

London's Electrical Sector

A review of current activity in London and good practice across Europe to accelerate the circular economy in the electricals sector

Summary report prepared for LWARB by
The Restart Project - September 2019

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1. SUMMARY

This document reviews current activity within London in the context of the electricals section of the London Circular Economy Route Map; and examines good practice across Europe to create recommendations to update the Route Map. The review, conducted as part of the European Regions Towards Circular Economy (CircE)¹ project, is based on consultations with a wide range of stakeholders, from local authorities to re-use organisations, repairers, businesses and the waste industry.

The review identifies a wide range of circular economy activity already occurring across the capital which can be built on to further accelerate change. However, implementing the vision of the Circular Economy Route Map will require system change including changes in policy and the regulatory framework, consumer behaviour change, and the engagement of a range of community organisations, local authorities and

businesses. New metrics will be needed both to prioritise relevant actions and to monitor progress.

This report provides context on the role that LWARB and other stakeholders can play within the electricals sector to drive that change. No organisation can achieve this vision on its own. The report highlights that LWARB has the potential to play a unique role: LWARB can promote actions with significant impact, identify and disseminate good practice and use its position to advocate for better policies to support the circular economy (CE). LWARB can also partner with others to implement specific actions and increase its impact.

We recommend a learning approach in which models of good practice are developed over time to support system change. These insights can be used to help inform future iterations of the Mayor's London Environment Strategy.



¹<https://www.interregeurope.eu/circe/>

Key findings

The review identifies a wide range of CE activity already occurring across the capital which can be used to accelerate change. Significant variation in local authority services and collection rates, together with a number of innovative models for collection for recycling and re-use driven by higher targets for e-waste collection, provides an opportunity to develop and implement good practice.

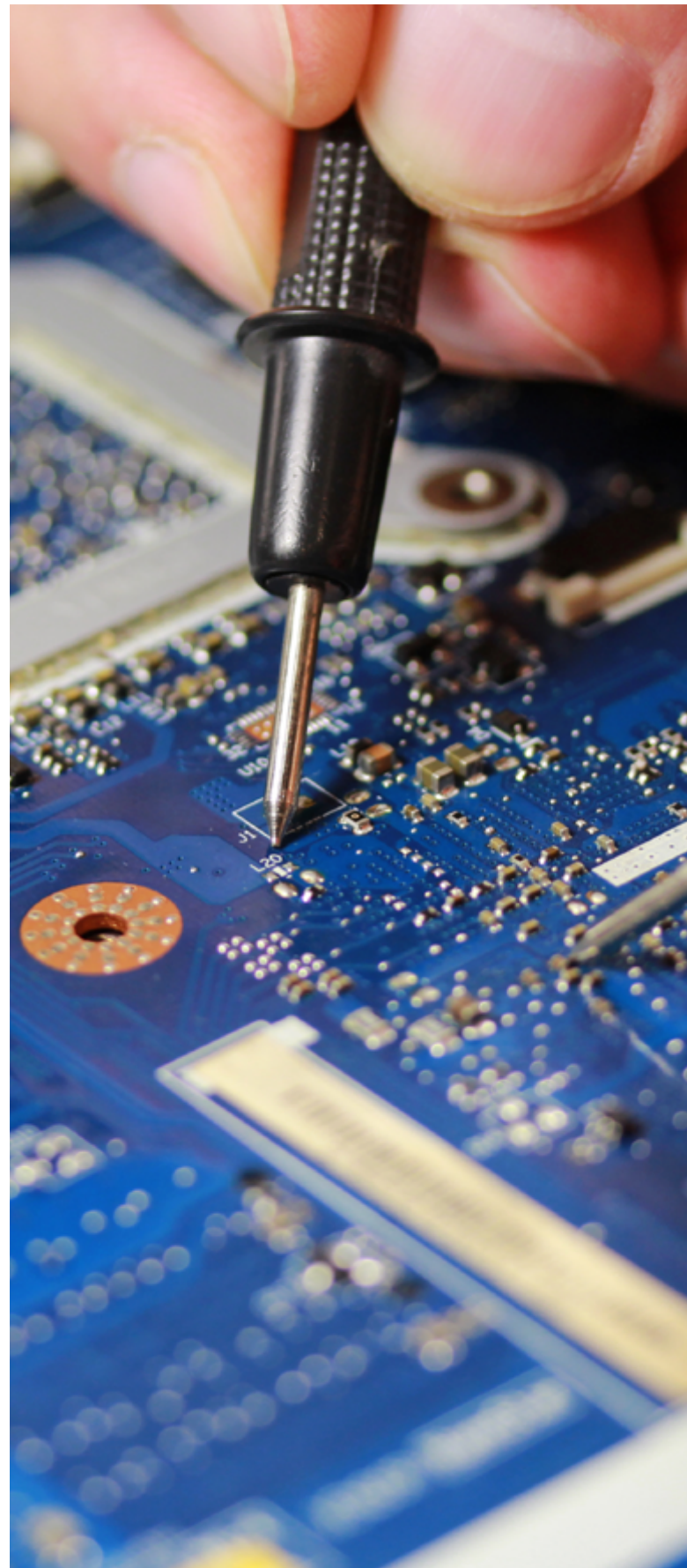
Stakeholders identified a range of opportunities to increase re-use, repair and recycling, and highlighted the environmental harm caused by e-waste and the continuing level of disposal of e-waste to landfill and incineration.

The examples of best practice identified in case studies from Europe show the benefits of new metrics, integration of service and awareness development, collaboration, operating at scale, and integration with waste prevention targets.

Improving policy and legislative frameworks

The expected review of Extended Producer Responsibility (EPR) for Waste Electrical and Electronic Equipment (WEEE) in the next two years provides an opportunity for London to advocate for implementation of “full net cost” to ensure adequate funding for improved WEEE recycling services across the capital. By advocating for continuing alignment of UK ecodesign regulations with Europe and inclusion of modulated fees in the EPR review London can aim to influence the design of more sustainable and repairable products.

