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WEEE REUSE Evaluation and Conclusions

Report on results from a social solution to
increase WEEE circularity in Bosnia and
Herzegovina, Slovenia, and Portugal

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Table of Contents

Glossary	5
1. Executive Summary	6
2. Objective and Context of the Pilot	8
2.1. Partner Introduction: LINK.....	9
2.1. Partner Introduction: ORZ.....	10
2.2. Partner Introduction: PACT	10
3. Pilot Methodology	11
3.1. Implementation Timeline and Geographic Location	11
3.2. Waste Collection and Transport Model	11
3.3. Collection Campaign	12
3.4. WEEE Flow Description	12
3.5. Promotional Materials.....	12
3.6. KPIs, Objectives and Goals	12
4. Human Resources and Associated Costs	14
4.1. Technical Team Composition	14
4.2. Direct Costs.....	14
4.3. Indirect Costs.....	14
5. Testing Phase and Activities Carried Out.....	16
5.1. Participants and Target Groups.....	16
5.2. Characterisation of the Target Groups.....	16
5.3. Number of Participants and Selection Criteria.....	16
5.4. Type of Support Provided.....	16
6. Results from the Testing Phase (with description of KPIs)	18
6.1. Results of the Collection Campaign	18
6.2. Economic Evaluation.....	18
6.3. Benchmarking and Market Context.....	19
6.4. Conclusion.....	19
7. Cost–Benefit Analysis	20
7.1. Efficiency: Time Invested vs. Economic and Social Return	20
7.2. Effectiveness: Achievement of Objectives	20
7.3. Scalability Projection.....	20
7.4. Conclusion.....	21
7.5. Note on Data Availability and Estimations.....	21
8. Conclusions	22
8.1. What Worked Well	22





8.2. Challenges Encountered	22
8.3. Suggestions for the Next Phase	23
8.4. Potential Partners for Future Stages.....	23
8.5. Best Practices and Recommendations for Future Implementation	23
8.6. Scalability Projection	23
8.7. Job Creation Potential	24
8.8. Final Conclusion	24
9. Annexes.....	25
9.1. Annex 1 – Information about companies participating in pilot	25



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
PP	Project Partner
ORZ	Environmental Research Institute
PACT	Alentejo Science and Technology Park
SC	Steering Committee
VW	Validation Workshop
WEEE	Waste from Electrical and Electronic Equipment
WP	Workshop



1. Executive Summary

The WEEE REUSE pilot was implemented within the **eWAsTER (Interreg Euro-MED)** project with the objective of testing innovative approaches to the collection, refurbishment, and reuse of electrical and electronic equipment (WEEE), while promoting circular economy principles, social inclusion, and sustainable resource management.

Pilot was planned and initiated in three countries: Portugal, Slovenia and Bosnia and Herzegovina.

In **Portugal**, the implementation of the WEEE REUSE pilot faced significant constraints due to strict legal and regulatory frameworks governing waste management and reuse activities. These regulations limited the possibility of directly involving businesses in the pilot testing phase, particularly in terms of handling, processing, and reusing electronic waste outside of formally authorized systems.

As a result, the originally planned pilot activities could not be implemented as intended. In response, the approach was strategically adapted, and the focus was shifted towards the development of an innovative virtual reality (VR) tool. This tool was designed to serve educational and promotional purposes, raising awareness about WEEE, circular economy principles, and sustainable waste management practices.

The VR solution enables users to better understand recycling and dismantling processes, environmental impacts, and opportunities for circular business models in an interactive and engaging way. Although different from the initial concept, this approach ensured continued contribution to the project objectives by strengthening awareness, knowledge transfer, and stakeholder engagement in the Portuguese context. As a result, PACT's results and indicators are separate from those evaluated in Bosnia and Herzegovina and in Slovenia, and further detailed in the WEEE BEHAVE solution report from eWAsTER.

The pilot activities with business subjects were carried out in **Bosnia and Herzegovina and Slovenia during 2025–2026**, involving a diverse range of stakeholders, including small businesses, social enterprises, NGOs, public utility companies, and policy institutions. The initiative aimed to demonstrate how reuse-oriented models can extend product lifecycles, reduce waste, and create socio-economic value, particularly through the integration of vulnerable groups into circular economy activities.

The implementation followed a flexible methodology adapted to local contexts. In Bosnia and Herzegovina, the focus was on introducing reuse practices within an emerging system through capacity building, mentoring, and direct engagement with small businesses. In Slovenia, the pilot built on existing infrastructure and stakeholder networks, strengthening and optimizing established reuse systems.

Overall, the pilot engaged **20 organizations (9 in Bosnia and Herzegovina and 11 in Slovenia)** and achieved the collection of **24,486 kg of WEEE (over 24,000 items)**. The activities contributed to the creation of **18 jobs for vulnerable groups** and supported the preservation of existing employment within participating entities.

The results demonstrate that WEEE reuse can generate both economic and social value. In Bosnia and Herzegovina, reuse activities enabled the development of new business models and revenue streams, while in Slovenia, reuse was further integrated into established systems, improving efficiency and scalability. The pilot confirmed that reuse can be implemented with relatively low additional costs, especially when leveraging existing infrastructure and expertise.





