



THE ROAD TO  
ZERO WASTE  
EASTERN CAPE  
CONFERENCE 2015

# E-waste: The toxic legacy of the Digital Revolution



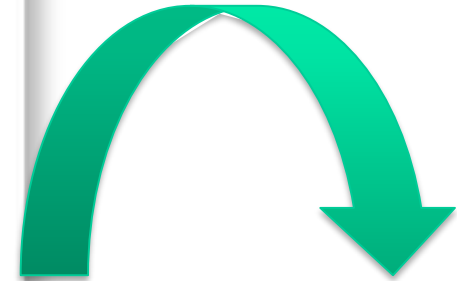
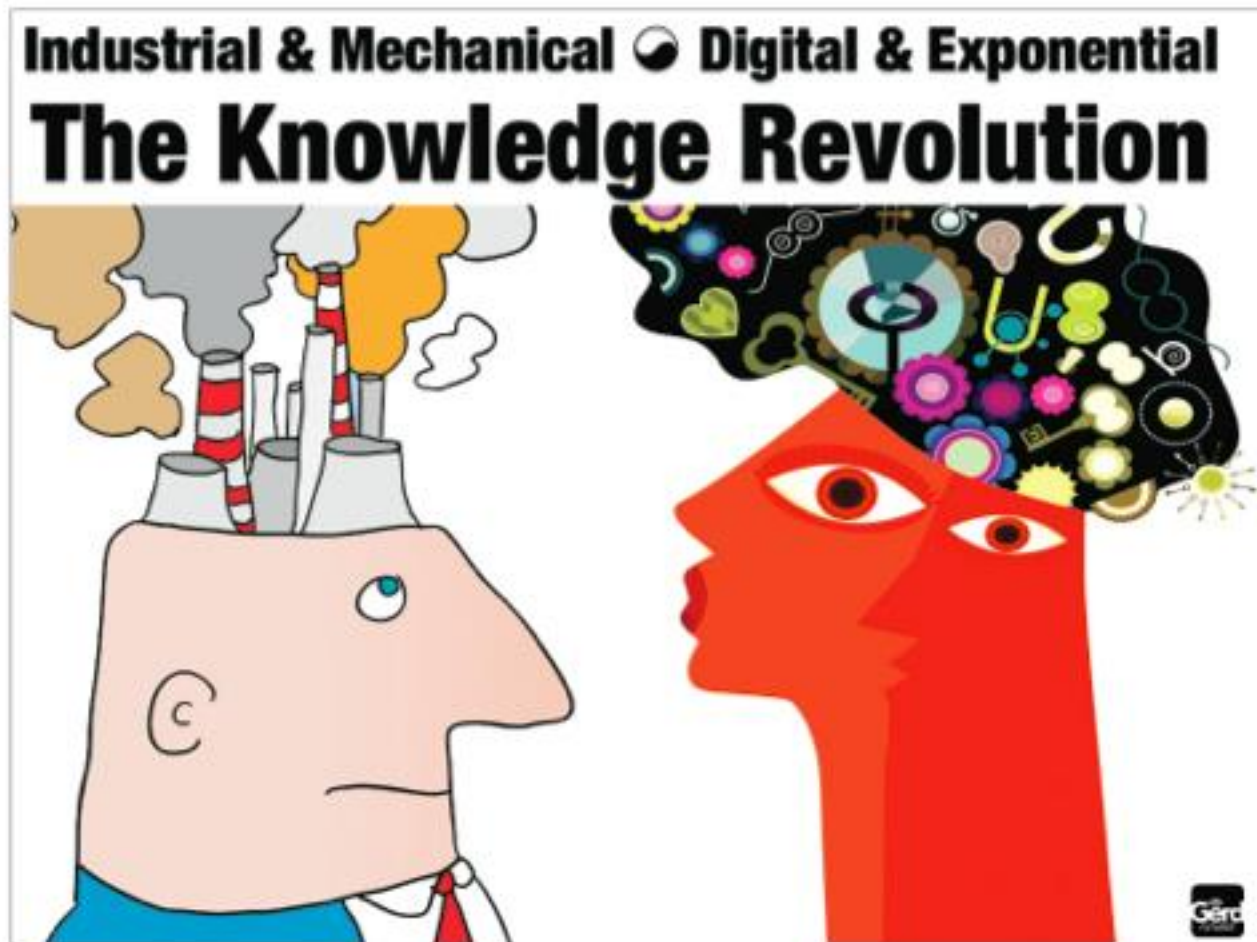
**Siphokazi Simandla**

Managing Director, Bolunga e-waste

South Africa



# The 3<sup>rd</sup> Industrial Revolution legacy



Digital Revolution from  
late 1950's brought  
along digital devices



# What is e-waste?

- **Electronic waste**, or **e-waste**, is a term for **electronic** products that have become unwanted, non-working or obsolete, and have essentially reached the end of their useful life for the owner.