London can leverage the Greater London Authority (GLA) Group’s purchasing power and build on the good practice developed by the GLA Group through its Responsible Procurement Policy to influence local authorities and businesses to adopt more sustainable procurement practices.



Increasing product lifespans through re-use and repair in the capital

London has a wealth of community groups, a vibrant charity retail sector, plenty of re-use organisations, a strong commercial repair sector and innovative CE businesses which can be drawn together to share and promote good practice, learning from each other and developing effective partnerships with each other and with local authorities. London can pioneer a knowledge group for the sector.

By studying examples of good practice among local authorities, understanding what is effective and encouraging partnerships between local

authorities, charities and re-use organisations London can stimulate the development of local authority re-use services, helping to mobilise stored WEEE for re-use and recycling. Developing open metrics to measure the carbon impact of repair and re-use can help reveal the contribution of re-use and repair to a low-carbon CE.

Communications are key to support behaviour change in this area and can complement current messaging on WEEE recycling and disposal.



Image credit: Restart project

Enabling London's transition to a circular economy for electricals

LWARB has made a significant contribution to enabling the CE for electrical products with support for, and investment in, new businesses based on CE principles delivering services such as re-use platforms, collection services for re-use and repair and support like this should continue.

London will benefit from a UK-wide behaviour change and communications campaign which is being planned by [WEEE Fund](#). By partnering with WEEE Fund LWARB can bring its experience of successful behaviour change campaigns in London to bear on creating a tailored campaign for London.

Improving WEEE recycling and disposal

London has an opportunity to build on the innovations in services already happening in different local authorities to study and identify good practice and develop a WEEE services model for the capital. Together with the potential for increased funding through the EPR review there is an opportunity to transform WEEE service in the capital in the next few years. New metrics for WEEE in residual waste can be developed to monitor progress in reducing inappropriate disposal.



2. REVIEW OF CURRENT ACTIVITY

The review methodology included desk-based research looking at current activity in London, good-practice across Europe and the CE context, stakeholder engagement, stakeholder workshops, preparation of case studies and interviews with case-study participants.

The vision of the electricals section of the CE Route Map is for London to:

- Send zero electricals to disposal (landfill or incineration);
- Act as a regional electricals hub for collection, re-use and recycling; and
- Re-use more electrical gadgets in the capital.

There has been progress on implementing many of the actions from the Route Map, (see Appendix 1) particularly through the provision of business and investment support to a number of CE startups in the electrical sector through the LWARB Advance London programme including Globechain, Premier Sustain, Tryatech, ZigZag Global, Recono.me and Library of Things. Growth capital was also provided through Circularity Capital to ZigZag Global and Grover.

Overall, however, there has been less focus on progressing action on electricals at London-level by LWARB, as the focus of the London Environment Strategy Implementation Plan² has been on implementing the Route Map for the built environment, textiles and plastics.



² GLA - London Environment Strategy Implementation Plan - May 2018.

The opportunity and the size of the sector in London

There is a significant opportunity for Londoners to save some of the £3.3bn³ spent on new electrical and electronic products annually and move towards a low-carbon CE by shifts in consumption towards more durable products, keeping products in use for longer through repair and maintenance and giving them a second life through sales, donation, repair and informal re-use.

Embodied impacts are significant with electrical and electronic products used in London contributing 1.7mt of CO₂e each year⁴. For the vast majority of electrical products, the environmental impact of the manufacturing phase is much more substantial than the in-use phase. Therefore, extending products' lifespans can make a significant contribution to a low-carbon CE.

