



UpWEEE

“Research of Upcycling Supports to Increase Re-use, with a Focus on Waste Electrical and Electronic Equipment”.

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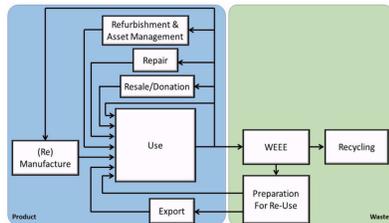
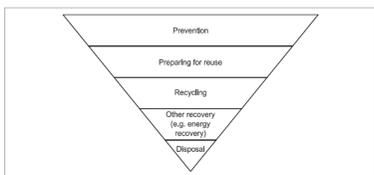
EPA Project Code – 2015-SE-DS-5 (EPA Report no.241)

This report provides a range of recommendations, based on experiences across the EU, aimed at supporting preparation for re-use of WEEE that will support the extension and development of this activity in Ireland. Interviews were conducted with organizations representing preparation for re-use sectors in the four highest preparation for re-use reporting countries in the EU (according to Eurostat): the UK, Austria, France, and Belgium. Additionally, preparation for re-use in Spain was examined as the first and that time only country to have established targets for preparation for re-use separate from those for re-use. Representatives were interviewed regarding factors that hindered and facilitated preparation for re-use in their respective systems.

Findings & Results

Through the reported analysis and the development of recommendations for the Irish preparation for re-use system, it is concluded that three main recommendations will facilitate and support the development of functional preparation for re-use systems, particularly in EU systems functioning under the guidance of the WEEE Directive. These recommendations, with equal priority, can be summarized as follows:

- creating an obligation for PROs to fully engage with preparation for re-use;
- removing barriers to access WEEE with potential for re-use at the most appropriate locations;
- maintaining high operating standards of approved preparation for re-use of WEEE organisations.



Historic WEEE

“The development of a model to ascertain future levels of historic WEEE arising”.

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EPA Project Code – 2014-RE-DS-1 (EPA Report no.186)

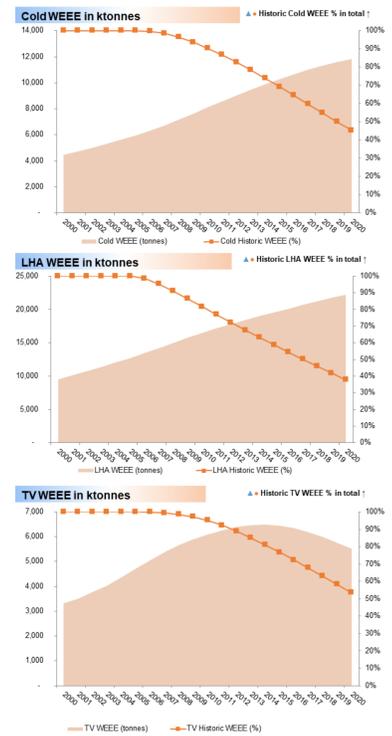
The implementation of the WEEE Directive in Ireland introduced a formal system for the return & environmentally sound management of WEEE. Visible fees were introduced to cover the cost of the environmentally sound management of “historic WEEE”. However, very little was known about the levels of historic WEEE that would arise, which created uncertainty with regard to funding the management of this historic WEEE.

This research employed novel modelling techniques in order to determine existing WEEE levels and predict the percentages of historic WEEE in Ireland. The research focused on “cold”, “large domestic appliances” and television WEEE and calculates Irish historic WEEE levels using data from disparate sources. The model determines WEEE sales, total WEEE figures and the ratio of historic to non-historic WEEE for years 2000-2020.

Findings & Results

The research findings indicate that historic WEEE comprises well over 50% of all material returning through official WEEE take-back channels in Ireland in 2015. Model predictions range from 2015 figures showing 69% cold WEEE will be historic in nature, 59% of large domestic WEEE will be historic and 77% of all television WEEE will be historic. For 2020, these figures will reduce to 45% historic WEEE for the cold category, 38% historic WEEE for large domestic appliances and 54% historic WEEE for televisions.

