SUSTAINABLE RECYCLING INDUSTRIES

Municipal WEEE Compass

A local government e-waste management support tool

Final Report: March 2026

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Economic Affairs SECO

Empa
Materials Science and Technology

WORLD RESOURCES FORUM

Authors Paul Jones, Susanne Karcher, Aysha Lotter

Publication year 2026

ISBN 978-3-906177-69-4

Acknowledgment

This report has been developed by the Sustainable Recycling Industries (SRI) project team in South Africa, with support from the Department of Forest, Fisheries and the Environment (DFFE) and the South African Local Government Association (SALGA)

forestry, fisheries & the environment
Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

SOUTH AFRICAN LOCAL GOVERNMENT ASSOCIATION
SALGA
Inspiring service delivery

Licence

Unless marked otherwise, this work is licensed under the Creative Commons Attribution-ShareAlike 3.0 Unported (CC-BY-SA 3.0) license. Additional rights clearance may be necessary for the elements that do not fall under the CC-BY-SA 3.0 license.

Disclaimer

This document has been produced without formal SECO editing. The designations employed and presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of SECO concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries or its economic system or degree of development. Mention of firm names or commercial production does not constitute any endorsement by SECO.

SRI SUSTAINABLE RECYCLING INDUSTRIES

sustainable-recycling.org
sri@wrforum.org

Turning waste into resources for development

SRI builds capacity for sustainable recycling in developing countries. The programme is funded by the Swiss State Secretariat of Economic Affairs (SECO) and is implemented by the Institute for Materials Science & Technology (Empa) and the World Resources Forum (WRF). It builds on the success of implementing e-waste recycling systems together with various developing countries since more than ten years.

Acronyms

AEL	Air Emissions Licence
ARO	African Reclaimers Organisation
CEI	Circular Electronics Initiative
CIGFARO	Chartered Institute of Government Finance Audit and Risk Officers
CMAM	Centre for Municipal Asset Management
COGTA	Department of Cooperative Governance and Traditional Affairs
CSIR	Centre for Scientific and Industrial Research
DFFE	Department of Forestry, Fisheries and the Environment,
DSI	Department of Science and Innovation
DTIC	Department of Trade, Industry and Cooperation
EMPA	Swiss Federal Laboratories for Materials Science and Technology
EPR	Extended Producer Responsibility
HHW	Household Hazardous Waste
ICT	Information and Communication Technology
IDP	Integrated Development Plans
IWMP	Integrated Waste Management Plans
MFMA	Municipal Finance Management Act
NCPC	National Cleaner Production Centre
NEMA	National Environmental Management Act
NEMWA	National Environmental Management: Waste Act
N&S	Norms and Standards
NWMS	National Waste Management Strategy
OCPO	Office of Chief Procurement Officer
PFMA	Public Finance Management Act
PRO	Producer Responsibility Organisations
SACN	South African Cities Network
SALGA	South African Local Government Association
SAWPA	South Africa Waste Pickers Association
SCM	Supply Chain Management
SITA	State Information Technology Agency
SMME	Small, medium and micro enterprise
SRI	Sustainable Recycling Industries
TIA	Technology Innovation Agency
WEEE	Waste Electrical and Electronic Equipment
WML	Waste Management Licence
WMO	Waste Management Officer
WRF	World Resources Forum
WUL	Water Use Licence

Table of contents

Acronyms **1**
Table of contents **2**
Tables **3**
Figures **3**
Executive summary **4**
1 Introduction **7**
1.1 Background 7
1.2 Purpose of the Municipal WEEE Compass 7
1.3 Approach and methodology 8
1.4 Structure of the report 10
2 WEEE management context **11**
2.1 Waste management as a function 11
2.2 Background to WEEE management 12
2.3 Legal landscape for WEEE management 14
2.3.1 Planning Obligations 14
2.3.2 Operational Requirements 15
2.3.3 Licensing and Compliance 15
2.3.4 Notable National Policies and Strategies 16
3 Key thematic areas **18**
3.1 Alignment and integration of policy and by-laws 18
3.1.1 Current problems and challenges 18
3.1.2 Potential interventions and recommendations 19
3.2 Integration of WEEE in the waste management system 21
3.2.1 Current problems and challenges 21
3.2.2 Potential interventions and recommendations 22
3.3 Collaboration with PROs 23
3.3.1 Current problems and challenges 23
3.3.2 Potential interventions and recommendations 24
3.4 Facilitation of municipal asset release 26
3.4.1 Current problems and challenges 26
3.4.2 Potential interventions and recommendations 27
4 Roles and responsibilities **28**
5 Conclusion **29**
Bibliography **31**
Annexures **33**
Annexure 1: Deep Dive Interview Questions 33

List of Tables

Table 1: Stakeholders and their function and/or mandate in WEEE management 13
Table 2: Roles and responsibilities of key stakeholders 28

List of Figures

Figure 1: Approach followed in developing the Municipal WEEE Compass 8
Figure 2: Top four key themes that have emerged as part of the Municipal WEEE Compass process . 18

Executive summary

Municipalities in South Africa are mandated to collect and dispose of waste, including waste electrical and electronic equipment (WEEE). WEEE, or e-waste, is a complex waste stream which requires coordination across a range of stakeholders to ensure correct handling, processing and disposal. This Municipal WEEE Compass is developed to contextualise the challenges that are being faced by municipalities across South Africa in managing e-waste, and to provide potential interventions and recommendations to improve WEEE management. The 'Compass' provides specific insight for municipalities around how to interpret and integrate relevant legislative and regulatory frameworks at the local level, how to manage WEEE as part of the broader waste management system, how to better collaborate with PROs to facilitate the development of local e-waste recycling industries, and how to release WEEE from their asset registers.

The SRI team, with support from the DFFE and SALGA, began the process by preparing an initial framework for the 'Compass', which was done by collating findings from previous research and engagements undertaken as part of the SRI programme related to municipal WEEE management, and categorising these accordingly. These findings were presented to waste management officer forums in the Western Cape, KwaZulu-Natal and Gauteng, where insights were gathered from provincial and municipal waste management managers, officers and officials. Seven municipalities were identified as subjects for deep-dive interviews. These interviews were done to understand the current status quo related to waste management, investigate the WEEE management context, and determine specific support requirements and roles and responsibilities of key stakeholders. Discussions were also had with PROs during quarterly engagements, to gain insight into challenges in working with municipalities. All information gathered during these initial phases was shared with municipalities across the country in a series of workshops, which resulted in a detailed workshop report. Thereafter, drawing on all the key learnings and information shared, a Municipal WEEE Compass was developed.

The Compass navigates four key thematic areas that arose during the research and engagement, namely:

1. Alignment and integration of policy and by-laws
2. Integration of WEEE in the waste management system
3. Collaboration with PROs
4. Facilitation of municipal asset release

Alignment and integration of policy and by-laws: Numerous pieces of national legislation and regulations are in place that both directly and indirectly guide WEEE management, and have a direct impact on municipalities. However, it has been identified that these WEEE-specific policies and regulations are not being integrated into local policies and by-laws. To assist in addressing the challenges identified, several potential interventions and recommendations are presented. For municipalities, it is important to ensure that relevant national policies and regulations are integrated into municipal IWMPs and by-laws and that the National WEEE Policy is implemented locally (with direct support from DFFE). At a national level, there is a need to develop a clear, standardised definition for WEEE and a practical WEEE-related policy landscape guideline for municipalities.

Integration of WEEE in the waste management system: WEEE is a complex waste stream that requires collaboration between a number of key stakeholders to ensure that collection does not become an additional burden to municipalities, and that WEEE is diverted from landfill to compliant recyclers. As such, the management of WEEE needs to be integrated into existing waste management systems. This

can be achieved by creating broad awareness about correct WEEE management, through integrating WEEE collection into existing waste management systems, through creating strong partnerships with PROs, and by having an approach to managing household hazardous waste.

Collaboration with PROs: Improving the collaboration between municipalities and PROs has emerged as a key challenge throughout the research, and is a topic of debate within the broader waste management space. There is currently an overlap in responsibility given the constitutional mandate of municipalities to collect waste the obligation of PROs to producers to divert WEEE from landfill and into new projects and processes. Given that limited municipal collection mechanisms exist to specifically recover WEEE, PROs have a substantial role to play in supporting municipalities. However, this relationship needs to navigate the governance and policy challenges that current inhibit collective action. To address these challenges, a framework is required for structuring PRO and municipal relationships along with a governance framework for WEEE management across all spheres of government. PROs are encouraged to deliver 'collaborative' infrastructure and support, while a single WEEE PRO alliance could be established as a single-entry point for engagement with municipalities. Lastly, there is a need for more harmonised PRO reporting on budget and expenditure to underpin the above.

Facilitation of municipal asset release: Many municipalities face a particular challenge in releasing assets classified as WEEE from municipal asset registers. It is understood that this challenge is also experienced by national and provincial government unities. This requires supportive policies and processes so that WEEE in government stockpiles can be released for refurbishment and recycling, instead of being stockpiled. This can be achieved by developing a uniform policy framework on WEEE asset release through recycling, by making WEEE recycling compulsory in asset disposal processes, appointing a panel of accredited e-waste recyclers through transversal tender at a national level (for municipalities to leverage), and by developing an asset disposal toolkit to guide WEEE asset release. Additionally, the State Information Technology Agency (SITA) can assist to facilitate buy-back of obsolete computer equipment, while capacity and technical expertise can be developed within SCM units and departments, and more coordinated action can be sought between relevant entities to improve asset release.