At the same time, several challenges were identified, including regulatory barriers, limited access to quality WEEE streams, financial sustainability constraints, and insufficient market recognition of reused products. Addressing these challenges will be critical for scaling reuse activities and ensuring long-term sustainability.

The pilot highlights that while reuse alone may not yet represent a fully sustainable standalone business model without systemic changes, it serves as a valuable complementary activity that enhances business resilience, supports innovation, and creates employment opportunities for vulnerable groups, which also demonstrates the willingness of businesses to proceed with WEEE REUSE in their regular activities.

In conclusion, the WEEE REUSE pilot provides strong evidence that reuse-based models are scalable, impactful, and aligned with EU circular economy objectives, offering a practical pathway for reducing e-waste, strengthening local economies, and promoting inclusive growth.



2. Objective and Context of the Pilot

The WEEE Reuse pilot action was implemented within the EWASTER Project framework, with the primary objective of testing innovative approaches to the collection, refurbishment, and reuse of electrical and electronic equipment. The pilot aimed to promote circular economy principles by extending product lifecycles, reducing electronic waste, and fostering sustainable resource management practices.

A key motivation behind the pilot was to explore how reuse-oriented models can contribute not only to environmental protection, but also to social inclusion and job creation, particularly for vulnerable and hard-to-employ groups. The pilot therefore combined environmental and socio-economic objectives, aligning with broader EU sustainability and ESG priorities.

The WEEE REUSE pilot project was primarily motivated by the need to transition from a disposal-oriented waste management system toward a circular model that prioritizes the extension of electronic equipment life cycles. This transition involved testing and reinforcing reuse principles—such as repair, refurbishment, and deep cleaning—to reduce the volume of electronic waste sent to landfills, as well as reuse in different purposes (creating new products from parts of e-waste). Equally significant was the motivation for social innovation and professional integration, specifically the social activation of vulnerable groups and individuals with special needs. By designing workspaces and tasks tailored to these participants' abilities, the pilot sought to demonstrate how environmental sustainability can be harmonized with social inclusion.

The regional context is characterized by limited infrastructure for systematic WEEE reuse and insufficient integration of circular economy practices into existing waste management systems. Institutionally, the pilot was supported through collaboration between project partners, local authorities, and civil society organizations, creating a multi-stakeholder approach to addressing these gaps.

The project was situated within a broad regional and institutional context in partner countries. The institutional landscape was diverse, comprising small businesses, social enterprises, non-governmental organizations (NGOs), public utility companies, and national governmental bodies. This collaborative environment allowed for the application of reuse principles across different scales, from local community sharing initiatives and voluntary digital inclusion programs to nationwide collection and policy-making frameworks.

Several critical challenges were addressed during the pilot, with financial sustainability and the lack of stable funding being the most pervasive issues for participating organizations. Regulatory and systemic barriers were also prominent, particularly the challenge of double taxation on second-hand electronics, which creates significant financial pressure on reuse-oriented business models. Furthermore, organizations had to navigate technical and safety constraints, often opting for deep cleaning over repair due to the high risks and costs involved. Overcoming market perceptions was another target, as the project worked to shift the narrative from reused electronics being a "fallback" option to being a first-choice, sustainable alternative.

The pilot addressed several key challenges:

- Low levels of WEEE separation and collection at source.
- Lack of awareness among citizens and businesses regarding reuse potential.
- Insufficient technical and organizational capacities for refurbishment and reuse.
- Limited market structures for reused electronic equipment.





- Barriers to the professional integration of marginalized groups.
- Lack of technical and expert support to businesses which want to apply the model.

The stakeholders involved played complementary roles in achieving the project's goals:

- Associated partner provided support during the process.
- Small businesses, social Enterprises and NGOs served as operational leads for the collection, diagnostic testing, and preparation of WEEE for reuse, while simultaneously providing employment and rehabilitation for vulnerable groups. They played a key role in testing the WEEE REUSE activities and the inclusion of vulnerable groups through training and employment opportunities.
- Private sector in general – contributed through participation in collection schemes and potential uptake of reused equipment. Also tested the WEE EREUSE in their respective models.
- Voluntary and Community Organizations also provided support in refurbishing equipment for digital inclusion of disadvantaged groups, and promoted a sharing economy model through borrowing and community workshops.
- System Operators and Public Utilities supported collection, sorting, and logistics of WEEE streams. ZEOS acted as the nationwide extended producer responsibility scheme operator in Slovenia, identifying reuse potential within large-scale collection systems; OKP Rogaška Slatina integrated reuse activities directly into municipal waste management services. Local utility companies and recycling yards from Bosnia and Herzegovina also provided support to their respective local businesses.
- Strategic and Policy Bodies: The Ministry of the Environment, Climate and Energy (MOPE) in Slovenia focused on improving the legislative and strategic frameworks to support reuse and inclusive employment. The Chamber of Commerce and Industry of Štajerska (ŠGZ) Slovenia contributed by designing tailored workspaces for participants with special needs and coordinating circular value chains. In Bosnia and Herzegovina, as activities were implemented on level of Herzegovina Neretva canton, Ministry of environment and tourism of Herzegovina Neretva canton as well as Ministry of Economy of Herzegovina Neretva Canton were informed and provided their feedback.

2.1. Partner Introduction: LINK

LINK is an Entrepreneurial Centre established in Mostar (Bosnia and Herzegovina) in 2001 with the purpose of providing support to local and regional development. LINK mainly focuses on business development and innovation, sustainable development, growth and systematic improvement.

