



Next generation battery recycling

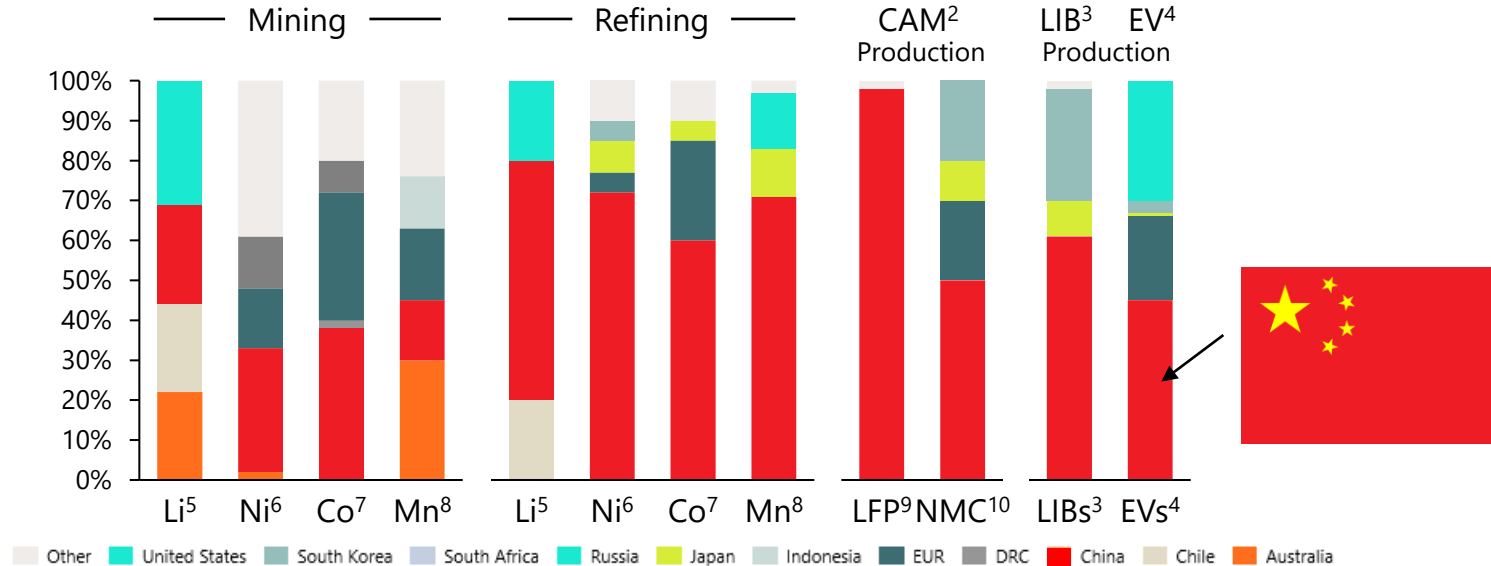
Building a circular battery value chain with partnerships

Aufbau einer zirkulären Batteriewertschöpfungskette mit Partnern

Nils Steinbrecher
Senior Director cylib GmbH

Why: European battery value chain is a necessity & major market opportunity

Global Ownership Distribution of mines, refining capacities, battery materials production and battery & EV production¹

