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WEEE BEHAVE Evaluation and Conclusions

Report on results from an educational solution to increase WEEE circularity in Cyprus, Greece, Bulgaria, Italy, and Spain

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Document Control Information

Document Title	WEEE BEHAVE Evaluation and Conclusions
Project Title	Preventing e-waste from polluting MED water by turning waste into a resource.
Project Mission	Strengthening an innovative sustainable economy
Programme Priority	Greener MED
Specific Objective	RSO2.6: Promoting the transition to a circular and resource efficient economy
Document Author	Aradippou Municipality, Larnaca, Cyprus (PP11) (WEEE BEHAVE coordinator) Dr. Panayiotis Michael, Dr. Mathaios Alambritis, Andriana Paraskevopoulou
Partners Involved	Municipality of Rethymno, Crete, Greece (PP3) Union of Bulgarian Black Sea Local Authorities Varna region, Bulgaria (PP7) Union of the Municipalities Pian del Bruscolo Pian del Bruscolo area, Italy (PP8) Provincial Waste Consortium of Málaga, Spain (PP9)
Work Package	Work Package 2 – Joint testing of solutions for e-waste prevention and management in MED
Activity	A2.4 – Testing Solution: WEEE BEHAVE
Deliverable ID	D.2.2.4 – WEEE BEHAVE evaluation and conclusions
Doc. Status	Final 2026-07-09
Sensitivity	Public
Date of Production	2026-07-28

Document Approver(s) and Reviewer(s)

NOTE: All Approvers are required. Records of each approver must be maintained. All Reviewers in the list are considered required unless explicitly listed as Optional.

Name	Role	Action	Date
Ricardo Sobral	Project Manager	*Approved*	2026-07-28

Document History

Versions	Date	Document status	Delivered by
V1.0 Final	2026-07-09	Final	PP11 Aradippou
V2.0 Final	2026-07-28	Final	PP11 Aradippou

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1. Glossary

EC	European Commission
EU	European Union
LAP	Local Action Plan
MED	Mediterranean
MED Methodology	Transnational Methodology for e-waste Prevention and Management
PP	Project Partner
SC	Steering Committee
VW	Validation Workshop
WEEE	Waste from Electrical and Electronic Equipment
WP	Workshop

2. Executive Summary

The WEEE BEHAVE pilot sought to increase e-waste collection by increasing the awareness of citizens from an early age. The main objectives of the pilot are:

- Raise awareness among primary school students about the environmental and societal impacts of electronic waste.
- Encourage behavioural change through interactive learning, creative games, school-based competitions, and participatory workshops.
- Strengthen community engagement in responsible e-waste disposal and recycling practices.
- Support the development of a long-term culture of sustainability within families and local communities.

The importance of learning for the green transition and sustainable development is highlighted in the EU Council Recommendation of 16 June 2022 [1] on learning for the green transition and sustainable development 2022/C 243/01.

Researchers in [2] also emphasize the role of school students acting as catalysts of environmental change among their parents and other community members. Intergenerational influence, in this sense, is seen as a means of assisting students to develop environmental citizenship competencies which include informing and influencing the actions of others, and thus '"multiplying" the impact of school environmental education programs beyond the boundaries of the classroom.

The WEEE BEHAVE pilot acts as a bridge between EU Recommendations, state-of-the-art research and the Directives, 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) [3] and 2011/65/EU of the European Parliament and of the Council of 8 June 2011 [4] on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

WEEE BEHAVE stands as a behaviour-oriented, education-driven pilot, rooted in strong regional and institutional cooperation. By focusing on early-age learners and fostering creative participation, the initiative successfully addressed fundamental gaps in e-waste awareness while establishing a solid foundation for scalable, data-driven interventions.

Best Practices were applied during the pilot including the following:

- **Age-appropriate educational design with interactive and practical activities tailored for young students.** With early-age learners being the main target group, students have acquired critical thinking and responsible decision making.
- **Creative competition structure integrating environmental education with arts and design thinking**.
- **Gamification.** Innovative Educational Games were designed by the WEEE BEHAVE partners. Examples are WEEE Creative Art, WEEE-Poly (a monopoly-like game), WEEE Big City Game, Customized Educational Cycles and WEEE Interactive learning. Games focus on what WEEE is, how to apply the 3 Rs (Reduce, Reuse and Recycle) and how to address the danger of incorrect disposal.

A well-defined WEEE BEHAVE strategy with specific goals and analysis of the forces of the ecosystem the pilots moved was developed and presented in the following sections.

The KPIs achieved far exceeded the initial expectations of the WEEE BEHAVE partners. The results show the outstanding participation of the Educational System and Students to the WEEE BEHAVE pilot efforts.

The result is a significant signal to policy makers that WEEE BEHAVE has as strong supporter the Educational Systems of the country. Given that WEEE BEHAVE leverages the huge investment in education, countries have already made, through the proposed WEEE School Steering Committees, the percentage of successfully scaling up WEEE BEHAVE, by institutionalizing the pilot in the participating countries is very high.

While this report serves as a common document describing the joint methodology, strategy, results and recommendations of the overall effort, individual reports included as Annexes to this document analyse the customized efforts per pilot region.

3. Objective and Context of the Pilot

The main objectives of the pilot are defined in the WEEE BEHAVE marketing strategy, analysed later in this document.

The main goals of the WEEE BEHAVE marketing strategy is to use Education as a driving force, positively changing the whole society and to elevate strategic planning from Local to Regional level. These two goals can be more finely described as:

- Raising awareness among primary school students about the environmental and societal impacts of electronic waste.
- Encouraging behavioural change through interactive learning, creative games, school-based competitions, and participatory workshops.
- Strengthening community engagement in responsible e-waste disposal and recycling practices.
- Supporting the development of a long-term culture of sustainability within families and local communities.

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WEEE BEHAVE stands as a behaviour-oriented, education-driven pilot, rooted in strong regional and institutional cooperation. By focusing on early-age learners and fostering creative participation, the initiative successfully addressed fundamental gaps in e-waste awareness while establishing a solid foundation for scalable, data-driven interventions.

The main challenges identified during the pilot are: (i) the denial of the workshop due to political alignment issues within city councils and municipalities, (ii) the unavailability of long-term impact data and (iii) awareness vs. behavioural outcomes. The challenges have been addressed by the partners in different ways explained in the individual reports included as Annexes with this report.

3.1. Partner Introduction: Municipality of Rethymno, Crete, Greece (PP3)

Rethymno, the third-largest city on Crete, is uniquely situated in a natural basin bordered by mountains to the south and a sandy seashore to the north. The city's urban area extends 10 kilometers east-west within this basin, with the Municipality covering a broader area of 28 kilometers, encompassing four Municipal units: Arkadi, Lappaion, Nikiforos Fokas, and Rethymnon.

The Rethymnon unit serves as the Municipality's heart, hosting most of the population (35,763 inhabitants), economic activities, cultural events, and educational institutions.

Country and region	Greece, Crete
Population and its development	55.636 (2021), stable
Pupils' share at population	10.059 (18%)
Size	397,5 km²
Density	140 / km²
City structure	West-East extension along the shoreline
No of schools	82
School choice model	Pupils go to closest school

Figure 1: Information regarding the Municipality of Rethymno

The city's climate is mild Mediterranean, characterized by warm summers and relatively mild winters compared to mainland Greece. Although no clear trends in precipitation are visible, Rethymno experiences extreme rainfall events, posing occasional challenges. Tourism forms the backbone of the local economy, with over 4,5 million overnight stays recorded in 2023, significantly increasing the seasonal population by over 600,000. Additionally, the city is home to a university hosting 12,000 students, further boosting its urban dynamics.

3.2. Partner Introduction: Union of Bulgarian Black Sea Local Authorities, Varna region, Bulgaria (PP7)

Real Implementation in Varna Region

Planning and Launch

In order to start promoting the WEEE Behave campaign to the regional stakeholders, target groups and general public, UBBSLA team decided to take part in the Ecofestival "Varna – the Sea" in July 2025, during the high touristic season and summer brake of students. This annual festival is a very important event for the Varna region from an ecological point of view, with participants of municipalities, youth associations, and NGOs working in the field of ecology. So, using this opportunity under the banner "Electronic World Without Waste: Exhibition for the Future of Our Planet!", UBBSLA stand showcased outdated gadgets no one uses anymore—but with a twist: instead of trash, they became teaching tools for sustainability. Held on July 18, 2025, in the scenic Sea Garden of Varna, our exhibition stand gathered over 30 enthusiastic children from grades 1 to 4, along with visitors and tourists, to participate in an inspiring journey toward a cleaner future. Children learned how old phones, keyboards, and cables could be creatively reused or properly recycled, giving them a second life instead of polluting our oceans and land.

Core Activities

The real implementation of the campaign WEEE BEHAVE was planned to start in November till December 2025, targeting pupils from grades 1 to 4 in primary schools throughout the Varna municipality and the rural municipalities from the region. Preparation involved detailed scheduling of school visits, educational sessions, and the structuring of competition rules.

Partnerships and Support:

- Implemented by UBBSLA with logistic and expert support from the Public Environment Center for Sustainable Development (PECSD)**.**
- Official support and cooperation from the Municipality of Varna and the Regional Department of Education – Varna ensured access to schools and integration into local educational schedules.

3.3. Partner Introduction: Union of the Municipalities Pian del Bruscolo, Pian del Bruscolo area, Italy (PP8)

Unione Comuni Pian del Bruscolo (UCPB) is a public union of 7 municipalities in Pesaro-Urbino Province (Marche Region, Italy), established in 2003, serving ~50,000 inhabitants across Tavullia, Vallefoglia, and surrounding areas.

Headquartered at Strada Pian Mauro 47, Tavullia (PU), UCPB manages shared services including early childhood education, social policies, and environmental initiatives like waste prevention.

Led by President Sen. Palmiro Ucchielli (Mayor of Vallefoglia), with Project Manager Enrico Anghileri for eWAsTER, UCPB excels in EU-funded projects promoting sustainability (e.g., EWAsTER, European Waste Reduction Week 2025).

As PP8, UCPB coordinates WP3 (LAPs/Transfer), implements WEEE BEHAVE pilot, and collaborates with Marche Multiservizi for waste ops.

Expertise: Integrated waste planning aligned with Regional Waste Management Plan; focus on circular economy, education, and behavioral change to boost WEEE collection.

3.4. Partner Introduction: Provincial Waste Consortium of Málaga, Málaga province, Spain (PP9)

Regional Context

The Málaga Solid Waste Consortium comprises 91 municipalities in the province of Málaga, which has one of the most complex mountainous geographies in Spain. The logistical costs of waste collection are very high compared to other provinces. The strategies and results achieved for selective waste collection around operation are usually carefully considered and selected based on extensive experience.

In our regional context, any improvement in the population's behaviour is greatly appreciated by the collection system. Furthermore, it helps to optimize costs, which are ultimately passed on to the population.

Therefore, with the scope of action of the Málaga Solid Waste Consortium, we reach a final population of 580,000 inhabitants through a group of 1,274 students, whom we have reached through the 27 workshops we have conducted.

Institutional Context

RSU Málaga Consortium is a local public administration entity for territorial cooperation, of the Public Administration, made up of 91 municipalities in the Málaga province.

The schools, as educational institutions, have provided the necessary time and space to hold the workshops. They are grateful for their interest in educating the public on environmental issues, topics that are sometimes difficult for students to grasp.

The Málaga Provincial Council, as an institution serving the municipalities of the province. Our President and council member has facilitated the dissemination of the EWASTER project and WEEE BEHAVE pilot project. He has visited to emphasize the importance of the workshops and the award visit.

3.5. Partner Introduction: Aradippou Municipality, Larnaca, Cyprus (PP11).

Aradippou is a municipality located in the Larnaca District of Cyprus, forming part of the wider urban area of Larnaca. It is one of the most developed and dynamic municipalities in the region, characterized by a mix of residential, commercial and light industrial zones.
In addition, Aradippou places increasing emphasis on urban sustainability and environmental management, gradually integrating green practices into local governance and infrastructure development.

Aradippou includes a Green Point facility as part of its municipal waste management system, supporting the collection and proper handling of recyclable and bulky waste materials in line with sustainable environmental practices.

Residents are required to take the large WEEE disposed items to designated Green Points or recycling centres in the wider Larnaca district. In addition, some retailers and importers operate take-back schemes, where consumers can return old electronics when purchasing new ones.

Overall, recycling participation in the area is relatively strong, particularly for common materials like packaging, paper and plastics, which are collected through organised municipal systems. Waste generation levels in the municipality are generally reported to be lower than the Cyprus average, reflecting both industrial composition and recycling habits.

However, like many semi-industrial municipalities, there can occasionally be concerns about informal handling of scrap materials, especially on electronic waste. Despite this, official collection and recycling routes are well defined and actively used by residents.

4. Pilot Methodology

4.1. Methodology Outline

The methodology was defined based on a series of regular meetings which followed the VW3 meeting in RSU Málaga on the 19th February 2025. During this first meeting opening notes and approaches were presented as proposals by the partners of WEEE BEHAVE. The following eight (8) meetings took place after the meeting in Málaga: 31/3/2025, 28/4/2025, 2/6/2025, 30/6/2025, 28/7/2025, 16/9/2025, 20/1/2026, 3/2/2026. The participating partners to the meetings and respective territories applying the pilot methodology were the following:

- Municipality of Rethymno, Crete, Greece (PP3)
- Union of Bulgarian Black Sea Local Authorities Varna region, Bulgaria (PP7)
- Union of the Municipalities Pian del Bruscolo Pian del Bruscolo area, Italy (PP8)
- Provincial Waste Consortium of Málaga, Spain (PP9)
- Aradippou Municipality, Larnaca, Cyprus (PP11).

Each pilot site has customized the methodology to suit the needs of its respective region and has generated a report. These reports (one for each pilot region) are included as Annexes with this report as follows:

- Annex I. Municipality of Rethymno, Crete, Greece (PP3)
- Annex II. Union of Bulgarian Black Sea Local Authorities Varna region, Bulgaria (PP7)
- Annex III. Union of the Municipalities Pian del Bruscolo Pian del Bruscolo area, Italy (PP8)
- Annex IV. Provincial Waste Consortium of Málaga, Spain (P*9)
- Annex V. Aradippou Municipality, Larnaca, Cyprus (PP11).
- Annex VI. Alentejo Science and Technology Park, Alentejo, Portugal (LP1).

4.2. The Scope of WEEE BEHAVE.

Initially the joined methodology defined the scope of WEEE BEHAVE. Through discussions it was clarified that **within the WEEE BEHAVE scope, explicit actions** will take place through educational activities by using appropriate material, in order to directly influence students and teachers/educators.

It was understood that, even without any explicit actions, the activities will also influence families and friends, as also administration, non-profit organizations, passers-by of the WEEE BEHAVE exhibitions, policy makers, producers and in general an audience consisting of all citizens living in the region. It was emphasized that no actions of the pilot will target these implicitly influenced target groups.

4.3. A joint WEEE BEHAVE marketing strategy

As a next step, the methodology defined a joint marketing strategy. Based on the scope of WEEE BEHAVE it was clear that the target group campaign planning and dissemination were students at schools (ages between 6-15 years old) and their teachers/educators.

Within the context of the WEEE BEHAVE marketing strategy, strategic goals were set and a “force” analysis was performed as follows.

4.3.1. Definition of the goals of WEEE BEHAVE marketing strategy

1. Strategy goal 1: Education as a driving force, positively changing the whole society
    a. **Explicitly:** Educate students and teachers with a wide range of different tools creating a new consciousness for young people.
    b. **Implicitly:** Use education of students as a force, generating network effects, creating awareness to the public and especially influencing producers and public policy.
2. Strategy goal 2: Elevate strategic planning from Local to Regional level
    a. Create awareness to local and regional authorities in order to align local strategies to regional strategies, elevating strategic planning to Regional level.

4.3.2. The Forces of the WEEE BEHAVE marketing strategy

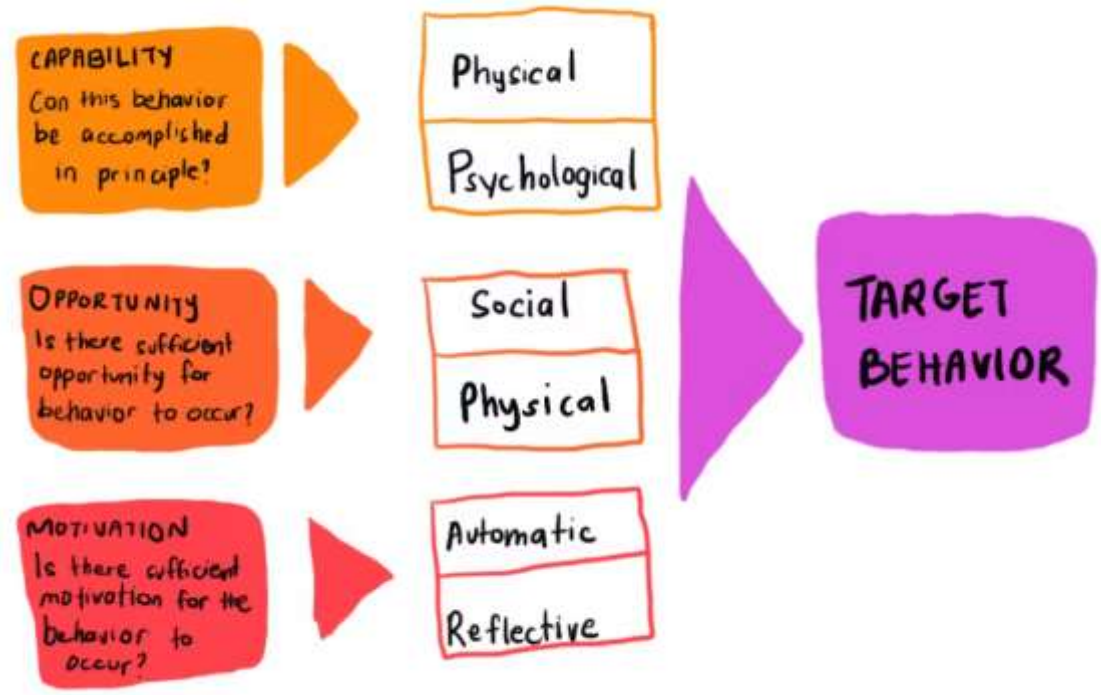
Following the strategic analysis paradigm of Porter's five forces, we have defined the WEEE BEHAVE forces [6]:

1. **Force 1:** Through education, students and educators to influence wide audience, which in turn exerts influential and political power to producers and policy makers. Keeps on track Regional and Local level with their duty to be aligned with the WEEE regulations (national laws) and objectives.
2. **Force 2:** Network effects through the education of students which influence their families.
3. **Force 3:** Through education, shape a new consciousness for young people as future politicians/active citizens/voters being sensitive to the aims of the WEEE directive.

4.4. Strategy supported by the COM-B MODEL

The COM-B model is a behaviour change framework that identifies three essential components required for any behaviour to occur. This strategy was defined by RSU Málaga (PP9) and agreed upon with the remaining WEEE BEHAVE partners.

Capability: The psychological and physical ability to engage in the behaviour
Physical capability: Having the physical skills, strength, or stamina
Psychological capability: Having the knowledge, cognitive abilities, and skills
Opportunity: External factors that make the behaviour possible or prompt it
Physical opportunity: What the environment allows or facilitates
Social opportunity: Cultural norms, social cues, and interpersonal influences
Motivation: Internal processes that energize and direct behaviour
Reflective motivation: Conscious planning, evaluations, and decision-making
Automatic motivation: Impulses, habits, emotional responses, and



COM-B model diagram, source: https://thedecisionlab.com/reference-guide/organizational-behavior/the-com-b-model-for-behavior-change

By systematically analysing these components, we can identify barriers and enablers to behaviour change and design targeted interventions.

4.4.1. Target Behaviour.

	Current Situation	*Desired Change*
TARGET BEHAVIOR	**What specific behaviour currently occurs?** Large containers are placed at specific locations in towns for dumping household goods and bulky waste. However, in reality, all types of waste, whether bulky or not, are dumped, including large WEEE. The population is not aware of the contamination caused by improperly separated WEEE.	**What specific behaviour do we want to achieve?** Install mini mobile recycling centers so that users can separate waste at the appropriate destination. Show local councils the current costs of managing unseparated waste. Raise awareness among the population about the advantages of waste separation, both environmental and economic, mainly WEEE.

4.4.2. Capability

Barriers	*Enablers*
What knowledge, skills, or physical abilities are missing? In small towns, city council budgets are smaller, leaving less for physical waste management tools. Small WEEE can be stored and delivered to designated collection points when they arrive, but	**What existing capabilities can we leverage?** By implementing a joint solution in the region, costs for local authorities are reduced and the scope of action is expanded. Prepare calendars with dates, times, and places where you can take all sizes of WEEE.

Barriers	Enablers
large WEEE cannot be stored and must be picked up immediately (higher transportation costs when purchasing due to geographical difficulties). They end up being deposited in unsuitable locations.	

4.4.3. Opportunity

Barriers	Enablers
What physical or social factors prevent the behaviour? Waste collection routes through 91 towns, usually small and sparsely populated, scattered throughout the mountainous terrain of the province of Málaga. In small towns there are no centers authorized to collect large WEEE.	**What environmental or social factors support the behaviour?** We propose analyzing routes by region (region: a group of nearby, small towns) to have at least one mobile recycling center in each one. Instead, we propose not having a recycling center in every town. This way, recycling center costs are optimized for a larger population. In small towns there are no centers authorized to collect large WEEE.

4.4.4. Motivation

Barriers	Enablers
What reduces willingness to perform the behaviour? Access to the population is complicated by vehicles, so at the population level, they feel "forgotten" by the autonomous community's agencies.	**What increases willingness to perform the behaviour?** The opportunity to act through the Consortium with the financial support of the eWaster project gives visibility to small communities, making them feel cared for and part of a larger group, which motivates them to support the local population.

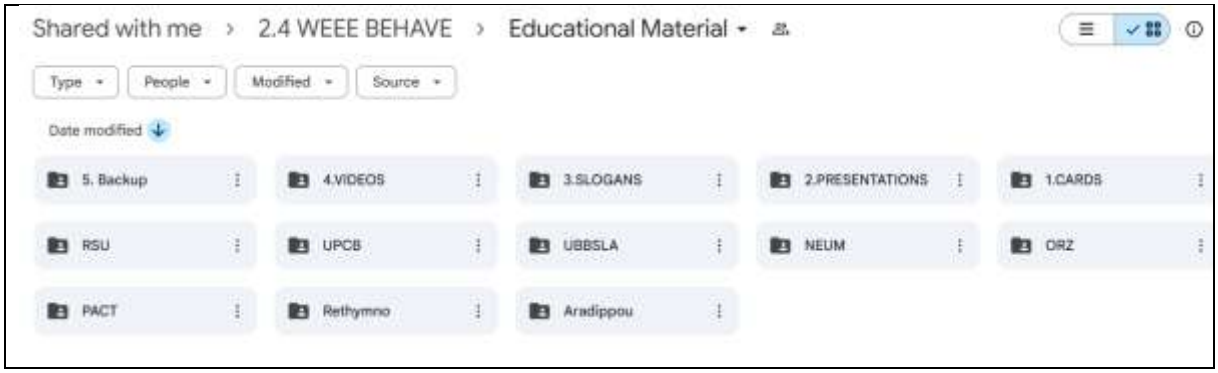
4.4.5. Current approaches and support needed

Current Approaches	Support Needed
What interventions have you already tried or planned? School visits are planned to raise awareness among the younger population about the consequences of not separating waste properly, especially for WEEE. Analysis of the current cost of non-separated waste collection to demonstrate and incentivize local governments to implement mobile mini-cleaning points.	**What specific expertise, tools, or resources would help address remaining barriers?** Contracting for mobile mini-cleaning points. Increase training activities. Promote and disseminate the tool provided by local governments, showing them the improved data in terms of waste figures and monetary costs.

4.5. Shared WEEE BEHAVE digital repository

A jointly developed **WEEE BEHAVE digital repository** was shared. Partners contributed educational material which can be shared with key stakeholders within the same territory and enable also interregional collaboration through the exchange of best practices among the

participating regions. Preliminary discussions were performed among WEEE BEHAVE partners in order to translate and adapt good practices demonstrated in the participating pilot regions. An indicative list of items from the digital repository is provided below:



4.6. Jointly designing explicit actions

In order to implement the joint WEEE-BEHAVE marketing strategy, the following steps have been defined and agreed among partners, for the Explicit Actions to be implemented by the WEEE BEHAVE partners in order to achieve the goals of the WEEE BEHAVE marketing strategy:

1. Collection of information sources/material.
    a. Including EU Regulations, National laws.
2. Conversion of Promotional Material into Educational Material.
    a. Development of Innovative games.
3. Translation of Educational Material/Promotional material and transfer to local context.
4. Licensing of proposed Educational Material and Activities for the schools.
5. Design of the local actions based on the local context (stakeholders, sites of activities).
6. Definition and collection of the tools to be used:
    a. In-class education, seminars, showing a film, reminders, campaign tools, educational games.
7. Design of educational activities.
8. Design of meetings/seminars for the students/educators.
9. Design of School campaigns.
10. Design of school competitions.
11. Design of rewards schemes.
12. Design of ways of influencing public policy (decision makers, producers - difficult to reach) through the education activities.

4.6.1. Joint discussions in defining a common timeline

After the explicit actions were designed, a timeline with the main phases of implementation was jointly developed by the partners, as demonstrated below:

#	Activity Name	Promotional Outcome	Activity Duration (From):	Activity Duration (To):
1	Identification of the stakeholders	Specify and organize the participation of the stakeholders	March 2025	August 2025
2	Informative Materials – Campaign Tools	Specialize and form the awareness materials and the campaign tools	May 2025	August 2025
3	Preparation of Educational Material	Collect the relevant educational materials to be shared within the project partners.	June 2025	August 2025
4	Coordination with School Principals and other stakeholders	Ensure stakeholders engagement and cooperation	September 2025	September 2025
5	**WEEE BEHAVE IMPLEMENTATION PHASE**	Schools, Green Point	October 2025	February 2026
6	PROJECT CLOSING PHASE – FOLLOW UP: Future/Sustainable Actions	Engage additional schools and municipalities, share best practices, and ensure transferability of results into Action Plans.	March 2026	September 2026

4.6.2. Joint discussions on defining a common set of KPIs.

Before implementation of the pilot in the participating regions, discussions were held among the partners for the definition of appropriate for the pilot KPIs. The following KPIs have been agreed upon:

- Number of participating students
- Student engagement
- WEEE collected
- Number of participating classes
- Teacher involvement

Reporting of the KPIs and the level of each indicator achieved is presented in the respective section of this document that follows.

5. Human Resources

WEEE BEHAVE partners agreed that the following model structuring a WEEE School Steering Committee is indicative for the implementation of the pilot and can also be used for the scaling of the solution:

Role	Organization Type	Minimum Capacity	Training Hours Required	Tools Provided
Pilot Coordinator / Project Manager	Local Authority	0.2 FTE for 4-6 months	8 hours	Pilot guidelines, KPI sheet, stakeholder contact list, reporting templates
School Liaison / Teacher Coordinator	School	1 focal point per school building for 2-3 months	4 hours	Educational kit, class competition rules, communication materials for families
Environmental Educator / Trainer	External educator or school support provider	1 trainer for education sessions during setup and launch phase	6 hours preparation + delivery	Presentation slides, mascot/materials, WEEE identification content, awareness tools
Waste Collection / Logistics Officer	Waste company / municipal operator	1 operational contact during pilot period	4 hours	Collection instructions, delivery certificates, link with recycling centre, data recording sheet

6. Testing Phase and Activities Carried Out

6.1. Participants and Target Groups

The target group of the WEEE BEHAVE pilot has been defined in the respective methodology as: **"students at schools (ages between 6-15 years old) and their teachers/educators".**

The pilot leveraged the existing Educational System in the countries of the pilot regions delivering customized and innovative educational material and methodologies for WEEE. A digital repository has been created which allowed the sharing of the educational material among stakeholders in the

pilot territory as also the inter-regional sharing of this material among the participating to the pilot partners.

More details can be found in the individual reports prepared by the WEEE partners attached as Appendix to this document.

7. Results from the Testing Phase (with description of KPIs)

7.1. Results of the Educational Activities

The key results from the Educational Activities that took place in the five (5) territories the pilot covered are summarized based on the agreed KPIs. The results have been aggregated from the respective reports for each pilot region as follows:

- Number of participating students: 3640
- Student engagement: 3194
- WEEE collected: 3956 (kg)
- Number of participating classes: 182
- Teacher involvement: 202

Detailed results and analysis for each pilot region are reported in the respective for each pilot region report available as an appendix:

1. Appendix I. Municipality of Rethymno, Crete, Greece (P3).
2. Appendix II. Union of Bulgarian Black Sea Local Authorities Varna region, Bulgaria (P7), Appendix III.
3. Union of the Municipalities Pian del Bruscolo Pian del Bruscolo area, Italy (P8).
4. Appendix IV. Provincial Waste Consortium of Málaga, Spain (P9).
5. Appendix V. Aradippou Municipality, Larnaca, Cyprus (P11).

In addition to the jointly agreed KPIs, metrics specific for each pilot region have been reported by some pilot regions and are included in the respective reports.

7.2. Evaluation

The results exceeded the initial expectations of the WEEE BEHAVE partners. All partners have highlighted that having a well thought, scientifically sound joint methodology before the implementation, kept the teams focused and helped to the success of the pilot implementations. The nature of WEEE BEHAVE pilot, focusing on educating young students emphasized the influence on people rather than the collection of large scale WEEE. Thus KPIs *Number of participating students*: 3640, and *Students engagement*: 3194 have primary importance, while the KPI *WEEE collected*: 3956 (kg) has supportive, still significant importance. KPIs *Number of participating classes*: 182 and *Teacher involvement*: 202 have also primary importance as they measure the support of the Educational System to the effort.

The results show the outstanding participation of the Educational System and Students to the WEEE BEHAVE pilot efforts, multiple times above the initial expectations of the WEEE BEHAVE partners.

The result is a significant signal to policy makers that WEEE BEHAVE has as strong supporter the Educational Systems of the country. Given that WEEE BEHAVE leverages the huge investment in education countries have already made, with efficiently managed coordinating teams as analyzed in next sections (WEEE School Steering Committees), the percentage of successfully scaling up WEEE BEHAVE, by institutionalizing the pilot in the participating countries is very high.

The KPI WEEE collected, while important, on average 0.7 tonnes per pilot, is only indicative of the warm adoption of the effort and engagement by the students and their families. Pilots run for a limited time during the academic year. Making WEEE BEHAVE a permanent infrastructure of the Educational Systems of the countries, in collaboration with the WEEE School Steering Committees, in the long run will significantly increase this rate in order to reach and exceed the 65% target set by the WEEE Directive [6]. We need to emphasize that based on the Global E-waste Monitor 2020, the average e-waste generated globally per capita per year is 7.3 kg (for year 2019).

7.3. Cost–Benefit Analysis

The WEEE-BEHAVE model applied by the partners can be also used for scaling the solution in the future. Partners conclude that a model structuring a WEEE School Steering Committee (Project Coordinator, School Liaison / Teacher and Environmental Expert / Trainer) will need on average 2 Full Time Equivalent personnel, leveraging the existing School Infrastructure while ensuring the conformance to the expected quality.

The model is low-resource, thus **very efficient**, but coordination-intensive, meaning the Project Coordinator role is critical for success. The key element is that Schools require limited additional capacity, as activities are integrated into existing teaching time. The Environmental Expert role ensures quality and credibility, especially for technical topics like e-waste.

Strong coordination enables access to schools, teachers play a supportive but not resource-heavy role while external experts ensure engaging and accurate content delivery.

The structure is aligned with the key policy recommendation from WEEE-BEHAVE partners of making WEEE-BEHAVE activities a permanent asset of the School System. Leveraging the existing educational infrastructure scalability can be achieved with minimal resources while being very **effective** in achieving objectives.

