

theo.deforges@industrya.com

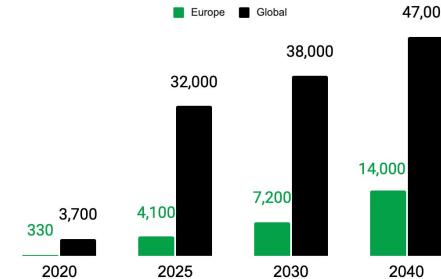
An aerial photograph showing a dark asphalt road with white dashed lines winding through a dense forest of green trees. The perspective is from above, looking down the length of the road.

TRULY BRINGING LITHIUM-ION BATTERY WASTE  
tozero

Stating the obvious: lithium-ion batteries (LiBs) demand is expected to >40x in Europe by 2040

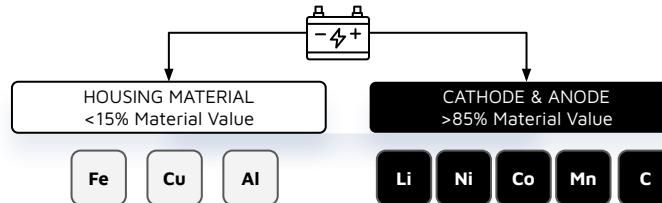
**Demand for LiBs is expected to >40x over the following two decades in Europe**

LiB Production in k tonnes



Massive growth coupled with ESG concerns and geopolitical tension.

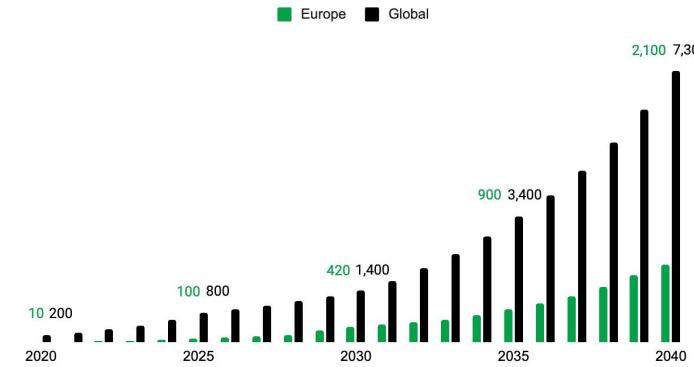
**Example of one 400kg EV LiB:** material value of >€3,000+\*



\*depending on LiB type: NMC, NCA, LFP, LNMO, LCO, LMO etc. However, Lithium will remain in all battery types and must be prioritized. For easy display abbreviations stand for: Iron (Fe), Copper (Cu), Aluminum (Al), Lithium (Li), Cobalt (Co), Nickel (Ni), Manganese (Mn), Graphite (C)

**...but this growth will create massive amounts of problematic, toxic waste**

LiB Waste in k tonnes

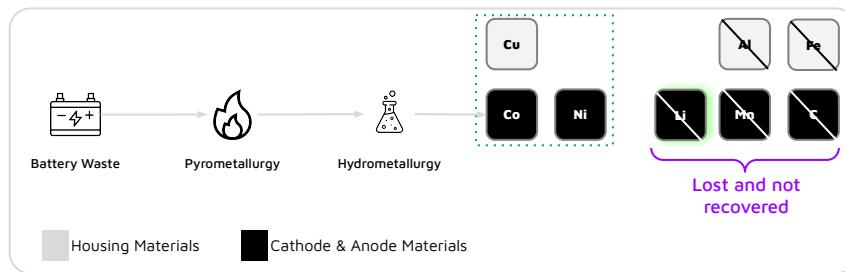


**↑1m tonnes LiB waste produced by 2030 (accumulated)**

Rapid growth in LiB production in Europe fuels significant waste from gigafactory production scrap, consumer electronics, and EVs.

Recycling is the obvious solution, except existing “recycling” methods are not effective at all

## Pyrometallurgy – “Smelting”



umicore GLENCORE  
Nickelhütte Aue GmbH

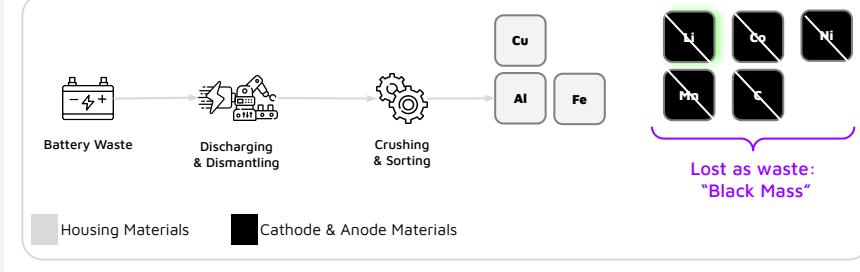
>50% material value lost  
(lithium not recovered)



Highly toxic emissions &  
large amounts of waste

Legacy process that is increasingly difficult to permit  
and will be obsolete by 2030

## Mechanical Treatment – “Shredding”



hydrovolt AKKUSIN VEOLIA Li-Cycle STENA RECYCLING



>85% material value lost  
(lithium not recycled)

