



Sustainability

# Innovations in Waste Management

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# INTEGRATED ENVIRONMENT SOLUTIONS PROVIDER FOR EMERGING ECONOMIES



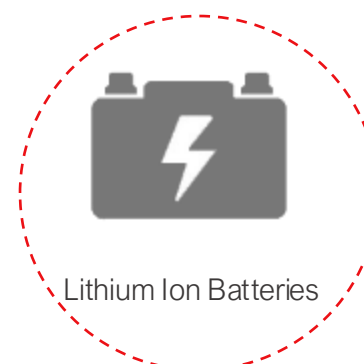
- One of Asia's largest providers of environment solutions
- Comprehensive, integrated capabilities across segments
  - Deep domain expertise backed by advanced technologies in waste processing, WTE, recycling & resource recovery and other environmental solutions
- Sustainability deeply rooted in the company's vision and operations
- International business includes presence in South-East Asia, Middle East, Africa and US



# ENABLING REGULATORY FRAMEWORK



11 Focus areas identified by the NITI Aayog to expedite the transition from Linear to Circular Economy







# WORLD-CLASS WASTE TO ENERGY PLANTS





# RESOURCE RECOVERY AT SCALE



ONE OF THE LARGEST DUMPSITES IN INDIA:  
325 ACRES, ~ 14 MILLION TONS



MOST ADVANCED LEACHATE TREATMENT PLANT IN INDIA AT DELHI



RAPID BIO-MINING



INDIA'S FIRST BOTTOM ASH RECYCLING FACILITY



# RESOURCE RECOVERY AT SCALE – LANDFILL GAS TO COMPRESSED BIO-GAS (CBG)



ONE OF THE LARGEST DUMPSITES IN INDIA:  
325 ACRES, ~ 14 MILLION TONS



THE LARGEST CBG PLANT IN INDIA

# C&D WASTE TO RECYCLED CONSTRUCTION MATERIALS



## SCALE, RESOURCE SCARCITY

7 Construction & Demolition Waste Management Facilities Across India



# C&D WASTE TO RECYCLED CONSTRUCTION MATERIALS



SCALE,  
RESOURCE  
SCARCITY

7 Construction &  
Demolition  
Waste Management  
Facilities across India.

OUTPUT



2 C&D waste Management Facilities in  
Hyderabad – Jeedimetla & Fatthulguda

600 TPD contracted capacity



Parking  
Tiles

Interlocking  
pavers

Pre-cast  
compound wall

# CIRCULARITY IN PLASTICS RECYCLING



Well defined **sorting** process



Conversion of **plastic waste** into pellets



Manufacturing products from recycled plastics

**~150 Tons per month being re-manufactured currently**



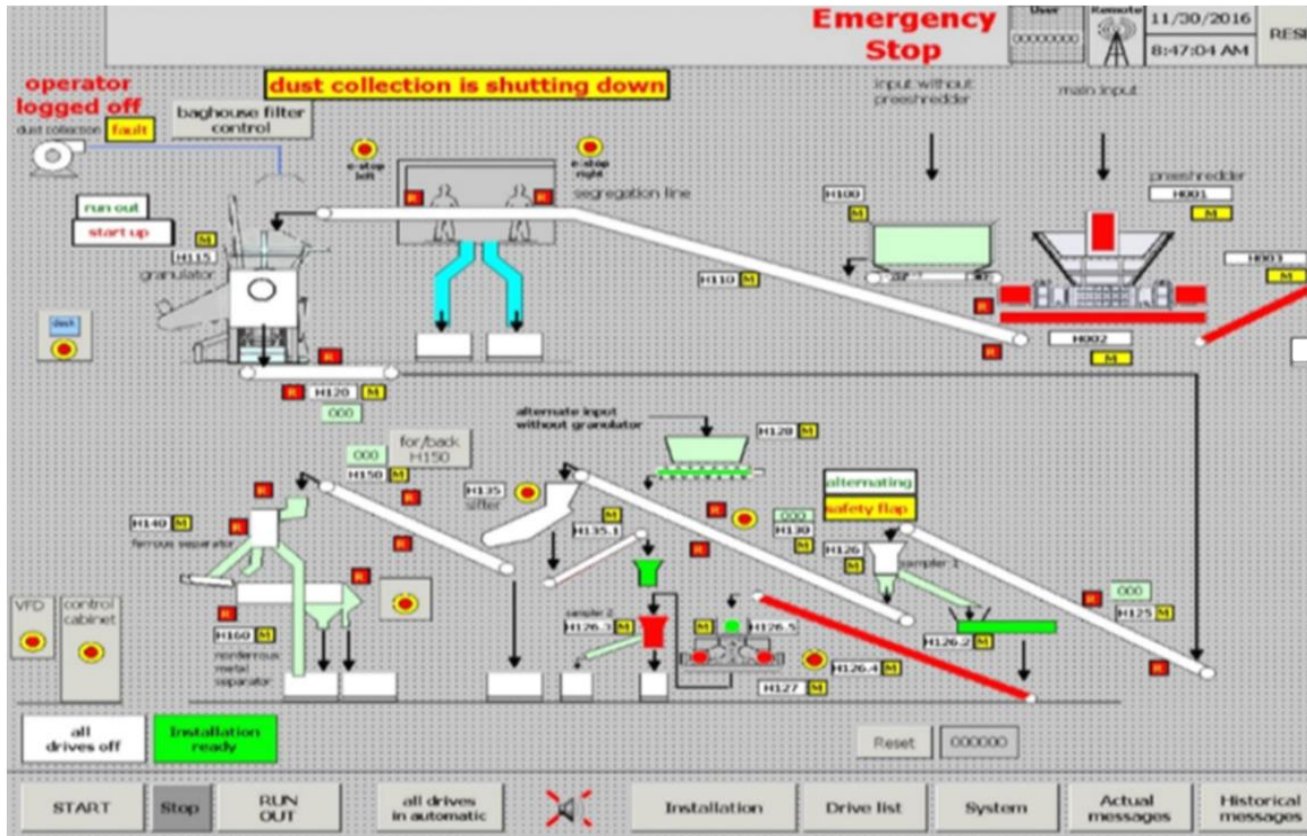


# E-WASTE RECYCLING AND PRECIOUS METAL RECOVERY FACILITY

- First LEED Platinum Refinery in India by Size
