

Development of specifications and technical requirements for WEEE preparation for Reuse activities in Greece

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State of the art

Hellenic Recycling Agency (HRA/EOAN) is a public interest, non-profit private entity supervised by the Ministry of Environment and Energy.

Its main objective is the elaboration, planning and implementation of policy for the “Alternative Waste Management” of packaging, packaging waste and other products (Prevention as well)

Currently in Greece there are 22 **approved** PROs which are organized under the Extended Producer Responsibility (EPR) **covering the alternative waste management of** packaging, portable batteries, accumulators, EEE, used tires, lubrication oils, ELVs and wastes from excavation, construction and demolition. **For more info** → www.eoan.gr

WEEE in Greece:

- **no separate quantitative target** for the preparation for reuse so far - **combined targets for preparation for reuse and recycling per WEEE category**
- 2 **approved** collective PRO's in Greece, “Appliances Recycling”, and “Fotokiklosi”.
- Both **PROs** organize their own network of collection points for the return of WEEE from private households, commercial, industrial and other sources (B2B), organize the transfer of the collected WEEE to establishments for the recycle/recovery of WEEE, and are liable for the environmentally proper management of the collected WEEE

Existing Reuse activities

- Reuse activities that exist are individual initiatives and mainly concern companies active in the wider field of reuse of EEE, and in particular repair and refurbishment of equipment, which is not waste (not WEEE) but used EEE.
- In addition, there are some individual initiatives that focus on the donation of electronic equipment by NGOs or private companies to schools or socially disadvantaged groups as well as on some platforms for the exchange of goods.
- These initiatives do not focus exclusively on EEE, social exchange activities under the framework of Municipalities
- In any case, these individual initiatives are not being recorded in a formal way by a national entity, so far.
- Repair Café and Specific Reuse actions being monitoring started with LIFE REWEEE project.

Development and demonstration of Waste Electrical and Electronic Equipment (WEEE) prevention and reuse paradigms :

LIFE14/ENV/GR/000858

Implementation Period: January 2016 – November 2020

Coordinating Beneficiary: Appliances Recycling SA

Associated Beneficiaries: Hellenic Recycling Agency, Ecological Recycling Society, Green Fund, RREUSE and Harokopio University of Athens

HRA is the responsible partner for **Action B.4** resulting to :

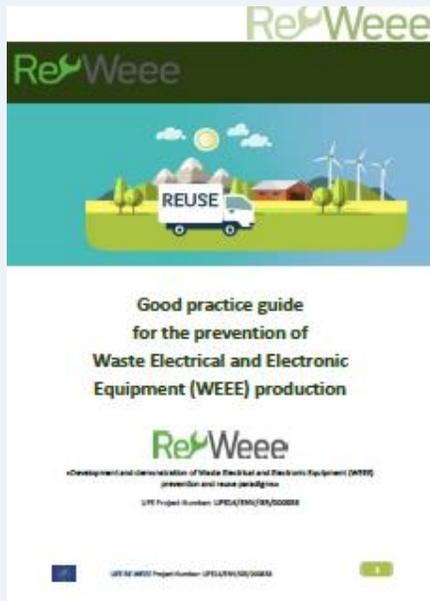
- the development of **technical specifications** for reuse of WEEE addressed to operators
- the development of **Good practice guide for the prevention of WEEE production for citizens, and Quick Guide for Repair for Electronic Devices**
- the future adaptation to a **legislative action** in order to set the **preparation for reuse** framework for **WEEE** in Greece and to develop a secure and reliable market for reused products.



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Guidelines for Prevention – Extending the life of your EEE



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Buy certified appliances

- To ensure that your device has the expected lifetime, you should always buy electrical and electronic equipment that **complies with European standards**. Each device must be **CE marked**. The CE marking proves that your product has been tested and meets all European standards for safety, health and environmental protection.

Keep your appliances clean from dust and debris

- Not adequate cleaning of the appliances may affect their performance as well as the frequency of damages. The **dust and debris** on the surface of the EEE **should be cleaned frequently** as they enter the interior of the devices over time, preventing them from functioning properly.

