



WEEE & Battery EPR in Action - Developments Toward a Circular Economy



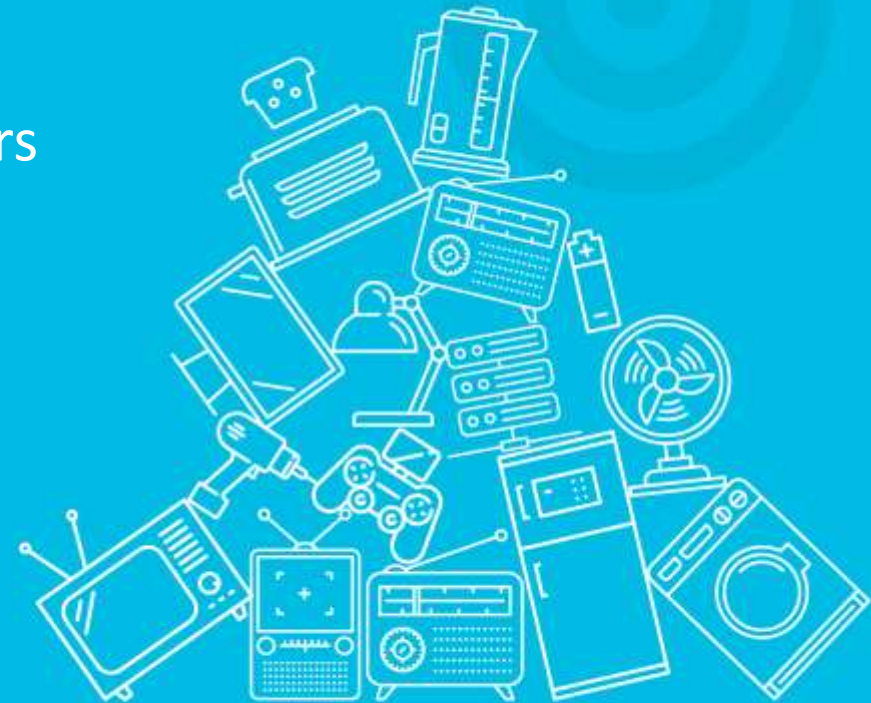


Global e-waste is growing at a rate of 3-4% per annum meaning that in 2025 there will be roughly **60 million tonnes** generated, the equivalent to **290,000 Statues of Liberty!**



2012 Waste Policy: A Resource Opportunity

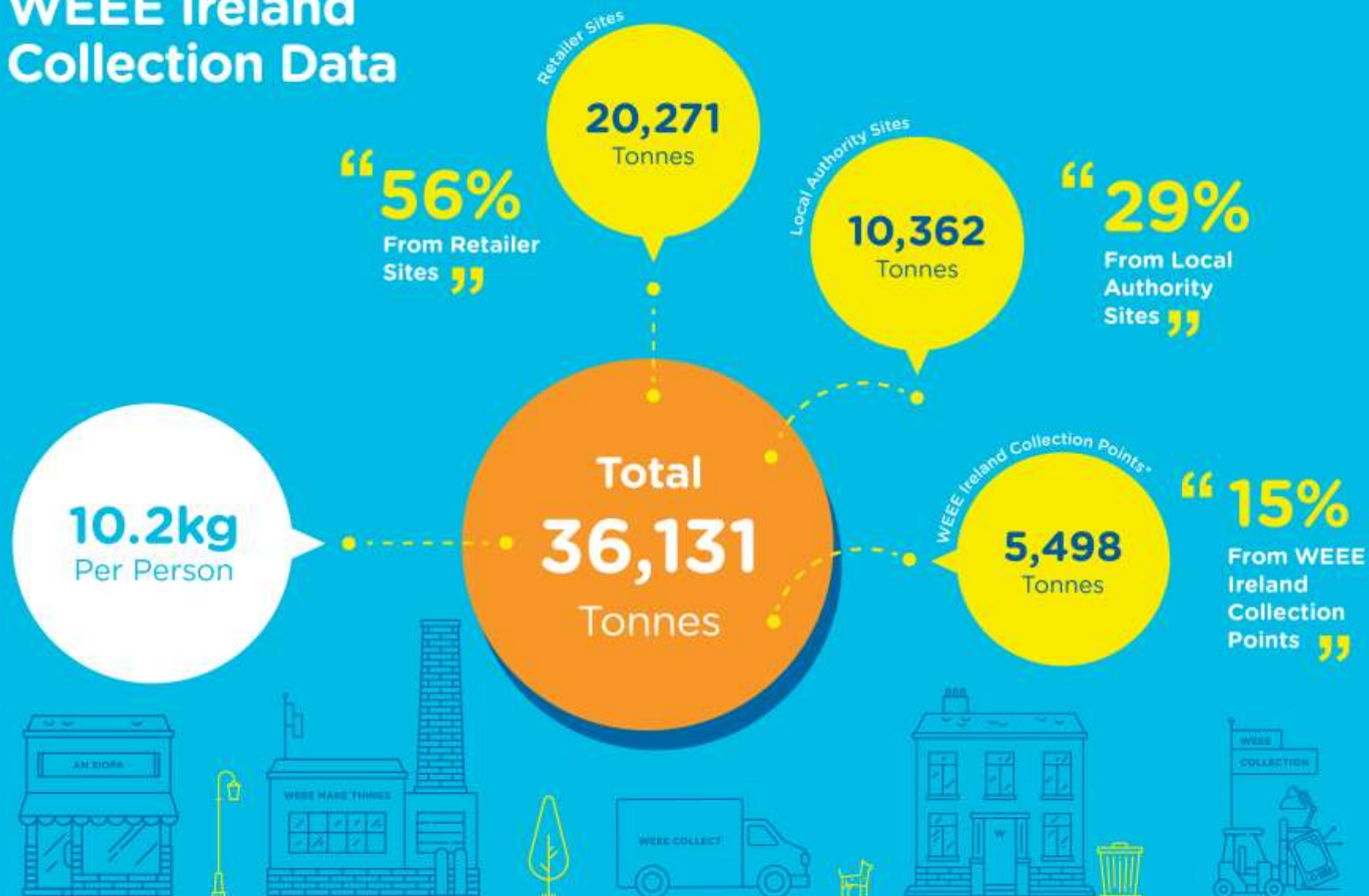
1. Included a lengthy PRI review – *WEEE, Batteries, Packaging, Farm Plastics, Tyres, ELV....*
2. Required Corporate Governance Charters on all Irish Producer Responsibility Initiatives
3. Contingency Reserves
4. WEEE Ireland current approval
2017 - 2021



