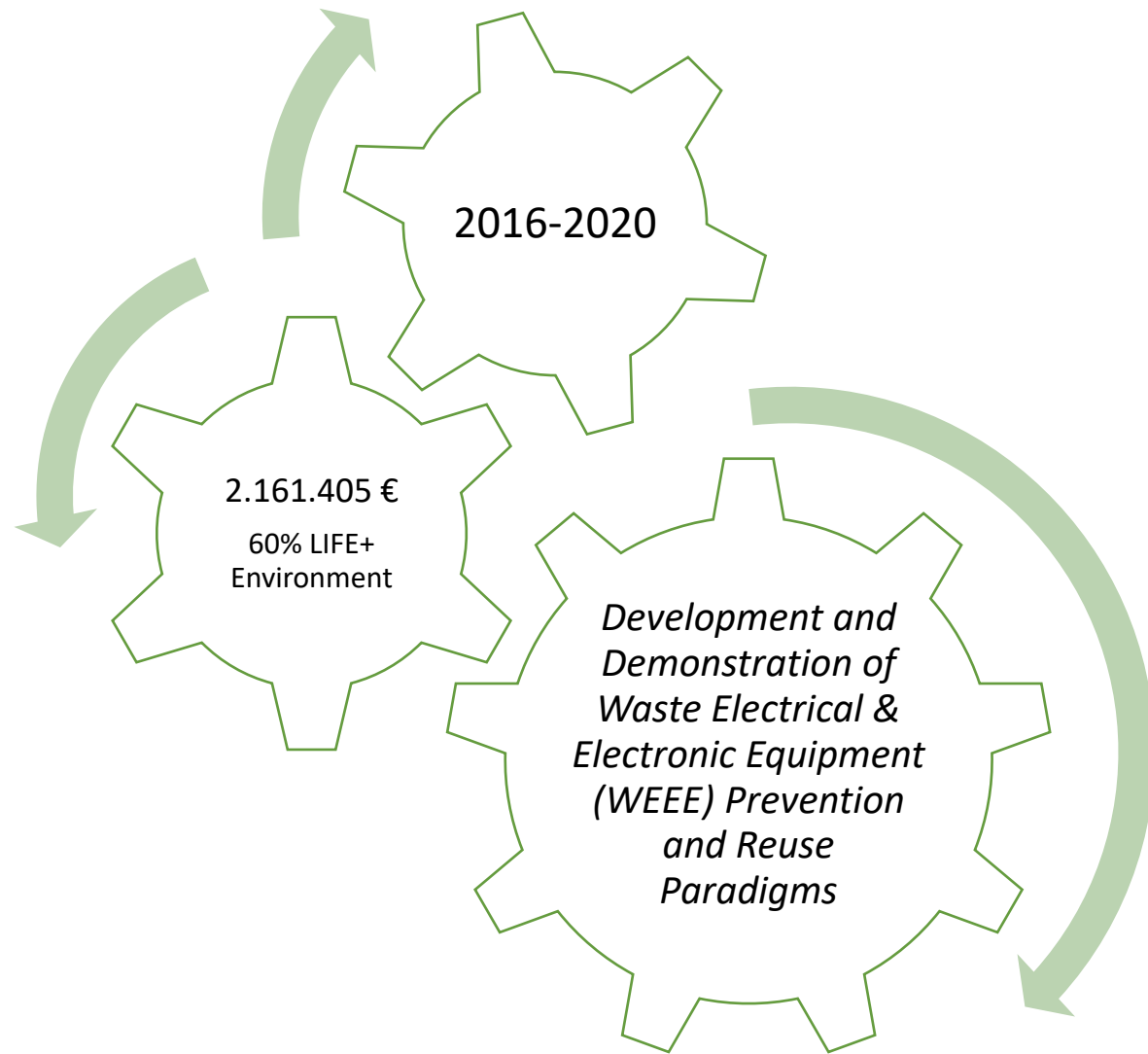


ReWeee

LIFE14 ENV/GR/000858

26/5/2023



Coordinator Beneficiary



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Co-Beneficiaries



GREEN FUND



Ecological Recycling Society



Harokopio University of Athens

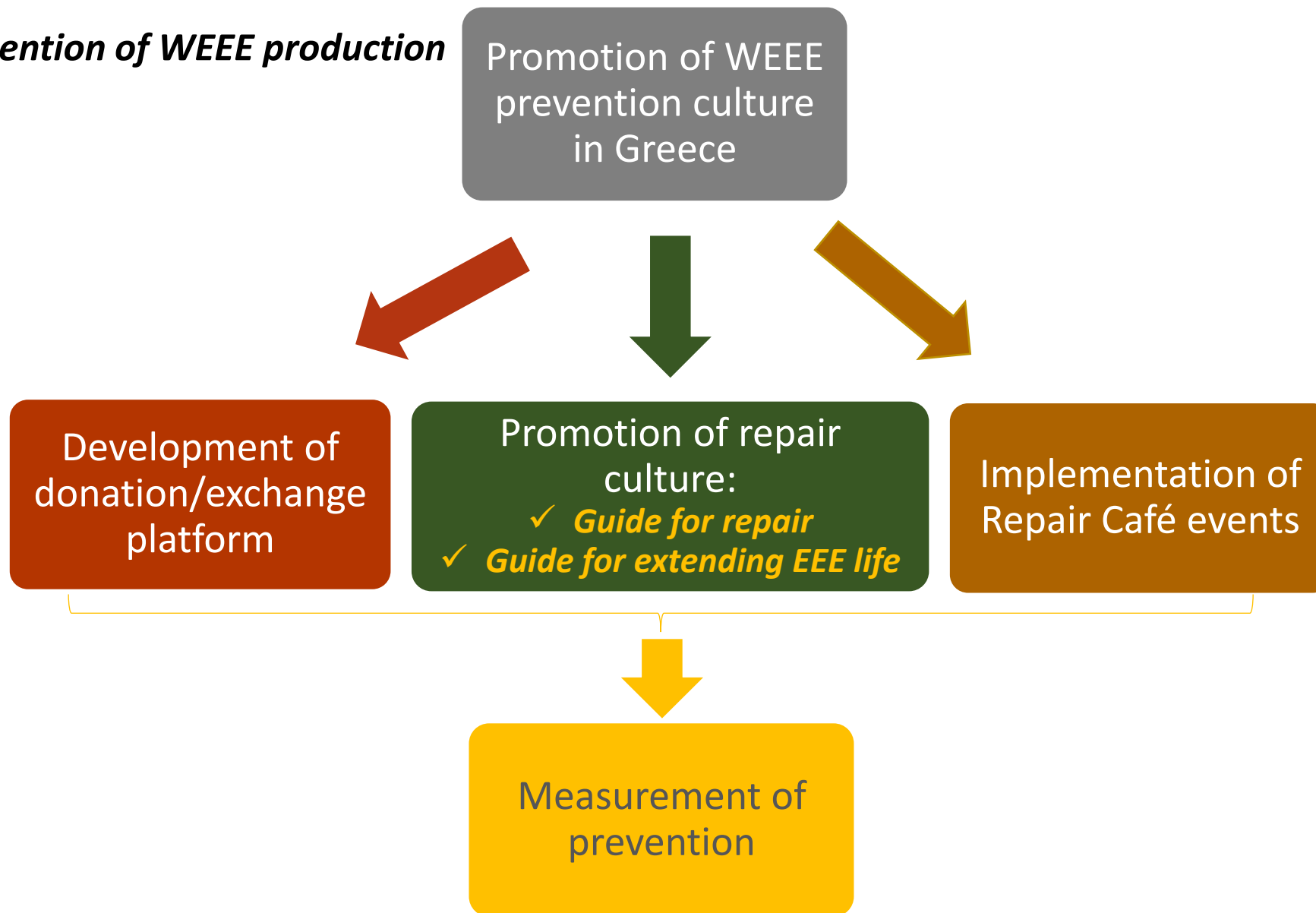


ReWeee *objectives according to EU policies*