These model results were validated using a statistically significant sampling of WEEE in Ireland over the course of 1 year. Cold, domestic appliance and television WEEE were sampled in order to determine the actual ratio of historic versus non-historic WEEE.



EEE2WEEE

“An investigation into WEEE Arising and Not Arising in Ireland”.

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Department of Electronic & Computer Engineering, University of Limerick, Castletroy, Limerick, Ireland.

EPA Project Code – 2017-RE-MS-9 (In progress)

The EEE2WEEE project will employ qualitative and quantitative methods to provide greater insight into the flow of EEE to WEEE in Ireland.

Collection rates for WEEE through official channels are very low across Europe. Currently, it is estimated that only one third of WEEE is being reported as separately collected and appropriately treated by compliance schemes. The recast of the WEEE Directive requires member states to transition to a target of either 45% of the average weight of EEE placed on the market in the previous three years from 2016 rising to 65% by 2019 or 85% of WEEE arising by 2019.

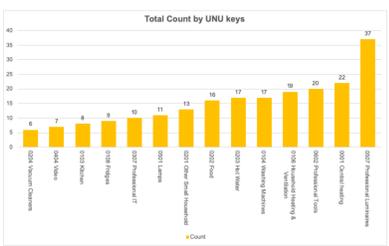
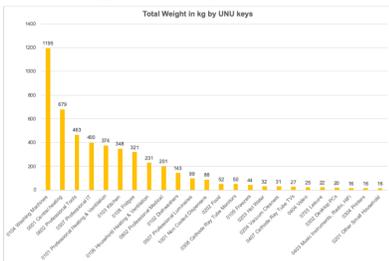
There are several gaps in the knowledge about the exact nature of EEE to WEEE flows in Ireland and, therefore, how to tackle these from a collection point of view. In 2015 for all WEEE only 60% of B2C was collected. This means that 40% is unaccounted for. The EEE2WEEE project is sampling for WEEE occurring at Scrap Metal sites in Ireland.



In addition, B2B WEEE is now included in the overall targets which is a new departure for WEEE regulation in Ireland and the extent of compliance/non-compliance in this sector is not well understood. This project will provide insight into where all of this material is going and what measures can be undertaken to capture it as WEEE arising.

Findings & Results

Initial Findings – To Be Completed 2020.



TriREUSE

“Trialling the preparation for reuse of B2C ICT WEEE in Ireland”.

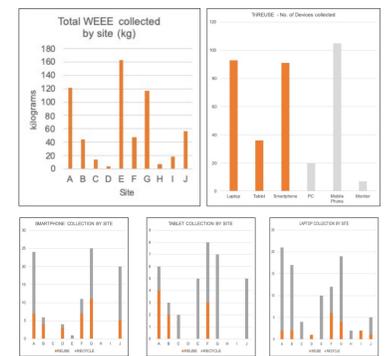
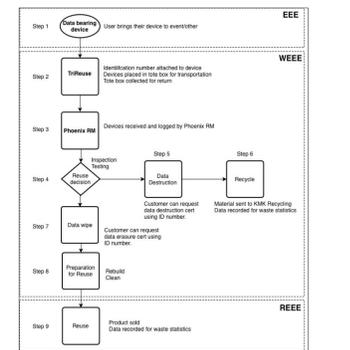
Authors: Damian Coughlan, Colin Fitzpatrick
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EPA Project Code – 2017-DS-9 (In progress)

The TriREUSE project investigated the potential of collecting B2C ICT WEEE for preparation for reuse in workplaces in Ireland. TriREUSE ran a series of WEEE to Work events where employees were incentivised to return their data-bearing devices (Laptops, Tablets & Smartphones) at these events where free data wiping and destruction were offered on all devices. The collected devices were returned to a certified Preparation for Reuse organisation where the devices were tested and assessed for their suitability for reuse using both technical and economic criteria.