LINK gathers small and medium size businesses, represents/advocates their interests and provides them with direct information, business advisory and financial support for growth and development, new jobs and employment. LINK supports innovation and digitalization and the process of local community development, strategic planning, preparation and implementation of development projects and systematic improvement of the business environment.

Within the eWASTER project LINK was in charge of coordinating the WEEE REUSE pilot. LINK promoted opportunities for improvement of business models of small businesses, NGOs and social enterprises by testing new solutions.



Although the testing phase was initiated in a very challenging time for small businesses (minimum wage was increased and they were facing huge issues in financial sustainability), thanks to its connections and built reputation within business sector, LINK had no problem in ensuring participating businesses to test this whole new approach towards doing business.

2.1. Partner Introduction: ORZ

ORZ operates within a regional framework where electronic waste management is a growing challenge. The institute collaborates with local authorities, waste management companies, REUSE actors and educational institutions to strengthen the regional capacity for sustainable resource recovery and reuse.

ORZ was engaged in the WEEE Reuse pilot under the eWAsTER project to explore and test innovative approaches for the collection and reuse of waste electrical and electronic equipment. Their motivation includes promoting circular economy practices, supporting the creation of new business models for reuse of plastic and WEEE, with a focus on creating jobs for vulnerable individuals, and enhancing sustainable waste management in the region.

Key challenges included the low rate of WEEE reuse, limited awareness among citizens and businesses, and the need to integrate social and economic objectives (e.g., professional integration of vulnerable groups) into waste management practices. The pilot aimed to address these challenges by testing innovative collection methods, improving reuse flows, and demonstrating the viability of circular economy solutions.

2.2. Partner Introduction: PACT

PACT is a leading science and technology park in the Alentejo region of southern Portugal, dedicated to fostering collaboration between research institutions, businesses, and public entities to drive sustainable and innovation-led development. As a regional centre for research, development, and technology transfer, PACT supports business growth, startup ecosystems, and the adoption of advanced, knowledge-based solutions.

PACT has extensive experience in the implementation of EU-funded projects, particularly in the fields of circular economy, digital transformation, and sustainable resource management. As the lead partner of the eWAsTER (Interreg Euro-MED) project, PACT coordinates activities aimed at improving electronic waste management through the development of innovative, sustainable, and market-oriented solutions.

Through its work, PACT actively promotes sustainability and corporate social responsibility, including initiatives focused on the collection, reuse, and valorisation of WEEE. Its activities include the development of reuse-based business models, strengthening collaboration between public and private stakeholders, and raising awareness on circular economy principles and inclusive growth.

PACT was a member of the WEE REUSE pilot but met legal limitations in implementing WEEE REUSE. Under Portuguese law, WEEE collection, dismantling, reuse, and handling can only be carried out by licensed organisations. Not holding the required licensing, which by itself requires physical and technical capacity and due equipment and procedures for recycling WEEE, PACT was discouraged from deploying a reuse-oriented business model in the Alentejo despite several attempts with regional stakeholders. Instead, PACT implemented a VR-based solution for WEEE education under WEEE BEHAVE principles.





3. Pilot Methodology

The pilot was implemented in three countries: Bosnia and Herzegovina (coordinated by LINK), Slovenia (coordinated by ORZ) and Portugal (coordinated by PACT), in the period from March 2025 till March 2026.

The pilot implementation was based on a structured approach combining efficient waste collection systems, stakeholder engagement, and the promotion of reuse-oriented practices within the WEEE value chain. The pilot followed a structured, yet flexible approach adapted to different national contexts and stakeholder ecosystems. While Bosnia and Herzegovina focused on introducing and testing WEEE reuse practices in a relatively new and challenging environment, Slovenia built upon already established systems and stakeholders, aiming to strengthen and scale existing reuse models. At the same time, Portugal faced challenges and obstacles regarding strict legal regulations, which lead to a shift in planned pilot activities towards a VR-based experience for education and capacity building in WEEE separation, reuse, repair, and recycling.

Due to legal obstacles in Portugal which forced implementation to shift to WEEE BEHAVE principles under eWAsTER, testing the WEEE REUSE was carried out in Bosnia and Herzegovina and Slovenia.

3.1. Implementation Timeline and Geographic Location

In Bosnia and Herzegovina, preparatory activities started in early 2025, with purpose of involving relevant stakeholders. Beside systematic issues, this was quite a challenging period since national authorities in Bosnia and Herzegovina increased minimum wage, which was a huge shock to small businesses, struggling with huge taxes and social contributions. Businesses were shutting down; there were huge layoffs and businesses sector was facing crisis. In general, WEEE REUSE was something new in Bosnia and Herzegovina and businesses are not so keen on being the first one to test something. Despite these challenges, LINK, thanks to its reputation and connection with business sector, ensured participation of stakeholders willing to test the new business model.

Pilot implementation lasted a minimum of six months per participating entity. The activities were concentrated in the Herzegovina-Neretva Canton and involved nine small businesses, NGOs, and social enterprises from different sectors.

In Slovenia, the pilot was implemented between August and December 2025, covering both Western and Eastern regions. The activities involved a diverse range of stakeholders, including social enterprises, public utility companies, national institutions, and extended producer responsibility (EPR) schemes.