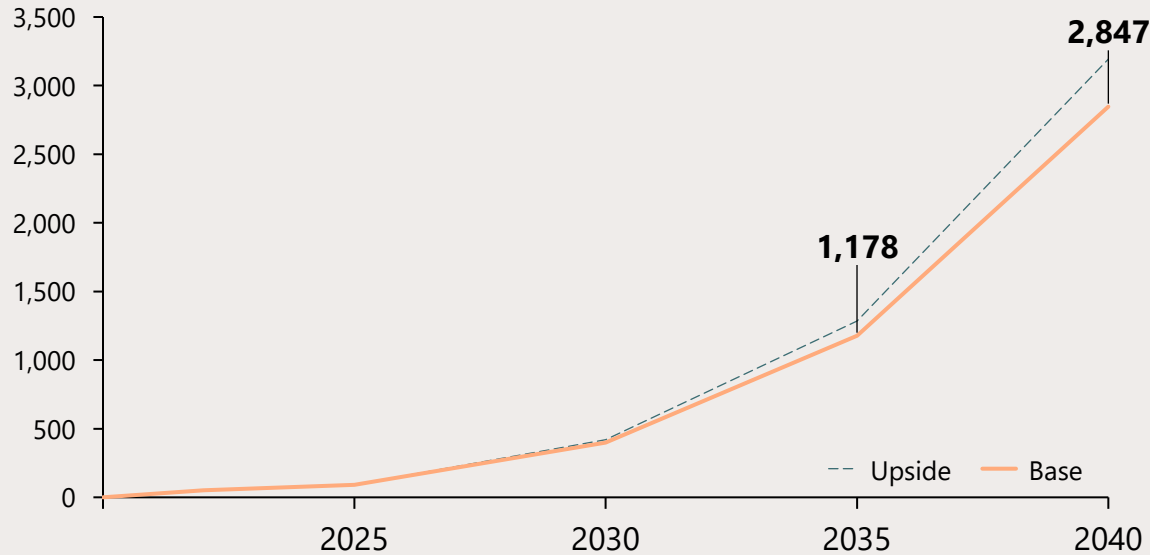


Europe and the U.S. are heavily dependent on China for the battery value chain — from raw material security to processing and production. **This is not only a geo-strategic concern but also a major missed market opportunity for Europe.**

1) Journal of Power Sources Advances, 2025 2) Cathode Active Material 3) Lithium-Ion Battery 4) Electric Vehicle 5) Lithium 6) Nickel 7) Cobalt 8) Manganese 9) Lithium iron phosphate Battery 10) Nickel manganese cobalt Battery

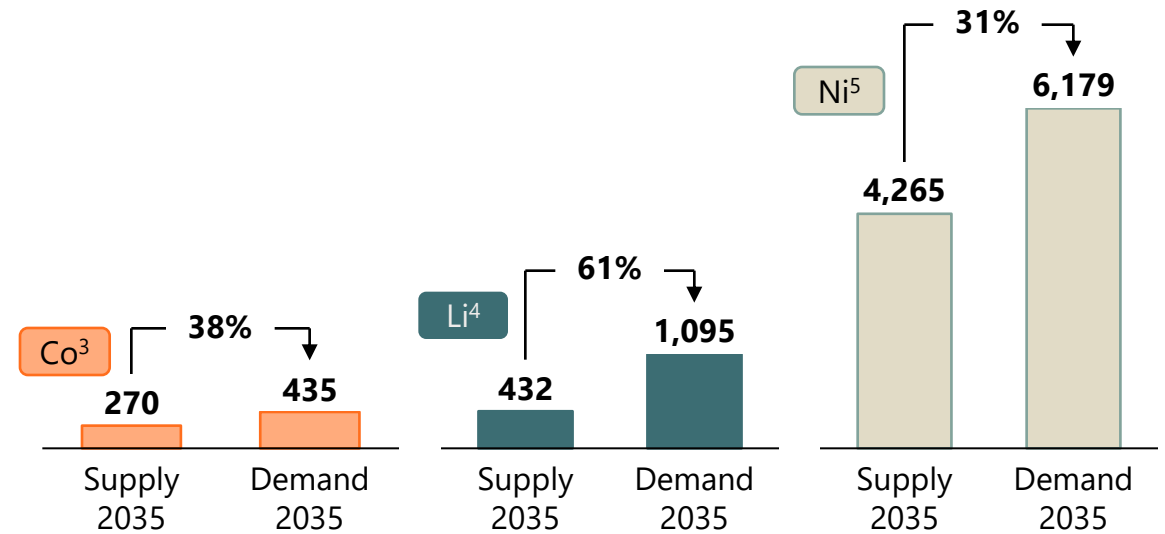
Why: Now is the time to own an exponentially growing market

Total battery waste in need of recycling in Europe in kilo tons¹



» Starting today, feedstock availability for battery recycling in Europe is set to grow exponentially

Critical metals mining capacity and demand globally in kilo tons²



» A sharp increase in raw material demand is driving the growing supply-demand gap