- Prevention and reduction of WEEE production
- Priority to re-use
- Implementation of qualitative management activities
- Achievement of the targets set by legislation
- Standards development for infrastructure and transportation activities



Activities for prevention of WEEE production



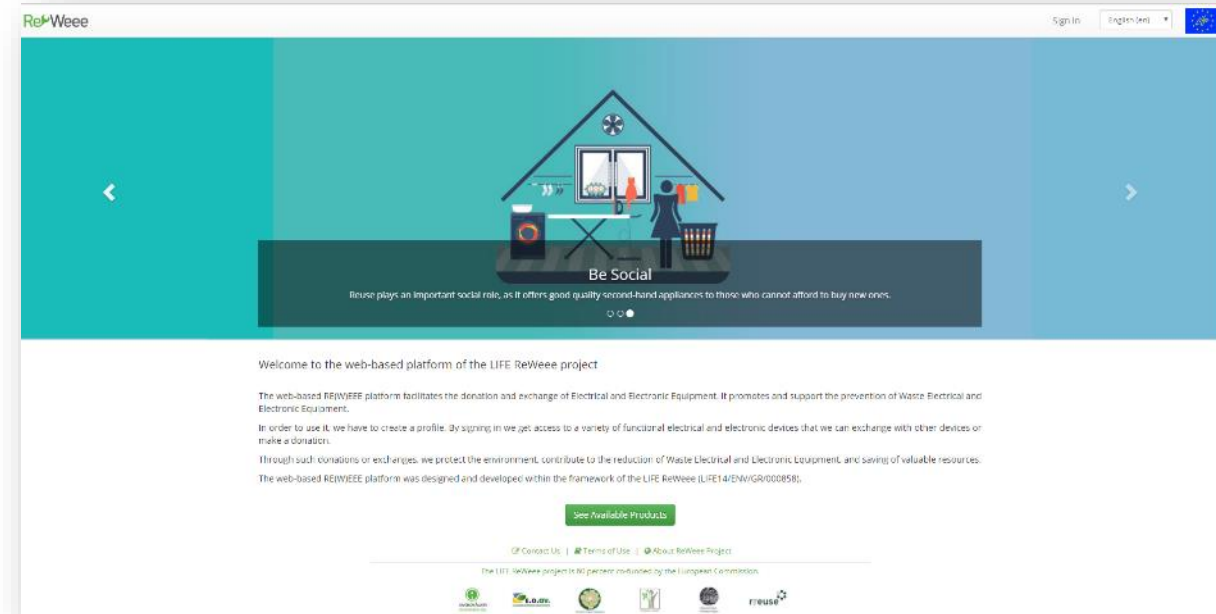
Activities for prevention of WEEE production

