

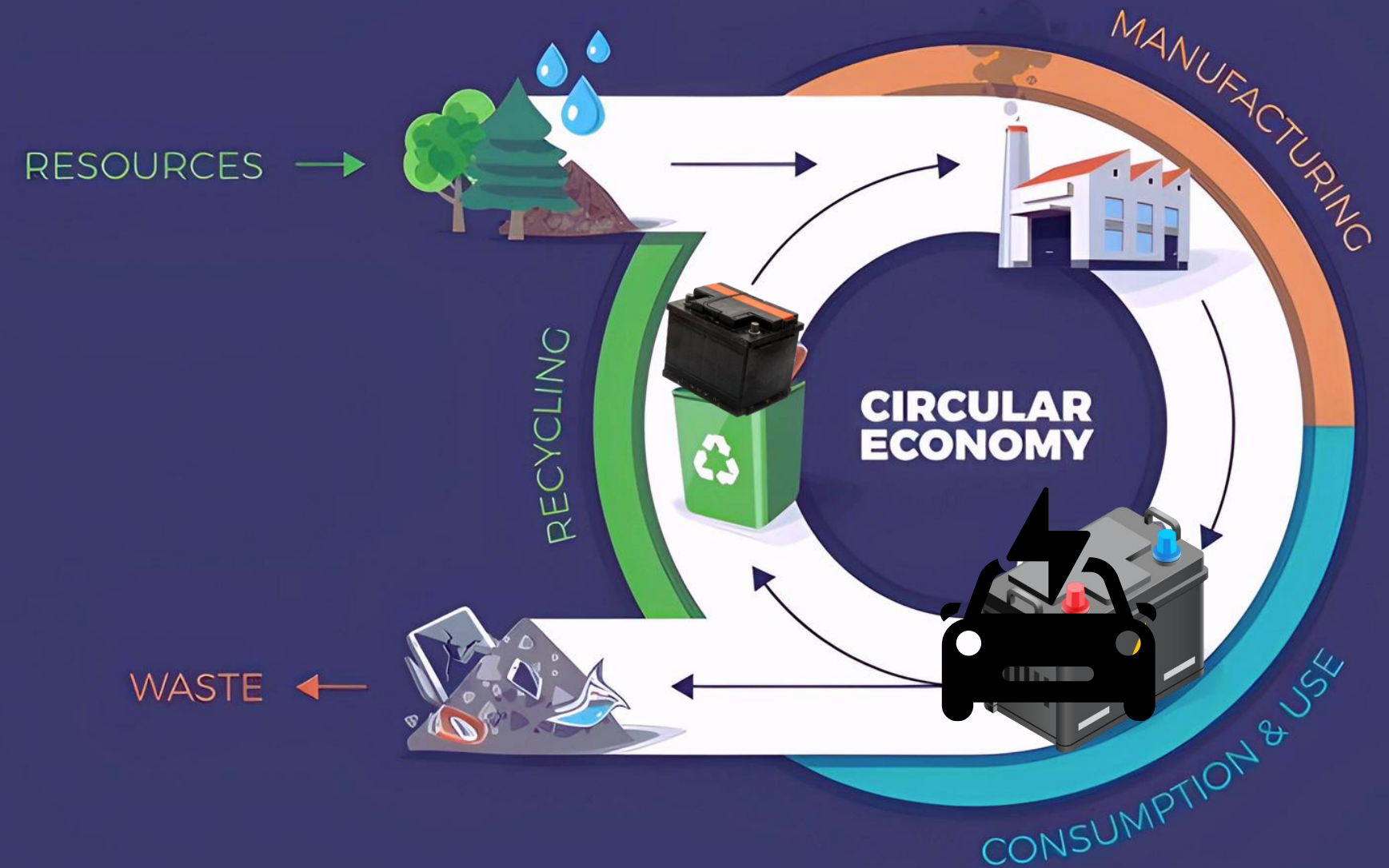
# LEAD RECYCLING IN INDIA

Market Update | Green Practices| Gravita's Promise

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Director, Gravita India Ltd



# Presentation Roadmap

**LEAD MARKET OVERVIEW**

**INDIA LEAD-ACID BATTERY INDUSTRY**

**INDIA'S BWMR & EPR RULES**

**GRAVITA'S LEADERSHIP**

# The India Lead Market

**1.5m**  
MT

Lead Demand

**4%**

CAGR

**85%**

Lead Comes  
from Recycling

**Top 5**

Among world's  
secondary lead  
production



## Lead Demand

Lead demand in India is expected to grow at a CAGR of ~5%, the present market size is 1.5 Million MT.



## Secondary Market

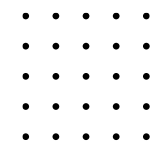
The secondary lead market is expected to take major share of the growth.



