



# *e-Waste Management in Lagos State*

## *The LAWMA experience*

**Paper presented at the 2-Day International  
Summit on Regulations & Management of  
e-Waste in Nigeria (Eko e-Waste Summit)**

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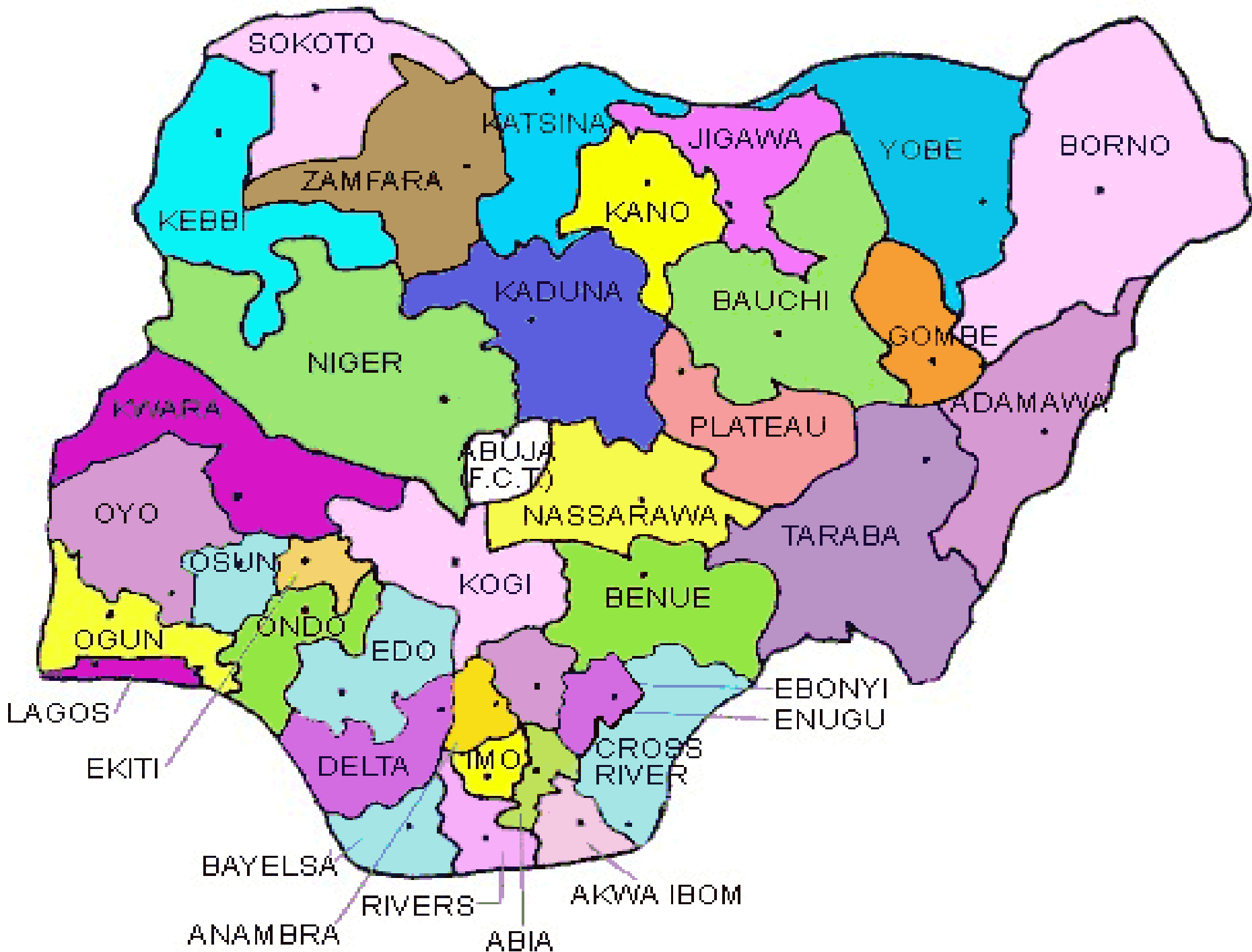
**Oriental Hotel, Lekki - Lagos.**