Promotion of WEEE prevention culture in Greece



Development of donation/exchange platform

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



Activities for prevention of WEEE production



Promotion of WEEE prevention culture in Greece



Implementation of Repair Café events

7 Repair Cafés



313 devices were brought in for repair:

- ✓ 222 were fixed or could be repaired with spare parts
- ✓ 91 irreparable



Step 6: Manually apply a pea-sized portion of thermal conductive paste on the micro-circuit (chip) of the central processing unit (CPU).

Step 7: Manually apply thermal conductive paste on the micro-circuit (chip) of the GPU, so that the whole micro-circuit is covered.

Step 8: Reconnect the CPU to the motherboard.

Step 9: Reconnect the GPU to the motherboard and connect the wiring to other components. Note that the assembly needs to be the same as before the repair.

Step 10: Reassemble the plastic protective shell of the laptop where the keyboard is integrated.

Step 11: Connect the device to the power supply.

2.3.4 Repairing "Blue Screen"

In order to repair damage No 4, the following equipment is required:

- Portable storage device - CD with the new Operating System software
- External hard drive to back-up files

Malfunction: Blue Screen & Auto-Restart, possibly caused by a malfunction of Operating System's (OS) data/ software. Repair steps:

Step 1: Start the computer.

Step 2: Connect the external hard drive to the USB port.



4. How to extend the life of your *mobile phone*



1. **Remove regularly dust and debris** from the keyboard and the screen.
2. **Use a case and a screen protector for your mobile phone** to prevent scratches and damages when placing the mobile phone in bags or pockets. At the same time the device is protected from dust and dirt.
3. **Adjust the brightness of the screen** properly.
4. **Run regular software updates.**
5. **Connections and signal:** Switch off wireless connection, GPS and Bluetooth when you are not using it so as to save energy.
6. Release space by **deleting the applications you are not using.**
7. To **free up space** on your phone store large files on either a removable memory card or back up older files on an external hard drive and remove them from your phone.
8. **Keep your mobile cool.** Don't place it next to heat sources or direct sunlight that may result in overheating of the device.
9. **When charging, the battery should be kept at a normal temperature.** Protective cases used in mobiles and the charging point are often responsible for increasing the temperature during charging. When charging your phone remove the case and don't place the cellphone between sheets or blankets that may increase the temperature of the device. **Avoid fast charging** (Battery University 2018, Hoffart 2008).
10. If your laptop has **Li-Ion battery, avoid very deep discharges** and avoid **charging to 100% capacity** (BatteryUniversity 2018, Hoffart 2008). A full zero to 100 percent battery recharge (a "charge cycle") is recommended once a month (TechAdvisor 2018).
11. **Replace the battery of your mobile if necessary.** In case you have to recharge your battery very often to get the expected level of performance, in case your mobile is overheated during charging or is discharged very often, although you are not using it intensively, there is significant indication that you have to replace the battery of your phone. Prefer REEE component or a new one (always according to the manufacturer's specifications).
12. **Replace damaged or broken components** with REEE components or with new ones (always according to the manufacturer's specifications).



Sources: Hoag et al. 2009, Make Use Of 2013, Dell 2018, Battery University 2018, Tech Advisor 2018, Hoffart 2008, Greenpeace 2017, Treehugger 2016

