



HINCKLEY RECYCLING NIGERIA LTD.
E-Waste Management: A formal approach
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BDM





Company Profile

Hinckley Recycling is committed to engender a standard of excellence by providing a high quality service for the disposal of electronic waste, and ensuring that this service is always conducted in an environmentally friendly manner, and that the processes involved during the disposal would at all times conform to and comply with all relevant legislation as enforced by the recognized authorities - local and international.

Hinckley Recycling conforms to strict environmental recycling requirements and best practices. We are the first registered E-waste recycler in Nigeria and pride ourselves on working closely with the Ministry of Environment, NESREA and LASEPA.

We offer a socially responsible solution for E-waste and we give you peace of mind ensuring that your business is contributing to reducing its carbon footprint, as well as recycling E-waste responsibly.

- Established since 1998 in Nigeria 
- Nationwide Coverage 
- Nigerian Company
- Recycling permits from both Federal and State government
- Meet highest International Standards
- Dedicated processing facility for removal of hazardous waste
- Multiple recycling services rendered



What is E-waste?

E-waste is any broken or unwanted electrical or electronic appliance (having electronic current flowing via it) discarded by its original user.



01
LARGE HOUSEHOLD APPLIANCES

02
SMALL HOUSEHOLD APPLIANCES

03
IT AND TELECOMMUNICATIONS EQUIPMENT

04
CONSUMER EQUIPMENT

05
LIGHTING EQUIPMENT

WEEE CATEGORIES

06
ELECTRICAL AND ELECTRONIC TOOLS

07
TOYS, LEISURE AND SPORTS EQUIPMENT

08
MEDICAL DEVICES

09
MONITORING AND CONTROL INSTRUMENTS

10
AUTOMATIC DISPENSERS

World E-waste Data

In 2016:

- 44.7million Mt/ 6.1kg per inhabitant
- 20% documented to be recycled responsibly
-In Africa
- 2.2million Mt/ 1.9kg per inhabitant
- Less than 1% documented to be recycled responsibly
- 71,000t were imported via 2 main ports in Lagos.
- EU member states – 77%
- Germany-20%, UK-19.5%, Belgium-9.4%, Netherlands-8.2%, Spain-7.35%, China & USA-7.33%, Ireland 6.2%
- 70% exported to China while others are split between India, Pakistan, Vietnam, the Philippines, Malaysia, Nigeria and Ghana & possibly Brazil and Mexico.

In 2017:

- Close to half of the worlds population used the internet

In 2018:

- 48million Mt/ 6.3kg per inhabitant

Source: UNU 2017

- 120 countries adopted the digitalization of broadcasting in 2016.
- By mid- 2017, 55 countries had implemented the digital switchover and 66 countries were in the process.
- 1 million tons of external power supplies are manufactured each year - ITU's specific principles for eco-designs.

Source: ITU 2012, 2015, 2016b & 2017a



International Standards



Any shipments of waste will be carried out in accordance to the Basel Convention as waste categorised under Annexes VIII and IX.

Hazardous fractions (Annex VIII) will require trans-boundary movement in order for delivery to adequate disposal facilities, following Basel Convention procedure of the Prior Informed Consent of all involved parties.