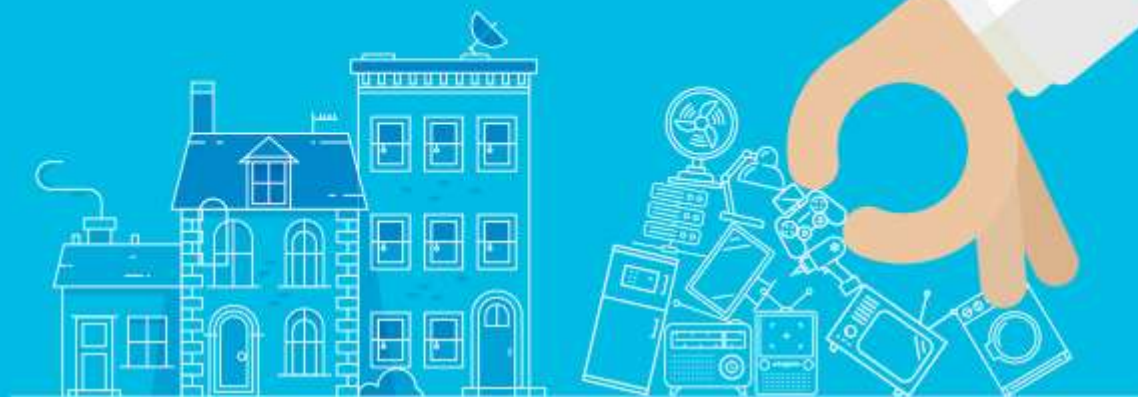
Strategy



WEEE Ireland Collection Data



*Includes Education, Public Collection Events, Waste Industry and Workplace collection points.



WEEE Collections, 17,000,000+ Units per Family

An estimated 17million+
WEEE appliances were
collected for recycling by
WEEE Ireland in 2018
including:

Fridges



120,000
Estimate Units

Large Household
Appliances



325,000
Estimate Units

Mixed
WEEE



13 million
Estimate Units

Televisions
& Monitors



195,000
Estimate Units

Lamps²



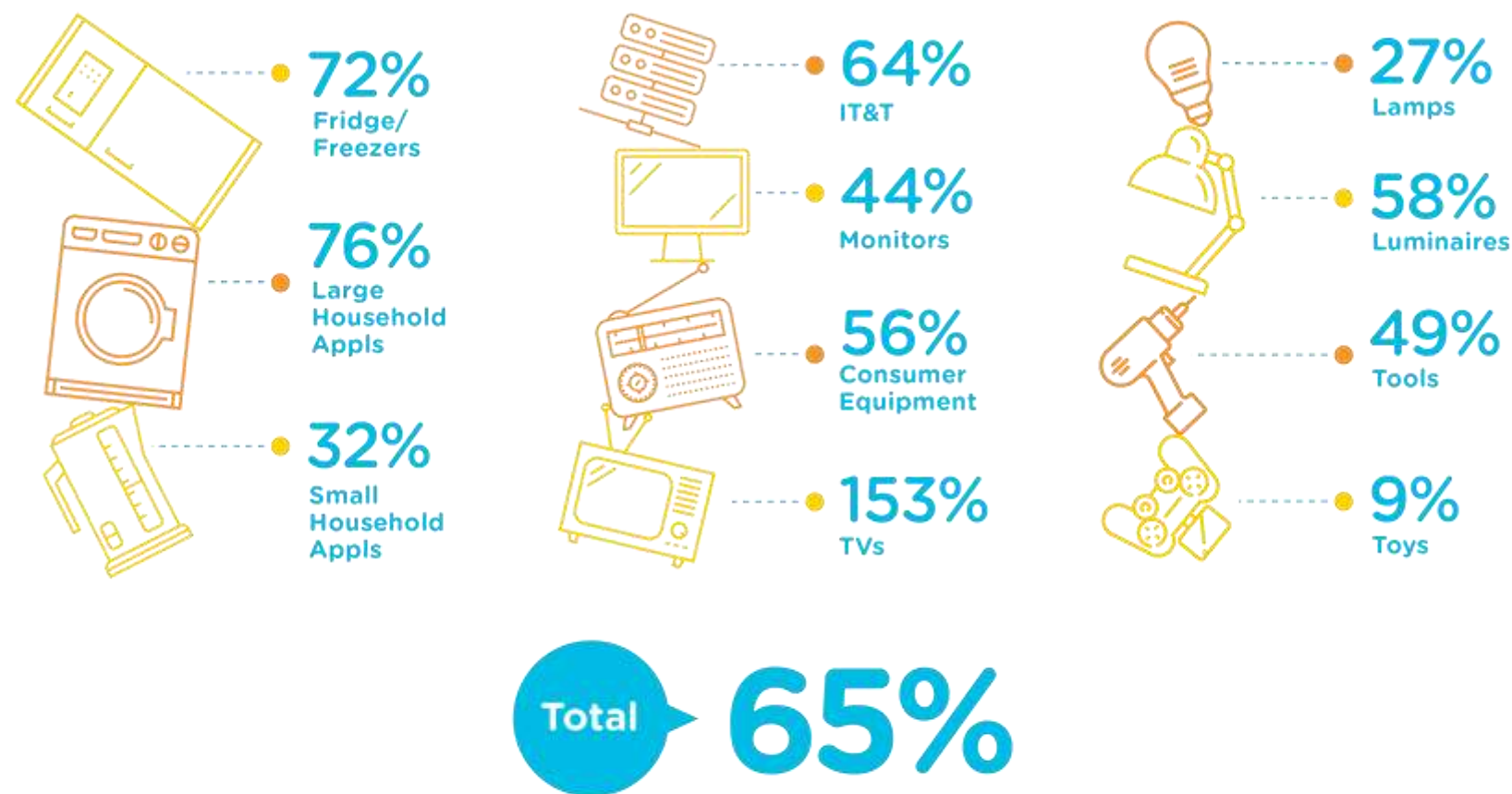
3.2 million³
Estimate Units

² Gas discharge lightbulbs including energy saving compact and longer fluorescent tubes.

³ WEEE Ireland collects and measures in tonnes but estimated units are calculated based on 'Placed on the Market' (POM) Blackbox reported data and sampling information from WEEE recycling facilities.