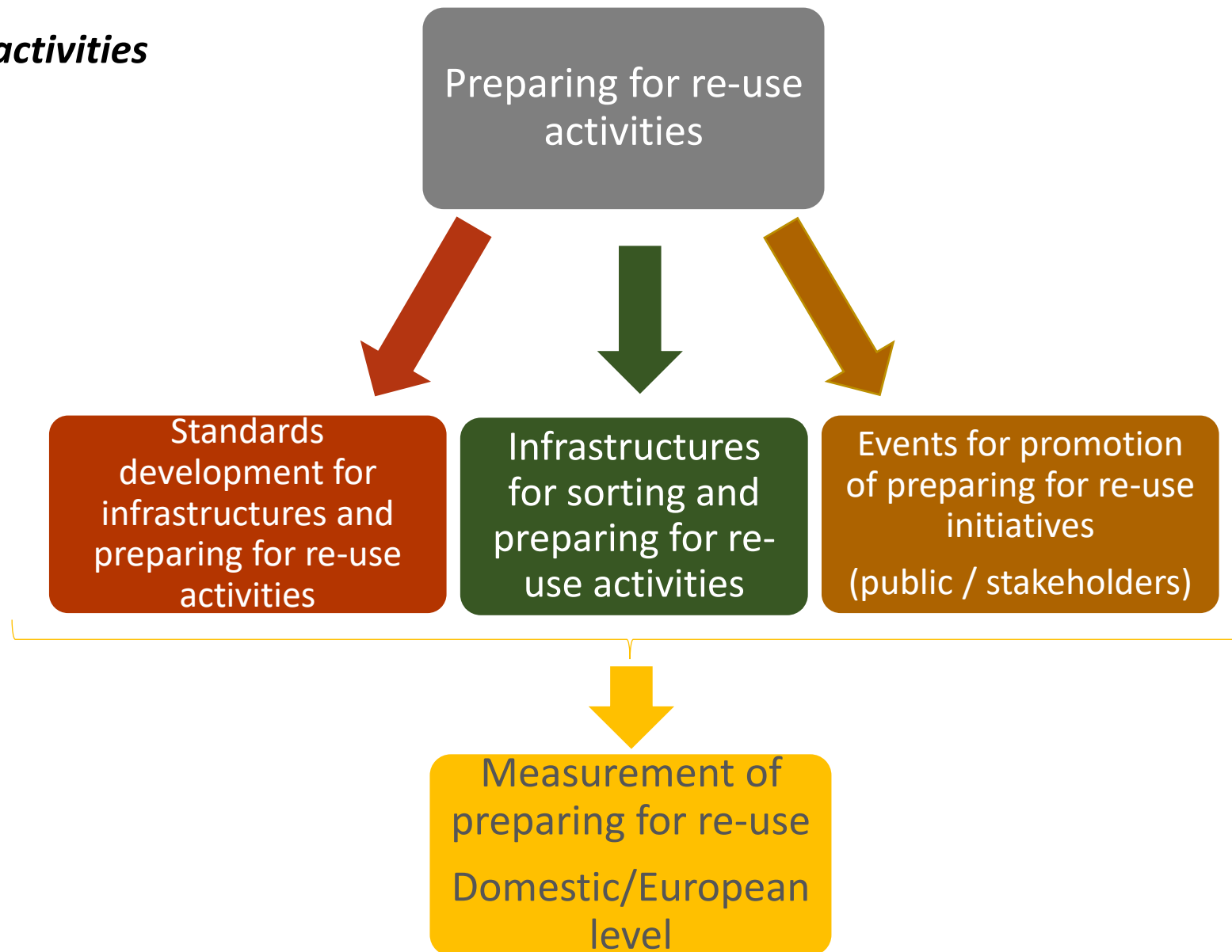
Promotion of repair culture:

- ✓ **Guide for repair**
- ✓ **Guide for extending EEE life**

The Guides are available in English

www.reweee.gr

Preparing for re-use activities



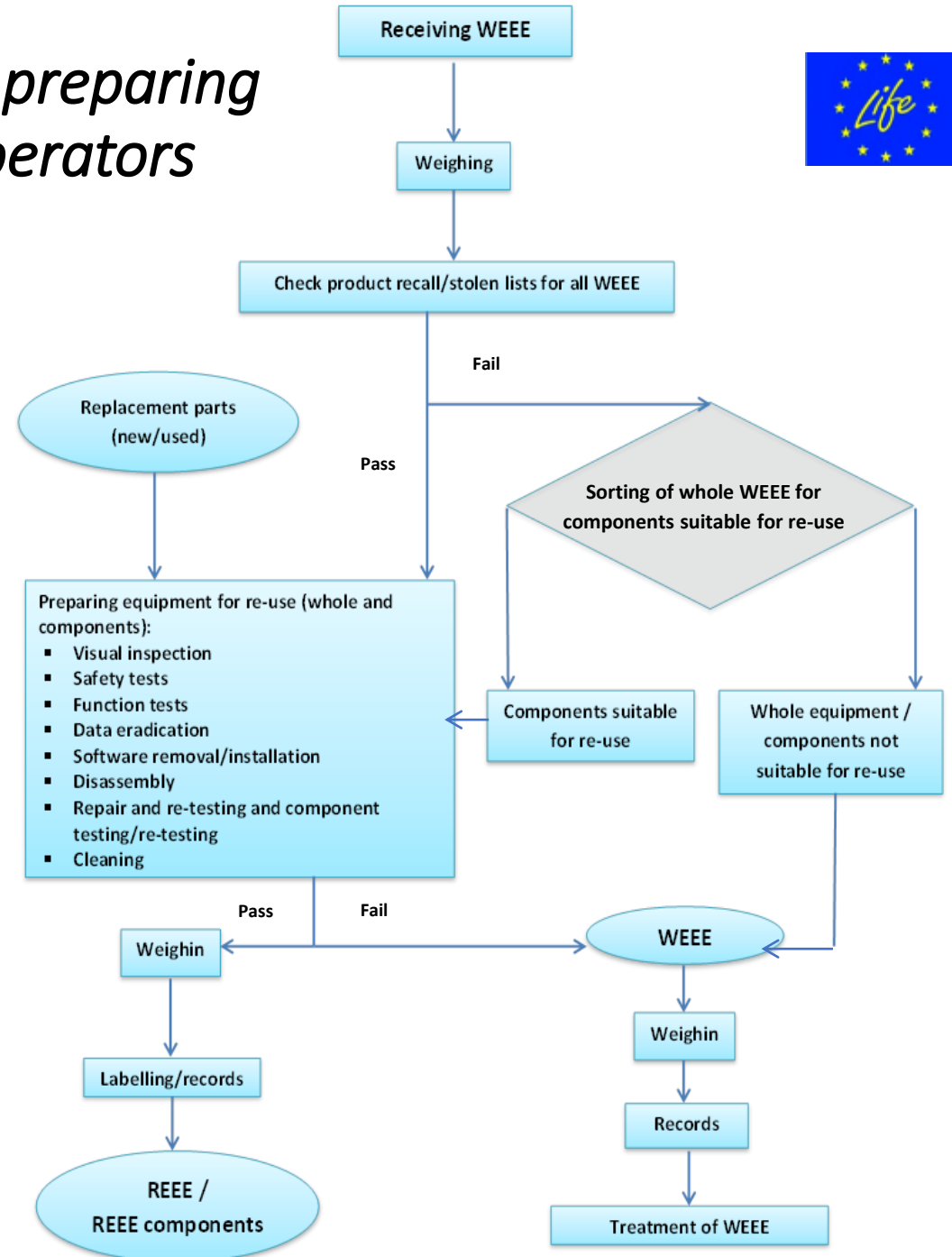
- ✓ Administrative requirements (management system, legal requirements, documentation and records, required competencies and training of employees, health and safety, tracking and traceability system)
- ✓ Equipment – general issues for treatment of WEEE
- ✓ Collection and Transport
- ✓ Sorting and Categorization
- ✓ Storage requirements
- ✓ Preparation for re-use
- ✓ Product Guarantee
- ✓ Put on the market