Opportunity for Londoners to

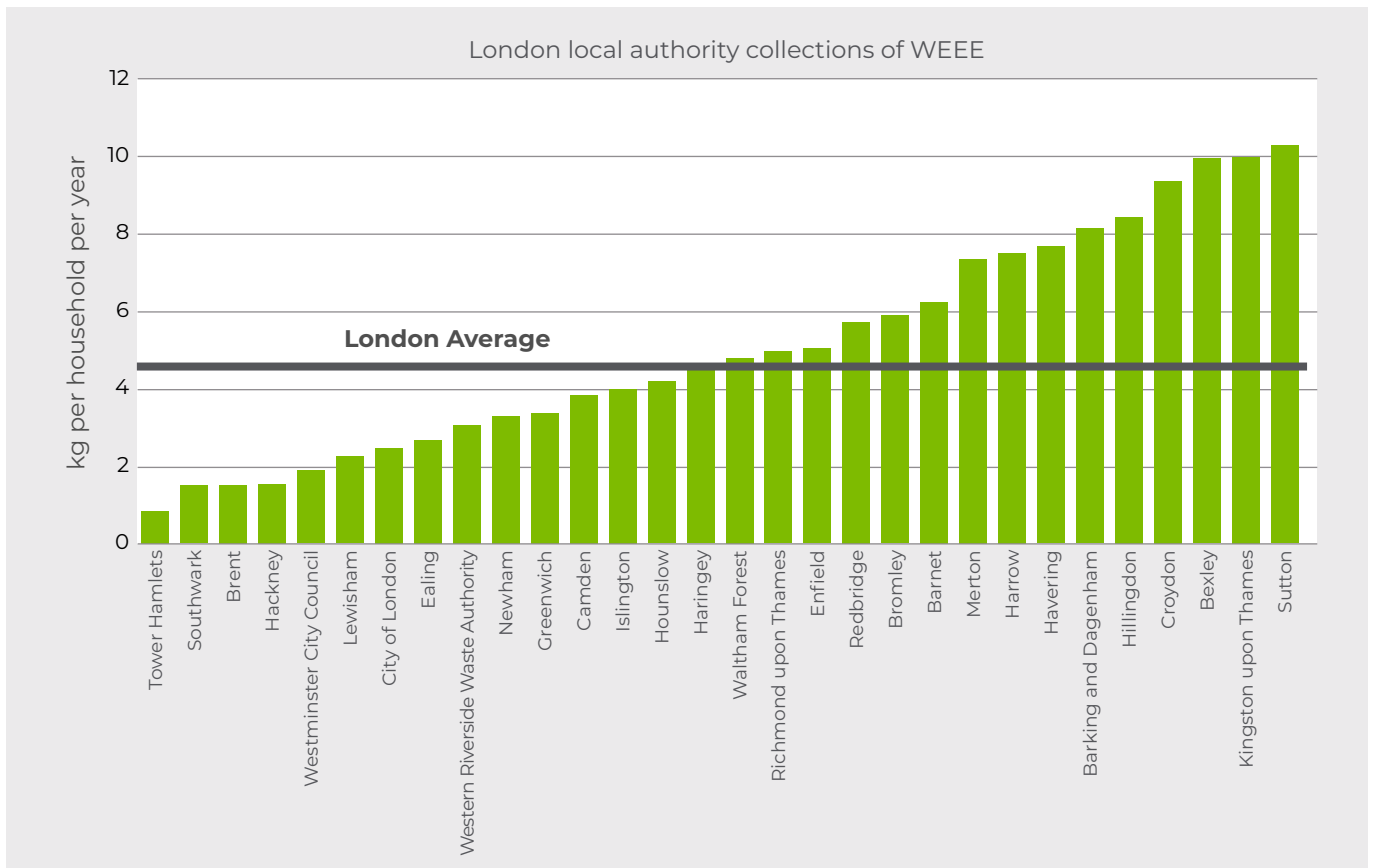
SAVE £3.3bn

on new electrical and electronic products annually



³ LWARB - Towards a circular economy - context and opportunities 2015.

⁴ Estimated proportion of UK total - WRAP - Switched on to value 2014.



An estimated 273,000 tonnes⁵ of Electrical and Electronic Equipment (EEE) is purchased in London annually with a similar level of WEEE generated. London level data on WEEE recycling collections is not available, but estimates put the volume at 90,000 tonnes⁶ per year, with an 80:20 split between domestic and business WEEE.

Around 17,000 tonnes of WEEE per year is collected by local authorities in the capital⁷, with significant variations in both services and collection rates in terms of kg per household across the capital (see diagram above). Flows of WEEE in scrap metal and non-household business re-use are estimated at 60,000 tonnes per year⁸, leaving a large balance unaccounted for, which could be in residual waste, theft or other undocumented flows.

Research due to be published later this year found that a substantial proportion of householders in the UK admit to putting e-waste

in the bin. The most recent estimates put the level of e-waste in residual waste at 0.5%⁹ but other estimates put it as high as 2.4%¹⁰.

The tonnage of EEE placed on the market in the UK has been dropping since a peak in 2015¹¹, against forecast expectations of an increase¹². A decline in consumption, free-riding (undeclared sales) or lightweighting of products could all be contributing factors. There is some anecdotal evidence that people are keeping products longer and looking after them better and Global E-Waste Monitor¹³ reported an increase in smartphone life cycles in the UK from 20 months in 2013 to 23.5 months in 2015. Building upon this kind of evidence could tell us whether the economy is getting more circular.

Data on re-use of EEE is not collected and is missing from the picture of EEE flows both at the London and the national level.

⁵ Estimated proportion of UK total - The current material flows of WEEE in London 2015.

⁶ Idem

⁷ LWARB - The current material flows of WEEE in London 2015.

⁸ Estimated proportion of UK total - WRAP UK EEE flows 2016.

⁹ Data from two stakeholders.

¹⁰ WRAP - UK EEE flows 2016

¹¹ Data from The Environment Agency

¹² WRAP - UK EEE flows 2016

¹³ UNU - The Global E-Waste Monitor 2017.

Changes to the context of the Route Map since 2017

There have been a number of changes to the context of the Route Map since its publication in 2017 which create opportunities to shape the future of London's CE for electricals.

The London Environment Strategy¹⁴ published in 2018 sets the objective of enabling the transition to a low-carbon CE and recognises the CE Route Map, though the implementation plan puts the focus on built environment, plastics and textiles, rather than electrical products. The strategy also sets a target for no recyclable waste to go to landfill by 2026 though it does not address WEEE specifically.

The GLA Group published its Responsible Procurement Policy in 2017¹⁵. Information Technology is one high-spend area identified where procurement practice could influence sustainability, and LWARB's office move¹⁶ is an example of applying these principles.

The UK government has set a more stretching target for collection of household WEEE for 2019. This and the increase in the UK's national collection target from 45% to 65% has increased pressure on Producer Compliance Schemes (PCSs) to collect and recycle more WEEE.

Compliance fees paid into the WEEE Fund for missed targets in previous years amounted to £8m in 2017 and £3.3m in 2018 which is used to support investment in research, trials and communications. The WEEE Fund is planning a national communications drive on WEEE starting in Q4 2019 with a budget of £3m over three years.

The UK Government's Resources and Waste Strategy¹⁷ commits to a review of the WEEE Regulations in 2019 and a consultation on changes in 2020, in line with EU regulations on EPR which includes the principle that producers of EEE should pay the "full net cost" of collection, recovery and recycling of end of life products. If these costs are not currently being met and a decision is taken to amend EPR to ensure they are then more funding could flow into WEEE services in the future. Modulated compliance fees under EPR could also lead to improvements in product design with less sustainable products becoming less competitive.

EU Ecodesign regulations approved in January 2019 will make some electrical products more repairable and easier to recycle at end of life starting from 2021. Regulations for other product groups are expected to follow. The extent to which these regulations will apply to the UK in the future is still not known.