WEEE Collection Results

WEEE Ireland Members B2C Takeback Rate by Category 2018¹



¹ WEEE Ireland Collection rate is calculated as a percentage of WEEE collected for recovery by the Scheme compared to the average weight of EEE placed on the market by Members as reported to the Producers Blackbox in the preceding 3 years

Battery Collection Results

“ In 2018 WEEE Ireland achieved a **48% waste portable battery collection rate** on behalf of Members, once again surpassing the EU target of 45%⁷. ”














856 tonnes

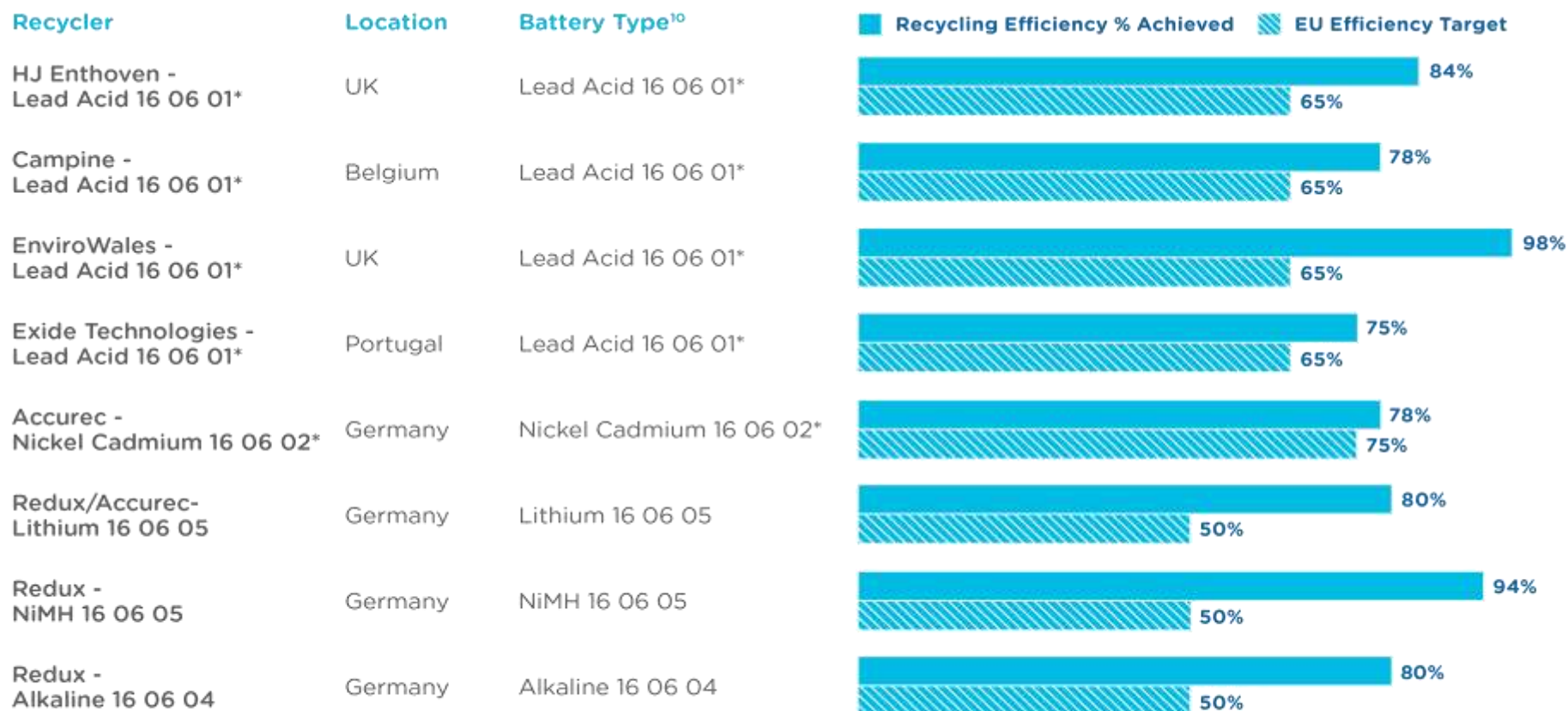
Collected by WEEE Ireland 2018

WEEE Ireland

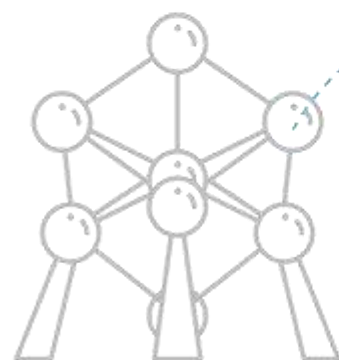
WEEE Recovery Rates 2018

Category	1	2	3	4	5	5	6	7	8	9	10
Description	Large Household Appliances	Small Household Appliances	IT & T Equipment	Consumer Electronics	Gas Discharge Lamps	Luminaires	Electrical Tools	Toys & Sports Equipment	Medical Devices	Monitoring & Control Equipment	Automatic Dispensers
											
EU Target Component Material Recycling & Reuse	80%	55%	70%	70%	80%	55%	55%	55%	55%	55%	80%
WEEE Ireland Component Material Recycling & Reuse	86%	70%	77%	85%	84%	82%	70%	70%	70%	70%	86%
EU Target Recovery Rate	85%	75%	80%	80%	N/A	75%	75%	75%	75%	75%	85%
WEEE Ireland Recovery Rate	92%	82%	86%	91%	N/A	94%	82%	82%	82%	82%	92%

WEEE Ireland Battery Recycling Efficiencies 2018

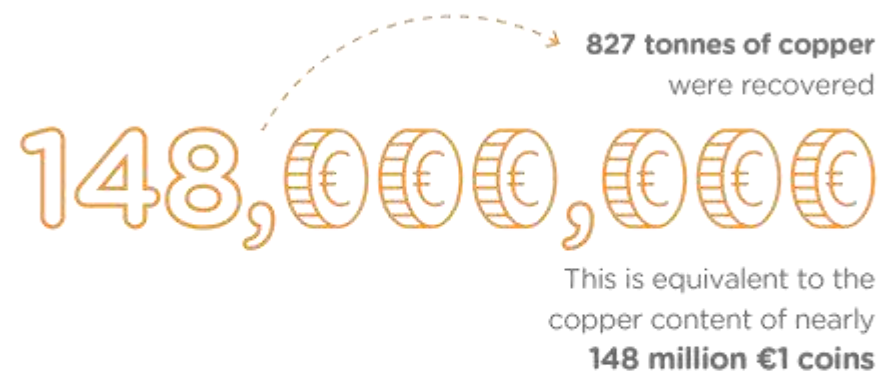
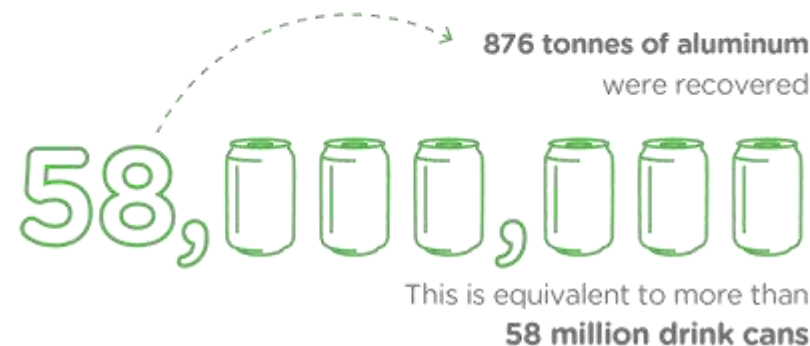