## Primary Lead Market

The primary lead is expected to remain more or less same levels (~ 0.25 Million Mt).

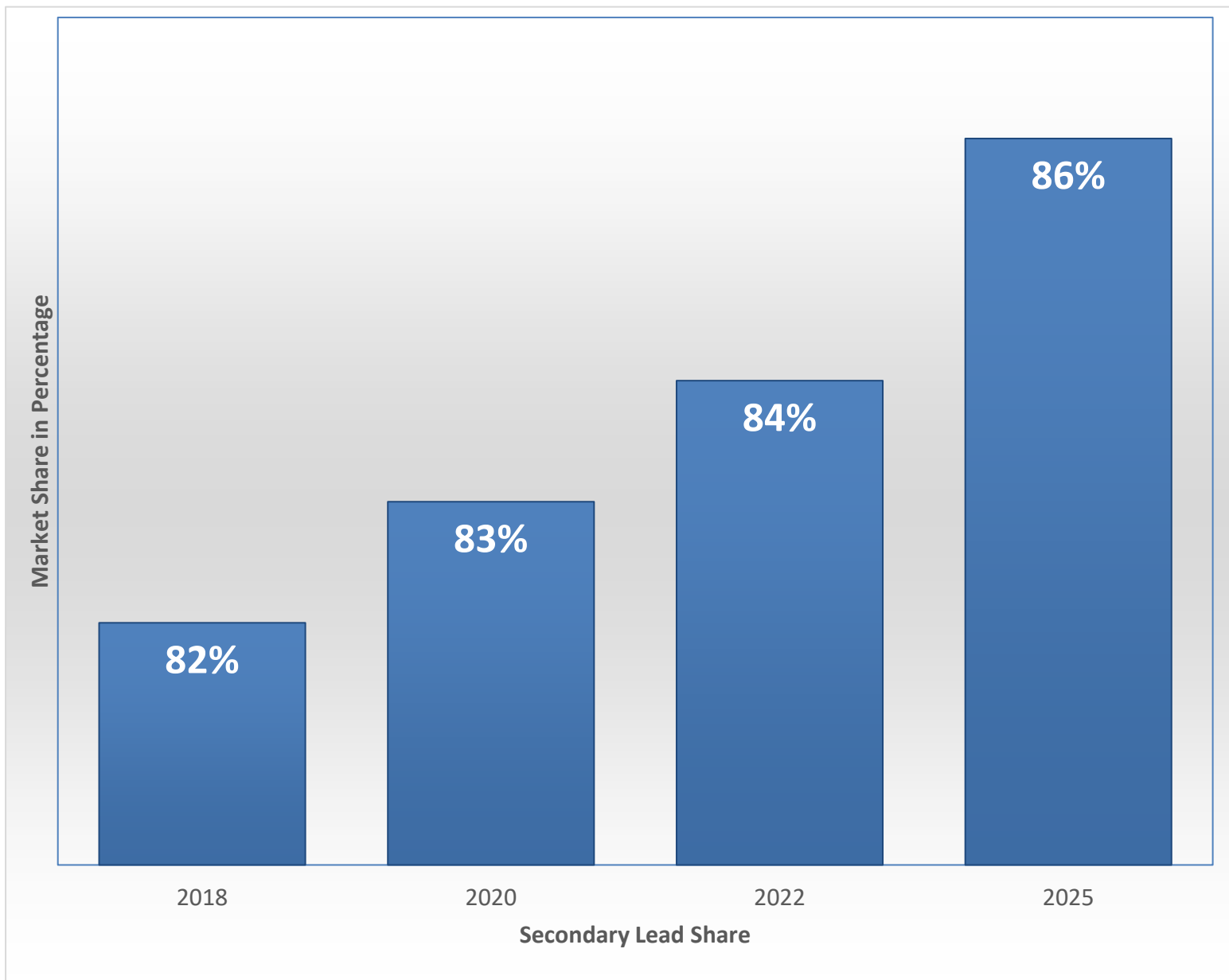
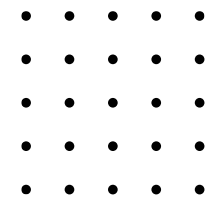
# India Market Outlook



Domestic lead demand is set to grow through 2031, anchored by lead-acid batteries across SLI (passenger/commercial vehicles, 2W), e-rickshaws, UPS/inverters, telecom, data centers, and industrial uses, supported by expanding automotive parc, back-up power needs, and replacement cycles.



