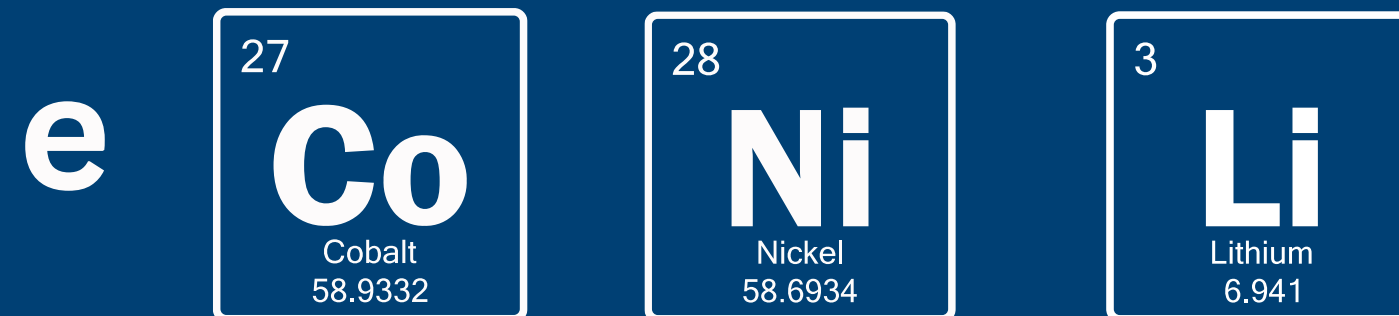




## “SCALING UP BATTERY RECYCLING : INDUSTRY INNOVATION FOR MALAYSIA’S CIRCULAR FUTURE”



*eco-friendly*

# Problem Statement

1,500,000

### Electric Vehicles

This is Malaysia's ambitious NETR target for 2040. This rapid adoption rate will create a massive volume of end-of-life batteries, presenting a significant environmental and logistical challenge that must be addressed.



### Rising Lithium Battery Waste

The country and the region currently lacks a large-scale recycler, meaning there is no clear solution for managing the high volume of battery waste that will be generated as EV adoption increases.



### Environmental & ESG Risks

The improper disposal of batteries can lead to severe environmental contamination from toxic materials, creating major environmental and social governance (ESG) risks that must be mitigated



### Unsustainable Imports

A continued reliance on importing new batteries or raw materials from mining is not a sustainable long-term solution. It is both costly and creates significant risks for the supply chain.



### Key Challenge Summary

The core problem is the gap between Malaysia's ambitious EV adoption targets and the lack of a robust, domestic infrastructure to handle the resulting battery waste. This creates a critical vulnerability in the country's energy transition strategy.

# Market Analysis - Global Overview

**US\$4.2 billion by 2035**

**Projected market value for second-life EV batteries**

According to IDTechEx, the second-life EV battery market is expected to reach this value by 2035.

**US\$4.7 billion by 2030**

**Market growth with a CAGR of 25.5%**

Markets and Markets forecasts this growth, highlighting a strong demand for second-life batteries.

**US\$19 billion by 2033**

**Expected global market size**

Spherical Insights anticipates the global market size to exceed this value by 2033, with significant growth momentum.

**CAGR of 37.6%**

**Growth rate for the global market**

This high CAGR reflects the increasing adoption of second-life batteries.

**Environmental sustainability**

**Key driver for market growth**

The focus on sustainability is pushing the demand for second-life batteries.

**Increasing EV adoption**

**Source of end-of-life batteries**

The rise in electric vehicle usage is ensuring a steady supply of batteries for repurposing.

# Powering Malaysia's Circular Economy for EVs and Renewable Energy

870,000

**EV Batteries**  
will need recycling in Malaysia by 2050.  
Econili provides the critical end-of-life solution to manage this waste sustainably and recover valuable resources.

As Malaysia accelerates towards its **2050 net-zero targets**, the surge in electric vehicles and renewable energy storage creates a new challenge: battery waste. Econili is at the forefront, transforming this challenge into a sustainable opportunity.

## 1. Advanced Recycling & Metal Recovery

Econili utilizes state-of-the-art technology to safely dismantle used batteries and extract valuable materials, preventing hazardous waste and reducing the need for new mining.

## 2. Pioneering a Circular Economy

By closing the loop, Econili shifts Malaysia from a linear "take-make-dispose" model to a sustainable circular system, which is vital for long-term resource security.