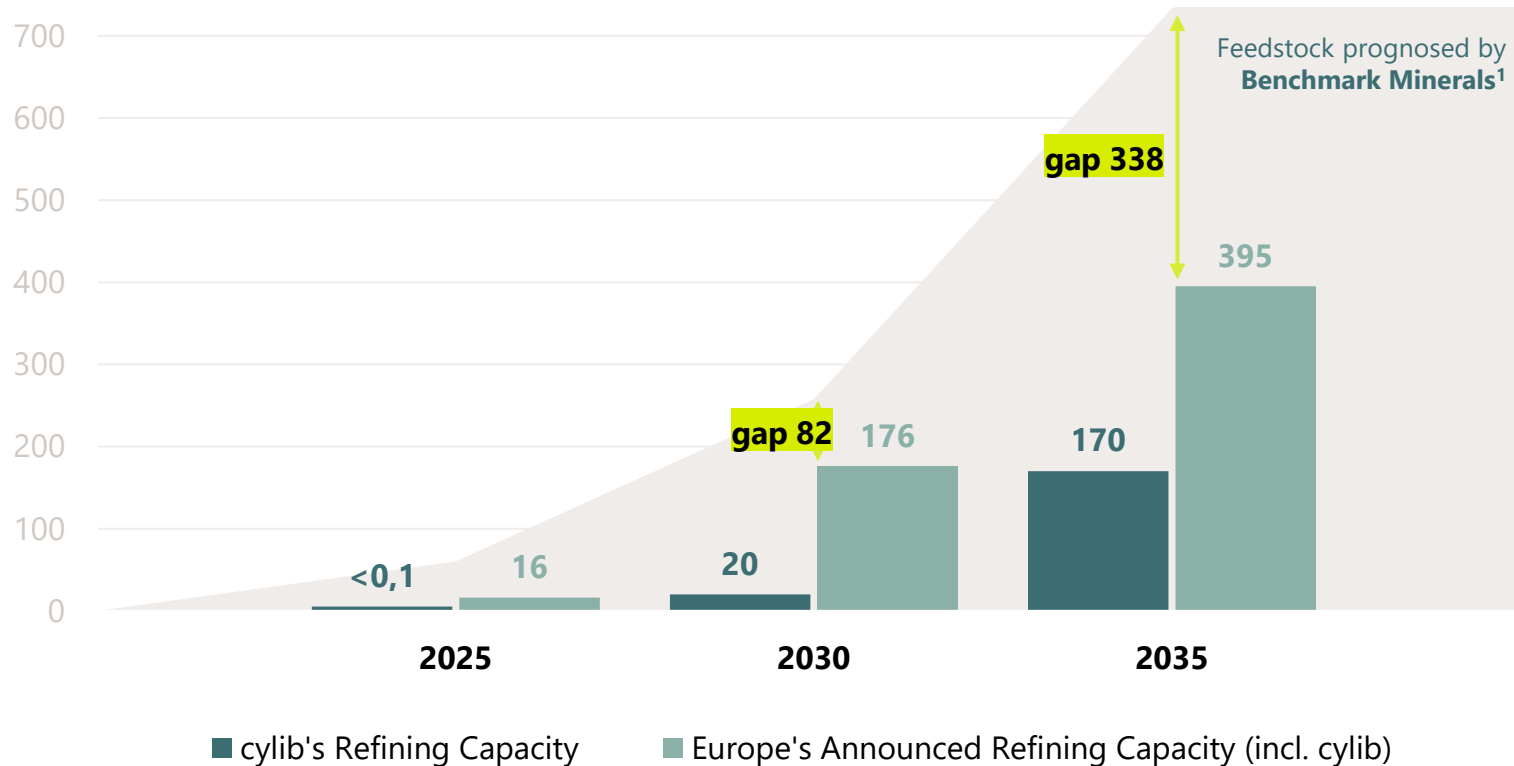
Battery recycling is a massive business opportunity worth > EUR 240bn⁶ by 2035

1) Benchmark Minerals, 2025 including End-of-Life batteries and production scrap 2) Capgemini, 2025 3) Cobalt 4) Lithium 5) Nickel 6) Porsche Consulting, 2025; MetaTech Insights, 2025

Why: Significant undercapacity of hydrometallurgical refining capabilities

Prognosed Black Mass supply vs. announced refining capacity in Europe¹

in kilo tonnes Black Mass



1

Clear undersupply of hydro-metallurgical recycling capacity in Europe compared to the projected black mass market.