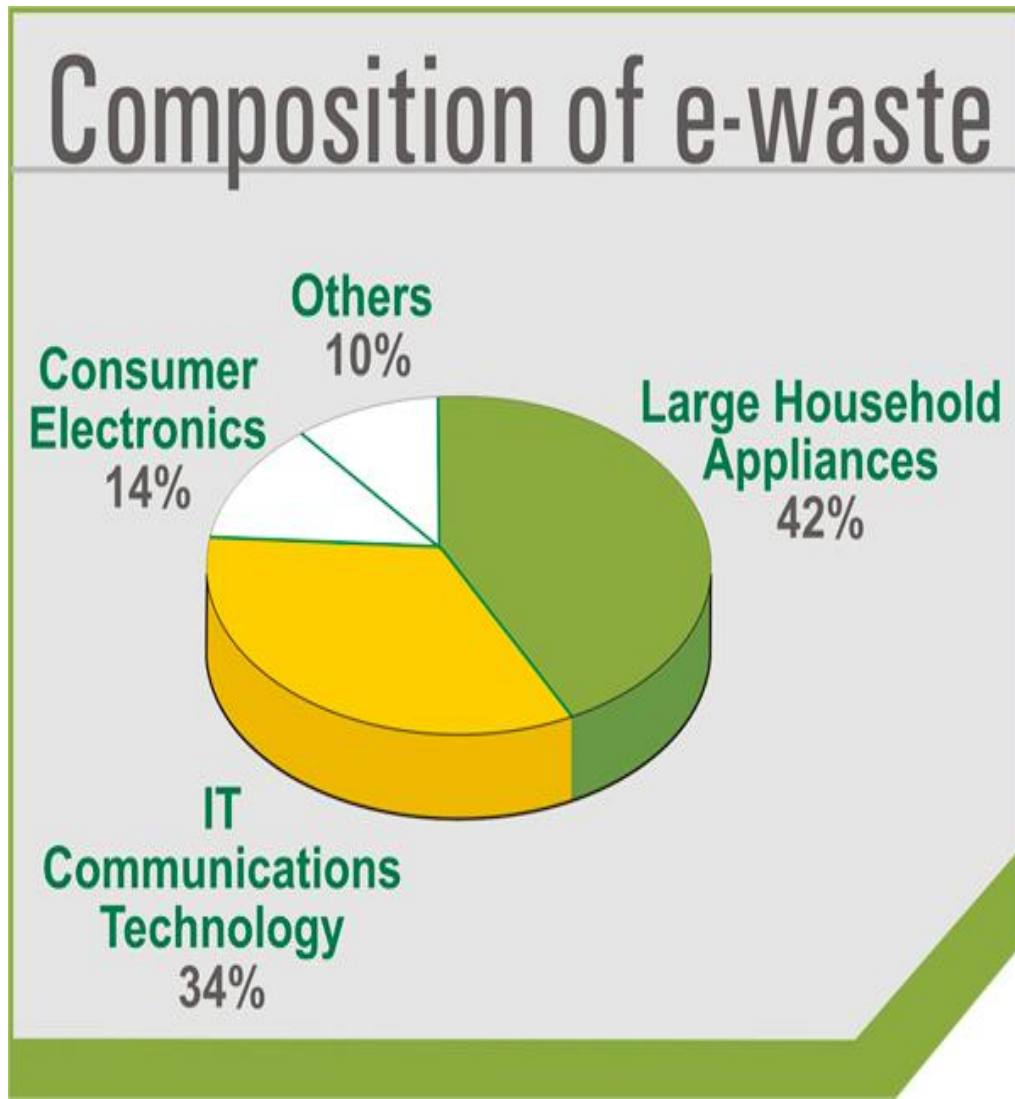




# Examples of Electronics waste

## 1. General Waste

## 2. Hazardous Waste



- Household waste category are old fridges, microwaves, Televisions and radios ;
- Office waste we have computers, printers, cables, Individual waste category are chargers, phones, tablets and
- Industrial waste category has batteries, cabling, switches and IT equipment.

# Why is it a problem?

E-Waste Toxic Components and their Damage to Human Health

Without safe recycling, most of these toxic components will end up in land fill – poisoning the soil and water



Toxic Materials	Birth Defects	Brain Damage	Heart, Liver, Lung & Spleen Damage	Kidney Damage	Nervous/ Reproductive System Damage	Skeletal System Damage
Barium		X	X			
Cadmium	X		X	X	X	X
Lead	X	X		X	X	
Lithium	X	X	X	X	X	
Mercury	X	X	X	X		
Nickel	X		X	X	X	
Palladium	X	X	X	X		
Rhodium			X			
Silver	X	X	X	X	X	

- It also contains components that do not disintegrate like plastic, metal and pc boards.
- These hazardous elements are a danger to the environment and human beings if they are not disposed responsibly.