Technical Requirements for preparing for re-use of WEEE for operators



Οπτικός έλεγχος σε όλες τις συσκευές

ΑΗΗΕ κατηγοριών ενδιαφέροντος



Design, development & operation of WEEE sorting centers



Particularities

- ✓ The development of the SCs is based on the current WEEE management procedures in Greece
- ✓ All stages of WEEE management are under the umbrella of EPR schemes according to Legislation
- ✓ WEEE sources for SCs are exclusively the existing collection points (network) of ECYCLE as ERP scheme
- ✓ No mentality for WEEE collection at the centralized Municipality collection points

The above particularities of Greek situation are differed from the procedures applied by other EU member states.
The developed models of SCs could be implemented at countries with similar WEEE treatment procedures

LIFE RE-WEEE Project

Difficulties faced during the SCs development

- Difficulties in the allocation of the infrastructure: Unclear provision in the Legislation framework for the development of such environmental infrastructure
- Inability of local authorities to provide proper infrastructures (Delays in infrastructures options, tender procedures for finding infrastructures etc.)
- Inability of local authorities for the exclusive operation of SC in the form in which it was developed, authorizations, required personnel, etc.
- Inability to assimilate / understand the compensatory benefits of local authorities from the operation of SCs
- Impossibility of SCs installation in urban area (possibility of direct / easy access to citizens)

Flexibility of the Project: Development of two models

Private factor



ATTICA SC:

Initiation of operation : February 2019

Public-Private Partnership



Oraiokastro SC:

Initiation of operation : July 2019

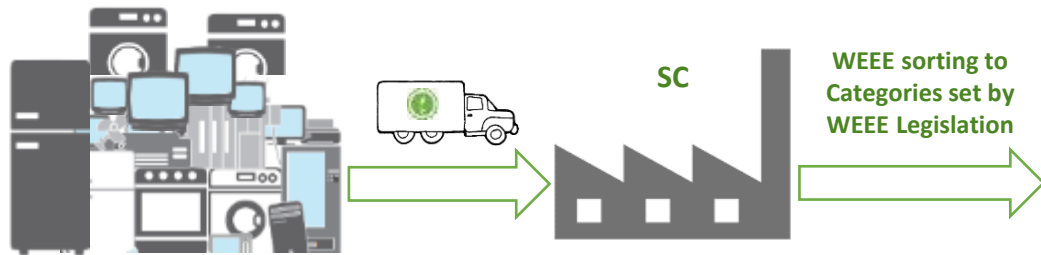


Put on the market/ Donation

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SC activities flow chart (same for the 2 models) Watch here how

Mixed WEEE to be sorted to Categories set by WEEE Legislation



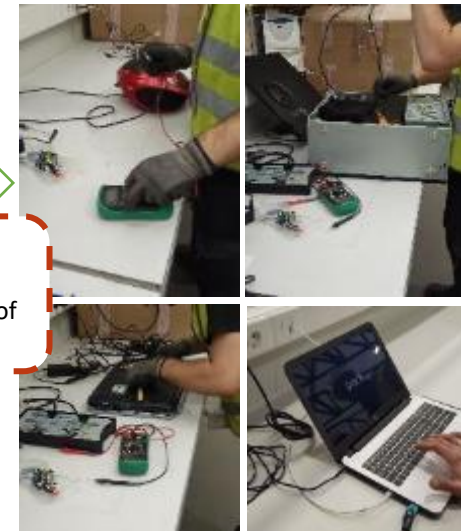
Sorting



Initial inspection to all appliances

WEEE of categories of interest / WEEE of categories out of interest (pilot)