# Recent Trend – Secondary Lead



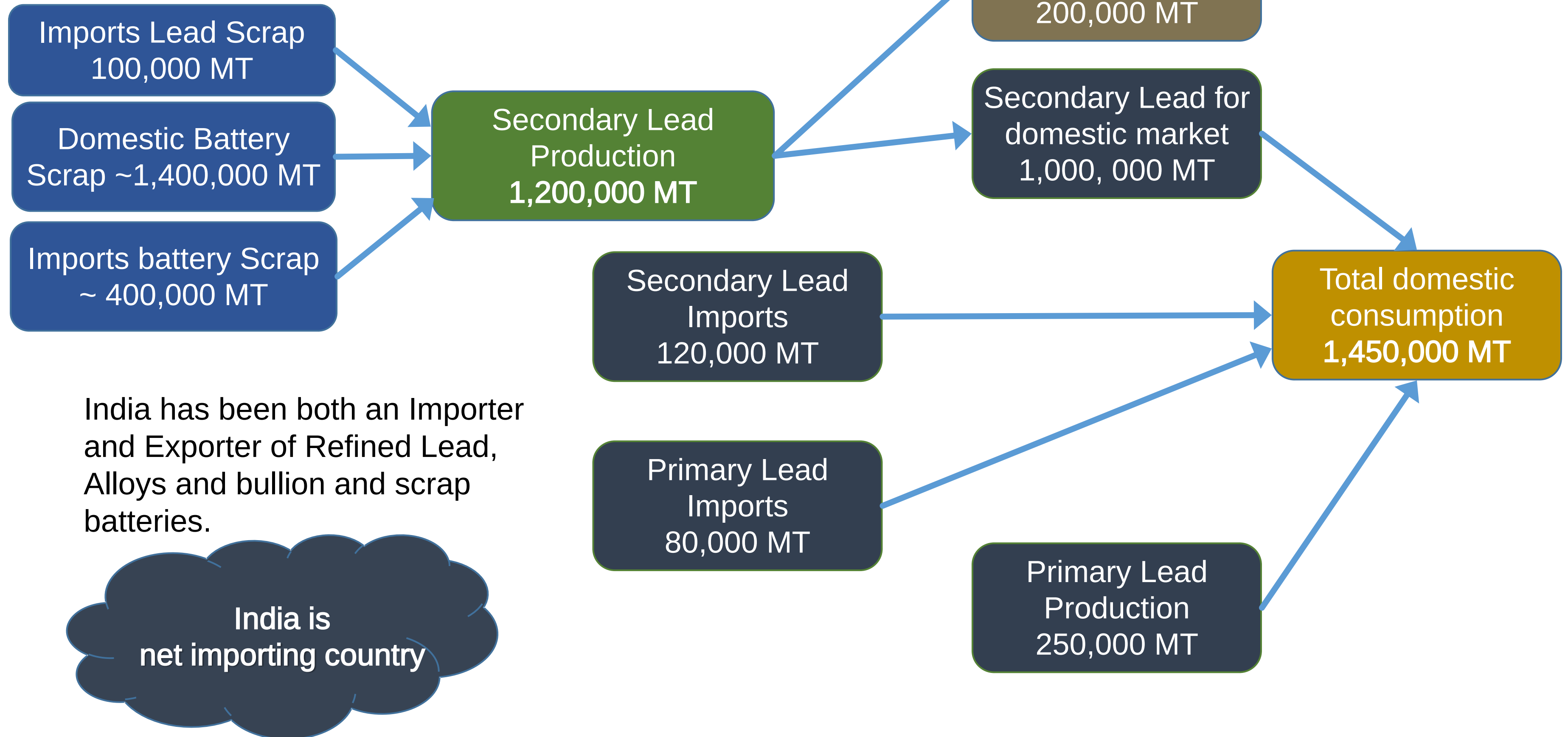
✓ **Primary Lead** - HZL is the only producer, importing from Korea Zinc as well

✓ Government initiatives such as Swachh Bharat Abhiyan, Vehicle Scrappage Policy (ELV), BWMR and EPR are going to boost the recycling industry.