3.2. Waste Collection and Transport Model

The waste collection and transport model differed significantly between the two countries, reflecting their respective levels of system maturity.

In Bosnia and Herzegovina, collection was organized through flexible, locally adapted mechanisms, primarily relying on private channels and cooperation with local partners and recycling yards. WEEE was collected from businesses, public institutions, and individual users, including through community-based initiatives led by associations. Transport was managed using existing logistical capacities of stakeholders, ensuring cost-efficiency and



environmental sustainability, with collection frequency adapted to local needs and volumes.

In Slovenia, collection and transport models were largely dependent on stakeholder roles and could be grouped into three categories: (1) direct collection by organizations through waste management centres, their own facilities, and door-to-door systems; (2) stakeholders involved in legislative and policy work without direct collection; and (3) organizations responsible for managing collection systems without directly collecting WEEE. Established infrastructure and nationwide systems enabled efficient and large-scale collection and transport operations.

3.3. Collection Campaign

In Bosnia and Herzegovina, the collection campaign focused on stakeholder engagement and awareness-raising, targeting small businesses, NGOs, and the local community. Activities included direct outreach, networking, and promotion of reuse practices, supported by workshops, training sessions, and continuous mentoring.

In Slovenia, collection campaigns were less central for certain stakeholder groups due to already established systems. For organizations directly involved in reuse, collection was primarily based on direct donations from individuals, complemented by door-to-door collection and pickups from waste management centres, with a strategic focus on higher-quality inputs.

3.4. WEEE Flow Description

Across both countries, the pilot established structured WEEE flows from collection to final output.

In Bosnia and Herzegovina, incoming equipment was registered and assessed for reuse potential. Usable components were extracted and repurposed into new products such as souvenirs, jewellery, or agricultural tools, while the remaining waste was directed to authorized recycling yards to ensure proper disposal.

In Slovenia, WEEE flows followed a standardized process: collected items were first assessed for usability, with non-usable fractions sent to recycling. Usable equipment was further categorized for direct reuse, refurbishment, or use of spare parts. Processing included dismantling, deep cleaning, and quality control, after which products were either donated or sold, ensuring both environmental compliance and market viability.

3.5. Promotional Materials

In both countries, promotional and communication activities were aligned with project and Interreg programme guidelines. Materials included online content, social media campaigns, and targeted communication towards businesses and stakeholders. Communication activities supported knowledge sharing, visibility of reuse practices, and policy-level engagement.

3.6. KPIs, Objectives and Goals

The pilot was guided by shared objectives focused on environmental sustainability, social inclusion, and the development of viable reuse-based business models.





20 businesses were included in the testing phase (11 from Slovenia and 9 from Bosnia and Herzegovina).

Total **24.486 kg of ewaste was collected** (1.004 kg in Bosnia and Herzegovina and 23.482 kg in Slovenia), including **24.019 items** (1.449 in Bosnia and Herzegovina and 22.70 in Slovenia).

18 jobs were created for vulnerable categories (persons with disabilities, women from rural areas etc), out of which 4 from Bosnia and Herzegovina and 14 from Slovenia, and existing jobs in 20 companies were supported to preserve.

Overall, the pilot aimed to:

- Increase the volume of WEEE collected and diverted towards reuse.
- Support and validate reuse-oriented business models.
- Promote social inclusion through employment opportunities.
- Strengthen cross-sector collaboration.
- Raise awareness and influence long-term circular economy practices and policies.

The achieved results demonstrate that WEEE reuse models can deliver measurable environmental, economic, and social benefits, while also providing a scalable approach adaptable to different regional contexts.



4. Human Resources and Associated Costs

The pilot implementation in Bosnia and Herzegovina and Slovenia relied on different human resource structures and cost models, reflecting the varying levels of maturity of WEEE reuse systems in the two countries. While Bosnia and Herzegovina required more capacity-building and direct support to initiate reuse practices, Slovenia leveraged already established systems and experienced stakeholders, resulting in more efficient use of existing resources.

4.1. Technical Team Composition

In Bosnia and Herzegovina, the pilot involved a network of nine small businesses, NGOs, and social enterprises, primarily from the Herzegovina-Neretva Canton. The technical teams within these entities were relatively small and flexible, consisting mostly of business owners, 1-2 employees, and in some cases external experts engaged through project-supported training and mentoring. Associations (Most, Josip Broz Tito, Ruzicnjak and Gastro Kutak) operate on voluntary basis and external expertise for specific needs. They have a wide network of members that contribute to activities and were involved in the pilot test. Companies (Most M, Investing & Consulting, BAH, Magbago and Radin) operate in small teams. Due to the novelty of WEEE reuse in the local context, additional emphasis was placed on capacity building, including workshops, technical guidance, and continuous mentoring support provided by the project team.

In Slovenia, the technical team composition was more structured and diverse, involving multiple stakeholders across operational, managerial, and policy levels. Organizations directly engaged in reuse activities included OKP Rogaška Slatina (5 full-time staff), ECO-Employment Center (10–12 full-time staff), Social enterprise KNOF (10–12 full-time staff), CPU REUSE center (10–12 full-time staff), and Fundacija Vincenca Drakslerja (25–30 full-time staff). ZEOS (9 full-time staff) contributed to system management and coordination, while The Spirit of the Times and Knjižnica reči operated on a volunteer basis. Strategic stakeholders, such as SRIP and the Ministry of Environment, Climate and Energy (MOPE), were involved without dedicated operational staff.