The pilot has been deployed in 5 territories for a limited time during one school year achieving to **engage 3194 students and collecting 3956 kg of WEEE**. On average 1.23 kg of WEEE has been collected from each student. Institutionalizing WEEE BEHAVE as a permanent asset for the countries, within a 6-year time horizon, an average Municipality will have achieved to : **(i) develop a strong intergenerational influence in their societies by creating lifetime value for each student and her/his family and friends and (ii) close the loop by partnering with e-waste collection services in order to foster conscious WEEE collection through education.**

While the first factor (intergenerational influence) will allow the **scaling** of the solution, the second factor will allow societies to consciously, through the educational system increase the rate of WEEE collection in order to achieve the rate to reach the 65% target set by the WEEE Directive. We need to emphasize that based on the Global E-waste Monitor 2020, the average e-waste generated globally per capita per year is 7.3 kg (for year 2019).

8. Conclusions

The WEEE BEHAVE pilot successfully demonstrated the enthusiastic adoption of customized, age-appropriate WEEE education and activities in schools, positively influencing young students of ages between 6-15, their families and friends.

The WEEE collection competitions increased student motivation and participation towards collection, while students acted as recycling ambassadors, sharing the message with their families and extending the impact beyond the classroom. Overall, the combination of education, collaboration, and active participation proved highly effective in raising awareness.

The results have been measured through a set of KPIs as follows:

- Number of participating students: 3640
- Student engagement: 3194
- WEEE collected: 3956 (kg)
- Number of participating classes: 182
- Teachers involved: 202

The result generates a strong signal to policy makers that WEEE BEHAVE has as strong supporter the Educational Systems of the country. Given that WEEE BEHAVE leverages the huge investment in education countries have already made, with efficiently managed coordinating teams (WEEE School Steering Committees), the percentage of successfully scaling up WEEE BEHAVE, by institutionalizing the pilot in the participating countries is very high.

While multiple challenges were identified and addressed during the pilot, including the alignment of the pilot activities with the school programme during the school year, the unavailability of long-term impact data and the awareness vs. behavioural outcomes, the most significant challenge addressed is the denial and delay of activities due to political alignment issues within city councils and municipalities. Institutionalizing WEEE BEHAVE can remove the political risk and establish a stable environment for its scalability. Future actions should pre-emptively foresee school calendarization within the implementation timeframe and stronger, earlier communication with stakeholders (e.g. utility companies for collection, NGOs & municipal teams for deploying activities).

The pilot demonstrated that combining environmental education with hands-on activities, on-site visits and creative approaches is an effective way to engage students and promote long-term behavioural change. Customized results per pilot territory extensive details can be found in the individual reports included as Annexes to this document.

In the future, the BEHAVE model may be replicated by adapting activities to local needs and identifying relevant stakeholders such as municipalities, recycling organisations, and schools, namely through embedding educational materials where needed with correspondent adaptations towards local challenges and needs.

Looking ahead, with the support of the governments of the countries and the EU, WEEE BEHAVE aims to further bridge the gap between awareness and action, reinforcing sustainable habits and contributing to a more circular and environmentally conscious society scaling the WEEE BEHAVE solution globally.

9. References

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10. Annexes

1. Annex I. Municipality of Rethymno, Crete, Greece (P3) (included as a separate document).
2. Annex II. Union of Bulgarian Black Sea Local Authorities Varna region, Bulgaria (P7) (included as a separate document).
3. Annex III. Union of the Municipalities Pian del Bruscolo Pian del Bruscolo area, Italy (P8) (included as a separate document).
4. Annex IV. Provincial Waste Consortium of Málaga, Spain (P9) (included as a separate document).
5. Annex V. Aradippou Municipality, Larnaca, Cyprus (P11) (included as a separate document).
6. Annex VI. Alentejo Science and Technology Park, Alentejo, Portugal (LP1) (included as a separate document).

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WEEE BEHAVE PILOT

MUNICIPALITY OF RETHYMNO

Annex I. Municipality of Rethymno, Crete, Greece (P3)

Report of the pilot WEEE BEHAVE
Municipality of Rethymno

https://ewaster.interreg-euro-med.eu/

Document Control Information

Document Title	Report of the WEEE BEHAVE pilot,
Project Title	Preventing e-waste from polluting MED water by turning waste into a resource.
Project Mission	Strengthening an innovative sustainable economy
Programme Priority	Greener MED
Specific Objective	RSO2.6: Promoting the transition to a circular and resource efficient economy
Document Author	Municipality of Rethymno (Yakinthi Pavlaki & Anna Psorogianni)
Partners Involved	Municipality of Rethymno
Work Package	WP2
Activity	WEEE BEHAVE pilot
Deliverable ID	<D.X.Y.Z – Name of Deliverable per JEMS>
Doc. Status	Final
Sensitivity	Public
Date of Production	Date 27/2/2026

Document Approver(s) and Reviewer(s)

NOTE: All Approvers are required. Records of each approver must be maintained. All Reviewers in the list are considered required unless explicitly listed as Optional.

Name	Role	Action	Date
		<Approve / Review>	

Document History

Versions	Date	Document status	Delivered by
Version 1.0	9/2/2026	Draft	Municipality of Rethymno
Version 2.0	27/2/2026	Draft	Municipality of Rethymno
Version 3.0	15/3/2026	Final	Municipality of Rethymno

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Glossary

EC – European Commission

EU – European Union

LAP – Local Action Plan

MED – Mediterranean

MED Methodology – Transnational Methodology for e-waste Prevention and Management

WEEE – Waste from Electrical and Electronic Equipment

Executive Summary

WEEE BEHAVE is an educational and awareness-raising initiative focused on the proper management, reduction, and recycling of Waste Electrical and Electronic Equipment (WEEE). The programme aims to inform students, citizens and local authorities about sustainable practices, encourage responsible disposal of electronic waste, and promote behavioural change through practical activities and community engagement.

Within the WEEE BEHAVE initiative, actions were carried out in schools and for the general public. The actions started in March 2025 and ended in February 2026. More specifically, 11 schools of the Municipality of Rethymno participated with more than 1406 children being part of all the activities organised. In schools, activities included interactive workshops, informational sessions, and hands-on recycling exercises where students collected and sorted electronic waste. Educational materials, games, presentations and competitions helped raise awareness about the environmental impacts of WEEE and the importance of correct disposal.

The pilot also organised a public information campaign and the installation of designated WEEE collection points. Local authorities also collaborated in communication activities to mobilise citizens and support the broader implementation of the project.

As key results and impact that can be noted is that students showed high levels of participation and engagement. The installation of dedicated WEEE recycling bins in schools enabled students to actively apply the knowledge acquired, resulting in the collection of significant quantities of WEEE. The actions increased environmental awareness and promoted responsible recycling behaviours among students, with positive spillover effects on their families and the local community. Overall, the initiative contributed to improved recycling habits, reduced improper disposal, and enhanced community awareness of circular-economy principles.

The success of WEEE BEHAVE shows strong potential for replication and expansion at the regional or even national level. Its educational approach, practical tools, and collaboration with local authorities make it highly adaptable to different contexts. With appropriate resources and institutional support, the programme could be scaled up to achieve broader behavioural change and significantly improve WEEE management on a large scale.

1. Objective and Context of the Pilot

The Municipality of Rethymno, as Project Partner 3, is responsible for coordinating e-waste prevention activities within the Municipality of Rethymno, which has a population of approximately 57.216 residents, according to the 2021 census. Current WEEE collection rates in the Municipality of Rethymno remain relatively low, compared to national and European targets. This situation underlines the need for targeted behavioral change interventions, particularly those driven by structured education, awareness-raising campaigns, and community engagement initiatives. Many households are either unaware of proper disposal channels or lack motivation and convenient access points for responsible e-waste management, resulting in unused devices being stored at home or disposed of improperly.

The WEEE BEHAVE initiative directly addresses these challenges by focusing on key target groups: schools, families, and policymakers. Through educational activities in schools, students are empowered to understand the environmental and economic impacts of electronic waste and to adopt sustainable consumption and disposal habits from an early age. Families are engaged through outreach activities, informational materials, and community events that promote responsible purchasing, reuse, repair, and recycling practices. At the same time, policymakers are involved to ensure that local strategies, incentives, and infrastructure improvements support long-term systemic change. By combining education, awareness, and policy engagement, the initiative aims to create a lasting culture of responsible e-waste management within the Municipality of Rethymno.

Key stakeholders in the WEEE BEHAVE initiative include the IT-Programming & Development Department of the Municipality of Rethymno-e-WAsTER team, which is responsible for overall coordination of the pilot. The Department of Environment of the Municipality of Rethymno, which manages waste collection and ensures proper environmental practices are followed. Local schools actively participated in the implementation of educational activities, reaching students directly. The Scouts of Greece provided valuable support in organizing events, such as the large city game. Additionally, the “Appliances Recycling S.A.”, to whom we are grateful for their contribution during the pilot implementation, including the provision of 15 recycling bins, educational material, leaflets and souvenir pencils for the children.

All involved stakeholders worked closely and effectively together to ensure the successful implementation of the WEEE BEHAVE pilot. Through constructive collaboration, clear communication, and coordinated efforts, they were able to address challenges efficiently and achieve the desired outcomes.

1.1. Partner Introduction: Municipality of Rethymno

Rethymno, the third-largest city on Crete, is uniquely situated in a natural basin bordered by mountains to the south and a sandy seashore to the north. The city's urban area extends 10 kilometers east-west within this basin, with the Municipality covering a broader area of 28 kilometers, encompassing four municipal units: Arkadi, Lappaion, Nikiforos Fokas, and Rethymnon. The Rethymnon unit serves as the Municipality's heart, hosting most of the population (35,763 inhabitants), economic activities, cultural events, and educational institutions.

Country and region	Greece, Crete
Population and its development	55.636 (2021), stable
Pupils' share at population	10.059 (18%)
Size	397,5 km²
Density	140 / km²
City structure	West-East extension along the shoreline
No of schools	82
School choice model	Pupils go to closest school

Figure 1: Information regarding the Municipality of Rethymno

The city's climate is a mild Mediterranean climate, characterized by warm summers and relatively mild winters compared to mainland Greece. Although no clear trends in precipitation are visible, Rethymno experiences extreme rainfall events, posing occasional challenges. The Municipality of Rethymno has 60 primary schools and 22 secondary schools across the Municipality, with most located in the city center, providing accessible education to students from both the city and surrounding areas. Additionally, the city is home to a university institution hosting 12,000 students, further boosting its urban dynamics.

Furthermore, tourism forms the backbone of the local economy, with over 4.5 million overnight stays recorded in 2023, significantly increasing the seasonal population by over 600,000. The fact that the city hosts a large number of tourists and students significantly increases the challenge of managing electrical and electronic equipment. Hotels and food service establishments frequently renovate and replace their equipment, generating high

volumes of WEEE. At the same time, students moving to other cities after completing their studies represent another factor contributing to WEEE generation. Often, relocating heavy appliances is costly and logistically difficult, which leads many of these items to end up as waste.

1.2. Purpose of the pilot

The purpose of the pilot is to increase the collection of WEEE by promoting awareness and understanding of responsible management practices from an early age. Through a variety of educational activities, workshops, and interactive sessions, the pilot seeks to engage students in meaningful learning experiences that emphasize not only proper disposal but also the importance of repairing, reusing and extending the life of electronic devices. By fostering this broader perspective, young people are encouraged to adopt sustainable behaviors, reduce unnecessary waste, and become advocates of responsible WEEE management within their families and communities.

In addition to students, the pilot targets families, local educators, and community stakeholders to reinforce learning outside the classroom. Using targeted communication campaigns, educational materials, and hands-on experiences, the initiative ensures that concepts such as reuse, repair, and environmentally safe disposal are understood and applied in everyday life. The approach aims to create lasting behavioral change, motivating residents to think critically about the lifecycle of electronic devices and their environmental footprint.

At the institutional level, the pilot also engages political representatives, municipal authorities, and local decision-makers. By involving them directly, the project promotes the development of informed policies, stronger institutional support, and more effective WEEE collection systems. By combining education for youth with the engagement of decision-makers, the pilot addresses both societal and structural challenges, fostering a comprehensive, sustainable approach to WEEE management and contributing to a circular economy in the local community.

In conclusion, the pilot seeks to create a lasting culture of responsible WEEE management by combining education, awareness, and policy engagement. By focusing on students, families, local authorities, and other community stakeholders**,** the initiative empowers all participants to take concrete, practical actions that reduce waste and promote sustainable practices. Through hands-on educational activities, communication campaigns, and collaboration with decision-makers, the project strengthens both individual behaviors and institutional frameworks. This dual approach ensures that WEEE management becomes a shared responsibility, supported by knowledge, accessible infrastructure, and informed

policies. Ultimately, the pilot contributes to the development of a more environmentally conscious, sustainable, and resilient community**,** where residents are aware of the environmental impacts of their actions and motivated to participate in building a circular economy.

2. Pilot Methodology

The specific objective of the pilot is to test the effectiveness of an educational and awareness-raising model for the proper management of WEEE, targeting both students and the general public. The pilot aims to determine whether this approach can successfully improve knowledge, shape responsible behaviors, and support informed decision-making regarding electronic waste. The communication objective is to ensure sufficient engagement from students, their families, and policymakers so that the proposed solution can be properly evaluated. Effective outreach and participation are essential for collecting meaningful feedback and assessing the overall impact of the pilot.

The pilot is based on a dual intervention model, targeting both **schools** and the **general public**. Participation is stimulated through the use of **competitions, gamification, and publicity**, creating an engaging environment that motivates students, families, and local authorities to take part actively. This approach combines educational and behavioral incentives to maximize awareness and proper WEEE management practices.

The WEEE BEHAVE pilot unfolded in two distinct phases.

Phase 1: Educational activities with schools

Phase 1.1: Educational activities with schools before the official launch of the pilot

Delivered by the e-WAsTER team across 10 schools of the Municipality of Rethymno. This Included educational visits at schools and iteractive events with games in order to define and understand:

- What is WEEE: Definition, examples (phones, toys, chargers vs. non-WEEE like batteries).
- Why special treatment: Hazardous components (heavy metals, pollutants) requiring certified recycling.
- How WEEE can be recycled: WEEE should be collected in special recycling bins designed only for electronic waste and the identification of WEEE recycling bins.
- Environmental consequences: Soil/water contamination, health risks from improper disposal/dispersion.

Timeline:

- March 17-18, 2025
- April 3-4, 2025
- May 13, 2025

Location:

- 10 schools
- Main squares & the old city of Rethymno

Materials:

- Leaflets for the main WEEE categories (200)
- Educational games (2)

KPI's:

- WEEE collected: 72 items (67kg)
- Pupils engaged: 330 students & 44 teachers
- Classes: 41

Goals:

- ✓ Raise awareness,
- ✓ Increase collection,
- ✓ Promote sustainable habits,
- ✓ Foster curiosity and critical thinking about the environmental impact of electronic waste and the benefits of a circular economy,
- ✓ Motivate children to look forward with excitement to all the upcoming campaign activities.

Phase 1.2: Official WEEE BEHAVE pilot activities for schools

Delivered by the e-WAsTER team across 11 schools of the Municipality of Rethymno, the pilot included educational visits and iterative games designed to help students explore, define, and fully understand:

- What is WEEE: Definition, examples (phones, toys, chargers vs. non-WEEE like batteries).
- What can I recycle in the WEEE recycling bins: Helping children understand exactly which electronic devices can be recycled in the special bins located in their schools.
- Why special treatment: Hazardous components (heavy metals, pollutants) requiring certified recycling.
- Environmental consequences: Soil/water contamination, health risks from improper disposal/dispersion.

Timeline:

- October 14, 2025 (launch of the campaign)
- December 2025 (presentation of WEEE BEHAVE campaign, upcoming competitions and arrangement of the educational visits)
- January 20, 2026 - February 4, 2026 (Educational visits)

Location:

- 11 schools
- "Agnostos Stratiotis" Square

Materials:

- Leaflets (500)
- Educational games (7)
- Educational videos (4)
- Recycling bins for schools by "Appliances Recycling S.A." (11)
- Souvenir pencils by "Appliances Recycling S.A."
- Souvenir hats with the message of the campaign
- Social media campaign (posts and reels).

KPI's:

- WEEE collected:

	1st counting/weighing (2/2/2026)		2nd counting/weighing (16/2/2026)		Total counting/weighing	
	#Items	Kg	#Items	Kg	#Items	Kg
14/10/2025 event	93	127	-	-	93	127
11 schools	513	669	613	1019	1126	1688

Table 1: WEEE collected

- Pupils engaged: 1076 Students & 83 Teachers
- Classes: 58

Goals:

- ✓ Raise awareness,
- ✓ Increase collection,

- ✓ Foster curiosity and critical thinking about the environmental impact of electronic waste and the benefits of a circular economy,
- ✓ Promote sustainable habits,
- ✓ Involve children as ambassadors to share knowledge with their families and community.

Phase 2: Official WEEE BEHAVE pilot activities the general public

In parallel with the activities carried out in schools, the campaign also targeted the **general public**. The aim was to raise awareness among a wider audience about the importance of proper WEEE management, encouraging all community members to understand the risks, use the special recycling bins, and adopt more sustainable behaviors in their daily lives.

Timeline:

- October 14, 2025 - February 2026

Location:

- Social media
- "Agnostos Stratiotis" Square

Materials:

- Leaflets (300)
- Social media campaign (posts and reels)
- 4 recycling bins by "Appliances Recycling S.A."

KPI's:

- WEEE collected: **226 items (306 kg)**
- Pupils engaged: general public (aprox. 500)

Goals:

- ✓ Raise awareness,
- ✓ Increase collection,
- ✓ Promote sustainable habits.

3. Pilot Implementation-Activities

This section provides a detailed overview of the activities carried out in the WEEE BEHAVE pilot, highlighting the concrete actions undertaken in schools, public authorities, and the general public. The main target group of the WEEE BEHAVE pilot was primary school students, thus the activities that took place with students are substantially more than those carried out with other groups. In the following subsections, all the activities implemented are presented in detail.

3.1. Activities with Schools

The activities conducted in primary schools began well before the official period of the pilot implementation. For this reason, the school activities are divided into two main categories: those carried out prior to the official launch of the campaign and those that took place as part of the campaign.

3.1.1. Pre campaing activities

Recycling Amusement Park, World Recycling Day

In order to celebrate World Recycling Day, on March 18-19, 2025, the Municipality of Rethymno organized a Recycling Amusement Park in cooperation with the Hellenic Recycling Utilization Company, enabling 900 students to enjoy the game, while learning about the usefulness of recycling and the way in which they can contribute to the effort to protect our planet. The eWAsTER project team made a partial contribution to this event by participating in the Recycling Amusement Park activities and providing an initial introduction to WEEE management.

This educational action aimed to invest in new generations, bearing in mind that children are both the best receivers and transmitters of messages about respecting the environment and acting with ecological awareness.

Figure 2: Recycling Amusement Park

During the activity, the eWAsTER team was there with a stand, giving children brief information about the project, its upcoming activities, and proper WEEE handling. We estimate that 75-100 children visited our stand.

Figure 3: e-WAsTER team and the Mayor during the activity

Educational presentations at schools

The e-WAsTER team together with the Scouts of Greece, visited 10 primary schools in order to inform students about WEEE recycling. The educational visits took place on April 3rd and 4th, 2025. More specifically, the team together with members of the Greek Scouts entered sixth-grade classrooms to inform the children about the main categories of electrical and electronic devices and, afterwards, to invite them to the big city game that was scheduled for the following month.

Figure 4: Educational visits to schools

During the briefing, the children were given an informative leaflet, specially designed by the e-WAsTER team members, to show in a fun and playful way students, which are the main categories of WEEE they can recycle. During the visit, the children were additionally informed about the basic rules of correct WEEE handling and were briefly introduced to the 17 Sustainable Development Goals.

Finally, students were encouraged to bring a non-functional electrical or electronic device, as a participation ticket to the game since the leaflet also served as an "invitation" to the big city game. Additionally, each class was asked to create a drawing inspired by the 17 Sustainable Development Goals and bring it with them as an extra ticket to the big city game.

Figure 5: Leaflet for the main WEEE categories

Big City Game

On May 13th, eWAsTER in cooperation with the Department of Environment of the Municipality and the Scouts of Greece, organized an educational City game for promoting proper waste management. A total of 230 students, from 10 primary schools, participated in the event, having the opportunity to live a special experience of interactive games on waste recycling, with some of the games focused on WEEE handling.

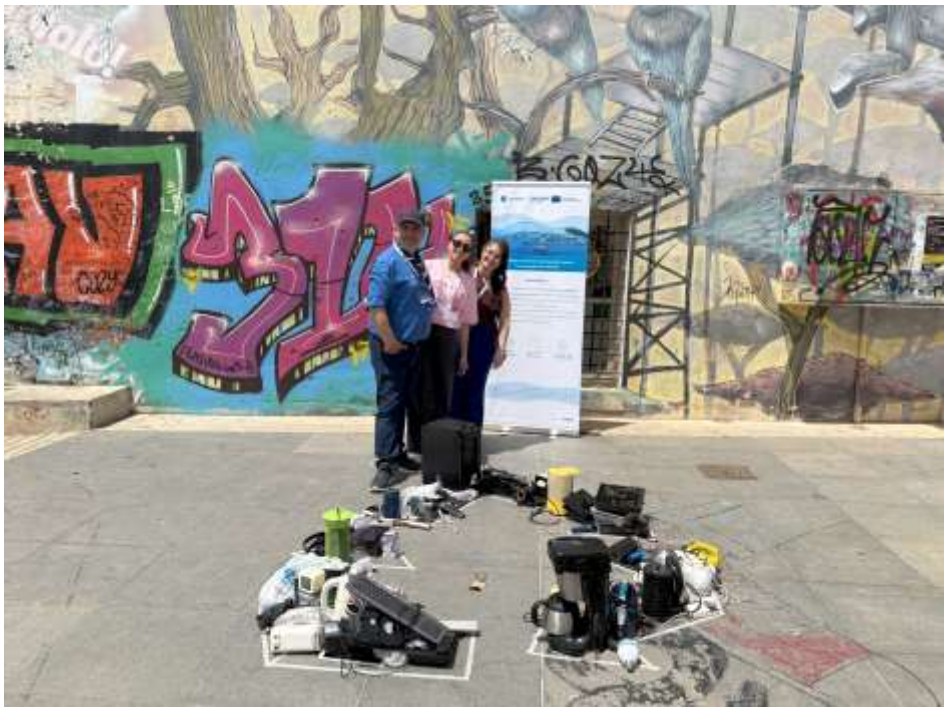

Figure 6: e-WAsTER team

Figure 7: Welcoming the students to the city game

At the start, students were welcomed and asked to hand over their “tickets” to enter the game. These tickets were actually broken or non-functional WEEE items, which the students contributed for recycling, learning in a practical way about recycling electronics. Afterwards, students were invited to display their drawings around the “Mikrasiaton” square. The square, serving as the gathering and starting point of the game, became a lively space filled with colors and creativity, showing everyone’s work.

As the game began, the combination of recycled electronics and students' artwork created an engaging atmosphere. Moving through the activities, the students could see the value of their contributions, both for the environment and for the community, making the event meaningful and interactive.

Figure 8: Big city game "tickets"

In each group, a map was given in order to find the square that they needed to visit in order to participate in the games. The game had several stations, and all games were dedicated to waste management. Additionally, many games were dedicated to WEEE recycling, reuse, and repair procedures, in order to introduce to students the need for proper WEEE management.

Figure 9: Game points map and WEEE games

The Big City Game concluded with great success, leaving both students and organizers delighted. Through playing and singing, the children not only enjoyed themselves but also

discovered the real importance of recycling in a fun and memorable way. The lively atmosphere, full of laughter and energy, turned learning into an experience rather than a lesson, showing the students that taking care of the environment can be exciting, creative, and something they can actively be part of it.

Figure 10: The big city game-"family" picture

3.1.2. Campaign: "Give value to its next life"- Awareness & Educational Activities with schools

Launch of the campaign - October 14th

The campaign "Give value to its next life" was launched on October 14, 2025. During that day, a special event was organized in one of the main squares ("Agnostos Stratiotis") of the city, in order to celebrate World Day of WEEE recycling, together with 218 students of the 5th grade from 10 primary schools of the Municipality of Rethymno.

Figure 11: Our Mayor together with the Project's team and the Municipal staff that helped

The event started at 9:00 and ended at 14:30. Each school attended the event for an hour, in order to avoid overcrowding and provide students with the opportunity to enjoy the games at their own pace. Although the main participants of the event were students, it should be noticed that the event was open to the general public as well, thus posters were distributed not only at schools but also in the city to promote and attract an audience.

Figure 12: Poster promoting the event-launch of the campaign

The event had more of a party character, since it was aiming to approach children in a more cheerful way so that they would be more excited about participating in the upcoming activities, organized within the WEEE BEHAVE pilot. Music was playing, balloons were set, symbolic presents were given to the children as well as leaflets with the most important information about WEEE (one side for the children and the other side was for their parents).

Figure 13: The two-sided leaflet distributed to children

At first, all students gave their "ticket" to the event, which was a broken or non-functional WEEE device. All the WEEE were collected in the special WEEE recycling bins, provided by "Appliances Recycling S.A.", to whom we are grateful for their kind contribution.

Figure 14: Recycling WEEE

In Table 2 the schools and classes that participated in the event are presented in detail, as well as the number of participants and the total number of items and kilograms of e-waste collected during the event.

A/A	School	Class	# Class	# of Students	#of Teachers
1	3rd Primary School	E1	1	18	1

2	13th Primary School	E1	1	21	1		
3	10th Primary School	E2	1	17	1		
4	16th Primary School	E	1	23	2		
5	1st "Experimental" Primary School	E	1	18	2		
6	8th Primary School	E1	1	17	1		
7	7th Primary School	E1, E2	2	44	2		
8	2nd Primary School	E2	1	19	1		
9	Primary School of Gerani	E	1	20	2	WEEE collected	
10	15th Primary School	E1	1	21	1	# Items	kg
		TOTAL	11	218	14	93	127

Table 2: Data for schools regarding the launch of the campaign event

Secondly, 2 educational videos were shown to the students. More specifically, the first video presented the main WEEE categories and the environmental importance of WEEE recycling and the second video was the eWAsTER project video. During the video, the students learned some basic information regarding WEEE in order to have the necessary knowledge to attend the educational games that followed.

Figure 15: Attending the educational video

Next, the students were separated into small teams and participated in the specially designed educational activities/games aiming for children to learn through interactive games while having fun. The games were designed to help children identify which electrical and electronic devices can be recycled, distinguish them from other household items, learn

which materials they contain are harmful to the environment and human health, and learn how to protect the sea from e-waste.

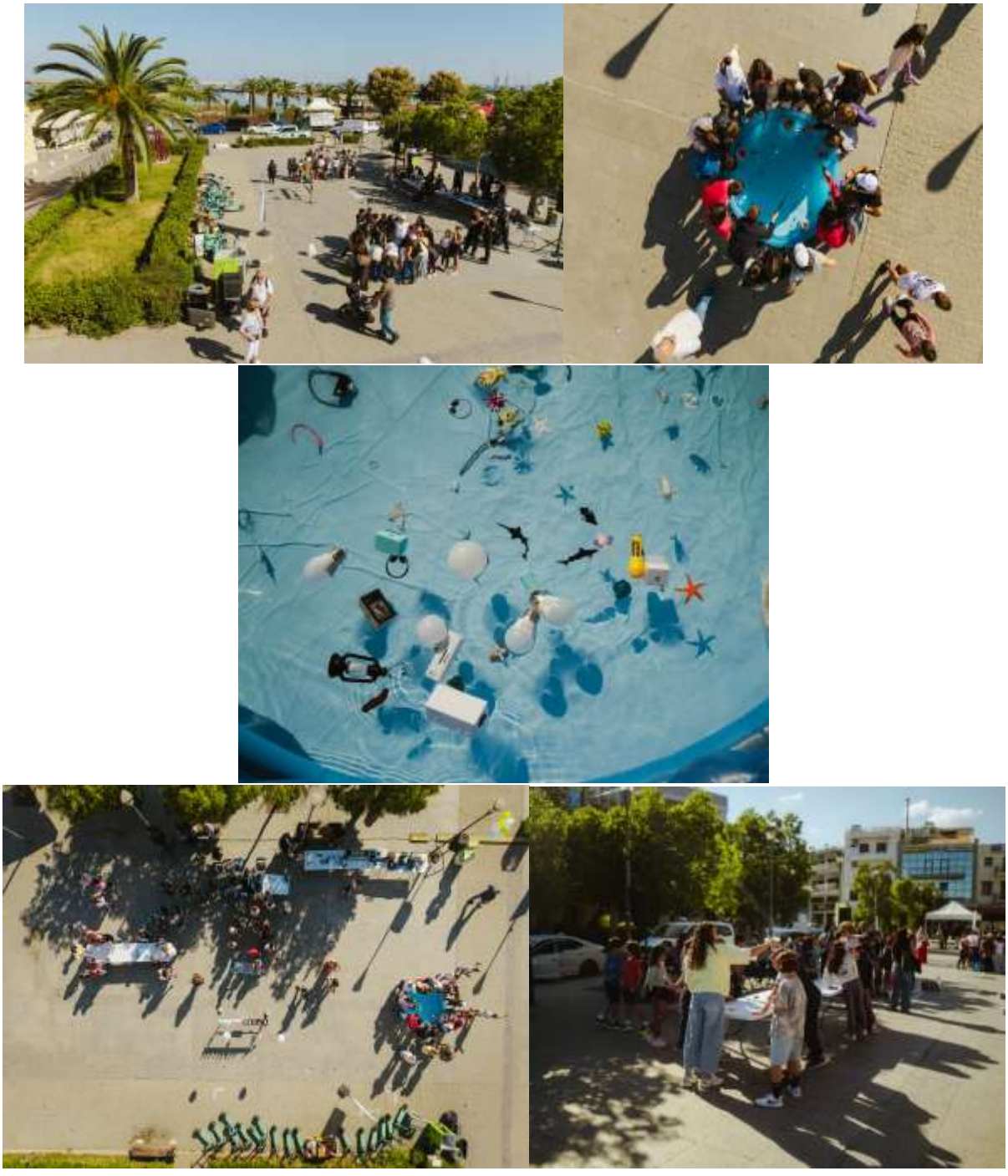

Figure 16: Educational games

Additionally, two stations were set up: one with vintage electrical and electronic devices so that children could see and learn about devices that are no longer available on the market,

and another station featuring computer parts, where a specialist showed the children the various parts that can be recovered.

Figure 17: Stations with vintage WEEE and computer parts

Finally, at the end of the event, souvenir gifts were given to the students so that they would have something to remember World WEEE Recycling Day and their visit to our WEEE BEHAVE campaign launch. More specifically, the souvenirs were: a hat (from the eWAsTER team) and a pencil (from “Appliances Recycling S.A.”).

Figure 18: Souvenir gifts

Educational visits to schools

During the first week of December 2025, the e-WAsTER team visited 11 schools of the Municipality of Rethymno, to present the WEEE BEHAVE campaign, the upcoming competitions and arrange the educational visits that started on January 20, 2026. Additionally at each school, posters were displayed in order to inform all students, teachers and parents about the competitions that started in the middle of December.

Figure 19: Informative sessions and our poster for the Competitions

Furthermore, the first visits were concentrated on informing all principals and teachers about the upcoming activities but in some schools, after request, the informative sessions were presented to the whole school.

Figure 20: Informative sessions to schools about the campaign

Next, in Table 3 are illustrated the schools that participated, the dates of visits, the classes visited, and the number of participants are illustrated. Furthermore, the classes that participated in the educational activities were selected from the e-WAsTER partners (7-10 years old) thus including the 3rd, 4th and 5th grade of each school. It should be mentioned that 1 school kindly asked us to include the 1st and 2nd grade as well. Furthermore, it should be mentioned that we didn't visit the 5th grade students that had already participated in the event organized on the 14th of October, since most of the materials and educational games were the same.

A/A	School	Date (2026)	Class	# Class	# of Students	#of Teachers
1	3rd Primary School	January 20	C, D1, D2, E	4	65	5
2	13th Primary School	January 21	C1, C2, D1, D2, E2	5	112	7
3	10th Primary School	January 22	C, D1, D2, E	4	49	4
4	16th Primary School	January 27	C1, C2, D	3	64	5
5	1st "Experimental" Primary School	January 28	A, B, C, D	4	40	6
6	8th Primary School	January 29	C1, C2, D1, D2, E2	5	81	9
7	7th Primary School	January 30	C1, C2, D1, D2	4	68	7

8	Primary School of Adele	February 2	C1, C2, D1, D2, D3	5	90	10
9	2nd Primary School	February 3	C1, C2, D1, D2, E1, E2	6	128	8
10	Primary School of Gerani	February 3	C, D	2	46	2
11	15th Primary School	February 4	C1, C2, D1, D2, E2	5	115	6
			TOTAL	47	858	69

Table 3: Schools participated

*NOTE: In several schools, certain classes were divided into more than one group. In these instances, we denote them as C1 and C2 rather than simply C.

