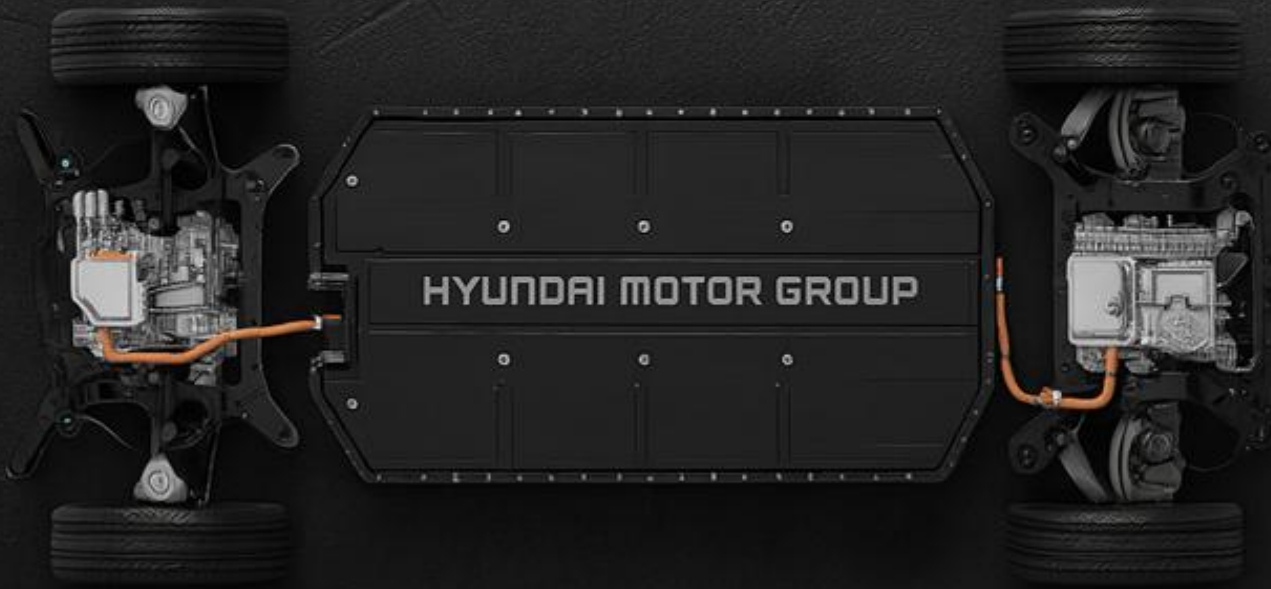


BATTERY RECYCLE SOLUTION

- FOR THE BEST RECYCLE -



01 Company Overview

01-1 Company Overview

We were spin - off from Hyundai Motor Group in July 2023 as an in-house startup, and are currently operating three in-house production facilities, one offices, and two R&D centers.



EVACYCLE Co., Ltd.

Mission Waste To Energy

Vision Be The Best for Recycling

✓ **Establishment** 2023.07.31

CEO Jihoon Ryu

Business EV Battery Recycling

✓ **Investors** · Hyundai ZERO1NE · DSC Investment/Schmidt
· POSCO Technology · Infobank Investment · Covent
· GS Ventures · POSCO International
· LX Ventures · Korea Ventures Investment

Members 28

Business Site

- Works**
- Hwaseong 1 works : 37-9 Eunhaengnamu-ro 62beon-gil, Yanggam- myeon, Hwaseong-si, Gyeonggi-do
 - Hwaseong 2 works : 161-166, Jugok-ri, Ujeong-eup, Hwaseong-si, Gyeonggi-do
 - Jeju 3 works : 2130-4, Hwabuk 1-dong, Jeju-si, Jeju-do

Office · Seoul office : 1409, Champs-Élysées A-dong, 406 Teheran-ro, Gangnam-g

- R&D**
- Songdo : 1212B, Songdo Seawalk In Terrace Halla, 29-8 Songdo-dong, Yeonsu-gu, Incheon
 - Pohang : 203, Secondary Battery Center, 1025-3 Gongdang-ri, Donghae-myeon, Nam-gu, Pohang, Gyeongbuk