2

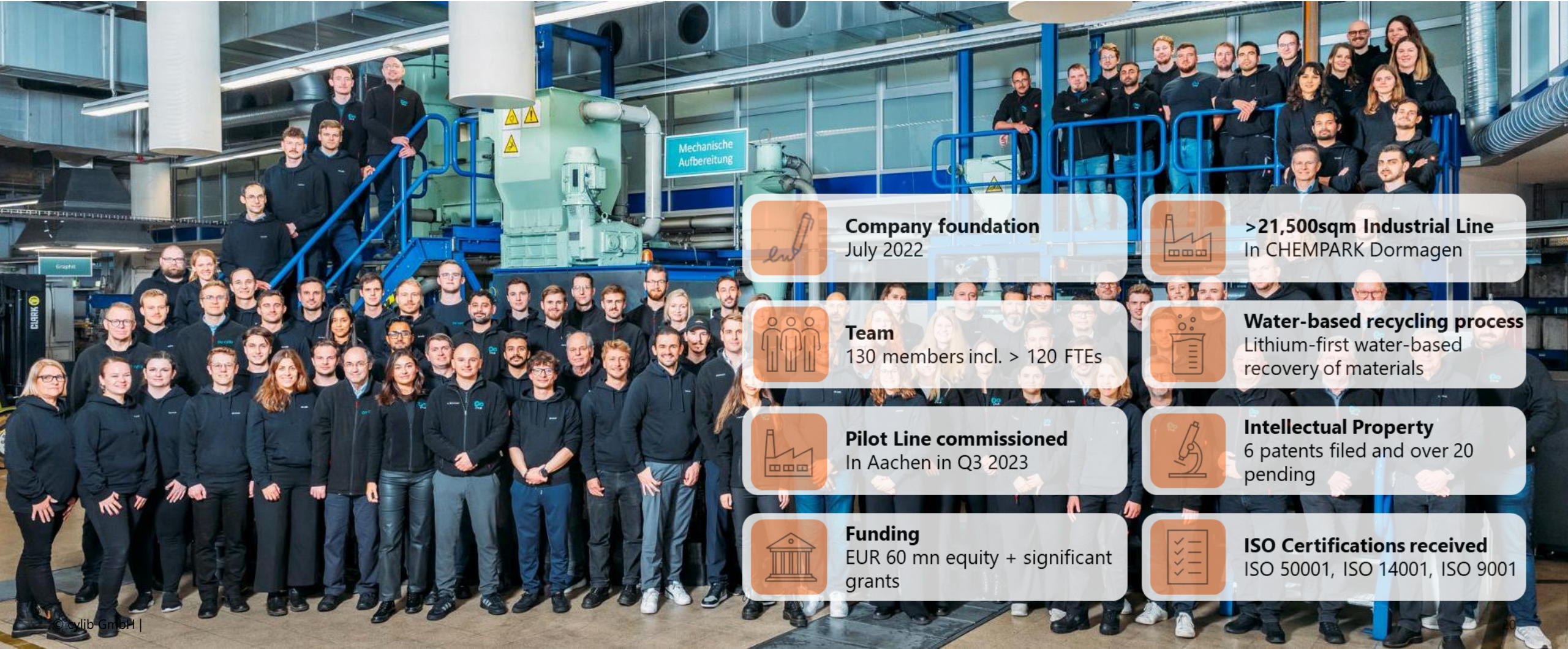
The recycling market, i.e., the supply of black mass, in Europe will reach over **733 kilo tonnes by 2035**.

3


Based on current publicly available information hydro-metallurgical projects and plants, cylib is forecast to achieve a **23,2% market share by 2035**.


1) Benchmark Minerals Q2 2025; Battery-News: Battery Recycling in Europe (as of March 2025)