## 3. Strategic Partnerships & Logistics

A successful circular economy requires a robust collection network. Through strategic collaborations, like our MoU with Bateriku.com, we are building an efficient, nationwide logistics chain to source end-of-life batteries from across the country.



## 4. Beyond Recycling: Second-Life Applications

Not all batteries need immediate recycling. We identify batteries with remaining capacity and refurbish them for new roles, maximizing their lifespan and value.



**This vision is supported by our active engagement with the government to help shape clear and effective policies for the battery recycling industry**

## **The Impact of a Closed Loop**

**95%**

### **Material Recovery**

of critical metals like lithium, cobalt, and nickel are recovered and returned to the supply chain.

**>80%**

### **Lower Carbon Footprint**

Recycling generates significantly fewer emissions compared to mining new materials.

**100%**

### **Alignment with NETR**

Our work directly supports Malaysia's National Energy Transition Roadmap 2050 goals.



# IMPACT TO OUR ECONOMY



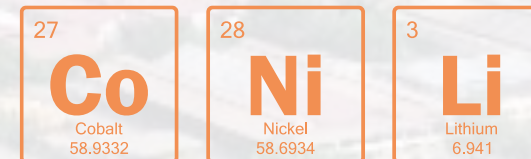
## Job Creation and Skill Development

Closed-loop battery recycling will generate thousands of jobs in areas like R&D, manufacturing, and technology, boosting Malaysia's green economy workforce.



## Attraction of Foreign Investment (FDI)

The recycling sector attracts global companies like Tesla, bringing billions in investment, strengthening Malaysia's position in the green tech industry.



## Resource Efficiency and Circular Economy

Recycling batteries reduces reliance on virgin materials and improves resource efficiency, aligning Malaysia with global sustainability goals.



## Enhanced Export Competitiveness

Closed-loop recycling helps Malaysia meet international sustainability standards, improving its competitiveness in global markets with stricter environmental regulations.



# WHY WE NEED ECONILI BATTERY?

- **Proprietary Recycling Technology.**

*Safe extraction of lithium, cobalt, nickel and other precious metals with high recovery rate.*

- **Second-life Battery Repurposing.**

*Energy storage systems for solar and renewable energy*

- **Reduces reliance on raw material imports**

- **Support circular economy & ESG compliance**



**Econili** is pioneering change by establishing the first lithium-ion battery refinery plant dedicated to processing black mass derived from lithium-ion batteries in Malaysia.

# MALAYSIA EV LANDSCAPE

## DEVELOPING RECYCLING INFRASTRUCTURE

Hitech Full Recovery

eCoNiL  
+ battery

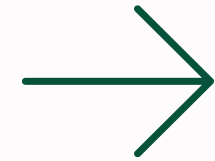


Malaysia is building its EV battery recycling capacity with these four pre-treatment facilities. While full processing requires further investment, this marks the beginning of a comprehensive

battery system management, preparing for second-life including applications.



# TARGET MARKET: ASEAN



## MALAYSIA'S DATA CENTER LEADERSHIP

Malaysia leads the region with its extensive **data center infrastructure**, which supports high-capacity and high-reliability operations. This growth also drives a significant demand for batteries and battery solutions.



## INDUSTRY GROWTH

Battery chain industry offers various advantages to Malaysia in terms of its' location and opportunities within the ASEAN. **The booming lithium-ion battery recycling industry, valued at billions globally, has attracted over 30 battery recycling factories to Malaysia during its peak.**



## SECURING CRITICAL METALS

**Global Critical Metal Recovery Centers of Econili with 24.000 MT capacity** positions Malaysia as a key player in advancing the global circular economy, reduces dependency to external players, aligning with sustainable development goals and enhancing international collaboration.