It is suggested that above interventions and recommendations be considered by all key stakeholders with roles and responsibilities in WEEE management in South Africa. The DFFE, as the national department with a mandate to create policy and ensure compliance within waste management, has a significant role to play in implementing and enforcing key policies and regulations, creating strong frameworks, providing support to capacitate municipalities, and ensuring oversight to optimise the role of PROs. SALGA can support the DFFE in many of these areas while ensuring that there is a clear dissemination of information from national to local government. Provincial government are also critical in ensuring clear dissemination of information from national to local government, but also in ensuring that the voice of municipalities is being elevated to a national level. PROs are encouraged to support the process of identifying solutions to improve collaboration with municipalities, to work collectively to deliver infrastructure, support collection and integrate waste pickers, and to improve WEEE data collection and dissemination.

Municipalities have arguably the most important role to play in driving change in WEEE management. There is a need to integrate relevant national WEEE policies and regulations into local IWMPs and by-laws, while simultaneously identifying current or planned waste facilities that can integrate WEEE as a waste stream. Municipalities also need to consider revising current asset release policies to ensure that WEEE is correctly released from asset registers into the hands of certified recyclers. They can also leverage national awareness resources to compliment local awareness campaigns, build internal

capacity around WEEE management and within supply chain management, and identify potentials solutions to improve collaboration with PROs.

Note on terminology: 'E-waste' and 'Waste Electrical and Electronic Equipment' (or 'WEEE') are used interchangeably in this report.

Keywords

E-waste; WEEE; management; local government

1 Introduction

1.1 Background

South African municipalities face significant challenges in managing waste electrical and electronic equipment (WEEE). As frontline entities in waste management, municipalities must navigate a complex legal framework while addressing practical implementation issues. A key objective of the SRI programme in South Africa is to support the development of municipal capacities when navigating this complex waste stream. WEEE is the fastest growing waste stream, which contains hazardous elements as well as critical resources needed for future generations. It is an imperative that municipalities, the actors on the ground, are capacitated to navigate the challenges, whilst reaping the potential benefits of proper WEEE management.

During 2022 – 2023, a range of interventions were undertaken as part of the SRI programme. Many of these interventions focused on the family of municipalities in the iLembe region in KwaZulu-Natal as part of the Local Project Component. These interventions touched on areas such as policy and by-law harmonisation (to support WEEE recycling), municipal recycling assets and facilities, the release of municipal assets from stockpiles, and household perceptions towards WEEE recycling. As a result of these interventions, it was identified that municipalities require guidance on how to support and grow the e-waste industry and ensure alignment with national legislation, policies and regulations.

The Sustainable Recycling Industries (SRI) programme is funded by the Swiss State Secretariat of Economic Affairs (SECO) and is jointly implemented by the Swiss Federal Laboratories for Materials Science and Technology (Empa) and the World Resources Forum (WRF). The recycling initiative aims to improve local capacity for sustainable recycling together with private and public institutions, as well as the informal sector in Colombia, Egypt, Ghana, Peru and South Africa.

The South African project, which commenced in Phase II of the SRI Programme, was implemented until the middle of 2025. The overall development objective of the SRI programme (Phase II) is to contribute to favourable framework conditions that enable the development of a sustainable recycling industry for waste electrical and electronic equipment (WEEE) and related waste streams in SECO partner countries. Importantly, the SRI Programme has a successor in the Circular Electronics Initiative (CEI), which will support the stakeholders identified in this report to implement certain high-impact recommendations. The CEI will ensure the sustainability of municipal support and capacity building, with the Municipal WEEE Compass as the foundational guide.

1.2 Purpose of the Municipal WEEE Compass

The purpose of this **'Municipal WEEE Compass'** is to contextualise the challenges that are being faced by municipalities across South Africa in managing e-waste and to provide potential interventions and recommendations that will assist municipalities to improve WEEE management. The 'Compass' will be a single source of information for all municipalities in South Africa to:

- Interpret and integrate relevant legislative and regulatory documents that relate to WEEE management.
- Guide the management of WEEE as part of the broader waste management function.

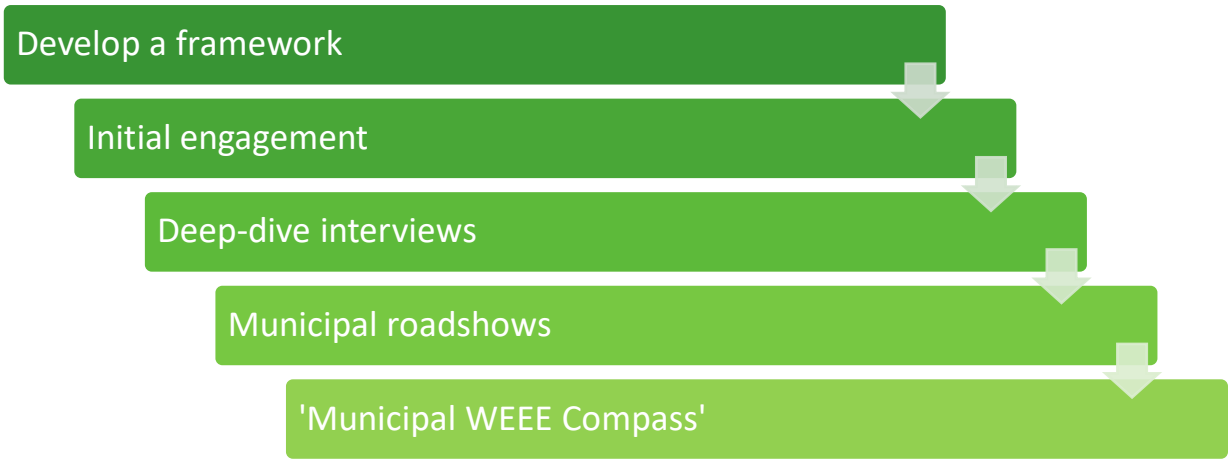
- Understand how to better release WEEE from their asset registers.
- Facilitate the development of their local e-waste recycling industries.

This provides a framework for further engagement with municipalities, provincial and national government, PROs and other key waste management actors, and will allow for high-impact recommendations to be identified and supported as part of the CEI Programme.

1.3 Approach and methodology

The approach followed and methodologies applied in developing the Compass are presented in this sub-section. Figure 1 provides a visual representation of the approach taken to develop the Compass, which is unpacked in more detail thereafter along with the specific methodologies utilised.

Figure 1: Approach followed in developing the Municipal WEEE Compass



As a point of departure, the project team developed an initial framework for the Compass. This comprised of collating the key findings from all previous research and engagements undertaken as part of the SRI programme since its inception in 2021 and then categorising these key findings accordingly. This resulted in a presentation that captured and categorised all the known challenges, issues and opportunities relating to municipal WEEE management in South Africa.

The next step was to test these initial findings with key stakeholders. This was done via Provincial Waste Management Officers forums in the Western Cape, KwaZulu-Natal and Gauteng. During these engagements, additional insights were gathered from provincial and municipal waste management managers, officers and officials. A request was also made for municipalities willing to participate in deep dive engagements to nominate themselves. A total of 7 municipalities were identified for deep-dive interviews, namely:

1. City of Cape Town
2. City of Tshwane
3. City of Ekurhuleni
4. City of Johannesburg
5. KwaDukuza Local Municipality
6. Mandeni Local Municipality
7. Swellendam Local Municipality

A structured interview questionnaire was used to guide the deep dive interviews. The questions that were used to guide the interviews are in Annexure 1 of this report. The questions were divided into three areas:

1. **Status quo**: current waste management practices; challenges being experienced in delivering waste management services; programmes, interventions or activities being implemented; municipal infrastructure and facilities to support recycling; waste picker integration programmes or projects; human resource allocation towards waste minimisation and recycling; policies, legislation, plans and by-laws in place; and relationships with private sector.
2. **Understanding WEEE**: Understanding of WEEE policies, regulations and legislation; integration into local policies and by-laws; WEEE management activities and awareness being implemented; private sector WEEE activities; waste picker involvement in WEEE management; relationship with WEEE PROs; current asset release policies.
3. **WEEE support**: Identifying the optimal role that municipalities and other stakeholders (DFFE, CoGTA, etc) should have in WEEE management; type of support required to better management WEEE; human resource requirements to optimise WEEE management.

Once information was gathered from deep dive interviews, the framework was updated to integrate the new information that was identified and the key themes that had emerged. This was then used as a basis for undertaking provincial roadshows (i.e. workshops). Three in person workshops were hosted in Durban, Johannesburg and Cape Town, followed by a virtual workshop for all stakeholders in areas outside these main metros. A total of 94 participants attended the four workshop sessions, including national representatives from DFFE and SALGA, provincial and municipal waste management officers, as well as municipal representatives with a role in WEEE management.

The purpose of the workshops was to provide a background to the study, and, through breakaway groups, gather in-depth information on key themes that had emerged. The key themes and guiding questions used to collect information were:

WEEE management as part of the broader waste management function

- What is the role of municipalities in WEEE management?
- How can WEEE be integrated into existing waste management functions?
- What is required to ensure that WEEE is included as a waste stream at drop-off sites?
- What knowledge and education are required at the local level to understand WEEE management better?
- How can waste picker integration be achieved to support the management of WEEE?

