **manufacture** by means of an electronic label or similar system.
- To **trace** the status and location of equipment during its useful life as a piece of **EEE** (warehousing, distribution, repair, installation, maintenance).
- To **trace** the status and location of equipment when it becomes waste (**WEEE**) (waste treatment centre, distributor, preparation for re-use centre, warehousing manager, treatment plant).
- To give preparation for re-use centres and waste recovery handlers **access to information provided by producers on WEEE**, in order to facilitate the proper handling of WEEE and its reuse in accordance with the provisions of article 10 of Royal Decree 110/2015 (different components and materials, location of hazardous substances, etc.).



The proposal

- To identify and trace the location of the strategic components contained by WEEE.
- To create a **chain of trust** for the **transfer of the economic resources provided by producers for the proper handling of waste**. Each agent of the chain (carrier, waste treatment centre, distribution, preparation for re-use centre, warehousing manager, waste treatment plant) would have access to the part of the resources to which they are entitled when they have carried out the task for which they are authorised.

TRANSPARENCY in the TRACEABILITY of EEE and of WEEE, and CIRCULARITY of COMPONENTS
CHAIN OF TRUST in ECONOMIC TERMS



Challenges and Opportunities

Challenges

Achieving the engagement and trust of manufacturers, importers and EPRS

Implementing a versatile system capable of handling all types of products and manufacturers, including imports

Achieving the traceability of products during the use stage while complying with data protection legislation, etc.

Opportunities

Identification and traceability of strategic substances

Possibility of reducing dependence on the importation of these substances

Direct connection between manufacturers and recyclers: better designed products and demand for recovered materials

Improvement in the quality of recycling and increase in the recovery of materials and substances





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Thank you for your time

Maria Vidal i Tarrasón
Head of the Recovery Promotion Department
Circular Economy Area
Waste Agency of Catalonia
mvidalt@gencat.cat

gencat.cat