Keep moisture out

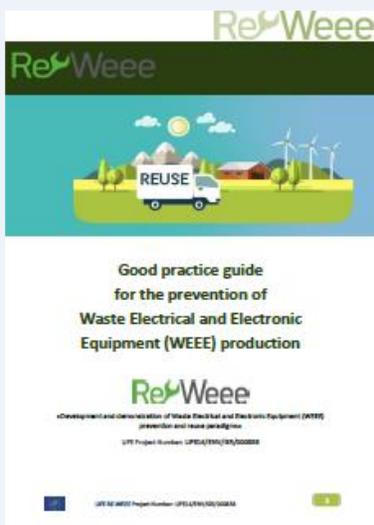
- If **moisture** enters the operating mechanism of EEE, the performance of the appliance may be affected, or it can lead to serious damage or even destruction of the device. In addition, if the devices are exposed to moisture, and their outer cover is metallic, they may rust.

Follow the manufacturer's guidelines

- **Each appliance has certain operating specifications according to the manufacturer** such as the suitable load (e.g. the kilograms of clothes for your washing machine, or the maximum weight and volume of materials for your blender). By overloading a device or operating it under unsuitable conditions, its components are worn and damages are more likely to occur. In addition, under inappropriate operating conditions appliances may have lower performance (e.g. not very clean clothes, lower speed of a computer etc.).

Guidelines for Prevention

– Extending the life of your EEE



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Keep kids and pets away from your appliances

- Small **children and pets** can cause minor or major damage to your devices at any time, which then affects the performance of your device.

Replace damaged or broken parts

- **Replacing damaged or broken parts** is particularly important for the proper functioning of EEE. The operation of a device with broken parts burdens some other component, leading to faster destruction of the device.

Protect your appliances from fluctuations in power

- The **intense fluctuations in the power supply** can damage your devices. Such fluctuations may arise either due to non-fixed supply from the network itself or due to other incidents such as bad weather (eg lightning) that may affect the operation of the network. If you can predict such an incident (eg from heavy rainfall) it is recommended to **turn off and disconnect electrical appliances**.

Perform regular maintenance according to manufacturer's recommendations

- **Regular maintenance of your appliances** will increase their efficiency and lower operating costs, as well as ensures longer life for your equipment.



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RE(W)EEE platform for Reuse



- *The RE(W)EEE platform provides the opportunity to **donate or exchange electrical and electronic appliances** that someone no longer needs. Thus, a device that would be left unused on a shelf or would end up in the waste bin could find a "second" life in the hands of another person that actually needs it.*
- *The RE(W)EEE platform is available in the following link:*

<https://reweee.hua.gr/el/>

<https://reweee.hua.gr/en/>

Development of specifications and technical requirements for the entire “preparation for reuse” cycle

Based on:

- The evaluation of the technical specifications during the operation of the 2 Sorting Centers
- The specifications developed in EU level (CENELEC EN 50574, EN 50625, EN 50614, PAS 141:2011, WEEELABEX, ECORAE LIFE11 ENV/ES/000574),
- PR EN 50614_2020, Requirements for the preparation for reuse of waste electrical and electronic equipment
- The Decision (EU) 2019/2193 laying down rules for the calculation, verification and reporting of data and establishing data formats for the purposes of Directive 2012/19/EU