[View of Works] Hwaseong 1 works



Hwaseong 2 work



Jeju 3 works



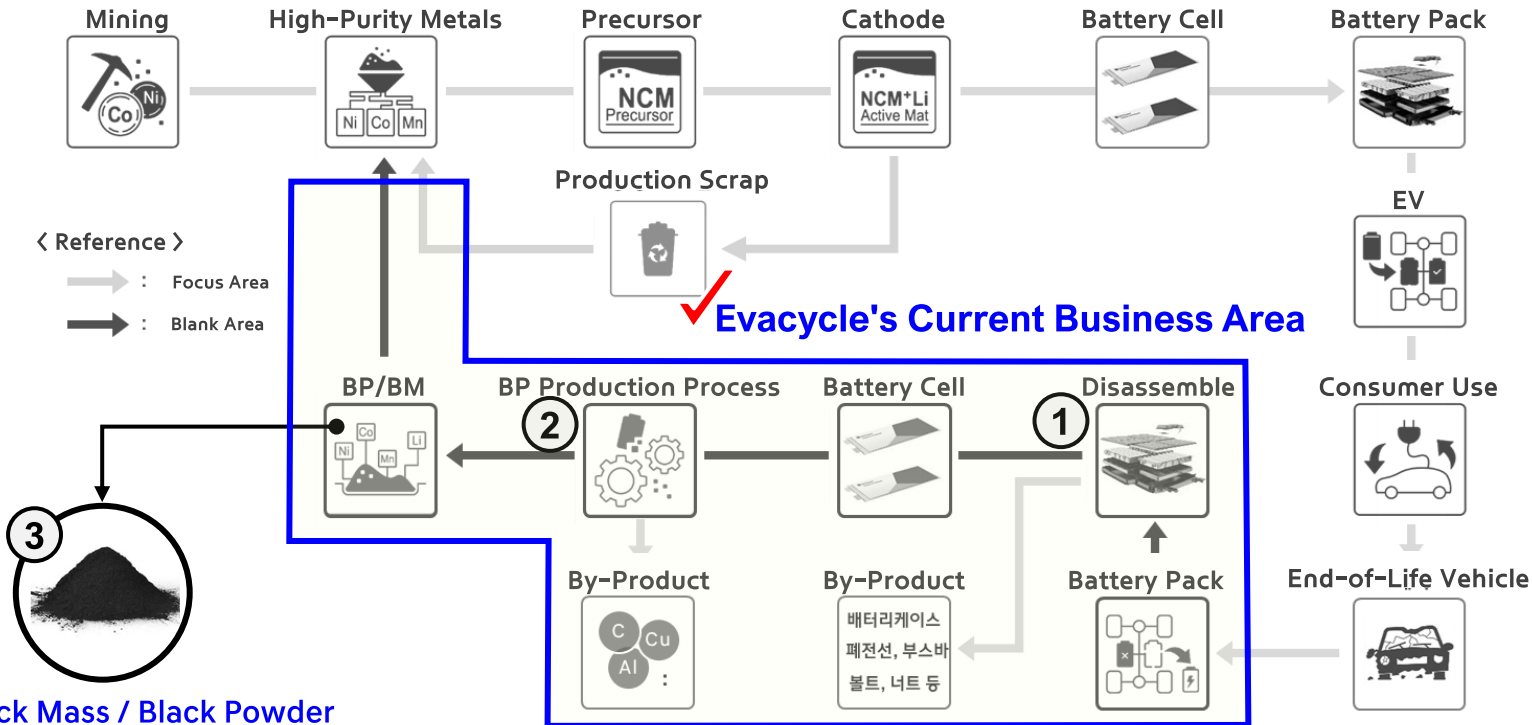
01 Company Overview

01-2 Business Scope

We are engaged in the preprocessing business of **recovering black mass** from used batteries for recycling purposes.

* Includes Black Powder recovery

[Battery Lifecycle Process]



Black Mass / Black Powder

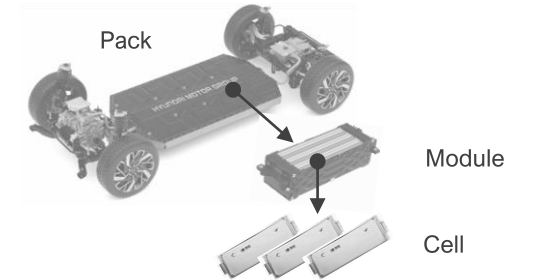
- A black powder containing nickel, cobalt, manganese, and lithium.

* Black Mass : Produced by processing spent batteries → contains nickel, cobalt, lithium, manganese, aluminum (from the cathode), graphite (from the anode material), copper (from the anode foil), and electrolyte.

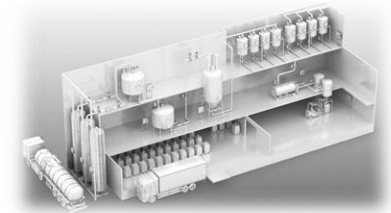
* Black Powder : Produced by processing cathode scrap → contains only nickel, cobalt, lithium, manganese, and aluminum (from the cathode foil).