We visited each class and engaged the students for approximately one teaching hour, taking care to avoid disrupting their regular schedule. At the beginning, we showed the children a 3-minute animated educational video that we had created, designed to introduce the topic in a fun, colorful, and approachable way. The video featured two playful dolphin characters, inspired by the two dolphins on the emblem of the Municipality, who guided the children through the story. Through these characters, the video highlighted the importance of recycling electronic and electrical devices, showing in an engaging way how proper disposal protects the sea and the environment from harmful substances, while also giving discarded WEEE items a valuable “second life”.

Afterwards, we presented a short video provided by Appliances Recycling S.A., which explained the stages of the recycling process in detail. The video highlighted each step, from collection and sorting to processing and material recovery, showing the students how discarded electronics are transformed into reusable resources. This not only reinforced the message from the first video but also helped the children connect the concepts of recycling with real-world actions, sparking curiosity and discussion about sustainable practices in their everyday lives.

Figure 21: Educational videos presented to each class

Following the video presentations, students became highly engaged and motivated, demonstrating increased interest in the topic. This positive response created the appropriate conditions for the implementation of a series of structured educational games aimed at reinforcing learning and helping students understand the importance of WEEE

recycling. Through interactive and participatory activities, students were encouraged to actively apply the knowledge acquired, while their understanding of the recycling stages and their ability to identify different categories of WEEE were assessed in a practical and effective manner.

To begin with, the first game focused on identifying the stages of the recycling process. Six students-representing the six recycling stages-stood in random order, while the rest of the class collaborated to place them in the correct sequence, allowing us to evaluate whether the stages had been fully understood.

Figure 22: Educational game "Let's find the stages of WEEE Recycling"

The second game aimed at recognizing different types of WEEE based on their functions. Miniatures of electrical and electronic devices were randomly distributed to students, who were then asked to match each device to specific functional questions, such as: Which device rotates? Which emits heat? Which device makes noise? Etc. The purpose of the

game was to help students gradually recognize the functions of each device, so that beyond understanding how they work, they could also learn which items can be recycled in the special bin we placed in their school for small appliances, while large appliances requiring different handling for recycling, and how to identify different categories of e-waste.

Figure 23: Educational game "Which devise is…"

The third game, titled “I’ve Got It on My Head”, was a variation of a well-known game that children of this age often play. The game involved dividing the class into smaller groups. Each student had an image of a WEEE item placed on their head and had to guess the device based on descriptions provided by their classmates. This activity encouraged teamwork, communication, and further familiarization with different categories of WEEE.

Figure 24: Educational game: “I got it on my head”

Additionally, it should be mentioned, that grade A and B that participated from the 1st “Experimental” Primary School, also had the opportunity to play an additional game in which students were asked to identify and color the WEEE in a given drawing.

Figure 25: Educational game: “Find and color WEEE”

Finally, in schools where it was possible for the activities to take place in an auditorium rather than in the classroom, the children played two additional games. The first game was "Fishing the appliances" and the second "Stick on the board the right appliance". More specifically, for the first game, the children lined up in pairs. We first asked them a question, for example, "Which device emits heat?" etc. Once the child answered correctly, it was given the task of going to the pool and fishing out the corresponding device.

Figure 26: Educational game: "Fishing the appliances"

Furthermore, for the game "Stick on the board the right appliance" we had two teams that were trying to fill the board with the right appliances. For this game special thanks to the "Appliances Recycling S.A." which lent us for th porpuses of the pilot the special board and the stickers.

Figure 27: Educational game: "Stick on the board the right appliance"

Overall, the combination of educational activities had a very strong impact on both students and teachers. Through a creative and enjoyable approach, participants gained substantial knowledge about WEEE recycling and developed a clearer understanding of which

electrical and electronic devices can be recycled. This increased awareness motivated students to bring additional devices for recycling, contributing not only to environmental protection but also supporting their school's participation and success in the competition.

WEEE collection competition between schools

All 11 schools participating in the pilot implementation of WEEE BEHAVE also participated in a competition to collect the highest number of electrical and electronic devices. Following coordination among project partners, the competition was based on the **number of items** collected. However, it should be noted that the Municipality of Rethymno recorded both figures to ensure more effective monitoring of the project's KPIs. The competition started in December and concluded in mid-February. Device counting was carried out twice, on February 2 and again shortly before the end of the competition, February 16. For the aims of the assessment, in each school, special WEEE Recycling bins were established, thanks to "Appliances Recycling S.A.", which responded promptly to our request and proceeded with the procurement of **11 WEEE recycling bins** (+4 for public buildings). These were installed in participating schools, with one bin allocated to each school, (as well as in municipal buildings to also serve the general public).

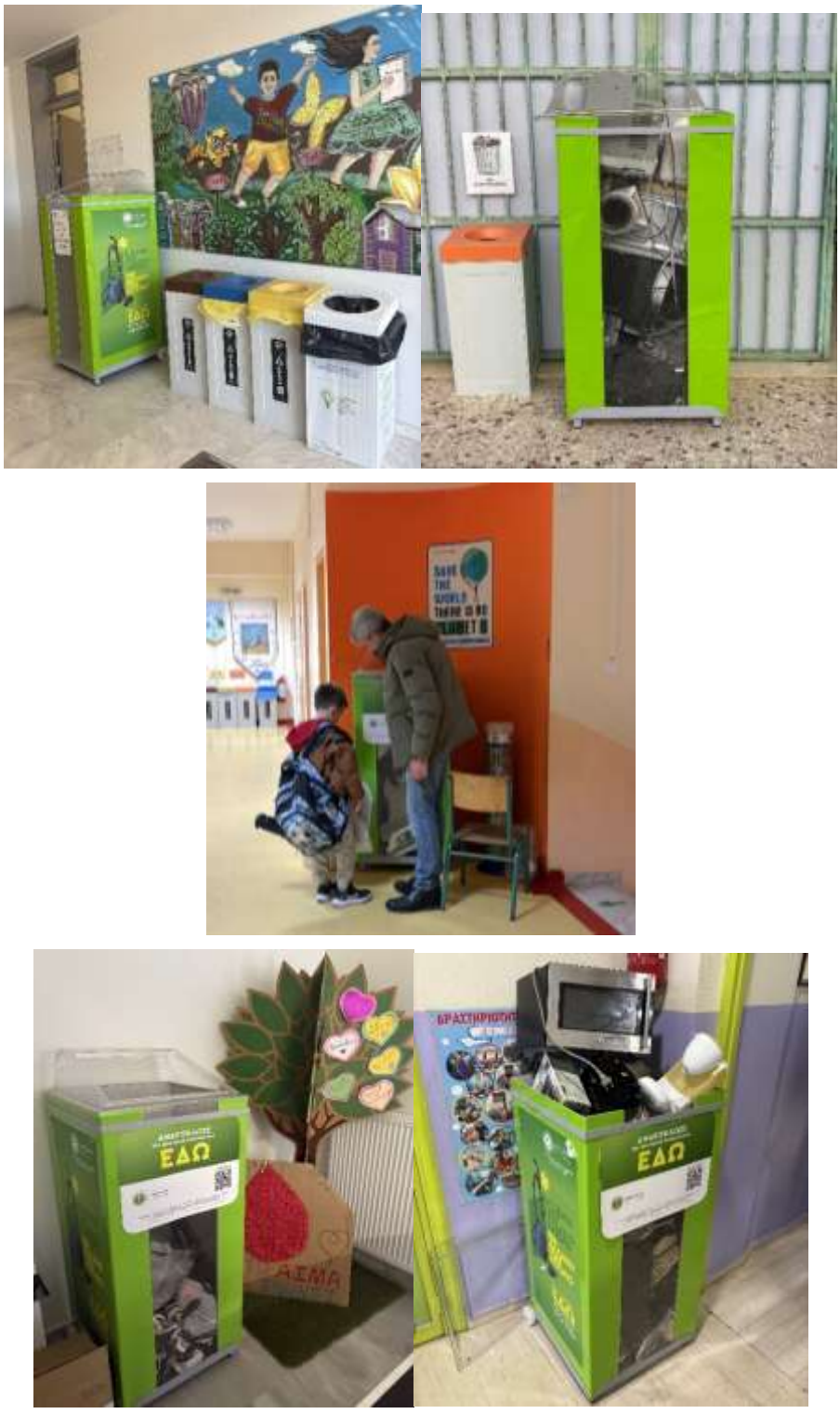

Figure 28: WEEE Recycling bins in schools

Table 3 illustrates the WEEE collected per school:

A/A	School	1st counting/weighing (2/2/2026)	2nd counting/weighing (16/2/2026)	Total counting/weighing

		#Items	Kg	#Items	Kg	#Items	Kg
1	3rd Primary School	17	25	28	30	45	55
2	13th Primary School	35	20	53	24	88	44
3	10th Primary School	50	87	34	37	84	124
4	16th Primary School	63	45	0	0	63	45
5	1st "Experimental" Primary School	64	70	140	86	204	156
6	8th Primary School	50	40	27	38	77	78
7	7th Primary School	20	130	100	280	120	410
8	Primary School of Adele	85	110	88	92	173	202
9	2nd Primary School	62	40	90	350	152	390
10	Primary School of Gerani	15	22	15	30	30	52
11	15th Primary School	52	80	38	52	90	132
	TOTAL	513	669	613	1019	1126	1688

Table 3: WEEE collection per school

WEEE themed video/play competition between schools

Each school had the opportunity to participate in an additional competition designed to further encourage creativity and active engagement. Specifically, schools were invited to create either a short video (3–5 minutes) featuring students as the main protagonists or, alternatively, to prepare a short theatrical performance, again with students taking the leading roles. Centered on the theme of recycling electrical and electronic equipment, the competition aimed to give children the chance to express their understanding of environmental responsibility through storytelling, performance, and collaboration.

Both the videos and the theatrical performances were presented at the "House of Culture," during the campaign's final event, attended by the Mayor, the responsible Deputy Mayors, members of the school community, and the general public. The presentations created a celebratory atmosphere, where students proudly showcased their work and shared their messages about recycling with a wider audience. The event not only highlighted the children's creativity and teamwork but also reinforced the importance of environmental awareness within the local community.

In total, 6 out of the 11 schools took part in this competition. Of the 6 schools that participated in the second competition, 2 presented a theatrical performance and 4 submitted a video, demonstrating strong interest and commitment to the initiative. Their participation reflected the enthusiasm of both students and teachers to engage more deeply with the topic of recycling and environmental responsibility. Through their creative

efforts, the participating schools made a meaningful contribution to the overall success and impact of the campaign.

Awards/ Recognition

To acknowledge the creativity, dedication, and active participation of the schools, awards were given for both competitions. The prizes were distributed as follows:

- WEEE collection competition between schools

We carefully recorded the total number of WEEE items collected by each school. It should be mentioned that the collected items were weighed according to the population of each school, as the schools differed significantly in size and we wanted the competition results to be fair and so smaller schools would have an equal chance of winning as larger schools. After calculating the per capita amount collected, we were able to determine the top three schools with the highest performance. Table 4 illustrates the results.

A/A	School	Competition Results		
		Items per Capita	#Items	Kg
1st place	1st "Experimental" Primary School	1.78	204	156
2nd place	10th Primary School	0.64	84	124
3rd place	2nd Primary School	0.60	152	390
	Primary School of Adele	0.60	173	202
4th	7th Primary School	0.53	120	410
5th	16th Primary School	0.50	63	45
6th	15th Primary School	0.43	90	132
7th	13th Primary School	0.38	88	44
8th	8th Primary School	0.37	77	78
9th	3rd Primary School	0.33	45	55
10th	Primary School of Gerani	0.26	30	52

Table 4: WEEE collection competition results

The first-place winner collected a total of 1.78 items per capita which corresponds to a total of 204 items and 156 kg. A remarkable result since it is the smallest school among the 11 schools. The second-place winner achieved a remarkable result as well, since it is also a small school, it collected 0.64 items per capita, 84 total items and 124 kg. Finally, there was a tie for the third place and it was decided that the 2 schools will share the position. Specifically they

gathered 0.60 items per capita, which correspond to 152 and 173 items, respectively, and 390/202kg, earning a well-deserved place among the top three.

The 4 winners **received a gift card from local stores specializing in electrical and electronic equipment, which they can use to purchase any equipment or device needed for their school.**

- WEEE themed video/play competition between schools

In the second competition, 6 out of the 11 schools took part. The participating schools created short theatrical plays or videos inspired by the project's campaign. As all the schools demonstrated outstanding effort, creativity, and dedication, the task of selecting winners proved extremely difficult. For this reason, it was decided that there would be no single winner; instead, all participating schools were recognized and received a gift in appreciation of their remarkable work and contribution. More analytically, **all 6 participants received a gift card from local stores specializing in electrical and electronic equipment, which they can use to purchase any equipment/device needed for their school.**

- Participation awards

All 11 participating schools received a Certificate of Participation to recognize and reward their effort and active involvement. In addition, each school was given as a gift the board game "Dive in to WEEE" that Rethymno's eWAsTER team designed especially for the project.

Figure 29: Rethymno's WEEE BEHAVE board game "Dive in to WEEE"

3.2. Activities for General Public

3.2.1. Awareness Campaign: “Give value to its next life”

The event organised on October 14, 2025 was not only aimed at children, a large part of it focused on informing and raising awareness among the general public. The leaflets distributed to children had on the other side information targeting pupils of older ages and especially parents.

In order to attract people of all ages, posters for the event were placed in various locations around the city, and a promotional campaign was carried out through the media and online.

Figure 30: Posters around the city for the event

Additionally, a series of social media posts were released to inform the general public about the campaign and encourage attendance. Through engaging visuals and clear messaging, these posts aimed to raise awareness, generate interest, and invite the wider community to take part in the initiative and support its environmental goals.

Figure 31: Additional posters used in social media posts

The general public responded enthusiastically to the call, demonstrating remarkable awareness and a strong sense of environmental responsibility. As the campaign gained visibility, more and more people became informed about its purpose and importance, which motivated them to take immediate action. Households across the community gathered their unused or outdated electrical and electronic devices and promptly delivered them for recycling. More specifically, from the general public were collected 60 items - 99kg. This collective effort not only reflected the campaign's success in engaging citizens, but also highlighted the growing commitment of the public to sustainable practices and the protection of the environment. Overall, numerous individuals wanted to learn more about the project's activities and express their admiration both for the organization of the event and for the overall purpose of the project.

Figure 32: WEEE collected from general public

As part of the campaign, 4 WEEE recycling bins from "Appliances Recycling S.A.", were strategically placed in prominent public buildings, making it easy and convenient for citizens to contribute their unused electrical and electronic devices. Throughout the duration of the initiative, the Department of Environment of the Municipality ensured the accurate tracking of the collected items. Thanks to this organized effort and the active participation of the community, a substantial total amount of electronic waste was successfully gathered, demonstrating both the efficiency of the campaign and the public's commitment to sustainable environmental practices. In Table 5 the items and their corresponding kilograms are illustrated.

	#Items	Kg
14th October	60	99
Public buildings	166	207

Table 5: WEEE collection from the general public

4. Final Event of the WEEE BEHAVE pilot

A special event was organized to mark the end of the WEEE BEHAVE campaign, bringing everyone together to celebrate the successful completion of its activities. The gathering provided a joyful opportunity for participants to reflect on their collective efforts and achievements, while fostering a sense of community and shared commitment to sustainability. During the event, awards were presented to recognize outstanding contributions, highlighting the dedication and enthusiasm of those who actively supported the campaign and helped make it a rgreat success.

Figure 33: The audience of the event

A delegation of students, accompanied by their teachers and their school principal, attended the event from all the schools that participated in the initiative, bringing a vibrant and enthusiastic atmosphere to the occasion. In total, more than 200 people took part in the event, reflecting the strong engagement of the school community. The event was also honoured by the presence of the Deputy Mayors responsible for the relevant sectors, the Mayor, the Director of the Directorate of Primary Education, highlighting the importance of the initiative and demonstrating the strong support of both the local authorities and the educational community.

Figure 34: Welcoming the audience

The event commenced with welcoming remarks from the distinguished guests, setting a positive and celebratory tone for the day. This was followed by a comprehensive presentation of the e-WAsTER project and the pilot action WEEE BEHAVE, outlining their objectives, expected impact, and the outcomes of the activities implemented in the participating schools. Particular emphasis was placed on the educational value of the initiative, the active involvement of students and teachers, and the importance of

promoting responsible recycling practices and environmental awareness within the school community.

Figure 35: Presentation of the project and the WEEE BEHAVE campaign from the eWAsTER team

Following the presentations, the audience enjoyed the screening of the students' videos and the performance of their theatrical plays, which stood out for their creativity, originality as well as their powerful messages. The students demonstrated remarkable imagination and talent, presenting ideas that were both thoughtful and engaging. Their creations were very well received and warmly applauded, clearly reflecting how much they were appreciated by everyone in attendance.

Figure 36: Theatrical plays from schools

The event concluded with a lively and celebratory award ceremony for the competitions, where the achievements and efforts of all participants were recognized and warmly

applauded. Each winner received a gift in appreciation of their creativity, dedication, and outstanding contributions. The atmosphere was full of excitement and pride, with students and teachers alike celebrating their accomplishments and sharing in the collective joy of the initiative. The ceremony highlighted not only the quality of the projects presented but also the enthusiasm, collaboration, and commitment of the entire school community, leaving a lasting impression on everyone in attendance.

Figure 37: Awards ceremony

5. Results

5.1. Overall results of the pilot

The overall results of the WEEE BEHAVE initiative were extremely positive. First of all, the participation of schools exceeded all expectations, as we were welcomed with great enthusiasm. This was largely due to the fact that the activities prior to the official launch of the campaign left a very positive impression on the children, inspiring excitement and motivation to take part in everything that followed during the official campaign. Regarding the WEEE collection aspect, the schools' contribution was enormous, with very large quantities of devices collected. Most importantly, however, the children gained a clear understanding of the significance of recycling electrical and electronic equipment.

Total items collected: **1445 during campaign, 1517 overall**

Total kg collected: **2121 during campaign, 2188 overall**

Total students who participated: **1406**

Total teachers who participated: **127**

Number of schools: **11**

Number of classes: **99**

Number of external organizations (NGOs, sponsors) supporting the campaign: **2**

Number of educational games: **9**

Number of educational videos: **4**

Number of leaflets: **800**

5.2. Challenges and lessons learned

Despite the very positive results achieved, the WEEE BEHAVE pilot proved to be a highly impactful and inspiring initiative. It successfully mobilized students, teachers, and the wider school community, fostering environmental awareness and encouraging responsible behaviors regarding WEEE management. The pilot demonstrated the strong potential of educational actions to drive meaningful change at the local level, combining knowledge, creativity, and active participation. Overall, it highlighted the effectiveness of engaging young people as ambassadors of sustainable practices and laid a solid foundation for future expansion and replication. However, alongside these achievements, the implementation of the pilot also encountered several challenges that provided valuable lessons for future implementation.

- One of the key challenges stemmed from the fact that WEEE collection took place among schools with significantly different numbers of students. In order to ensure a fair and inclusive competition, the winner had to be determined through a methodology that accounted for school size, so that smaller schools would not be disadvantaged or effectively excluded due to their lower student population. Notably, the smallest participating school had 114 students, while the largest had 287, making it essential to apply an equitable evaluation approach that safeguarded equal opportunities for all.
- An additional challenge was maintaining consistency and accurate monitoring of WEEE collections across multiple schools. Coordinating regular collection schedules, recording data reliably, and ensuring fair allocation of results for the competitions required careful planning and close oversight. It was essential to guarantee that all schools could participate on an equal footing and that the collected data accurately reflected each school's efforts, so that the outcomes of the pilot remained transparent, credible, and motivating for the students.
- Another important challenge was ensuring that children were engaged in a way that was both enjoyable and educational, enabling them to fully grasp the importance of recycling and responsible WEEE management. Striking the right balance between fun and learning required thoughtful design and careful planning of games, interactive activities, and creative tasks that could capture their interest while effectively conveying key environmental messages. It was essential to adopt age-appropriate approaches, encourage active participation, and maintain high levels of motivation throughout the process, so that the experience would not only be entertaining but also leave a lasting educational impact.
- We had to deal with technical challenges in schools. Since the WEEE BEHAVE pilot application and the associated games relied on digital tools and applications, there

was always a risk of technical malfunctions or access issues in some schools. In particular, school visits that required equipment for screening videos sometimes encountered difficulties when older or outdated devices did not function properly. Addressing these issues demanded quick troubleshooting and support from the project team to ensure that all students could fully participate and benefit from the activities.

- One more challenge concerned the limited opportunities for organizing school visits to WEEE recycling facilities. Within the framework of the project, we aimed to take the students to a plant that processes WEEE, so they could experience first-hand the journey of the devices they recycle and better understand the different stages of treatment and recovery. However, given that Crete is an island and, due to its geographical location, does not host large-scale facilities carrying out this type of processing, it was not feasible to easily arrange such a visit. As a result, the project team had to identify alternative ways to demonstrate the recycling process to the children in an engaging and educational manner. Ultimately, this led to the use of a dedicated recycling video, from "Appliances Recycling S.A.", as well as the design of an interactive game illustrating the different stages of the WEEE recycling process, ensuring that the learning objectives were still effectively achieved.
- Although such instances were limited, another challenge involved the initial hesitation or reluctance shown by a small number of teachers toward the planned activities. In some cases, this resistance stemmed from concerns about the additional workload, time constraints within an already demanding curriculum, or uncertainty about how the activities would align with educational priorities. Addressing these concerns required open communication, reassurance, and a clear presentation of the project's educational value and environmental significance. The project team invested time in building trust, explaining the objectives and expected benefits for both students and schools, and demonstrating how the activities could be smoothly integrated into existing teaching practices.
- Another challenge was the different motivations and levels of engagement among students. Despite a general interest in environmental issues, students displayed varying levels of motivation and enthusiasm. Some participated actively, while others were more reluctant and required additional encouragement. The challenge was to design activities that could maintain the interest of all students, regardless of age or personal preferences, ensuring that everyone remained engaged and could fully benefit from the learning experience.
- Finally, another important challenge was reaching a wide audience and effectively raising awareness about WEEE recycling among people of all ages. Achieving this required careful planning and strategic coordination of various communication

channels, including posters, local media coverage, and online campaigns. It was essential to ensure that the messages were clear, engaging, and tailored to different audiences, so that the initiative could not only inform but also motivate citizens to adopt responsible recycling behaviors. This multi-channel approach demanded constant monitoring, creativity, and collaboration among team members to maximize the impact and visibility of the project within the community.

Nevertheless, these challenges did not diminish the overall success of the pilot; on the contrary, they offered important insights that will help refine and strengthen the design, outreach strategy, and operational framework of future actions.

6. WEEE BEHAVE Campaign Evaluation

In the present section, the results of the primary research conducted through questionnaires are presented. These questionnaires were distributed to the schools that participated in the campaign in order to evaluate the activity and gather feedback from the participants.

6.1. Questionnaire Design and Purpose of the Questionnaire

The questionnaire was carefully designed with the intention of collecting meaningful and reliable feedback while keeping the number of questions relatively limited. This approach was adopted in order to ensure that the questionnaire would remain concise and user-friendly, preventing respondents from feeling overwhelmed or fatigued during the completion process. Despite its brevity, the questionnaire was structured in a way that allowed us to gather essential information and valuable insights regarding the impressions and experiences formed throughout the implementation of the activity.

The purpose of the questionnaire was not limited to assessing whether the students enjoyed the activity or to evaluating the level of satisfaction among the teachers and the school administration regarding its implementation. Equally important was the intention to obtain further insights about the overall impact of the activity within the school environment. In particular, a key objective was to investigate whether there is a willingness on the part of the school community to adopt and repeat the activity in the following school year, or even to establish it as a regular annual initiative.

More particularly, emphasis was placed on exploring whether the children enjoyed the activity, whether they found it interesting and engaging, and whether they would be willing to participate again in a similar initiative in the future. Additionally, participants were asked whether they would like to see any changes or improvements in the activity, such as different types of activities, more interactive elements, or other adjustments that could enhance their experience. Finally, in Annex 2 we present the questionnaire that we designed for the purposes of the present research.

6.2. Presentation and Analysis of the Questionnaires

A total of 37 questionnaires were collected from the 11 schools that participated in the activity. The target was to obtain a random sample of 3 questionnaires from each school in order to ensure a balanced representation of the participating institutions. This sampling approach allowed us to gather feedback from different school environments while maintaining a manageable and comparable dataset for the analysis of the results.

The questionnaire analysis was conducted using IBM SPSS Statistics 21 software. The following content is structured according to categories of questions. To begin with, the first set of questions concerns general information about the respondents, aiming to provide a basic profile of the participants before analysing their opinions and experiences.

- For the Question: *"What is your role?"*

The distribution of respondents shows that **2.7%** belong to the **Primary Education Department**, **21.6%** to **School Administration**, **64.9%** are **teachers**, and **10.8%** fall into **other categories**, primarily including **music and arts teachers**.

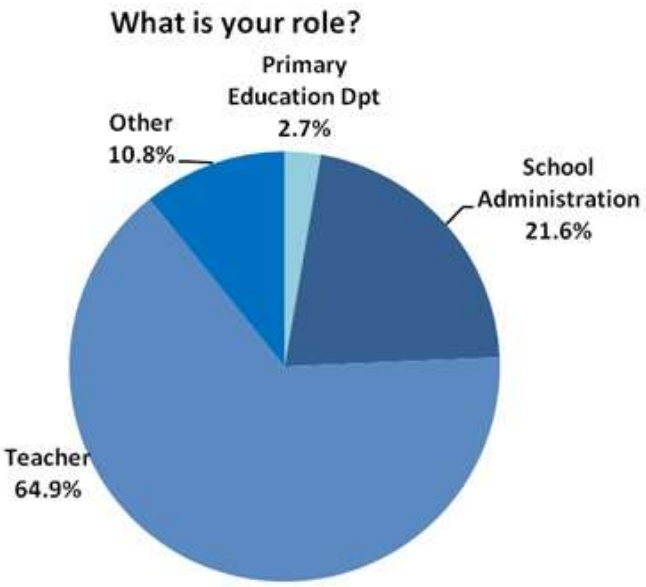

Figure 38: The role of the respondents

- For the Question: *"Which grade do you teach?"*

As shown in the chart below, the majority of participants teach in the **3rd and 4th grades**, which are the grades targeted by the campaign visits. Additionally, a considerable number of **"Not-applicable"** responses can be observed, as staff members from the **Primary Education Department**, as well as most **school principals**, do not teach classes.

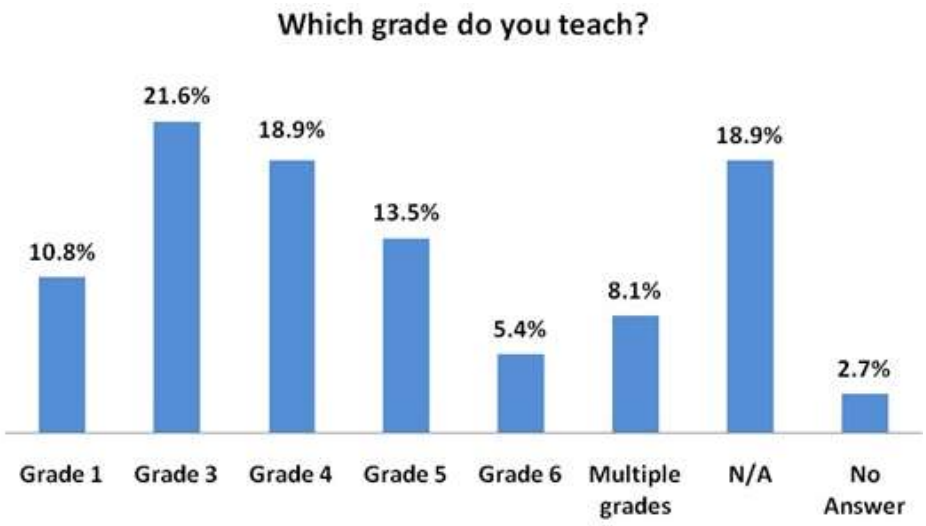

Figure 39: Which grade the respondents teach

- For the Question: *"How many students are in your class?"*

More than half of the responses indicated that the class size ranged between **16 and 20 students**, while **no class had fewer than 10 students**. Furthermore, a considerable number of **"Not-applicable"** responses can be observed, similarly to the previous question, as staff members from the **Primary Education Department**, as well as most **school principals**, do not teach classes.

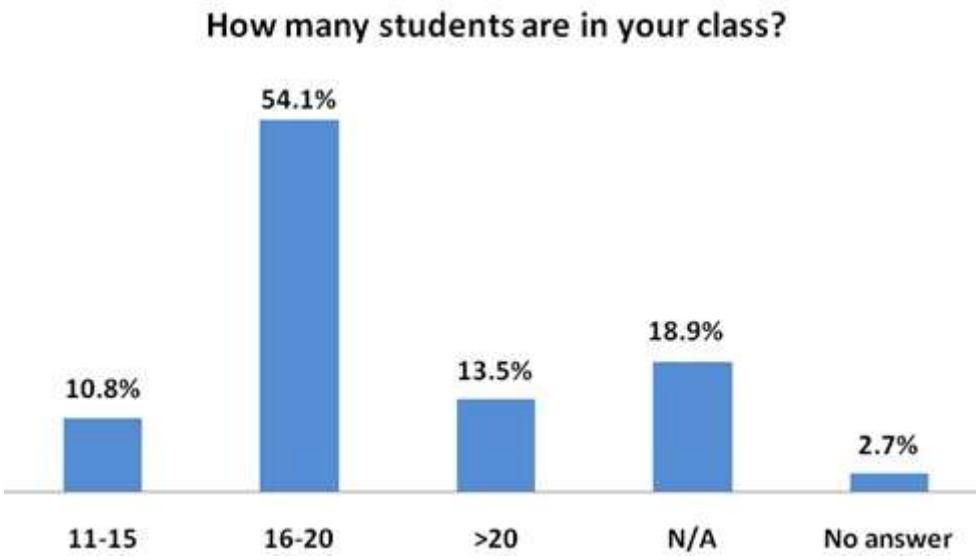

Figure 40: The number of students in classes

The second part of the questionnaire includes 7 questions focusing on the educational activities carried out. The analysis that follows not only presents the responses to each

individual question in a clear and systematic manner, but also incorporates a series of combined and comparative analyses that provide deeper insight into the data. In particular, it links selected questions to the general background information provided by the respondents, allowing for a more comprehensive interpretation of patterns, relationships, and trends. This approach enhances the overall understanding of the findings by moving beyond simple descriptive statistics and offering a more integrated and meaningful exploration of the results.

- For the Question: *"Please rate on a scale from 1 to 5, where 1 = Not at all and 5 = Extremely. How satisfied are you with the educational activities that were carried out?"*

As shown in the table below, an **overwhelming majority of respondents (94.6%)** reported that they were either very satisfied or extremely satisfied with the educational activities carried out as part of the **WEEE BEHAVE campaign** while indicates a consistently positive reception among participants. This high level of satisfaction suggests that the campaign was successful in engaging its audience and delivering meaningful and effective educational content. Furthermore, it is particularly noteworthy that **none of the respondents expressed a negative impression** of the activities, highlighting the absence of dissatisfaction. This reinforces the effectiveness and positive impact of the initiative.

How satisfied are you with the educational activities that were carried out?				
		Frequency	Percent	Cumulative Percent
Valid	Moderately / Neutral	2	**5.4**	5.4
	Very	9	**24.3**	29.7
	Extremely	26	**70.3**	100.0
	Total	37	100.0	

Table 6: Ranking the satisfaction of the activities

To further examine the results illustrated in Table 6, we analyzed the responses in more detail. More specifically, Table 7 presents a **detailed breakdown of the answers by the respondents' roles**. It can be noticed, **75% of the school administration members were extremely satisfied**, while **62.5% of the teachers reported the same level of satisfaction**. These results suggest that the implemented actions were highly successful.