***Ola Oresanya***

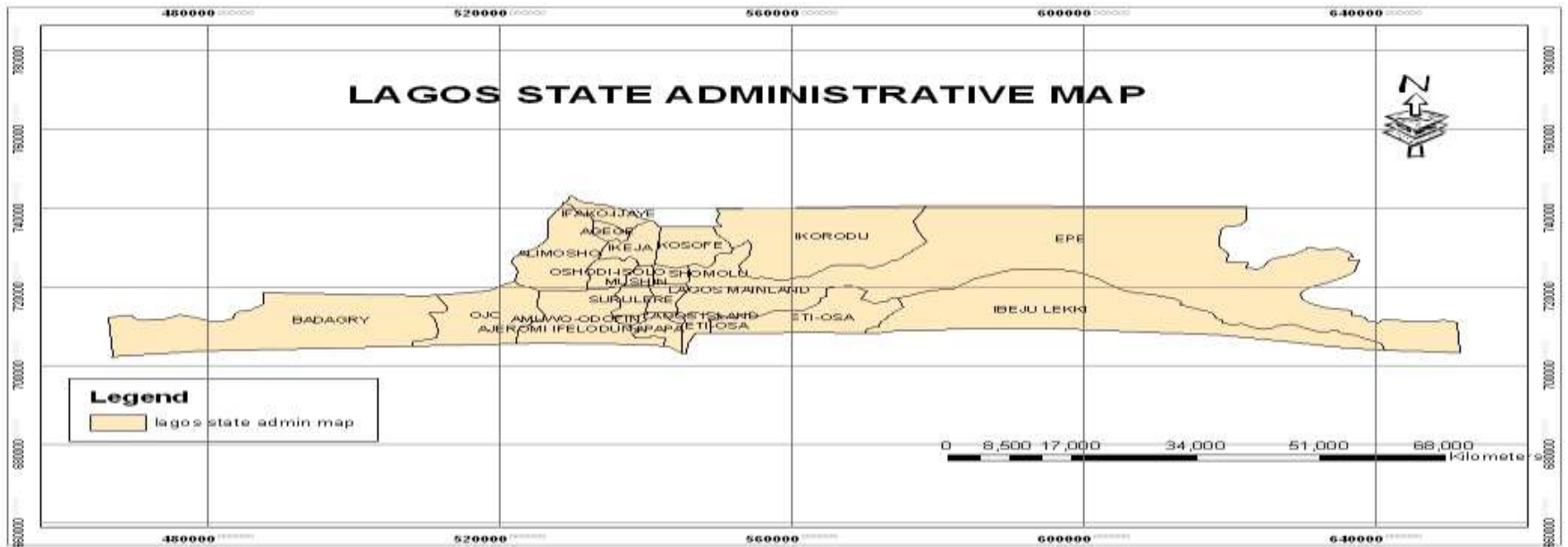
***Managing Director***

***Lagos Waste Management Authority***

**24<sup>th</sup> February, 2011**



# Lagos State At A Glance











# Preamble

- Population - about 18 Million.
- Growth rate: - 6 – 8%.
- Waste generation: - about 10,000MTPD.

- GPC - 0.5kg/person/day.
- Lagos VD - over 222veh/km.
- Nigeria VD - 11veh/km.