✓ **Secondary Lead Market** is growing @5% CAGR

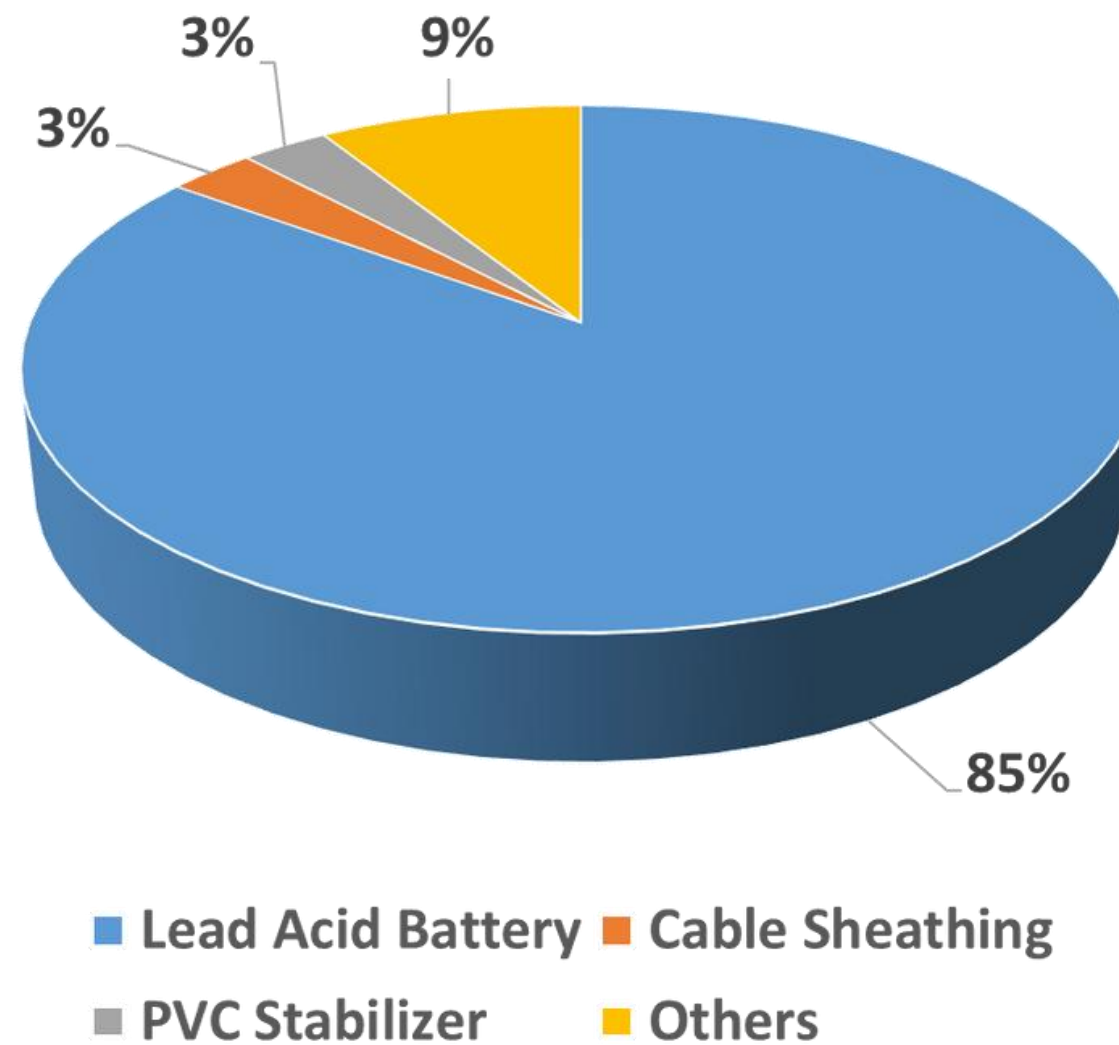
✓ Acceptance of secondary Lead have increased for varied application

# India Lead Statistics



# Major Lead Applications

**Lead-Acid  
Batteries**  
Largest  
consumption  
segment



**Cable  
Sheathing**  
Emerging area  
with growing  
demand

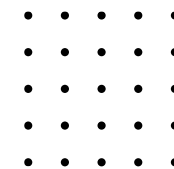
**Both primary and secondary lead widely  
accepted in LAB market**

# India Lead-Acid Battery Industry

India's lead-acid battery market is about \$5Bn and is estimated to reach \$7Bn by 2033

## Potential growth is expected from

- Automobile Sector
- Telecom infrastructure
- Renewable energy- wind and solar
- E-tricycles
- Home & Office power backup systems



# India's Circularity Move

India's scrap battery recycling market is scaling to a new levels - unlocking growth, jobs and innovation.

Government launched two modern, pro-growth frameworks to match this momentum:

- **BWMR 2022** - the unified battery waste rules.
- **EPR** - producer-led circularity, built on accountability and traceability.
- **End-of-Life Vehicles (ELV) Rules, 2025** - promote waste reduction, material reuse, disposal, recycling and management of End-of-Life (EOL) vehicles.

India's BWMR and EPR rules formalize battery collection, mandate producer responsibility, curb informal recycling, and channel end-of-life batteries to compliant smelters; boosting secondary lead output, improving environmental safeguards, and strengthening circular, reliable domestic supply.

# BWMR 2022

## (Battery Waste Management Rules)

Consolidate and modernize India's battery waste regulation across all chemistries; drive safe collection, recycling, and circularity through Extended Producer Responsibility (EPR).