		What is your role?				
		Primary Education Dpt	School Administration	Teacher	Other	Total
How satisfied are you with the educational activities that were carried out?	Moderately / Neutral			**8.3%**		5.4%
	Very		**25.0%**	**29.2%**		24.3%
	Extremely	**100.0%**	**75.0%**	**62.5%**	**100.0%**	70.3%
Total		100.0%	100.0%	100.0%	100.0%	100.0%

Table 7: Crosstabulation "How satisfied are you with the educational activities that were carried out?" & "What is your role?"

		Which grade do you teach?								
		Grade 1	Grade 3	Grade 4	Grade 5	Grade 6	Multiple grades	N/A	No Answer	Total
How satisfied are you with the educational activities that were carried out?	Moderately / Neutral			**14.3%**	**20.0%**					5.4%
	Very	**50.0%**	**12.5%**	**28.6%**	**20.0%**		**33.3%**	**28.6%**		24.3%
	Extremely	**50.0%**	**87.5%**	**57.1%**	**60.0%**	**100.0%**	**66.7%**	**71.4%**	**100.0%**	70.3%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8: Crosstabulation "How satisfied are you with the educational activities that were carried out?" & "Which grade do you teach?"

Furthermore, as illustrated in Table 8, teachers across all grade levels reported being **extremely satisfied** with the activities, indicating a uniformly positive response. This consistent level of high satisfaction suggests once again that the initiative was well-received regardless of grade level and effectively met the expectations and needs of teachers. It also reflects the overall quality and relevance of the activities, as perceived by those directly involved in their implementation.

- For the Question: *"Please rate on a scale from 1 to 5, where 1 = Not at all and 5 = Extremely. How satisfied are you with the educational material presented to the students?"*

The present question aimed to **investigate whether the educational material presented to students was suitable** and aligned with their learning needs and expectations. As shown in Table 9, a substantial majority of respondents expressed a high level of satisfaction with the material, with **67.6% reported being extremely satisfied.** An additional **21.6% indicated they were very satisfied**. These findings suggest that the educational content was generally well-designed, relevant for students.

At the same time, **10.8% of respondents expressed a neutral attitude toward the material**. While they did not view it negatively, some aspects could be improved or adapted to better meet expectation. Notably, the absence of negative responses reinforces the overall positive evaluation of the material. Taken together, these results highlight the effectiveness of the educational resources used. They also indicate opportunities for refinement to achieve even higher levels of satisfaction.

How satisfied are you with the educational material presented to the students?				
		Frequency	Percent	Cumulative Percent
Valid	Moderately / Neutral	4	**10.8**	10.8
	Very	8	**21.6**	32.4
	Extremely	25	**67.6**	100.0
	Total	37	100.0	

Table 9: Ranking the satisfaction of the educational material

Table 10 presents the responses to this question with a **breakdown by grade taught**. As shown in the results, **all respondents were mostly extremely** or **very satisfied.** Furthermore, **teachers of the 3rd and 6th grades recorded the highest percentages of "extremely satisfied"** responses.

		Which grade do you teach?								Total
		Grade 1	Grade 3	Grade 4	Grade 5	Grade 6	Multiple grades	N/A	No Answer	
How satisfied are you with the educational material presented to the students?	Moderately / Neutral			**28.6%**	**20.0%**		**33.3%**			10.8%
	Very	**50.0%**	**12.5%**	**14.3%**	**20.0%**			**28.6%**	**100.0%**	21.6%
	Extremely	**50.0%**	**87.5%**	**57.1%**	**60.0%**	**100.0%**	**66.7%**	**71.4%**		67.6%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0 %	100.0%	100.0 %

Table 10: Crosstabulation "How satisfied are you with the educational material presented to the students?" & "Which grade do you teach?"

- For the Question: *"Please rate on a scale from 1 to 5, where 1 = Not at all and 5 = Extremely. How understandable was the educational material for the students?"*

This question asked whether the educational material was **understandable to the students**. Table 11 shows that **51.4% of respondents stated that the material was extremely understandable**. No negative responses were recorded, indicating that the material was **well-designed, appropriate, and well-received by the schools.**

How understandable was the educational material for the students?				
		Frequency	Percent	Cumulative Percent
Valid	Moderately / Neutral	1	**2.7**	2.7

	Very	16	**43.2**	45.9
	Extremely	19	**51.4**	97.3
	No answer/Not aware	1	**2.7**	100.0
	Total	37	100.0	

Table 11: Degree of Comprehensibility of the Educational Material for Students

Additionally, the following Tables present the analysis of this question **by respondents' roles and by the grades they teach**. As shown in Table 12, **50% of the teachers reported that the material was very understandable**, while **45.8% stated that it was extremely understandable**. These responses indicate that the material was **both clear and acceptable**, although there is **room for improvement** if the activity is repeated.

		What is your role?				
		Primary Education Dpt	School Administration	Teacher	Other	Total
How understandable was the educational material for the students?	Moderately / Neutral			**4.2%**		2.7%
	Very		**37.5%**	**50.0%**	**25.0%**	43.2%
	Extremely	**100.0%**	**50.0%**	**45.8%**	**75.0%**	51.4%
	No answer/Not aware		**12.5%**			2.7%

Table 12: Crosstabulation "How understandable was the educational material for the students?" & "What is your role?"

Furthermore, since this question is of considerable interest, **in the event that this activity is repeated in the future**, Table 13 below presents a **breakdown of the responses by grade.** As observed, the material was rated **extremely understandable in the higher grades**, while for the **1st and 3rd grades it was reported as very understandable**.

		Which grade do you teach?								
		Grade 1	Grade 3	Grade 4	Grade 5	Grade 6	Multiple grades	N/A	No Answer	Total
How understandable was the educational material for the students?	Moderately / Neutral			**14.3%**						2.7%
	Very	**100.0%**	**50.0%**	**14.3%**	**40.0%**		**100.0%**	**14.3%**	**100.0%**	43.2%
	Extremely		**50.0%**	**71.4%**	**60.0%**	**100.0%**		**71.4%**		51.4%
	No answer/Not aware							**14.3%**		2.7%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 13: Crosstabulation "How understandable was the educational material for the students?" & "Which grade do you teach?"

- For the Question: *"Please rate on a scale from 1 to 5, where 1 = Not at all and 5 = Extremely. How much did the students enjoy the educational activities that were conducted?"*

At this point, the next question addresses **how much the students enjoyed the activities**. As shown in Table 14, the majority of the students enjoyed the activities extremely.

How much did the students enjoy the educational activities that were conducted?				
		Frequency	Percent	Cumulative Percent
Valid	Moderately / Neutral	**2**	**5.4**	5.4
	Very	**12**	**32.4**	37.8
	Extremely	**22**	**59.5**	97.3

	No answer/Not aware	**1**	**2.7**	100.0
	Total	37	100.0	

Table 14: Students' Enjoyment of the Educational Activities

Furthermore, as illustrated in Table 15, for **all individual grades-except the first grade**-students were reported to have **enjoyed the activities extremely**. For the first grade, responses were **evenly split (50%-50%) between "very enjoyable" and "extremely enjoyable"**. Additionally, the majority of teachers instructing **more than one grade** also indicated that their students found the activities **very enjoyable**.

		Which grade do you teach?								
		Grade 1	Grade 3	Grade 4	Grade 5	Grade 6	Multiple grades	N/A	No Answer	Total
How much did the students enjoy the educational activities that were conducted?	Moderately / Neutral			**14.3%**	**20.0%**					5.4%
	Very	**50.0%**	**37.5%**	**28.6%**	**20.0%**		**66.7%**	**14.3%**	**100.0 %**	32.4%
	Extremely	**50.0%**	**62.5%**	**57.1%**	**60.0%**	**100.0%**	**33.3%**	**71.4%**		59.5%
	No answer/Not aware							**14.3%**		2.7%
Total		100.0 %	100.0 %	100.0 %	100.0 %	100.0%	100.0%	100.0 %	100.0 %	100.0 %

Table 15: Crosstabulation "How much did the students enjoy the educational activities that were conducted?" & "Which grade do you teach?"

- For the Question: *"Please rate on a scale from 1 to 5, where 1 = Not at all and 5 = Extremely. How likely are you to participate in a similar activity if it is held next school year?"*

The next two questions are particularly important for gathering information regarding the **intention to participate again**. The first question asks **how likely respondents would be to take part in the activity if it were repeated next school year**. The results, as shown in Table 16 below, are **very encouraging**, with **81.1% of respondents stating that it is extremely likely they would participate again next year**.

How likely are you to participate in a similar activity if it is held next school year?				
		Frequency	Percent	Cumulative Percent
Valid	Very	**6**	**16.2**	**16.2**
	Extremely	**30**	**81.1**	**97.3**
	No answer/Not aware	**1**	**2.7**	**100.0**
	Total	37	100.0	

Table 16: Reported Likelihood of Future Participation in Similar Educational Activities

Additionally, the table below presents the responses to this question **by respondents' roles**, showing a **very positive outcome**. More specifically, a **very strong intention to participate again next year** was observed from the Primary Education Department, **87.5% of the School Administration members**, **75% of teachers**, and **100% of music and arts teachers**.

		What is your role?				
		Primary Education Dpt	School Administration	Teacher	Other	Total
How likely are you to participate in a similar activity if it is held next school year?	Very			**25.0%**		16.2%
	Extremely	**100.0%**	**87.5%**	**75.0%**	**100.0%**	81.1%
	No answer/Not aware		**12.5%**			2.7%
Total		100.0%	100.0%	100.0%	100.0%	100.0%

Table 17: Crosstabulation "How likely are you to participate in a similar activity if it is held next school year?" & "What is your role?"

- For the Question: *"Please rate on a scale from 1 to 5, where 1 = Definitely No and 5= Definitely Yes. To what extent would you support establishing this activity as a recurring annual event?"*

The present question is of a similar nature but aims to **assess the intention to establish the WEEE BEHAVE activities on an annual basis**. We wanted to evaluate the respondents' willingness for the activity to become **yearly event**, which is also **highly valuable for conveying the results of the WEEE BEHAVE campaign to policymakers**. As shown in the table below, **81.1% of respondents would definitely support establishing the activities as an annual event,** while **no respondent expressed a negative intention.**

To what extent would you support establishing this activity as a recurring annual event?				
		Frequency	Percent	Cumulative Percent
Valid	Probably Yes	6	**16.2**	16.2
	Definitely Yes	30	**81.1**	97.3
	No answer/Not aware	1	**2.7**	100.0
	Total	37	**100.0**	

Table 18: Reported Likelihood of Future Participation in Similar Educational Activities

Furthermore, **analyzing responses by role,** as illustrated in Table 19, we observe that the **Primary Education Department is 100% positive in supporting the establishment of WEEE BEHAVE as a recurring annual event.** Addtionally, **75% of the School Administrations expressed strong support along with 83.3% of the teachers** and **all of the music and arts teachers**. These results clearly indicate strong overall support across all respondent groups, highlighting a shared commitment to making WEEE BEHAVE a sustainable and recurring annual initiative.

	What is your role?				
	Primary Education Dpt	School Administration	Teacher	Other	Total

To what extent would you support establishing this activity as a recurring annual event?	Probably Yes	**100.0%**	**12.5%**	**16.7%**		16.2%
	Definitely Yes		**75.0%**	**83.3%**	**100.0%**	81.1%
	No answer/Not aware		**12.5%**			2.7%

*Table 19: Crosstabulation "To what extent would you support establishing this activity as a recurring annual event**?**" & "What is your role?"*

- For the Question: *"What suggestions would you make to improve the activity?"*

The last question of the questionnaire focused on **suggestions for improving the activities in case they are conducted again in the future**. This was a **multiple-choice question**, (thus the percentages do not add up to 100%) and the chart below presents all the options from **most to least selected**. As illustrated, 78.4% of respondents suggested including more games and activities, followed by 45.9% who expressed a desire for more school visits. Furthermore, 29.7% recommended adapting the material to different age groups, while 8.1% stated that they do not believe any changes are necessary. Finally, 5.4% of respondents provided additional suggestions, such as extending the project duration to allow for recurring activities that reinforce environmental awareness, and encouraging students to create something of their own.

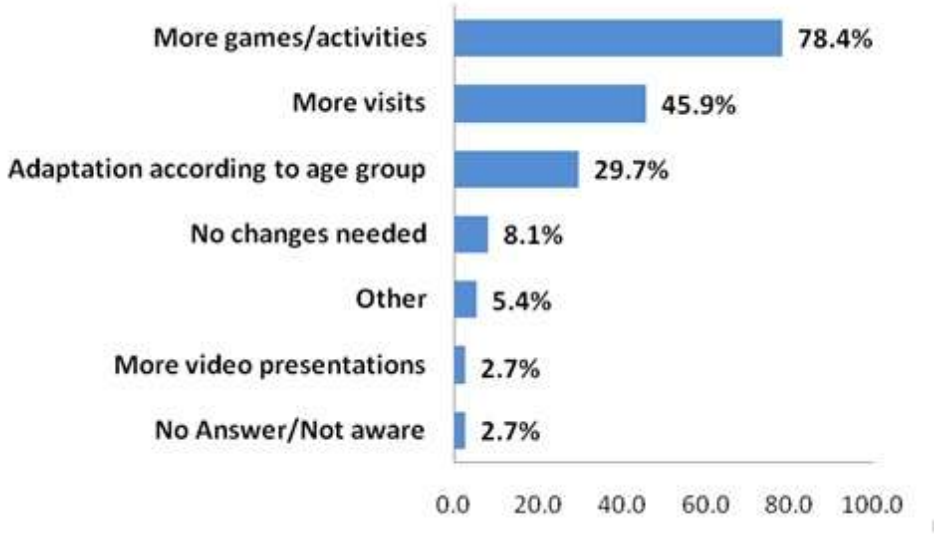

Figure 41: Suggestions for Improving the Educational Activity

6.3. Conclusions from the Analysis

In conclusion, the analysis of the questionnaires indicates that the activities conducted within the WEEE BEHAVE campaign were widely accepted by all participants. No negative feedback was received for any question, which is an important indicator for the overall evaluation of the campaign. The results demonstrate that the activities were highly successful, as they were greatly enjoyed by the students and very positively evaluated by the respondents..

Furthermore, the evaluation revealed a **very significant finding**: there is a **strong willingness from all participants for the activities to be repeated next year**, along with robust support for **establishing them as an annual initiative.**

7. Conclusions

Summing up, the implementation of the WEEE BEHAVE pilot campaign in schools proved to be highly successful, exceeding initial expectations in terms of participation, engagement, and impact. The strong enthusiasm shown by both students and educators demonstrated that early preparatory activities played a crucial role in motivating children and fostering positive attitudes toward the campaign. Beyond the impressive quantities of WEEE collected, the most significant outcome was the increased awareness and understanding among students regarding the importance of recycling electrical and electronic equipment, highlighting the educational value of the initiative.

The success of the WEEE BEHAVE pilot campaign is reflected both in the impressive numbers achieved and in the creative engagement of the students. A total of 1,219 WEEE items were collected, weighing 1,815 kilograms, demonstrating not only the active participation of schools but also the tangible environmental impact of the initiative. Beyond these measurable results, students were actively involved through interactive activities, games, and video projects, which allowed them to apply theoretical concepts about WEEE recycling in a practical and enjoyable way. By combining creativity, collaboration, and hands-on experiences, the pilot fostered a strong sense of ownership among students, motivating them to take an active role in promoting sustainable behaviors both at school and at home, and reinforced the educational value of the campaign.

Figure 42: Students enjoying Rethymno's WEEE BEHAVE board game "Dive in to WEEE"

Despite the challenges encountered during implementation, including differences in school sizes, logistical limitations, and varying levels of initial teacher support, these obstacles provided valuable insights for future initiatives. Addressing these challenges required flexibility, careful planning, and effective communication, all of which contributed to the overall learning experience of the pilot. The lessons learned from this process underlined the importance of inclusive participation strategies, strong stakeholder engagement, and well-coordinated awareness-raising actions, which will be essential for scaling up and improving similar campaigns in the future.

Additionally, the campaign's success extended beyond the schools, reaching the wider community and encouraging active participation from citizens of all ages. As part of this broader engagement, a total of 226 WEEE items were collected from the public, weighing 306 kilograms. These contributions demonstrate that the initiative not only educated students but also effectively raised awareness among the local community, translating environmental education into real, tangible action and reinforced the campaign's overall impact.

Looking ahead, there is strong potential for the further development and expansion of similar initiatives. Integrating such actions more systematically into the educational framework would allow a greater number of schools to participate and benefit from hands-on environmental education. In addition, extending the campaign beyond primary education to include secondary schools would significantly broaden its reach and impact, empowering older students to develop deeper environmental awareness and actively contributed to sustainable waste management practices.

Annexes

Annex 1 – Attendance list from educational activities

Εκπαιδευτικό Πρόγραμμα **WEEE BEHAVE** με στόχο την ορθή διαχείριση των Α.Η.Η.Ε.
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Παρουσιολόγιο Συμμετεχόντων Δημοτικών Σχολείων & Εκπαιδευτικών
Primary schools & Teachers attendee list

	Ονοματεπώνυμο Full Name	Δημοτικό Σχολείο Primary School	Τάξη Class	Αριθμός μαθητών Number of students	Ημερομηνία Date	Υπογραφή Signature
1	[redacted] ΜΑΡΙΑ	3ο Δ.Σ. ΡΕΘΥΜΝΟΥ	Γ1	21	20/1/2026	
2	Τριανταφύλλια [redacted]	3ο Δ.Σ Ρεθύμνου	Ε	19	20/1/2026	
3	[redacted] Αναίνης	13ο Δ Σχ. Ρεθύμνου	Δ1	21	21/1/2026	
4	[redacted] Άδαμα	13ο Δ.Σχ Ρεθύμνου	Γ2	17	21/1/2026	
5	[redacted] Ηλίας	10ο Δημ Σχ. Ρεθύμνου	Δ1	12	22/1/2026	
6	Βαλίνσια Φ[redacted]	10ο Δημ Σχ Ρεθύμνου	Δ2	7	22/1/2026	
7	[redacted] Μαρία	10ο ΔΣ Ρεθύμνου	Ε'	17	22/01/2026	
8	[redacted] Παναγία	1ο Πειραματικό Δ.Σχ. Ρεθύμνου	Β	20	28/1/2026	

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9	Πέτρος [redacted]	16ο Δ Σ Ρεθύμνου	Δ	16	27/1/26	
10	Βασιλεία [redacted]	8ο Δ Σ Ρεθύμνου	Γ1	15	29/1/26	
11	[redacted] Δάφνη					
12	[redacted] Μαρία	8ο Δ.Σχ	Δ1	18	29/1/2026	
13	[redacted] Χρυσόστομος	8ο Δ Σχ. Ρεθύμνου	Ε2	12	29/1/2026	
14	[redacted] Κατερίνα	8ο Δ.Σχ. Ρεθύμνου	Σ2'	12	29/1/2026	
15	[redacted] Θεοφίλη	7ο Δ Σ ΡΕΘΥΜΝΟΥ	Γ1	19	30/01/2026	
16	Ν[redacted] Αγγελική	7ο Δ Σ. ΡΕΘΥΜΝΟΥ	Γ1	19	30/01/2026	
17	Γεώργιος [redacted]	1ο Δ Σ ΡΕΘΥΜΝΟΥ	Γ1	19	30/01/2026	

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26	[redacted] (Εκπ/κός)	7ο Δημοτικό	Δ2	16	30/1/26	
27	[redacted] Κοσμάς	7ο Δημοτικό	Δ2	16	30/1/26	
28	[redacted] Χαρίκλεια	Δ.Σ. Άδελε	Δ3	16	2/2/26	
29	Κωνσταντίνος [redacted]	Δ.Σ. Άδελε	Δ3	16	2/2/26.	
30	[redacted] Ράνια	2ο Δ.Σ. Ρεθύμνου	Δ2	24	3/2/26	
31	[redacted] Ελπίδα	2ο Δ.Σ. Ρεθύμνου	Δ2	24	3/2/26	
32	[redacted] Αγγελική	6ο ΔΣ Γερανίου	Γ	23	3/2/26	
33	[redacted] Αναστασία	6ο ΔΣ Γερανίου	Δ	23	3/2/26	

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18	Γεωργία [redacted]	1ο Περιφερειακό Δημοτικό Ρεθύμνου	Γ'	20	28/1/2026	
19	Βαρβάρα [redacted]	1ο Πειραματικό Ρεθ	Γ'	20	28/1/2026	
20	[redacted] Κατερίνα	8ο Δημ Σχολείο Ρεθ	Γ2	17	29/1/2026	
21	Μαρία [redacted]	8ο Δημ Σχ. Ρεθ.	Γ2	17	29/1/2026	
22	[redacted]	8ο Δ.Σ Ρεθύμνου	Δ2	19	29/1/2026	
23	[redacted]	8ο Δ.Σ. Ρεθύμνου	Δ2	19	29/1/2026	
24	[redacted] Φίλιππος	12ο Δ.Σ. Άδελε	Γ1	20	3/2/2026	
25	[redacted] Παναγιώτα	12ο Δ.Σ. Άδελε	Γ1	20	2/2/2026	

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34	[redacted] Μυρτώ	Άδεια	Γ2	22	2-2-2026	
35	[redacted]	Άδεια	Γ2	22	2-2-2026	
36	[redacted] Γιάννης	Άδεια	Δ2	15	2-2-2026	
37	[redacted] Μαρία	Άδεια	Δ2	15	2-2-2026	
38	[redacted] ΚΕΝΤΡΟ	ΑΔΕΑΕ	ΤΠΕ	-	2-2-26	
39	[redacted] Δώρα	2ο Δημ. Ρεθύμνου	Δ1	24	3-2-26	
40	[redacted] Αρετούσα	2ο Δημ Ρεθύμνου	Δ1	24	3-2-26	
41	[redacted] Πόπη	2ο Δημ. Ρεθύμνου	Ε1	20	3-2-26	

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42	[redacted]	Δ.Σ. Άδεια	Δ1	17	2/2/2026	
43	Αγορίτσα [redacted]	2ο Δημ. Ρεθύμνου	Γ2	20	3-2-2026	
44	[redacted]	2ο Δημ Ρεθύμνου	Γ1	22	3-2-2026	
45	[redacted] Ελευθερία	2ο Δ.Σ Ρεθύμνου	Ε2	18	3-2-2026	
46	[redacted] Ανδρέας	1ο Δ.Σ Ρεθύμνου	Ε2	20	4-2-2026	
47	[redacted] Μάνια	1ο Δ.Σ Ρεθύμνου	Δ1	17	4-2-2026	
48	[redacted] Μαρία	1ο Δ.Σ Ρεθύμνου	Δ2	21	4-2-2026	
49	[redacted]	>> >>	Δ1	21	04/02/26	

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50	Ελένη [redacted]	3ο Δημ Σχ Ρεθύμνου	Δ1	12	20-1-26	
51	[redacted] Αικατερίνη	»	»	»	»	
52	[redacted] Χριστίνα	3ο Δημοτικό Ρεθύμνου	Δ2	13	20-1-26	
53	[redacted] Γιαννούλα	13ο Δημ Σχ Ρεθύμνου	Ε2	20	21/1/26	
54	[redacted] Καλλία	13ο Δημ Σχ Ρεθύμνου	Ε2	20	21/1/2026	
55	[redacted] Σία	13ο Δημ Σχ Ρεθύμνου	Γ1	19	21-1-26	
56	[redacted] Φιλιππα	13ο Δημ Σχ Ρεθύμνου	Γ1	19	21-1-26	
57	[redacted] Ν.	13ο Δημ. Σχ Ρεθύμνου	Δ3	22	21-1-26	

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58	[redacted] Γεωργία	10ο Δ.Σ. Ρεθύμνου	Γ'	13	22/1/2096	
59	[redacted] Μαρία	16ο ΔΣ Ρεθύμνου	Γ1	15	27/1/2026	
60	Μαρία	16ο Δ Σ Ρεθύμνου	Γ2	15	27/1/2026	
61	[redacted] Ελευθερία	16ο Δ Σ Ρεθύμνου	Γ2	15	27/1/2096	
62	Μαρία [redacted]	1ο Πειρ. Δ Σχ Ρεθ	Α	20	28/1/2026	
63	Ν.Νος [redacted]	1ο Πειρ. Δημοτικό Ρεθύμνου	Δ	20	28/1/2026	
64	Αρχοντία [redacted]	1ο Πειρ. Δημ. Σχολείο Ρεθύμνου	Δ	20	28/1/2026	
65	Αναστασία [redacted]	16ο Δ.Σ. Ρεθύμνου	Δ	18	27/1/2026	

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Εκπαιδευτικό Πρόγραμμα **WEEE BEHAVE** με στόχο την ορθή διαχείριση των Α.Η.Η.Ε.

Pilot action WEEE BEHAVE : increasing the awareness on WEEE waste prevention

Παρουσιολόγιο Συμμετεχόντων Δημοτικών Σχολείων & Εκπαιδευτικών

Primary schools & Teachers attendee list

	Ονοματεπώνυμο Full Name	Δημοτικό Σχολείο Primary School	Τάξη Class	Αριθμός μαθητών Number of students	Ημερομηνία Date	Υπογραφή Signature
66	[redacted]	15ο Δ.Σ.	Γ2	15	04/02/2026	
67	[redacted] Μαρία	15ο Δ.Σ.	Δ2	21	04/02/2026	
68	[redacted]	7ο Δ.Σ.	Γ2	19	30/01/2026	
69	[redacted]	7ο Δ.Σ.	Ε2	14	30/01/26	

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Annex 2 – Questionnaire

ΕΡΩΤΗΜΑΤΟΛΟΓΙΟ ΑΞΙΟΛΟΓΗΣΗΣ ΕΚΠΑΙΔΕΥΤΙΚΗΣ ΔΡΑΣΗΣ WEEE BEHAVE

Το παρόν ερωτηματολόγιο έχει στόχο την αξιολόγηση της εκπαιδευτικής δράσης WEEE BEHAVE που υλοποιήθηκε στα πλαίσια του έργου e-WAsTER Interreg EURO-MED. Η συμπλήρωση του ερωτηματολογίου είναι ανώνυμη. Τα δεδομένα που θα συλλεχθούν θα χρησιμοποιηθούν αποκλειστικά για τους σκοπούς του έργου και θα αναλυθούν και παρουσιαστούν συγκεντρωτικά, χωρίς καμία δυνατότητα ταυτοποίησης των συμμετεχόντων.

ΜΕΡΟΣ Α' ΓΕΝΙΚΕΣ ΠΛΗΡΟΦΟΡΙΕΣ

Α1. Ποια είναι η ιδιότητα σας;

- Στέλεχος Πρωτοβάθμιας εκπαίδευσης ◯
- Διεύθυνση Σχολείου ◯
- Δάσκαλος/Δασκάλα ◯
- Άλλο ◯
- Δεν απαντώ ◯

Α2. Σε ποια τάξη διδάσκετε;

Α' Δημοτικού	Β' Δημοτικού	Γ' Δημοτικού	Δ' Δημοτικού	Ε' Δημοτικού	ΣΤ' Δημοτικού	Δεν Απαντώ	Ν/Α
◯	◯	◯	◯	◯	◯	◯	◯

Α3. Πόσα παιδιά έχει το τμήμα σας;

- Έως 10 ◯
- 11-15 ◯
- 16-20 ◯
- >20 ◯
- Δεν απαντώ ◯
- Ν/Α ◯

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ΜΕΡΟΣ Β' ΕΡΩΤΗΣΕΙΣ ΓΙΑ ΤΙΣ ΕΚΠΑΙΔΕΥΤΙΚΕΣ ΔΡΑΣΕΙΣ
Αξιολογήστε από το 1 έως το 5, όπου 1=Καθόλου και 5=Πάρα πολύ τις παρακάτω ερωτήσεις:

Β1. Πόσο ικανοποιημένος/η είστε από τις **εκπαιδευτικές δράσεις** που υλοποιήθηκαν;

1=Καθόλου	2=Λίγο	3=Ούτε Λίγο Ούτε Πολύ	4=Πολύ	5=Πάρα Πολύ	Δεν Γνωρίζω/ Δεν Απαντώ
◯	◯	◯	◯	◯	◯

Β2. Πόσο ικανοποιημένος/η είστε από το **εκπαιδευτικό υλικό** που παρουσιάστηκε στους μαθητές;

1=Καθόλου	2=Λίγο	3=Ούτε Λίγο Ούτε Πολύ	4=Πολύ	5=Πάρα Πολύ	Δεν Γνωρίζω/ Δεν Απαντώ
◯	◯	◯	◯	◯	◯

Β3. Πόσο **κατανοητό** ήταν το εκπαιδευτικό υλικό από τους μαθητές/τριες;

1=Καθόλου	2=Λίγο	3=Ούτε Λίγο Ούτε Πολύ	4=Πολύ	5=Πάρα Πολύ	Δεν Γνωρίζω/ Δεν Απαντώ
◯	◯	◯	◯	◯	◯

Β4. Πόσο **άρεσαν-ενθουσίασαν** τους μαθητές/τριες οι εκπαιδευτικές δράσεις που υλοποιήθηκαν;

1=Καθόλου	2=Λίγο	3=Ούτε Λίγο Ούτε Πολύ	4=Πολύ	5=Πάρα Πολύ	Δεν Γνωρίζω/ Δεν Απαντώ
◯	◯	◯	◯	◯	◯

Β5. Πόσο πιθανό είναι **να συμμετέχετε ξανά** σε μια παρόμοια δράση, εάν πραγματοποιηθεί την **επόμενη σχολική χρονιά**;

1=Καθόλου	2=Λίγο	3=Ούτε Λίγο Ούτε Πολύ	4=Πολύ	5=Πάρα Πολύ	Δεν Γνωρίζω/ Δεν Απαντώ
◯	◯	◯	◯	◯	◯

Β6. Αξιολογήστε από το 1 έως 5 όπου 1= Σίγουρα Όχι και 5= Σίγουρα Ναι, θα επιθυμούσατε η δράση αυτή να καθιερωθεί **ετησίως**;

1=Σίγουρα Όχι	2=Μάλλον Όχι	3=Ούτε Ναι Ούτε Όχι	4=Μάλλον Ναι	5=Σίγουρα Ναι	Δεν Γνωρίζω/ Δεν Απαντώ
◯	◯	◯	◯	◯	◯

Β7. Ποιες προτάσεις θα κάνατε για την βελτίωση της δράσης;

Περισσότερες δράσεις/παιχνίδια ◯
Προβολή περισσότερων video ◯
Περισσότερες επισκέψεις στο σχολείο ◯
Προσαρμογή ανά ηλικιακή ομάδα ◯
Δεν προτείνω κάποια αλλαγή ◯
Δεν γνωρίζω/ Δεν απαντώ ◯

Άλλο: Παρακαλώ συμπληρώστε.....

Παρακαλείστε μετά την συμπλήρωση του ερωτηματολογίου να το στείλετε στο παρακάτω email: ypavlaki@rethymno.gr.

Ευχαριστούμε πολύ για την συμμετοχή σας!

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January 2026

WEEE BEHAVE
Evaluation and Conclusions

Annex II. Union of Bulgarian Black Sea Local Authorities Varna region, Bulgaria (P7)

prepared by PP7: Union of Bulgarian black Sea Local Authorities (UBBSLA)

https://ewaster.interreg-euro-med.eu/

Executive Summary

The WEEE BEHAVE implementation in Varna region (Bulgaria) represents a behaviour-oriented, education-driven pilot embedded in strong regional and institutional cooperation. By targeting early-age learners and leveraging creative participation, the initiative addressed foundational challenges in e-waste awareness while laying the groundwork for future scalable and data-driven interventions.

WEEE BEHAVE in Varna region was focused on:

- Raising awareness among primary school students about the environmental impacts of e-waste.
- Stimulating behavioural change through interactive education, creative competitions, and participatory workshops.
- Increasing local engagement in responsible disposal and recycling of electronic waste.
- Supporting the development of a long-term culture of sustainability within families and broader communities.

The Varna region provided a favourable environment for the pilot due to its strong educational infrastructure, active municipal involvement, and public spaces that allow high visibility for awareness activities. The campaign was led by the Union of Bulgarian Black Sea Local Authorities (UBBSLA), with institutional support from the Municipality of Varna and the Regional Department of Education – Varna, and expert and logistical assistance from the Public Environment Center for Sustainable Development. This cooperation ensured smooth access to schools and alignment with local and European sustainability objectives.