Targets

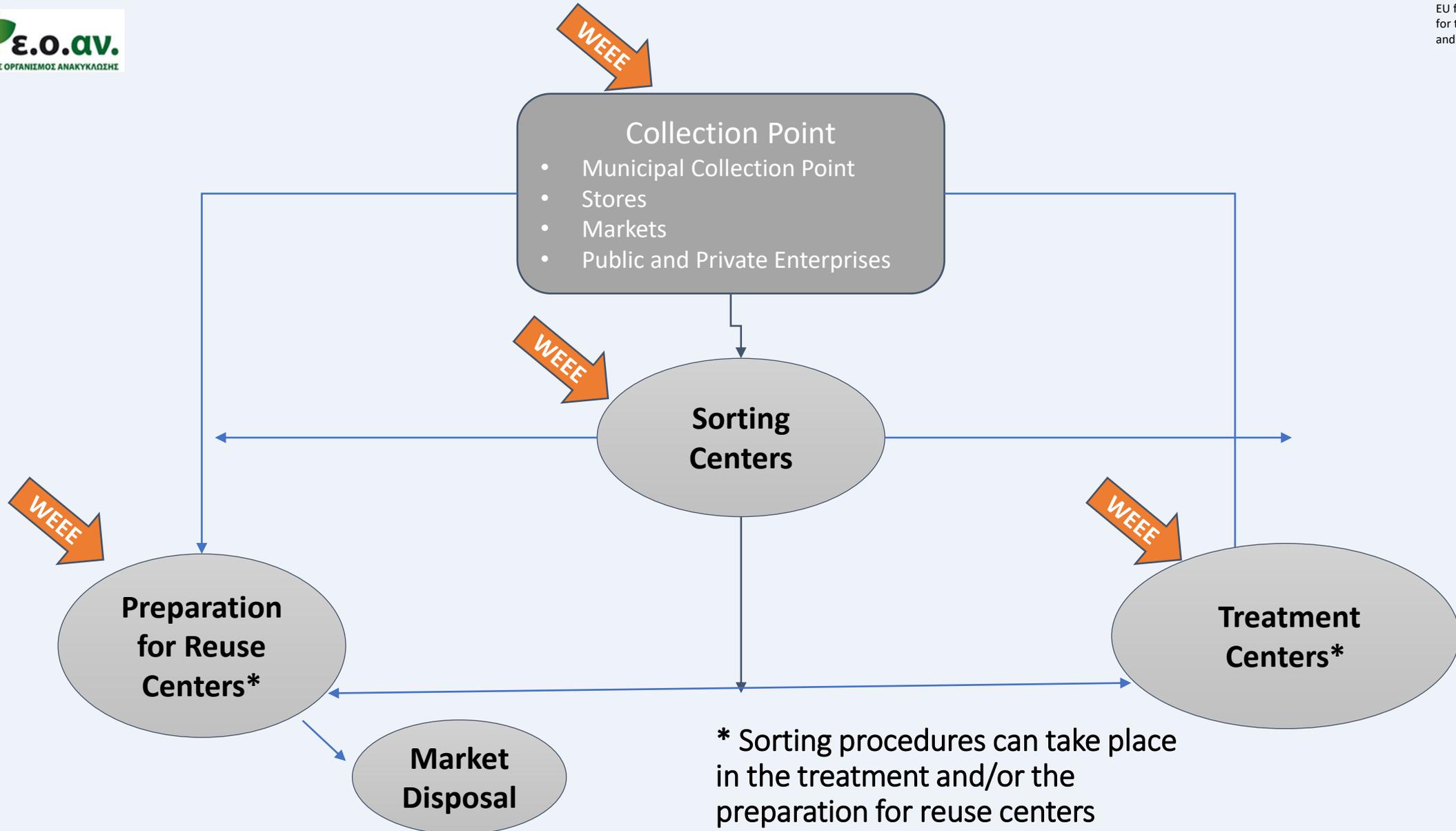


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ReWeee



- Encourage the reuse of waste of electrical and electronic equipment (WEEE) thereby reducing the quantity of WEEE to be processed and contributing to a circular economy.
 - Provide a framework for assuring the consumers about the safety of equipment and quality of the preparation for reuse operator **thus ensuring the viability of the whole idea.**
 - Provide a framework for assuring manufacturers and/or brand owners that returning products to the market after preparation for reuse will not adversely affect their brands or reputations for safety of the equipment.
 - Provide assurance to stakeholders of the legality of preparing for reuse operators.
 - Create fair competition for all operators in the WEEE chain.
 - Support the prevention of illegal (cross boundary) shipments of WEEE.
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Technical Requirements for preparation for reuse of WEEE for operators