WEEE Recovery Footprint

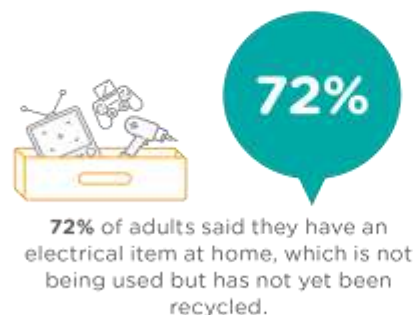
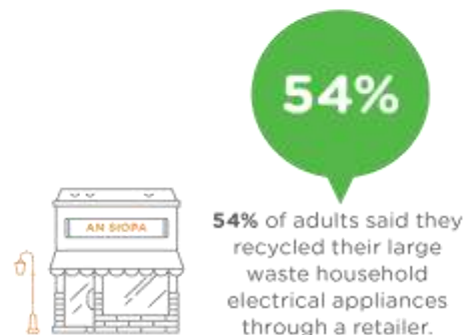


Almost 19K tonnes of iron
were recovered

The equivalent of
8 Attomiums
in Brussels



Public Awareness



...the power is in your hands!



weee
ireland



APPROVED RECYCLING SCHEME

Small things matter...

Recycle lighting equipment and household electrical waste for FREE at your local authority recycling centre or electrical retailer, and support LauraLynn!



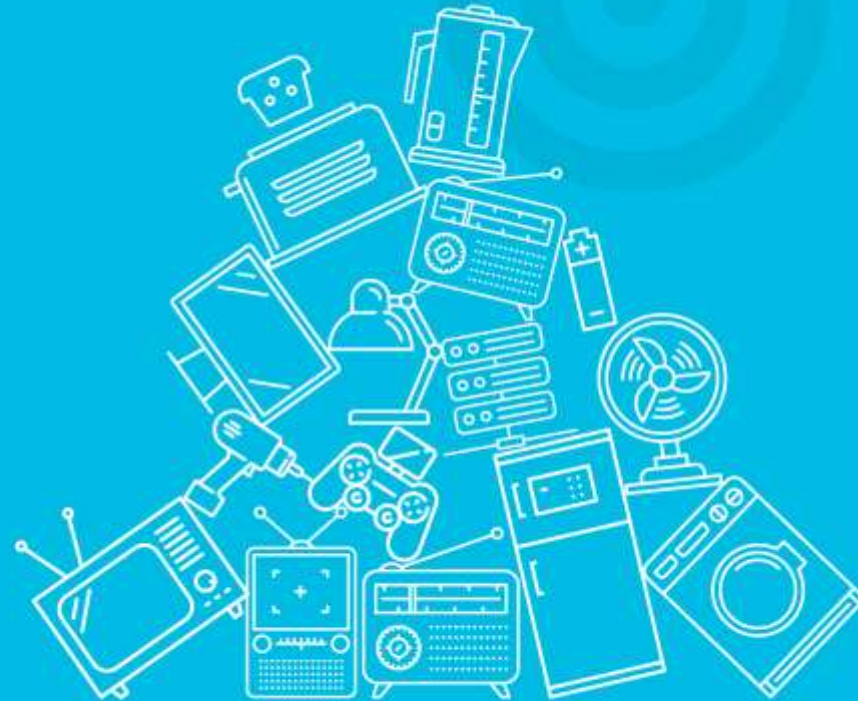
LauraLynn

IRELAND'S CHILDREN'S HOSPICE

www.smallthingsmatter.ie

Success Factors

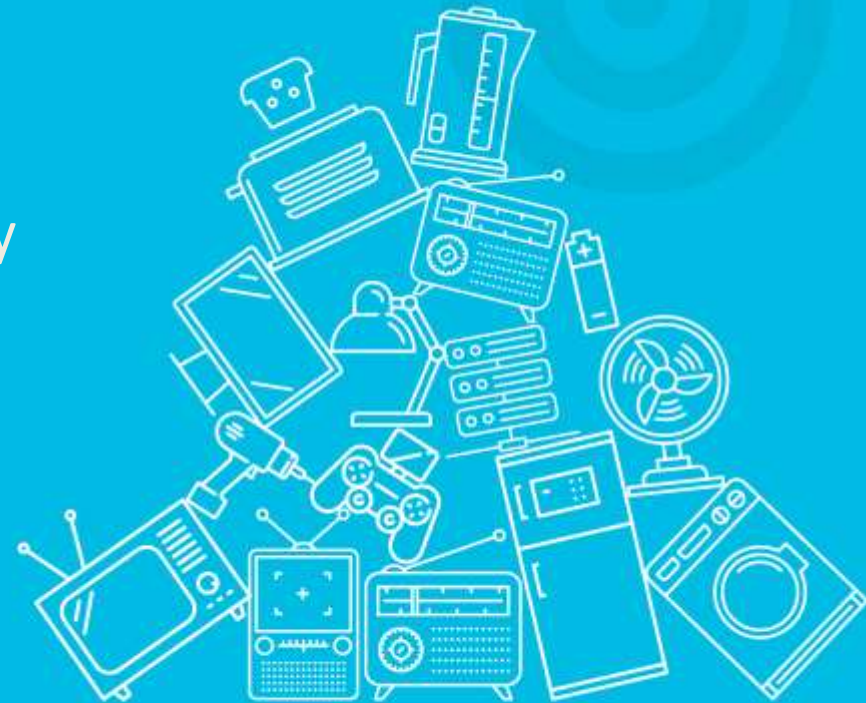
- Not for profit Scheme
- 1:1 Takeback Retailers
- Mandatory Handover
- Mandatory EN Standards
- Option for Visible Fee
- Stakeholder Platform



Collaboration

Engagement with our European Colleagues expands the reach and expertise of WEEE Ireland Scheme

Supports our development in European and Irish Circular Economy transition



LIFE & H2020 European Projects







..." ensure that all separately collected waste electrical and electronic equipment is treated in accordance with the WEEELABEX normative requirements or any other equivalent EN treatment standards."