Key Development

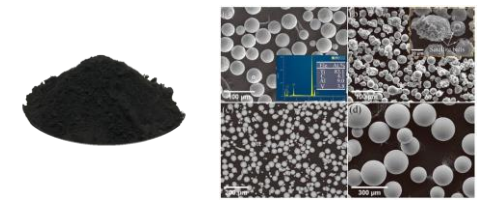
① Battery Disassembly (ECDL)



② BM Production Line (ECPL)



③ Recovery rate · Purity



01 Company Overview

01-3 History

In the 2 year and 4 months since our spin-off we have achieved rapid growth through collective commitment and a unified team.

* ECDL : **EvaCycle Disassembly Line**

* ECPL : **EvaCycle Product Line**

9

2023

- 07 · HMG Spin-off & Corporate Establishment
 - Two patent applications (jointly owned by Hyundai Motor, Kia)
- 08 · Seed investment raised (Hyundai ZERO1NE Fund)
- ✓09 · Establishment of ECPL 1.0 * ECPL : BM Product Line
 - Recruitment of C Level (EPC Engineer)
 - Pre-A investment raised from Infobank
- 10 · Acquisition of business site/hazardous waste permits
 - Venture company certification
- ✓11 · Signed used battery processing contract with KIA
 - Pre-A round investment raised (Hyundai ZERO1NE, DSC/Schmidt, GS Ventures, Covent)

[Before corporation establishment]

- '22.09 · Hyundai Motor Group Venture Cultivation
- '22.12 · Factory lease

2024

- 01 · Acquired Root Enterprise Certification
- 02 · Permit acquired for manufacturing of hazardous chemicals
 - Initiated Li pre-extraction technology development (by Nov.)
 - Sales contracts signed (POSCO HY Clean Metal, PGSEM, SK Ecoplant, GS Global, Ecopro)
- ✓ · Completion of purchase of Hwaseong 1 works site
- 04 · Selected as MOTIE Carbon Neutrality Leading Company (₩5.69B, 1.43% interest)
 - filed 14 patents (incl. Eu-targeted wet crush tech)
- ✓05 · Selected as a tenant company by Jeju Technopark; established Jeju branch
- ✓06 · Selected as an outstanding project company by Deep Tech TIPS (Fast Track, 1.5 billion won over 3 years)
- ✓07 · Signed waste battery processing contract with Hyundai
- 08 · Acquired ISO certifications (9001, 14001, 45001)
- ✓09 · Upgraded ECPL system from version 1.0 to 1.5
- ✓11 · temporary exclusive contract for scrap with LG Energy Solution
- ✓12 · Purchased Jeju plant
 - Secured Pre-A bridge investment (Hyundai Motor ZERO1NE, POSCO Technology Investment, LX Ventures)

2025

- ✓01 · '25 scrap and End of life Battery supply contract (LG Energy Solution)
 - Used Battery processing contract Kia 100%
- 02 · Jeju TP Waste battery consignment contract
 - Gate 1 post-pro (5 Gate total, 2 year road map)
- ✓03 · Approved hazardous waste facility plan in Jeju (first in the region)
 - Jeju 3 works Start-up Preparation
 - Preparing for Jeju plant operation
 - Selected by Hyundai Motor for precursor s synthesis PM project
 - Passed 1st round of national R&D consortium project (₩20B scale)
 - Initiated global partner scouting & market research
- ✓05 · Developed next-gen ECPL 2.0
 - Developed next-gen ECDL 2.0
 - Set up of new HQ factory in Hwaseong
- ✓07 · New business preparation with Hyundai Motor Grupe



01 Company Overview



Team

Experts in Mechanical and Chemical fields are working together to develop innovative solutions.

— Mechanical Tech —

— Chemical Tech —



CEO
Jihoon Ryu

Former Kia Responsibility Manager (16 years)
EV/HEV Product Group Leader, Eco-Car
Strategy Group Leader
Battery & Mobility New Business Planning



Research Director
Woo Young Shim

Current Professor at Yonsei University,
Department of New Materials Engineering
Ph.D. in Materials Engineering from
Northwestern University
Lithium-ion Nano Technology



Management Strategy
Hyedong Nam

Former Hyundai Motor Responsible Researcher
(16 years)
Powertrain Design/Cost/Quality
11 patent applications, Environmental
Technician



Development Center Director
Youngjo Kang

Professor at Dong-A University
(New Materials Engineering)
Ph.D. in Materials Engineering from the Royal
Institute of Technology, Sweden
Metallurgical refining and chemical metallurgy
technology (Former POSCO)