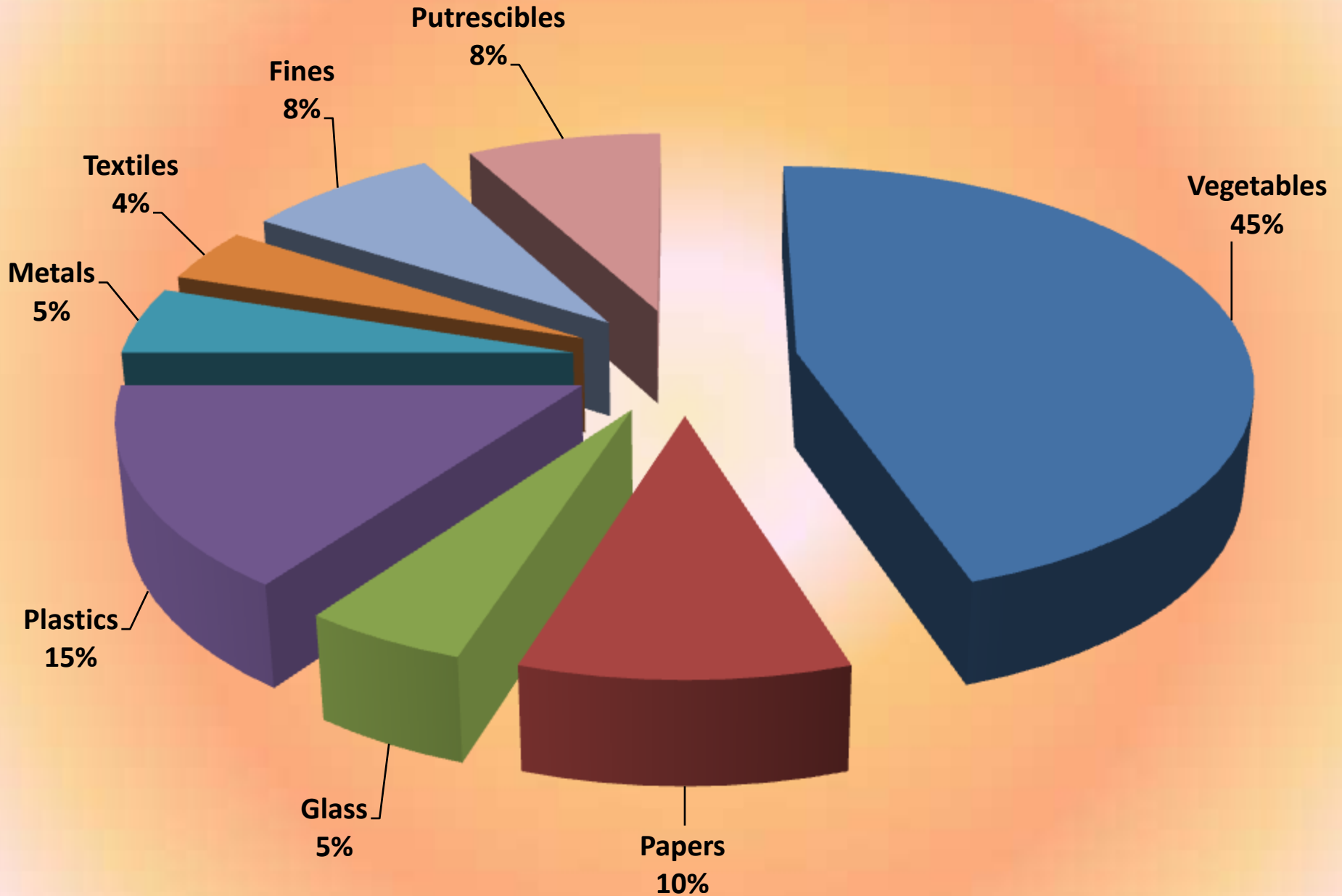
# What is e-Waste?

The standard definition of e-waste includes all end-of-life electronic products, components and peripherals such as:

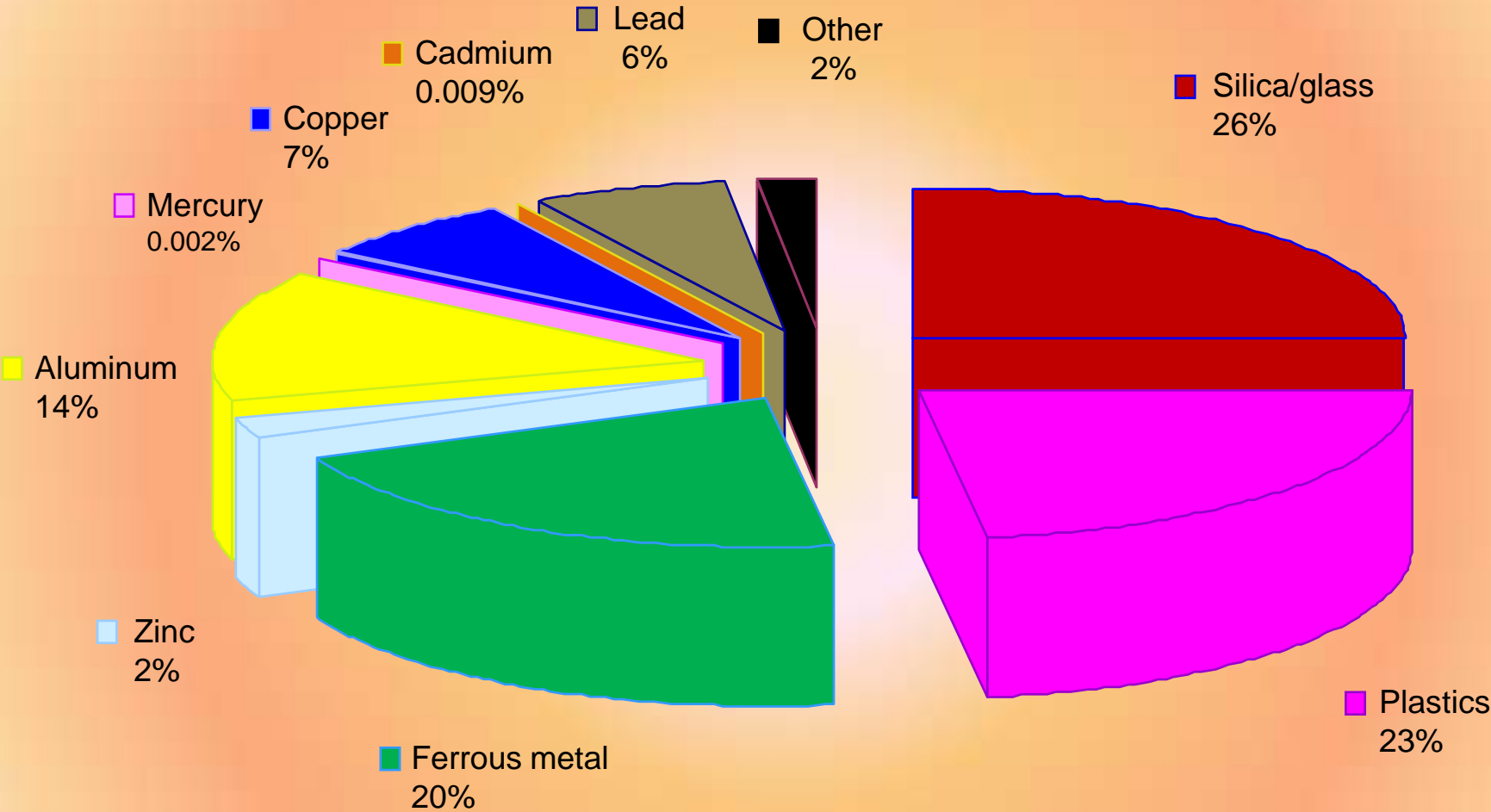
- ❖ Televisions
- ❖ Computers: Systems/Monitors
- ❖ Photocopiers
- ❖ Printers
- ❖ Central Processing Units (CPU)
- ❖ Fax machines
- ❖ PDAs, MP3 Players
- ❖ Video and DVD Players
- ❖ Mobile Phones



# Lagos State Waste Analysis



# Material Composition of Personal Computers



Source: Microelectronics and Computer Technology Corporation (MCC)