Unpacking the policy and legislative environment

- Identify the current disconnect between national and local policy (i.e. what is the breakdown? Why is this occurring? How can this be improved?)
- What is required to ensure that local policy and by-laws are harmonised with the national framework?
- How does the current asset release policy inhibit the release of government WEEE? What can be done to release WEEE from government stockpiles?

Partnerships and relationships to support local WEEE management

- What support does local government require from national and provincial governments, and producer responsibility organisations (PROs)?
- What mechanisms can be used to optimise the above relationships, especially with PROs?
- What can be done to strengthen relationships with local government and waste reclaimers (and organisations representing reclaimers like South Africa Waste Pickers Association [SAWPA] and African Reclaimers Organisation [ARO])?
- How does local government better collaborate with and empower the private sector to drive WEEE management? What types of models and/or mechanisms can be used to entrench this into the waste management system? What can be done to strengthen public-private relationships?
- How can funding for WEEE activities be unlocked from existing funding mechanisms? What other innovative mechanisms exist?

A workshop report was developed and circulated to all registered participants. This workshop report, along with all the information that had been gathered until that point, was used to formulate the information that is contained within this **Municipal WEEE Compass**.

1.4 Structure of the report

The remainder of the Compass is structured as follows:

- **Section 2 – WEEE management context:** This section provides some context on waste management as a municipal function; a brief understanding around WEEE management; and an overview of the legal landscape for WEEE management.
- **Section 3 - Top municipal WEEE management themes**: This section presents the top four themes that have emerged related to municipal WEEE management. This is the core of the Municipal WEEE Compass and focusses on alignment and integration of policies WEEE and by-laws, facilitation of municipal asset release, integration of WEEEE into the waste management system, and collaboration with PROs. For each theme, the Compass provides an overview of the current problem and challenges and presents potential interventions and recommendations.
- **Section 4** – **Roles and Responsibilities**: This section presents the roles and responsibilities of key stakeholders that have emerged in line with the key interventions and recommendations presented in Section 3.
- **Section 5** – **Conclusion**: The final section of the report concludes by providing a summary of the key findings and presents a way forward for the Municipal WEEE Compass.

2 WEEE management context

2.1 Waste management as a function

In South Africa, waste management is a multistakeholder prerogative that is actioned through cooperative environmental governance. This approach is articulated in the National Waste Management Strategy (2020), which sets out three overarching waste management system goals: waste minimisation; effective and sustainable waste services; and compliance, enforcement and awareness. The waste management system is supported by a comprehensive legislative and policy framework. Key legislation includes the National Environmental Management: Waste Act 59 of 2008 (NEM:WA), which establishes integrated waste management principles, licensing requirements, and regulations for waste management plans, alongside the Constitution of the Republic of South Africa that assigns waste management as an overlapping function across spheres of government, involving national, provincial and local authorities, as well as government agencies, private sector organisations, and civil society. Each of these spheres perform distinct roles in achieving the three waste management goals, thereby ensuring effective service delivery and advancing sustainable waste management practices.

The most fundamental government functionaries are national Department of Forestry, Fisheries and the Environment (DFFE), provincial departments of environmental affairs and/or waste management, as well as municipal authorities. Between them, they have a cooperative mandate and concurrent capacities:

- Waste-related policymaking is led by the DFFE, which develops national waste legislation and policy, oversees licensing and permitting, and ensures compliance. Complementary national roles are played by the CoGTA, which supports municipal governance and service delivery, and National Treasury, that influences waste management implementation through fiscal frameworks, funding mechanisms, and conditional grants. At provincial level, this framework is translated into integrated waste management strategies.
- Provincial governments are expected to monitor compliance of municipalities with the national government and communicate national policy at municipal level. Another role of the provincial government is to create awareness of waste within the province.
- Local governments have implementation responsibilities regarding waste management within the country. Municipalities are responsible for service delivery (collection, disposal, provision of facilities), crafting waste management by-laws, implementing and enforcing waste regulations, monitoring waste volumes, creating awareness and separation at source campaigns, and managing compliance. They are also expected to compile an integrated waste management strategy.

Beyond government departments, local businesses, private households and the informal sector play an important role in assisting governments in working towards a ‘zero-waste society’. Both businesses and governments are beholden to specific waste management by-laws, which stipulate measures that must be taken to ensure compliance.

- Households play an important role in waste management. Although household waste collection is the responsibility of municipalities, as the generators of a substantial amount of general waste, households are expected to comply with by-laws and manage their waste in accordance with municipal regulations. This includes ensuring that waste streams such as

hazardous waste are disposed of at specified facilities and diverted from landfill. Households also play a crucial role in driving separation at source.

- Businesses are also expected to comply with by-laws and ensure that waste is being diverted from landfill. Larger generators of waste are required to prepare IWMPs and are often responsible for ensuring that their waste is correctly disposed, via service providers, rather than through the municipal collection system. Businesses that are handling, storing or processing waste need to comply with National Norms and Standards, and depending on their size and the activities performed, may require waste-related authorisations such as a Waste Management Licence (WML), Environmental Authorisation, Waste Transport Registration, Hazardous Waste Handling Permits, Extended Producer Responsibility (EPR) Registration, Air Emissions Licence (AEL) and a Water Use Licence (WUL).
- Waste pickers and recyclers play an important role in waste management by recovering recyclable materials and diverting waste from landfills. Their contribution is significant and highlights the need for recognition and appropriate integration into formal waste management systems.

Finally, Producer Responsibility Organisations (PROs) are another important role player in the waste management system. As stipulated in Extended Producer Responsibility (EPR) legislation, PROs are responsible for a range of activities including coordinating producer compliance with waste regulations and laws, facilitating collection and recycling, financial management of EPR funds, collecting waste data and reporting it to municipalities, education and awareness, integrating the informal sector, and driving innovation. EPR complements rather than replaces municipal waste management functions, as municipalities remain constitutionally responsible for waste service delivery. Clear role delineation and cooperative governance between government and PROs is essential to avoid duplication, legal risk, and fragmented implementation.

2.2 Background to WEEE management

Waste Electrical and Electronic Equipment (WEEE), also called ‘electronic waste’, or just ‘e-waste’, refers to any electronic and electrical devices that are no longer wanted, needed or that are broken beyond repair. This includes devices such as TVs, laptops, appliances, phones, cables, lighting, batteries, or any other device that is powered by electricity or batteries.

WEEE is the fastest growing waste stream globally, with over 62 million tonnes generated in 2022, equivalent to 7.8 kilograms per person per year (GEM, 2024). Within South Africa, it was estimated that 530,000 tonnes of e-waste was generated in 2022, of which only 4.35% was recycled (GEM, 2024). A 2017 study indicated that WEEE is generated by three main groups, namely, national and provincial government (45%), business (35%) and households (20%) (Mintek, 2017).

Since e-waste comprises a broad range of products, all which have a different material composition, e-waste management is complex. This is made more difficult since some e-waste contains hazardous materials, which need to be managed under strict conditions. Improper WEEE management can therefore have serious implications, both on environmental and human health.

As such, e-waste was banned from landfill in 2021. However, most e-waste continues to be disposed as part of general refuse and ends up in landfill. Proper management is required to ensure that WEEE is diverted from landfill into the hands of recyclers, who can treat hazardous components, recover functionality, and ensure that other fractions are further processed. Ensuring proper e-waste management does however require inputs from a broad range of stakeholders. The table below

provides a summary of the key stakeholders with a function and/or mandate related to WEEE management:

Table 1: Stakeholders and their function and/or mandate in WEEE management

Stakeholder	Key function and/or mandate related to WEEE management
EEE Producers	EEE producers create, distribute and circulate electronic products. They are legally required to be affiliated with a PRO and comply with the regulations set out by the Department of Forestry, Fisheries and the Environment (DFFE). They are responsible for the 'end-of-life' stage of their products and must consider design and systems that enable responsible WEEE management.
WEEE generators (households, schools, businesses, etc.)	WEEE generators (such as households, schools or institutions) purchase and use EEE until it no longer meets their needs. Thereafter, they are encouraged to dispose of WEEE responsibly.
PROs	PROs are responsible for supporting EEE producers in meeting EPR obligations by monitoring legal compliance, reporting to authorities and promoting the responsible end-of-life management of products.
WEEE Recyclers	WEEE recyclers collect, dismantle, recycle, repair or refurbish e-waste. They dispose of or sell fractions and circulate finished products in the second hand market.
Waste management companies	Waste management companies are contracted by industry and institutions to collect and dispose of various waste streams, of which WEEE is often included.
National government	DFFE is responsible for creating legislation, policies and regulations regarding the management of e-waste in the country, including EPR legislation. The DFFE is also tasked with monitoring and enforcing WEEE management activities.
Provincial government	Provincial governments are responsible for ensuring regional compliance with national policy. This includes aligning WEEE management practices with national guidelines, registering and monitoring recycling facilities, as well as implementing projects such as awareness creation initiatives.
Municipalities	Municipalities are responsible for general waste management within their jurisdiction. This includes collection and disposal of general waste, which often includes WEEE. They are also responsible for development of waste management infrastructure such as landfills and drop-off points, some of which include separate WEEE collection. They are also responsible for developing and implementing local polices and by-laws, and monitoring businesses activities. They are required to collaborate with PROs.
Financial Institutions	Financial institutions play an increasingly important role in ensuring a smooth transition to a circular economy through provision of circular finance.
Enterprise Support Institutions	Enterprise support institutions are responsible for promoting economic development, and the WEEE sector presents an opportunity to achieve this objective.
NGOs	NGOs act out of concern for the negative environmental impacts of improper disposal of WEEE and are motivated by their concern for the safety of those handling WEEE, particularly waste pickers.
Research organisations	Research organisations such as universities, research institutions or consultancies play a vital role in studying the impacts of WEEE on the environment and people. They investigate the current structure of WEEE management practices and contribute to solutions by uncovering and testing best practices from around the world.
Waste pickers/ reclaimers	Waste pickers are involved in informal collection of WEEE that is found in general waste and landfill.
Waste Picker Organisations (SAWPA and ARO)	Waste picker organisations are concerned about how WEEE affects waste pickers from a health perspective as well as income generation. WEEE is one of the most valuable waste streams but is also very hazardous.