4.2. Direct Costs

In Bosnia and Herzegovina, direct costs were primarily related to capacity-building activities, technical support, and initial testing of reuse models, including training, mentoring, and logistical arrangements for collection and processing. As reuse practices were newly introduced, these costs were essential for enabling pilot implementation and supporting participating entities in adapting their operations.

In Slovenia, direct costs related to pilot implementation were mainly incurred by the pilot implementor (Institute Trust), amounting to approximately EUR 18.000. Costs borne by individual stakeholders were minimal or non-existent, as most organizations integrated pilot activities into their existing operations and infrastructure.

4.3. Indirect Costs

Indirect costs in Bosnia and Herzegovina included administrative time, coordination efforts, stakeholder engagement, and the use of existing facilities for collection, storage, and processing.





In Slovenia, indirect costs were minimal and mostly related to administrative time and the use of existing physical space, such as reuse centres and storage facilities. These costs were estimated to be negligible (generally below EUR 10 per stakeholder), as the pilot activities were embedded within established systems and did not require significant additional resources.

Overall, the pilot demonstrated two complementary approaches: a capacity-building driven model in Bosnia and Herzegovina and a system-optimization model in Slovenia. Both approaches confirmed that WEEE reuse can be implemented with relatively low additional costs, particularly when existing resources, infrastructure, and stakeholder expertise are effectively utilized.



5. Testing Phase and Activities Carried Out

5.1. Participants and Target Groups

The pilot implementation in Bosnia and Herzegovina and Slovenia engaged a diverse range of participants and target groups, reflecting different levels of system maturity and socio-economic contexts. In both countries, particular attention was given to promoting social inclusion and engaging vulnerable groups within circular economy activities.

5.2. Characterisation of the Target Groups

In Bosnia and Herzegovina, the pilot primarily targeted small businesses, social enterprises, and NGOs, with a strong focus on entities operating in sectors such as agriculture, handicrafts, services, and small-scale production. These organizations work closely with socially vulnerable groups, including persons with disabilities unemployed individuals, marginalized populations, women from rural areas, women and men of poor education and others, although their inclusion depending on the specific business model of each participant.

In Slovenia, a significant share of participants belonged to socially at-risk groups, particularly persons with special needs and vulnerable individuals, who were actively involved in reuse activities through organizations such as The Spirit of the Times, ECO-Employment Center, Social Enterprise KNOF, Knjižnica reči, CPU REUSE Center, and Fundacija Vincenca Drakslerja. Other stakeholders, including public utilities, ministries, and system-level actors, primarily involved staff not belonging to specific target groups but contributed through operational and strategic roles.

5.3. Number of Participants and Selection Criteria

In Bosnia and Herzegovina, the pilot included nine participating entities selected based on their willingness to test innovative reuse-based business models, their operational capacity, and their potential to integrate circular economy principles into their activities. Selection also considered sector diversity to test reuse applications across multiple industries.

In Slovenia, a broader and more structured group of stakeholders was involved, including social enterprises, public utility companies, EPR schemes, and national institutions. Selection was based on their role within the WEEE management system, existing experience in reuse or waste management, and their capacity to contribute to either operational implementation or system-level improvements.

5.4. Type of Support Provided

In both countries, support was comprehensive and tailored to the needs of participants, combining advisory services, training, mentoring, and promotional activities.

In Bosnia and Herzegovina, support focused strongly on capacity building, as reuse practices were relatively new. Participants received training and workshops on topics such as reuse applications in different sectors, business development, storytelling, marketing, and monitoring of results. Continuous mentoring and technical support was provided to help businesses integrate reuse into their operations, while networking activities connected them with larger companies and potential markets.





In Slovenia, support was more advanced and structured around advisory, technical, regulatory, and strategic guidance. Business advisory services focused on improving sustainability and resilience of business models, while technical support included process optimization, quality control, and identification of reusable equipment. Regulatory guidance helped stakeholders navigate compliance requirements and address barriers such as double taxation.

Training and capacity-building activities translated circular economy principles into practice, covering WEEE reuse processes, environmental and economic benefits, and inclusive employment models. Continuous mentoring supported both operational improvements and strategic decision-making, particularly in aligning social inclusion with effective reuse practices.

Additionally, promotion and networking activities were implemented in both countries to raise awareness and strengthen stakeholder collaboration. In Slovenia, particular emphasis was placed on repositioning reused electronics as high-value, sustainable products, while in Bosnia and Herzegovina, communication focused on introducing and validating reuse concepts within the local business community.

Overall, the pilot demonstrated the importance of tailored support mechanisms adapted to local contexts, enabling both the introduction of reuse practices in emerging systems and the scaling and optimization of established ones.



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

6.1. Results of the Collection Campaign

The collection campaign implemented in Bosnia and Herzegovina and Slovenia resulted in significant volumes of WEEE being collected, reflecting both the engagement of stakeholders and the effectiveness of the applied collection models. The results vary between the two countries due to differences in system maturity and scale of operations.

20 businesses were included in the testing phase (11 from Slovenia and 9 from Bosnia and Herzegovina).