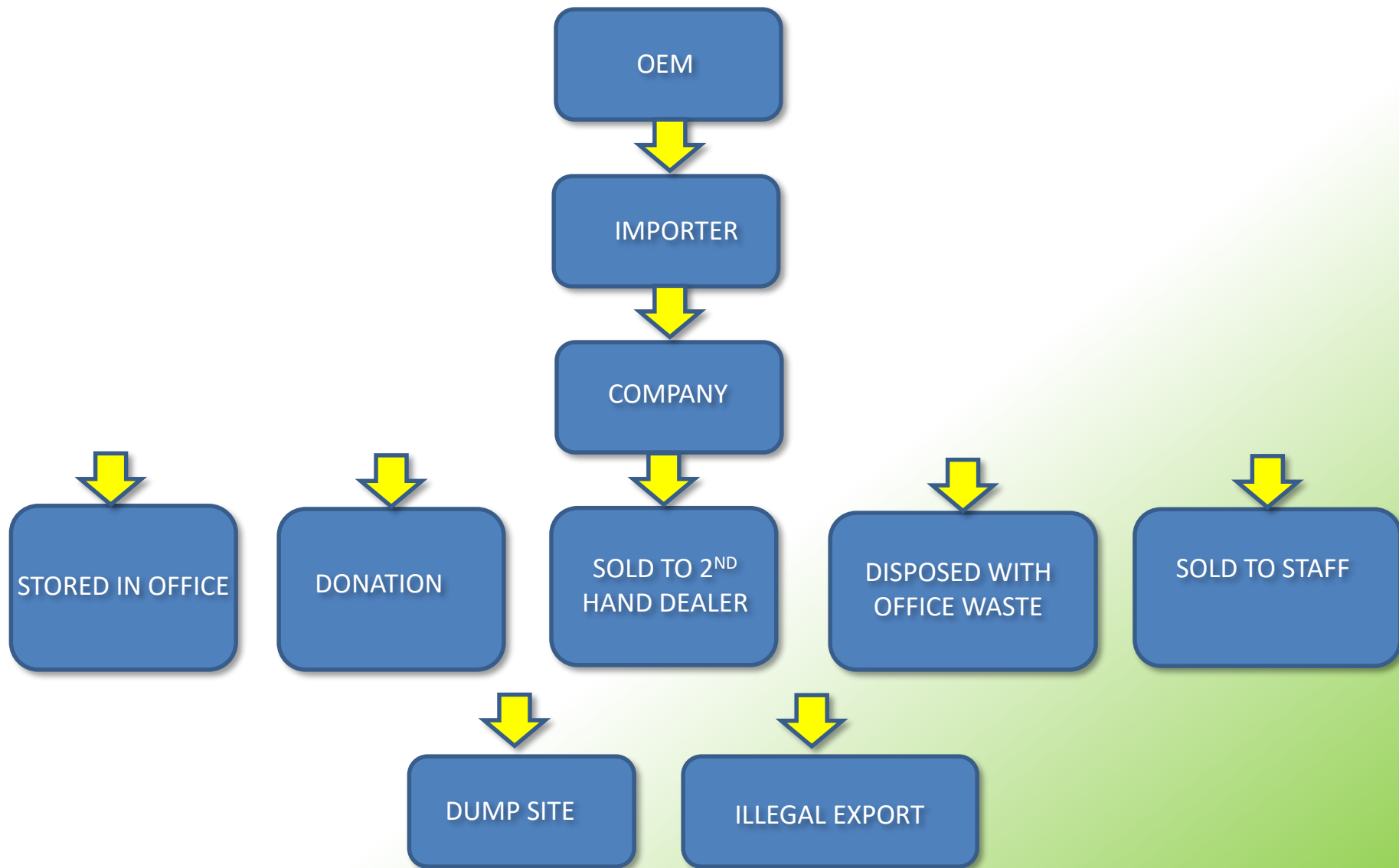
Non-Hazardous E-waste

Categorised under	Categorised under Annex VIII	Annex IX
Aluminium		B1010
Iron/Steel		B1010
Copper		B1010
Bronze/Brass		B1010
Stainless steel		B1010
Mixed ferrous metals		B1010
Mixed non-ferrous metals		B1050
Mixed plastic		B3010
ABS plastic		B3010
Glass		B2020
Printed circuit boards (PCB)	A1180	B1110

Hazardous E-waste

Categorised under	Categorised under Annex VIII
Lithium ion batteries	A1170
Capacitors	A1180
Lead-acid batteries	A1160
Nickel Cadmium batteries	A1170
Other batteries	A1170
LCD screens	A1180
CFL (e.g. scanner bulbs)	A1180
Toner cartridges	A1180
CRT leaded glass	A2010
Phosphorous powder	A3130
Brominated plastic	A3180

Today's Electrical Life Cycle



Informal E-waste Management – The Problem



E-waste collected by scrap merchants is being cannibalized for recovery of valuable fractions whilst hazardous waste is discarded in dump sites, burnt or buried.

Effects of Informal E-waste Management

E-Waste Component	Electric Appliance found	Adverse Health Effects
Lead	CRT monitor, lead-acid batteries, Circuit boards, some PVCs.	Damage to the nervous system, behavioral disturbances, attention deficits, hyperactivity, lower IQ.
Mercury	Fluorescent tubes, mechanical door bells, flat screen TVs/monitors, phones	Memory loss, muscle weakness, reduced fertility, slower growth, dermatitis, kidney damage.
Cadmium	Nickel-cadmium rechargeable lamps, phone battery,	Severe damage to the lungs & kidney, neuromotor deficit in children.
Brominated Flame Retardants	Most electronic plastics	Liver & thyroid problems, brain damage.
Carcinogenic Powder	Ink Cartridges/toner	Cancer, skin irritation.
Sulphur	Lead-acid batteries	Heart , liver & kidney damage, eye & throat irritation.
Arsenic	Microchips, phones	Negative impact on skin, liver, nervous & respiratory systems.

Effects of Informal E-waste Management Cont.