Production General Manager
Byungsoo Yu

Former Hyundai Steel Responsibility Manager
(17 years)
Hydrogen Plant Planning/EPC/Operation
Industrial Safety Engineer

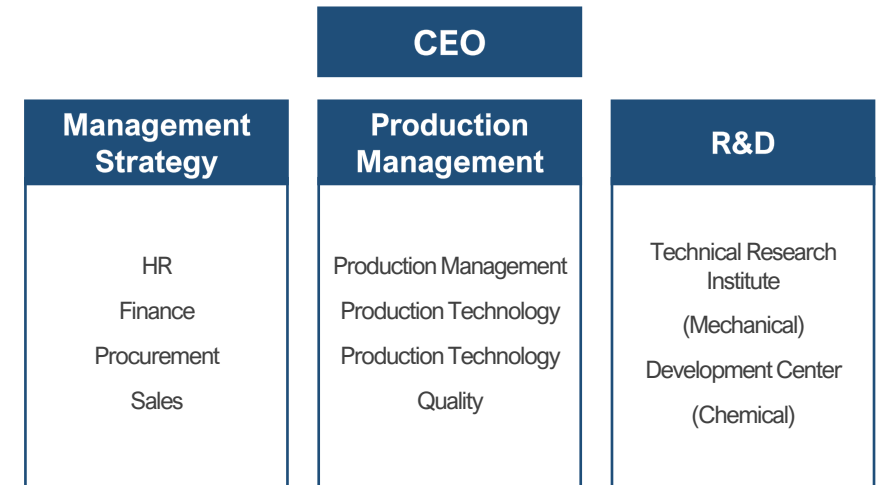


Senior Researcher
Jaesun Jin

Former Central Research Institute, Samsung S1
Former Head of IPO Technical Documentation at
HealthHub
Former Head of Computer Development Team at
Jeju Halla Hospital

Organization

Three Organizations, 28 Members



R&D Development Areas

- ① Technology Research Center: Development of mechanical processes, including PFD, P&ID, and engineering design
- ② Advanced Development Center: Development of chemical technologies such as nano-ion separation and dry processing

**Ph.D. Researchers (Dr. Woo-Young Shim, Dr. Young-Jo Kang): Official dual appointments with university approval, Full-time salaries and enrolled in national social insurance (4 major insurances)*

02-2 Battery Disassembly(ECDL 2.0)

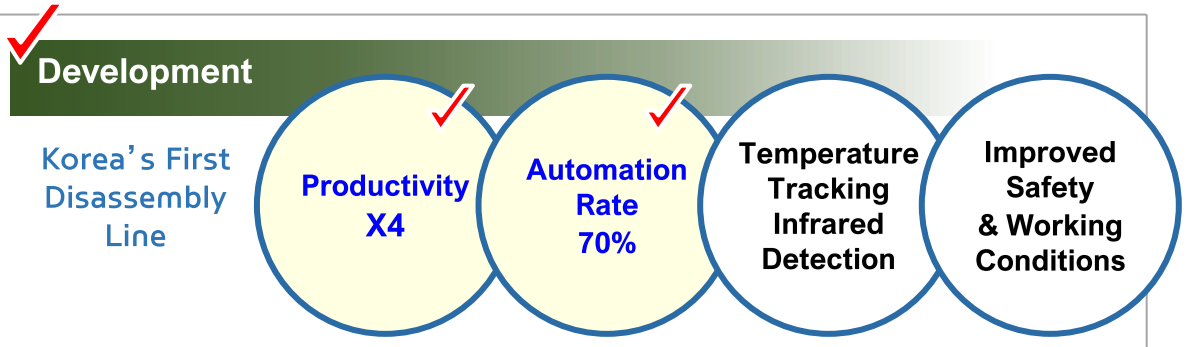
ECDL 2.0

(EVACYCLE Disassembly Line)