- **Administrative requirements** (management system, legal requirements, documentation and records, required competencies and training of employees, health and safety, tracking and traceability system)
- **Equipment Requirements**
- **General issues for treatment of WEEE** in respect of preparation for reuse potential
- **Collection and Transport**
- **Sorting and Categorization**
- **Storage requirements**
- **Preparation for reuse**
- **Product Guarantee** offered by operator– safe for use and free from conditions that could cause harm – at least 90 days from the date to supply to a new user
- **Put on the market** / Preparation for reuse label – sales number / User Information (*user manual, safe installation and use. any software supplied. contact details of reuse operator*)



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Sorting Centers in Greece

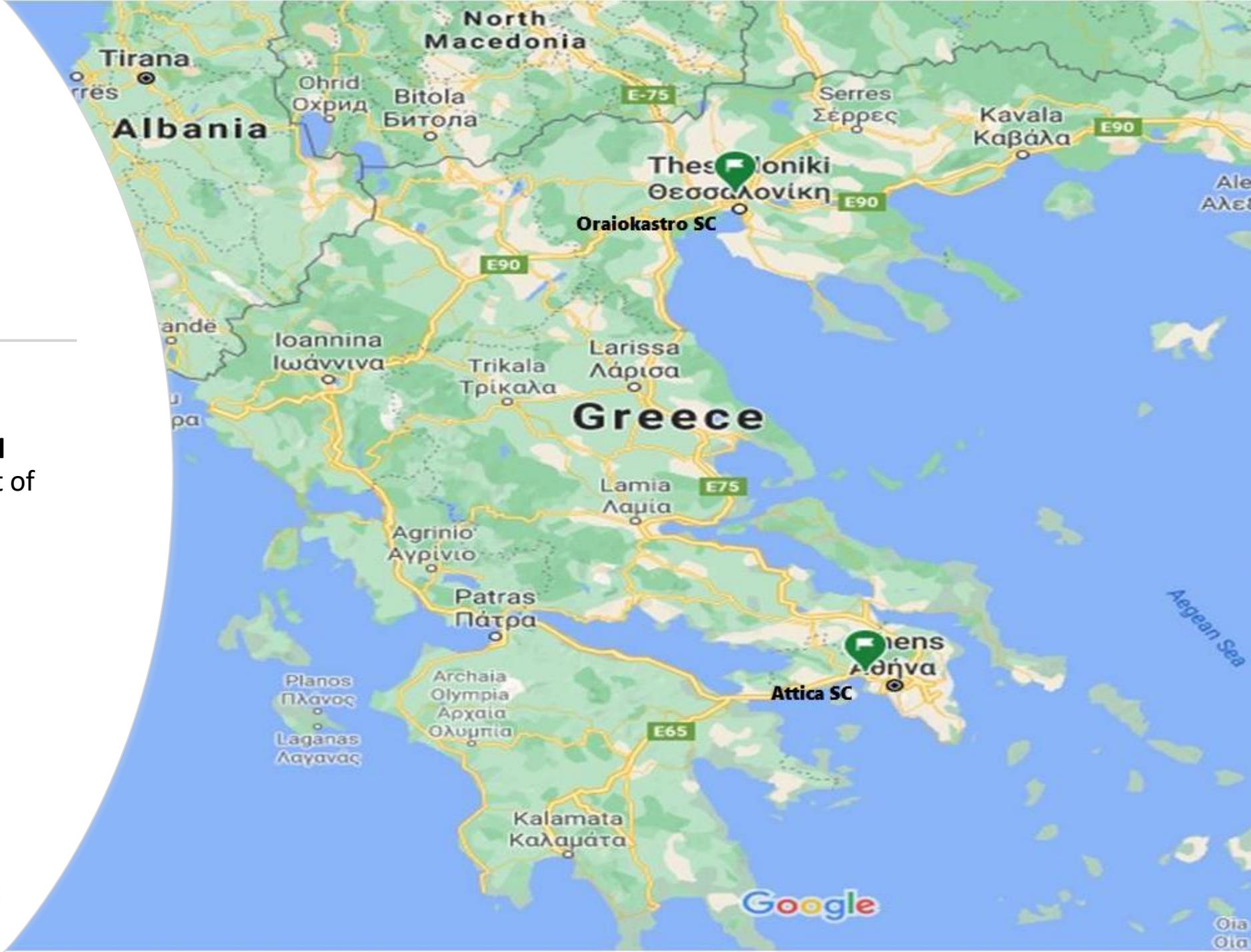
2 Sorting Centers in Greece

**Oraiokastro – Region of Central
Makedonia** (active involvement of
Municipality)

<http://www.reuse-it.gr/>

Aspropyrgos – Region of Attika

<https://ecoreset.gr/>



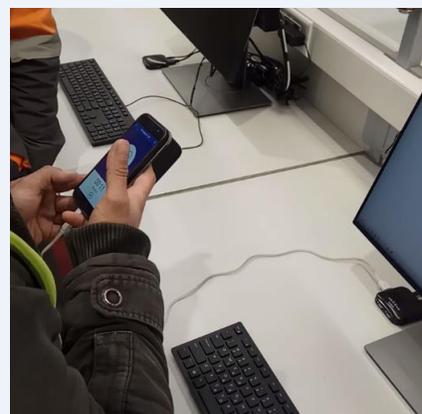


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Activities in Sorting Centers

Activities		
Initial activities	Sorting:	<ul style="list-style-type: none">- WEEE Handling – Loading / Unloading- Load inspection- Categorization in the WEEE categories (according to KYA 23615/651/E.103/2014)- Weighting
Preparing for reuse activities	Preparing for reuse:	<ul style="list-style-type: none">- Sorting of WEEE driven for treatment or preparing for reuse activities – visual inspection- Initial Inspection- Functional tests- Data erasing- Software removal / installation- Repair- Repeat tests- Cleaning
	Put on the market / donation	<ul style="list-style-type: none">- Packaging- Product guarantee

Equipment





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Main issues

- WEEE handling and preparation for reuse activities shall respect legal and regulatory requirements
- Operators should follow all legal requirements that are applicable to the environmental, health and safety aspects of all activities, services and processes undertaken at the facility, and should have a signed cooperation agreement with a Producer Responsibility Organization (EPR).