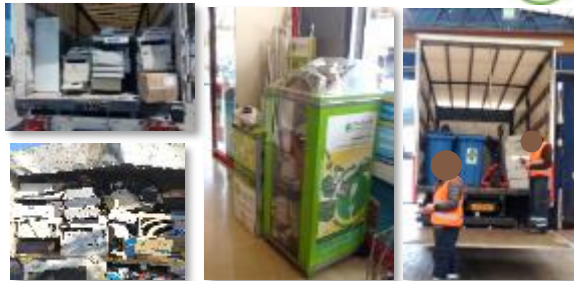
Further preparing for re-use activities



REEE

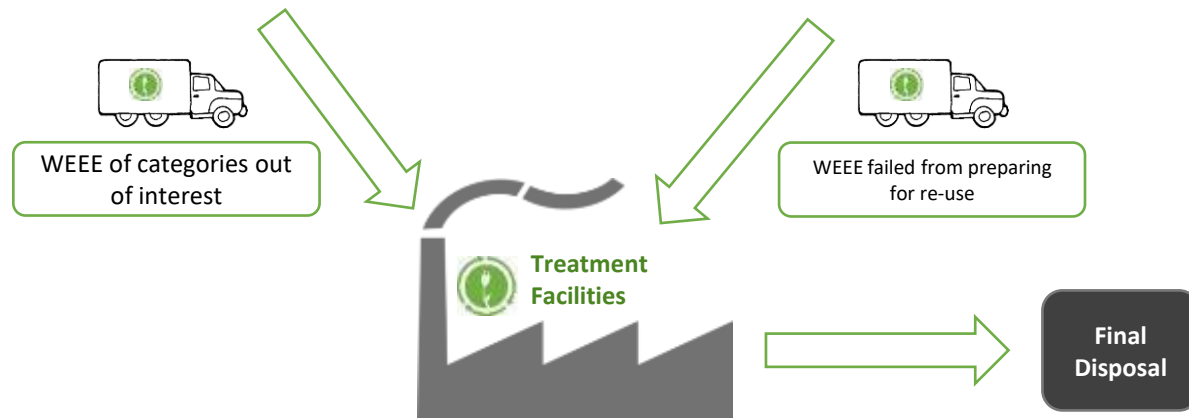
Collection

Mixed WEEE from collection points of



Sources

- Retailers / Private Organizations
- Municipalities / Public bodies



❖ Results 2019 – 2022

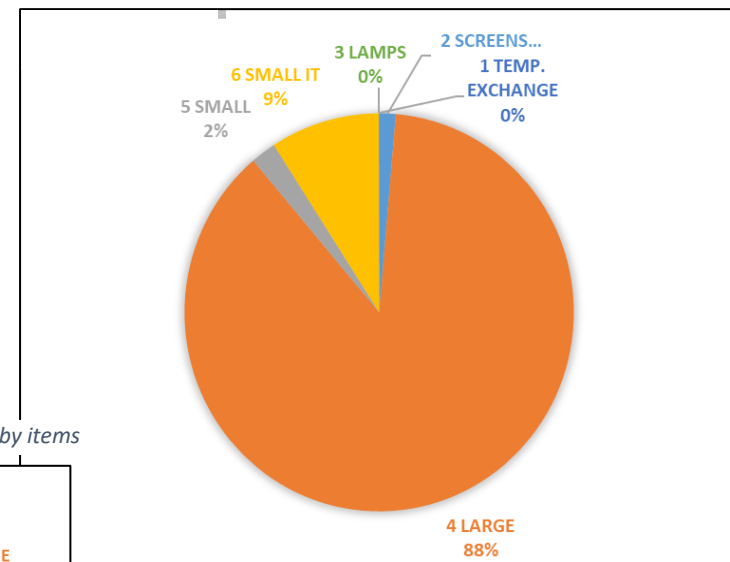
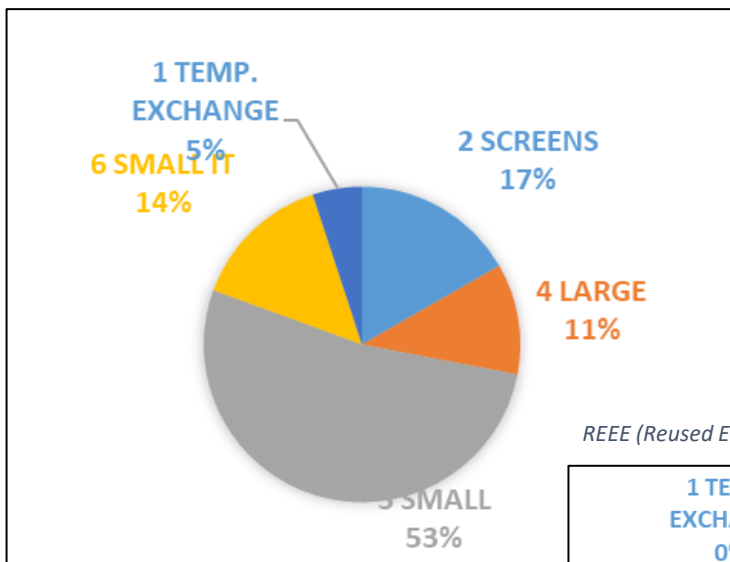
YEAR	MONTH	QUANTITIES (Kg)					SALES/ DONATION
		TOTAL INPUT (MIXED WEEE TO BE SORTED TO CATEGORIES SET BY WEEE LEGISLATION)	PREPARING FOR REUSE ACTIVITIES			REEE	
			INITIAL INSPECTION		SECOND PHASE OF VISUAL INSPECTION/ PASS TO FURTHER INSPECTION		
			SORTED CATEGORIES OF LEGISLATION (CATEGORIES OF INTEREST TO BE INSPECTED VISUALLY)				
	TOTAL OVERALL	20.100.021,00	10.908.193,00	4.203.406,00	577.384,88	165.548,13	
	TOTAL 2019	4.151.059,00	2.255.091,00	1.154.068,00	81.775,05	96.161,19	