EN 50625



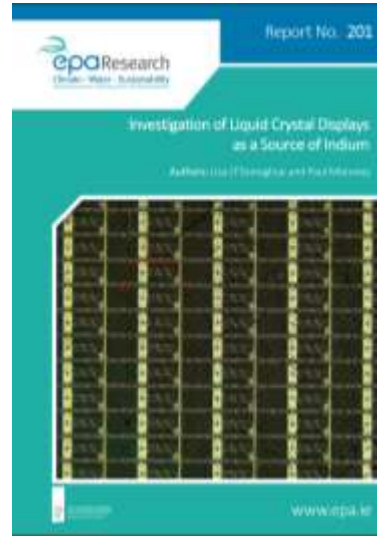
From an environmental perspective, both product and component scavenging of C&F (especially compressors) are alarming, due to the release of the ozone depleting substances (CFC's) contained in the refrigeration circuit. The product scavenging is 48%.

On top of that the scavenging of compressors averages 22%. When extrapolating the figures derived from the quantities handled in this study to entire EU volumes, based on 1.7 million tonnes of WEEE generated, it equals **8 million tonnes of CO₂ equivalent per year.**

SCAVENGING OF C&F RESULTS IN AN UNNECESSARY EMISSION OF 8 MILLION TONNES OF CO₂ EQUIVALENT PER YEAR WHICH EQUALS THE ANNUAL EMISSIONS OF 6 MILLION CARS.

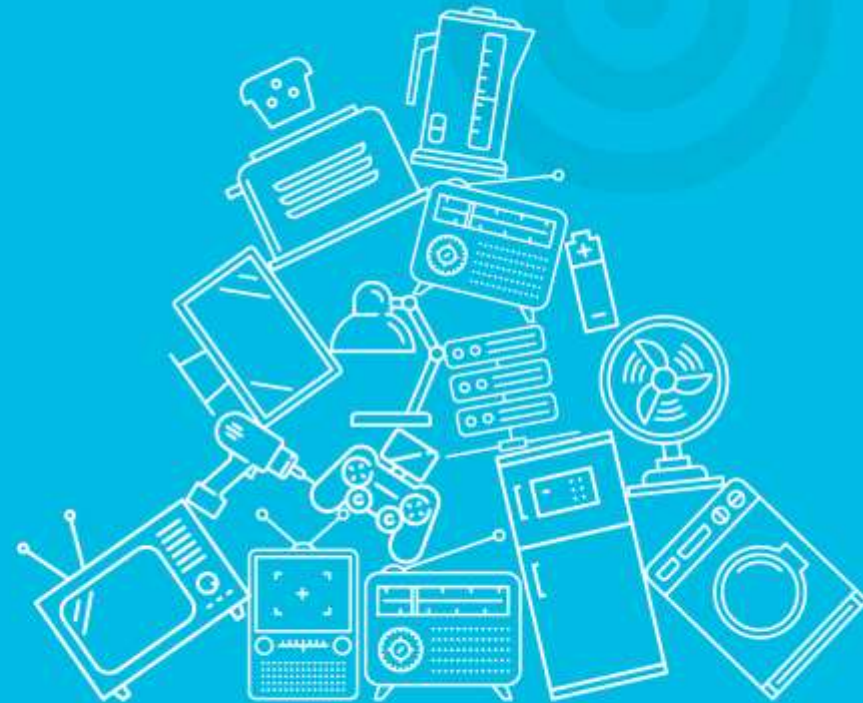


Taken from **WEEE Recycling Economics, Shortcomings of the current model; commissioned by EERA**; <https://www.eera-recyclers.com/files/unu-eera-brochure-online-v5-002.pdf>



RISKS

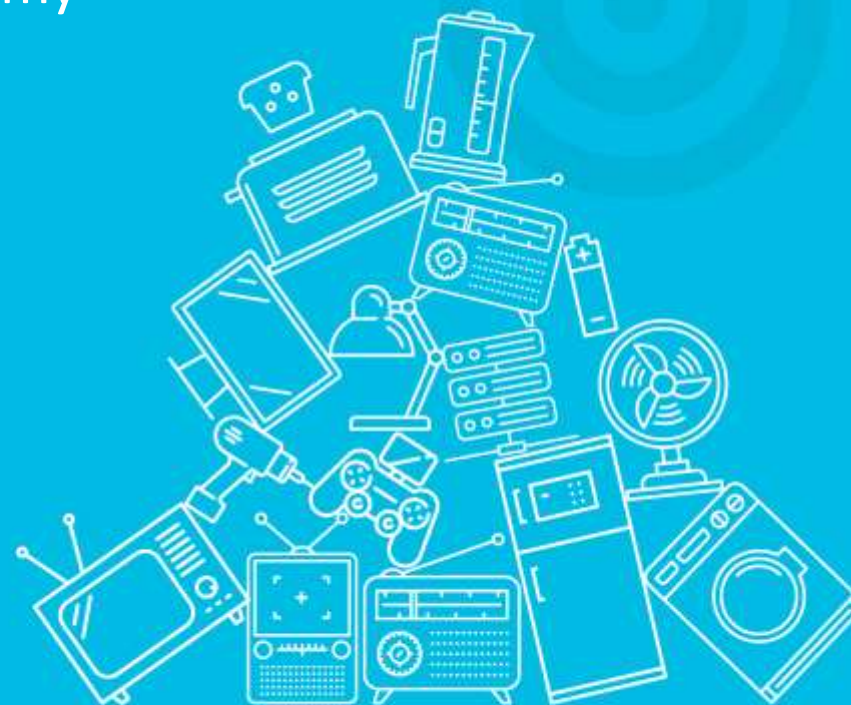
- National WEEE Target 2019 – B2B?
- Small WEEE return rates
- Damaged Lithium Batteries
- Application of EN Standards





Next Steps

- A new Waste Policy
- Climate Action Plan & Circular Economy
- Article 8a EPR – Eco modulation?
- Battery Directive Recast