How: From Pilot to Industry





 **Company foundation**
July 2022


 **>21,500sqm Industrial Line**
In CHEMPARK Dormagen

 **Team**
130 members incl. > 120 FTEs

 **Water-based recycling process**
Lithium-first water-based recovery of materials

 **Pilot Line commissioned**
In Aachen in Q3 2023

 **Intellectual Property**
6 patents filed and over 20 pending

 **Funding**
EUR 60 mn equity + significant grants

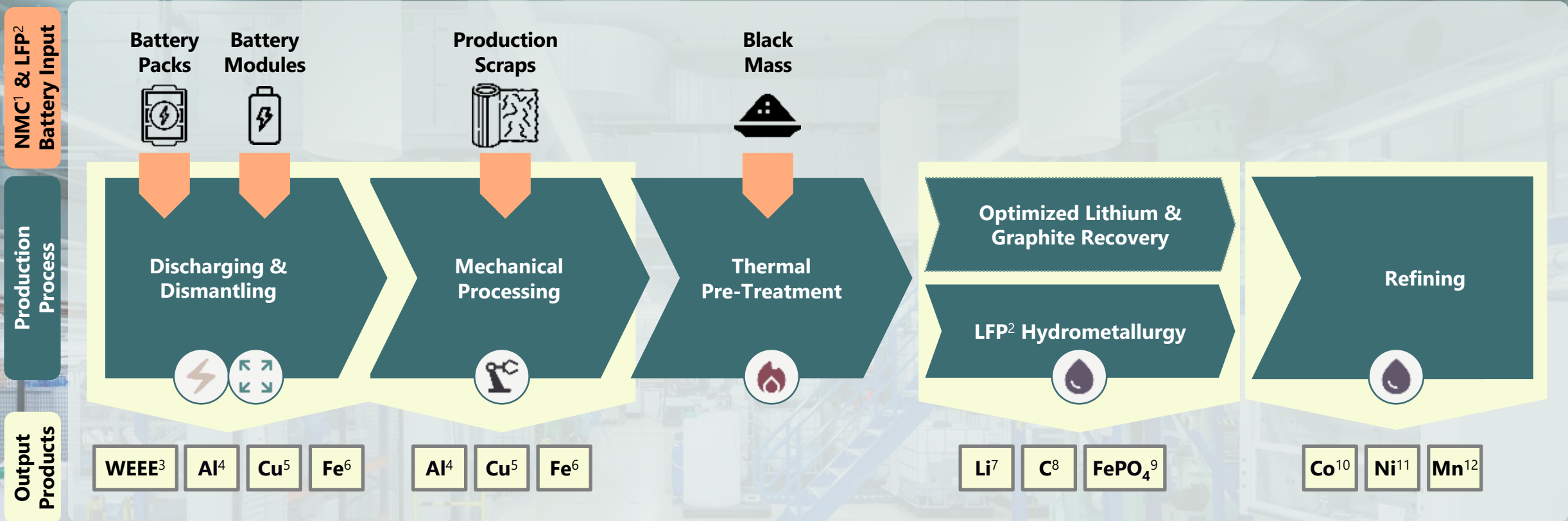
 **ISO Certifications received**
ISO 50001, ISO 14001, ISO 9001

cylib Vorstellung

How: Strong investor base



How: cylib's water-based tech to recover lithium



1) Nickel manganese cobalt 2) Lithium iron phosphate 3) Waste of Electrical and Electronic Equipment 4) Aluminum 5) Copper 6) Iron 7) Lithium 8) Graphite 9) Iron Phosphate 10) Cobalt 11) Nickel 12) Manganese

Industrialisierung cylib

How: Successful groundbreaking ceremony with MP Hendrik Wüst

- » Official groundbreaking celebrated alongside the Minister President of North-Rhine Westphalia Hendrik Wüst on September 9th, 2024.
- » Besides the MP, attendees included:
 - Members of Bundestag and Landtag from German political parties CDU, SPD, Bündnis 90/Die Grünen, and FDP.
 - Landrat Hans-Jürgen Petrauschke
 - Mayor of Dormagen, Erik Lierenfeld



Die Landesregierung
Nordrhein-Westfalen



CYLIB

CURRENTA
GRUPPE



How: Leveraging chemical park to scale European battery recycling



World-class "VERBUND" network

Optimally situated in Currenta chemical park with over 70 co-located chemical companies, offering direct access to consumables and offtakers



Energy & Waste networks

Directly integrated with reliable utility, energy and waste networks, the site benefits from on-site infrastructure and its own power plant



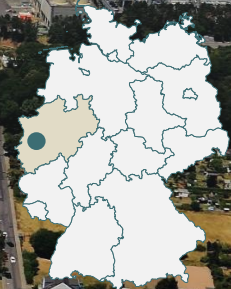
CHEMPARK Dormagen services

Shared infrastructure and specialized services, including on-site fire department, maintenance and operational enablers