### ➤ Key Stakeholders

Producers (makers/importers/brands),  
Recyclers/Refurbishers, Bulk  
consumers/distributors.

### ➤ Why It Matters

Boosts secondary raw materials (e.g.,  
lead), improves ESG, formalizes  
recycling, reduces environmental risk.

### ➤ Core Obligations

- EPR registration and annual targets by chemistry/weight.
- Free take-back; collection points and reverse logistics.
- Channel only to registered recyclers; ban on informal processing.
- Meet recovery efficiencies; upload data/certificates on the portal.

### ➤ Enforcement

- Environmental Compensation (for target shortfall/non-compliance).
- Suspension/cancellation of registrations; legal action possible.

# Extended Producers Responsibility (EPR)

Policy requiring producers to ensure end-of-life collection, recycling/refurbishment and environmentally sound management of products they place on the market.

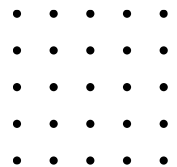
Ensures circularity and material security (e.g., secondary lead), reduces environmental risk, elevates ESG and brand trust, and formalizes the recycling ecosystem.

## ● Key Stakeholders

- **Producers:** manufacturers, importers, brand owners of batteries (all chemistries).
- **Bulk Consumers:** Industries.
- **Recyclers/Refurbishers:** registered entities meeting norms and recovery efficiencies.

## ● Key Obligations

- Register on national EPR portal; obtain/maintain authorization.
- Fulfil annual collection and recycling/refurbishment targets (by chemistry/weight).
- Provide free take-back; establish collection points and reverse logistics.
- Channel only to registered recyclers; secure recycling certificates and mass-balance records.
- Report periodically on quantities placed on market (POM), collected, treated, and recovered.



# ELV Rules 2025

## (End-of-Life Vehicles Rules)

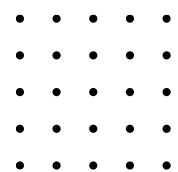
Encourage recycling/reuse of vehicle components, reduce raw material demand, minimize pollution and support a circular economy.

### ➤ Key Stakeholders

- **Producers** - Vehicle OEMs/importers
- **Registered Vehicle Owners** - Individuals and fleets/bulk consumers (>100 vehicles)
- **Registered Vehicle Scrapping Facilities** (RVSFs)
- **Recyclers/Refurbishers/Co-processors**
- **Regulators/Platforms** - CPCB/State Boards, ELV online portal

### ➤ Core Obligations

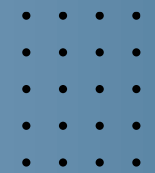
- **Producers (EPR)**: Meet annual ELV collection/scrapping targets; procure and redeem EPR certificates; register and report on portal
- **Owners/Fleets**: Route ELVs/unfit vehicles to RVSFs within timelines; maintain disposal records; bulk consumers register and file annual returns
- **RVSFs**: Depollute (fluids, airbags, batteries), dismantle, segregate; issue EPR certificates; channel materials to authorized recyclers; manage hazardous residues via TSDF
- **Recyclers**: Accept only from authorized channels; report recoveries; ensure compliant treatment of metals, plastics, glass
- **Battery Handling**: Remove batteries during depollution; transfer to authorized battery recyclers per Battery Waste Management Rules



# Shift from INFORMAL TO FORMAL

With redefining of Battery Waste Management Rules (BWMR), Extended producers responsibility (EPR), End of Life Vehicle (ELV) Rules and stricter implementation of GST,.....

*.....The scrap availability for formal recycling sector is expected to grow at faster pace.*