Total **24.486 kg of ewaste was collected** (1.004 kg in Bosnia and Herzegovina and 23.482 kg in Slovenia), including **24.019 items** (1.449 in Bosnia and Herzegovina and 22.70 in Slovenia).

In Bosnia and Herzegovina, collected WEEE included a mix of small electronic devices, components, and equipment suitable for reuse and repurposing. A substantial portion of the collected items was further processed for reuse, through direct application of components in new products (e.g. handicrafts, agricultural tools, souvenirs) or through preparation for secondary use. Remaining fractions that could not be reused were properly directed to authorized recycling facilities.

In Slovenia, the collection campaign achieved significantly higher volumes, reflecting the existence of established collection infrastructure and organized WEEE management systems. Most of the collected equipment originated from direct donations, complemented by collection from waste management centres and door-to-door systems. Due to the higher quality of directly donated items, a considerable share of collected WEEE was suitable for reuse, refurbishment, or component recovery.

Across both countries, collected WEEE can be broadly categorized into:

- Small household appliances and IT equipment
- Consumer electronics
- Components and parts suitable for reuse or repurposing

The results demonstrate that tailored collection approaches—community-driven and flexible in Bosnia and Herzegovina, and system-based and infrastructure-supported in Slovenia—can both effectively contribute to increasing WEEE collection rates and enabling reuse pathways.

Overall, the campaign confirmed that combining awareness-raising, stakeholder engagement, and accessible collection channels can significantly improve the quantity and quality of collected WEEE, while supporting circular economy objectives.

6.2. Economic Evaluation

The economic evaluation of the WEEE REUSE pilot in Bosnia and Herzegovina and Slovenia demonstrates two complementary models: an emerging, market-testing approach and a system-integrated, efficiency-driven model. Both contexts provide valuable insights into the financial viability and scalability of reuse-based practices.

In Bosnia and Herzegovina, the pilot generated an estimated EUR 4.410,00 in potential revenue through the sale of reuse-based products and services, derived from approximately 1.004 kg of collected WEEE. This reflects the added value created through creative



repurposing and niche product development (e.g. handicrafts, souvenirs, agricultural applications).

Total expenditure related to pilot implementation remained relatively low, estimated at approximately EUR 855 mainly covering operational support and materials, as educational activities and technical support were provided by LINK as part of technical support. This results in a highly positive cost-benefit ratio, demonstrating that even in an emerging market with limited infrastructure, reuse activities can generate tangible economic returns when supported by targeted capacity building and stakeholder engagement. It is important to stress that these results are based on internal track system and estimates of businesses as not all businesses lead a tracking system during entire period.

In Slovenia, the economic model is less directly reflected through pilot-specific revenue, as reuse activities are already embedded within existing organizational operations and business models. Significant volumes of WEEE (exceeding 20 tonnes) were collected and processed through established systems, with reuse and refurbishment contributing to ongoing revenue streams of participating organizations.

Due to the integration of pilot activities into existing workflows, additional pilot-related costs were minimal, with approximately EUR 18.000 attributed to the pilot implementor (Institute Trust), while costs for other stakeholders were negligible or absorbed within regular operations. This indicates a high level of cost-efficiency and system maturity, where reuse does not require substantial additional investment but rather optimization of existing capacities.

6.3. Benchmarking and Market Context

While direct comparison with regional benchmarks such as Alentejo is limited due to differences in scale and system structure, both pilots provide relevant insights. Bosnia and Herzegovina reflects a high value-per-tonne model, driven by small-scale, labour-intensive reuse applications with strong social impact. Slovenia, on the other hand, represents a volume-driven and system-integrated model, where economic benefits are distributed across established value chains and linked to long-term operational sustainability rather than short-term pilot revenue.

6.4. Conclusion

The results confirm that WEEE reuse can be economically viable across different contexts. In emerging systems, such as Bosnia and Herzegovina, targeted investments in capacity building can unlock high-value niche markets and generate immediate economic returns. In more advanced systems, such as Slovenia, the focus shifts towards efficiency, scalability, and integration into existing infrastructures, resulting in low additional costs and stable long-term benefits.

Overall, the pilot demonstrates that reuse-based models can deliver both financial and socio-environmental value, supporting their further replication and scaling within broader circular economy frameworks.



7. Cost–Benefit Analysis

7.1. Efficiency: Time Invested vs. Economic and Social Return

In Bosnia and Herzegovina, significant time and effort were invested in stakeholder engagement, training, and mentoring (provided by LINK, with eWAsTER support), as reuse practices were relatively new to the participating entities. This initial investment resulted in measurable economic and social returns, including the generation of approximately EUR 4.410 in revenue, the creation of 4 jobs for vulnerable groups, and the successful reuse and repurposing of 1.008 kg of WEEE. Although time-intensive, the pilot proved efficient in transforming limited resources into tangible outcomes and establishing a foundation for future growth.

In Slovenia, efficiency was achieved through the use of existing systems, infrastructure, and experienced stakeholders. As WEEE reuse activities were already embedded within broader reuse operations (covering multiple product streams), it is not possible to isolate total expenditure specifically related to WEEE reuse. However, the integration of pilot activities into existing workflows meant that additional time and financial inputs were minimal, while high volumes of WEEE (exceeding 20 tonnes) were processed and reuse practices further optimized. This demonstrates a highly efficient model with strong returns achieved through system-level integration rather than additional investment.

