METEX

Creating a Circular Supply Chain of **Critical Battery Materials** to **Power** the next generation **Energy Source** for a sustainable world.

Inside Lithium Ion Cell

Copper - 8%

Alumunium - 9%

Steel - 10%

Material Breakup inside a lithium ion cells

Black Mass - 50%

Graphite - 50%

Cobalt - 22%

Nickel- 7%

Lithium - 7%

Manganese- 14%

Others- 22%

(Plastics, Electrolyte, etc)

Elgreen ECOSYSTEM PLAY

A Full Stack Solution

METEX

RAW MATERIAL

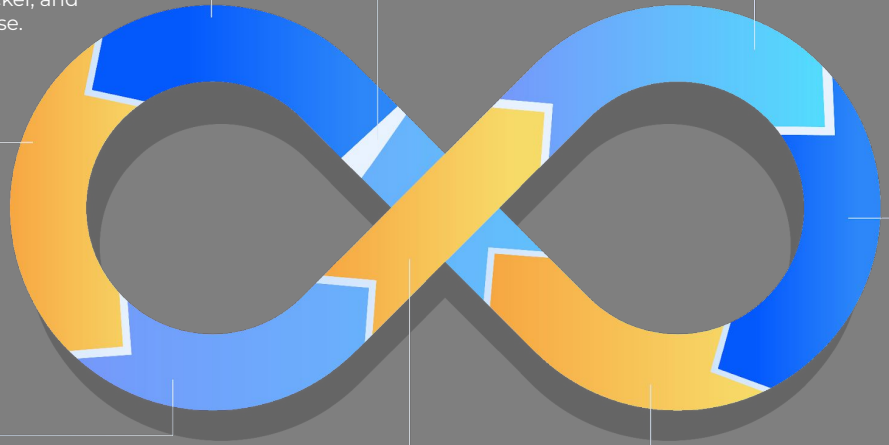
The production of batteries begins with the extraction of raw materials such as lithium, cobalt, nickel, and manganese.

RECYCLING

The battery is mechanically or chemically processed to separate the different materials, such as cobalt, nickel, lithium..

COLLECTION

At the end of the battery's life, it is collected and transported to a recycling facility.



REFINING

These raw materials are refined to produce the necessary components for the battery, such as lithium carbonate and nickel sulfate.

SORTING & SEPERATING

The battery is sorted into chemistries, such as lithium-ion or lead-acid, to facilitate the recycling process.

REPAIR & MANUFACTURE (Mechanify)

The components are assembled into the battery, which is then tested and packaged along with repair services.

USAGE (Intuions)

The battery is used to power devices such as electric cars and smartphones.

SECOND LIFE

The batteries or products are used to power devices, creating a circular economy.

Solutions

METEX

Recycling End of Life Lithium Battery and Battery Life cycle Management

Turning **Old Batteries into Fresh Materials** for Batteries of Tomorrow

Value Addition for EV OEMs by providing residual value of their batteries to their end customers.

Up to **95% recovery of valuable** materials from used batteries.