¹⁴ GLA - London Environment Strategy 2018

¹⁵ GLA - The GLA Group Responsible Procurement Policy 2017

¹⁶ LWARB - A Circular Office in the City 2017

¹⁷ HM Government - Our waste, our resources: A strategy for England 2018

Stakeholder consultations

The Restart Project consulted with a wide variety of stakeholders as part of the review, including two CE start-ups, a global IT manufacturing company, a repair business, charities, re-use organisations, CE advisers, a community re-use project, a local authority, two waste authorities, a recycling company, two producer compliance schemes, and a funding organisation. We would like to thank all the stakeholders who contributed their time, experience and expertise. See Appendix 2 for a list of the stakeholders which participated.

Stakeholders highlighted the need to shift consumption towards more durable products that have longer in-use lifetimes, and change consumer behaviour towards maintenance, re-use and repair as a way to “slow the loop”. They highlighted practical opportunities to boost re-use by consumers, charities, re-use organisations and businesses, and identified gaps in re-use and refurbishment capacity that need to be filled.

A significant challenge identified by stakeholders was the disposal of WEEE in residual waste. This is not only an issue for the general public but also for small businesses, who are confused about their WEEE responsibilities and contributing to WEEE in residual waste. The stakeholders identified low public awareness of WEEE recycling services as an issue and asked for a public communications campaign.

Stakeholders identified the high rate of theft of compressors from fridges sent for recycling as a symptom of ongoing issues with the WEEE collection and recycling system in London. This reduces the potential for re-use and releases refrigerants into the environment affecting greenhouse gas emissions and air quality. While action on environmental crime does not lie at the London level practical actions could be taken to reduce the risk of theft.

The need to identify and articulate the relatively high environmental impact of WEEE was also highlighted. The impacts of WEEE compared to other streams of waste, particularly in terms of carbon impacts and use of critical raw materials should be communicated to drive consumer behaviour change towards extending product lifespans, re-use, repair and recycling.

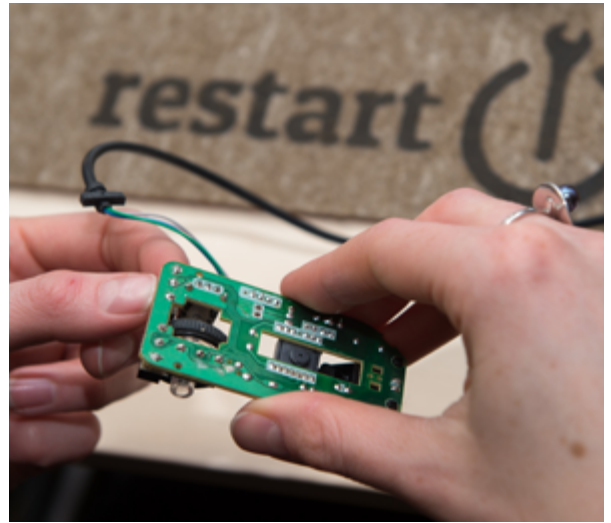


Image credits: Restart project



3. GOOD PRACTICE AROUND EUROPE, AND WHAT IT MEANS FOR LONDON

A review of good practice from around Europe was undertaken to strengthen the recommendations contained within this report. From a long-list of examples six were selected as case studies. They are considered strong examples in their category with potential for replication or providing learning for London and filling gaps in the Route Map, particularly in repair, re-use and recycling.

The selected case studies are:

Millor Que Nou:

an integrated community repair, commercial repair and re-use project linked into local waste prevention programmes in Barcelona, Spain¹⁸.

De Kringwinkel:

an expanding network of re-use organisations with 130 shops integrated into local waste prevention targets in Flanders, Belgium¹⁹.

E-Waste Race:

a long-established WEEE collection competition for schools in Netherlands, which is expanding into Germany using a franchising model²⁰.

Repair Network Vienna (RNV):

a successful association of repair businesses supported by the local authorities as part of a waste prevention programme²¹.

Tech Takeback:

pop-up collections aimed at hoarded technical WEEE and combining recycling and re-use in Brighton and Hove²².

Scotland Sustainable Procurement:

best practice in sustainable procurement including the development of replicable tools and guidelines²³.

The studies offer good-practice insights into key recommendations emerging from this study:

Increasing product lifespans, re-use and repair.

Although higher in the waste hierarchy than recycling, re-use activities have often been overlooked in policy and service delivery due—in part—to their unpredictability and resistance to standardisation.

Improving WEEE disposal and recycling.

These innovative services also incorporate a social or educational component and address current and hoarded WEEE.

Improving policy and legislative frameworks.

The context for case studies is vital to consider, and these examples provide insights into the interplay of policy requirements and supportive, integrated ways of working.

¹⁸ MQN: <http://www.millorquenou.cat>

¹⁹ De Kringwinkel: <https://www.dekringwinkel.be/>

²⁰ E-Waste Race: <https://www.ewasterace.nl/>

²¹ RNV: <https://www.reparaturnetzwerk.at/>

²² TTB: <http://www.techtakeback.co.uk/>

²³ Scotland sustainable procurement: <https://www.gov.scot/> <https://www.zerowastescotland.org.uk/>

MILLOR QUE NOU (MQN)

Barcelona, Spain

Millor Que Nou (Better than New) has pioneered an integrated approach to promoting repair and re-use amongst Barcelona residents. In 2006, MQN began life as a listings service for repair businesses. In 2009 the project hired premises and began to offer tools and training to motivate people to repair their own belongings. The venue also acts as an exchange hub for unwanted items.

MQN is funded by the municipality as part of their waste reduction programme, which covers staff costs, premises and materials. Two staff work at the municipal office with 7-8 staff and 2-3 volunteers based at the venue. The project operates for 49 hours per week, receiving around 20,000 visits per year, processing approximately 1 tonne of goods per month (including bikes, textiles, carpentry, plumbing, electronic and electrical appliances) of which around 85% is repaired.

