



**RECYCLE  
100**

# **9<sup>TH</sup> INTERNATIONAL SECONDARY LEAD & BATTERY RECYCLING CONFERENCE**

**HILTON KOTA KINABALU**



# Battery scrap recycling in Africa

An Example of Circular Economy

*Presented By*

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# AFRICA at a Crossroads



19% of world's population: Africa is home to nearly 1 in 5 people on the planet.



Every 6th car in Africa for every 1,000 people—immense potential for automotive and mobility markets.



Rapidly approaching status as largest e-waste generator by 2028.



Youth-driven demographic - over 50% under age 25 in many countries.



*“Africa is not just a consumer of technology; it is emerging as a steward of global sustainability.”*

# Recycling and Resource Potential

- Africa holds 70%+ of cobalt, platinum, tantalum; 60% manganese reserves.
- Huge potential for urban mining (circularity) via e-waste, ULABs.
- Global supply chains are shifting making Africa a critical region.



# AFRICA: Circular Economy in Action

Over 85% of global lead demand is from battery;  
Batteries are a true “**circular economy**” product



## **Africa's new wave:**

Investment in closed-loop recycling,  
partnerships with automakers and utilities



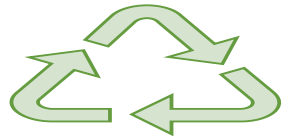
## **Corporate responsibility**

extends to education, healthcare, and  
community partnerships

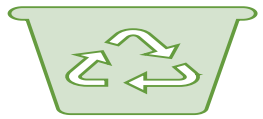
# Market Forces & Driving Trends (2025+)



Stringent **environmental regulations** & disposal norms



Surging activities for **battery recycling**



Shift from Informal recycling to formal **Lead Recycling**



**Growing awareness** of the health risks from unsound recycling; regulatory clampdowns on the informal sector



***“2025 is a turning point;***

*Africa's battery sector is modernizing fast, led by policy, technology and new circular business models that make sustainable recycling integral to economic growth.”*

# Why Africa's Lead Recycling Matters Now More Than Ever

Africa's recycled lead market forecasted to grow at 7% CAGR (2025–2031), the present recycled market is estimated 600,000 MT Lead

Africa's lead-acid battery market is forecast to grow from \$2 Bn to \$3.5 Bn by 2031 --- The estimated CAGR is ~ 7%.

Rising demand from automotive and renewable energy sectors

Pivot away from primary mining, sustainability a top policy driver

Lead recycling sector poised to fuel Africa's economy with green jobs, export gains and a lowering environmental issues.

*“Lead recycling today is not just about sustainability; it's about securing Africa's energy future, protecting public health and driving economic progress through responsible industry leadership.”*



# PROBAMET: Key Facts at a Glance

*Partnership for Responsible Battery and Metal Recycling in Nigeria.*

What	<ul style="list-style-type: none"><li>• National initiative to improve safe recycling of Used Lead-Acid Batteries (ULABs) and metals.</li></ul>
Why	<ul style="list-style-type: none"><li>• Protects health &amp; environment from unsafe battery recycling.</li></ul>
Who	<ul style="list-style-type: none"><li>• The initiative is funded by Germany's Federal Ministry for Economic Cooperation and Development (BMZ) and supported by GIZ (federal enterprise owned by the German government, it implements international cooperation projects for sustainable development and education).</li></ul>
How	<ul style="list-style-type: none"><li>• Upgrades recycling standards via training &amp; technical support.</li><li>• Certifies responsible recyclers; promotes compliance &amp; better market access.</li><li>• Supports policy reform &amp; government enforcement.</li></ul>
Impact	Safer recycling, reduced pollution, better health outcomes.

*Nigeria  
is the only  
African country  
with  
**PROBAMET**,  
but serves as a  
model for  
others.*

# Rise of Formal Recycling in Africa

*Support from UNEP, ILA, Pure Earth and national governments.*

*Countries Leading the Way*

- *South Africa*
- *Ghana*
- *Nigeria*
- *Egypt*
- *Senegal*
- *Mozambique*
- *Tanzania*



Formal units increasingly replacing backyard recyclers.