Findings & Results

The research findings indicate that: Higher reuse rates were achieved than from regular WEEE collections (29%). On-site promotion from CSR, IT, Facilities and Employee Volunteer Programs (EVP) of awareness and collections days improves collection rates. High returns of typically difficult to collect devices. Providing a free data destruction & erasure service increased takeback. There were several outcomes from trialling the reuse of B2C ICT WEEE in Ireland and these are listed below; Secure data destruction/erasure provides an incentive to owners to return devices, it created and raised awareness of the concept of “reuse”, it promoted reuse before recycling for IT equipment, identified potential source of feedstock for reuse, All devices will contribute to targets either through reuse or recycling, potential for preparation for reuse certified organisations to continue collection events and collaboration with all stakeholders yielded the best return of devices. The TriREUSE trial provided evidence of how a preparation for reuse collection of B2C ICT WEEE might work with the IT Asset Disposition (ITAD) sector. A regular collection service would encourage users to dispose of unused and unwanted data bearing devices sooner.



ColectWEEE

“A Community-based Social Marketing Approach for Increased Participation in WEEE Recycling”.

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EPA Project Code – 2016-RE-DS-7 (EPA Report no.262)

This study explored human behaviour in relation to small WEEE recycling. In doing so, the research took a quasi-ethnographic approach to investigate WEEE disposal behaviours from an “emic” perspective; i.e., consumer experiences and interpretations of WEEE and its disposal as these are situated within the context of consumers’ everyday lives. The rationale for this approach is the need to reconcile the policy perspective on WEEE (etic) with the subjective experiences and interpretations that drive people’s behaviours (emic). Fieldwork took place from September to December 2017 in the Munster region in Ireland. Data collection consisted of 26 in-depth interviews with 30 participants, observations and casual conversations at a CA site and waste collection event, and participant observation at 25 retailers

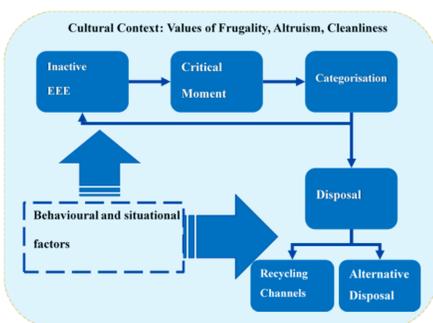
Findings & Results

Findings reveal that for consumers, electronic and electrical devices exist in fluid, in-between states of meaning and perceived value, from the time they enter one’s life until their disposition.

WEEE disposal typically undergoes a four-stage journey, a process EEE typically goes through before divestment:

a) Once EEE is no longer used it tends to be either consciously stored or abandoned in the home. b) A trigger prompts consumers to divest (critical moment). c) Provoked to action, consumers must decide what precisely to discard (transition from EEE to WEEE). d) Consumers decide to recycle or not (divestment).

The import of a multi-pronged approach is proposed. First, short term recommendations involve simple interventions to immediately augment the visibility and accessibility of WEEE recycling. These involve augmentation of the WEEE recycling brand, increasing consumer reflexivity through targeted information, and routinizing WEEE recycling through frequently visited collection points. Second, medium term recommendations address issues of communication and trust building. Finally, long-term recommendations address the ideological underpinnings of WEEE recycling and the opportunities afforded by market-facing movements and collaborative consumption trends.



ExportEEE

“An assessment of used EEE exports from Ireland”.

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EPA Project Code – 2018-RE-DS-11 (In progress)

The recast WEEE Directive requires member states to transition to a target of either 45% of the average weight of EEE placed on the market in the previous three years from 2016 rising to 65% by 2019 or 85% of WEEE arising by 2019. However, EEE leaving the country as UEEE is not available for collection and therefore may need to be accounted for in the target calculations. Over the next year, the ExportEEE project will develop a scientifically robust method to quantify UEEE being exported from Ireland, by both private citizens and larger scale business processes.

Findings & Results

Roll on roll off vehicle inspections (in progress): The project team is able to join inspections of these vehicles being shipped by private individuals in order to record amounts of UEEE being exported. This data is collected from the required packing lists in each vehicle and is supported by visual observations.