# Gravita's Indian Leadership

# Our Indian Leadership

**1992** Established

**1** India's largest recyclers

**2 Lac+** MT Production Capacity

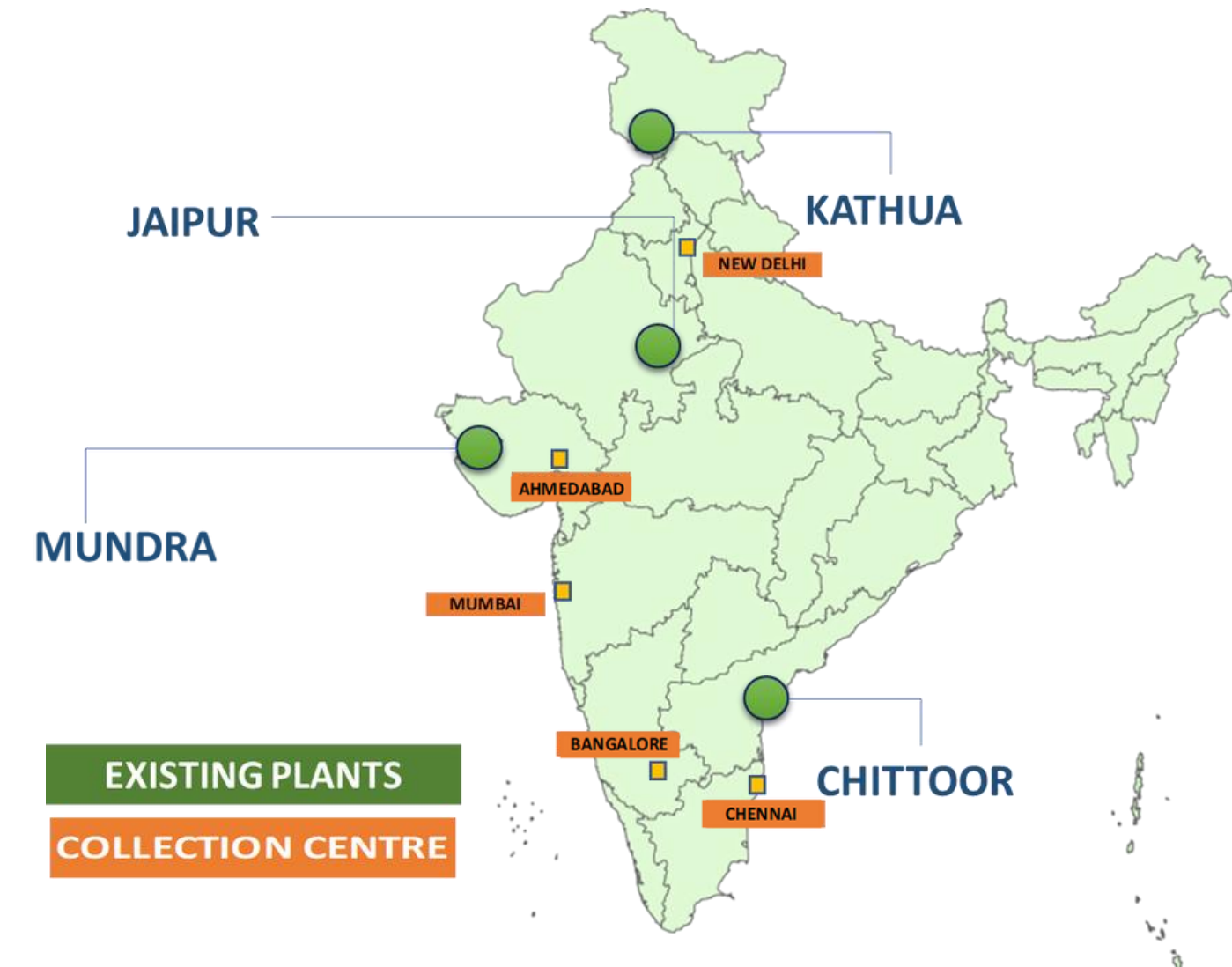
**MCX** Accreditation for all three plants