# What can we as a society and organisations do about it?



Refurbished computers and other items can be sold at the fraction of a price of new equipment.

# What are the benefits of processing e-waste responsibly?



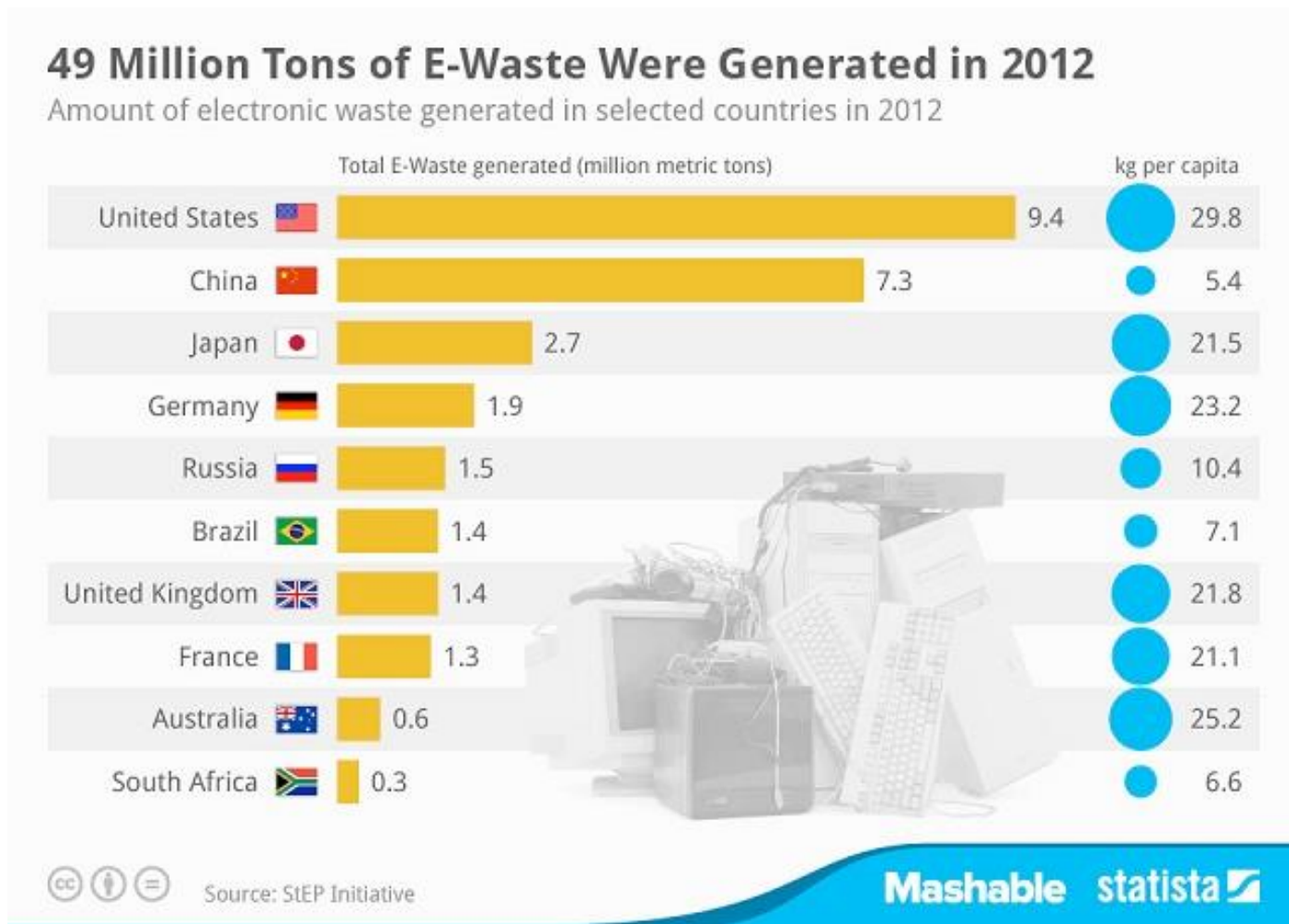
Encourages PFMA aligned Asset disposal practices that promote Clean audits.

**Job Creation**

**Creates Refurbish Market products**

# How big is the problem today?

It is estimated that electronic waste in South Africa increases by 10% each year.



2 million tonnes of electronic waste was generated in 2013 and only 300 000 tonnes was recycled. That gives us an 18% recovery rate.