# AFRICA: Business Challenges

Scattered Raw Material & Scrap  
Availability

Lack Of Safety For Working  
Professionals

Limited Global  
Connectivity

High Incidence Of Theft & Illicit  
Trade

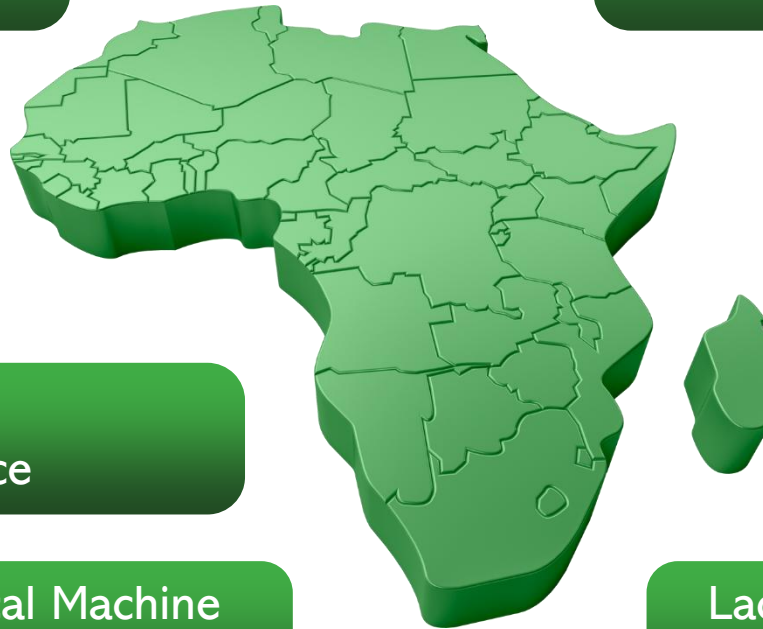
Shortage Of  
Skilled Workforce

Inadequate Industrial Infrastructure

Limited Availability Of Critical Machine  
Components & Chemicals

Lack of scrap retention policies leads to  
local recycling challenges

Substandard Living Conditions For  
Workforce



# AFRICA: Logistics & Finance Challenges



## Logistics & Supply Chain

- Limited vessel availability
- Infrequent shipping schedules
- Complex documentation.