The public launch of WEEE BEHAVE took place in July 2025 during the Ecofestival "Varna – the Sea" in the Sea Garden of Varna, where an interactive exhibition introduced children, residents, and tourists to the concept of electronic waste and its environmental impacts. Old phones, cables, keyboards, and other electronic components were presented not as rubbish, but as resources that can be reused or recycled, helping visitors understand how everyday choices affect the environment.

The main implementation phase followed in November and December 2025, when UBBSLA experts conducted interactive educational sessions in primary schools across the region. More than 400 students from grades 1 to 4 participated in engaging lessons that combined discussions, games, and hands-on demonstrations of electronic waste disassembly and recycling processes. These age-appropriate activities helped children understand what electronic waste is, why it is harmful when improperly disposed of, and how its components can be given a second life.

To reinforce learning and encourage creativity, a regional student competition was launched, inviting children to create art installations, posters, drawings, and presentations using electronic waste materials. A total of 128 projects were submitted by students from 30 schools, including both urban and rural municipalities, and more than 256 kilograms of electronic waste were reused in the process. The competition demonstrated how environmental education can be combined with creativity and play, while delivering strong messages about sustainability and circular economy principles.

All submitted projects were showcased in a public exhibition at the UBBSLA office, which was open to visitors, families, and the wider community. Each participating child received a certificate and a small prize in recognition of their effort, while the most outstanding projects were awarded during a public ceremony held in December 2025, attended by

representatives of the Regional Department of Education – Varna. The campaign also reached a broader audience through local and regional media coverage, public exhibitions, and social media communication, engaging thousands of citizens in the topic of electronic waste.

Overall, the WEEE BEHAVE campaign in the Varna region demonstrated that early education, creativity, and strong local partnerships can play a key role in building environmental awareness and promoting responsible behaviour. The pilot laid a solid foundation for future expansion, with the potential to reach more schools, age groups, and communities, and to further strengthen the link between awareness-raising activities and real-life sustainable practices.

Objective and Context of the Pilot

Brief Description of the Motivation

The primary motivation behind the implementation of the WEEE BEHAVE activities in the Varna region was to address the growing challenge of improper electronic waste (WEEE) management by intervening at an early educational stage. Rather than testing a new physical waste collection system, the initiative focused on behavioural change and awareness-building as foundational drivers of long-term circular economy practices.

Key motivational drivers included:

- Preventive environmental action: Educating children early to reduce future environmental impacts from improper e-waste disposal.
- Behavioural transformation: Encouraging responsible attitudes toward reuse, recycling, and sustainable consumption through experiential learning.
- Circular economy orientation: Demonstrating the reuse potential of electronic components through creative repurposing rather than disposal.
- Community multiplier effect: Leveraging children as agents of change to influence household and community behaviour.
- Alignment with EU sustainability priorities: Embedding the campaign within the broader EWAsTER framework, which promotes innovation and behavioural approaches to waste reduction.

Overall, WEEE BEHAVE in Varna was motivated by the need to build a long-term culture of sustainability, rather than achieve short-term collection targets.

Regional Context

The Varna region is a major urban and educational hub in northeastern Bulgaria, with a dense network of primary schools and strong municipal structures. Like many urban regions, Varna faces challenges related to increasing volumes of electronic waste, driven by rapid technological turnover and household consumption patterns.

The region offers favorable conditions for pilot initiatives due to:

- High concentration of educational institutions (more than 150 public schools, ≈10 are private ones, 6 universities, some Vocational Training Centers, Language academies)
- Existing municipal interest in environmental and sustainability initiatives.

- Public accessibility to high-visibility spaces (e.g., Sea Garden) for outreach and exhibitions.

Institutional Context

The campaign was embedded within a multi-level institutional framework, ensuring legitimacy, access, and coordination:

- UBBSLA served as the lead implementing organization.
- Municipality of Varna provided official backing and institutional endorsement.
- Regional Department of Education – Varna facilitated integration into school schedules and ensured compliance with educational standards.
- Public Environment Center for Sustainable Development (PECSD) provided technical, logistical, and expert support.

This institutional ecosystem enabled smooth implementation across schools while aligning local actions with EU-funded project objectives under EWAsTER.

Challenges Targeted by the Initiative

The WEEE Behave campaign in Varna region explicitly aimed to address:

- Low awareness of e-waste impacts among young children and households.
- Limited understanding of reuse and recycling concepts at early educational stages.
- Behavioural inertia related to improper disposal of electronic devices.
- Disconnect between environmental education and practical action**.**

Challenges Faced During Implementation

Despite successful execution, several limitations were identified:

- Measurement limitations: No structured pre- and post-intervention surveys were publicly reported to quantify behavioural change.
- Lack of long-term impact data: The campaign did not yet document measurable changes in household e-waste disposal behavior or collection volumes.
- Pilot-scale scope: Activities were limited to grades 1–4, with scalability to other age groups or regions not yet demonstrated.
- Behavioural outcomes vs. awareness: While awareness and engagement were high, translating these into sustained behavioural change requires longer-term monitoring.

These challenges are typical for pilot educational interventions and were partially anticipated within the project design.

Stakeholders Involved and Their Respective Roles

Stakeholder	Role and Responsibilities
Union of Bulgarian Black Sea Local Authorities (UBBSLA)	Lead implementer; campaign design, coordination, competition organization, award ceremony hosting, and overall project management within EWAsTER.

Stakeholder	Role and Responsibilities
Public Environment Center for Sustainable Development (PECSD)	Provided expert knowledge, educational content, logistical support, and methodological input for workshops and activities.
Municipality of Varna	Institutional support, facilitation of access to schools, endorsement of campaign objectives, and support for public visibility activities.
Regional Department of Education – Varna	Authorization and coordination with primary schools; integration of activities into school timetables; Award ceremony representation of the institution and thus establishing the WEEE Behave campaign as a significant educational event..
Primary Schools (Grades 1–4)	Implementation venues; teachers supported participation, supervised activities, and encouraged student engagement.
Students (Primary School Pupils)	Primary beneficiaries and active participants; creators of competition projects and key agents of behavioural dissemination to families.
Parents and Families	Indirect stakeholders; exposed to campaign messages through children's participation and public exhibitions.
Local Community and General Public	Beneficiaries of awareness-raising through press-releases, exhibitions and public events.
EWAsTER Project Framework (EU level)	Strategic framework ensuring alignment with broader EU circular economy and sustainability goals.

SECTION - Partner Introduction: UBBSLA

Real Implementation in Varna Region

Planning and Launch

In order to start promoting the WEEE Behave campaign to the regional stakeholders, target groups and general public, UBBSLA team decided to take part in the Ecofestival "Varna – the Sea" in July 2025, during the high touristic season and summer brake of students. This annual festival is a very important event for the Varna region from an ecological point of view, with participants of municipalities, youth associations, and NGOs working in the field of ecology. So, using this opportunity under the banner "Electronic World Without Waste: Exhibition for the Future of Our Planet!", UBBSLA stand showcased outdated gadgets no one uses anymore—but with a twist: instead of trash, they became teaching tools for sustainability. Held on July 18, 2025, in the scenic Sea Garden of Varna, our exhibition stand gathered over 30 enthusiastic children from grades 1 to 4, along with visitors and tourists, to participate in an inspiring journey toward a cleaner future. Children learned how old phones, keyboards, and cables could be creatively reused or properly recycled, giving them a second life instead of polluting our oceans and land.

Pictures:

Core Activities

The real implementation of the campaign WEEE BEHAVE was planned to start in November till December 2025, targeting pupils from grades 1 to 4 in primary schools throughout the Varna municipality and the rural municipalities from the region. Preparation involved detailed scheduling of school visits, educational sessions, and the structuring of competition rules.

Partnerships and Support:

- Implemented by UBBSLA with logistic and expert support from the Public Environment Center for Sustainable Development (PECSD)**.**
- Official support and cooperation from the Municipality of Varna and the Regional Department of Education – Varna ensured access to schools and integration into local educational schedules.

STAGE 1

Educational Sessions in Schools (NOVEMBERE 2025)

Target Group: Primary school students 1st-4th grade from the region and their teachers

UBBSLA experts visited selected three schools (19 classes in total) and within one class hour introduce to students the essence of e-waste, why it is important to recycle it, evaluate it and how we can deal with the problem together. In the form of a talk, educational games and a workshop with a practical demonstration of the processes of recycling and

disassembling old electrical appliances – children learned how each part of their old devices can be reused. Pedagogical approaches were adapted to suit early school ages with an emphasis on interaction, hands-on activities, and experiential learning to improve comprehension and long-term retention. At the end of the session, UBBSLA experts announced the start of the student competition, present the rules for participation and register the interested children.

Duration: 20 days

List of schools visited:

- Primary School "Dobri Chintulov" - Varna (12 classes)
- Private Primary School PHOENIX – Varna (1 class)
- "St. St. Cyril and Methodius" Primary School – Varna (6 classes)

Results:

- Over **400 children** participated from 3 different schools in the learning sessions
- One of the most significant results of the campaign is the **increased awareness among students** about the proper way to manage e-waste. Through a variety of educational materials and lessons, children learned not only what e-waste is, but also how it can be recycled and reused. This knowledge is essential for the future of our planet and for creating sustainable practices in society.
- The **active participation of students** was another key aspect of the campaign. Many children took part in the organized competition for the most creative e-waste project, which was part of the program. The competitive nature of the activity not only stimulated their interest, but also motivated them to actively engage in solving the problems related to e-waste. As a result, students acquired valuable practical skills for the proper collection and sorting of electronic devices and their components.
- The **educational resources** provided within the campaign also played an important role. Interactive teaching methods made the process more interesting and fun for the children, while helping them to better understand the topic. Lessons were adapted to suit the age and level of understanding of the students, which further facilitated the acquisition of new knowledge.
- The campaign has fostered a sense of **social responsibility in children**. They are aware of the importance of collective efforts to protect the environment and will begin to apply what they have learned not only at school but also at home. This is especially important, as instilling such values from an early age can have a long-lasting positive effect on the behavior of young people and their families.

More information (links):
https://www.ubbsla.org/weee-behave-success-and-multiplication/
https://www.ubbsla.org/weee-behave-competition-notice/
https://www.ubbsla.org/weee-behave-campaign-in-varna/
https://www.ubbsla.org/weee-behave-campaign-starts/
https://www.ubbsla.org/ewaster-ecofest-varna-2025/

Pictures:

STAGE 2

Creative Student Competition

As a major component of WEEE BEHAVE, a creative student competition was launched to reinforce learning and encourage active participation.

According to the rules in the competition, children 1-4 grade from Varna region were able to participate individually or as a team and to develop a project, which can be one of the following categories:

• Projects made from recycled electronic parts (old circuit boards, cables, batteries and other materials), for example robots, houses, decorations, etc.

• Posters, collages, drawings that show what e-waste is and why it is important to recycle it, you can add your own ideas on how to dispose of waste.

• Presentations – children prepare short presentations (perhaps with the help of the teacher) in which they explain what e-waste is and why it is important to recycle it, you can use photos, diagrams and even small demonstrations.

Duration: 15 days

Evaluation & Criteria: A nine-member jury evaluated submissions based on the following criteria: Creativity and originality; Use of materials; Impact and educational value

Pictures:



Results:

- **128 creative art installations**, such as robots, houses, birds, a space car, a train, a magic tree, a clock and many others, made from waste electronic materials, electronic boards, batteries, old electronic devices. In addition, the children presented numerous posters, posters and presentations on the topic of e-waste and the importance of its recycling.
- Children from **30 classes from 13 different schools** and their families/teachers were involved, half of them located outside the city of Varna (rural municipalities)
- More than **256 kg of electronic waste was collected** in order to be created the e-waste art-installations for the student competition.

More information:
Pictures of all projects can be found here
https://www.ubbsla.org/weee-behave-competition-evaluation-results/
https://www.ubbsla.org/weee-behave-competition-award-ceremony/

Pictures:










STAGE 3

Exhibition & Awards

We have established an exhibition hall for all received creative installations in the UBBSLA office (1st floor of our building), which was open for public also. Each child who participated in the competition with a project received a certificate prepared and signed by the UBBSLA team leader, as well as a special prize (a branded, as well as a Christmas chocolate calendar, having the Christmas spirit around the holidays).

Thanksgiving letters and certificate for participation were prepared for all teachers and schools directors took part in the WEEE Behave campaign.

An award ceremony was held on 18 December 2025 at the UBBSLA office. The first 3 placed Winners received recognition along with certificates and special prizes (vouchers for a large public bookstore). This public event was great compliment for children, their partners and teachers involved, due to the Head of the Regional Department of Education – Varna attended and she personally awarded students with projects that ranked in the top three places.

Results:

- We have established a public **exhibition hall** for all received creative installations in the UBBSLA office
- Following the competition, the best student works were planned for a **photo exhibition** in a public space (entrance of Varna's Sea Garden) to display the projects to a wider audience and further reinforce community awareness.

Pictures:

Outcomes and Reach

Participation Metrics

- **400+ students** engaged in educational sessions within the first week of implementation.

- The competition generated **128 submitted projects**, indicating strong engagement and creativity across participating schools.

Educational Impact

Qualitative outcomes include:

- Increased understanding among young learners about the environmental footprint of e-waste.
- Enhanced creativity in applying recycling principles to tangible projects.

Stakeholder feedback indicated a positive reception from pupils, teachers, and parents, though formal attitude surveys or pre/post assessments were not publicly documented.

Community Visibility

Public exhibition and award events helped extend the campaign's reach beyond schools, engaging families and local residents in the broader discussion on sustainable waste practices.

Technical Strengths & Innovation

The WEEE BEHAVE campaign in Varna region illustrated several technical strengths:

1. **Age-appropriate educational design** with interactive and practical activities tailored for young students.
2. **Creative competition structure** that integrated environmental education with arts and design thinking.
3. **Partnership model** combining local authorities, education departments, and expert organisations for broad institutional support.
4. **Integration within a broader EU project framework (EWAsTER)** ensuring alignment with transnational innovation goals.

Challenges and Limitations

Although generally successful, the Varna implementation faced typical pilot challenges:

- **Scope of measurement:** No publicly available detailed monitoring data (e.g., post-campaign attitude surveys) has been released to quantify behavioural change.
- **Long-term tracking:** Sustained follow-up metrics (e.g., actual increases in e-waste collection at local collection points) have not yet been documented.
- **Scalability assessments:** As a pilot, scaling to broader age groups or community sectors remains to be demonstrated in future stages of EWAsTER.

Recommendations for Future Implementation

Based on observed activities and documented results:

1. **Develop structured metrics** for pre/post knowledge and behaviour change among participants.

2. **Incorporate longitudinal follow-up** to examine impacts on household recycling behaviour.
3. **Expand educational materials** to include digital resources for remote learning.
4. **Integrate partnerships with e-waste collection services** to close the loop between awareness and practical recycling outcomes.

Results from the Testing Phase (with description of KPIs)

School-Based Competition & Awareness Campaign

- Number of participating students: **430+**
- Number of participating schools: **13 (30 different classes)**
- Student engagement: **128**
- Changes in student attitudes and behaviors: ???
- Teacher involvement**: 30+**
- Number of external organizations (NGOs, sponsors) supporting the campaign: **5**

City Hall Awareness & Participation Campaign

- Number of participating city departments: **1**
- Number of city hall employees involved: **2**
- Changes in city hall policies and practices: ????
- Public awareness of the campaign: **4 press-releases** on local/regional media + **2.766 engaged people** from our social media posts
- Community engagement: ???
- Number of new policies or procedures introduced to improve cooperation between departments: ????

Overall Campaign Impact & Long-Term Sustainability

- Number of campaign events and activities: **4**
- Media coverage: **4 press-releases** on local/regional media
- Social media engagement: **2.766 engaged people** from our social media posts.
- Partnerships: **4**
- Sustainability: ???

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January 2026

WEEE BEHAVE
Evaluation and Conclusions

Annex III. Union of the Municipalities Pian del Bruscolo Pian del Bruscolo area, Italy (P8)

Report prepared by PP8: Unione Comuni Pian del Bruscolo (UCPB)

https://ewaster.interreg-euro-med.eu/

Document Control Information

Document Title	WEEE BEHAVE Evaluation and Conclusions
Project Title	Preventing e-waste from polluting MED water by turning waste into a resource.
Project Mission	Strengthening an innovative sustainable economy
Programme Priority	Greener MED
Specific Objective	RSO2.6: Promoting the transition to a circular and resource efficient economy
Document Author	Enrico Anghileri
Partners Involved	
Work Package	Work Package 2 –
Activity	A2.2 – Testing Solution: WEEE BEHAVE
Deliverable ID	D 2.2.1 – WEEE BEHAVE evaluation and conclusions for application of …
Doc. Status	Final 2026-03-05
Sensitivity	Public
Date of Production	2026-01-15

Document Approver(s) and Reviewer(s)

NOTE: All Approvers are required. Records of each approver must be maintained. All Reviewers in the list are considered required unless explicitly listed as Optional.

Name	Role	Action	Date
		<Approve / Review>	
Ricardo Sobral		*<Approve / Review>*	
		<Approve / Review>	

Document History

Versions	Date	Document status	Delivered by
1.0	2026-01-15	DRAFT	Enrico Anghileri
2.0	2026-03-05	FINAL	Enrico Anghileri

Table of Contents

Glossary

EC – European Commission

EU – European Union

LAP – Local Action Plan

LINK – Association LINK Entrepreneurial Center

MED – Mediterranean

MED Methodology – Transnational Methodology for e-waste Prevention and Management

ORZ – Environmental Research Institute

PACT – Alentejo Science and Technology Park

WEEE — Waste from Electrical and Electronic Equipment

Executive Summary

The WEEE BEHAVE pilot action, implemented by UCPB in the Pian del Bruscolo area (Pesaro-Urbino, Marche Region, Italy), successfully tested and escalated a school-based awareness and collection competition model to boost WEEE collection rates through behavioral change.

First edition (Oct 31–Dec 3, 2025): Two primary schools (Fabio Tombari - Padiglione Tavullia; Carlo Alberto Dalla Chiesa - Bottega Vallefoglia) engaged 162 pupils (4th-5th grades), collecting **560 kg** WEEE via classroom boxes and certified deliveries to Vallefoglia Recycling Centre. Padiglione won overall (**313 kg**), Bottega IV C top class (**126 kg**).

Second edition (Feb 3–Mar 5, 2026): Following demand from inspired stakeholders, **IC Papa Giovanni Paolo II** (4 buildings: Via Guidi/Montefeltro Montecchio, Monteciccardo, Tavullia) engaged **249 pupils**, collecting **799 kg** WEEE. Via Guidi won (385 kg), VB Via Guidi top class (**189 kg avg. 9 kg/pupil**).

Aggregated impact: **1,359 kg WEEE** from **411 pupils** across 2 institutes. Enthusiastic feedback, local media coverage (Vivere Pesaro, Nov 3, 2025), and Jan 19, 2026 award ceremony confirmed success.

Scalability proven: Expansion to new institute validates model for LAP integration and MED upscaling

1. Objective and Context of the Pilot

UCPB, as Project Partner 8, manages e-waste prevention in Pian del Bruscolo (Pesaro-Urbino province, ~50,000 inhabitants).

Challenges: low WEEE collection rates despite widespread centers and home pickups; need for behavioral change via education.

WEEE BEHAVE targets schools/families/policy makers, aligning with Marche Regional Waste Plan.

Stakeholders: UCPB (coordination), Marche Multiservizi (collection), schools (implementation), Senator Palmiro Ucchielli (endorsement)

Marche Multiservizi, the local waste management company responsible for collection and treatment services in the area, provided technical support including weighing, transportation, and processing of collected WEEE

1.1. Partner Introduction: UCPB

Unione Comuni Pian del Bruscolo (UCPB) is a public union of 7 municipalities in Pesaro-Urbino Province (Marche Region, Italy), established in 2003, serving ~50,000 inhabitants across Tavullia, Vallefoglia, and surrounding areas.

Headquartered at Strada Pian Mauro 47, Tavullia (PU), UCPB manages shared services including early childhood education, social policies, and environmental initiatives like waste prevention.

Led by President Sen. Palmiro Ucchielli (Mayor of Vallefoglia), with Project Manager Enrico Anghileri for eWAsTER, UCPB excels in EU-funded projects promoting sustainability (e.g., EWAsTER, European Waste Reduction Week 2025).

As PP8, UCPB coordinates WP3 (LAPs/Transfer), implements WEEE BEHAVE pilot, and collaborates with Marche Multiservizi for waste ops.

Expertise: Integrated waste planning aligned with Regional Waste Management Plan; focus on circular economy, education, and behavioral change to boost WEEE collection.

2. Pilot Methodology

The WEEE BEHAVE pilot unfolded in two distinct phases to ensure knowledge transfer before action.

Phase 1: Educational Preparation (October 31, 2025)

Delivered by Stefano Pirazzoli (Ludoteca del Ri) to ~162 pupils (4th-5th grades) across two schools: Fabio Tombari (Padiglione, Tavullia) and Carlo Alberto Dalla Chiesa (Bottega, Vallefoglia). Sessions (9-10:30 AM / 11-12:30 PM) used interactive/playful methods to teach:

- What is WEEE: Definition, examples (phones, toys, chargers vs. non-WEEE like batteries).
- Why special treatment: Hazardous components (heavy metals, pollutants) requiring certified recycling.
- Environmental consequences: Soil/water contamination, health risks from improper disposal/dispersion.

Sen. Palmiro Ucchielli opened, stressing early education for responsible behavior.

Figure 1: Sen. Ucchielli opening Phase 1 at Bottega School

Figure 2 Educational session at Carlo Alberto Dalla Chiesa - Bottega Vallefoglia (Oct 31, 2025) – pupils engaged in WEEE interactive learning

Figure 3 Educational session at Fabio Tombari School (Oct 31, 2025) – pupils engaged in WEEE interactive learning

Phase 2: Competitive Collection (Nov 14-Dec 3, 2025)

Pupils applied knowledge: small WEEE to classroom boxes (Dec 1-3); larger items to Vallefoglia Centre with scoring certificates scoring (e.g., equivalent to the actual weight of large items delivered).

Timeline:

- Education Oct 31, 2025;
- Collection Nov 14-Dec 3, 2025;
- Weighing/award Dec 3
- Award Ceremony January 19, 2026

Location:

- 2 schools
- Vallefoglia Recycling Centre.

Materials:

- Interactive sessions (through an educator from Ludoteca del Riù - Pesaro),
- classroom boxes
- certificates for deliveries of bulky items at Centro di Raccolta Vallefoglia thanks to the involvement of families
- Marche Multiservizi ensured logistics, weighing, and WEEE processing to certified facilities.

KPIs:

- WEEE collected (target: 300kg; achieved 560kg)
- pupils engaged (162);
- classes (9).
- Goals: Raise awareness, increase collection 50% vs. Baseline.

3. Human Resources and Associated Costs

Category	Details	Cost Estimate
Direct	Enrico Anghileri (PM, 20h), Stefano Pirazzoli (educator, 4h), Marche Multiservizi (logistics)	€1,200 (staff/logistics)
Indirect	UCPB admin (10h), materials (boxes)	€400
Total	-	**€1,600** (indicative; excludes prizes offered by Marche Multiservizi)

4. Testing Phase and Activities Carried Out

4.1. Participants and Target Groups

Primary:

162 pupils (82 4th graders, 80 5th graders) from 9 classes:

- Bottega (94 pupils: IV A 17, V A 26, IV B 15, IV C 18, V C 18).
- Padiglione (68 pupils: IV A 16, V A 20, IV B 16, V B 16)

Support provided:

Phase 1: Tailored training on WEEE identification (what is/isn't), special risks, recycling process – enabling accurate collection.

Phase 2: Competition incentives (class scoring), certificates for family deliveries.

Secondary:

Teachers (implementation), families (deliveries), Marche Multiservizi (logistics). Selection: All eligible classes for maximum reach.

5. Results from the Testing Phase (with description of KPIs)

5.1. Results of Collection Campaign

The two-phase approach proved highly effective: Phase 1 equipped pupils to identify/select proper WEEE (avoiding errors), leading to quality collection in Phase 2

Total: 560 kg WEEE (118kg school + 442kg Centre).

High engagement exceeded expectations.

Building	School (kg)	Centre (kg)	Total (kg)
Bottega	60.8	186	**246.8**
Padiglione	58.0	255.5	**313.5** (Winner)

Top class: Bottega IV C (126 kg).

Efficiency: ~6.98 kg/pupil.

Effectiveness: Enthusiasm + media coverage.

Scalability: Proven model.

Figure 4 WEEE weighing during competition (Dec 3, 2025) at Padiglione School

Figure 5 WEEE weighing during competition (Dec 3, 2025) at Bottega School

5.1.2 Second Competition – IC "Papa Giovanni Paolo II" (Feb–Mar 2026)

This second competition was launched following the strong interest expressed by the "**Papa Giovanni Paolo II" Comprehensive Institute**, whose staff and families had heard about the positive results of the first WEEE BEHAVE campaign in Pian del Bruscolo. It therefore represents a natural **escalation** and replication of the pilot, confirming its attractiveness and transferability.

The initiative involved **four school buildings** of the Institute:

1. Via Guidi – Montecchio
2. Montefeltro – Montecchio
3. Monteciccardo
4. Tavullia.

As in the first pilot, **the competitive phase was preceded by a dedicated educational phase**. On **3 February 2026** training sessions were delivered in the Tavullia and Monteciccardo buildings, while on **5 February 2026** they were replicated in the Via Guidi and Montefeltro buildings. The same team facilitated the activities: educator **Stefano Pirazzoli** from Ludoteca del Riù, project manager **Enrico Anghileri** (UCPB) and **Valeria**

Bertani from **Marche Multiservizi**, the local waste management company. The Mayor of Vallefoglia, **Sen. Palmiro Ucchielli**, opened the first session at Via Guidi, underlining the civic and environmental importance of proper WEEE management.

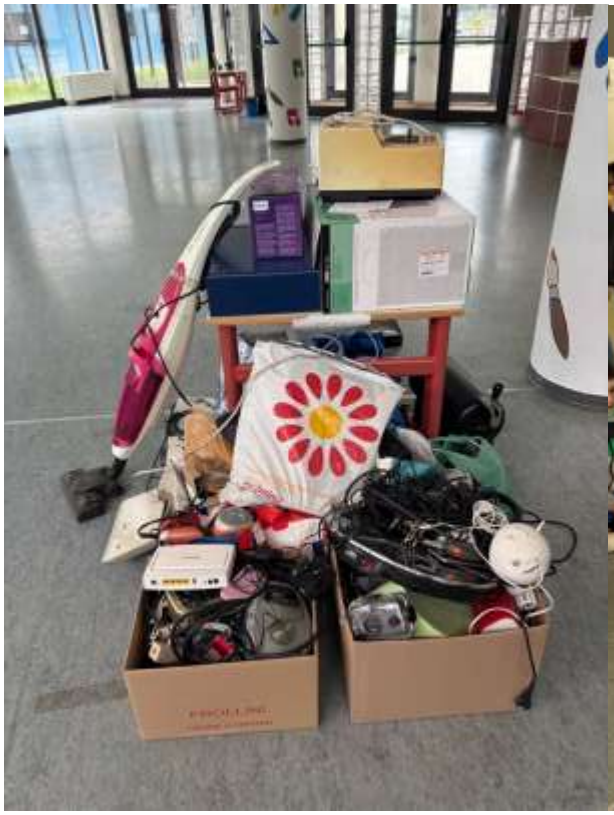
The competition itself took place on **4–5 March 2026**, engaging **249 pupils** from 4th–5th grades across the four buildings. As in the first edition, pupils collected **small WEEE at school** (e.g. phones, chargers, small appliances) while, with the active support of their parents, **bulky and heavy WEEE** (such as televisions, desktop computers and large household appliances) were delivered to the Vallefoglia Recycling Centre. The children effectively acted as **drivers of behavioural change** within their families, motivating parents to clean up garages and households and to use the formal collection point; a significant share of the total weight is therefore linked to these bulky items, which strongly influenced the final rankings.

Building (Plesso)	WEEE collected at school (kg)	WEEE via Centre vouchers (kg)	Total (kg)	Pupils	Average kg per pupil
Tavullia	160.400	35.000	195.400	53	3.687
Montecicardo	22.100	44.000	66.100	27	2.448
Via Guidi (Papa)	198.000	187.500	385.500	74	5.209
Montefeltro	114.980	37.500	152.480	95	1.605
TOTAL	**495.480**	**304.000**	**799.480**	**249**	**3.211**

Table – Results of the second competition per school building (IC "Papa Giovanni Paolo II")

The best performing class was **VB – Via Guidi**, with a stunning total of **188.7 kg** and an average of **8.986 kg of WEEE per pupil**, largely thanks to the high number of bulky items brought to the Recycling Centre with the help of families. The **best performing building** in absolute terms was **Via Guidi (Papa Giovanni Paolo II, 385.5 kg**), while Tavullia reached the second place with 195.4 kg.


GIOVANNI PAOLO II



5.1.3 Aggregated Results of Both Competitions

Considering both editions together, the WEEE BEHAVE pilot implemented by UCPB in Pian del Bruscolo has so far involved **411 pupils** (162 in the first competition plus 249 in the second) and has led to the collection of a combined total of **1,359.77 kg of WEEE** (553.5 kg from the first campaign and 799.48 kg from the second). This confirms the strong potential of school-based awareness and collection schemes to significantly increase WEEE capture rates in a relatively short time, while simultaneously engaging families and strengthening cooperation between schools, local authorities and the municipal waste operator Marche Multiservizi.

5.2. Award Ceremony

The pilot culminated in a celebratory Award Ceremony on January 19, 2026 (III Phase), held at both schools: Carlo Alberto Dalla Chiesa (Bottega, 9:00 AM) and Fabio Tombari (Padiglione, 11:00 AM). Approximately 160 pupils, teachers, and stakeholders attended, marking the competition's closure while reinforcing circular economy messages.

Key Highlights

Institutional Speeches and Recognition

The ceremony featured remarks from key stakeholders emphasizing the initiative's impact:

- Sen. Palmiro Ucchielli, Mayor of Vallefoglia and President of Unione dei Comuni Pian del Bruscolo (UCPB), praised pupils and families' commitment and highlighted the educational value of the initiative in fostering environmental responsibility.
- Eng. Franco Macor and Dr. Valeria Bertani (Marche Multiservizi), local waste management representatives, emphasized the importance of correct WEEE management and the critical role of young generations in establishing sustainable behavioral practices.
- Dr. Enrico Anghileri, Project Manager of eWAsTER, contextualized the competition within the broader Euro-Mediterranean framework and underlined its pilot significance and potential for regional transferability.
- Teaching staff acknowledged student dedication and summarized the educational journey from Phase 1 (awareness-building) to Phase 3 (celebration).

Competition Results Recognition

Awards were assigned recognizing excellence and inclusive participation:

Award Category	Winner	Outcome
Most Virtuous Class	IV C Bottega School	125.7 kg WEEE collected
Most Virtuous School Building	Padiglione School	313.5 kg WEEE collected (highest overall)

Prizes and Inclusive Messaging

All prizes were provided by Marche Multiservizi, adopting an inclusive and educational approach:

- School buildings received double sets of waste separation/recycling bins to support ongoing daily recycling practices and infrastructure.
- Every participating pupil (162 students) received a sustainable gadget—plantable pencils containing biodegradable material and seeds. Once the pencil is worn, the seeds can be planted to grow new plants and wood resources, embodying the philosophy that "Everyone wins!" and linking individual action to environmental regeneration.

Commitment to Future Expansion

Both Marche Multiservizi and UCPB committed to leaving additional educational materials with schools, with the shared objective of:

- Enabling repetition of the WEEE BEHAVE initiative in subsequent school years.
- Extending participation to lower primary grades (1st-3rd), maximizing awareness-raising across all ages.

- Supporting sustainability momentum and institutional embedding of circular economy education.

Event Impact and Stakeholder Feedback

The award ceremony represented a significant moment of recognition for students' efforts and validated the effectiveness of combining education, family involvement, and community-based action to promote sustainability and circular economy principles at the local level. The event concluded with positive feedback from all attendees and expressed commitment to institutionalizing the Ewaster initiative as a recurring educational activity in Pian del Bruscolo schools

5.3. Evaluation

Cost per kg: ~€2.85/kg.

