



**Development and Demonstration of Waste Electrical &  
Electronic Equipment (WEEE) Prevention and Reuse  
Paradigms**

**Guidelines**

**A tool for the comparable measurement of (W)EEE reuse and  
preparing for reuse  
(Deliverable B1.3)**

LIFE Environment and Resource Efficiency – LIFE14 ENV/GR/000858



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## ACRONYMS AND ABBREVIATIONS

<b>CAS</b>	Civic Amenity Site
<b>D2DC</b>	Door-to-Door Collection
<b>EC</b>	European Commission
<b>EEE</b>	Electrical & Electronic Equipment
<b>EU</b>	European Union
<b>PRO</b>	Producer Responsibility Organization
<b>WEEE</b>	Waste Electrical & Electronic Equipment

## 1. Introduction

Waste Electrical and Electronic equipment (WEEE) is considered one of the fastest growing waste streams worldwide. It is estimated that 44.7 million metric tonnes (Mt) of WEEE were generated worldwide in 2016 alone, of which only 20% was recycled through appropriate channels. In order to tackle the growing WEEE generation, policies providing robust guidelines on reuse (prevention) and preparing for reuse are considered a necessity.

The core tenet in management “*what gets measured gets managed*”, applies also in addressing the issue of WEEE quantification. The establishment of **an accurate, uniform and consistent quantification and reporting methodology** is a precondition for the implementation of coordinated efforts to measure WEEE at a country, regional, local or an entity level. On that ground, the LIFE-REWEEE project focused on **the development of an integrated, consensus-based methodology and a relevant user-friendly tool (in excel format) for measuring EEE re-use and (W)EEE preparation for re-use** (Action B.1, Sub - action B.1.3). Both the methodology and the tool are integrated with EU practices, environmental legislation and policies, and are anticipated to comprise pivotal instruments for decision makers.

Herein, the consortium of the LIFE-REWEEE project anticipates to provide all relevant stakeholders (please refer to section 1.1) with **comprehensive guidance for the utilization of the aforementioned tool, with ultimate to yield reliable, meaningful and comparable data.**

### The LIFE-REWEE project (full title: “Development and Demonstration of Waste Electrical & Electronic Equipment Prevention and Reuse Paradigms

The co-funded by the European Commission LIFE programme “LIFE-REWEEE” aims at the reduction of Waste Electrical and Electronic Equipment (WEEE), through the implementation of prevention (reuse) and preparation for reuse actions. More specifically, it involves the development and operation of two WEEE Sorting Centres, in the wider area of Athens (Attica prefecture) and Central Macedonia, to sort (throughout the implementation of the project) 1,000 and 500 tn of WEEE, respectively. In addition, the “LIFE-REWEEE” project promotes and facilitates the implementation of the relevant legislation, the reliable preparing for reuse in Greece, and the development and implementation of models and assessment tools of EU-wide applicability.

## 2. Target schemes

The tool has been developed to aid the key-players of (W)EEE management,, i.e. **the re-use centres/networks, and Producers Responsibility Organizations (PROs)**, to measure EEE re-use and (W)EEE preparation for reuse, in accordance to the integrated methodology which was developed by the LIFE- REWEEE project (Deliverable B1.2). Therefore, the types of the current “Delivery-collection” systems in EU, and the involved entities, in EU Member States, have been taken under consideration.

The Tool is comprised six parts (excel files), one per each implementing type of Delivery-Collection scheme. More specifically, these parts are as following:

- i. **Civic Amenity Sites (CAS):** Facilities where (W)EEE and other types of waste are collected to be incinerated, recycled, prepared for re-use or re-used. (FILE NAME: “Civic Amenity Sites.xlsx”).
- ii. **Door-to-Door Collection scheme, when a Private Sector Entity is the discarder:** Private Sector Entity is any entity that is not related to the public administration, including but not limited to private companies, enterprises, distributors, retailers, manufacturers, shops, businesses, private organisations, corporate, industry, stores/malls, NGOs etc. It includes all the actors which use EEE through their professional activities and which will deliver or make available those products as waste or non-waste after their use life. (FILE NAME: “D2DC Private Sector Entities.xlsx”)
- iii. **Door-to-Door Collection scheme, when a Public Sector Entity is the discarder:** Public Sector Entities are authorities at national, decentralized, regional and/or municipal level, public utility organizations etc., which are also using EEE for their own operational activities. This category includes all the actors from the public institutions which use EEE through their professional activities and which deliver or make available those products as waste or non-waste after their use life. (FILE NAME: “D2DC Public Sector Entities.xlsx”)
- iv. **Door-to-Door Collection scheme, when a Household is the discarder:** Households of the residential complex which use EEE for their own needs. This category covers all the households using EEE for domestic use and which will deliver or make available those products as waste or non-waste after their use life. (FILE NAME: “D2DC Households.xlsx”)
- v. **(W)EEE Collection Points:** A facility collecting household (W)EEE for recycling, re-use or preparing for re-use at a small scale. Within the framework of the LIFE-REWEEE methodology, (W)EEE Collection points may be distributors, retailers, Extended Producer Responsibility schemes, enterprises, big stores, malls, Puntos Limpios (Clean Points), municipalities green collection points, charities, open days, and campaigns, movable units. (FILE NAME: “(W)EEE Collection Points.xlsx”)
- vi. **Do-it-Yourself Delivery:** This scheme is mainly determined by one criterion: the (W)EEE discarder is responsible the transportation directly from its spot to the re-use or preparing for re-use centre facilities. Only households have been identified as (W)EEE discarders for this scheme which is in general described by the respondents as being made through donations (direct donation, collection in shops, etc.). FILE NAME: “Do-it-Yourself Delivery.xlsx”)

Note:

The term “discarder” has been selected herein to avoid the confusion with “WEEE producers”, which are in general considered as being the entities who manufactured or sold the EEE which then becomes a second-hand EEE or a WEEE. However, the term “discarder” also includes the entities selling or donating EEE. For the purpose of the methodology and the tool, (W)EEE Discarder is be considered as any entity getting rid of, selling or donating (W)EEE through one of the aforementioned Delivery – Collection schemes. The discarder is considered as the original and/or end users of the (W)EEE.

### 3. Categories of WEEE

Within the worksheets of the Tool, the reported WEEE are classified according to the six categories set – up by the Annex III to the [Directive 2012/19/EU](#) of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment. More specifically, the six categories are set as following:

C1: Temperature exchange equipment

C2: Screens, monitors, and equipment containing screens with a surface >100cm<sup>2</sup>

C3: Lamps

C4: Large equipment (any external dimension >50cm)

C5: Small equipment (no external dimension >50cm)

C6: Small IT and telecommunication equipment (no external dimension >50cm)

### 4. Abbreviations and acronyms in the excel files

<b>CAS</b>	Civic Amenity Site
<b>D2DC</b>	Door-to-Door Collection
<b>EEE</b>	Electrical & Electronic Equipment
<b>PREUSEQDIYD</b>	Potentially Re-usable Quantities of do-it-yourself delivery
<b>PREUSEQHABD2DC</b>	Potentially Re-usable Quantities of households with door-to-door collection
<b>PREUSEQMXO</b>	Potentially Re-usable Quantities of Mixed Origination
<b>PREUSEQPRSED2DC</b>	Potentially Re-usable Quantities of private sector entities with door-to-door collection
<b>PREUSEQPUSED2DC</b>	Potentially Re-usable Quantities of public sector entities with door-to-door collection
<b>PREUSEQWCP</b>	Potentially Re-usable Quantities of (W)EEE Collection Points
<b>RQMXO</b>	Rejected Quantities of Mixed Origination
<b>SCQMXO</b>	Separately Collected Quantities of Mixed Origination
<b>WEEE</b>	Waste Electrical & Electronic Equipment

### 5. Colour matching

The cells in the excel files are coloured depending on the type of entry or output. To this end, the colour matching is shown in the Table 5-1.

**Table 5-1:** Colour Matching

Type of entry/output	Colour Matching
Stage of the process (e.g. weighing of input stream)	
Categories of WEEE	
Data Entry cell	

Type of entry/output	Colour Matching
Output cell	
Sum	

## 6. Reporting of spare parts

The inclusion of new spare parts in the calculation of prepared for reuse quantities, should be in context with the Article 1.1 of Decision 2019/2193 (COMMISSION IMPLEMENTING DECISION (EU) 2019/2193 of 17 December 2019 laying down rules for the calculation, verification and reporting of data and establishing data formats for the purposes of Directive 2012/19/EU of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE)):

*“Where whole appliances are prepared for reuse, and only components representing in total less than 15 % of the entire weight of the appliance are replaced by new components during the preparation for re-use process, the entire weight of the appliance shall be reported as prepared for re-use.”*