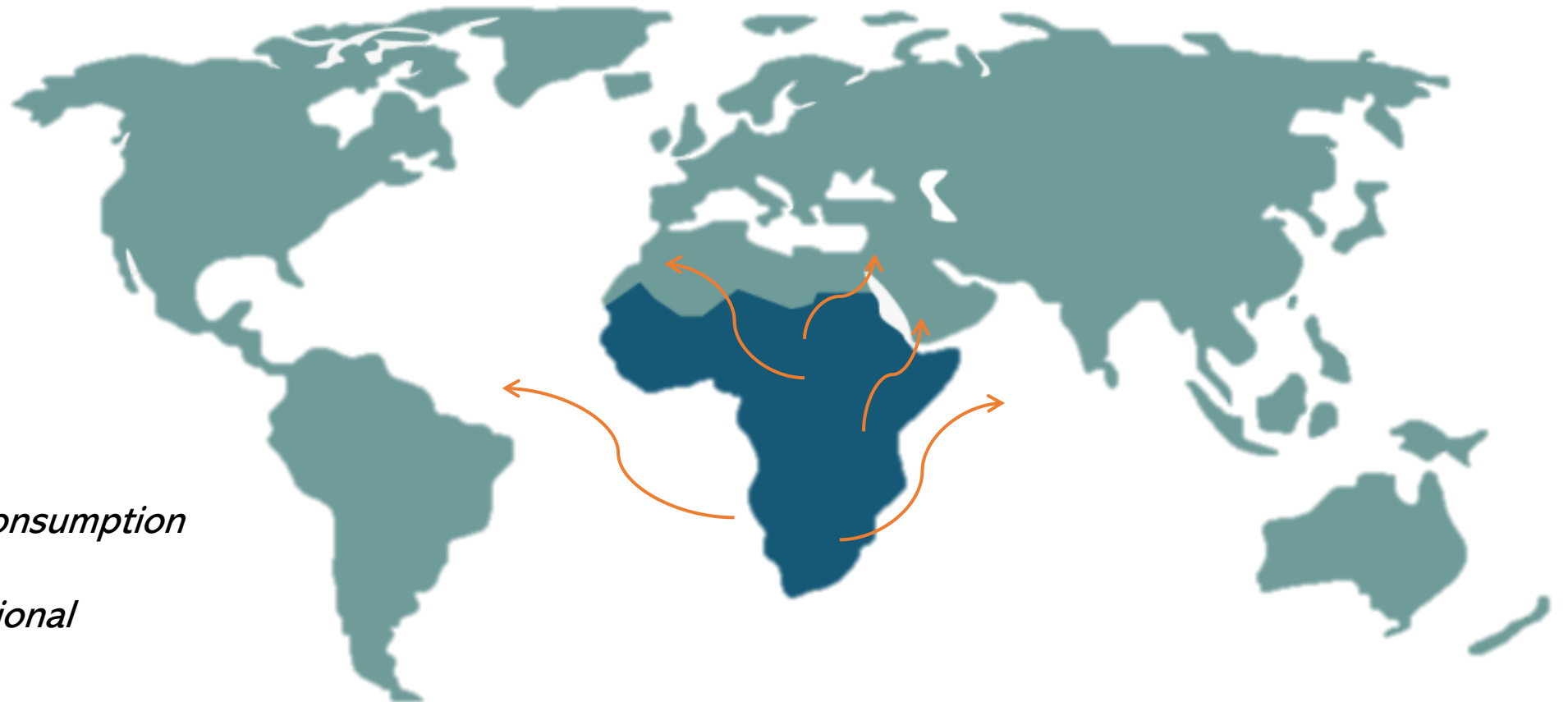


## Banking & Finance

- Shallow financial depth
- Reliance on non-African systems,
- Low awareness of global financing trends,
- **High volatility in currency exchange rates and transaction security concerns.**

# Global Reliance

With minimal domestic consumption, Africa's metal production relies heavily on markets in Europe, Asia, and America.



- *Limited Domestic Consumption of Produced Metals*
- *Reliance on International Markets for Offtake*

Africa

# Gravita in Africa

# Gravita: Highlights

Presence since  
**2003**

**150,000 MT+**  
material recycling  
capacity

Closely working with **EPAs**  
, **UNEP** and **ILA**

Recycling of **Lead,**  
**Aluminium, Plastic**  
and **Rubber**

**70%+** local  
employment, skills  
training and best-practice  
transfer to partner  
companies

Among the **largest and**  
**fastest-growing recyclers,**  
with operations in key  
West/East African states

**Awareness Campaigns** for  
Health, Safety and  
Environmental Protection

Exporting to **US, Europe,**  
**India, S. Korea, China,**  
**Turkey and Southeast**  
**markets**