Social return: Awareness for 411 pupils + families; replicable low-cost.

5.4. Cost–Benefit Analysis

Worked well: Dual collection boosted bulky items; a system of delivery certificates at Centro Raccolta Vallefoglia motivated pupils and families. Multiservizi's prizes (bins + universal gadgets) boosted motivation without extra UCPB costs; ceremony reinforced community ties.

Challenges: Logistics for large items, resolved well through agreement with Marche Multiservizi that manages Vallefoglia centre.

Scalability:

- Extend to 1st-3rd grades;
- Extended to IC Papa Giovanni Paolo II (249 pupils, Mar 2026);
- Projection of Documovie "Materia Viva" for seniors/families (Feb/Mar).

6. Conclusions

The **two successful WEEE BEHAVE** competitions implemented by UCPB demonstrate the **exceptional scalability and effectiveness** of the pilot solution in the Marche Region. The **first campaign** collected **560.29 kg WEEE** from **162 pupils** (Oct–Dec 2025), while the escalation at IC Papa Giovanni Paolo II achieved 799.48 kg from 249 pupils (Feb–Mar 2026), for a **combined total of 1,359.77** kg – over 1.36 tonnes diverted from improper disposal in 5 months.

Padiglione school led the first edition with **313.47 kg**, confirming building-level competition viability. Pupils acted as **powerful change agents**, driving family engagement: **bulky WEEE** (TVs, appliances) from parents dominated volumes, powering top performances (IV C Bottega: 126 kg; VB Via Guidi: 189 kg, avg. **8.99 kg/pupil**). The **dual-phase model** (Ludoteca del Riù/Multiservizi education + competition) ensured precise WEEE identification and quality collection, sparking spontaneous replication demand.

Key metrics:

- **Overall average: 3.31 kg/pupil** (1st: 3.46 kg/pupil; 2nd: 3.21 kg/pupil).
- **Cost-efficiency: €2.85/kg** (based on €1,600 direct/indirect costs for first edition; similar expected for second).

Outcomes: Intrinsic motivation (no awards needed for 2nd); stakeholder enthusiasm; media coverage.

Transferability: Zero-cost design replication – scaled from 2 to 6 buildings instantly. Ideal for MED LAPs: lower grades, high schools ("Materia Viva" Feb/Mar), inter-municipal rollout via school-family networks

EWAsTER

Interreg
Euro-MED

Co-funded by
the European Union

WEEE BEHAVE
Evaluation and Conclusions

Annex IV. Provincial Waste Consortium of Málaga, Spain (P9).

Provincial Waste Consortium of Malaga
(RSU Málaga)

https://ewaster.interreg-euro-med.eu/

Document Control Information

Document Title	WEEE BEHAVE Evaluation and Conclusions
Project Title	Preventing e-waste from polluting MED water by turning waste into a resource.
Project Mission	Strengthening an innovative sustainable economy
Programme Priority	Greener MED
Specific Objective	RSO2.6: Promoting the transition to a circular and resource efficient economy
Document Author	<Document Author>
Partners Involved	
Work Package	Work Package 2 –
Activity	A2.2 – Testing Solution: WEEE BEHAVE
Deliverable ID	D 2.2.1 – WEEE BEHAVE evaluation and conclusions for application of …
Doc. Status	Draft 2025-07-23
Sensitivity	Public
Date of Production	2025-07-23

Document Approver(s) and Reviewer(s)

NOTE: All Approvers are required. Records of each approver must be maintained. All Reviewers in the list are considered required unless explicitly listed as Optional.

Name	Role	Action	Date
		<Approve / Review>	
Ricardo Sobral		*<Approve / Review>*	
		<Approve / Review>	

Document History

Versions	Date	Document status	Delivered by

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1. Glossary

EC – European Commission

EU – European Union

LAP – Local Action Plan

LINK – Association LINK Entrepreneurial Center

MED – Mediterranean

MED Methodology – Transnational Methodology for e-waste Prevention and Management

ORZ – Environmental Research Institute

PACT – Alentejo Science and Technology Park

WEEE — Waste from Electrical and Electronic Equipment

2. Executive Summary

The WEEE BEHAVE pilot project focuses on the main objective of raising awareness among students aged 6-12 years regarding WEEE management, through school workshops.

A plan is being developed for the implementation of in-person educational workshops on WEEE in schools within the municipalities of the Málaga Provincial Waste Consortium during October, November, and December 2025.

Following the educational workshops on WEEE, positive results have been obtained from both the participating students and the teaching staff at the schools involved.

The combination of fun, visual, and participatory activities tailored to each educational cycle has helped children to not only understand the problem of WEEE, but also to internalize in a practical and relatable way the importance of its management and recycling in general.

During the workshops, a high level of involvement has been observed by the students, as the activities have been designed to encourage curiosity, teamwork, and critical thinking.

Most students have shown interest in topics such as pollution and the recycling of WEEE, promoting responsible attitudes that can be transferred to their homes and close circles.

From the teachers' perspective, the workshops have been a resounding success. They have used them to adapt the environmental subjects included in the subjects for each course. After the workshops, they create a final summary of the material learned and applied to the subject they teach during the course.

The quantitative project´s expectations have exceeded with the following data:

- A total of 27 workshops, each lasting about 120 minutes. Distributed across different primary schools in the municipalities associated with the consortium. The teaching teams were very accommodating and made their time available.
- Use and distribution of all Spanish-English information cards on WEEE in the total workshops.
- The participation of students and teachers in all the workshops has been very satisfactory. A total of 1.274 students, in addition to the teachers, participated in each workshop.
- A total of 65 kg of WEEE collected and one school winning participation with an average of 0.42 kg/student. CEIP López Mayor, Vva. Del Trabuco.

The qualitative results are:

- It has been verified through comprehension games what WEEE is, how to apply the 3 Rs (Reduce, Reuse and Recycle) and the danger of its incorrect disposal. The students´ participation has been exemplary.
- The students have visualized the result of a polluted Mediterranean Sea.
- Through educational games, it has been confirmed that students have acquired critical thinking and responsible decision-making.

- Sustainable habits have been encouraged among students so that they can implement them at home and school and spread them in their immediate environment.
- Active participation and collaborative work have been strengthened in the environmental subjects that each course includes in its teaching program.

1. Objective and Context of the Pilot

1.1 Brief Description of the Motivation

The primary motivation of the WEEE BEHAVE pilot must be understood within the broader motivation of the EWASTER project. The main motivation of the EWASTER project is to promote the circular economy in the Mediterranean region, focusing on viewing WEEE (Waste Electrical and Electronic Equipment) as a resource. Developing this primary motivation, the WEEE REUSE, WEEE PROCURE, and WEEE BEHAVE pilot are planned. Specifically, the motivation of WEEE BEHAVE pilot is to increase public awareness of WEEE as a resource, not waste, starting at a very young age. Therefore, focusing on educating children aged 6-12 about WEEE management and the consequence of its mismanagement is the main driving force. The WEEE BEHAVE pilot project will describe the educational materials and workshops applied to practical applications.

Key highlights:

- Reaching the largest possible population within the specified age range. Reaching the social and domestic environment of each student to expand the awareness network. Raising public awareness.

- Verifying the assimilation of important concepts about circular economy in age-appropriate vocabulary.

- Student involvement. The younger population will demand an example from the older population.

An additional motivation located within our area of operation is to initiate environmental education in the municipalities for selective collection solutions for WEEE that will be carried out as an application of European and Andalusian regulations.

1.2 Regional Context

The Málaga Solid Waste Consortium comprises 91 municipalities in the province of Málaga, which has one of the most complex mountainous geographies in Spain. The logistical costs of waste collection are very high compared to other provinces. The strategies and results achieved for selective waste collection around operation are usually carefully considered and selected based on extensive experience.

In our regional context, any improvement in the population's behaviour is greatly appreciated by the collection system. Furthermore, it helps to optimize costs, which are ultimately passed on to the population.

Therefore, with the scope of action of the Málaga Solid Waste Consortium, we reach a final population of 580,000 inhabitants through a group of 1,274 students, whom we have reached through the 27 workshops we have conducted.

1.3 Institutional Context

RSU Málaga Consortium is a local public administration entity for territorial cooperation, of the Public Administration, made up of 91 municipalities in the Málaga province.

The schools, as educational institutions, have provided the necessary time and space to hold the workshops. They are grateful for their interest in educating the public on environmental issues, topics that are sometimes difficult for students to grasp.

The Málaga Provincial Council, as an institution serving the municipalities of the province. Our President and council member has facilitated the dissemination of the EWASTER project and WEEE BEHAVE pilot project. He has visited to emphasize the importance of the workshops and the award visit.

1.4 Challenges Targeted by the Initiative

The main challenges of the initiative were:

- Understanding the message, we wanted to convey to children aged 6-12: What WEEE is, the 3Rs (reduce, reuse, and recycle), and the circular economy.

- A deeply ingrained culture of buying, using, and discarding. Normalized children of that age.

- Lack of an increased budget for environmental education.

1.5 Challenges Faced During Implementation

The following challenges were encountered during implementation:

- Lack of understanding of the WEEE concept.

- Consideration of batteries as WEEE.

- Some municipalities have denied the workshop due to political issues.

- Difficulty in accessing politicians with greater media power.

- Administrative bureaucracy for the formalization of the contract to start the workshops.

- To assess the tangible impact of the awareness initiatives, the ideal approach would be to measure both the quality and quantity of WEEE within the participating municipalities before and after the campaign. A full one-year observation period would be required to evaluate the actual behavioural shifts. Furthermore, an analysis could be conducted on the quality of other waste fractions typically affected by the improper separation of WEEE.

Despite everything, the implementation of the WEEE BEHAVE pilot has been satisfactory.

1.6 Stakeholders Involved and Their Respective Roles.

1.6.1 Consorcio Provincial de Residuos Sólidos Urbanos de Málaga:

Partner of the E-WASTER project, responsible for delivering workshops, as well as the management and review of the WEEE BEHAVE pilot project in the province of Malaga.

1.6.2 Quesada & Pastor Consultores. Company:

A company specializing in environmental education and authorized to conduct the workshops.

1.6.3 Cities Councilors of the Consorcio RSU Málaga:

Institutional local support, facilitation of what school is the selected to workshop in this Municipality. 15 municipalities.

- Antequera
- Pizarra
- Álora
- Nerja
- Archidona
- Campillos
- Vva. del Trabuco
- Vélez-Málaga
- Coín
- Alhaurín el Grande
- Alhaurín de la Torre
- Cártama
- Alameda
- Casabermeja
- Ronda

1.6.4 Educational team. Teachers:

Access to schools, public visibility of workshops. Key stakeholders who provide feedback on the workshops.

1.6.5 Educational entities. School Principals:

Those responsible for the educational entities where the workshops have been held. They have facilitated the availability of the courses for the workshops.

1.6.6 Students (6-12 years old):

The end users for whom the workshops are delivered. Mail target group of the WEEE BEHAVE pilot project.

1.6.7 President of Consorcio Provincial de Residuos Sólidos Urbanos de Málaga:

He is also a Provincial Deputy and has facilitated the dissemination of information about the EWASTER and WEEE BEHAVE pilot. He provides provincial support for activities and workshops in schools.

1.6.8 Local Community and General Public:

General public targeted for project awareness campaigns, through social media, press releases, press conferences, radio and print media.

1.6.9 eWAsTER Project Framework (EU level):

Strategic framework ensuring alignment with broader EU circular economy and sustainability goals.

2. Pilot Methodology in RSU Málaga.

2.1 General description.

A comprehensive and specialized proposal was presented for the implementation of in-person educational workshops on Waste Electrical and Electronic Equipment (WEEE). These workshops targeted students aged between 6 to 12 years old in educational centers throughout the municipalities of the Consorcio Provincial RSU Málaga, during November and December 2025.

The main theme of all activities was responsible WEEE management, and the educational methodology was tailored to each age group. The workshops combined information sharing with edutainment to raise environmental awareness, promote sustainable habits, and empower students as active agents in the proper management of this waste in their homes and communities.

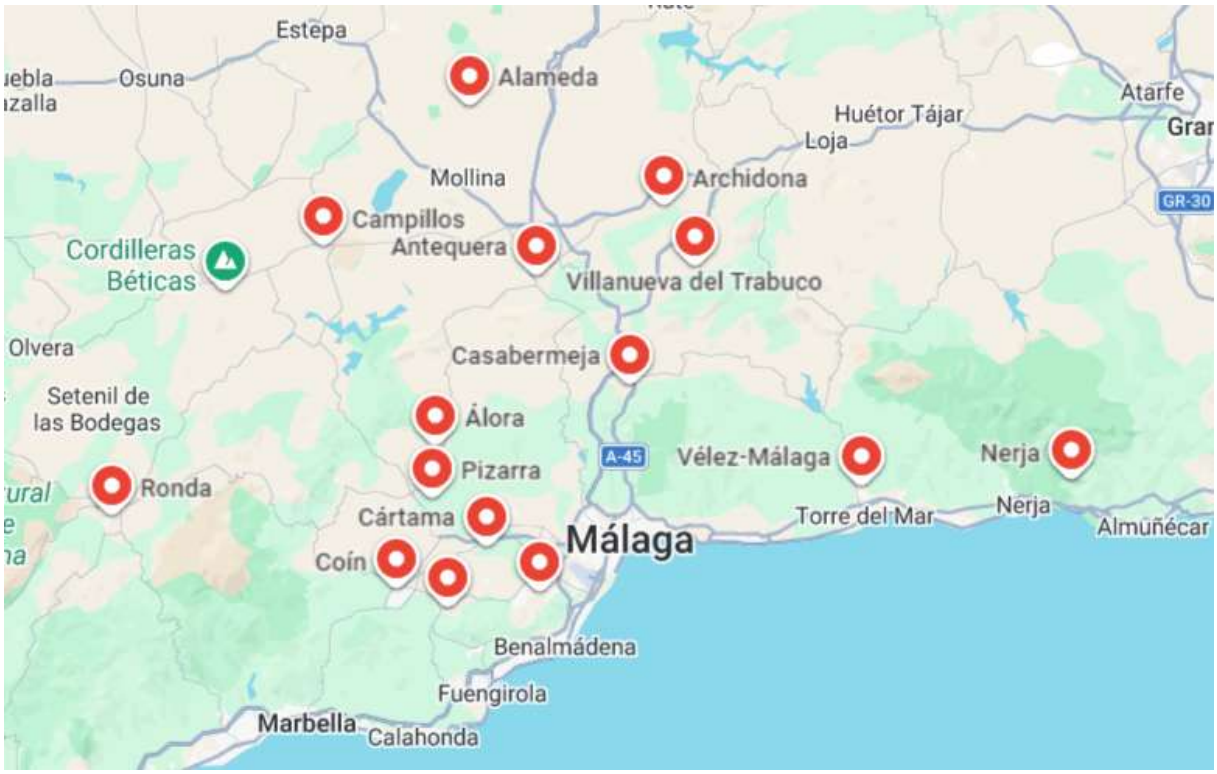
As part of the value proposition, the training was contextualized to the reality of the Mediterranean ecosystem. This allowed students to connect the global problem of WEEE with the local environment, which generated greater impact and personal commitment.

Once the pilot program was over, the school that collected the most WEEE won a visit to the provincial council's nativity scene. The visit was paid for by the consortium, and the students and their families were thrilled with the prize. Annex PP9 RSU Málaga 5: Pictures award workshops.

2.2 Implementation timeline.

DATE	MUNICIPALITY	SCHOOL	KG WEEE COLLECTED	STUDENTS	KG/ALUM
20/10/2025	Antequera	CEIP Félix Rodríguez de la Fuente	2,875	13	0,22
23/10/2025	Coín	CEIP Lope de Vega	1,87	31	0,06
23/10/2025	Pizarra	CEIP Guadalhorce	3,31	35	0,09
24/10/2025	Alhaurín el Grande	CEIP Jorge Guillén	2	30	0,07
24/10/2025	Alhaurín el Grande	CEIP Carmen Arévalo	1,5	35	0,04
28/10/2025	Álora	CEIP Los Llanos	0	32	0,00
28/10/2025	Álora	CEIP Miguel de Cervantes	2,25	35	0,06
30/10/2025	Alhaurín de la Torre	CEIP San Sebastián	0	45	0,00
30/10/2025	Alhaurín de la Torre	CEIP Torrijos	7,265	41	0,18
03/11/2025	Nerja	CEIP San Miguel	0	37	0,00
03/11/2025	Nerja	CEIP Narixa	0,795	42	0,02
04/11/2025	Cártama	CEIP Los remedios	0	88	0,00
04/11/2025	Cártama	CEIP La Campiña	0	157	0,00
05/11/2025	Archidona	CEIP San Sebastián	5	42	0,12
07/11/2025	Alameda	CEIP San Francisco de Asis		41	0,00
10/11/2025	Campillos	CEIP Manzano Jiménez	0,5	48	0,01
11/11/2025	Casabermeja	CEIP San Sebastián	1	48	0,02
12/11/2025	Vva del Trabuco	CEIP López Mayor	16,9	40	0,42
13/11/2025	Ronda	CEIP Juan Carrillo	6,5	45	0,14
13/11/2025	Ronda	Centro Privado de Enseñanza Juan de la Rosa	10,44	47	0,22
14/11/2025	Velez-Málaga	CEIP Luis Villar	10	42	0,24
14/11/2025	Velez-Málaga	CEIP Nuestra Señora de los Remedios	4,5	76	0,06
17/11/2025	Antequera	CEIP San Juan	8,69	54	0,16
19/11/2025	Vélez-Malaga	CEIP Genaro Rincón	3,82	54	0,07
19/11/2025	Vélez -Malaga	CEIP Vicente Aleixander	0	61	0,00
21/11/2025	Pizarra	CEIP Fuensanta	1,4	27	0,05
21/112025	Coín	CEIP Pintor Palomo	1,21	28	0,04
			64,96	1274	

2.3 Geographic location.



Málaga is one of the most mountainous provinces in Spain. Consequently, the implementation of these workshops required significant logistical coordination and travel efforts to ensure maximum population coverage. The following map illustrates the 15 municipalities where the 27 workshops took place, highlighting the provincial relief—stretching from the coastline to the Cordillera Bética.

2.4 Used materials.

The workshop included a theoretical briefing that presented the content described above, accompanied by audiovisual resources and opportunities for discussion with students. This was followed by a practical session consisting of two or three, depending on the number of students and the progress of each session because, there was hight participation in them.

They started with participatory introduction. Age-appropriate oral presentation on WEEE and its importance was conducted. Always to used information cards in Spanish and English languages. Annex PP9 RSU Málaga 1: Information Cards.

In the middle of the workshop, main activity. This consisted of a game, dynamic, story, experiment or group exercise that explored key aspects such as device recycling and the recognition of WEEE waste. Annex PP9 RSU Málaga 2: Snakes and Ladders. Annex PP9 RSU Málaga 3: Word Search.

To conclude the workshops, questions were asked to assess student understanding and participation. The WEEE that the students brought was collected, and they were

encouraged to share their opinions and suggestions for improvement on the topic. Teachers were asked to provide feedback on each workshop, and some incorporated the workshop content into their environmental curricula for each course. This proved to be a very productive conclusion because, in addition, teachers asked questions to gauge student participation, comprehension, and assimilation of the material covered in the workshop. Some teachers even considered participation and understanding positively in their students' grades. Annex PP9 RSU Málaga 4: Pictures about workshops.

2.5 KPI. Results.

School-Based Competition & Awareness Campaign

- Number of participating students: 1.274
- Number of participating schools: 27
- Student engagement: 80% total. This was verified through questions during the workshops.
- Changes in student attitudes and behaviours: Positive. Observed during the workshops
- Teacher involvement: 40
- Number of external organizations (NGOs, sponsors) supporting the campaign: 1

City Hall Awareness & Participation Campaign

- Number of participating city departments: 14 (each municipality).
- Number of city hall employees involved: 14
- Changes in city hall policies and practices: Working on it.
- Public awareness of the campaign: 2.218 views on social media.
- Community engagement: Based on the total population of 363.906 citizens across the 14 municipalities.
    - Direct reach=0.4%
    - Indirect reach=1.5%
    - Total reach=2%
- Number of new policies or procedures introduced to improve cooperation between departments: Working on it.

Overall Campaign Impact & Long-Term Sustainability

- Number of campaign events and activities: 27
- Media coverage: regional Radio, digital regional press and 4 social media.
- Social media engagement: 2.766 engaged people from our social media posts.
- Partnerships: 1
- Sustainability: Working on it.

3. Human Resources and Associated Costs

3.1 Technical team:

Monitors who lead the workshops:

- Inmaculada Pérez Massé. Environmental scientist.
- María José Bermúdez Gómez. Environmental engineer. Environmental educator.
- Lucía Infantes López. Biologist. Environmental educator.

Staff project PP9:

- Isabel Montero Mellado. Engineer. Development of Project.

Manager project PP9:

- Francisco Zurita Escobar. Biologist. Project supervision.

3.2 Cost

The budget item used in the development of the pilot project was "*Pilot WEEE BEHAVE implementation costs, awareness campaigns, cost of competition, other*".

The total amount was 13,686.67€.

The personnel costs are those declared under the staff item.

And the indirect costs are not being declared.

4. Testing Phase and Activities Carried Out

4.1. Participants and Target Groups

The work was carried out in three key points.

1. Preparation Phase: All teaching materials were designed, and activities were adapted for each age group. Coordination with participating schools took place, and the entire training team was prepared.

2. Implementation Phase: The workshops were designed for the three cycles into which primary education is divided, with explanations and activities differentiated by school stage:

- **Cycle 1 (ages 6-8)**: Explanations were simple, using everyday examples and participatory spaces for dialogue. Activities had a visual and sensorial focus, using materials that students handled safely to understand WEEE concepts, environmental effects, and proper management.

- **Cycle 2 (ages 8-10)**: Explanations introduced more technical concepts and delved deeper into environmental impacts. The dynamics facilitated teamwork in complex classification exercises. Scenarios were presented to illustrate the consequences of poor waste management.

- **Cycle 3 (ages 10-12)**: Explanations were more detailed and took an analytical approach, including the recycling process and the 3Rs principle. Activities sought analysis in specific situations and encouraged dialogue to develop proposals for concrete actions at home and at school.

The methodology was based on a single workshop that adapted to each cycle, maintaining the core structure but modifying content, complexity, and vocabulary according to the cognitive and motor abilities of each group.

3. Evaluation Phase: The results obtained from each experience were analysed, a corresponding report was prepared, and conclusions and recommendations were established for future interventions in this type of project.

5. Results from the Testing Phase.

Impact and Influence Analysis

The project achieved a significant reach within the community. Considering the total population of 363.906 inhabitants and the direct-action group of 1,272 students, the campaign projected a total influence of 2%.

This impact was calculated based on a multiplier effect, where each student acted as a communication vector within their household. It was estimated that the message reached approximately 6360 people effectively. This demonstrated that the educational intervention permeated the social fabric, transforming school learning into a broader network of environmental awareness that extended far beyond the classroom.

6. Conclusions

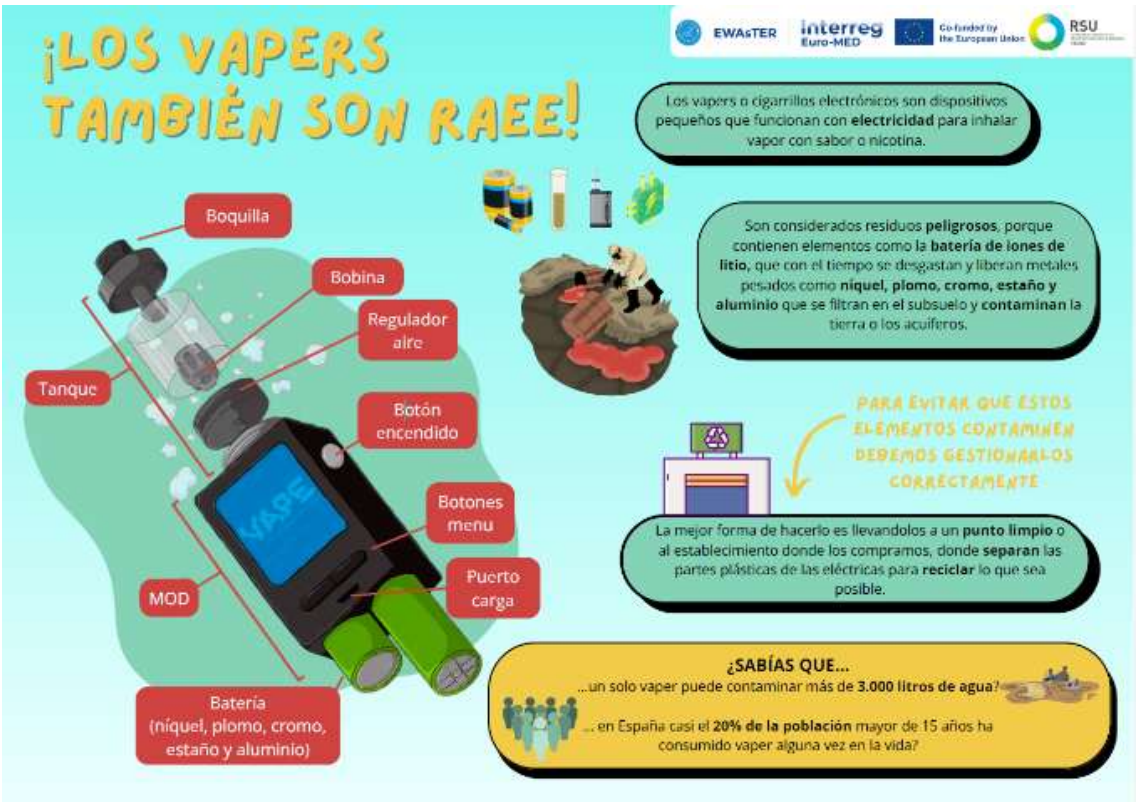
Economically, the Consortium recognizes that investing in early-stage education is significantly more cost-effective than managing the environmental and financial consequences of improperly discarded electronic waste. By endorsing this specific model, the Consortium commits to adopting a proven methodology that has already demonstrated its ability to reach a diverse audience across both coastal and inland municipalities.

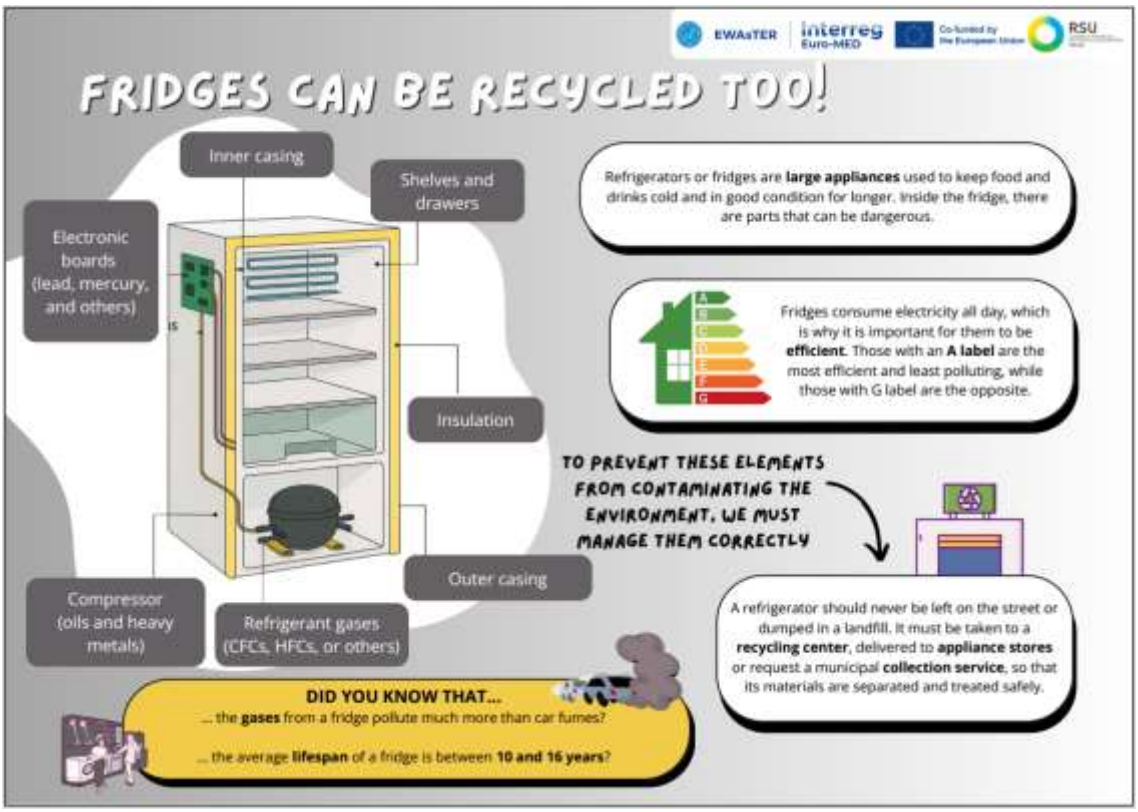
LESSONS LEARNED

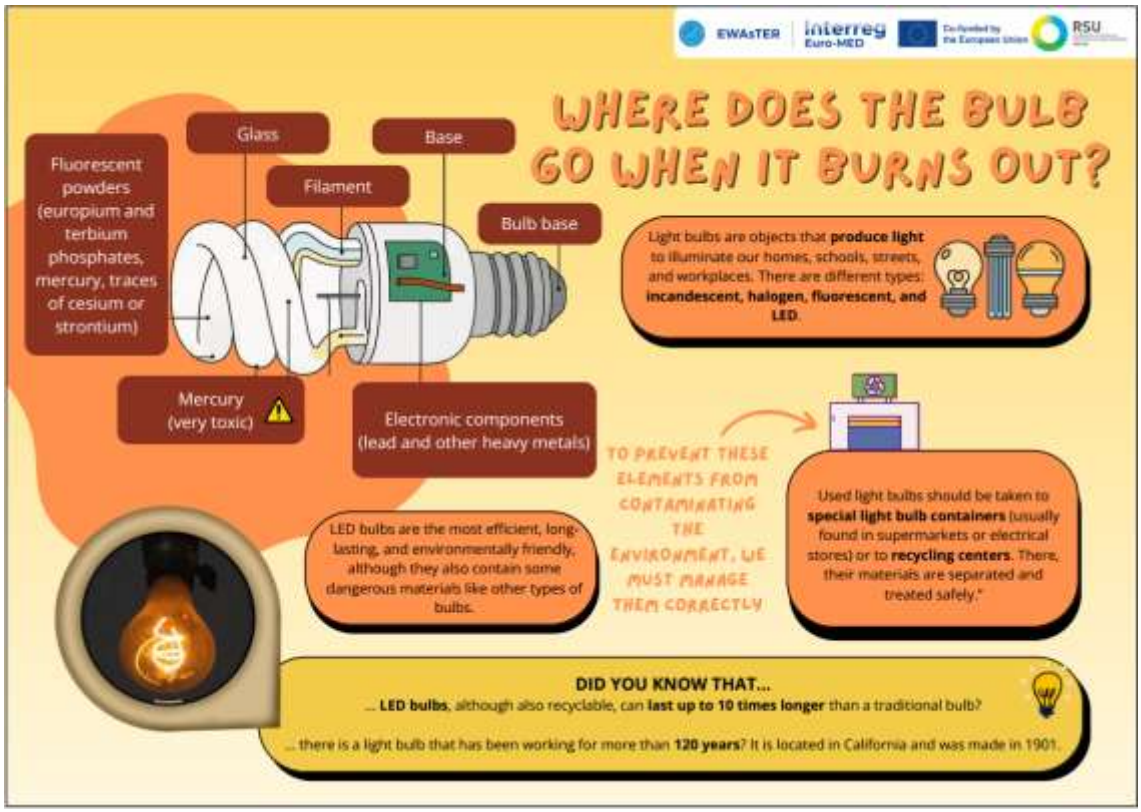
Conversely, the main barrier encountered was strictly organizational, stemming from the lack of scheduling availability within the schools' calendars during the project's condensed timeframe. The misalignment between the project's execution deadlines and the established academic year proved to be a significant challenge for continuity. For other regions aiming at pilot uptake, we recommend a "train the trainers" approach. By empowering local municipal staff and teachers to deliver the workshops themselves, the pilot becomes less dependent on external consultants and more resilient to budget fluctuations, ensuring that the capitalisation of the project remains within the public administration and becomes a permanent asset of the local community.