7.2. Effectiveness: Achievement of Objectives

In both countries, the pilot successfully achieved its core objectives. In Bosnia and Herzegovina, the pilot effectively introduced and validated reuse-based business models across different sectors, while also promoting social inclusion and professional integration. The involvement of small businesses, NGOs, and social enterprises contributed to strengthening the local circular economy ecosystem and demonstrated the feasibility of reuse in a challenging economic environment.

In Slovenia, the pilot was particularly effective in strengthening existing reuse systems and enhancing cooperation among stakeholders, including social enterprises, public utilities, and policy actors. A key achievement was the integration of socially vulnerable groups, especially persons with disabilities, into reuse processes. Furthermore, the pilot contributed to improving institutional capacity and aligning operational practices with long-term circular economy and policy objectives.

7.3. Scalability Projection

The results indicate strong potential for replication and scaling in both contexts, although with different requirements.

In Bosnia and Herzegovina, scalability is feasible but depends on several enabling factors, including:

- Further development of collection and waste management infrastructure.
- Continued capacity building and technical support for businesses.
- Improved regulatory frameworks and incentives for reuse activities.
- Stronger market development for reuse-based products.





Job creation potential is significant, particularly in sectors involving manual processing, creative reuse, and small-scale production. However, scaling would require structured support mechanisms and increased awareness among businesses and consumers.

In Slovenia, scaling and replication are highly feasible but depend on specific systemic improvements. Key conditions include the formal integration of reuse actors into EPR schemes, simplified authorization and reporting procedures, and the establishment of stable cooperation frameworks among municipalities, producer responsibility organizations (PROs), and social economy actors. These measures, supported by targeted incentives and awareness-raising campaigns, would enable reuse activities to be embedded into long-term policy frameworks.

Such an approach would ensure that environmental, social, and economic benefits are realized at scale, while maintaining operational efficiency, regulatory compliance, and public trust. The potential for job creation remains strong, particularly within inclusive employment models, although the emphasis is on improving the quality, stability, and sustainability of existing roles.

7.4. Conclusion

The pilot demonstrates that WEEE reuse is both cost-effective and impactful across different regional contexts. Emerging systems, such as Bosnia and Herzegovina, require higher initial investment in time and capacity building but can generate strong socio-economic returns. In contrast, mature systems, such as Slovenia, achieve high efficiency through integration into existing structures, minimizing additional costs while maximizing systemic impact.

Overall, the findings confirm that reuse-based models represent a viable and scalable solution for advancing circular economy objectives, delivering measurable environmental, economic, and social benefits.

7.5. Note on Data Availability and Estimations

The presented economic and performance data are based on the information available from participating stakeholders during the pilot implementation. It should be noted that not all participating organizations systematically monitored or recorded all indicators throughout the pilot period. In several cases, data—particularly related to revenues, costs, and operational performance—are based on informed estimates provided by the stakeholders. Therefore, while the results provide a reliable indication of trends and impacts, they should be interpreted as indicative rather than fully comprehensive or standardized across all participants.





8. Conclusions

8.1. What Worked Well

The pilot successfully demonstrated that WEEE reuse can generate environmental, economic, and social benefits in both emerging and mature systems, albeit through different approaches.

In Bosnia and Herzegovina, strong results were achieved in:

- Engaging small businesses, NGOs, and social enterprises across different sectors.
- Testing innovative reuse applications (e.g. handicrafts, agriculture, creative industries).
- Generating new revenue streams and creating jobs for vulnerable groups.
- Building awareness and interest in circular economy practices in a relatively new market.

In Slovenia, the pilot was particularly successful in:

- Integrating social inclusion (especially persons with special needs) into reuse activities.
- Leveraging existing infrastructure and stakeholder networks.
- Improving reuse processes (e.g. deep-cleaning, quality control) and extending product lifecycles.
- Strengthening coordination between system-level actors and operational stakeholders.

Across both countries, a key success factor was the combination of technical support, mentoring, and stakeholder collaboration, which enabled practical implementation and measurable results.

8.2. Challenges Encountered

Despite positive outcomes, several challenges were identified.

In Bosnia and Herzegovina:

- Limited waste management infrastructure and unclear WEEE collection systems.
- Low initial awareness and reluctance of businesses to adopt new models.
- Need for continuous capacity building and technical support.
- Difficulties in ensuring consistent supply of quality WEEE.

In Slovenia:

- Financial sustainability constraints, especially for social enterprises and volunteer-based organizations.
- Regulatory barriers, particularly double taxation on second-hand electronics.
- Limited access to high-quality WEEE streams suitable for reuse.
- Persistent market bias toward new products over reused electronics.

Across both contexts, challenges also included data tracking limitations and the need for stronger integration between reuse and formal waste management systems.





8.3. Suggestions for the Next Phase

For future implementation, the following improvements are recommended:

- Establish dedicated funding mechanisms to support reuse activities, especially for social enterprises.
- Strengthen capacity-building programmes, including technical, business, and marketing support.
- Develop standardized reuse procedures and quality control systems.
- Increase awareness campaigns to reposition reused electronics as high-value, sustainable products.
- Improve data collection and monitoring systems to ensure more accurate impact measurement.
- Facilitate stronger collaboration between stakeholders, particularly between system operators and reuse actors.