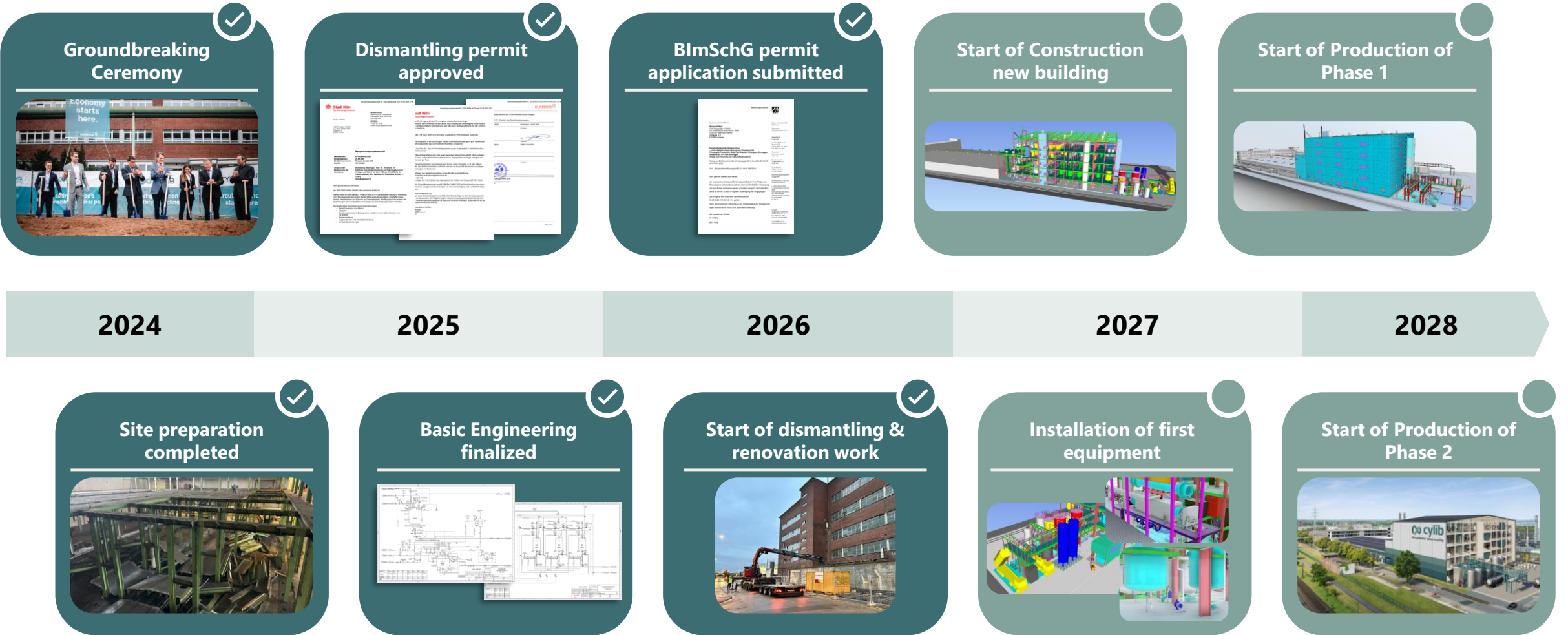


Streamlined permitting

Optimized permitting conditions and process by Currenta, enabled by a site zoned and equipped for industrial use, tailored for chemical operations



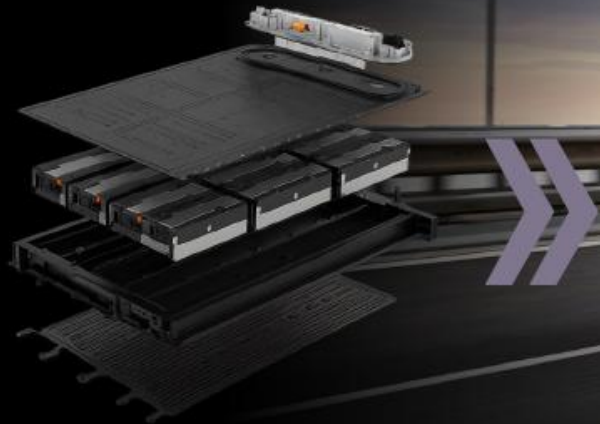
How: Dormagen build-out already underway with Start of Production in 2027



What: Nearly 40 POCs with OEMs and Tier-1 Suppliers, Porsche example

From vision to reality: Cell testing installed in Macan electric begins mid-year

- Porsche has launched a **pilot project** for the **recycling of high-voltage batteries**.
- Porsche aims to **reproduce** high-voltage battery cells with a defined proportion of **recycled materials**.
- In summer 2026, Porsche will **pilot** their potential use in **Porsche vehicles**.



VISION

A vehicle with a high-quality recycled battery offers the same reliability, range and performance as a new battery – with less negative environmental impact at the same time.



Next Generation Battery Recycling

For a true circular economy.