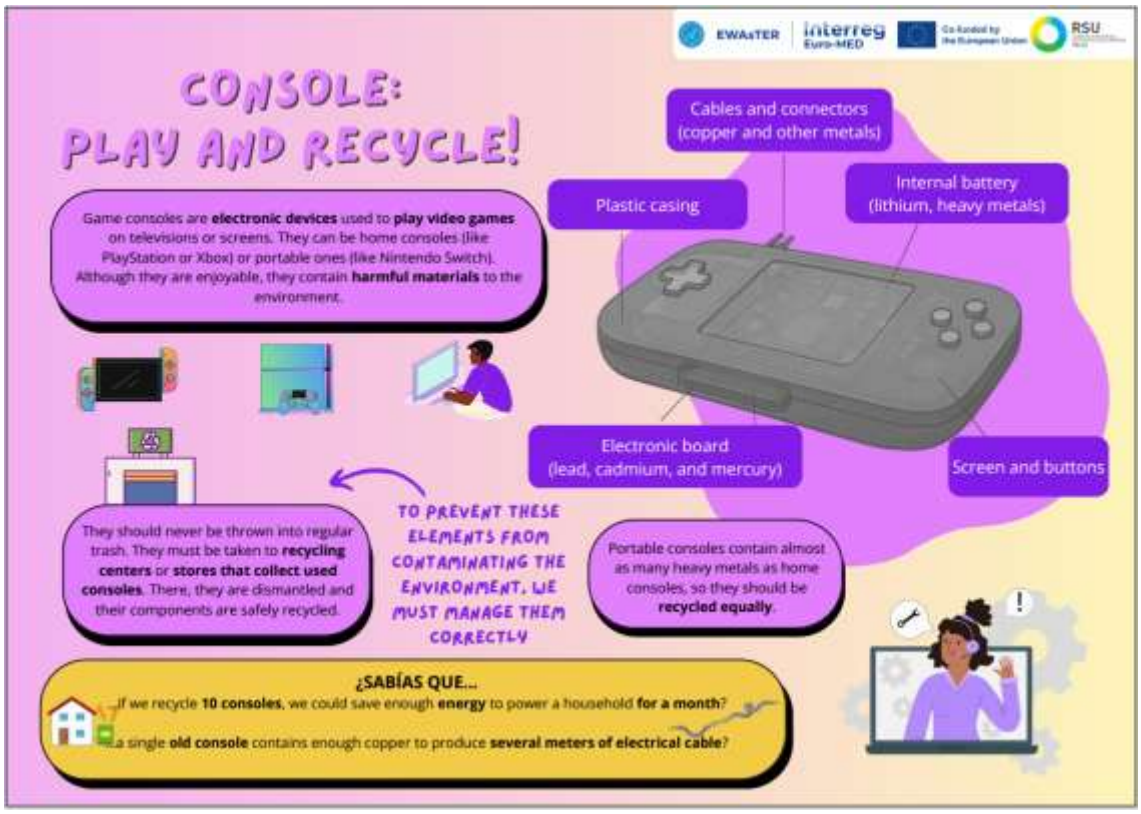
7. Annexes

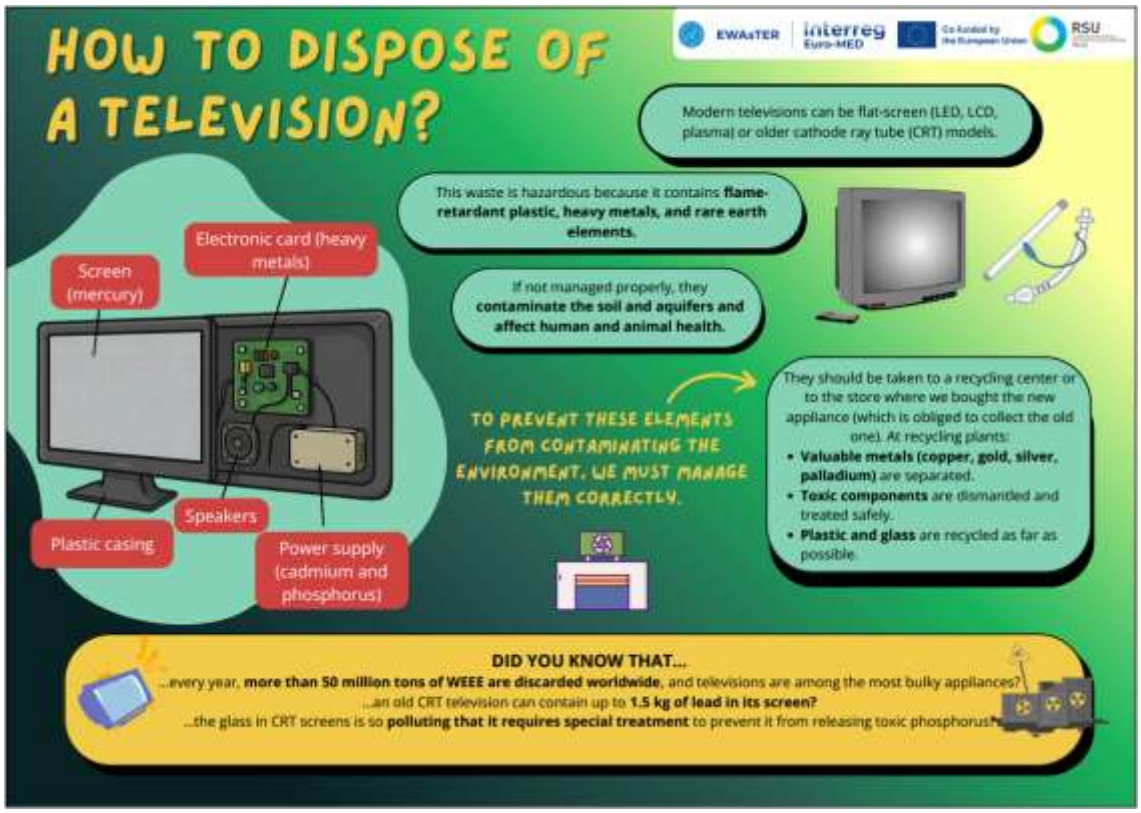
Annex PP9 RSU Málaga 1: Information Cards.



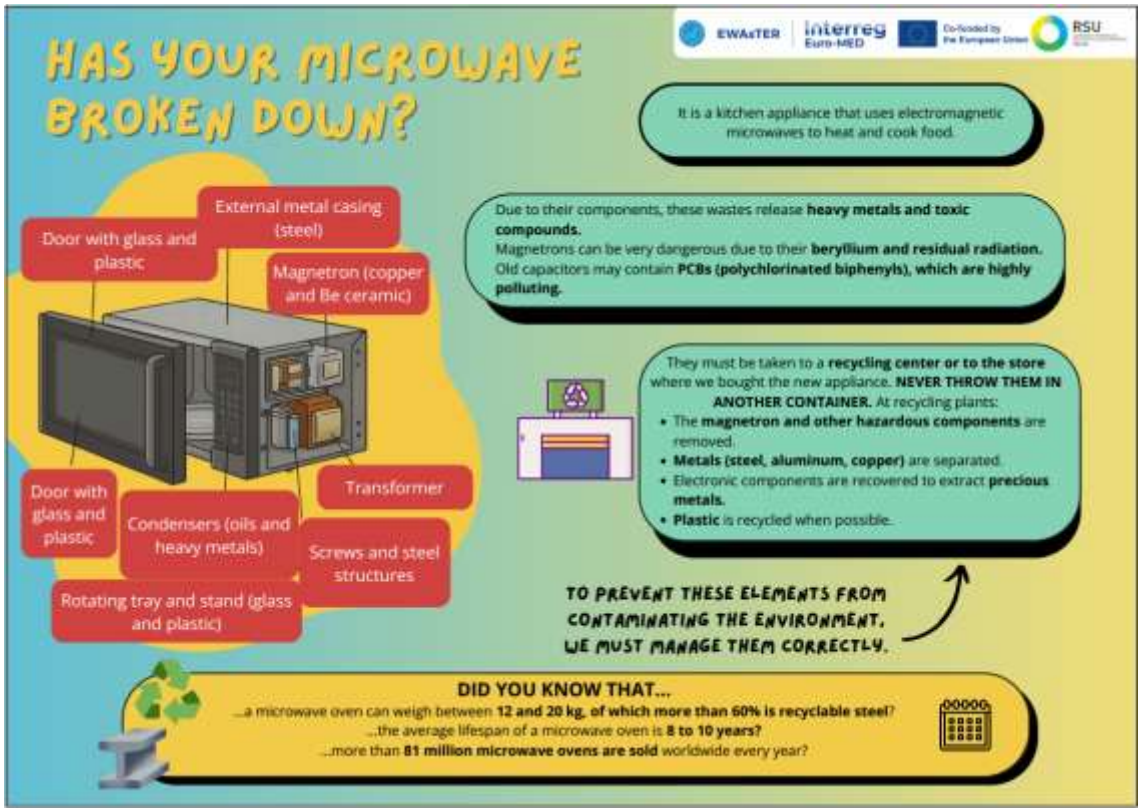

EWAsTER
interreg Euro-MED
RSU
FRIDGES CAN BE RECYCLED TOO!
Inner casing
Shelves and drawers
Electronic boards (lead, mercury, and others)
Insulation
Outer casing
Compressor (oils and heavy metals)
Refrigerant gases (CFCs, HFCs, or others)
Refrigerators or fridges are large appliances used to keep food and drinks cold and in good condition for longer. Inside the fridge, there are parts that can be dangerous.
Fridges consume electricity all day, which is why it is important for them to be efficient. Those with an A label are the most efficient and least polluting, while those with G label are the opposite.
TO PREVENT THESE ELEMENTS FROM CONTAMINATING THE ENVIRONMENT, WE MUST MANAGE THEM CORRECTLY
A refrigerator should never be left on the street or dumped in a landfill. It must be taken to a recycling center, delivered to appliance stores or request a municipal collection service, so that its materials are separated and treated safely.
DID YOU KNOW THAT...
... the gases from a fridge pollute much more than car fumes?
... the average lifespan of a fridge is between 10 and 16 years?


EWAsTER
interreg Euro-MED
RSU
WHERE DOES THE BULB GO WHEN IT BURNS OUT?
Glass
Base
Filament
Bulb base
Fluorescent powders (europium and terbium phosphates, mercury, traces of cesium or strontium)
Mercury (very toxic)
Electronic components (lead and other heavy metals)
Light bulbs are objects that produce light to illuminate our homes, schools, streets, and workplaces. There are different types: incandescent, halogen, fluorescent, and LED.
LED bulbs are the most efficient, long-lasting, and environmentally friendly, although they also contain some dangerous materials like other types of bulbs.
TO PREVENT THESE ELEMENTS FROM CONTAMINATING THE ENVIRONMENT, WE MUST MANAGE THEM CORRECTLY
Used light bulbs should be taken to special light bulb containers (usually found in supermarkets or electrical stores) or to recycling centers. There, their materials are separated and treated safely.
DID YOU KNOW THAT...
... LED bulbs, although also recyclable, can last up to 10 times longer than a traditional bulb?
... there is a light bulb that has been working for more than 120 years? It is located in California and was made in 1901.

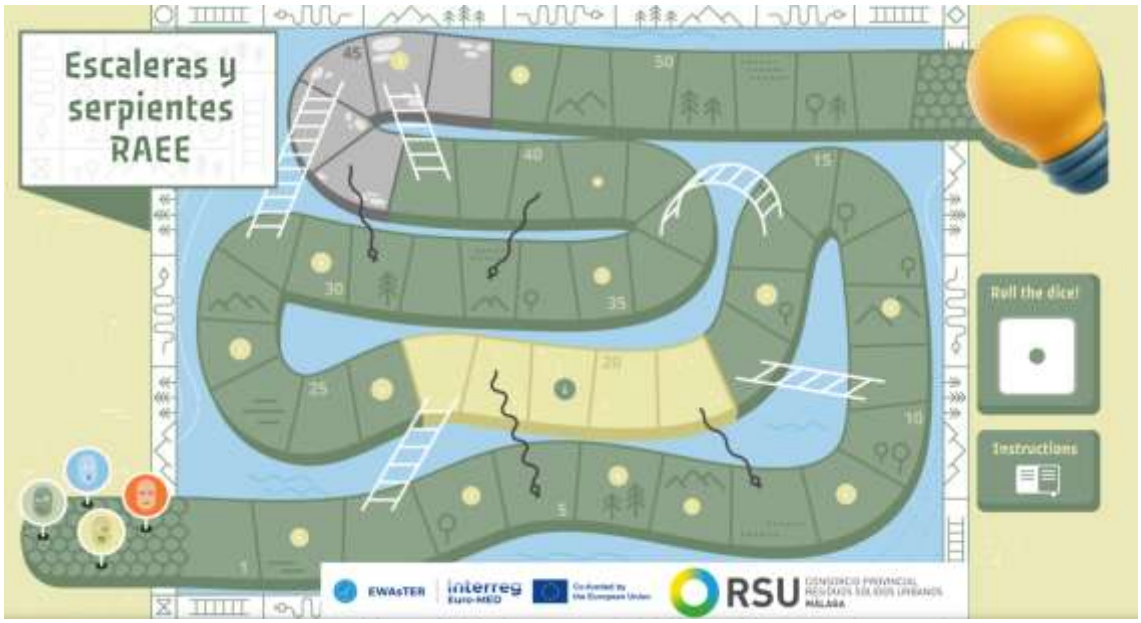

EWAsTER
interreg Euro-MED
RSU
CONSOLE: PLAY AND RECYCLE!
Game consoles are electronic devices used to play video games on televisions or screens. They can be home consoles (like PlayStation or Xbox) or portable ones (like Nintendo Switch). Although they are enjoyable, they contain harmful materials to the environment.
Cables and connectors (copper and other metals)
Plastic casing
Internal battery (lithium, heavy metals)
Electronic board (lead, cadmium, and mercury)
Screen and buttons
They should never be thrown into regular trash. They must be taken to recycling centers or stores that collect used consoles. There, they are dismantled and their components are safely recycled.
TO PREVENT THESE ELEMENTS FROM CONTAMINATING THE ENVIRONMENT, WE MUST MANAGE THEM CORRECTLY
Portable consoles contain almost as many heavy metals as home consoles, so they should be recycled equally.
¿SABÍAS QUE...
...if we recycle 10 consoles, we could save enough energy to power a household for a month?
...a single old console contains enough copper to produce several meters of electrical cable?


HOW TO DISPOSE OF A TELEVISION?
EWAsTER
interreg Euro-MED
RSU
Modern televisions can be flat-screen (LED, LCD, plasma) or older cathode ray tube (CRT) models.
This waste is hazardous because it contains flame-retardant plastic, heavy metals, and rare earth elements.
If not managed properly, they contaminate the soil and aquifers and affect human and animal health.
Screen (mercury)
Electronic card (heavy metals)
Speakers
Plastic casing
Power supply (cadmium and phosphorus)
TO PREVENT THESE ELEMENTS FROM CONTAMINATING THE ENVIRONMENT, WE MUST MANAGE THEM CORRECTLY.
They should be taken to a recycling center or to the store where we bought the new appliance (which is obliged to collect the old one). At recycling plants:
• Valuable metals (copper, gold, silver, palladium) are separated.
• Toxic components are dismantled and treated safely.
• Plastic and glass are recycled as far as possible.
DID YOU KNOW THAT...
...every year, more than 50 million tons of WEEE are discarded worldwide, and televisions are among the most bulky appliances?
...an old CRT television can contain up to 1.5 kg of lead in its screen?
...the glass in CRT screens is so polluting that it requires special treatment to prevent it from releasing toxic phosphorus?


ARE YOU GOING TO REPLACE YOUR HAIR DRYER?
EWAsTER
interreg Euro-MED
RSU
It is a portable appliance that generates hot, dry air using a heating element and an electric fan. They are classified as small household appliances (PAE), which are also WEEE.
Boquilla concentradora (plástico)
Resistencia calefactora (nicromo)
Boquilla
Motor (cobre, imanes y pequeñas piezas metálicas)
Placas de control (plomo y estaño)
Carcasa plástica
Botones de control
Cable y enchufe (Cu y PVC)
Cable y enchufe (Cu y PVC)
They are hazardous waste because they contain pollutants such as copper, magnets, alloys such as nichrome, lead, and tin, flame retardants, copper, and PVC.
If they end up in landfills, their plastics release microplastics and flame retardants.
Copper and other metals from the engine and cables are lost if they are not recycled.
The combustion of plastics releases toxic gases that affect health and pollute the air.
They should be taken to a recycling center or to the store where we bought the new appliance. At recycling plants:
Metals (copper, aluminum, iron) → recycled.
Plastics → recycled when possible.
Electronic parts → managed as hazardous WEEE.
TO PREVENT THESE ELEMENTS FROM CONTAMINATING THE ENVIRONMENT, WE MUST MANAGE THEM CORRECTLY.
DID YOU KNOW THAT...
...Europe controls most of the global market for hair dryers, accounting for 34.30% in 2023?
...a hair dryer can contain up to 180 grams of recyclable metals (copper, steel, aluminum, alloys)?
These metals can be recovered if the appliance is recycled properly


HAS YOUR MICROWAVE BROKEN DOWN?
EWAsTER
interreg Euro-MED
RSU
It is a kitchen appliance that uses electromagnetic microwaves to heat and cook food.
External metal casing (steel)
Door with glass and plastic
Magnetron (copper and Be ceramic)
Door with glass and plastic
Condensers (oils and heavy metals)
Transformer
Screws and steel structures
Rotating tray and stand (glass and plastic)
Due to their components, these wastes release heavy metals and toxic compounds.
Magnetrons can be very dangerous due to their beryllium and residual radiation.
Old capacitors may contain PCBs (polychlorinated biphenyls), which are highly polluting.
They must be taken to a recycling center or to the store where we bought the new appliance. NEVER THROW THEM IN ANOTHER CONTAINER. At recycling plants:
The magnetron and other hazardous components are removed.
Metals (steel, aluminum, copper) are separated.
Electronic components are recovered to extract precious metals.
Plastic is recycled when possible.
TO PREVENT THESE ELEMENTS FROM CONTAMINATING THE ENVIRONMENT, WE MUST MANAGE THEM CORRECTLY.
DID YOU KNOW THAT...
...a microwave oven can weigh between 12 and 20 kg, of which more than 60% is recyclable steel?
...the average lifespan of a microwave oven is 8 to 10 years?
...more than 81 million microwave ovens are sold worldwide every year?

Annex PP9 RSU Málaga 2: Snakes and Ladders.



Annex PP9 RSU Málaga 3: Word Search.

Annex PP9 RSU Málaga 4: Pictures about workshops

















Annex PP9 RSU Málaga 5: Pictures award workshops.

EWAsTER | Interreg Euro-MED

Co-funded by the European Union

WEEE BEHAVE Evaluation and Conclusions

PP11: Aradippou Municipality

Document Control Information

Document Title	WEEE BEHAVE Evaluation and Conclusions
Project Title	Preventing e-waste from polluting MED water by turning waste into a resource.
Project Mission	Strengthening an innovative sustainable economy
Programme Priority	Greener MED
Specific Objective	RSO2.6: Promoting the transition to a circular and resource efficient economy
Document Author	Andriana Paraskevopoulou
Partners Involved	PP11 Aradippou Municipality
Work Package	Work Package 2 – Joint testing of solutions for e-waste prevention and management in MED
Activity	A2.2 – Testing Solution: WEEE BEHAVE
Deliverable ID	D 2.2.4 – WEEE BEHAVE evaluation and conclusions
Doc. Status	Final 2026-07-09
Sensitivity	Public
Date of Production	2026-07-09

Document Approver(s) and Reviewer(s)

NOTE: All Approvers are required. Records of each approver must be maintained. All Reviewers in the list are considered required unless explicitly listed as Optional.

Name	Role	Action	Date
Ricardo Sobral	Project Manager	*Approve*	2026-07-09

Document History

Versions	Date	Document status	Delivered by
V1.0	2026-07-07	Final	PP11 Aradippou

Table of Contents

Glossary

EC	European Commission
EU	European Union
LAP	Local Action Plan
MED	Mediterranean
MED Methodology	Transnational Methodology for e-waste Prevention and Management
PP	Project Partner
SC	Steering Committee
VW	Validation Workshop
WEEE	Waste from Electrical and Electronic Equipment
WP	Workshop

Executive Summary

The Municipality of Aradippou implemented a pilot action under the **eWAsTER Interreg Euro-MED** project to promote responsible management of Waste Electrical and Electronic Equipment (WEEE) among primary school students through environmental education, experiential learning and community engagement.

The pilot combined educational lectures, a guided visit to the Green Point of Aradippou, creative awareness activities and a WEEE collection competition in collaboration with WEEE Cyprus. Students showed particular interest in the hands-on elements of the programme, especially the visit to the Green Point where they could directly observe how e-waste is sorted and managed, as well as the competitive collection activity, which made recycling tangible and engaging. The carnival participation as WEEE machines also proved highly effective in maintaining attention and reinforcing environmental messages in an enjoyable way.

Key performance indicators (KPIs) highlighted strong engagement and behavioural impact: high student participation across all activities, increased awareness of proper e-waste disposal methods, significant volumes of WEEE collected during the school competition for the local data and active involvement of households influenced by students acting as "environmental ambassadors."

Several lessons emerged from the implementation of the eWAsTER pilot. Experiential and creative learning approaches significantly enhance student motivation and message retention. Collaboration with WEEE Cyprus and local schools was essential for operational success and credibility. Early engagement of teachers helped integrate activities more effectively into the school environment and ensured continuity beyond the pilot phase.

However, some challenges were also identified. Coordinating activities required careful scheduling and logistical planning. Sustaining student engagement over multiple sessions demanded varied and interactive content to avoid fatigue. Additionally, ensuring long-term behavioural change beyond the pilot period remains a challenge that requires continuous reinforcement and follow-up actions.

Overall, the eWAsTER pilot demonstrated that combining education with hands-on experience can effectively shape environmental behaviours at an early age and is highly adaptable for replication in other municipalities with the support of local stakeholders.

1. Objective and Context of the Pilot

1.1. Objective

The pilot implementation is planned in such a way to increase awareness of WEEE recycling among school students and encourage responsible environmental behaviour through interactive education, practical activities and community participation. By empowering students to become recycling ambassadors, the initiative sought to extend its impact beyond the classroom and promote sustainable habits within families and the wider community.

1.2. Context of the Pilot

The pilot was implemented by the Municipality of Aradippou as part of the **eWAsTER Interreg Euro-MED** project, responding to the increasing need to raise public awareness and strengthen participation in proper e-waste management. Activities included educational sessions combined with interactive games, a visit to the Green Point of Aradippou, public exposure through dance at the local festival participation and a WEEE collection competition in collaboration with WEEE Cyprus. These initiatives equipped students with both theoretical knowledge and hands-on experience, while promoting long-term behavioural change and reinforcing cooperation between local authorities, schools and environmental stakeholders.

1.3. Partner Introduction

The Municipality of Aradippou coordinated and implemented all pilot phases, leading the planning, communication, stakeholder engagement and overall project execution. The pilot was delivered in close collaboration with WEEE Cyprus, which provided technical expertise on WEEE collection and recycling processes, as well as the participating primary schools, whose teachers and management actively supported the implementation of the educational activities.

Additional external collaborators contributed to the successful delivery of the pilot, supporting creative activities, documentation, communication and dissemination with digital tools. The combined expertise and commitment of all partners ensured an engaging educational experience and maximised the pilot's impact within the local community.

2. Executive Summary

Aradippou is a municipality located in the Larnaca District of Cyprus, forming part of the wider urban area of Larnaca. It is one of the most developed and dynamic municipalities in the region, characterized by a mix of residential, commercial and light industrial zones.
In addition, Aradippou places increasing emphasis on urban sustainability and environmental management, gradually integrating green practices into local governance and infrastructure development.

Aradippou includes a Green Point facility as part of its municipal waste management system, supporting the collection and proper handling of recyclable and bulky waste materials in line with sustainable environmental practices.

Residents are required to take the large WEEE disposed items to designated Green Points or recycling centres in the wider Larnaca district. In addition, some retailers and importers operate take-back schemes, where consumers can return old electronics when purchasing new ones.

Overall, recycling participation in the area is relatively strong, particularly for common materials like packaging, paper and plastics, which are collected through organised municipal systems. Waste generation levels in the municipality are generally reported to be lower than the Cyprus average, reflecting both industrial composition and recycling habits.

However, like many semi-industrial municipalities, there can occasionally be concerns about informal handling of scrap materials, especially on electronic waste. Despite this, official collection and recycling routes are well defined and actively used by residents.

3. Pilot Methodology

3.1. Outline

The methodology was derived directly from the activities and actions implemented during the pilot project. It was exported and organized based on the practical procedure followed, ensuring that the methodological framework accurately reflects the execution process and achieved outcomes. Mainly a community-driven pilot methodology designed to educate young students and thereafter citizens about Waste Electrical and Electronic Equipment (WEEE) and about good practices including sustainability, reuse, recycling, and circular economy practices through immersive learning, gamification, participation and stakeholder collaboration.

3.2. Methodological Outcomes

It was successfully demonstrated that combining:

- experiential learning,
- gamification,
- public engagement,
- stakeholder collaboration,
- and emotional motivation

Can significantly enhance environmental awareness and youth participation in sustainable practices.

The pilot generated measurable positive engagement, strengthened community awareness, and promoted the adoption of environmentally responsible habits among younger generations.

3.3. Pilot Duration and Implementation Period

The pilot was implemented from early February until early March 2026, including a preliminary awareness activity conducted in December 2025, during which the WEEEPOLY educational floor game was presented to high school students. This introductory activity served as an early dissemination and testing phase, helping familiarize students with the project's educational objectives and interactive learning approach.

3.4. Educational and Experiential Learning Approach

The methodology combined:

- Educational material delivery
- Hands-on practical engagement
- Interactive gamification
- Community participation

- Real-life environmental exposure

The core implementation took place through an excursion and educational tour with the local elementary school students at the Aradippou Green Point. Students were introduced to real waste collection and recycling procedures while actively participating in practical demonstrations related to WEEE management.

The use of the WEEEPOLY educational game enabled students to take on active roles and simulate environmental decision-making processes. Through role-play, practical tasks, and interactive participation, students developed a clearer understanding of:

- Proper WEEE disposal
- Environmental responsibility
- Circular economy principles
- Mindful investment

3.5. Gamification and Active Participation

Gamification was a central component of the methodology. Students participated in:

- Interactive quizzes
- Friendly competitions
- WEEE collection

The quizzes and activities were designed to reinforce previously learned concepts in a fun and memorable way. Participation and engagement levels reached 100%, demonstrating the effectiveness of experiential and gamified learning in environmental education.

To further encourage motivation and connection with the project:

- All students received participation certificates and medals
- Memorial gifts made from recycled materials were distributed

These symbolic rewards strengthened students' enthusiasm and reinforced the sustainability message.

3.6. Behavioural Change and Future Impact

The pilot methodology focused not only on knowledge transfer but also on long-term behavioural influence. The primary objective was to encourage students to:

- Integrate reuse and recycling habits into their daily routines
- Promote responsible WEEE management within their families and communities

The activities positively influenced students' environmental awareness and inspired optimistic attitudes toward a more sustainable future and circular economy mindset.

3.7. Community Outreach and Public Awareness

An additional dissemination activity included participation in a large local carnival parade attended by thousands of citizens and covered by Larnaca local media.

This visual awareness campaign transformed dance students into symbolic "e-waste machines," creatively communicating environmental messages through costumes, dance, and performance art. The parade significantly enhanced public visibility of the project and disseminated the importance of WEEE recycling and sustainability to a wider audience.

3.8. Stakeholder Collaboration and Capacity Building

The methodology also incorporated a stakeholder brunch meeting involving project partners and stakeholders. The meeting:

- Strengthened collaboration among participating organizations
- Facilitated dialogue on improving WEEE collection efforts
- Explored additional ways to support citizens in Cyprus and local communities
- Encouraged future cooperation for environmental sustainability initiatives

3.9. Methodological Outcomes

It was successfully demonstrated that combining:

- experiential learning,
- gamification,
- public engagement,
- stakeholder collaboration,
- and emotional motivation

Can significantly enhance environmental awareness and youth participation in sustainable practices.

The pilot generated measurable positive engagement, strengthened community awareness, and promoted the adoption of environmentally responsible habits among younger generations.

4. Planning Phase

A joint solution from WEEE BEHAVE partners has been developed:

Municipality of Rethymno, Málaga (RSU), Union of the Municipalities Pian del Bruscolo (UPCB), Union of Bulgarian Black Sea Local Authorities (UBBSLA), Union of Bulgarian Black Sea Local Authorities (UBBSLA), Bosnia and Herzegovina (NEUM), Environmental Research Institute, Slovenia (ORZ), Alentejo Science and Technology Park (PACT) and Aradippou (ARAD).

The common methodology for the jointly developed solution involves the following phases:

4.1. Planning through monthly meetings

Definition of the scope of WEEE BEHAVE

- Explicit action will take place through educational activities / material directly influencing students, teachers / educators.
- Implicitly, the activities will influence the following groups: Families and friends and from the general public: Municipal - Administration, non-profit, passers-by and citizens-wide audience.

The target group campaign planning and dissemination are students at schools (ages between 9-12 years old and their teachers/educators.)

4.2. Definition of the goals of WEEE BEHAVE marketing strategy

4.2.1. Strategy goal 1: Education as a driving force, positively changing the whole society

- **Explicitly:** Educate students and teachers with a wide range of different tools creating a new consciousness for young people.
- **Implicitly:** Use education of students as a force, generating network effects, creating awareness to the public and especially influencing producers and public policy.

4.2.2. Strategy goal 2: Elevate strategic planning from Local to Regional level

Create awareness to local and regional authorities in order to align local strategies to regional strategies, elevating strategic planning to Regional level.

4.3. Explicit Actions - Design - WEEE BEHAVE Repository

In order to implement the joint WEEE-BEHAVE marketing strategy the following jointly agreed steps have been defined for the **Explicit Actions** by the WEEE-BEHAVE partners (i.e. explicitly: Educate students and teachers with a wide range of different tools creating a new consciousness for young people).

- Collection of information sources/material
- Translation of Educational Material/Promotional material and transfer to local context.
- Design of the local actions based on the local context (stakeholders, sites of activities).

- Definition and collection of the tools to be used:
    - In-class education, seminars, campaign tools, educational games
- Design of educational activities
    - Design of meetings/seminars for the students/educators
    - Design of School campaigns
    - Design of school competitions
    - Design of rewards schemes
    - Design of ways of influencing public policy (decision makers, producers - difficult to reach) through the education activities
- Explicit Actions – Implementation
    - Execution of activities, school campaigns and competitions
        - Implementation of seminars with the students
        - Implementation of school campaigns/competitions/rewards schemes

5. Pilot Activities Execution

5.1. Phase A. Preparatory phase.

The preparatory phase prior to the launch of the WP2 pilot included a series of initial coordination meetings with the school principals and students of local elementary and high schools. These meetings aimed to ensure a proactive engagement with the students and the school community in general in regards with the WEEE disposal by circulating specially designed flyers and posters. The sessions were coordinated by Dr. Mathaios Alambritis and Mrs. Eleni Xenophontos on behalf of Aradippou Municipality, facilitating communication between the municipality and the school while laying the groundwork for the successful future implementation of the initiative.

5.2. Phase B. WEEEPOLY: December 17, 2026.

WEEEPOLY is an innovative board game inspired by the classic Monopoly model, designed to combine education with entertainment through an interactive simulation experience. The game helps players develop a practical understanding of how electronic waste (WEEE Waste Electrical and Electronic Equipment) can be effectively managed, collected, repaired, recycled, and reintegrated into a more sustainable circular economy.

Goals of activity:

- Education through Gamification, Simulation
- Innovation, a game with WEEE Regulation embedded

Each game round is designed for **12 participants**, divided into **4 teams of 3 players**. Team members collaborate strategically while operating under a **shared budget**, making collective decisions on how to allocate resources efficiently. Players can choose to invest in recycling facilities, repair and refurbishment solutions, awareness campaigns, and other sustainability-driven initiatives aimed at improving electronic waste management systems.