2.3 Legal landscape for WEEE management

The Constitution of the Republic of South Africa establishes the foundational division of powers across national, provincial, and local government spheres. While waste functions are distributed across these three spheres, municipalities bear substantial practical responsibility for implementation. The Constitution provides municipalities with executive authority over waste management services within their jurisdictions, though this authority is subject to national and provincial legislation.

The NEMWA (Act 59 of 2008) serves as the primary legislative framework governing waste management in South Africa, including WEEE. Key provisions affecting municipalities include:

- **Waste Service Standards (Section 9):** Municipalities must deliver waste management services (including waste removal, storage and disposal) that align with national and provincial norms and standards. Municipal Waste Management By-Laws are the main arena for local legislative power.
- **Designate a municipal Waste Management Officer (WMO) (Section 10):** WMOs must coordinate activities as guided by the ***National Waste Management Strategy.***
- **General Duty Provisions (Section 16)**: All "holders of waste" (including municipalities) must minimise waste and its toxicity, manage waste to prevent endangerment to health and the environment, and ensure responsible waste disposal.
- **Classification of WEEE**: Schedule 3 of NEMWA categorises the hazardous portions of e-waste as hazardous waste, with non-hazardous components classified as general waste. The National Waste Information Regulations specifically classify WEEE as hazardous waste (HW18) unless decontaminated with all hazardous substances removed (GW18).
- **Licensing Requirements**: The storage, reuse, recycling, recovery, treatment, and disposal of WEEE must comply with the ***List of waste management activities that have, or are likely to have, a detrimental effect on the environment***, which require licensing when specific technical thresholds are met.

2.3.1 Planning Obligations

Municipalities must develop and maintain two critical planning documents:

- **Integrated Development Plans (IDPs)** per the Municipal Systems Act
- **Integrated Waste Management Plans (IWMPs)** per NEMWA

These plans must be aligned to address waste management in an integrated manner, which includes WEEE management. Municipalities must regularly update both plans to ensure relevance and effectiveness. The annual performance report is required to ensure implementation of the IWMPs. IWMPs will be crucial to service delivery and efforts to remove the service delivery backlogs that still exist in certain provinces and municipalities. ***National Framework Guideline for the Development of Integrated Waste Management Planning*** to assist provinces and municipalities in developing IWMPs and integrating them into their broader planning frameworks.

Municipalities must develop systems ensuring safe and efficient transportation, processing, and disposal of electronic waste throughout its lifecycle. **Local governments should incorporate specific**

WEEE management provisions within their IWMPs, including strategically located collection points and targeted recycling programs designed for WEEE streams. These specialised WEEE initiatives must be carefully aligned with broader municipal development goals outlined in IDPs, particularly those focused on environmental sustainability, carbon footprint reduction, and resource recovery objectives.

The Waste RDI Roadmap noted that the lack of implementation, monitoring, and reporting on IWMPs by local government and industry, coupled with a **shortage of reliable data** on waste streams in terms of **types and volumes,** posed a significant obstacle to any waste management intervention. It is essential to address gaps in knowledge to implement effective e-waste initiatives.

2.3.2 Operational Requirements

Local municipalities must establish comprehensive infrastructure for WEEE management to meet regulatory standards. This includes developing dedicated WEEE collection points and systems designed explicitly for WEEE handling. Municipalities are required to implement classification standards to identify and separate hazardous components from non-hazardous WEEE materials correctly. Additionally, they must comply with the ***Norms and Standards for Storage of Waste (2013)*** to ensure proper temporary storage of collected materials. All processing activities must follow the ***National Norms and Standards for Sorting, Shredding, Grinding, Crushing, Screening or Baling of General Waste (2017)*** for applicable WEEE fractions, ensuring environmentally sound handling of discarded EEE.

Currently, the DFFE is developing a dedicated set of N&S for the management of WEEE with specific reference to the hazardous portion found within WEEE. The WEEE N&S intends to establish minimum technical and operational requirements for WEEE practitioners and their operations and provide specificity regarding the management of hazardous portions. The DFFE-mandated requirements will ease the current operational waste license requirements and remove operational bottlenecks hindering the growth of SMME-type WEEE operators in South Africa, whilst strengthening environmental stewardship and BPEO**. As of 2025, these N&S are voluntary** and available to industry to pilot the N&S for three years**. In 2028, these N&S will become mandatory**.

2.3.3 Licensing and Compliance

The regulatory framework mandates that municipalities obtain necessary WML for all WEEE-related activities within their jurisdiction. **Technical requirements must be met for all waste management facilities handling WEEE, with regular inspections and maintenance to ensure ongoing compliance.** Municipalities bear responsibility for reporting to the **South African Waste Information System (SAWIS)** with **accurate and timely data** on **WEEE volumes, processing methods, and disposal outcomes.** Beyond their operations, municipalities must **also monitor the compliance of third-party WEEE handlers** operating within their boundaries, ensuring all stakeholders adhere to national standards for WEEE management.

In 2020, the Minister published the **Extended Producer Responsibility Regulations** alongside the product-specific notice **Extended Producer Responsibility Scheme for the Electrical & Electronic Equipment Sector**. This progressive implementation of EPR regulations and product-specific notices demonstrates the government's ongoing commitment to expanding producer responsibility across various waste streams that impact municipal waste management operations. EPR is an environmental policy aimed at furthering the 'Polluter Pays Principle', placing the end-of-life environmental and social costs of a product on the product's producer.

Municipalities are encouraged to reach out to EPR-obligated producers through Producer Responsibility Organisations (PROs) to explore opportunities for public-private partnerships. These partnerships can support more collection schemes for all EPR-obligated waste streams, including not only e-waste but also Paper, Packaging and some single-use products, Lighting Waste, and Batteries. Such collaborations create economies of scale and one-stop solution set-ups for citizens. Additionally, municipalities should actively seek collaboration with producers, PROs, and the DFFE when developing public education materials or hosting collection events.

Municipalities can use the recently published guidelines as a benchmark to select the most appropriate PRO for their needs. In February 2024, DFFE published a ***Draft Guideline and Toolkit for the Determination of Extended Producer Responsibility Fees***. This document aims to provide producers and PROs with guidance on setting realistic EPR fees that align with proposed amendments of financial arrangement regulations 7(3) or 7A(3). The guideline and toolkit also include mechanisms to determine EPR fees applicable to identified products. The rationale behind this Guideline and Toolkit is to ensure transparency, fairness, standardisation, and universality when setting EPR fees.

2.3.4 Notable National Policies and Strategies

In 2025 a formidable step forward was taken to realise the potential and mitigate the harms, or e-waste: the National WEEE Policy was gazetted.

South Africa's **National WEEE Policy 2025** represents a comprehensive framework for managing WEEE across the country. Developed through the SRI Programme in partnership with the DFFE, the policy was formally gazetted in 2024 with final publication expected in 2025. The policy was shaped through a systems-thinking approach and adapted to the local context through over 20 multi-stakeholder workshops and public consultations prior to extensive public commentary through DFFE consultation processes.

The policy is designed to serve as an overall framework that can house any WEEE-specific regulations and policies, while harmonising existing national, provincial or local "WEEE relevant" by-laws (Such as the waste management by laws and the health by-laws), local economic growth plans, development plans, and municipal Integrated Development Plans (IDPs) and Integrated Waste Management Plans (IWMPs) emanating from the South African Government.

For municipalities, the WEEE Policy 2025 brings specific responsibilities and support mechanisms to enable effective e-waste management at the local level. The Municipal WEEE Compass is a concomitant practical toolkit to guide local governments within the policy context. Municipalities are expected to align their by-laws and Integrated Waste Management Plans with the national WEEE policy and receive technical guidance for establishing waste drop-off and/or buy-back centres that integrate e-waste as a crucial component of Household Hazardous Waste (HHW). Given that e-waste is growing at three times the rate of solid municipal waste in South Africa, with the country's largest metros facing a looming landfill crisis, the policy's emphasis on municipal-level implementation is critical for diverting WEEE from landfills, which have been banned from accepting e-waste since 2021.

The policy operates within South Africa's Extended Producer Responsibility (EPR) framework, requiring producers and their mandated Producer Responsibility Organisations (PROs) to take responsibility for the lifecycle of their products. Local and provincial government departments represent approximately 45% of WEEE inputs to the recycling sector, followed by the business sector at 35% and households at 20%. Through collaborative efforts between municipalities, PROs, and other stakeholders, the policy

aims to establish collection networks, improve public awareness, and create economic opportunities while ensuring environmentally sound management of WEEE. The formation of a WEEE Policy Steering Committee will oversee implementation and coordinate future developments, ensuring municipalities receive the support needed to meet their obligations under this comprehensive framework.