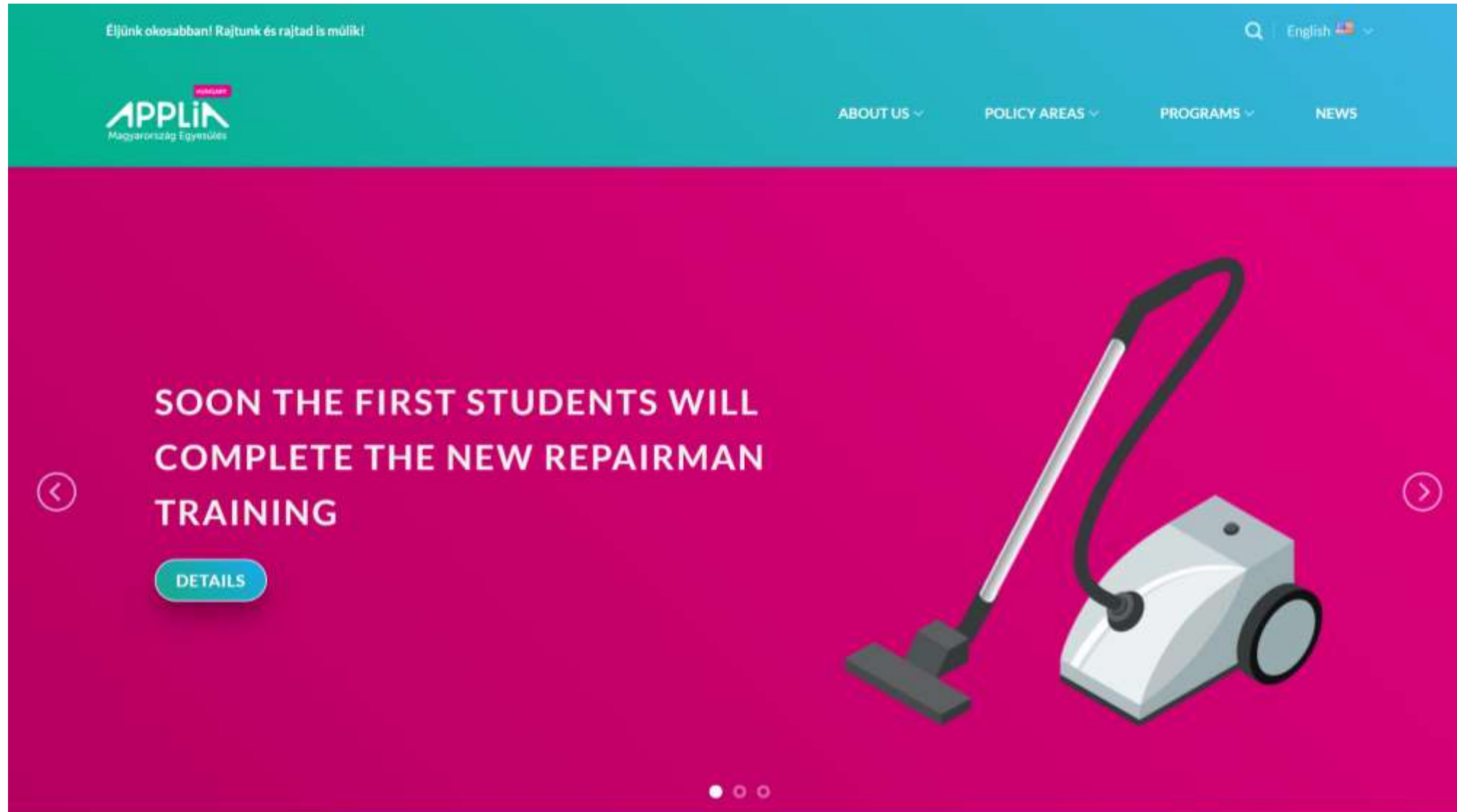


Moving Up the Waste Hierarchy

Article 9....Member States Shall
“encourage the re-use of products
and the setting up of systems
promoting repair and re-use
activities, including in particular for
electrical and electronic equipment,
textiles and furniture, as well as
packaging and construction materials
and products;”

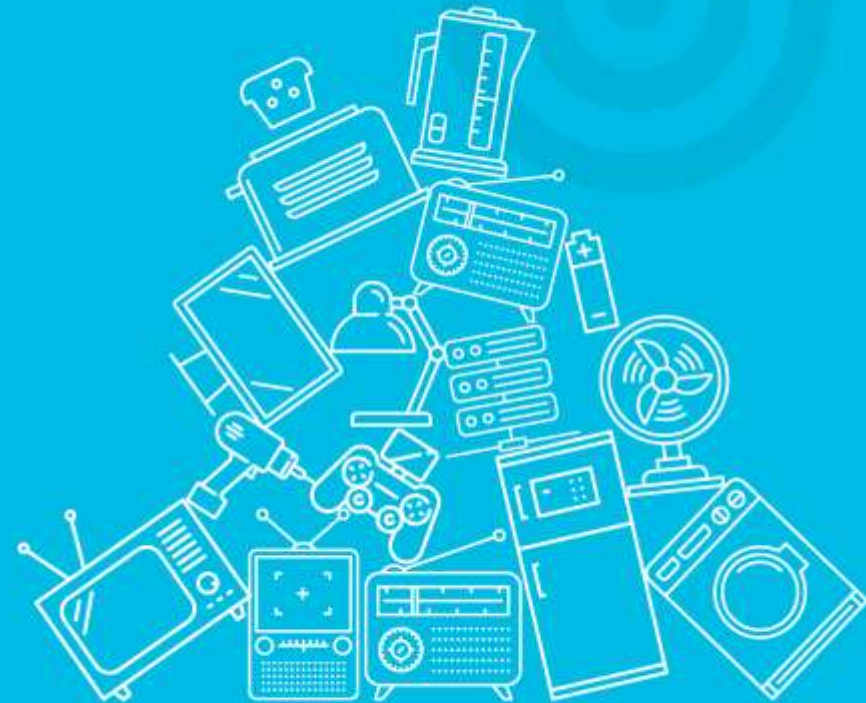


Case Study: APPLiA Hungary



Environmental management & EPR solutions
.....for new longlife technology including

- Lithium Batteries
- and the PV Sector



New Technologies...New Challenges







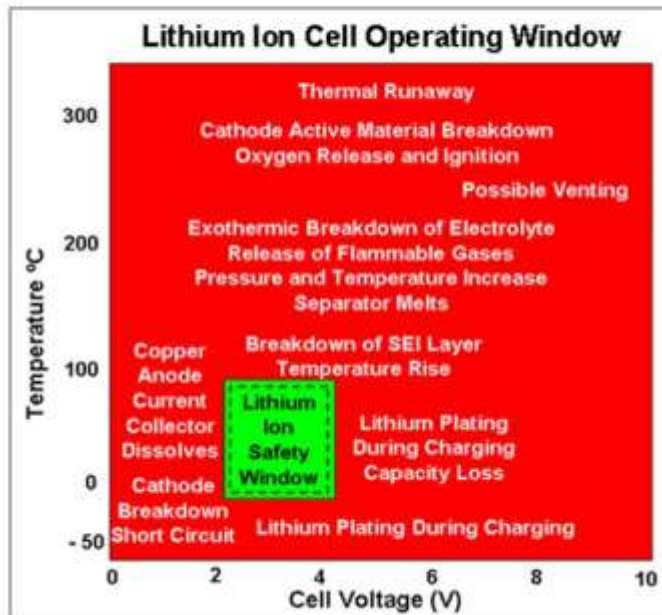


Just look out the window



*presented by Benjamin Strandquist, BIL, Electrification of Norwegian Car Market,
EUCOBAT EV Conference 24th June 2019*

Safety concerns about (second life) Li Ion batteries



www.mpoweruk.com



Out of the rEVolt project successful business for start-up Time Shift Energy Storage



1GW of PV Solar Power = 400,000 panels...