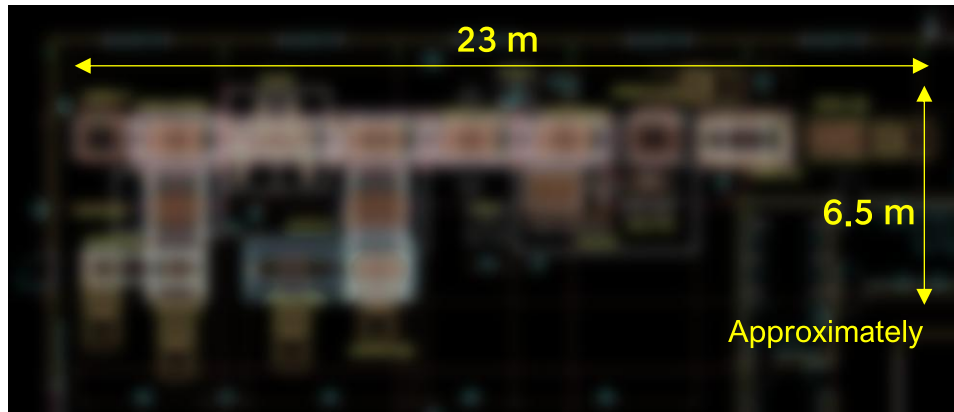
The automated battery disassembly line, ECDL 2.0, is aimed at **improving productivity and establishing a safe working environment (minimizing the risk of human accidents).**

The disassembly automation technology will continue to be upgraded to **secure competitiveness in high labor cost markets** such as the U.S. and Europe.

- Installation TimeLine : 2025.05
- Disassembly Method : Automation & Manual operation
- Target Battery for Disassembly : IONIQ 5/6, EV6/9
E-GMP 10Type
- Disassembly Capacity : 4000 unit/ year (base on 3 workers)



Automated Battery Disassembly Line



02 Solution

02-1 Battery Disassembly(ECDL 2.0)

ECDL 2.0

(EVACYCLE Disassembly Line)

The automated battery disassembly line, ECDL 2.0, is aimed at improving productivity and establishing a safe working environment (minimizing the risk of human accidents).

The disassembly automation technology will continue to be upgraded to secure competitiveness in high labor cost markets such as the U.S. and Europe.



* Reference illustration attached

ECPL 2.0

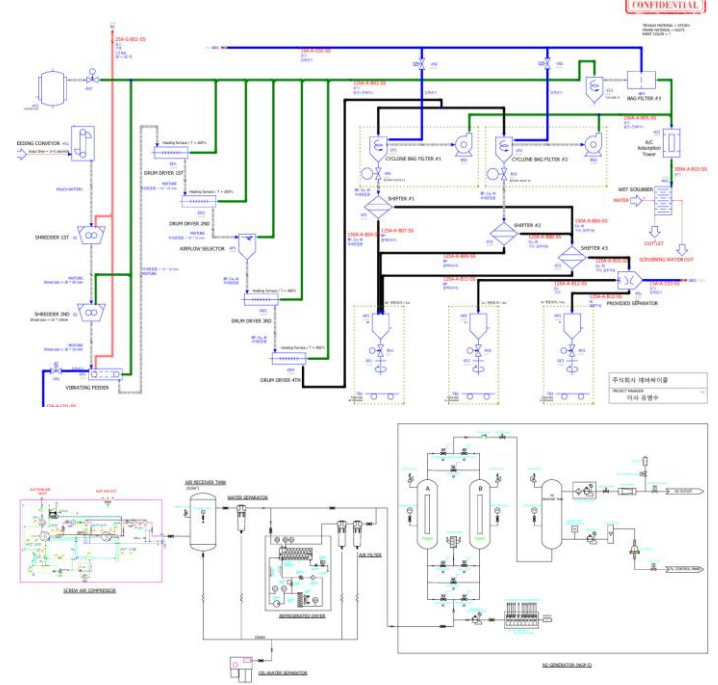
(EVACYCLE Product Line)

ECPL 2.0 serves as a test bed toward a complete process, targeting global top-tier production standards
 Unmanned operation and centralized control minimize safety risks and reduce OPEX (labor costs)

★★★ : Top – Tier, ★★ : Upper - mid, ★ : Mid – tier

· Installation TimeLine : 2025.05

ECPL 2.0 P&ID



Key Development

ECPL1.5 Maintain strengths

ECPL2.0 Add new strengths

Over 50% reduction in CO ₂ emissions	World's smallest particle size	High-speed black powder production ★★★	Material recovery rate over 70% ★★★
Unmanned process operation	Sealed structure with vacuum system	Fire prevention N2 Purge	3+α Stage Drying
Additional 50% improve productivity	Complete separation and recovery of all materials	Centralized control system	Smart Factory

02 Solution

02-4 BP Product(ECPL 2.0)

ECPL 2.0

(EVACYCLE Product Line)

ECPL 2.0 serves as a test bed toward a complete process, targeting global top-tier production standards
Unmanned operation and centralized control minimize safety risks and reduce OPEX (labor costs)



03 Partners

03-1 Customer Value

"Evacycle provides high-quality products to clients through low-carbon processes.

With the goal of achieving carbon neutrality, we are committed to contributing to battery resource circulation in partnership with diverse clients."