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SCOTTISH GOVERNMENT AND ZERO WASTE

Scotland

The Scottish Government and Zero Waste Scotland have developed a range of initiatives that use CE principles to help public sector organisations purchase EEE more sustainably. This reflects Scotland's ongoing leadership in integrating CE principles into public policy. To help the public sector meet the Sustainable Procurement Duty the Government produced a suite of four tools:

- 1) the Prioritisation Methodology - to identify areas of high concern,
- 2) the Sustainability Test - to identify relevant and proportionate contract requirements,
- 3) the Flexible Framework Assessment Tool - to audit policies and processes and
- 4) the Life Cycle Impact Mapping tool - to identify the impacts of products across their lifetimes.

Zero Waste Scotland have developed a set of guidelines on how to procure for repair, re-use and remanufacturing. These cover product warranties, recycled content, durability, upgradeability, repairability, life-time extension, re-use and recycling. What is so novel about these guidelines is the level of detail that they provide to purchasers, giving them insights into exactly how to differentiate between products that are more and less repairable. These features are rarely—if ever—included in product marketing materials, so the guidelines contribute to greater transparency in these important areas.

THREE KEY INSIGHTS FROM THE CASE STUDIES CAN INFORM LONDON'S FUTURE ACTIONS:

1

New ways to measure value

Interviews with case study representatives identified that funding streams for these projects are currently healthier in other European states. The funding landscape is such that other benefits (e.g. social inclusion and education) can play a larger role in the discussions around service provision.

There is an urgent need to develop a set of more nuanced metrics that measure the additional benefits provided by particular schemes in enhancing circularity more broadly. These metrics could potentially link to other sources of funding. More could be done to understand the impact of re-use and therefore how and why re-use and recycling services need to be provisioned differently.

2

Collaborative working

The case studies, such as De Kringwinkel and RNV showcase the benefits that can be provided by successful collaboration or federation. Many of the projects listed here maximise the advantages of working together at scale. Where integrated working extends outwards to partnerships with local, regional and national authorities, gains are made by consistent working that reduces overheads and enhances outcomes overall.

London can learn from these examples by encouraging, facilitating and accessing funding for collaborative working between stakeholders at different scales of the CE, to achieve maximum shared benefit. Collaboration has worked well in the case studies where a bottom-up structure is in place that is driven by organisations, or where stakeholders have a clear and defined benefit to working together. London boroughs may be able to make gains from undertaking a shared and consistent approach to aspects of WEEE processing.

3

Integrated awareness raising and service provision

Promotion of services to the public is a key theme across most of the case studies. It is clear that a lack of information is a problem: unwanted EEE is hoarded by consumers as they are unsure what to do with it. The case studies take an integrated approach to awareness-raising and service provision, helping consumers to understand whether (and how) to re-use or recycle their unwanted items.

London could learn from these dual dimensions by prioritising awareness-raising overall and where possible taking an integrated approach to WEEE collection and processing. This would include local authorities, but also other stakeholders: for example, in partnerships between charities and other not-for-profit organisations.

4. CONCLUSIONS

System change will be needed to deliver the vision of the Route Map including changes in policy and the regulatory framework, consumer behaviour change, and the engagement of a range of community organisations, local authorities and businesses. New metrics will be needed both to prioritise relevant actions and to monitor progress.



New metrics will be needed both to prioritise relevant actions and to monitor progress.”

London has an opportunity to influence the forthcoming review of the WEEE regulations to ensure producers contribute fully to the cost of providing the services Londoners need. The range of collection models across London’s local authorities and the innovation that is starting to appear due to higher WEEE collection targets provide a learning opportunity for London to develop and identify what works. There is a need to monitor WEEE in residual waste in order to be able to set a reduction objective.



Londoners need clearer communications about how to recycle WEEE as well as better services and there is an opportunity to shape the delivery of the planned WEEE communications campaign in several ways: to highlight all channels for WEEE recycling, not only local authority channels; to encourage Londoners to move up the waste hierarchy by highlighting re-use and repair opportunities; and to articulate good practice, providing a single source of information for residents to understand the WEEE services and options available to them.



Londoners need clearer communications about how to recycle WEEE as well as better services..”

London has a huge range of community organisations, a vibrant charity retail sector, a number of re-use organisations, commercial repairers and CE startups all of which contribute to extending the in-use life of electrical products through re-use and repair. The work of these organisations can be championed, celebrated and supported by sharing good practice, understanding what makes effective partnerships, and understanding the opportunities and barriers faced by the sector.

There is a need to quantify harm from illegal activity and to quantify the carbon impact of re-use, repair and extended product lifespans in order to raise awareness of how these activities contribute to the development of a low-carbon CE.

The case studies of good practice show the benefits of moving up the waste hierarchy from recycling to re-use and repair services, the opportunities for linking innovation in collection to social and educational needs, and the impact of policy and legislative frameworks and how these can influence change.



Image credits: Restart project

5. RECOMMENDATIONS

The overall vision of the electricals sector of the Route Map is for London to:

- Send zero electricals to disposal (landfill or incineration);
- Act as a regional electricals hub for collection, re-use and recycling; and
- Re-use more electrical gadgets in the capital.

Implementing this vision will require system changes including changes in policy and the regulatory framework, consumer behaviour change, and actions by a range of stakeholders including community organisations, local authorities and businesses. New metrics will be needed both to prioritise relevant actions and to monitor progress.

LWARB can act as a catalyst for change by highlighting actions with significant impact, by identifying, supporting and disseminating good

practice, by advocating for policies which support the emergence of the CE and by partnering with others to implement specific actions. Other stakeholders are expected to complement the work of LWARB in delivering the vision.

It is recognised that LWARB’s resources are limited and additional funding may be needed to support development of this work. Specific funding may be available for WEEE related projects including communications, trials and research through WEEE Fund, and there is potential to engage businesses and local authorities in supporting work in this area.

A learning approach is recommended where good practice is developed over time to create a holistic approach to system change which can inform the development of the next London Environment Strategy and expand its currently limited focus on electricals over the next 2-3 years.