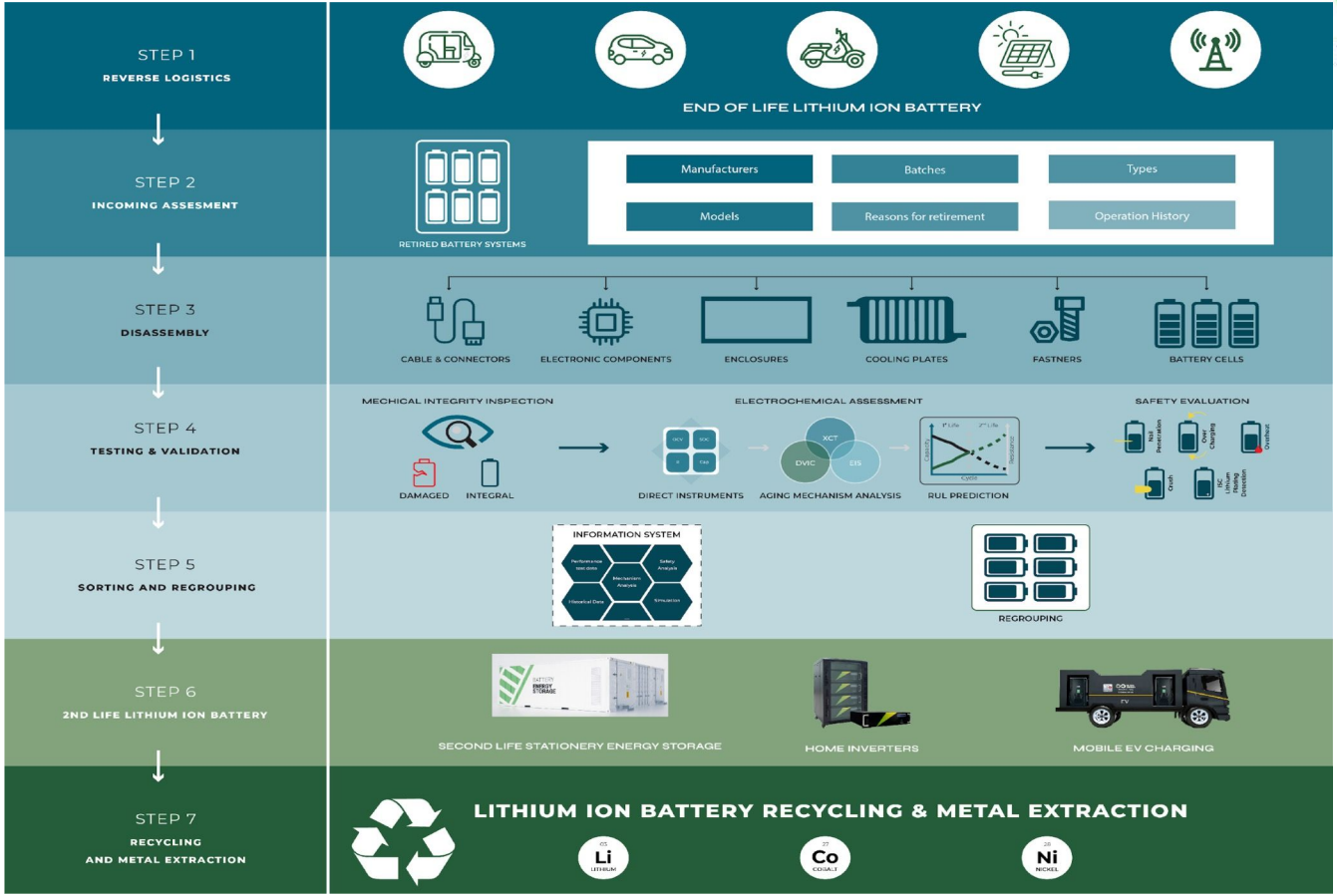
Giving 2nd life to used lithium ion cells by Re-manufacturing smart energy storage applications.

Business Process Map

Collection Via HUB and SPOKE Model in India

Testing via inhouse proprietary technology

Process tracking on each step via inhouse asset management software.



Indigenous Battery Recycling Technology

End-of-life battery modules & cells

Dismantling & Discharging

Battery components other than cells

Battery cells

Mechanical Treatment & Separation

Cu foils, Al foils, graphite, polymers, electrolyte

Black mass (Al, Cu, Fe, Li, Mn, Co, Ni, G)

Mechanical process>

Graphite

Leaching with mineral acids

Leachate (Al, Cu, Fe, Li, Mn, Co, Ni)

Precipitation of impurities

Feed (Li, Mn, Co, Ni)

Solvent extraction of Mn

Feed (Li, Co. Ni)

< Hydrometallurgy process

Co Salt

Solvent extraction of Co

Feed (Li, Ni)

Ni Salt

Solvent extraction of Ni

Feed (Li)

Li Salt

Precipitation of Li

Moat : Why we say we are the best.

Sustainable

- Zero hazardous air emissions, **non pyro/no burning**
- Ensuring **responsible disposal** of the hazardous waste; contributing to circular economy.

Proprietary

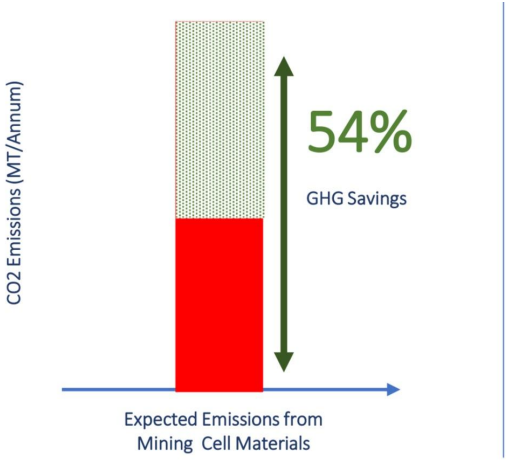
- **Patent filed for unique Recycling Process & Machinery Design.**
- Extraction of Lithium, Cobalt Nickel, Manganese (costly raw-material) **up to 99.3%** purity.
- Wet Black Mass Extraction with **Zero** material waste.