# Fluorescent tube recycling



Mercury is contained  
In various types of fluorescent  
Lamps.

A proper recycling is  
necessary for each type of lamp.

# Recycling batteries



Batteries contain Cadmium

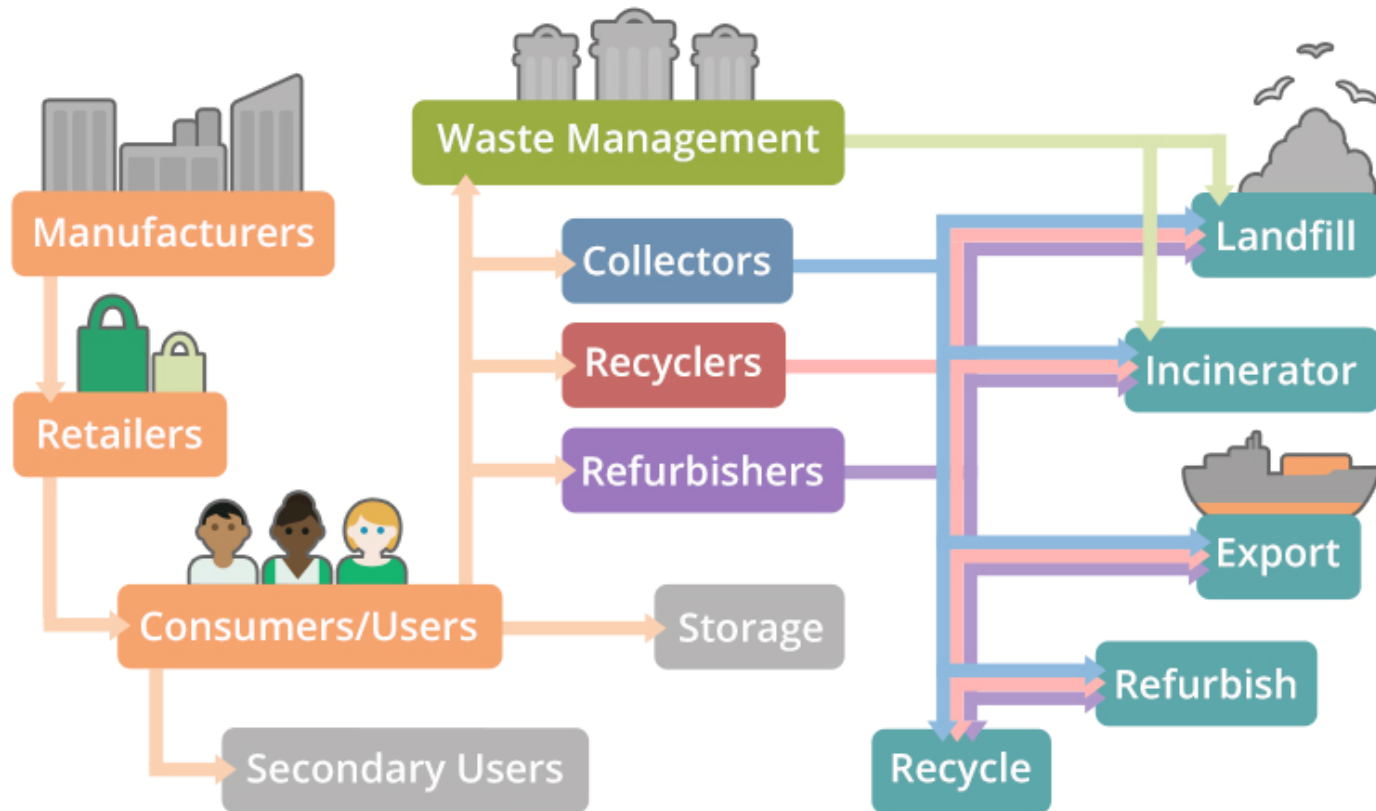
Inhalation of cadmium containing  
Fumes can result initially  
in metal fume fever but may  
Progress to chemical pneumonitis,  
Pulmonary edema and death.



# Where does Your e-waste Go?

## Lifecycle of Electronics

What happens during post productions



### Common practice :

Friends & Family ; Garage ;  
Bottom drawer; Municipal dustbin ;

### Correct practice:

Registered e-waste recycler

# Managing e-waste growth

- The key to avoid becoming buried under mountains of discarded computers, computer monitors, and televisions is the development of viable markets, policies, education and processes for recycling electronic waste.



**Reduce**



**Reuse**



**Recycle**





THE ROAD TO  
ZERO WASTE  
EASTERN CAPE  
CONFERENCE 2015

Thank you for your attention.  
Any questions?



**Siphokazi Simandla**

Managing Director, Bolunga e-waste

South Africa