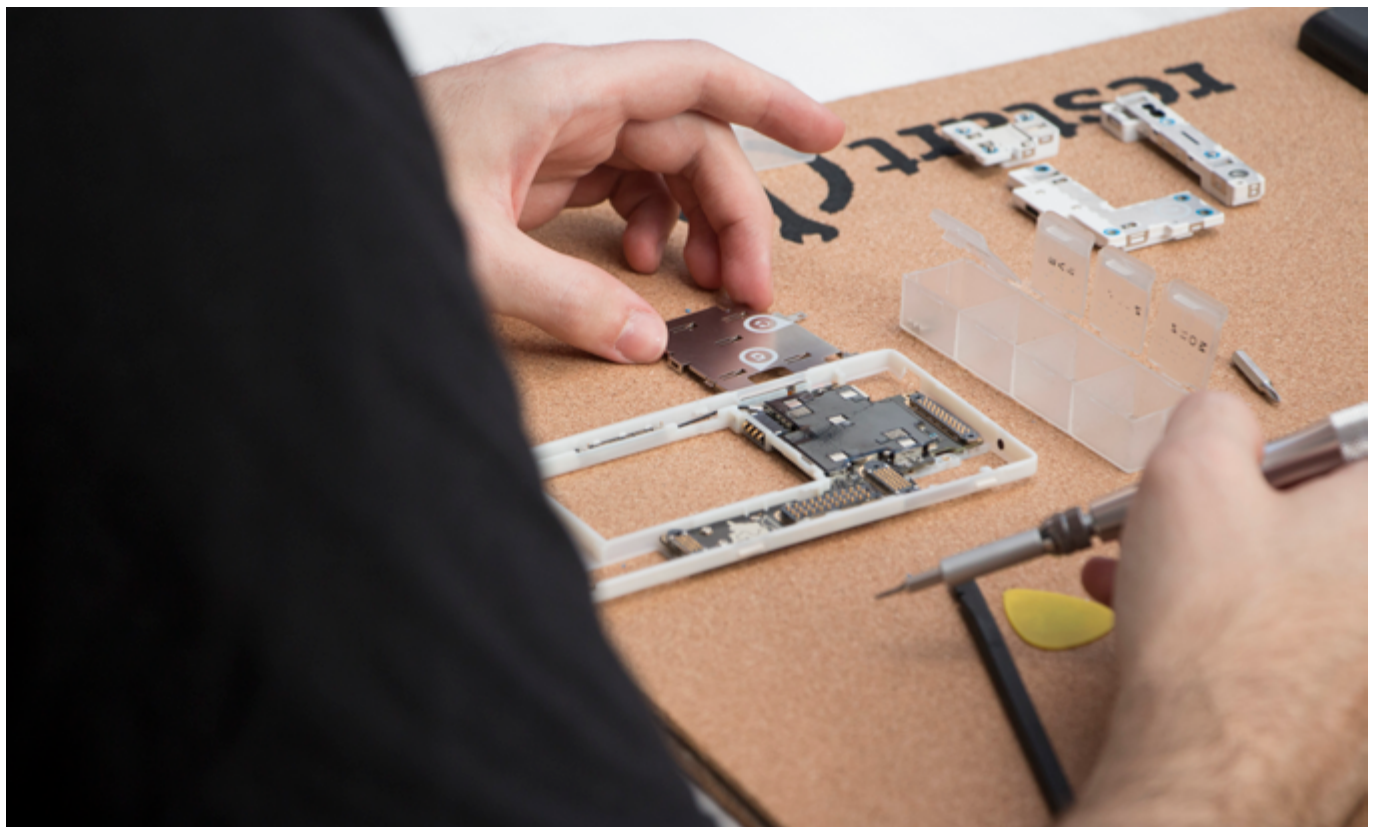


Image credit: Restart project

The following actions are identified to help focus resources and action through better understanding of the system itself, and coordinated, strategic approaches to

delivery. Actions are grouped under key recommendations, highlighting areas in which LWARB could lead, and others in which other organisations are better suited to take action.

IMPROVING POLICY AND LEGISLATIVE FRAMEWORKS

ACTION 1: Advocate for policies enabling the CE transition

Actors: LWARB and local authorities

Funding: LWARB resources

Contribute to the EPR (WEEE) Regulations review and encourage local authorities to also create their own responses to the review. LWARB can have a particular role here in support of London's local authorities to ensure that the EPR review delivers "full net cost" funding for WEEE services.

Lobby for EPR to include modulated fees so that the least sustainable products become less competitive.

Lobby the UK government to ensure continuing alignment of UK Ecodesign regulations with the EU to make products more durable and repairable.

ACTION 2: Lead by example through public procurement

Actors: LWARB, GLA and local authorities

Funding: LWARB/GLA/LA resources

Taking inspiration from the case study on Scottish procurement and LWARB's internal procurement, continue to extend this approach to the whole of the GLA Group, as started as part of its most recent sustainable procurement action plan. LWARB can work with the GLA to develop examples of how circular procurement options can deliver environmental sustainability, lower full lifecycle costs and help meet the Mayor's greenhouse gas and air pollution targets.

Use the collective power of the GLA Group to make the case for circular procurement, document it, and publicise it with a view to influence other companies and local authorities London-wide, to reduce cases of poor practices by London-based businesses, avoiding re-use of recycling of electricals due to lack of sufficient understanding of opportunities

GLA / LWARB can develop guidance and training for local authorities on circular procurement and disseminate this through the guidance for the development of borough in the Reduction Reduction and Recycling Plans to encourage them to review their IT purchasing in particular along CE lines.