- The operator shall possess infrastructure in terms of size, equipment, technologies installed, and characteristics of the operations that are suitable for the activities performed on site.
- Operator should first aid measures and emergency plans, internal controls and de-pollution monitoring, logistic system
- Tracking and traceability system should exist to track the WEEE received – up to and including the point in time when the product is confirmed as waste or REEE or REEE component.
- WEEE shall be handled (loading, unloading, transport) and stored with due care in order to avoid additional damage and/or release of hazardous substances into air, water, or soil, as a result of damage and/or leakage.
- Storage areas designated for the storage of WEEE intended for preparation for reuse shall have weatherproof covering and impermeable surfaces for all WEEE to prevent ground water and soil contamination
- If rating plate (information from manufacturer) or CE labelling does not exist, the product leaves the preparation for reuse procedure



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Main issues

- If it is uncertain that hazardous substances are present in WEEE or components, the WEEE or components shall be treated as if they contain the hazardous substances
- Personal data stored on the memory of the ICT equipment shall be destroyed (eradication procedure) when the product is moving to preparation for reuse procedure.
- Replacement of software on ICT should follow recommendation of manufacturer – only licensed software should be used
- WEEE that is not suitable for preparation for reuse, may be disassembled to recover components suitable for reuse.
- The operator shall carry out random tests on REEE or REEE components to confirm the quality assurance
- The operator should monitor the rate of return of REEE sold and reasons for return
- Export of REEE or REEE components is feasible when the operator make available documents that meet requirements for used EEE as specified in WEEE directive 2012/19/EU.