The WEEE Policy does need to be understood within the larger policy context and the history of policy implementation in South Africa to provide the best strategy for going forward. The ***1999 National Water Management Strategy*** experienced uneven and delayed implementation, with some aspects not implemented at all, primarily due to institutional and regulatory constraints. The 2012 NWMS superseded the 1999 ***strategy*** until the publication of the current ***National Waste Management Strategy in 2020.***

A key aspect of the NWMS 2020 is its embrace of the circular economy concept, which aims to close "the loop between resource extraction and waste disposal by the application of waste avoidance, re-use, repair, recycling, and recovery throughout the economic cycle to minimise waste generated and reduce demand for virgin materials as production inputs." The strategy identifies three key principles for a circular economy as established by the Ellen MacArthur Foundation: (1) design out waste and pollution, (2) keep products and (3) materials in use and regenerate natural systems.

To further the purpose of the NMWS, the then Department of Environment, Forestry, and Fisheries (DFFE)and Department of Science and Innovation (DSI) developed the **Waste Picker Integration Guideline for South Africa** in 2020. This guideline aims to provide municipalities and industry with measures to improve waste pickers' working conditions. Integration is particularly sought through the municipal waste system to acknowledge the landfill airspace savings that waste pickers already provide to municipalities at significant personal risk without recognition. While the guideline makes no express mention of WEEE, waste pickers are known to salvage EEE either for refurbishment or to sell as scrap, making them ‘informal’ participants in the e-waste management chain. Municipalities were core stakeholders in developing this guideline, which represents an important step toward formalising the role of waste pickers in South Africa's waste economy.

The ***National Household Hazardous Waste Management Strategy***, published in March 2024, aims to address gaps in hazardous waste management. It provides strategic governance models, recommendations, and guidelines for municipalities to use when collecting and managing household hazardous waste. The model is based on value-creating principles of sustainable partnerships, waste minimisation and sustainable hazardous waste services, sound institutional processes, innovation and growth, and financial stability. The Strategy covers physical collection and transportation, special concerns related to transporting hazardous materials, collaboration with the private sector, including producer organisations and the informal sector, as well as costs and financing. Importantly, municipalities are encouraged to develop interventions best suited to local needs and conditions.

3 Key thematic areas

Throughout the engagement, four recurring themes arose. These are areas that impact on all the stakeholders; however, municipalities are central actors across all the themes.

Figure 2: Top four key themes that have emerged as part of the Municipal WEEE Compass process

The current problems and challenges that are faced in relation to each key thematic area are presented first, and then, some potential interventions and recommendations are shared.

3.1 Alignment and integration of policy and by-laws

This theme speaks to how best local policies, by-laws, and other relevant legislation and regulations can be aligned with policy and regulations that exist for WEEE at a national level. As shared in the previous section, there are numerous pieces of national legislation (such as the National WEEE Policy) and regulations (such as the National Norms and Standards for Waste to Landfill and Extended Producer Responsibility) that influence WEEE management at a municipal level. From research and engagement undertaken within municipalities, in most municipalities, WEEE-specific policies and regulations are not being integrated into local policies and by-laws. Aligning the local policy environment with key national policy imperatives and regulations, and integrating key considerations into local policies and by-laws, will assist to further enhance WEEE management activities for all stakeholders.

3.1.1 Current problems and challenges

A common challenge faced by municipalities across South Africa is how to interpret national policies and regulations related to WEEE, how to align local policies and by-laws with this national framework, and how to effectively implement local requirements with limited capacity and resources.

The National Norms and Standards for Waste to Landfill (2013) banned all WEEE from entering landfill as of 23 August 2021. However, many municipalities across the country are still unaware of this regulation, while many municipalities that are aware, lack the resources and/or internal capacity to implement systems and develop infrastructure to ensure that WEEE is diverted from landfill. As such, WEEE continues to enter landfills (and dumps) across South Africa, even though there is a national requirement for WEEE to be diverted.

Based on feedback received from municipalities, the following are understood to be the main problems. Firstly, there is a disconnect in communication between national, provincial and local

government. Critical information that needs to be communicated from national government down to a municipal level, is not being effectively delivered, indicating that the mechanisms and platforms for communication are not functioning optimally. Secondly, due to a lack of capacity (i.e. financial and human resources), municipalities are often unable to implement the requirements that are prescribed within national policies and regulatory frameworks. Considering these challenges, the key question is, how are national policies and/or regulations are effectively communicated with and understood by municipalities (and where applicable, all the other key stakeholders at a local level), and how are municipalities supported and capacitated to ensure that they can implement national WEEE-related requirements?

Another particularly challenging area for municipalities relates to how WEEE is integrated into integrated waste management plans (IWMPs) and waste management by-laws. Research undertaken by SRI over the past few years has indicated that waste management by-laws and IWMPs are inconsistent in terms of definitions and interventions regarding WEEE. Many plans and by-laws omit WEEE completely, while some briefly define WEEE, but then only speak to WEEE generally in regulations regarding the hazardous waste stream. Hence, specific WEEE management programmes and/or activities are limited in IWMPs, and there are few municipal by-laws that contain specific provisions to manage this complex waste stream.

Stakeholders have identified some areas of concern related to the above challenges. Firstly, WEEE is considered to be a 'less problematic' waste steam in comparison to plastics, paper, packaging materials, construction and demolition waste, and garden waste. These streams are considered more 'visible' and leading to more rapid depletion of landfill space in most municipalities. Although less 'visible', WEEE is increasingly becoming a problematic waste stream from a social and environmental risk perspective; the imminent human and environmental health implications of improperly managing WEEE at municipal level should be emphasised and understood.

Secondly, the definition of WEEE presents challenges for stakeholders, as it is classified as both general and hazardous waste. National legislation considers WEEE hazardous until decontaminated and hazardous components are removed, after which it is treated as general waste. However, the specific hazardous components are not clearly defined, and there is no regulation on their management. It is also unclear which fractions become general waste after dismantling. Additionally, stakeholders noted that the definition of WEEE is not accessible to South Africans in all other languages. As such, the lack of a clear, coherent and shared definition further exacerbates the above challenges related to integrating WEEE into local IWMPs and by-laws.

3.1.2 Potential interventions and recommendations

The following solutions and recommendations have been shared by stakeholders with the potential to address the above problems and challenges.

1. **Develop a standard, clear definition for WEEE**: As a starting point, there is a need for a simple, clear and standardised definition of WEEE that can be understood by all stakeholders in the value chain and be accessible to all South Africans. This definition should then replace all others, and be used in all policies, strategies and other regulatory documents from a national through to local government level.
2. **Incorporate WEEE into municipal IWMPs and by-laws:** WEEE needs to feature more prominently in all relevant municipal plans and by-laws to ensure that there is sufficient focus

on this problematic waste stream. Without this, municipal WEEE awareness and collection efforts will not be prioritised, and improper WEEE management and enforcement will continue to be a widespread challenge. Programmes and projects need to be identified and embedded into municipal plans, along with the allocation of resources to implemented these, while regulations that govern how WEEE is managed needs to be integrated into local waste management by-laws. The following actions can be easily implemented by municipalities in this regard:

a. IWMPs can identify WEEE as a priority waste stream and a specific projects and interventions should be presented along with deliverables, targets for decontamination and value recovery, timeframes and partners. These projects and interventions should focus on how municipalities aim to create broader awareness about WEEE management and what mechanisms and platforms will be used to improve WEEE collection. Since it is understood that budget availability for waste management is a constraint in most municipalities, projects and interventions that can be considered 'low-hanging fruits' should be identified. This can be done in consultation with local WEEE recyclers and PROs, to identify areas where private sector interventions can be aligned with the needs to the municipality.

b. Integrated waste management by-laws can be updated to include a clear definition for WEEE and have an exclusive sub-section that outlines specific regulations for how WEEE must be handled by households, businesses and institutions. This process should be facilitated by the DFFE, where the *Model Waste Management By-Laws* that exist should be updated to provide a set of standard, clear regulations and guidelines for municipalities which can be adopted to suite the local environment.

3. **Implement the National WEEE Policy at a local level**: The National WEEE Policy (2025) has been gazetted and provides a clear framework for WEEE management in South Africa. The Policy raises the need for a clear framework for local-level implementation and a model for funding to support implementation. The DFFE, with support from SALGA and municipalities, will lead the process of developing this framework and a suitable funding model to ensure that the priority areas of the National WEEE Policy are being filtered into action at a local government level, and as per the recommendations above, are also being reflected in IWMPs and by-laws.

4. **Develop a practical WEEE-related policy landscape guideline:** There is a shared call from municipalities, as well a provincial government stakeholders, for a clear and practical policy guideline document that answers the question of *'what does national policy mean for local implementation?*'. As noted earlier, there are numerous stakeholders with a role in WEEE management and a myriad of relevant policies, strategies and regulations that need to be interpreted and integrated by local government. However, there is no resource available that provides an overview of this policy framework and how to navigate this. As such, a short and simple-to-understand guideline document is required that summarises the key points of policies, strategies and regulations that relate to WEEE, and provides a framework within which local (and provincial) government can place themselves to support implementation. This could include the following:

a. The key implications of EPR and a framework within which municipal-PRO engagement and collaboration can be achieved.

b. The legal requirements that need to be met by local government, and potential templates for mechanisms that can be used to do so (e.g. Environmental Management Cooperation Agreement [EMCA] template, Model WEEE by-laws, etc).

c. Procurement and supply-chain regulations that inhibit WEEE release (see section 3.4) for public entities and a potential framework/s to address this.

d. Capacity-building plans for municipal staff, councillors and informal actors.