INCREASING PRODUCT LIFESPANS THROUGH REUSE AND REPAIR IN THE CAPITAL

ACTION 3: Support LA good practice on mobilising stored WEEE

Actor: LWARB and local authorities

Funding: LWARB/LA resources + WEEE Fund (trials)

Encourage a range of actions by local authorities to mobilise stored domestic WEEE for re-use and recycling such as trials of small WEEE collection services, partnerships with charities to provide re-use collections, WEEE amnesties, development of data cleansing toolkits and school e-waste races.

ACTION 4: Support good practice in re-use and repair

Actor: LWARB plus local authorities, partners in re-use and repair sector and CE businesses.

Funding: To be investigated. WEEE Fund (study of good practice).

Investigate appropriate funding to allow facilitation of a knowledge sharing group including charities, re-use organisations, community repair and CE businesses. This would focus on promoting re-use and repair in the capital, share good practice, understand what makes effective partnerships work and better understand the opportunities and barriers faced by the sector.

Consider holding an electrical CE conference to launch the knowledge group: bringing together potential partners to champion and celebrate the role of charities, re-use organisations, community repair and CE businesses.

Undertake a comparative study of different local authority areas to identify good practice on re-use and evaluate the effectiveness of different practices.

Work with stakeholders in the capital to consider trialling a re-use target in one area of London, measuring results in terms of carbon savings to evidence the contribution of re-use to developing a low-carbon CE.

ACTION 5: Develop and deliver a re-use and repair communications campaign

Actor: LWARB, repair organisations, charities, waste companies, re-use organisations, local authorities, GLA

Funding: to be investigated

Develop a communications campaign, parallel to the EEE/WEEE campaign, to promote London-wide opportunities for re-use and repair and highlight good practice.

Consider adding re-use options to the [London Recycles website](#) or developing a separate online re-use directory, potentially combined with a repair directory.

Collaborative endorsement of independent repair businesses highlighted in a London-wide repair directory and involved in a repair network, to make London a city openly endorsing repair (where developed by other actors).

ENABLING LONDON'S TRANSITION TO A CIRCULAR ECONOMY FOR ELECTRICALS

ACTION 6: Support for CE business models

Actor: LWARB

Funding: LWARB resources

Continue to support small and medium to transition to CE business models in the electrical sector through capacity building e.g. business advice through the Circular London programmes.

Investigate the potential for corporate businesses to transition to a CE in the electrical sector through promoting specific programmes (e.g. staff small WEEE amnesty).

Support the development of metrics to evaluate the carbon impact of the electrical economy building on measurement tools developed by WRAP. Carbon metrics will enable the relative priority of work in the sector to be evaluated and provide tools for monitoring the delivery of the low carbon CE.

ACTION 7: Support the delivery of a WEEE communications campaign

Actors: WEEE Fund, GLA, local authorities.

Funding: WEEE Fund has allocated £3m to the campaign over the next three years + LWARB resources

Partner with the WEEE Fund to support the delivery of their planned national WEEE communications campaign using LWARB's knowledge of similar campaigns to ensure the design of an effective 3 year campaign tailored to London.

Encourage the inclusion of information on repair and re-use alongside recycling of WEEE.

Consider piloting and evaluating this in one area with monitoring and adaptation of the messages for a London-wide roll out.

Consider the best way to provide a single source of information to residents about all WEEE services, including council services, charity and re-use services, donation options, exchange platforms, and repair options. Consider adding local authority WEEE collection and re-use services to the London Recycles website.

IMPROVING WEEE DISPOSAL AND RECYCLING

Action 8: Support LA good practice on WEEE collection and disposal

Actors: LWARB, local authorities

Funding: LWARB resources + additional funding to be investigated

Collate existing local authority data on WEEE recycling collections in order to identify trends and monitor performance. It is recommended that LWARB adopts open data metrics, allowing for transparent and easy assessment of progress.

Encourage London's local authorities to evaluate and document the results of trials and changes in service models and the performance of different collection methods and showcase good LA practice in WEEE collection. The results could be disseminated through the [Resource London](#) team and the GLA could develop guidance for the inclusion of WEEE collection and disposal good practice into boroughs' Reduction and Recycling plans to encourage local authorities to adopt good practices.

Identify suitable funding sources for a comparative study of different local authority areas to identify local drivers of performance, good -practice and the cost-effectiveness of different systems. Such a study may be eligible for support from WEEE Fund.

Consider how to best monitor the amount of WEEE in London's residual waste, e.g. by using data from composition analysis and incinerator ash metal content, and evaluate the environmental impact of inappropriate disposal e.g. compressor theft. Use this as a key indicator to monitor progress in reducing inappropriate WEEE disposal.

COMPLEMENTARY WORK BY OTHER ACTORS

We expect other actors to complement the work of LWARB in delivering the vision:

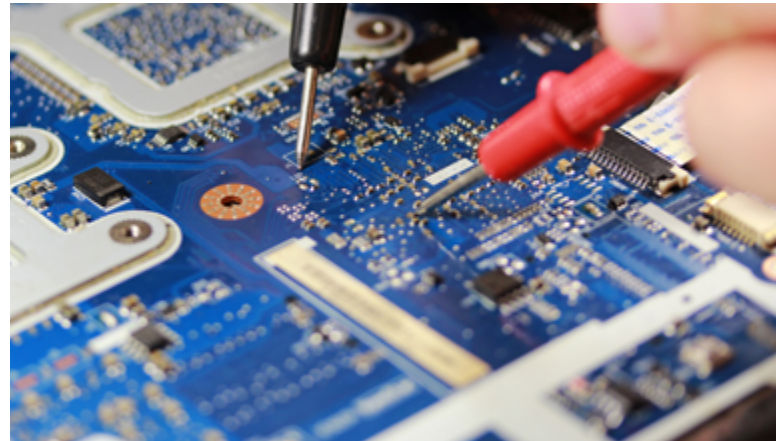
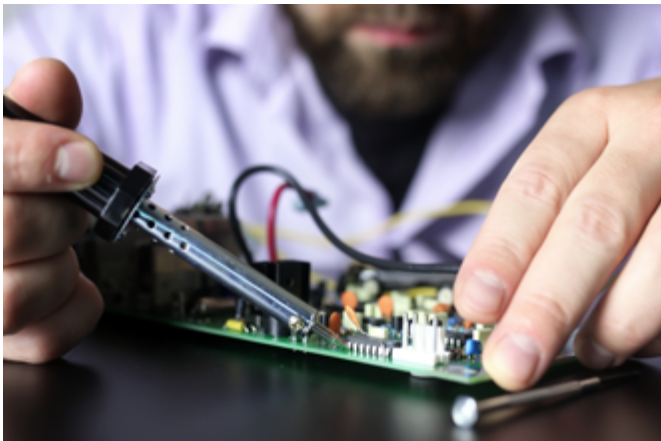
- The GLA Group is expected to extend the work of its recent sustainable procurement action plan to the whole of the group and can draw on inspiration from the case study on Scottish procurement.
- WEEE Fund is expected to publish the results of research on consumer attitudes to e-waste.
- WEEE Fund is expected to launch a 3-year national communications and behaviour change campaign on WEEE in Autumn 2019.
- A government review of EPR (WEEE Regulations) is expected by the end of 2020. The timing of this is subject to confirmation.
- The EU is continuing to work on extending ecodesign regulations supporting repair to other product categories and this is supported by a commitment from the UK government to meet or exceed these standards.

LWARB can also seek opportunities to promote and support work by others, such as community organisations, charities and businesses, which helps deliver the vision:

- Development and promotion of an electrical repair directory for London.
- Feasibility study and preparatory work towards developing a London repair network.
- Review of London's re-use and refurbishment capacity to identify gaps in provision, starting with fridge re-gassing and TV refurbishment, the value that can be recovered, the opportunities and barriers to boosting capacity, and the potential to mobilise investment in new capacity.
- Development of toolkits for DIY data cleansing for use by re-use organisations, charities, businesses and residents and public information campaign around data safety.

“

LWARB can also seek opportunities for other organisations to deliver the vision”



APPENDIX 1

Review of actions from LWARB's Circular Economy Route Map

The Route Map proposed a number of actions for LWARB and other stakeholders across London to accelerate the CE for electrical products in London, which are reviewed here.

ACTIONS	STATUS
<p>Use the joint power of cities to influence brands and manufacturers to design circular economy principles both into their products (e.g. durability, repairability, modularity) and their business models (eg. incentivised return, lease/hire).</p> <p>Utilise the Mayor's position to introduce collaboration with other cities, align a common vision and leverage cities' purchasing power.</p>	<p>GLA Group published its Responsible Procurement Policy in 2017 and has identified IT, lighting and signalling and cabling for London Underground as high spend areas where procurement practice could influence sustainability.</p> <p>LWARB is a partner in the EU CircE programme to support circular economy good practice and policy development across 8 European regions.</p> <p>LWARB's office refurbishment is an example of circular procurement.</p>
<p>Identify and engage with universities and colleges to incorporate circular economy principles and activity into electronic engineering courses.</p>	<p>Currently not funded.</p>

ACTIONS	STATUS
Pilot a campaign targeting residents and businesses to promote, re-use and recycling of electrical equipment. (e.g. Love Food Hate Waste approach).	Partners interested, resource not identified. Some Local Authorities in London have promoted re-use and recycling through their waste prevention programmes.
Develop KPI's to enable effective collection of re-use data.	Partners interested, currently not funded.
Encourage local authorities'/companies' to track electrical assets to ensure best use of existing products and reduce need for procurement/use online platform to facilitate re-use.	Partners interested, currently not funded.
Encourage review of local authorities/ 'companies' corporate IT strategy (e.g. replacement cycles, procurement and disposal) with circular economy principles (e.g. extending product life, use of remanufactured product, re-use).	Partners interested, currently not funded.
Explore the potential to collect, re-use and sell on office electrical equipment in London (linking London offices to London SMEs and communities for re-use).	<u>Advance London</u> provided business support to companies such as Globechain, an online re-use platform which connects businesses and charities.
Provide business support to electricals SMEs through Advance London to scale up or develop circular economy business models.	Advance London has provided business advice to a number of startups in the electrical products field.
Seek opportunities to invest in circular economy electricals innovations such as design for adaptability, disassembly, re-use and remanufacturing, new products and services.	Advance London has provided investment support to startups in the electrical products field.

ACTIONS	STATUS
Bring together producer compliance schemes to consider service packages to local authorities.	Plan in place led by WRAP until March 2018. No progress made and no longer funded.
Encourage UK government to increase the target for producer responsibility scheme and oblige contractors to work with local authorities.	The UK government has set a more stretching target for 2019. Evidence of innovation in collection systems through partnerships between PCSs and local authorities.
Support innovative ideas on collection, recycling and WEEE treatment (e.g. dismantling, material extraction, etc.) by backing pilots and offering advice.	Partners interested, currently not funded.

APPENDIX 2

Stakeholder consultations

The Restart Project consulted with a wide variety of stakeholders as part of the review, through two workshops and by telephone and face to face meetings. Restart would like to thank the stakeholders who generously gave of their time and expertise.

The 19 stakeholders ranged from manufacturing and CE startups to re-use organisations, advisors, waste authorities, recyclers and waste managers.

[British Heart Foundation](#)
[Charity Retail Association](#)
[Dell](#)
[European Recycling Platform](#)
[Globechain](#)
[Greater London Authority](#)
[LB Hackney](#)
[North London Waste Authority](#)
[QSA](#)
[Recono.me](#)
[Resource Futures](#)
[Reuse Network](#)
[SWEEEP Kuusakoski](#)
[Tech-Takeback / Freegle](#)
[Timpson](#)
[Veolia](#)
[WEEE Fund](#)
[West London Waste Authority](#)
[WRAP](#)

