

E-WASTE RECYCLING

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PRESENTATION AT THE WORLD MATERIALS FORUM

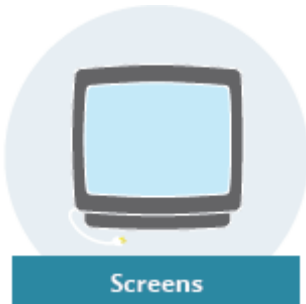
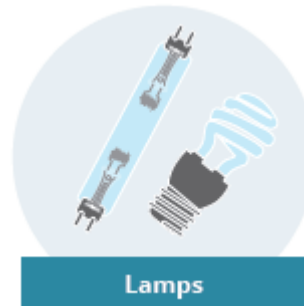
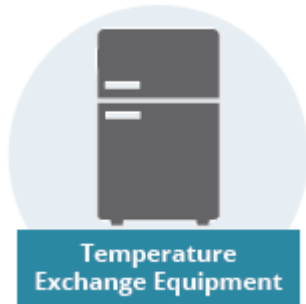
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WHAT IS E-WASTE RECYCLING

E-waste recycling is the reuse and reprocessing of electrical and electronic equipment of any type that has been discarded or regarded as obsolete

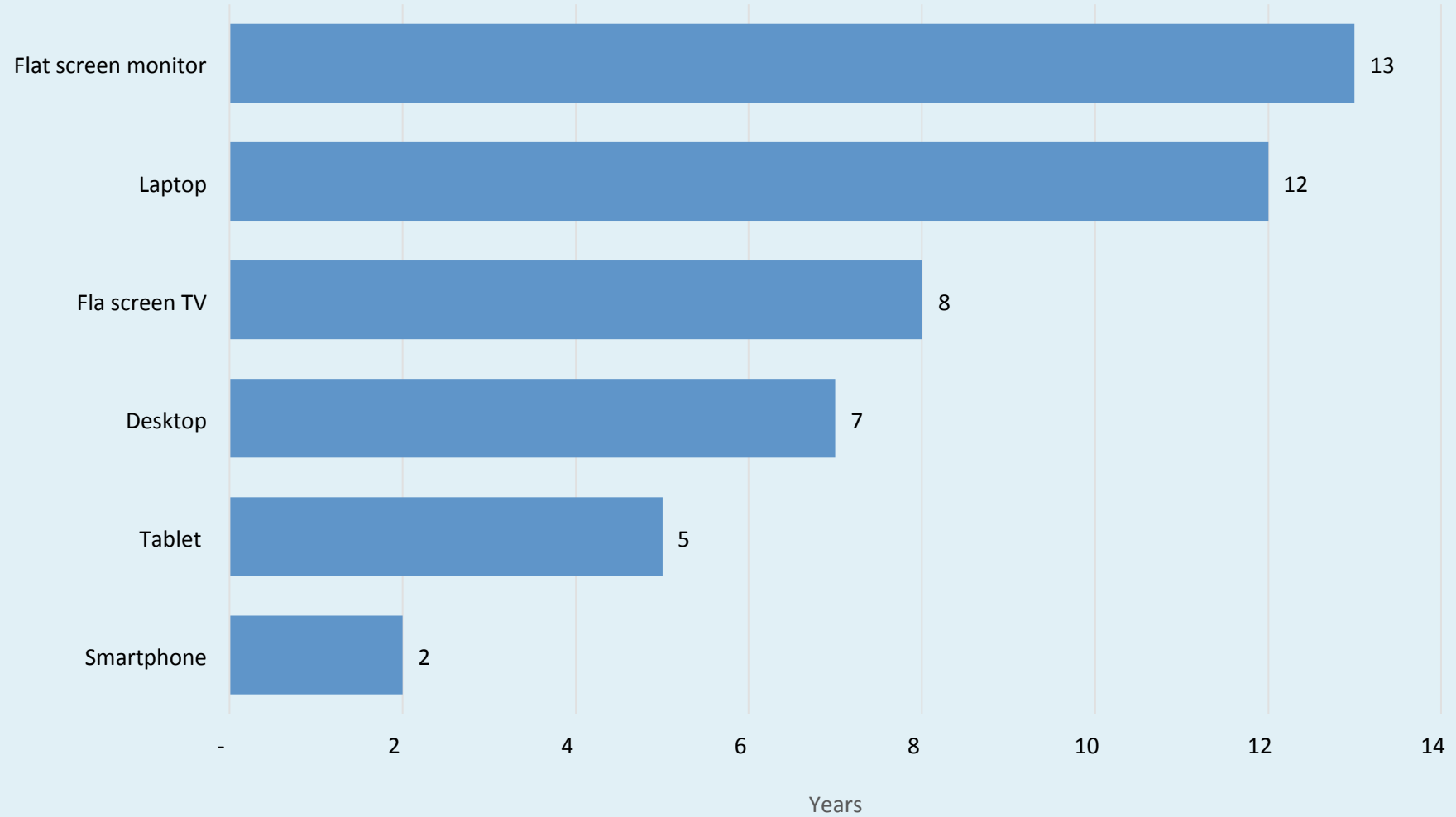
Categories of e-waste



Each product of the six e-waste categories has a different lifetime profile, which means that each category has different waste quantities, economic values, as well as potential environmental and health impacts, if recycled inappropriately.