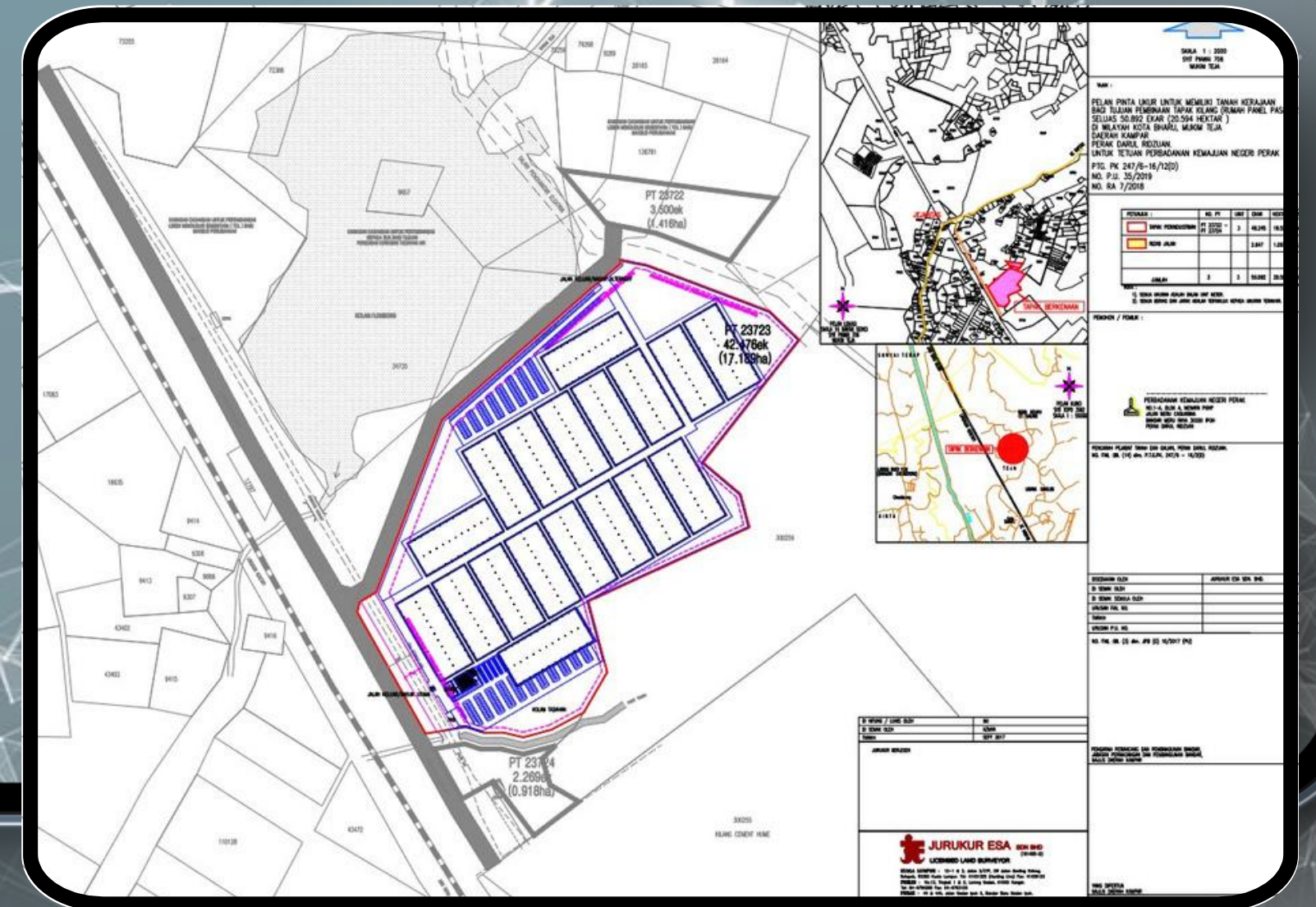
## Our Growth Plans

# Circular Economy Valley

The Circular Economy Valley (CEV) is an initiative that brings together **18 e-waste treatment factories**, with the potential to include a lead acid battery reclamation factory.

The Circular Economy Valley is an ambitious initiative that brings together 18 factories dedicated to the battery industry under a single, cohesive valley. This valley will serve as a model for sustainable industrial practices, focusing on creating a closed-loop system that minimizes waste, reduces environmental impact, and maximizes resource efficiency. The project aims to revolutionize the battery industry by integrating the principles of a circular economy, fostering innovation, and promoting economic growth.