+ monitoring equipment, storage batteries





INTRODUCTION

ABOUT PV CYCLE

Manufacturers, rebranders, online shops or importers of e-products and batteries find in PV CYCLE a trusted partner - truly representing their needs and priorities around the topic "waste". A non-for-profit, member-based organization, PV CYCLE offers both collective and tailor-made waste management and legal compliance services for companies and waste holders around the world.

Because we think that waste matters, PV CYCLE has developed a collection network that is simply closer to the consumer.

WHAT DO WE COVER?

PV module waste
Electrical/electronic equipment waste
Battery waste
Industrial waste
Packaging waste

WHAT DO WE OFFER?

Waste Compliance
Waste Collection & Treatment
Waste Consultancy
Waste Dismantling
Waste Management Programs
National Services

PV CYCLE ASSOCIATION AISBL

114, Bd. Brand Whitlock - 1200 Brussels, Belgium
T: +32 (0)2 880 7250
info@pvcycle.org

www.pvcycle.org



One-stop-shop

Single point of contact for all-inclusive waste management and legal compliance.



Industry-driven

A member-association, PV CYCLE focuses on our clients' needs and priorities.



Collective

Lower costs through expert know-how and collective approach.



Transparent

Transparent, all-inclusive prices for sustainable solutions.



Non-profit

Independent from investors and recyclers, PV CYCLE members benefit directly from our assets.

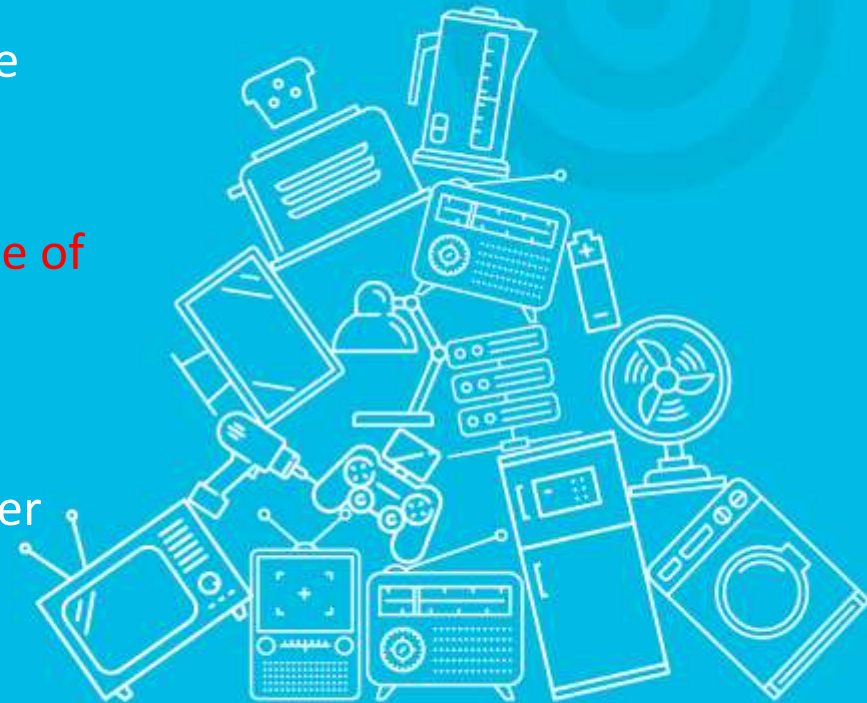


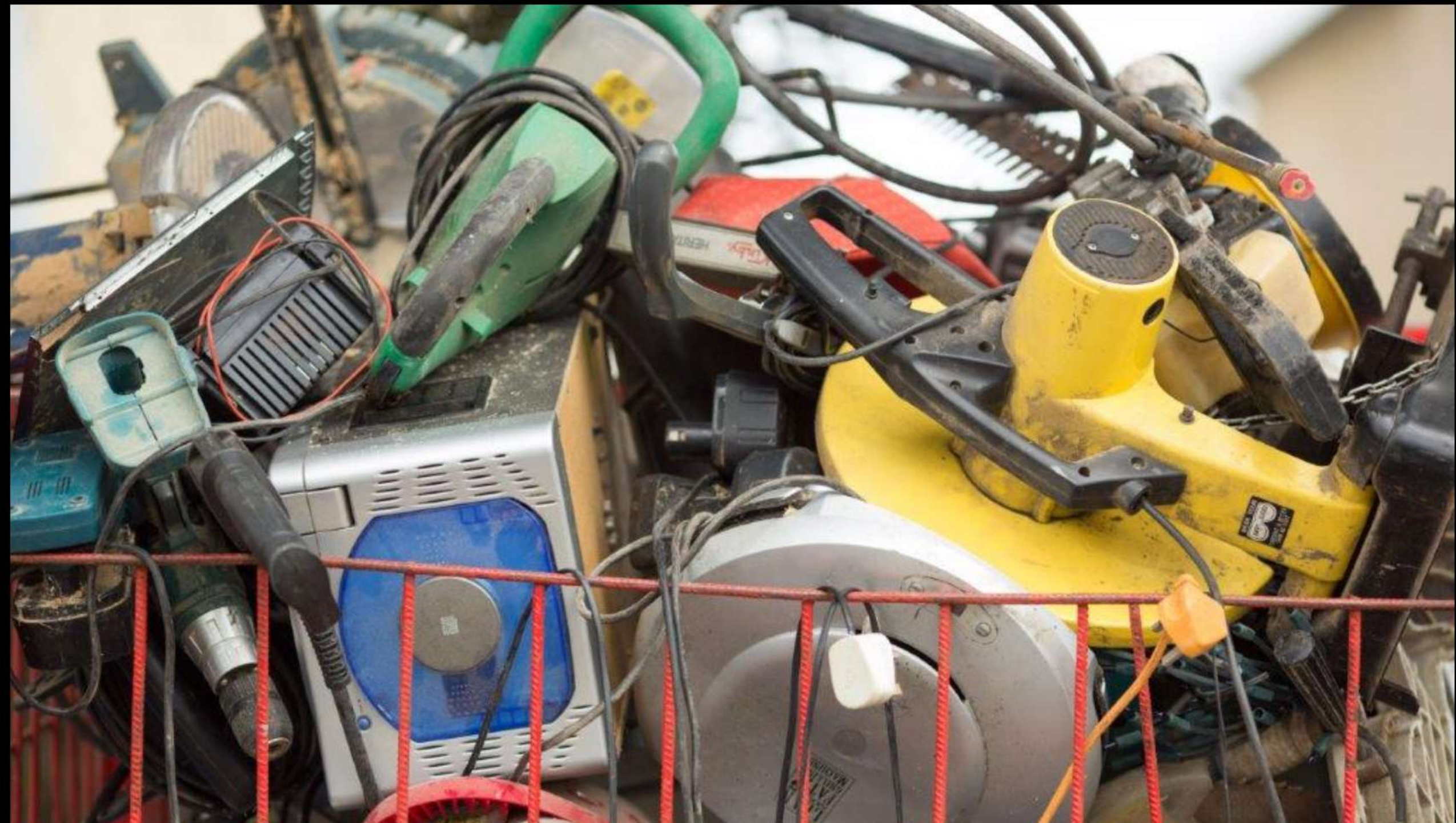
WEEE Ireland has partnered with PV Cycle since 2017 to support multinational OEMS and their Distributors in Ireland.