**4** Recycling Plants

**ILA** India's only accredited plants

Closely working with Indian Government, Key policy makers

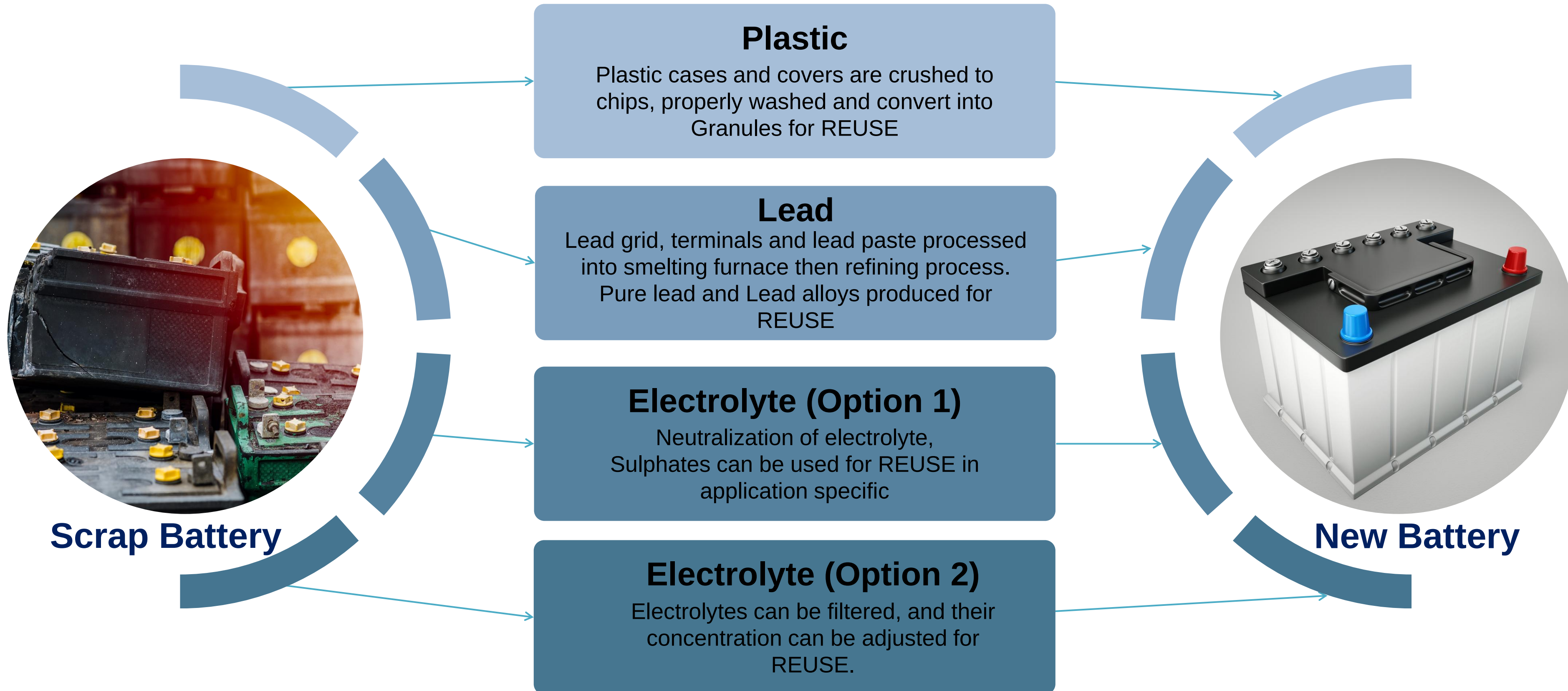
Exporting to US, Europe, Africa, S. Korea, China, Turkey and Southeast markets



# Empowering Circular Economy



# From Scrap to Resource



# Recycling Facilities





## Social Commitment

- Supporting local communities through education, health, and livelihoods
- Building skills and creating green jobs in recycling
- Ensuring safety, diversity, and growth for employees
- Protecting the environment and promoting circular economy