# What are the e-waste toxic components?

## COMPUTER PARTS

## TOXINS

**Monitor**



**BARIUM  
PHOSPHORUS  
HEXAVALENT CHROMIUM  
LEAD  
PLASTICS**

**Case**



**Key Board**



**Mouse**



**BROMINATED FLAME RETARDANTS  
PVC**

**Hard Drive**



**Motherboard**



**BERYLLIUM  
CADMIUM  
LEAD  
MERCURY  
PLASTICS**

**Ethernet Card**



**Memory Module**



**BERYLLIUM  
CADMIUM  
LEAD  
MERCURY**

S/N	NAME OF IMPORTER	CARGO SIZE	CONTENTS INSIDE CARGO (ALL KINDS OF ELECTRONICS USED)														PORT OF LOADING	
			(NOTE: ITEMS LIKE FREEZER, FRIDGE,FAN, MOBILE PONES, POWER CABLES, COMPRESSORS,SPEAKERS,INVERTERS ETC, WHICH COULD NOT BE IN TABLE ARE REP. BY 'S/P&OTHERS' i.e SPARE PARTS AND OTHERS.															
			TV	MNT R	PRIN-TERS	DVD	LPTP	BLND ERS	RADIO S	KETTLE S	FILM S	PRES SING IRON	VDEOC	GAS.	COMP	MICR O.W	CAR ELECT-RONICS	
1	BROKER NIG, LTD	20 FT	45	100	50		70								300			HAMBU RG
2	MAMUDA ENT.	20 FT		150		56										670		HAMBU RG
3	ZENITH BANK	20 FT						78		78	900							HAMBU RG
4	IYKESON INVESTMENT COY	40 FT	74	57	57		100	45	35				70	53	25	300	71	HAMBU RG
5	BETHEL INVESTMENT	40 FT	186	89	30	114			50	50	80					210		
6	MARY BAZUAYE	40 FT		75			130				120		57	56		430		ROYDO N SUSSEX
7	GANACO INVT. LTD	40 FT	150	90	78		98				45							HAMBU RG
8	MARY BAZUAYE	40 FT	280	92		300	87	120				250	60	71		430	1000	
9	PASLINE IND. LTD	40 FT	1162	73	90	70			99			180				200		HAMBU RG
10	NNANNA GOD INVEST. LTD	40 FT	280		25		70			800	67	120	40	50			567	SUSSEX, UK
65																		
120																		
165																		
	<b>TOTAL NUMBER OF ITEMS</b>		<b>14,761</b>	<b>7,636</b>	<b>11,759</b>	<b>12,781</b>	<b>5,568</b>	<b>5,684</b>	<b>12,552</b>	<b>8,091</b>	<b>16,606</b>	<b>6,725</b>	<b>3,042</b>	<b>4,944</b>	<b>33,969</b>	<b>6,374</b>	<b>65,216</b>	

## 4-day Survey of 175 Containers at Tin-Can Island Port in June 2010.

Items In Containers	TV	MNTR	PRNT-PHOTO CPY	DVD	LPTP	BLNDR	RADIO	KETTLE	FILM	IRON	VIDEO	GAS.C	COMPU	MICRWV	S/P OTHERS
Total Items in 175 Containers	14,761	7,636	11,759	12,781	5,568	5,684	12,552	8,091	6,606	6,725	3,042	4,944	33,969	6,374	65,216

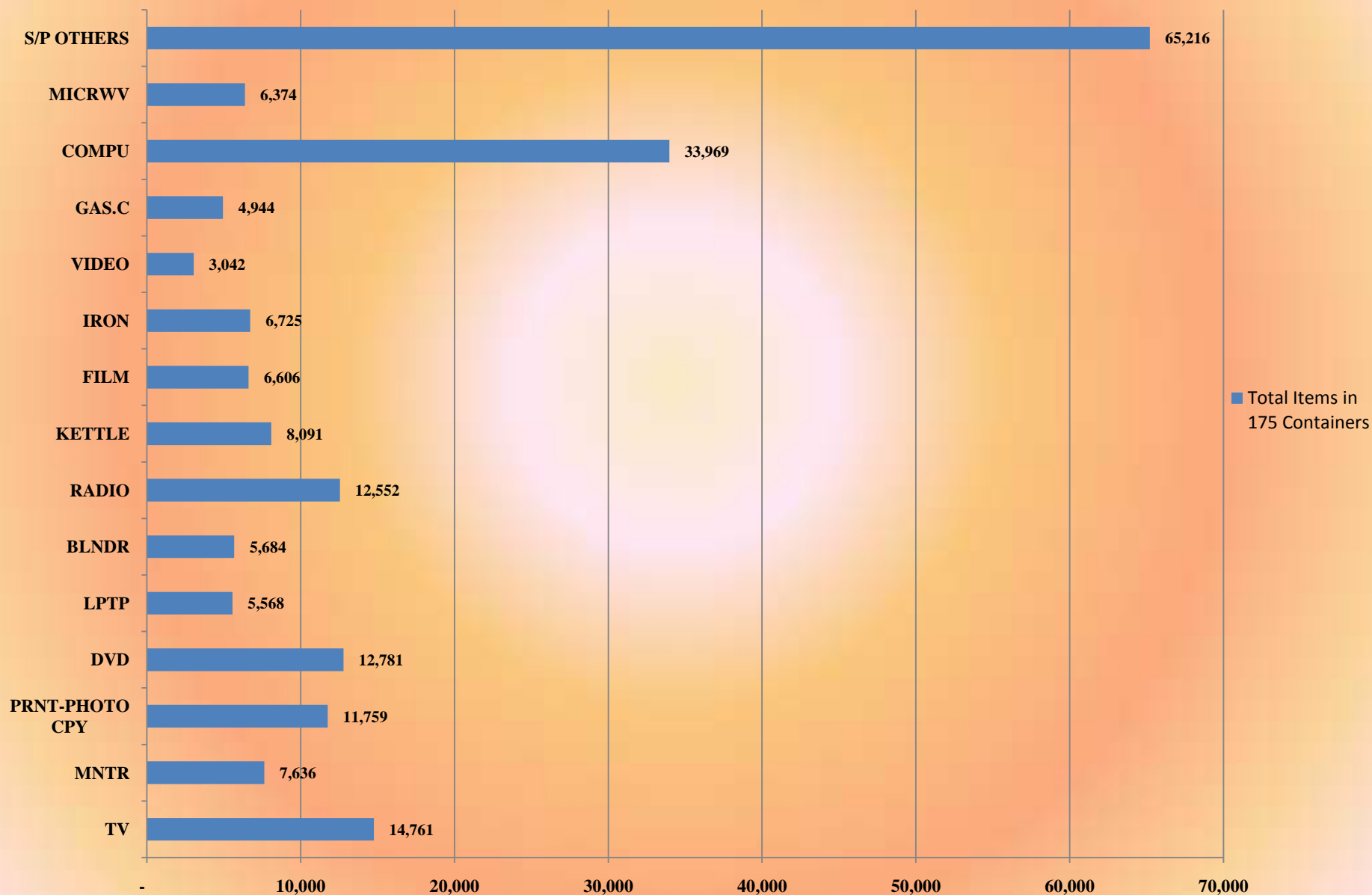
(Note: Items Like freezer, fridge, fan, mobile pones, power cables, compressors, speakers, inverters etc, that could not be in Table are rep. by ‘**S/P OTHERS**’ i:e spare parts and others).