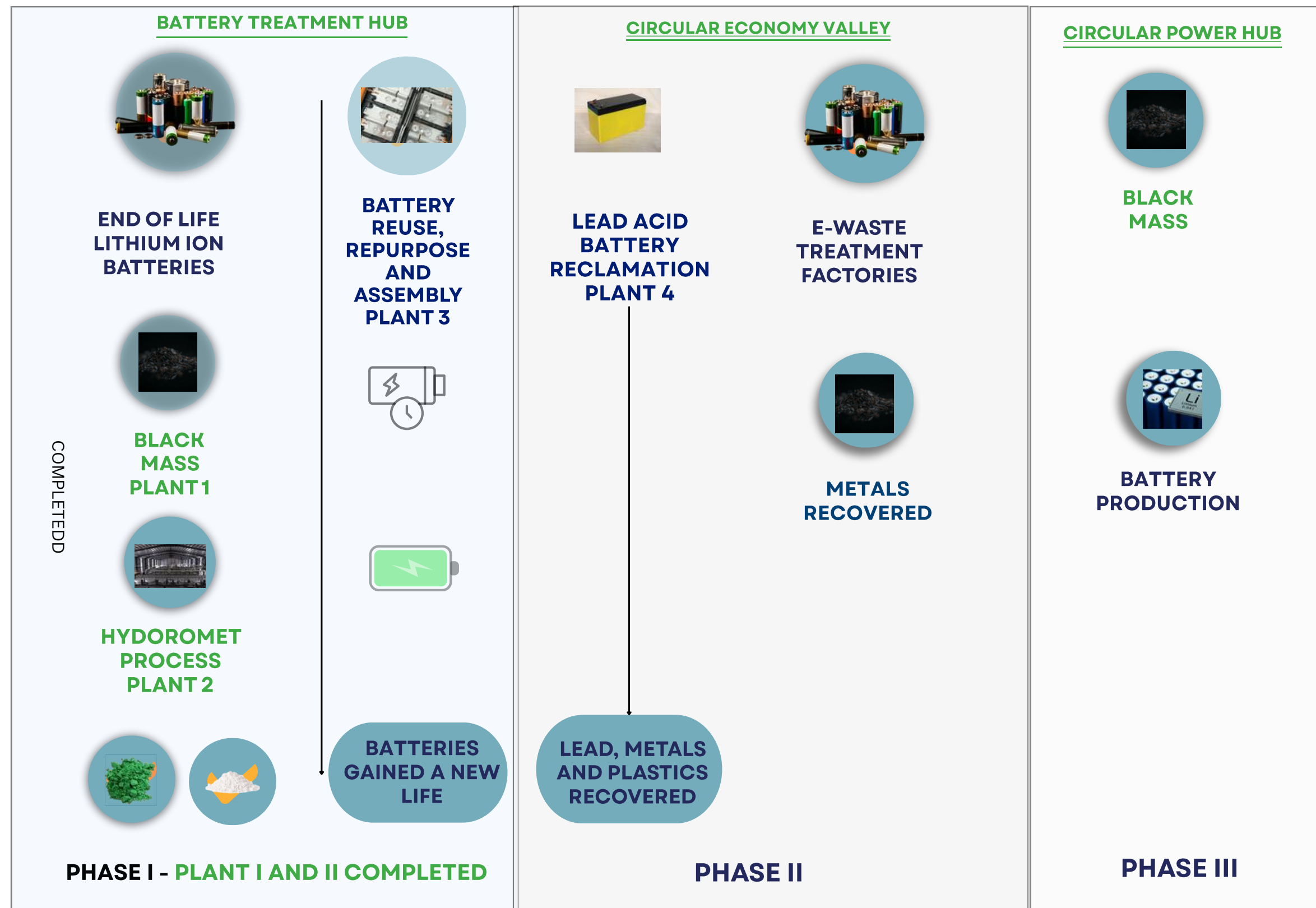
Factories and spaces at Econili will be available for lease, with operators choosing facilities that meet their individual requirements.







# Pioneering the Top Closed - Loop Battery Ecosystem



The Circular Economy Valley provides the recovered raw materials that the Circular Power Hub (CPH) Malaysia can then use for new battery production. This is the essence of a circular economy – taking waste and turning it back into valuable inputs, reducing reliance on virgin materials.



## Our Growth Plans

# Circular Power Hub

Setting up the Circular Power Hub (CPH) Malaysia as a high-quality battery production facility is a strategic initiative that taps into the growing demand for lithium-ion batteries.

The project will be ISO 14001 certified for environmental management and ensure compliance with Malaysian and international regulations.

- With the completion of project Phase III, Malaysia will achieve building an **end-to-end closed loop battery chain**.





# Thank You



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## General Inquiry

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