# Corporate Social Responsibility

## Social



## Education



## Environment



## Health



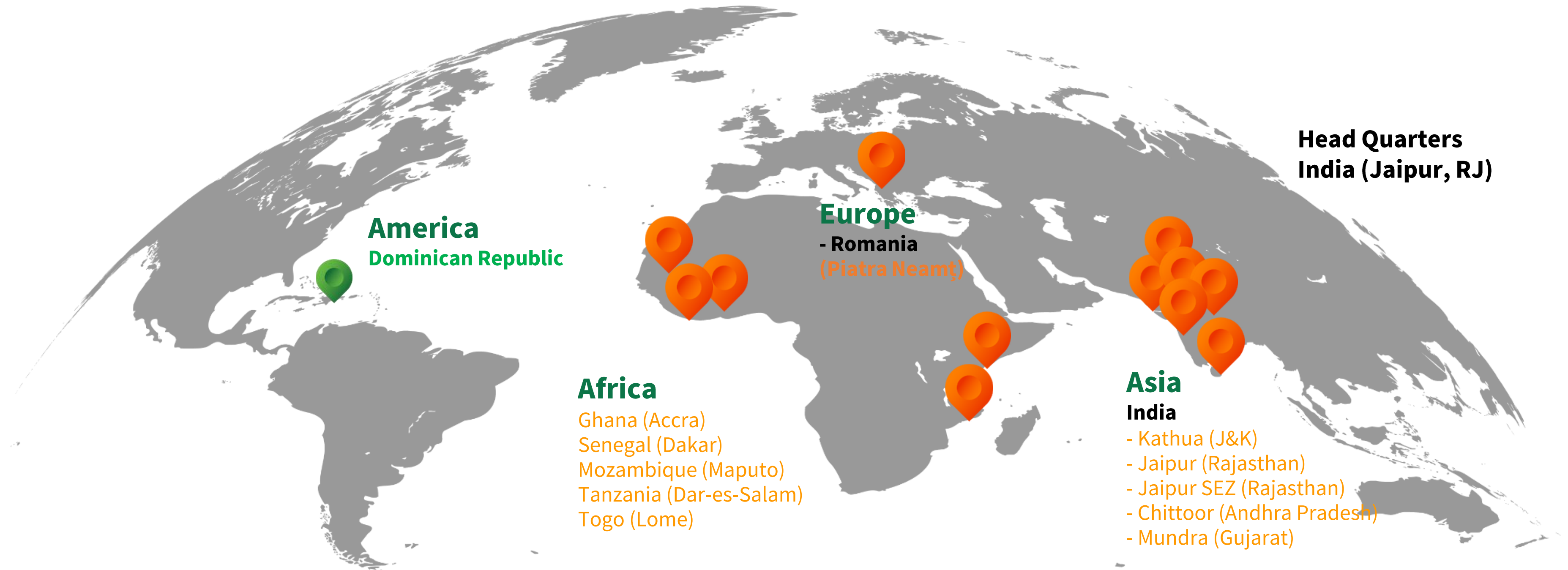
# OUR JOURNEY



# Business **VERTICALS**



# GLOBAL Operations



 Existing Facilities

 Upcoming Facilities

# PROCUREMENT Network

**33**

Own yards

**1900+**

Touch points

**2,87,000 MT+**

Scrap collection

## Europe

Own Yards - 1

Touch Points- 15+

Scrap collection(MT) - 4,500+

## Americas

Touch Points- 30+

Scrap collection (MT) -42,500+

## Africa

Own Yards - 27

Touch Points- 850+

Scrap collection (MT) -98,000+

## Asia

Own Yards - 5

Touch Points- 1,000+

Scrap collection(MT) - 141,000+

## Australia

Touch Points- 5+

Scrap collection(MT) - 1,300+

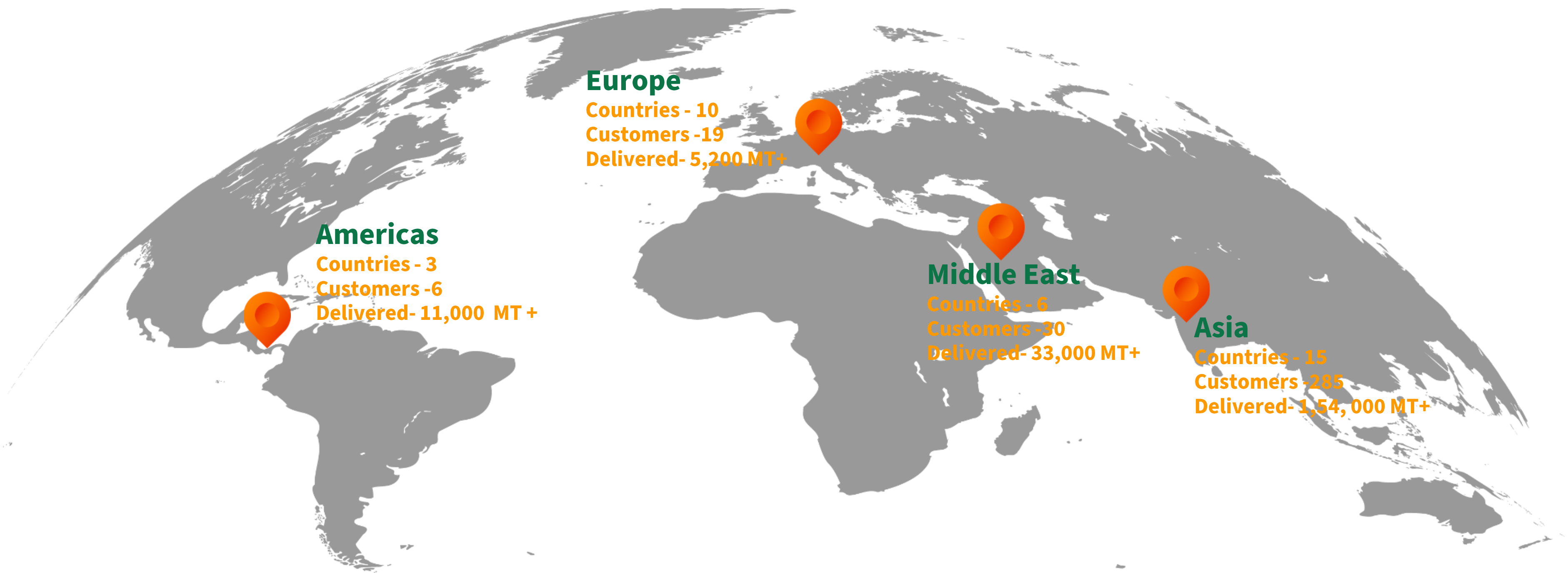
*Deep presence in Asia , Africa , Middle East, Europe & America ensures raw material at competitive prices*

# CUSTOMER Network

**34 +**  
Countries

**340 +**  
Customers

**2,03,000 MT +**  
Recycled products delivered



**Thank You**

**SAVE THE PLANET**

**Company Contact:**

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**Email :** [sales@gravitaindia.com](mailto:sales@gravitaindia.com)