- **Collective Scheme supports their EPR reporting, financing and end of life (waste) obligations for dual use B2C panels**
- **How will large scale solar PV panels provide for end of life financial guarantee?**
- **If Irish collection targets include B2B and PV panels how do we reach 65% take back rates in the coming years?**

Article 8aMember States shall take the necessary measures to ensure that the financial contributions paid by the producer of the product to comply with its extended producer responsibility obligations:...

4 (b)..in the case of collective fulfilment of extended producer responsibility obligations, **are modulated**, where possible, for individual products or groups of similar products, **notably by taking into account their durability, reparability, re-usability and recyclability and the presence of hazardous substances**, thereby taking a **life-cycle approach** and aligned with the requirements set by relevant Union law, and where available, based on **harmonised criteria** in order to ensure a smooth functioning of the internal market....



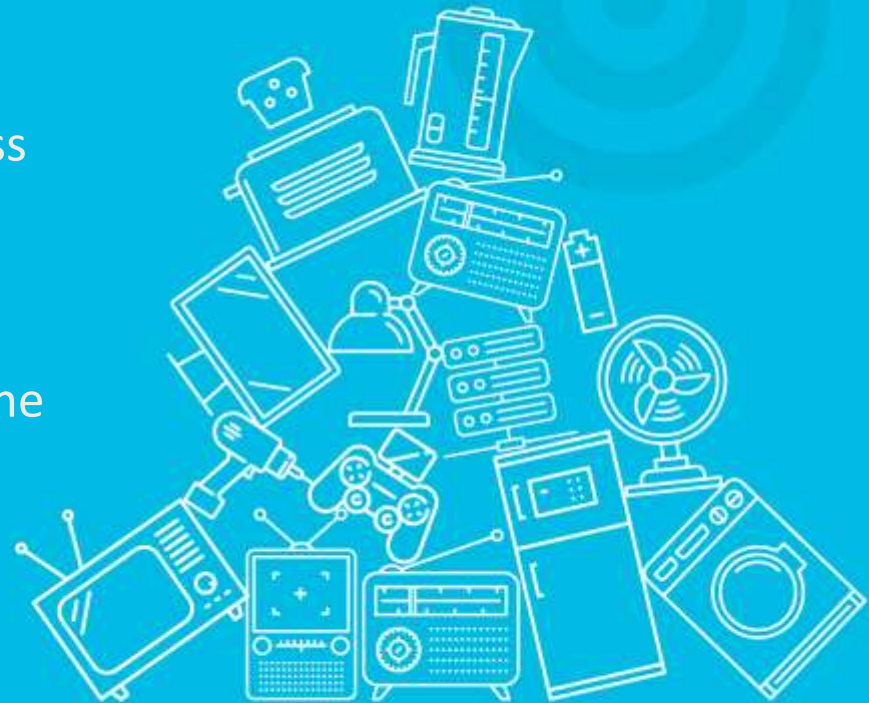


Eco Modulation

How do we harmonise the rules on eco modulation across different electrical products and member states.....by 2023 (?)

Ennomia preparation of guidance and FAQ on behalf of the Commission (in draft)

Example: Use OEM warranty as a proxy of durability and provide a standardised label across product types?



WE'LL TAKE YOUR OLD APPLIANCE BA

RC5570 - ARC5570A + W

FREE
RECYCLING



**OF YOUR OLD
APPLIANCES
IN THIS STORE**

*Please Ask Staff for details

WHIRLPOOL
141/95 LITRE FRIDGE FREEZER

Included in this price is a contribution to recycling Costs of \$ 30

Price: **319.95**


8 003437 981814

WHIRLPOOL FRIDGE FREEZER
A+ ENERGY GIVES 20% SAVINGS VERSUS STANDARD
5.8 CUBIC FEET FRIDGE CAPACITY
2 GLASS SHELVES INC CRISPER COVER
3.7 CUBIC FEET FREEZER CAPACITY

Scan this QR code for
Live Stock, more info
and Today's BEST PRICE



Warranty 2 Years Parts and Labour

WHIRLPOOL
319.95 : 141/95 LITRE FRIDGE

**BEST EVER
DEAL**

Last Valid Date : 30 - Jun - 2016
Subject to Limited Quantity Availability
SAVE an EXTRA 20.00euro

Now: **299.95**

Included in this price is a contribution to recycling Costs of \$ 30
*Excludes All other Offers



Example- France

*Presented at WI EPR event 15th October by
Mark Hilton, Eunomia*

- **Combinations of criteria - different criteria applied to different product categories**

WASHING MACHINE DISHWASHER	Availability of spare parts essential for the equipment use during 11 years <u>or</u> integration of postconsumer recycled plastic (minimum threshold of 10%)	—	CAT 04	14010	€ 6.67
	Unavailability of spare parts essential for the equipment use during 11 years <u>and</u> no integration of postconsumer recycled plastic (minimum threshold of 10%)	—	CAT 04	14011	€ 8.33

- **+/- 20% bonus malus on ‘Visible Fee’**
- **Middle ground reflects average PRO costs**
- **Balancing of funding between schemes where in-balance due to bonus / malus variations**

What can you do?

#SmallThingsMatter....but also the bigger picture – Procurement?

- 1) Has your organisation replaced lighting throughout its buildings in the last 12 months?
- 2) Where does your organisation's IT go at end of life?
- 3) What about the catering equipment, point of sale tech, displays and screens, AV equipment, promotional items....
- 4) What new energy technology, EV or hybrid vehicles is your organisation purchasing?

Do all of your tenders and contracts include Producer Registration criteria for EEE and Batteries?



THANK YOU

Leo Donovan, CEO

WEEE Ireland

Whelan House, South County
Business Park, Leopardstown,
Dublin 18, Ireland.

PH: +353 (0)1 2999 320

FX: +353 (0)1 2959 410

EM: info@weeeireland.ie