	TOTAL 2020	4.910.668,00	3.006.760,00	1.322.075,00	349.159,12	12.054,19	
	TOTAL 2021	5.184.182,00	2.767.796,00	852.609,00	55.057,46	33.062,93	
	TOTAL 2022	5.854.112,00	2.878.546,00	874.654,00	91.393,25	24.269,82	
			OF TOTAL INPUT	OF CATEGORIES OF INTEREST	OF VISUAL INSPECTION/PASS		
	PERCENTAGE	OVERALL	54%	39%	14%		
		2019	54%	51%	7%		
		2020	61%	44%	26%		
		2021	53%	31%	6%		
		2022	49%	30%	10%		

Results: 2019 - 2022



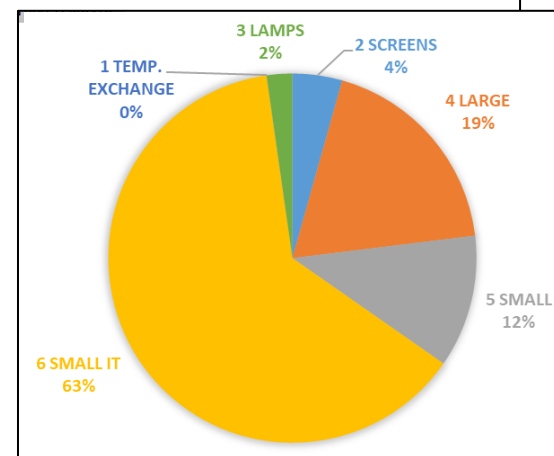
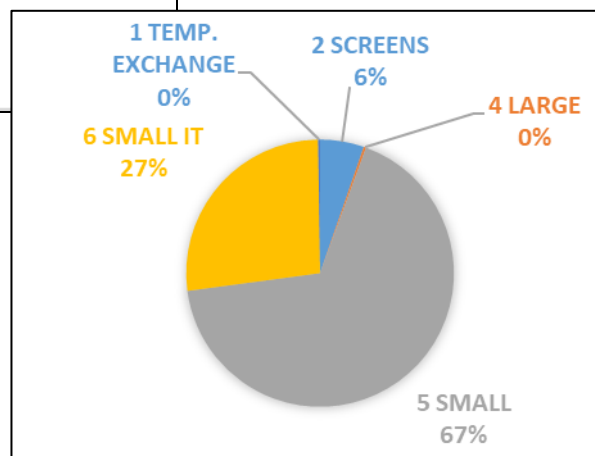
REEE (Reused Electrical and Electronic Equipment) by weight

REEE (Reused Electrical and Electronic Equipment) by weight



REEE (Reused Electrical and Electronic Equipment) by items

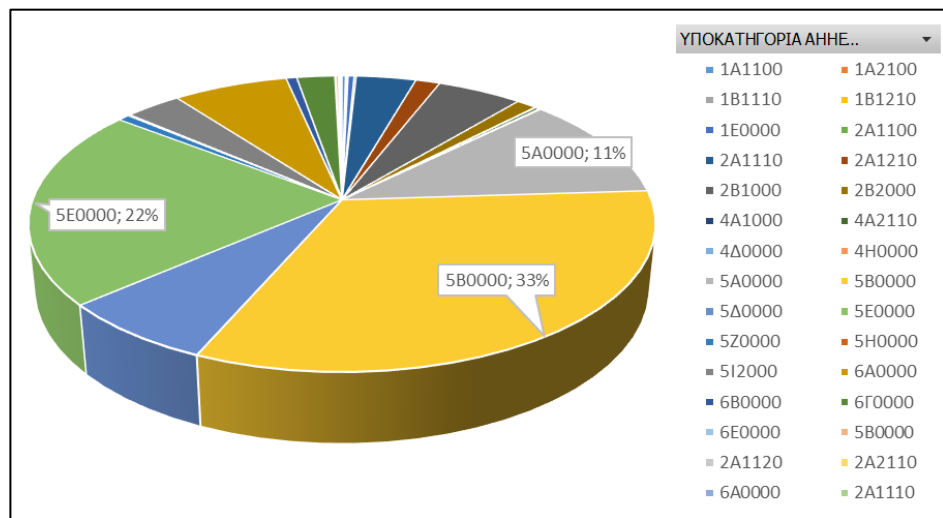
REEE (Reused Electrical and Electronic Equipment) by items