3.2 Integration of WEEE in the waste management system

WEEE is a complex waste stream that requires separate collection and specialised processing. As the mandated waste management authority, this needs to be facilitated by municipalities by ensuring integration of this waste stream into the broader waste management system. This does not require organisational restructuring, large capital investment or on-going operational expenditure, but rather, can be done by creating awareness and making provision for WEEE collection as part of existing facilities.

3.2.1 Current problems and challenges

E-waste is considered to be a relatively 'new' waste stream within the South African context when compared to waste streams such as paper and packaging, organic, and construction and demolition waste. Since these other waste streams contribute significantly more to the total amount of waste generated and sent to landfill compared to e-waste, they receive the bulk of attention and resources, taking precedence when setting any IWMP-based targets and interventions (and as such, budget allocations). In addition, e-waste is a complex wastes stream to manage; each product comprises of a range of different materials, of which there are often both hazardous and non-hazardous fractions.

Due to these complexities, many municipalities have acknowledged that they lack knowledge about how to support proper management e-waste, and there is limited integration of e-waste into existing municipal waste management systems and facilities. All major metropolitan municipalities in South Africa, and many other municipalities, have facilities such as garden drop-off or waste disposal sites, some of which include recycling drop-off points. However, in most cases, e-waste is not officially accepted as a waste stream or separated from household waste.

With e-waste generation rates rising three times faster than other municipal solid waste streams, the mismanagement of WEEE and the negative consequences thereof are starting to become increasing evident in municipalities across South Africa. Further, the challenges caused by WEEE mismanagement (such as littering or pollution) are cross-cutting in nature and impact on waste management, environmental health and law enforcement departments and various other functions.

Therefore, municipalities need to prioritise the management of WEEE. However, given limited budgets and capacity, it is imperative that WEEE is managed as part of the broader waste management system, integrated into existing programmes and facilities, and managed in a transversal manner with contributions from various stakeholders. Ultimately, municipalities should avoid direct involvement in WEEE management but rather facilitate collection and ensure that WEEE is directed to licensed, compliant facilities for processing.

3.2.2 Potential interventions and recommendations

The following solutions and recommendations have been shared by stakeholders with the potential to address the above problems and challenges.

1. **Create broad awareness about correct WEEE management**: Broader awareness about how to correctly manage e-waste is needed within government, businesses and institutions, and the general public. This will increase diversion of WEEE from landfill and into the hands of compliant waste management companies and recyclers. It has been suggested that this awareness approach is developed at a national level through a national awareness campaign that can be filtered down to provincial and local government so that there is a single, coherent message about managing WEEE. *WEEE are SA* is a national awareness and knowledge platform that has been developed as part of the SRI Programme, and this could be used to further disseminate knowledge and information.
2. **Integrate WEEE collection into existing waste management systems:** Integrating WEEE collection into the existing waste management system can be achieved by including WEEE as a separately collected and stored waste stream at existing refuse disposal sites (such as garden sites, drop-off sites, etc). This can be done by appointing a service provider to management e-waste collection services at the required sites:
    a. In instances where disposal sites are already operated by private service providers, the conditions of the contract could be amended to ensure that they make provision for e-waste to be collected and channelled to an e-waste recycler. The City of Cape Town provides a good case study for this model, where drop-off sites are operated by a service provider, and many of the drop-off sites across the city allow e-waste to be disposed. In the contract/agreement, the service provider operating the disposal sites need to meet specifications to ensure that e-waste collected is sent to a certified recycler and data is shared on the amount diverted from landfill.
    b. Where disposal sites are operated by the municipality, a service provider can be identified via an appropriate procurement process to provide e-waste collection bins/structures and service these regularly. This too would need to include specifications to ensure that e-waste is properly recycled and data is shared on the amount diverted from landfill. This could also be done through collaboration with PROs, where an MoU or similar agreement with the PRO might allow for collection mechanisms to be located at existing facilities.
3. **Create strong partnerships with PROs**: Municipalities are encouraged to create strong partnerships with PROs to leverage EPR funding to further enhance WEEE management activities. These activities include establishing central drop-off points (as above), encouraging private sector collection mechanisms (including community e-waste drop-off events), and advancing waste picker integration projects for all EPR-related waste streams. This will be specifically dealt with in the section 3.3 below.
4. **Develop an approach to managing household hazardous waste (HHW)**: Currently, there are limited mechanisms for households to safely dispose of household hazardous waste (HHW). A national Household Hazardous Waste Strategy has been developed, and e-waste is identified as one of the waste streams. Leveraging the national strategy, municipalities are encouraged to develop an approach towards managing HHW. As separate collection is not viable, HHW

could be included as a waste stream at municipal disposal sites (as noted above for WEEE). This is currently done at some disposal sites for used oils, paints, etc.

3.3 Collaboration with PROs

This theme has emerged as key focus area through engagement with municipalities, PROs and WEEE recyclers, and has been a topic of debate amongst stakeholders due to the complexity of the underlying problem. Namely, municipalities have a constitutional mandate to collect waste from waste generators, while PROs have an obligation to producers to ensure that waste is diverted from landfill and into value-adding projects and processes; and there is a clear overlap. Within the context of WEEE management, with limited (or no) municipal collection mechanisms for WEEE, PROs have a substantial role to play in supporting municipalities. However, governance and policy challenges limit the ability for municipalities and PROs to engage to work collectively towards recovering WEEE. Regardless, stronger collaboration is required between municipalities and PROs to drive diversion of WEEE from landfill.

3.3.1 Current problems and challenges

A key objective of EPR regulations is to shift the growing financial and logistical burden of WEEE management from municipalities to producers of electronic and electrical equipment (EEE). PROs are established as the authorised mechanism to act in the interest of the producers and fulfil any EPR obligations on their behalf.

Currently, there are five PROs registered in South Africa who are responsible for EEE. In South Africa, PRO obligations to meet targets go beyond the traditional approach to EPR, which in most countries' centres exclusively around the achievement of WEEE management targets for collection, recycling, and in some cases, also reuse. Such obligations include, but are not limited to, increasing collection, supporting infrastructure development, stimulating SMME growth in the wider field of WEEE management, and creating pathways to allow for the integration of waste pickers/reclaimers in existing formal WEEE collection and management services. Hence for this system to work effectively, strong collaboration is required between PROs and municipalities.

However, several challenges are currently being experienced that hinder the ability of PROs and municipalities to collaborate effectively. Firstly, different approaches are being taken by both PROs and municipalities in initiating engagement with one another. For example, some PROs have taken a blanket approach and reached out to all municipalities with a request for collaboration, while others have targeted specific municipalities (mostly metros). Consequently, the programmes or support being offered varies widely across municipalities. On the other end, the approach taken by municipalities is also varied. Some municipalities have directly approached PROs to identify areas of collaboration or to suggest programmes or projects where they need support, while most others have refrained from doing this due to uncertainty about how to legally engage with PROs without triggering procurement concerns under the MFMA. The latter has also been raised by PROs as a current challenge.

Similarly, challenges are being experienced around the use of a Memorandum of Understanding (MoU) as the formal mechanism for collaboration between PROs and municipalities. Firstly, municipalities require an MoU with each PRO for which they are collaborating. There are 5 PROs that focus on EEE alone, not to mention the many others that deal with other waste streams. As such, municipalities can be overburdened with needing to sign numerous MoU with different PROs.

This was raised as a particular challenge by one Metropolitan Municipality that was engaged as part of this research, who indicated that their legal department was hesitant to approve 7 separate MoUs for

similar collaborations. Further, legal departments are often hesitant to approve MoUs, and in some cases have advised against the signing of any MoUs with PROs, as the approach in which the municipality was engaged could trigger MFMA concerns (as noted above). As such, many municipalities have yet to have any engagement with WEEE PROs (or many others) at all and are effectively losing out on potential financial or logistical support that could be provided by PROs as part of fulfilling critical aspects of their EPR mandate. Further, MoUs are not legally binding documents which further exacerbate the challenges experienced.

Finally, there are some challenges that inhabit collaboration between PROs and municipalities that are caused by the current framework within which PROs function. Currently, there is no standard 'weighting matrix' to quantify the extend or degree to which each of the EPR-related environmental, economic and social delivery targets should contribute to overall targets. This creates vastly different interpretations, budget allocations, and corresponding programmes and communications responses amongst the five PROs. It also makes it very difficult (if not impossible) to objectively compare how efficiently the current WEEE PROs are performing when compared with each other, as agendas of delivery priorities are vastly different.

Further, this adds to a culture of competition between PROs, the competitive nature of PROs was noted by municipalities during the engagement process, with some suggesting that they are "competitive and secretive", and reluctant to work with smaller or more rural municipalities. As an example, it was noted during engagement that attempts have been made to sign an exclusive partnership agreement with municipalities which would limit them to working with a single PROs. This would limit any opportunity for PROs to work together on developing harmonised collection systems and logistics systems as crucial, non-competitive areas.

3.3.2 Potential interventions and recommendations

The following solutions and recommendations have been shared by stakeholders with the potential to address the above problems and challenges.

1. **Establish a framework for structuring PRO and municipal relationships:** Arguably the most crucial solution to address the problems identified above is a clear framework for how relationships between municipalities and PROs (for all waste streams) are structured. This framework should provide clear, practical guidelines for how such collaboration can be achieved, as well as a standardised, 'model' MoU that can be used as a template by all municipalities and PROs.