About **4,500** containers from **North America and Europe** pass through the Lagos Ports each month i.e. an average of **180 daily**.

*Source: Nigeria Customs-Tin Can Island & Apapa Ports*

# 4-day Survey of 175 Containers at Tin-Can Island Port in June 2010

## Total Items in 175 Containers





# Quick Facts & Stats on *e*-waste in Lagos

- An estimated **53,600 metric tones** of *e*-waste waste dumped at the Dumpsites annually.  
This includes more than:
  - 860,000 computers
  - 530,000 printers
  - 900,000 monitors and
  - 480,000 TVs
- An estimated 500 containers of used electronics & computers enter the Lagos Ports every day.

*Source: Nigeria Customs-Tin Can Island & Apapa Ports*

# Container Arriving at Alaba Int'l Market





Classified as imported electronics, but Used

















Classified as imported electronics, probably “Junk”















Courtesy: Basel Action Network (BAN)



# Unconventional e-Waste Collection and Processing





# Unconventional Resource Recovery



Courtesy: Basel Action Network (BAN)





**Courtesy: Basel Action Network (BAN)**



# Current *e-waste* Material Recovery Process









# Projected Collection and Processing





# *e*-Waste Management Strategy

The Lagos State stakeholders, include:

- ❖ Ministry of Environment, LAWMA, LASEPA etc.,
- ❖ Manufacturing Association of Nigeria (MAN)
- ❖ Federal Ministry of Environment,
- ❖ Computer Village Association Ikeja,
- ❖ Alaba International Market Association
- ❖ Individuals from Academia
- ❖ Market Associations
- ❖ Corporate bodies and Other stakeholders

# Collection Channels

Three major *E*-waste collection channels to consider:

## ❖ Municipal collection sites

Consumers and/ or businesses can leave WEEE/ E-waste at municipal sites

## ❖ Recycling Banks

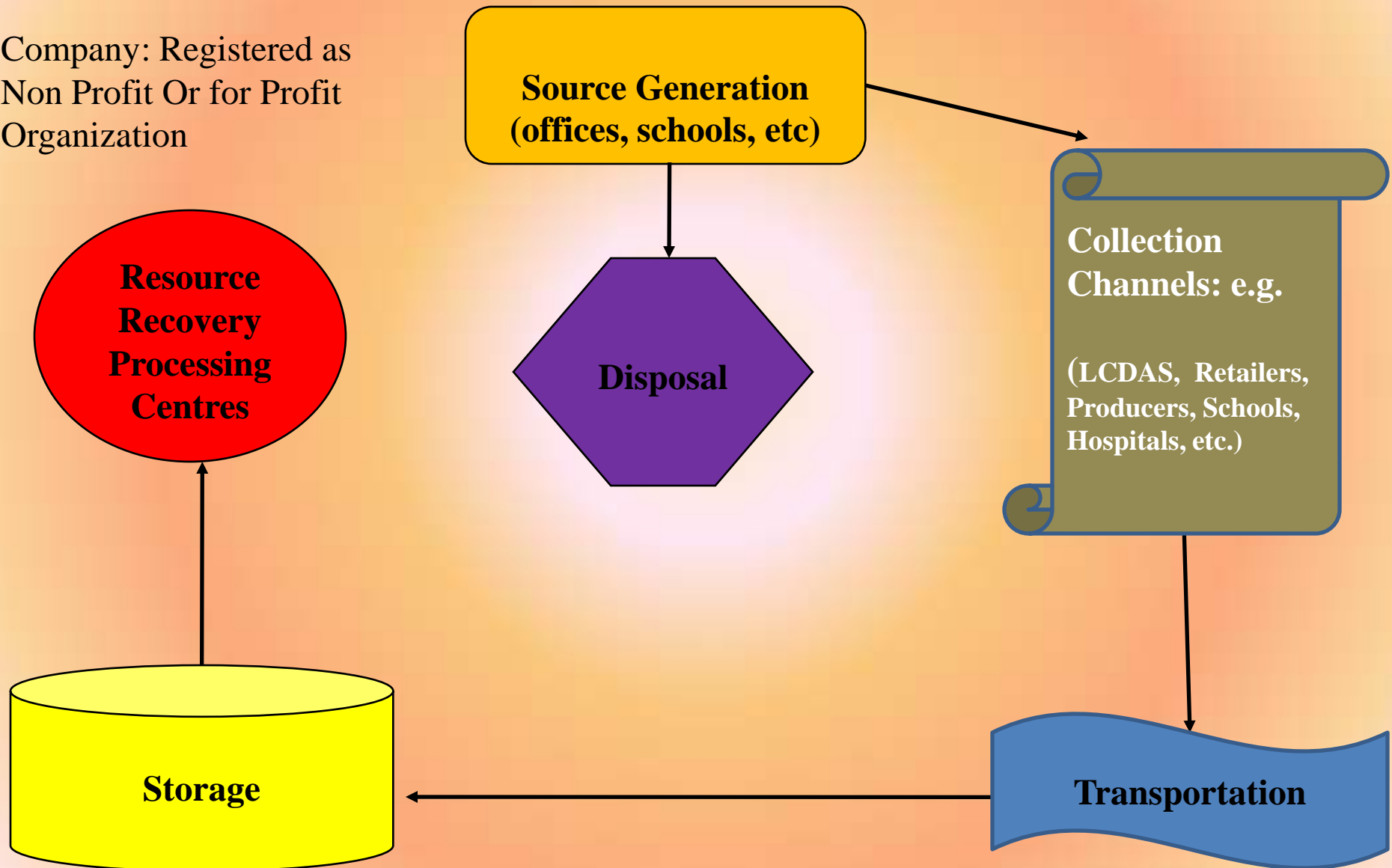
Consumers can take back E-waste to retail stores that distribute similar products

## ❖ Buy-back.

Usually applies to larger commercial equipment and operates on the principle of “new equipment replacing the old ones”.

# Waste Stream & Diversion: *e*-Waste Management Strategy

Company: Registered as  
Non Profit Or for Profit  
Organization







Welcome To  
**OLUSOSUN**  
Landfill Site, Ojota, Lagos State



# Olusosun Landfill Site (2010)



May 2010



# Recycling Bank







# Oshodi Transfer Loading Station





# Medical Waste Treatment Plant, Oshodi





# ADVOCACY





# Street Captains









# Which products are eligible for collection at a Municipal *e*-Waste Collection Depot

## Eligible Electronics:

- ❖ Televisions
- ❖ Computer systems/monitors
- ❖ CPUs and servers (including mouse, keyboard, cables, speakers)
- ❖ Laptops and notebook computers
- ❖ Printers including multi-function printers





*Dolphin / Kubirin Loop* **Welcome to LAGOS**



THANK YOU FOR LISTENING



Contact us @

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