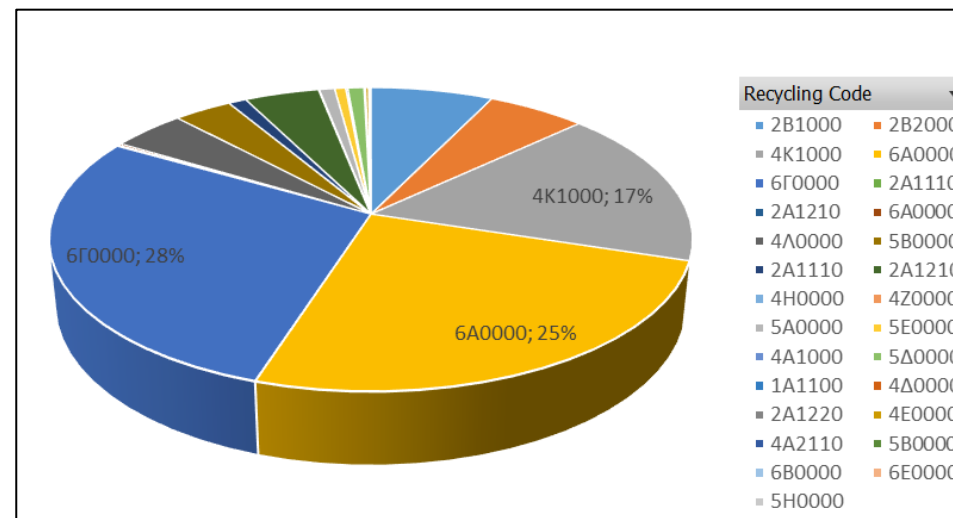
Results: 2019 - 2022



REEE sold by items



REEE sold by items



Results

- ❖ High reusability



LIFE RE-WEEE Project



2 different models operate under the same operational plan

- Facilities / equipment / consumables provided by the operator
 - This budget is covered by the operation cost of the SC, funded by ECYCLE, according to the tender procedure for the Attica SC operator selection.
- Attica SC synergies with WEEE treatment facilities (recycling)
- Donations to social enterprises and other organizations
- 100% funding by ECYCLE for the SC operation from Feb. 2020
- Contribution of the Municipality of Oraikastro to the constructive activities at the SC facilities (funding)
- Equipment / consumables provided by the Municipality of Oraikastro (procurement by G.F.)
- Donations to Oraikastro Municipality
- 100% funding by ECYCLE for the SC operation from Feb. 2020

Implementation of the developed models at EU member states with similar procedures of WEEE management, after improvements and adjustments to their situation.

Lessons learnt and improves:

- Two models of SCs operation
 - ✓ provision of facilities and services in cooperation with local authorities
 - ✓ exclusively by Private initiative as well
- Flexibility in sales abroad / Flexibility in the market demand (i.e. spare parts sales)
- Synergy with treatment facilities
- Targeted loads with high potential for reuse to be transported to the SCs
 - sorting at source / Installation of special collection bins
 - Evaluation tool development
 - Development of an automatic procedure for tracing loads ideal for the SCs
 - Synergies with Producers/Retailers of IT equipment for WEEE collection
- Public awareness events to the SCs

Lessons learnt and practices already performed to ensure the sustainability of the SCs:

- Operation of the SCs for 4 years with the **100% funding by ECYCLE (EPR)** according to European and National Legislative framework and the contracts between ECYCLE and the SCs operators.
- Foreseen budget for the SCs operation costs at the ECYCLE business plan
- WEEE transportation to the SCs and monitoring of the procedures for 5 years of the SCs operation
- Improvements to ERP system of ECYCLE for tracing affiliated retailers/companies with loads with high potential of reuse
- Evaluation methodology of WEEE (calculator/inspections)
- Public awareness events to the SCs

ReWeee

LIFE14 ENV/GR/000858

Thank you for your attention

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appliances
recycling s.a.



Ε.Ο.Α.Υ.
Εθνική Οργανισμός Ανακύκλωσης
National Recycling Agency (Ε.Ο.Α.Υ.)



Ecological Recycling Society



GREEN FUND



Harokopio University of
Athens



rreuse

With the LIFE financial
instrument contribution of
European Union for the
Environment