   A model MoU could be the departure point for individual MoU development purposes, highlighting shared legal and operational requirements, but should allow for:

   a. adjustments to reflect local realities and specific relationships,
   b. to clarity roles and responsibilities of the collaboration partners,
   c. and provide details of any programme or project specific details that might be required.

   Some work has been done by the DFFE and SALGA in this space, and some municipalities themselves have started to develop an approach for engaging with PROs. This has been structured as a '*non-binding declaration of intent and understanding between the Parties identified but which does not create any legal obligations or liabilities between them*". This work being done needs to be coordinated and in partnership with these parties, as well as

PROs and all three spheres of government, to ensure that a robust, harmonised framework is developed.

2. **Develop a stronger governance framework for WEEE management across all spheres**: Further to the above, there is a need for a governance framework to guide WEEE management activities across all spheres of government. This framework, which should be driven by DFFE and supported by National Treasury, should provide clear guidelines to government about how EPR funding can be leveraged, in partnership with PROs, without violating MFMA and PFMA regulations.

3. **PROs to deliver 'collaborative' infrastructure and support:** Although each PROs have their own specific budgets, programmes and focus areas, it is recommended that PROs work collaboratively to deliver on ***non-competitive aspects*** such as infrastructure development, WEEE collection, waste picker integration, awareness creation, and data collection, monitoring and reporting. The latter is dealt with as a separate solution/recommendation below, however, the others are briefly described below:

    a. ***Coordinated infrastructure development*:** Instead of independent efforts, municipalities and PROs could collaborate on strategic planning for waste collection, sorting, and recycling infrastructure. This could involve identifying gaps in current infrastructure and jointly investing in new facilities or upgrading existing ones.

    b. ***Optimised collection systems**:* PROs can leverage their understanding of WEEE types and volumes to help municipalities set up shared WEEE collection events, potentially integrating with existing municipal waste collection services. For example, there is a need to provide facilities closer to communities, such as dedicated drop-off points; these could be provided by PROs but also made part of existing public facilities such as garden sites, recycling centres and related drop-off sites. Defining specific geographical areas where PROs will focus their collection and recycling efforts, in coordination with municipal waste management plans, can prevent duplication and ensure comprehensive coverage. Smaller municipalities are encouraged to function as "satellite" WEEE consolidation locations from where the private sector can easily and efficiently collect to bring to metro areas where the actual recycling takes place.

    c. ***Support for waste pickers/reclaimers**:* Municipalities and PROs can collaborate to integrate informal workers into the formal EPR system, providing training, safety equipment, and fair compensation, as well as access to sorting and buy-back centres. Efforts via PROs to capacitate waste pickers/reclaimers to handle WEEE as a waste stream could include municipalities allocating zones near landfills where such waste can be safely separated and then sold on site to mobile buy back centres.

    d. ***Awareness creation:*** This is another area where collaboration between PROs could be sought. Each PRO is currently driving their own awareness creation efforts, while municipalities themselves do not have resources or capacity to do so themselves. PROs could develop some basic awareness materials that highlight specific areas where municipalities require education and awareness to be created, and these can be used by municipalities across the country to encourage diversion of WEEE from general refuse and into the hands of recyclers.

4. **Harmonised PRO reporting on budget and expenditure:** As noted earlier, the current system for reporting is fragmented which creates challenges. There is a need for an improved approach to ensure harmonised reporting on budgets and expenditure across all the PROs. Firstly however, a clearly defined mandate (in the form of a generic weighted matrix for all WEEE PROs) regarding the minimum expectations for a consolidated municipal engagement approach needs to be developed. Thereafter, regarding better quality and more harmonised reporting of PROs to the DFFE, a standardized reporting format is required to greatly improve data analysis facilitation and performance tracking against EPR targets. Openness in financial flows (EPR fees collected by PROs and how they are utilised) and mutually agreed on and clearly weighed performance metrics helps build trust and accountability.
5. **Single WEEE PRO alliance be established as a single-entry point:** Lastly, numerous municipalities noted that they would prefer to engage with a single PRO around WEEE management rather than a few PROs. As with the Paper and Packaging PRO Alliance, an alliance between the WEEE PROs could be established that allows for a single-entry point for engagement with municipalities and to coordinate areas collaboration between PROs in non-competitive areas (as noted in item 3 above).

3.4 Facilitation of municipal asset release

This theme investigates the release of assets from municipal stockpiles. Most municipalities that have been engaged as part of the Municipal WEEE Compass process have indicated that they faced significant challenges in releasing assets from municipal registers. It is understood that national and provincial departments face the same challenges when attempting to release assets. Supportive policies and processes can ensure that assets that are classified as WEEE in government stockpiles can be released for recycling, instead of being stockpiled, which leads to a loss of value and inhibits WEEE industry development.

3.4.1 Current problems and challenges

Releasing assets that are classified as WEEE from government stockpiles, while staying compliant with the various National Environmental Management Act (NEMA) associated Regulations, is a challenge that is faced by most municipalities. This is made more challenging as these Regulations outline strict guidelines for handling such waste held for disposal.

Section 14 and Section 111 of the Municipal Finance Management Act (MFMA) sets guidelines for asset management and disposal. However, municipalities struggle to identify accredited service providers, and this delays the entire process, leaving WEEE trapped in the system.

Further, asset management policies and asset disposal policies are not explicit in promoting recycling, hence municipalities default to traditional disposal methods such as auctioning or scrapping, instead of exploring ways to repurpose or recycle assets. The reliance on public auctions for disposing of WEEE also presents risks, mainly concerning data security and environmental impact.

Additionally, the State Information Technology Agency (SITA), who are mandated to procure ICT equipment for state entities, currently does so without any clear mandate to ensure the recovery of the equipment that is being replaced. It is understood that ‘green procurement’ processes are also not integrated into the current SITA mandate.

As such, the absence of clear and comprehensive asset disposal policies that integrate recycling has led to inefficiencies, environmental concerns, and missed opportunities for sustainable resource management.

3.4.2 Potential interventions and recommendations

The following solutions and recommendations have been shared by stakeholders with the potential to address the above problems and challenges.

1. **Develop a uniform policy on WEEE asset release through recycling:** National government, particularly via the National Treasury, should work towards developing a comprehensive asset disposal policy to explicitly address e-waste refurbishment and recycling to manage stockpiles. This should provide clear guidance to asset managers, enabling timely disposal of WEEE and effective management of stockpiles. This policy should also consider 'deferred dumping', which is currently occurring when the Department of Education accesses used but functional ICT equipment for schools without clear guidelines as to how to maintain, repair and dispose of these assets when required. This policy could be in the form of a 'model' 'or 'standardised' asset release policy template that can be used by municipalities to craft a local policy based on best practice.
2. **Make WEEE recycling compulsory in asset disposal processes:** Municipalities should ensure that that recycling is made compulsory within all asset release processes and strengthen legal compliance mechanisms to support this. However, this needs to be done within the context of the waste management hierarchy, where the first priority would be to ensure that assets are first repaired and/or refurbished, and where not possible, components are then recovered for use in repair/refurbishment/remanufacturing.
3. **Develop an asset disposal toolkit to guide WEEE asset release:** An Asset Disposal Toolkit should be developed that guides all spheres of government in understanding how to effectively implement WEEE asset release. As part of the SRI programme, a preliminary asset disposal toolkit was drafted, and this can be the basis for development of a comprehensive asset release toolkit.
4. **Appoint panel of accredited e-waste recyclers through transversal tender**: National Treasury could appoint a panel of accredited e-waste recyclers through a transversal tender which could be leveraged by all public sector entities. This could streamline procurement processes and ensure asset release takes place within a reasonable period, by compliant recyclers, and complies with environmental regulations.
5. **State Information Technology Agency (SITA) to facilitate buy-back of obsolete computer equipment:** SITA, as the central SA government IT procurement agency, should be mandated to facilitate the buy-back of redundant and obsolete computer equipment when replacing this equipment. The applies to ICT managers, where SITA does not render IT services, as well as to technology providers who may provide ICT equipment directly to government departments, where take-back schemes should become mandatory.
6. **Build capacity development and technical expertise in Supply Chain Management (SCM)**: Capacity and technical expertise needs to be developed within SCM units and departments to more effectively manage asset release in line with the above recommendations. This can be done through awareness workshops for staff on handling of assets that are WEEE, as well as

leveraging the Asset Disposal Toolkit (as suggested above). This will ensure that all employees understand what constitutes e-waste, how to identify it once classified, and the correct procedures for handling and disposal.

7. **Drive collaboration between various entities to improve asset release**:
    - Collaboration is required with the private sector to support e-waste collection, refurbishment and recycling infrastructure.
    - Collaboration is required with professional bodies [e.g. Centre for Municipal Asset Management (CMAM) and Chartered Institute of Government Finance Audit and Risk Officers (CIGFARO)] to share public sector asset release amendments, toolkits and processes.
    - Collaboration is required between departments (supply-chain/procurement departments, finance departments, IT departments and waste management departments) to ensure e-waste disposal follows regulations and best practices. Collaboration between such departments will ensure common understanding and that all parties understand fully their roles and responsibilities in the process of asset release.

4 Roles and responsibilities

The previous section has presented a range of potential interventions and recommendations for how WEEE can better be managed by municipalities based on the challenges that are being faced. However, improving WEEE management at a local government level cannot be done in isolation and requires a collective effort from a range of critical stakeholders. The table below presents the roles and responsibilities that each key stakeholder is required to undertake to support in creating a more conducive environment for WEEE management within municipalities.