Throughout the game, participants encounter a variety of real-life inspired challenges, unexpected events, and hidden traps that test their decision-making, adaptability, and teamwork. These obstacles simulate the complexities of managing electronic waste in practice, including financial limitations, regulatory requirements, operational setbacks, and market uncertainties.

What makes Weeepoly particularly distinctive is the integration of **WEEE regulations and compliance principles directly into gameplay**. By embedding real-world legal frameworks, responsibilities, and environmental obligations into the game mechanics, players gain hands-on familiarity with the rules governing electronic waste management while learning the importance of stakeholder cooperation and responsible resource planning.

The ultimate objective is to manage the available funds wisely, make sustainable investment decisions, and successfully return the full allocated budget by the end of the game. More than just a game, Weeepoly serves as a practical learning tool that encourages systems thinking, problem-solving, and awareness of the environmental and economic dimensions of e-waste management.

Photos from the activity:

Figure 1. Inspired by the Monopoly, The WEEEPoly game has been designed to simulate concepts from the EU WEEE Directive, enabling students to experience the processes followed and infrastructures involved. Group photo of the students of the Lyceum of Aradippou with their Teachers and the Officers of the Municipality of Aradippou.

Figure 2: Active playing of WEEEPoly by the students. From WEEE separate collection, to treatment to re-use in a fun and paedagogical manner.

Figure 3: Active playing of WEEEPoly by the students. Following the instructions of the simulation-game.

Figure 4: Inspired by Monopoly, the WEEEPoly game, allows students to experience processes and infrastructures in a simulation game.

5.2.1. Participants - Target Audience

WEEEPoly is primarily designed for high school students aged 15 years and above, as the game requires participants to demonstrate a solid level of reading comprehension and the ability to understand and apply game rules effectively.

While the game is tailored to this age group, its implementation can be further enriched through the participation of adults in general and more specifically among additional groups such as teachers, youth workers, municipal representatives, and environmental educators.

By engaging young people at this educational stage, Weeepoly aims to transfer early awareness of responsible consumption, waste prevention, repair culture, recycling systems, and circular economy principles, encouraging participants to become more informed and environmentally conscious citizens.

5.2.2. Key Stakeholders

The successful implementation and dissemination of WEEEPoly is supported through collaboration with key local and sectoral stakeholders, including:

- **Aradippou Municipality**, contributing local governance perspectives and supporting community-level sustainability initiatives and outreach activities.
- **Larnaca School Board**, facilitating access to educational institutions, student participation, and alignment with school-based learning objectives.
- **WEEE Cyprus**, providing sector expertise, industry knowledge, and guidance on WEEE regulations, recycling systems, and best practices in electronic waste management.

Through this multi-stakeholder collaboration, WEEEPOLY bridges education, local authorities, and industry expertise to create an engaging and impactful learning experience on sustainable electronic waste management.

5.2.3. KPIs

KPI	Achieved (All T.)
Number of participating students	22
Students engagement	22
WEEE collected	N/A
Number of participating classes	1
Teachers involvement	3
Publicity	Aradippou Social Media: approx. 8.000

5.3. Phase C. Pilot Execution and Implementation

5.3.1. Part A: Local Green Point Excursion: February 9, 2026.

The first phase of the pilot activation took place at the Aradippou Green Point and was organised as an educational excursion aimed at raising students' awareness of proper Waste Electrical and Electronic Equipment (WEEE) management and recycling practices. The activity provided participants with a valuable opportunity to observe first-hand how a local Green Point operates and to better understand the role of citizens in supporting a cleaner and more sustainable environment.

The excursion was attended by two fifth-grade classes, comprising 43 students and three teachers. The participants were welcomed by Andriana Paraskevopoulou, EU co-funded projects officer at the Municipality of Aradippou, who introduced the objectives and expected outcomes of the visit. Introductory presentations were then delivered by DLGOL representatives, Mr. Iacovos Iacovides and Mr. Pavlos Michael.

During the visit, students were informed about the existing WEEE collection and management system, including the designated collection points operating across Larnaca and the importance of correctly separating electronic waste from other waste streams. They also learned that citizens are currently responsible for transporting both small and large WEEE items to authorized collection facilities, as household collection services are not yet available.

The guided tour of the Green Point focused particularly on the dedicated WEEE collection area, where students observed waste separation, handling and storage procedures and interacted directly with facility personnel.

To acknowledge their participation and encourage a committed environmental engagement, the students were awarded participation certificates and were recognized by the Mayor of Aradippou for their contribution to promoting environmental awareness and sustainable behaviour.

Figure 1: The activity starts from the 2nd Elementary School of Aradippou (Grades 5 and 6, student ages 11-12)

Figure 2: Arrival at the Green Point

Figure 3: Arrival at the Green Point. Students, Teachers and Officers have a photo with the Mayor of Aradippou Mr. Christodoulos Partos.

Figure 4: Press coverage (Larnaca Times) with interview from

Mayor Mr. Christodoulos Partou.

Figure 5: Introduction to students by Aradippou and District Local Government Organization of Larnaca (ΕΟΑΛ) officers.

Figure 6: Tour and explanation to students for the WEEE separation processes at the Green Point.

Figure 7: Different waste streams explained to students at the Green Point.

Figure 8: Emphasis on the collection of WEEE at the Green Point. Students combine the theoretical knowledge they received in class with on-site experience from the actual WEEE operations at the Green point.

Figure 9: Tour at the Green Point facilities.

Figure 10: Mayor Mr. Christodoulos Partou, Municipal Counsel Mr. George Savva and Teacher Mrs Maria Chadjigeorgiou give certificates to participating students.

5.3.1.1. KPIs

KPI	Achieved (All T.)
Number of participating students	43
Students engagement	43
WEEE collected	N/A
Number of participating classes	2
Teachers involvement	3
Publicity	Online Media audience: approx. 30.000

5.3.2. Part B: Collaboration of Aradippou Municipality with local Dance School "Dancing Art" participating in Larnaca Carnival parade: Sunday February 15, 2026.

The Municipality of Aradippou participated in the Larnaca Carnival Parade in collaboration with the local private dance school, Dancing Art. The activity aimed to engage the wider community and raise public awareness about the importance of reuse of Waste Electrical and Electronic Equipment (WEEE) generated by households. Through a fun, innovative and creative way of presentation led by the Dance School's teacher and owner, Lena Theodorou along with her students, environmental messages were communicated to a larger audience. On behalf of the Aradippou Municipality, EU co-funded projects officer Andriana Paraskevopoulou also participated together with the rest of the eWaster representatives at the carnival parade.

Photos from the activity:

Figure 1: Just before the start of the carnival parade, students from the private Dance School "Dancing Arts" (ages 7-17 years old) take a group photo, dressed as WEEE household appliances.

Figure 2: A photo from within the parade showing the participation of people from the whole Cyprus (estimated participation approx. 20000 people). The parade was covered by regional and nationwide media.

Figure 3: Mayors of Aradippou and Larnaca, Mr. Christodoulos Partou and Mr. Andreas Vyras attend the parade.

Figure 4: WEEE BEHAVE represented at the Larnaca Carnival.

Figure 5: Young "WEEE household appliances" dancing within the larnaca parade.

Figure 6: Young dancers dressed as "WEEE household appliances" for the larnaca parade.

Figure 7: Young dancers dressed as "WEEE household appliances" for EWaster.

Figure 8: Young dancers and cartoons "talking" about EWaster.

Figure 9: Young "WEEE household appliances" of WEEE BEHAVE dancing in the larnaca parade.

5.3.2.1. KPIs:

KPI	Achieved (All T.)
Number of participating students	14
Students engagement	14
WEEE collected	N/A
Number of participating classes	1
Teacher involvement	1
Publicity	20.000 audience in Carnival plus regional and national media: approx: 50.000

5.4. Part C: Stakeholders engaging meeting, February 16, 2026.

On 16 February 2026, a stakeholders' meeting was held in the restaurant meeting area at the Indigo Hotel in Larnaca. The objective of the meeting was to engage WEEE Cyprus as a key stakeholder, along with ASPON Consulting as an external partner and sustainability EU project management company. *Inter alia*, the discussions included improving the management and promotion of WEEE practices locally and more further.

The discussion focused on how citizens can be better supported in WEEE disposal, as well as on effective dissemination strategies to raise awareness. Particular emphasis was placed on the possibility of integrating WEEE weighing activities in schools as a permanent educational and operational procedure within the project framework.

The meeting was attended by the Mayor of Aradippou, Mr Christodoulos Partou, the Municipal Chief Executive Secretary, Mr. Mathaios Alambritis, the Municipal Civil Engineer Mr. Andreas Demetriou, Andriana Paraskevopoulou the EU Funded Projects Officer of the Municipality and Mrs Efi Tzikouli for the EU Affairs Officer of the Municipality. For ASPON Consulting was Mr. Michael Zanos and WEEE Cyprus was represented by Mr. Herodotos Savva.

Photo from the activity:

Figure 1: Stakeholders meeting took place at Indigo Hotel in Larnaca. In the photo Mayor Mr. Christodoulos Partos supported by the Municipality Officers and the General Manager of ASPON Consulting Mr. Michalis Zanos discusses with the WEEE Cyprus Operations Manager Mr. Herodotos Savva for the plans for the scaling of the WEEE BEHAVE activities in the whole Cyprus.

5.5. Part D: Educational Seminar / Lecture Session at Aradippou B' Elementary School, February 17, 2026.

Following their educational visit to the Green Point, the students took part in an interactive seminar and teaching session delivered by Aradippou Municipality Officer, Mrs Andriana Paraskevopoulou, in the presence of their teachers.

The session aimed to build on the knowledge and experiences students gained during the visit and help them better understand e-waste management. The students at the sixth grade received a full introduction into the e-waste management spectrum as they did not have the chance to attend the Green Point excursion, in comparison to the students at the fifth grade who had already been introduced to the concept of e-waste. Undeniably, all 48 students learned about the environmental

impacts of e-waste and why proper disposal and recycling are important. Andriana utilised the material from the eWaster Database and information from resources such as stakeholders' website for the presentation, but she mainly focused on getting the students talking and checking for any gaps in their understanding, so they could share the circular economy message with their families and communities as simply as possible.

Through discussions and interactive activities, the students reflected on what they saw during the Green Point visit, shared key takeaways and explored practical ways to support more sustainable waste management. The session encouraged participation, critical thinking, and the exchange of ideas between students and teachers.

To keep the atmosphere engaging and fun, Andriana organised a quiz for the students based on a question-and-answer session giving thus the participants the opportunity to test their knowledge and ask questions. Participation gifts were also handed out to recognise students' enthusiasm and involvement.

The session ended with an introduction to the next phase of the initiative—the WEEE Collection campaign. Mrs Paraskevopoulou encouraged students to become active ambassadors for responsible e-waste collection and recycling in their school and social environment.

Photos from the activity:

Figure 1: Aradippou Municipality Officer Mrs Andriana Paraskevopoulou, giving a WEEE seminar to the students of 2nd Elementary School of Aradippou (Grades 5 and 6, ages 10-12 years old.

Figure 2. "Is it appropriate to dispose WEEE or is there a second chance?" - Lessons learned by the students during the seminar.

Figure 3. Collection points and the role of WEEE Cyprus presented to students by Aradippou Municipality Officer Mrs Andriana Paraskevopoulou.

Figure 4. *Quiz: "Right or Wrong?"*

Figure 5. *Student assistants to the Municipality Team give participation gifts from recycled materials to their classmates.*

Figure 6. *Participation gift from recycled materials.*

Figure 7. A promising moment for next generations: Young presidents of the classes receive the mandate to responsibly prepare with the support of their families Green Points in their school for the WEEE separate collection competition.

5.5.1.1. KPIs:

KPI	Achieved (All T.)
Number of participating students	84
Students engagement	84
WEEE collected	N/A
Number of participating classes	4
Teachers involvement	5

5.6. Part E: School Competition for Collection of WEEE from the elementary local cchool, Aradippou B', March 6, 2026.

Following the educational session delivered to the fifth and sixth grade students on 17 February, Andriana organised a WEEE collection competition between the classes of each grade. Students were encouraged to collect unwanted electrical and electronic items from their homes and bring them to school for recycling. It was a collaboration with WEEE Cyprus. The collected items were weighed using a special scale to ensure accurate recording of the results.

On the day of the collection, the WEEE Cyprus officer, Gregoris, provided students with a detailed explanation of how WEEE Cyprus manages the collection, transportation, and recycling of electronic waste. This gave students a better understanding of the process that takes place after electrical and electronic equipment is collected and highlighted the importance of proper disposal practices.

The amount of WEEE collected varied among the classes, reflecting differences in how households store old electrical equipment. The competition motivated students to actively participate in the initiative, creating a fun and friendly competitive spirit among the classes.

At the end of the activity, the winning classes received a board game as a prize, while all participating students were awarded medals in recognition of their effort and contribution. Andriana encouraged the winning classes to share the prizes among their classmates, highlighting that the true purpose of the competition was the initiation of a common effort and to raise awareness among their community, a role they will hold in the future.

As a recognition of the project's value and impact, an endorsement letter was also received from the school's Headmistress, Mrs Maria Kyriazi, a key stakeholder who actively supported the implementation of the activity.

Photos from the activity:

Figure 1: In the central internal area of the 2nd Elementary School of Aradippou, the separately collected WEEE household appliances and equipment are weighed with special equipment managed by WEEE Cyprus. In the photo students with the WEEE Cyprus Officer.

Figure 2: Weighing results for the household appliances and equipment, separately collected by the 5th Grade class.

Figure 3: Students participating in the competition receive an eWaster BEHAVE medal (Group photo) rewarding their effort.

Endorsement Letter for the Municipality of Aradippou

Aradippou, 06th of March 2026

To whom it may concern,

I am pleased to formally endorse the Municipality of Aradippou for the successful implementation of the pilot activities under the **eWAsTER Program-Interreg Euro-MED**, focusing on the recycling of electrical and electronic devices and its valuable contribution to promoting environmental awareness within the school community.

The Municipality has demonstrated strong commitment and effective coordination in carrying out this important environmental initiative.

The educational material, lecture, and excursion delivered by Ms. Andriana Peraskevopoulou, on behalf of the Municipality of Aradippou, were conducted in an engaging and professional manner. These activities were successfully completed and provided students with valuable knowledge on the responsible management and recycling of electrical and electronic waste.

Through this initiative, students have significantly enhanced their understanding of environmental sustainability and developed greater awareness and responsible habits regarding electronic waste management.

We highly commend the Municipality of Aradippou for its dedication to environmental education and for providing meaningful learning opportunities for our students.

Sincerely,

Maria Kyriazi

Headmistress of Aradippou B' Elementary School

Figure 4: Endorsement Letter for Aradippou Municipality by the Headmistress of Aradippou B' Elementary School.

5.6.1.1. KPIs:

KPI	Target (All T.)	Achieved (All T.)
Number of participating students	100	84
Students engagement	50	84
WEEE collected	200kg	88kg
Number of participating classes	10	4
Teachers involvement	10	5
Publicity		Municipality media: 8000

6. Human Resources and Associated Costs

6.1. Technical Team and Roles

Andriana Paraskevopoulou (Municipality of Aradippou in-house Staff - EU co-funded Projects Officer)

- Overall coordination and supervision of pilot activities, including implementation and supply of equipment.
- Stakeholder communication and logistical support, including educational materials, transport, and venue arrangements.
- Monitoring and supervision of project metrics and results.
- Reporting and administrative coordination.

PERSONNEL COST IN TOTAL: ≃8,480EUR
Including the external partners' salaries.

Direct Costs

- Transportation costs.
- Materialistic completion of the WEEEPOLY game.
- Equipment and material supply required for pilot implementation.
- Videography and photography services.
- Production of WEEE-themed costumes.
- Participation gifts distributed during educational sessions.
- Winning prizes and medals awarded.
- Lunch expenses for stakeholder meetings.
- Venue-related expenses where applicable.

EXPENSES COST IN TOTAL: ≃5,392EUR

7. Results from the Testing Phase

7.1. Impact and Influence Analysis

Students took their role as WEEE recycling ambassadors seriously and actively shared the message of responsible WEEE recycling with their families and friends. By transferring the knowledge they gained through the WEEEBehave pilot execution to those around them, they helped multiply the impact of the initiative and extend its reach beyond the classroom.

This shows that the activity contributed to raising environmental awareness within households and the wider community, encouraging more sustainable habits and helping shape future generations of conscious and educated citizens. To track feedback evaluation and estimate the level of the impact of the pilot, five students were interviewed and shared their views on how the experience shaped their perspective and inspired them to make a positive difference both in their personal lives and within their local community.

Key points from the students' interviews transferred into text and are presented below:

Twins Theklia and Marilia reflected on the Green Point visit and the classroom session, explaining that they gained a clearer understanding of WEEE, with one learning what it is and the other how to separate it properly.

⬅They noted changes in their daily habits, such as being more careful with electronic devices at home and reminding their family to recycle them correctly. Theklia also said she now thinks more before disposing of electronics.

With one word they described WEEE recycling as “Respect” and a “Second Chance,” emphasizing that change starts with each of us and can create a positive difference in their community.

⬇ Anna shared that after the excursion and lecture she learned that old electronic devices can be reused in different ways. She described WEEE recycling as “good practices for a greener future” and believes that correct recycling can reduce the volume of e-waste. She also noted that continued recycling habits can positively influence her community over time.

➡Maria shared that after the educational session she learned that broken devices are not necessarily useless. She described WEEE recycling as “responsibility” and highlighted that even small actions can help protect the environment. She believes that recycling habits can contribute to a healthier future in her community.

➡Kallistheni shared that she learned e-waste should not be disposed of in regular bins or random locations. She described WEEE recycling as “Environmental Awareness” and highlighted the importance of building good habits from a young age. She is inspired by the idea of a “Clean Community Forever” and hopes this mindset continues in her community.

8. Conclusions

What worked well:

The pilot effectively engaged students through interactive sessions and a WEEE collection activity. Collaboration with WEEE Cyprus, Aspon Consulting Ltd, and local schools and organisations ensured smooth delivery, while students acted lively as ambassadors, spreading awareness beyond the classroom.

The pilot successfully engaged students through interactive sessions and hands-on WEEE activities, making the learning experience practical and meaningful. Collaboration with WEEE Cyprus, the Municipality of Aradippou, and schools ensured smooth coordination and strong delivery.

The WEEE collection competition increased motivation and participation, while students acted as recycling ambassadors, sharing the message with their families and extending the impact beyond the classroom. Overall, the combination of education, collaboration, and active participation proved highly effective in raising awareness.

Challenges encountered:

Main challenges included time restriction combined with strong planning as coordinating activities with the school schedule limited the flexibility of arrangements. Additional difficulties arose from implementing activities during weekends, particularly for events such as the carnival, which required extra planning based on resources and facilities availability.

Suggestions for next phase:

Future actions should include better scheduling within project timeframe, stronger communication with stakeholders and partners. Suggestion on adapting pilot core plan main goal and KPIs according to data available on WEEE Management locally/nationally.

Potential partners:

Would not deviate much on potential partners compared to the partners and organisations we collaborated in the eWaster project. That is to say that future stages could involve NGOs, recycling companies, private sector partners and media organisations to increase reach and impact.

Best practices and Lessons learned

The pilot demonstrated that combining environmental education with hands-on activities, on site visits and creative approaches is an effective way to engage students and promote long-term behavioural change.

The model can be easily replicated in other schools and regions by adapting the activities to local needs and involving relevant stakeholders, such as municipalities, recycling organisations and schools. To ensure successful replication, future implementations should strengthen coordination with schools, embed educational materials where needed, and maintain strong collaboration among all partners. Awareness campaigns play a major role in the correct WEEE management immersion too.

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WEEE BEHAVE
Evaluation and Conclusions

Annex VI. Alentejo Science and Technology Park, Alentejo Region, Portugal (LP1)

https://ewaster.interreg-euro-med.eu/

Document Control Information

Document Title	WEEE REUSE Evaluation and Conclusions
Project Title	Preventing e-waste from polluting MED water by turning waste into a resource.
Project Mission	Strengthening an innovative sustainable economy
Programme Priority	Greener MED
Specific Objective	RSO2.6: Promoting the transition to a circular and resource efficient economy
Document Author	Ricardo Sobral
Partners Involved	PACT – Alentejo Science and Technology Park, S.A.
Work Package	Work Package 2 – Joint testing of solutions for e-waste prevention and management in MED (RSU)
Activity	A2.4 – Testing Solution: WEEE BEHAVE
Deliverable ID	D.2.4.1 – WEEE BEHAVE evaluation and conclusions.
Doc. Status	Final 2026-07-27
Sensitivity	Public
Date of Production	2026-07-27

Document Approver(s) and Reviewer(s)

NOTE: All Approvers are required. Records of each approver must be maintained. All Reviewers in the list are considered required unless explicitly listed as Optional.

Name	Role	Action	Date
Panayiotis Michael	A2.2 Coordinator	*Approve*	2026-07-28

Document History

Versions	Date	Document status	Delivered by
1.0	2026-07-27	Final	Ricardo Sobral

Table of Contents

Glossary

EC	European Commission
EU	European Union
LAP	Local Action Plan
MED	Mediterranean
MED Methodology	Transnational Methodology for e-waste Prevention and Management
PP	Project Partner
SC	Steering Committee
VW	Validation Workshop
WEEE	Waste from Electrical and Electronic Equipment
WP	Workshop

Executive Summary

The WEEE BEHAVE pilot action, implemented by UCPB in the Pian del Bruscolo area (Pesaro-Urbino, Marche Region, Italy), successfully tested and escalated a school-based awareness and collection competition model to boost WEEE collection rates through behavioral change.

First edition (Oct 31–Dec 3, 2025): Two primary schools (Fabio Tombari - Padiglione Tavullia; Carlo Alberto Dalla Chiesa - Bottega Vallefoglia) engaged 162 pupils (4th-5th grades), collecting **560 kg** WEEE via classroom boxes and certified deliveries to Vallefoglia Recycling Centre. Padiglione won overall (**313 kg**), Bottega IV C top class (**126 kg**).

Second edition (Feb 3–Mar 5, 2026): Following demand from inspired stakeholders, **IC Papa Giovanni Paolo II** (4 buildings: Via Guidi/Montefeltro Montecchio, Monteciccardo, Tavullia) engaged **249 pupils**, collecting **799 kg** WEEE. Via Guidi won (385 kg), VB Via Guidi top class (**189 kg avg. 9 kg/pupil**).

Aggregated impact: **1,359 kg WEEE** from **411 pupils** across 2 institutes. Enthusiastic feedback, local media coverage (Vivere Pesaro, Nov 3, 2025), and Jan 19, 2026 award ceremony confirmed success.

Scalability proven: Expansion to new institute validates model for LAP integration and MED upscaling

1. Objective and Context of the Pilot

PACT, as Lead Partner, is a regional coordination actor for the Regional Transfer and Technology System (SRTT). The Alentejo's main challenges relate to low citizen awareness and difficulties in implementing effective education and collection campaigns due to its low population density.

WEEE BEHAVE targets schools, families, and policymakers, aligning with the key identified challenges for the region.

Key stakeholders are the inter-municipal waste management organisations within the region, namely Ambilital, AMCAL, Gesamb, Resialentejo, and Valnor, the national waste management operators, namely Electrão and ERP Portugal, and the Alentejo Coordination and Regional Development Commission, as responsible for licensing and monitoring of waste agents.

1.1. Partner Introduction: PACT

PACT was created with the purpose of leading the SRTT that aims to support the creation and development of companies in Alentejo, and be a pole of attraction for innovative companies with sustainable results that incorporates all the Alentejo sub-regions.

Since the beginning of its activity, it has consolidated its role as a relevant institution in strengthening the innovation ecosystem in Alentejo.

PACT has close ties with the regional Government CCDRA and, regularly participates in the design of innovation strategies and plans related to business promotion. Circular economy is a strategic development axis, and PACT has a specific area working on sustainability on SME and eco-businesses.

The Alentejo is one of the seven NUTS 2 regions in Portugal. Though the second largest in area at 27,317 km2, its population density is the lowest in Portugal at 17.254/km2, making it a sparsely populated, majorly rural region.

The Alentejo's activities within eWAsTER responds to a clear challenge: Portugal ranks among the weakest WEEE collectors in the EU, with regional studies confirming low citizen awareness despite a dense collection infrastructure.

2. Pilot Methodology

2.1. Phase 1: Application Design & Production (April 2026)

Lacking the technical expertise to develop a VR application in such a short timeframe, PACT launched a public procurement to deliver an experience focused on citizen awareness, waste-related education, and capacity building for handling e-waste in separation and dismantling.

The application was developed between April 2026 and June 2026, to be deployed at the São João regional fair, which is hosted yearly in Évora and attracts thousands of visitors.

The application is split into eight modules: e-waste vs. general waste; safety & personal protective equipment; desktop personal computer disassembly; e-waste material categories; e-waste disposal guidelines; a sorting practical activity; a hands-on exploration of item-based tag knowledge; and a final assessment.

PACT employed one FTE to monitor development and ensure conformity with project guidelines, prepare the deployment at the aforementioned fair, and review survey results.

Figure 1. e-waste vs general waste module

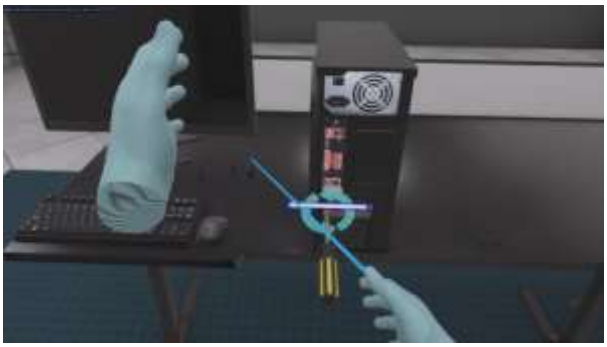

Figure 2. Desktop PC dismantling module

Figure 3. Item-based tag knowledge module

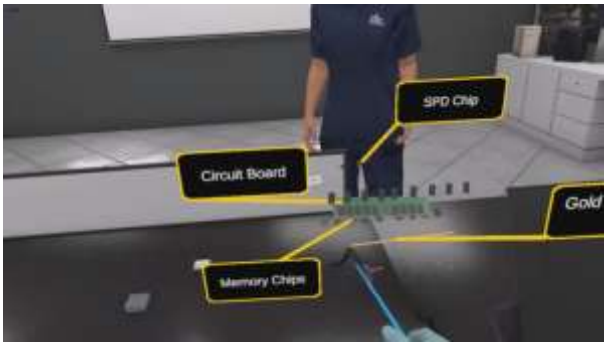

Figure 4. Item-based tag knowledge module

2.2. Phase 2: Public Testing (23 June to 5 July)

Full testing took place at the São João Fair, between 23 June and 5 July 2026, at PACT's institutional space. The pilot received over 100 visitors, though not all responded to the survey.

One FTE was necessary to implement the pilot test, gather survey responses, and evaluate the feedback gathered after the fair was over. One set of Meta Quest 3 glasses were employed during testing, as well as one laptop to run the application, which was connected to one television to improve the pilot's visibility for other visitors.

3. Human Resources and Associated Costs

Category	Details	Cost Estimate
Direct	Project Manager, 40 hours	250€
Direct	IT Intern, 104 hours	152€
Direct	Application Production	18,889€
Direct	Meta Quest 3 Glasses	600€
Direct	Laptop PC	950€
Total		20,841.00€

4. Testing Phase and Activities Carried Out

4.1. Participants and Target Groups

PACT tested the VR-based educational experience over a period of two weeks, targeting both children, young adults, and their legal guardians. Responses were overwhelmingly positive over the 55 collected survey answers, averaging a 3.81/4 score, where 45 responses detailed a 4/4 score.

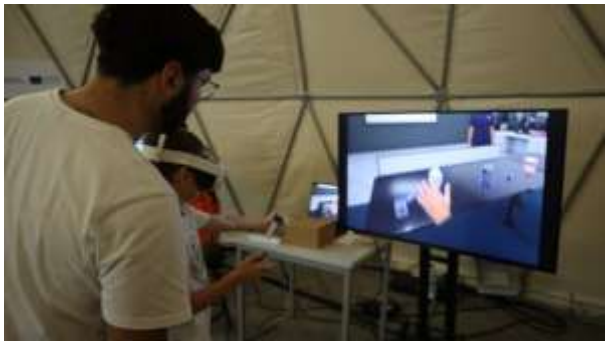

Figure 6. Testing e-waste vs general waste module

Figure 5. Testing desktop PC dismantling module

Figure 8. Testing item-based tag knowledge module

Figure 7. Testing e-waste vs general waste module

4.2. Results of VR Pilot Test

Of all, 43 participants stated the experience was easy to use, while 21 evaluated there were some challenges, of which the main ones were controls and movement (17 respondents), clarity and instructions (8), and user experience in navigating menus (2).

Out of 55 respondents, 89.1% considered they had learned at least “some things” during the experience, while the remaining presented no learning opportunities, though half of these claimed to already consistently recycle WEEE. The main requests for improvements were the addition of further interactive experiences for hands-on learning, with a smaller portion requesting further information concerning WEEE.

The overwhelming majority of respondents claimed that they would recommend the experience for WEEE education (94.5%), that it would be useful in a school setting or training environment (96.4%), and that they would start to recycle WEEE (50.9%) or strengthen their practice (43.6%) after the experience.

Considering recycling profiles, over half the respondents (54.5%) claim to recycle WEEE, though only 34.5% recycle consistently. The main motives for not recycling were not knowing where to

deliver WEEE (34.5%), while a smaller percentage stated they did not know the importance of recycling WEEE (14.5%) or the inconvenience of directly depositing in purpose-made places (5.5%).

Overall, the experience was overwhelmingly seen as positive, with a majority of respondents emphasising the benefits a VR-based experience can bring to WEEE and environmental education and awareness-raising.

Partners who wish to implement this application in their own regions will also require funding to translate the experience into the local language.

4.3. Commitment to Future Expansion

The VR application is designed for integration into PACT's public institutional offer, specifically within its citizen science and circular economy pillar. PACT has regional scope across the Alentejo and maintains established cooperative relationships with all five intermunicipal waste management entities (Ambilital, AMCAL, Gesamb, Resialentejo, Valnor) and the region's higher education institutions, providing natural deployment channels through study visits, open days, fairs, and hosted sessions at PACT's premises and partner locations.

In the future, PACT plans to conclude development on another sequence of modules targeting the electric vehicle and the photovoltaic panels sectors; as their size and relevance in Portugal grows, so will the need to have professionals equipped with the skills to handle new e-waste categories and dismantle new equipment.

4.4. Cost-Benefit Analysis

Throughout implementation, key successes were the engagement from students and younger children with the technology. Students found higher engagement through the use of innovative, immersive experiences within citizen science actions, and legal guardians tended to think such solutions are worthwhile experiments within the classroom.

Some challenges focused on user-experience details that will be improved in the future, such as control schemes within the virtual reality environment, and with the lack of content, which is more costly to produce for such an application than it would be to lecture through a standard presentation or leaflet.

To consider scalability, in the future the application may be considered for direct implementation within classrooms, either by schools, municipalities, or directly by waste management organisations or NGOs.

5. Conclusions

The successful implementation of the VR-based immersive educational experience implemented by PACT demonstrates the core importance and potential in integrating technology for education, as well as the demonstrable transferability and scalability of the pilot as an efficient dissemination and citizen awareness action.

The first pilot implementation reached over 100 students and legal guardians in less than two weeks, and received exceptionally high praise from both younger and older visitors alike.

Several actions would be needed to translate the solution into routine practice: Defining annual school and student campaigns. Institutionalisation should be linked to an official plan, a steering mechanism, or a recognised operational owner, as this solution benefits from municipal or school coordination structures. Furthermore, strong coordination with school infrastructures is required for long-term implementation, and may require another FTE to coordinate with regional or local stakeholders before implementation, namely in aligning implementation timing with the relevant school calendar and signing off the educational activities.

Since the application is finalised, the implementation timeline would focus on coordination with schools, which is the most time-intensive element. For this solution, future adopters should begin coordination late in the previous school year (April to May, in Portugal's school year), targeting late September to begin activities in partnership with schools and waste management organisations.

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