  - Accredited by USBGC
- 13,500 MT per annum
- Pyro-metallurgical Technology
- Advanced Hydrometallurgy Processing
- Advanced E-scrap processing
- Thermal Destruction program
- Renewable Energy- 510 KvA Refinery
- Strong focus on Green processing



# RECOVERING PRECIOUS METALS FROM WASTE - INTEGRATED REFINERY





# RECYCLING MARINE WASTE

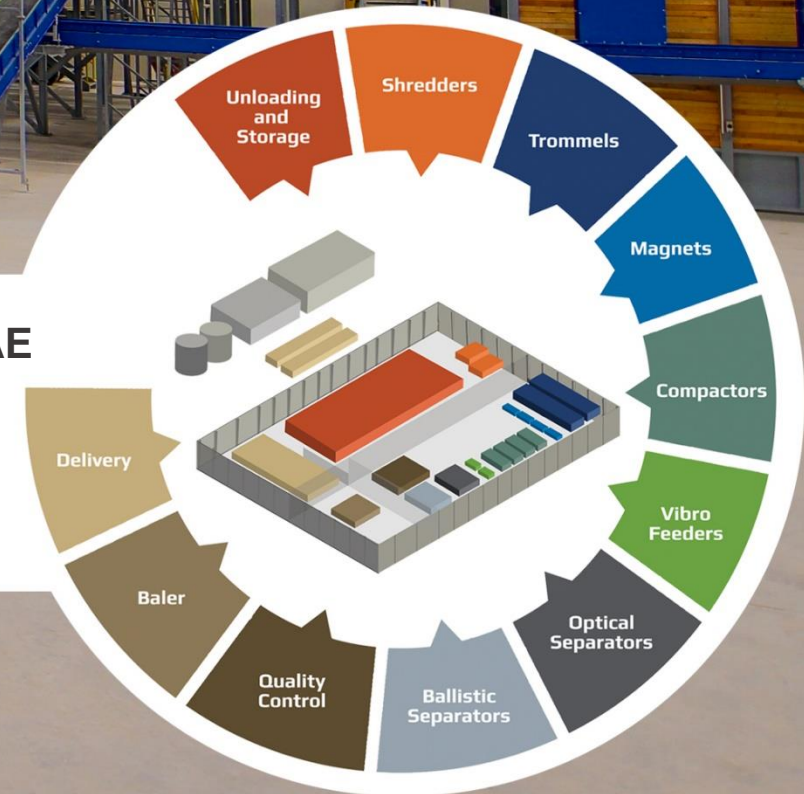






## AI POWERED MATERIAL RECOVERY FACILITY - FARZ,UAE

- ❖ Capable of handling 1,600 tonnes per day of Municipal Solid Waste
- ❖ Contains 2 sorting lines for mixed MSW.
- ❖ Fully automated system with no human intervention.
- ❖ Reduces 20 tonnes c. of CO2 emissions per day.





# END-OF-LIFE (ELV) REGISTERED VEHICLE SCRAPPING FACILITY (RVSF)



On march 31st, 2024, we inaugurated our first state-of-the-art vehicle scrapping facility at Jhajjhar, Delhi/NCR

Plant Area	5 Acres	Capacity	100 ELVs per day
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We are working on establishing RVSF at **Hyderabad, Bangalore and Mumbai** by end of FY 2024-25 with minimum capacity of 4000 ELV per annum.



## LITHIUM-ION BATTERY RECYCLING PLANT

Li-ion battery recycling pilot plant in Hyderabad  
(under development):

- 600 MT per annum capacity
- Mechanical Processing Technology
- Advanced Hydrometallurgy Processing
- High Recovery and High Purity metal salts
- Highest Safety Standards
- Renewable Energy usage planned
- Water Recovery & Green processes





# ACCELERATING A SUSTAINABLE REVOLUTION

## Our Footprint in Waste Management



## Outputs promoting circularity

IWM	• INDUSTRIAL WASTE MANAGEMENT
BMW	• BIO-MEDICAL WASTE
MSW	• MUNICIPAL SOLID WASTE
WTE	• WASTE TO ENERGY
C&D	• CONSTRUCTION AND DEMOLITION
E-WASTE	• ELECTRONIC WASTE
ELV	• END-OF-LIFE VEHICLE RECYCLING
PLASTICS	• PLASTICS RECYCLING

### FUELS

- REFUSE DERIVED FUEL (**RDF**)
- ALTERNATE FUEL RESOURCE (**AFR**)
- COMPRESSED BIO-GAS (**CBG**)

### ENERGY

- POWER
- STEAM

### MATERIALS

- PLASTIC PELLETS
- PLASTIC BAGS
- BASE METALS
- PRECIOUS METALS
- CRITICAL METALS
- SALTS
- AGGREGATES
- SAND



Thank You

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