# AFRICA: What We Are Doing





# Gravita In Action



Senegal



Mozambique



Tanzania

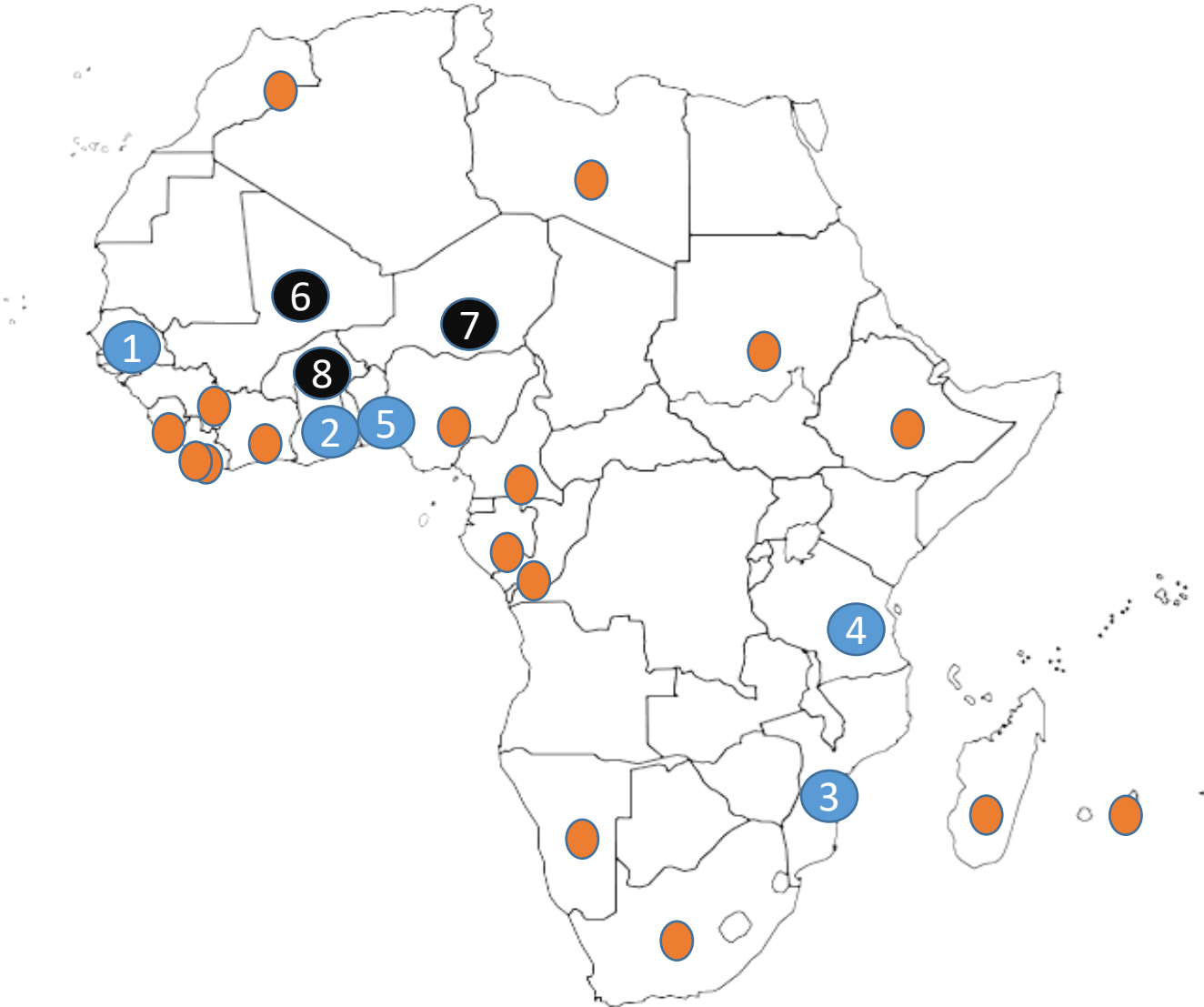


Ghana



Togo

# AFRICA: Our Spread



- |                       |   |
|-----------------------|---|
| 1. Senegal            | ... Recycling location & Scrap Collection |
| 2. Ghana              | ... Recycling location & Scrap Collection |
| 3. Mozambique         | ... Recycling location & Scrap Collection |
| 4. Tanzania           | ... Recycling location & Scrap Collection |
| 5. Togo               | ... Recycling location & Scrap Collection |
| 6. Mali               | ... Scrap Collection                      |
| 7. Niger              | ... Scrap Collection                      |
| 8. Burkina Faso       | ... Scrap Collection                      |
| 9. Associate Partners |   |



# New Era of Smelting Operations in Africa





# Refining Operations & Process Automation



# Pollution Control Systems & House Keeping





# Employment



*More than 70% employees are locals , Skill development*



# Developing Relations





# ILMC Visit & Process Bench Marking





# ILMC Visit & Process Bench Marking



# Gravita's Way Forward in Africa



**Process Benchmarking in collaboration with the ILMC**

**State-of-the-Art Processing Plants across Africa**



**Partnering with Country-Specific EPAs**



# Gravita's Way Forward in Africa



**Awareness Campaigns for Responsible Hazardous Scrap Collection**

**Renewable/Alternative Energy deployment**



**Skill Development Programs for Local Communities**



The Journey Continues...

**Together, We SAVE THE PLANET.**

**Thank You !**