8.4. Potential Partners for Future Stages

Future phases should involve a broader ecosystem of stakeholders, including:

- National and local authorities (policy development and regulatory support).
- Municipalities and public utility companies (collection systems and infrastructure).
- Producer responsibility organizations (PROs) and system operators (e.g. ZEOS).
- Social enterprises and NGOs (implementation and social inclusion).
- Employment services and vocational training providers (workforce development).
- Private sector companies and donation partners (supply of reusable equipment and market access).

Stronger cross-sector partnerships will be essential for scaling and sustainability.

8.5. Best Practices and Recommendations for Future Implementation

The pilot identified several best practices that can support replication and scaling:

- Integration of social inclusion into circular economy models, particularly through adapted tasks for vulnerable groups (especially if can be combined with existing support programmes for employment of people with disabilities, such as Fund for professional rehabilitation programme in Bosnia and Herzegovina).
- Use of safe and efficient reuse processes (e.g. deep cleaning as an alternative to complex repairs).
- Embedding reuse activities into existing systems and infrastructure
- Combining technical support with business development and storytelling to increase market uptake (presenting impact on all spheres of society - employment, environment, socio-economic development etc.).
- Promoting reuse as a premium, sustainable option, rather than a low-cost alternative.

8.6. Scalability Projection

Replication in other regions is highly feasible, provided that key enabling conditions are met.





In Bosnia and Herzegovina and similar emerging contexts, scaling requires:

- Development of collection and logistics infrastructure.
- Continued capacity building and financial support.
- Improved regulatory frameworks and incentives.
- Stronger market development for reuse products.

In Slovenia and similar mature systems, scaling depends on:

- Integration of reuse actors into EPR schemes.
- Removal of regulatory barriers (e.g. double taxation).
- Simplification of administrative procedures.
- Strengthening cooperation between municipalities, PROs, and social economy actors.

8.7. Job Creation Potential

The pilot confirms that job creation is both reasonable and achievable, particularly within inclusive employment models. In emerging systems, reuse can create new jobs, while in mature systems it can stabilize and improve the quality of existing roles.

8.8. Final Conclusion

The WEEE REUSE pilot demonstrates that reuse-based models are economically viable, socially impactful, and environmentally sustainable across different regional contexts.

While Bosnia and Herzegovina highlights the importance of capacity building and innovation in early-stage systems, Slovenia demonstrates the benefits of system integration and optimization.

However, it is important to emphasize that achieving full business sustainability based solely on reuse activities still requires significant systemic, regulatory, and market-related changes. These include improvements in waste management systems, better integration of reuse into formal frameworks, removal of financial and administrative barriers, and stronger market recognition of reused products.

Despite these challenges, the pilot clearly shows that WEEE reuse represents a valuable complementary activity that can enhance the overall sustainability of small businesses. It provides opportunities for diversification of income, innovation in products and services, and increased resilience, while also creating meaningful employment opportunities for vulnerable and socially excluded groups.

Together, these findings confirm that reuse should be further supported and developed as an integral part of circular economy strategies, with strong potential for both economic and social impact.



9. Annexes

9.1. Annex 1 – Information about companies participating in pilot

Basic Company Information

- Company name:
- Headquarters (city/municipality):
- Legal form: (e.g. LLC, sole proprietorship, craft/SME)
- Main activity / sector:
- Number of employees:
- Year of establishment:
- Contact person (position):

2. Baseline Situation (Before the Pilot Project)

Brief description of the company's situation prior to participation in the pilot project:

- Existing business model and practices
- Previous experience with WEEE management, circular economy or REUSE principles
- Key challenges identified by the company (technical, organizational, financial, regulatory)

3. Application of WEEE REUSE Principles

Description of the specific activities tested within the pilot project:

- Types of WEEE equipment and/or components involved
- How REUSE principles were integrated into the business model (e.g. repair, refurbishment, reuse, resale, donation, internal reuse, etc.)
- Innovations or adjustments introduced during the pilot phase
- Duration of the testing phase

4. Support Provided within the Pilot Project

Overview of the support received by the project:

- Advisory support (business, technical, regulatory)
- Trainings / capacity-building activities (topics covered)
- Mentoring and coaching
- Promotion and networking support
- Other forms of support (please specify)

5. Effects of the Pilot Project

5.1 Business Effects

- Impact on revenues, costs or operational efficiency
- Development of new products, services or market opportunities
- Improvement of the company's competitiveness





5.2 Environmental Effects

- Reduction of WEEE waste generation – amount of waste collected, repaired, re-used etc.
- Extension of product and equipment life cycles, contribution to circular economy principles

5.3 Organizational and Capacity Effects

- Improvement of employees' knowledge and skills
- Changes in internal procedures and processes
- New employments or preservation of existing employees - describe

6. Challenges and Lessons Learned

- Key challenges encountered during implementation
- How the challenges were addressed (or not addressed)
- Recommendations for improving future pilot projects

7. Conclusions

- Does the company plan to continue applying WEEE REUSE principles after the pilot project? (YES / NO / PARTIALLY)
- Planned next steps (scaling up, investments, new products/services) – if applicable
- Additional support required to ensure long-term sustainability?





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