Table 2: Roles and responsibilities of key stakeholders

Stakeholder	Roles and responsibilities
DFFE	● Implementation of the National WEEE Policy as the overarching policy framework for WEEE management in South Africa ● Refine and update the 'Model Integrated Waste Management By-Laws' to provide clear regulations and specifications related to WEEE management and the current policy landscape ● Facilitate development of a standardised definition of WEEE that can be used across all waste management actors in South Africa ● Create a national framework (with support from all stakeholders) for WEEE awareness that can be adopted by municipalities across the country to ensure a shared vision and message. ● Create a framework for how WEEE collection can be integrated into existing (and planned) municipal waste management infrastructure and facilities. ● Support creation of a framework to guide municipal/PRO collaboration ● Create a standardised reporting framework for all WEEE PROs to ensure consistent data collection and publish aggregated data on WEEE management publicly

Stakeholder	Roles and responsibilities
SALGA	• Support dissemination of all relevant DFFE policies (such as National WEEE Policy), frameworks and awareness materials to municipalities • Facilitate coordination between all spheres of government around WEEE management • Support creation of a framework to guide municipal/PRO collaboration
Provincial government	• Create a mechanism/s (or leverage existing mechanisms) to translate the collective voice related to municipal WEEE management challenges to relevant national platforms. • Disseminate national policies and frameworks to municipalities • Develop provincial (regional) approaches towards WEEE management
Municipalities	• Integrate relevant national WEEE policies and regulations into local IWMPs and by-laws • Identify current and planned waste/recycling facilities to integrate WEEE as a waste stream to increase collection • Leverage national awareness resources to complement local awareness campaigns • Revise current asset release policies to release WEEE from asset registers and stockpiles into the hands of certified recyclers • Build internal capacity around WEEE management through leveraging available resources (such as WEEE are SA 'WEEE Masterclass' and PRO training) • Identify potentials solutions to improve collaboration with PROs and feed this into national processes towards creating a strong framework
WEEE PROs	• Identify potential solutions to improve collaboration with municipalities and feed this into national processes towards creating a strong framework • Work collaboratively with other WEEE PROs to deliver infrastructure, support collection and integrate waste pickers • Improve WEEE data collection and provide access to publicly available WEEE data

5 Conclusion

The Municipal WEEE Compass was developed to contextualise the challenges that are being faced by municipalities across South Africa in managing e-waste, and to provide potential recommendations to improve WEEE management. The Compass provides specific insight for municipalities around how to interpret and integrate relevant legislative and regulatory frameworks at the local level, how to manage WEEE as part of the broader waste management system, how to better collaborate with PROs to facilitate the development of local e-waste recycling industries, and how to release WEEE from their asset registers.

This Compass provides a framework for further engagement with municipalities, provincial and national government, PROs and other key waste management actors. Drawing on research and engagement undertaken since 2021, the Municipal WEEE Compass has synthesised the key challenges that are being faced and identified four key thematic areas. The specific problems and challenges being experienced in relation to these thematic areas, and potential recommendations for these areas to address these, are presented in this Compass. These lay the foundation for further discussions to be

undertaken to dive deeper into complex issues such a PRO collaboration, and for stakeholders to start to implement recommendations highlighted in this report. Certain recommendations will be initiated as part of the Circular Electronics Initiative (CEI), which is the follow-on programme to the Sustainable Recycling Industries (SRI), that is being implemented by the Swiss State Secretariat of Economic Affairs (SECO) from 2026 – 2029.

Further engagement with government, PROs, recyclers and civil society will allow for more in-depth understanding of some of the challenging questions that remain after this Compass, such as:

> **'How** can the WEEE landfill ban realistically be enforced in the absence of alternative solutions?'
>
> **'How** can provincial and local IWMPs align better with one another on household hazardous waste and WEEE in particular?'
>
> **'How** can we all better facilitate the safe flow of information between the spheres of government, PROs and private sector operators?'

Bibliography

DFFE, Draft National Policy for the Management of Waste Electrical and Electronic Equipment. Department of Forestry, Fisheries and the Environment, 2024. [Online]. Available: www.gpwonline.co.za

National Constitutional Assembly, Constitution of the Republic of South Africa, 1996. Republic of South Africa, pp. 545-. doi: 10.5771/0506-7286-1994-4-545.

Department of Environmental Affairs, National Environmental Management: Waste Act. Republic of South Africa, 2008. doi: 102GOU/B.

DEFF, "National Waste Management Strategy," Republic of South Africa, 2020.

DEA, List of waste management activities that have, or are likely to have, a detrimental effect on the environment, GN 921 of 29 November 2013. Republic of South Africa.

Local Government: Municipal Systems Act no. 32 of 2000. Republic of South Africa.

Department of Science and Technology, "A National Waste R&D and Innovation Roadmap for South Africa: Phase 2 Waste RDI Roadmap. The economic benefits of moving up the waste management hierarchy in South Africa: The value of resources lost through landfilling.," p. 50, 2014, [Online]. Available: http://www.wasteroadmap.co.za/download/trends_in_waste_management.pdf

Department of Environmental Affairs, National norms and standards for the storage of waste, GN 926 of 29 November 2013. Republic of South Africa.

Department of Environmental Affairs, National Norms and Standards for the sorting, shredding, grinding, crushing, screening or baling of general waste, GN 1093 of 11 October 2017. Republic of South Africa.

DEA, National Environmental Management: Waste Act (59/2008) Waste Classification and Management Regulations, vol. 578, no. 36784. 2013, pp. 1–48. [Online]. Available: http://www.greengazette.co.za/pages/national-gazette-37230-of-17-january-2014-vol-583_20140117-GGN-37230-003%0Awww.gpwonline.co.za

DEA, National Waste Information Regulations. 2012.

Department of Environmental Affairs, National Pricing Strategy for Waste Management, vol. GG 40200, no. GN 904. Republic of South Africa, 2016.

F. and F. Department of Environment, Extended Producer Responsibility Regulations GN 1184 of 5 November 2020. Republic of South Africa.

DEFF, "Extended Producer Responsibility Scheme for the Electrical and Electronic Equipment Sector," Pretoria, 2020.

DFFE, "Guideline and Toolkit for Determination of Extended Producer Responsibility Fees," Nov. 2024. [Online]. Available: www.gpwonline.co.za

DEFF and DSI, "Waste Picker Integration Guideline for South Africa: Building the recycling economy and improving livelihoods through integration of the informal sector," Pretoria, Jul. 2020. [Online]. Available: https://wasteroadmap.co.za/wp-content/uploads/2021/02/Waste-Picker-Integration-Guidelines.pdf

DFFE, "National Household Hazardous Waste Management Strategy," Mar. 2024. [Online]. Available: www.gpwonline.co.za

DFFE, “National policy on thermal treatment of general and hazardous waste,” 2009.

RSA, “Public Finance Management Act No. 1 of 1999.”

RSA, “Local Government: Municipal Finance Management Act No. 56 of 2003”.

RSA, “Public Procurement Act No. 28 of 2024”.

Annexures

Annexure 1: Deep Dive Interview Questions

Status Quo

1. Please provide us with some background information on the way your municipal waste department is structured, functions (i.e. size, functions, etc) and is financed
2. What are the main challenges (organisational, technical and/or financial) that you experience in delivering your waste management services?
3. What programmes, interventions or activities are you currently implementing to promote recycling? What is your target group for those? Do any of these have a specific focus on e-waste?
4. What municipal infrastructure or facilities do you have in place to support recycling activities? Do you have any municipal e-waste drop-off points? If so, please provide some insight into how these are structured.
5. Are you currently implementing any programmes, projects or interventions that focus on waste picker integration?
6. Do you have dedicated human resources that deal with waste minimisation and recycling? Are there any resources dedicated to e-waste management? Please share details on this.
7. What waste management policies, legislation, plans or by-laws do you have in place?
8. Do you have any relationships with private sector recycling companies? What is the focus of these relationships?

Understanding WEEE

1. Do you have an understanding of all relevant WEEE policies and legislations that are currently in place nationally? E.g. EPR, landfill ban, etc.
2. To what extent are the above integrated into your local plans, policies and by-laws?
3. What are the current WEEE management activities occurring in your municipality? Are there any formal WEEE awareness and collection mechanisms? Is WEEE ending up in general refuse (and therefore at landfill)?
4. What private sector WEEE management activities are you aware of that are taking place in your municipality?
5. Are you aware of any waste picker activities occurring in your municipality related to e-waste?
6. Do you have any relationships with WEEE PROs? If so, what are these?
7. Do you have an asset release policy? If so, please share some insight into how this is structured? Does this inhibit the release of WEEE from your municipality into recycling activities?

WEEE support

1. What in your opinion is the optimal role that your municipality should play in WEEE management?
2. What type of support does your municipality require in better understanding and encouraging WEEE management (collection and recycling) activities? Note: probe into the following:
    a. Understanding the implications of national and provincial policy at a local level and harmonisation local policies and by-laws?

b. Support in generating awareness and promoting increased WEEE collection mechanism?
c. Support in optimising existing and/or establishing new municipal infrastructure or facilities to support WEEE collection and management?
d. Support in ensuring that WEEE is released from municipal stockpiles?

3. What role do you feel DFFE, SALGA, provincial government, district municipalities, PROs, and private sector should play in the above support?
4. Is there any other support or guidance that you require?
5. What additional human and financial resources would allow your municipality to optimise WEEE management?
6. Please share any other thoughts or inputs?