Scalable

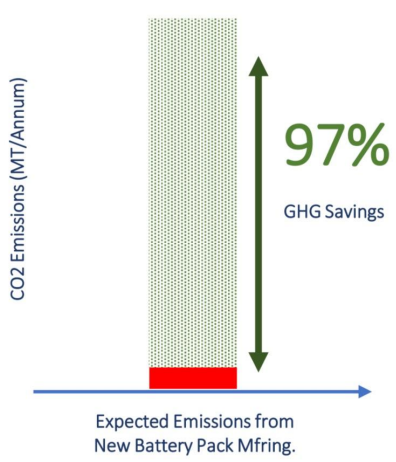
- In-House **Modular Design** of Plant & Equipment enables a quicker and cost efficient scale up (100 - 5000 MT/A).
- **“Hub & Spoke”** model for a robust Supply Chain

Elgreen ESG Impact

CO2 Emission Savings for Battery Material Extraction
(Elgreen Recycling Vs. Mining)
52 Kgs of CO2e per KWh of Battery



CO2 Emission Savings
(Elgreen Battery Reuse Vs. New Battery Pack)
200 Kgs of CO2e per KWh of Battery



Compared with traditional mining and refining, Elgreen process*

(per tonne of battery input) can:

Reduce water usage by up to an overall

97%

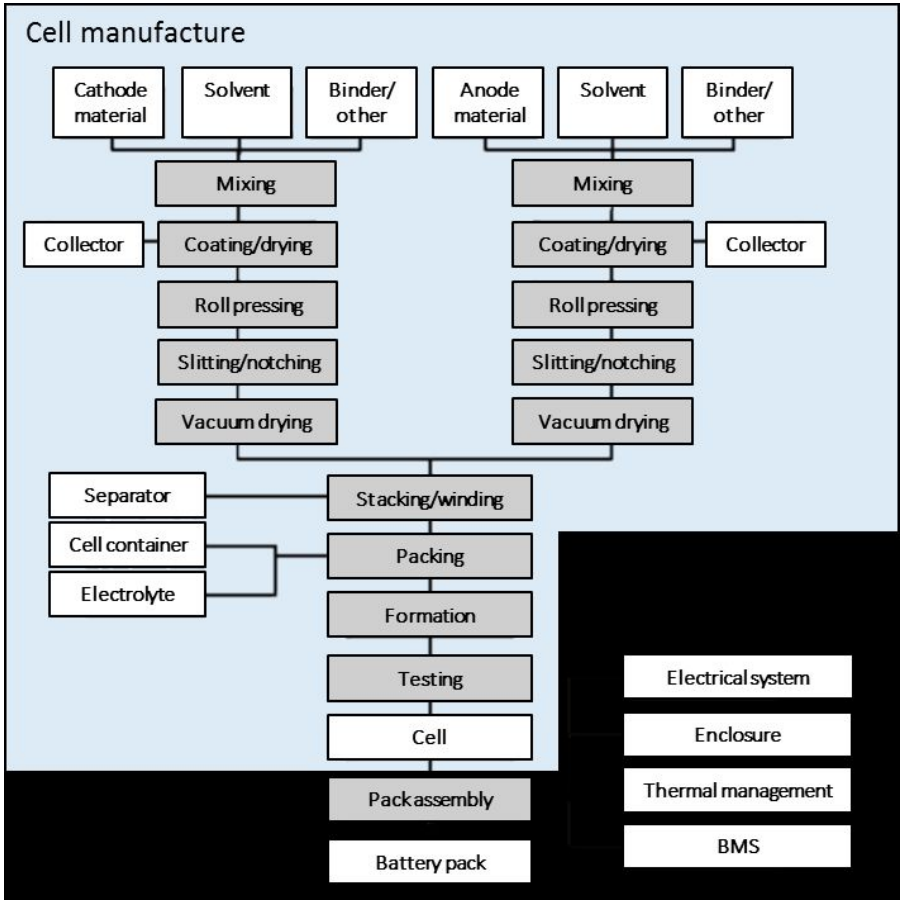
~ 2M cubic metres of water

Future Plans: Cathode Manufacturing from recycled materials

Electrode Production

Cell Assembly

Formation & Finishing



	Cell development from freshly MINED materials	RECYCLED
COST	61% of the total cost of the cell.	↓17% of the total cost of the cell.
CO2 EMISSION	Mining & electrode production accounts for 55% of CO2 emissions	↓Sustainably Recycled materials can reduce CO2 emissions by 5X.

Leadership & Team

Ramneek Chopra,

CEO and Director

Serial Entrepreneur with 20+ years of experience building high-growth startups, and Director at Vertel Infotel.

Dr. Krati Chopra

COO

Expert on Lithium ion Technology, Lithium ion Cell Development, Advanced Materials and Characterisation, Lithium Ion Battery Recycling and Material Recovery.

Prashant Pant

General Manager, Plant Operations

13+ years of Experience,
Ex Thysennkrupp, Ex M&M, Ex Tata Steel,
Ex Jindal, Ex CK Birla Group

Pankaj Chaudhary

General Manager, Finance

Seasoned finance professional with more than 17 years of work experience in various domains like Multimodal Logistics, Manufacturing,& Real Estate.

+15

Amazing Teammates

Our Sustainable Development Growth goals