Formal E-waste Management



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1. Appropriate storage systems

- Collection of E-waste
- Sorting of E-waste



2. Engaging a licensed E-waste recycler

- Processing of E-waste
- Repairing of E-waste
- Recycling
- Dismantling



3. Implementing the tenets of your ISO 14001 Certification

- Component recovery from E-waste
- Residual disposal of E-waste



Appropriate storage systems

- Collection of E-waste

- Sorting of E-waste

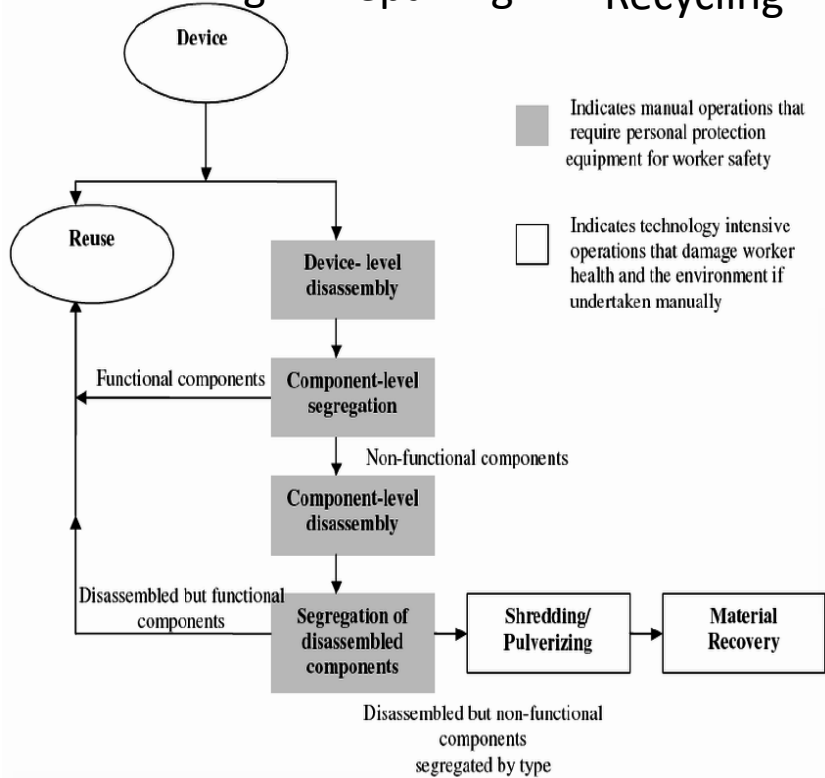


Engaging a licensed E-waste recycler



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- Processing
- Repairing
- Recycling
- Dismantling



Implementing the tenets of ISO 14001



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- Component recovery from E-waste
- Residual disposal of E-waste



Hinckley Recycling – Case Studies

ExxonMobil

Exxon Mobil

Recycling of electronic waste including IT equipment and lead acid batteries from Victoria Island, Lagos.



Friesland

Hard drive shredding for computer hard drives in Lagos.



Guinness

Data destruction of PDA, laptop and desktop hard drives from Ikeja, Lagos.



HP

Long term recycling contract to recycle all end of life HP waste in Nigeria.



Ericsson

Recycling and data destruction of IT assets from VI, Lagos.



NESREA

Recycling of eWaste including AC split units, phones and IT equipment.



Sightsavers

Data destruction of their laptop from the UK aid charity branch in Kaduna



Haier Thermocool

Long term recycling of all end of life whole appliances or parts across all their RDCs in Nigeria



KPMG

Recycling of IT equipment including onsite shredding of hard drives



PZ Cussons

Recycling of IT electronic waste including tapes in ~~Ibadan~~



Fan Milk

Long term recycling & disposal of all end of life white goods across all their RDCs in Nigeria



Proparco

Responsible recycling of IT assets & refurbishing of functional units



Samsung

Long term recycling contract of all white, brown, black goods etc in Nigeria.



Nestle

Responsible recycling of huge backlog of Ink toner cartridges in HQ & branch.

Proposed Solution



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1. Establish a clear legal framework for e-waste collection and recycling
2. Introduce extended producer responsibility to ensure producers finance the collection and recycling of e-waste.
3. Enforce legislation for all stakeholders and strengthen monitoring and compliance mechanisms across the country to ensure a level playing field.
4. Create favorable investment conditions for experienced recyclers to bring the required technical expertise to the country.
5. Create a licensing system or encourage certification via international standards for collection and recycling.
6. If an informal collection system exists, use it to collect e-waste, and ensure e-waste is sent to licensed recyclers through incentives.
7. When no local end-processing facilities exist for an e-waste fraction, ensure good and easy access to international licensed treatment facilities.
8. Ensure that costs to run the system are transparent and stimulate competition in the collection and recycling system to drive cost effectiveness.
9. Ensure that all stakeholders involved in e-waste collection and recycling are aware of the potential impacts on the environment and human health as well as possible approaches to the environmentally sound treatment of e-waste.
10. Create awareness on the environmental benefits of recycling among consumers.

Source: UNU 2017



1. Awareness! Awareness!! Awareness!!!
2. Formalizing the E-waste sector/ EPR
3. Strengthen compliance approaches
4. Tighten border security
5. Awareness! Awareness!! Awareness!!!

Thank you.



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