THE CASE FOR E-WASTE MANAGEMENT

Average lifespan of consumer electronics and tech devices (2015)



THE AFRICAN CONTEXT (1)

Africa is the latest destination for E-Waste, referred to as the 'digital dump' by the Basel Convention Network, since many Asian countries are now coming up with legislation that bans uncontrolled importation of certain categories of used electrical equipment.

Africa faces a double burden

1. **Generation**: Increased consumption of ICT and electronic equipment due to consumer preferences
2. **Dumping**: from developed countries

THE AFRICAN CONTEXT (2)

Table 6.1: E-waste generation and collection per continent

| Indicator | Africa | Americas | Asia | Europe | Oceania |
|--|--------|----------|-------|--------|---------|
| Countries in region | 53 | 35 | 49 | 40 | 13 |
| Population in region (millions) | 1,174 | 977 | 4,364 | 738 | 39 |
| WG (kg/inh) *inh - inhabitant | 1.9 | 11.6 | 4.2 | 16.6 | 17.3 |
| Indication WG (Mt) | 2.2 | 11.3 | 18.2 | 12.3 | 0.7 |
| Documented to be collected and recycled (Mt) | 0.004 | 1.9 | 2.7 | 4.3 | 0.04 |
| Collection Rate (in region) | 0% | 17% | 15% | 35% | 6% |

- The African continent hosts the least number of direct manufacturers of EEEs, yet it carries a significant burden of contribution to the global e-waste problem, generating about 2.2 Mt annually from domestic output.
- Most of this is derived from imports of new and used equipment, and a few local assembly plants.
- Locally derived generation is believed to constitute about 50% to 85% of total e-waste generation, the rest being from the transboundary illegal import from developed countries in the Americas and Europe, and from China

E-WASTE MANAGEMENT CHALLENGES FACED IN AFRICA

- Lack of adequate public awareness
- Lack of government policy and legislation,
- Lack of an effective take-back/collection system and Extended Producer Responsibility
- The dominance of the recycling sector by an uncontrolled, ill-equipped informal sector
- Lack of adequate recycling facilities
- Poor financing of hazardous waste management activities

BUT THERE IS HOPE

- Most African countries are now aware of and concerned with the dangers inherent to poor management of e-waste.
- As such, governments in many African countries have begun showing increasing concerns and interest in adopting comprehensive and integrated approaches to solving the e-waste problem

Some countries that have domestic regulations on e-waste



Ghana



Nigeria



Madagascar



Kenya

For example

Nigeria and Kenya have proposed EPR schemes which require manufacturers and importers to formulate their EPR procedures and obtain approvals from the government

The Ghana model is based on the payment of eco-fees from manufacturers and importers to a fund to be managed by government and the industry, and used for managing e-waste.

E-WASTE RECYCLING PROJECTS IN AFRICA (1)



| | |
|------------------|--|
| Country | Kenya |
| Overview | <ul style="list-style-type: none"> • Waste Electrical and Electronic Equipment (WEEE) Centre offers the service of awareness creation (training) and safe disposal of electrical and electronic waste (e-Waste) in accordance with the National Environment Management Authority (NEMA) waste regulations. • Electrical and electronic equipment, peripheral devices, parts and accessories that are no longer usable are disposed of in a process that ensures zero dumping |
| Ownership | Private sector |
| Services | <ul style="list-style-type: none"> • Secure data destruction • IT asset recovery • IT asset disposal • Training |
| Capacity | Approx. 11 tonnes of e-waste per month |
| USP | One of the few Kenyan government-approved e-waste recyclers and the only one licensed to collect, process and ship the waste |



E-WASTE RECYCLING PROJECTS IN AFRICA (2)



| | |
|------------------|--|
| Country | Nigeria |
| Overview | <ul style="list-style-type: none"> E-Terra Technologies Ltd is a pioneering private “end-to-end” e-waste management service provider in Lagos, Nigeria registered with Federal Ministry of Environment (FMENV) and Lagos State Environmental Protection Agency (LASEPA) |
| Ownership | Private sector |
| Services | <ul style="list-style-type: none"> E-waste collection and disposal: pre-evaluation, pick-up, dismantling, sorting and recycling of primarily waste electrical and electronic equipment (WEEE) in our Material Recovery Facility (MRF) in Lagos State Data destruction Asset decommissioning |



E-WASTE RECYCLING PROJECTS IN AFRICA (3)



| | |
|------------------|--|
| Country | Ghana |
| Overview | <ul style="list-style-type: none"> • Agbogbloshie Makerspace Platform (AMP) is a transnational youth-driven project to promote maker ecosystems in Africa. The Company maintains that mining what already works for models and methods, and deploying co-design within existing communities of makers, across class, religious and tribal strata is key to e-waste management • The Agbogbloshie scrapyard hosts dismantling, sorting and processing activities across a range of scrap types, from aeronautical, automotive, electronic (e-scrap), domestic and household waste to glass, metal, and plastics |
| Ownership | Private sector |
| Services | <ul style="list-style-type: none"> • Education: Enable makers handle e-waste according to best practices • Tooling: Makers upcycle e-waste to make value-added products • Design: Makers earn money from selling the value-added products they fabricate • Enterprise: Makers build their own business cooperatives |
| USP | Integrating the informal sector into official management structures |



THANK YOU