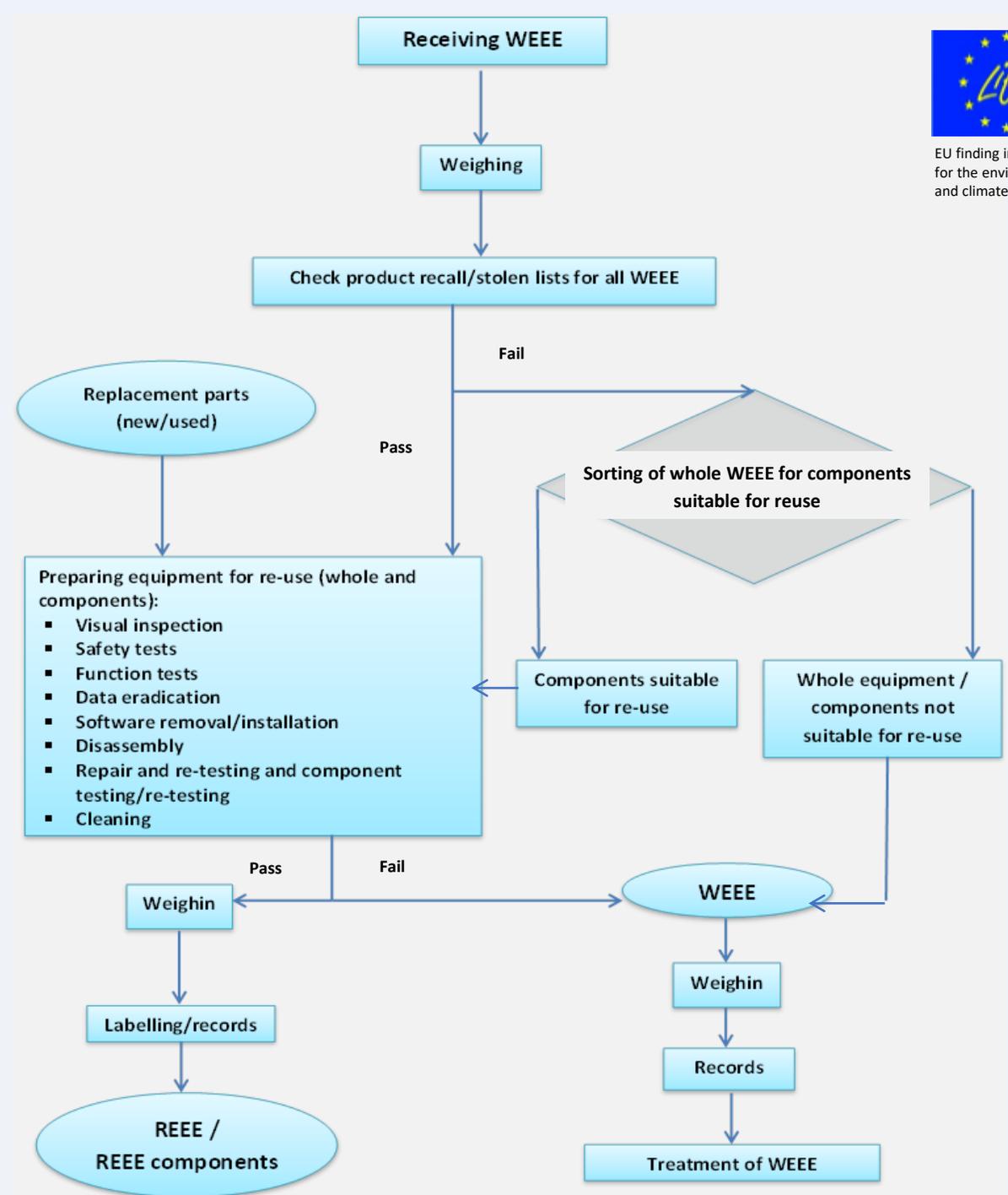
Overview of the preparing for reuse process



Οπτικός έλεγχος σε όλες τις συσκευές

→

ΑΗΗΕ κατηγοριών ενδιαφέροντος





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Crucial factors for increase of Reuse

- Raise Citizens' awareness and change Consumer behavior towards prevention and reuse
 - Improvement of the cooperation between Municipalities and PROs.
 - Enhance Municipalities capabilities to face challenges in WEEE treatment, prevention and recycling.
 - More WEEE Collection Points, separate bins for WEEE with Reuse potential.
 - Creation of Green Points and Sorting Centers.
 - Proper WEEE treatment and Preparation for Reuse plants in terms of infrastructure suitability.
 - Legal framework supports the Reuse of WEEE.
- ✓ The pandemic Covid-19 crisis has a positive influence in the demand for REEE

Thank you for your attention

Project Team of HRA/EOAN

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