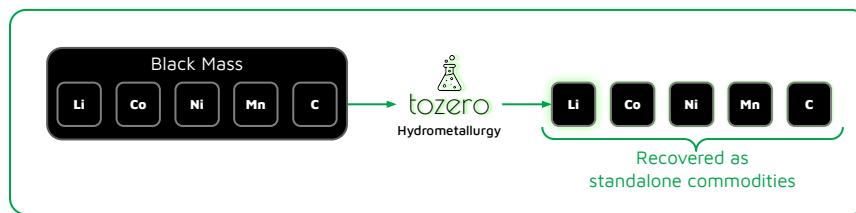


Operationally challenging  
due to transportation of  
explosive materials

Despite drawbacks, lots of competition in this field  
as technology is undifferentiated

We are the first ones that have cracked recycling of Black Mass in a truly circular fashion – regardless of battery type

## tozero Hydrometallurgy



Proven technology and scaled 15,000x above lab-setup for Li, C



All critical materials recovered, especially lithium ("white gold")



Fulfils regulatory requirements by EC: 80% recovery for Li

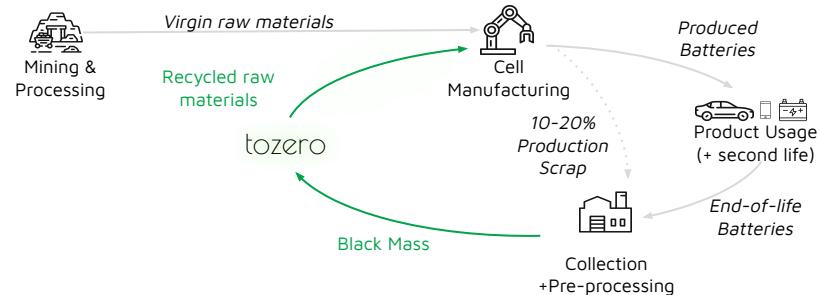


Low energy consumption due to "cooking water" temperatures



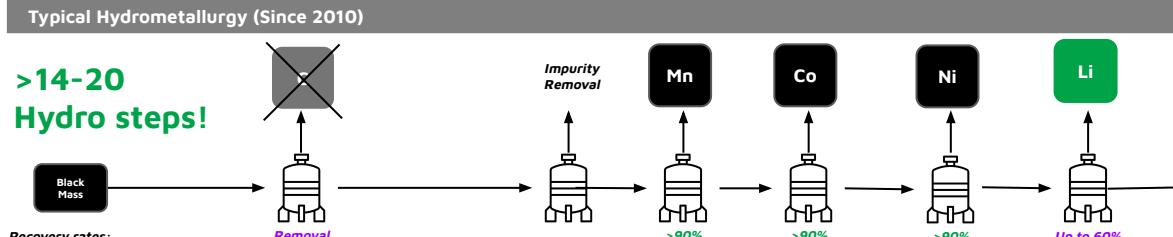
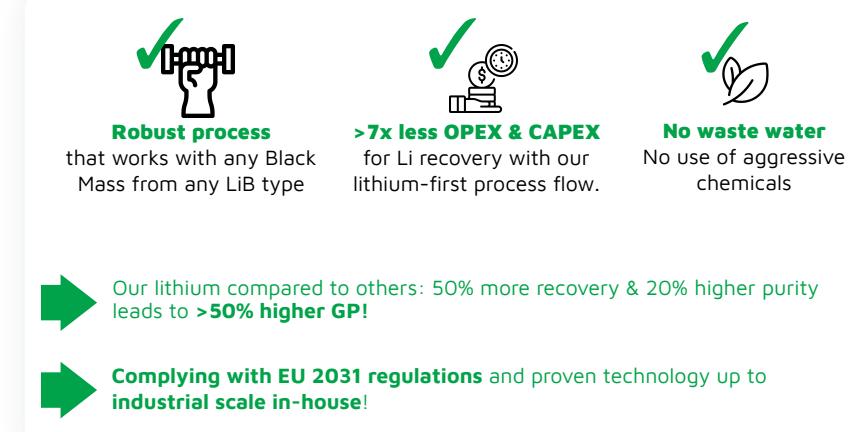
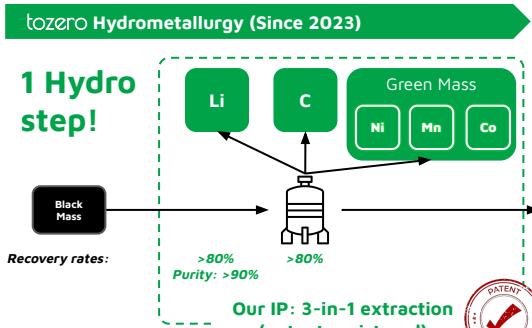
Uncomplicated logistics for Black Mass

**Our process closes the loop for LiBs by feeding key materials back into the production value chain**



Our technology can handle Black Mass from any type of LiB (NMC, LFP, NCA, etc.), offering us an unfair advantage

Truly closing the loop for all LiB types with our proprietary process unlocking >50% higher recovery rates for lithium – the most valuable material in LiBs – and boosts profitability to levels unprecedented in the industry

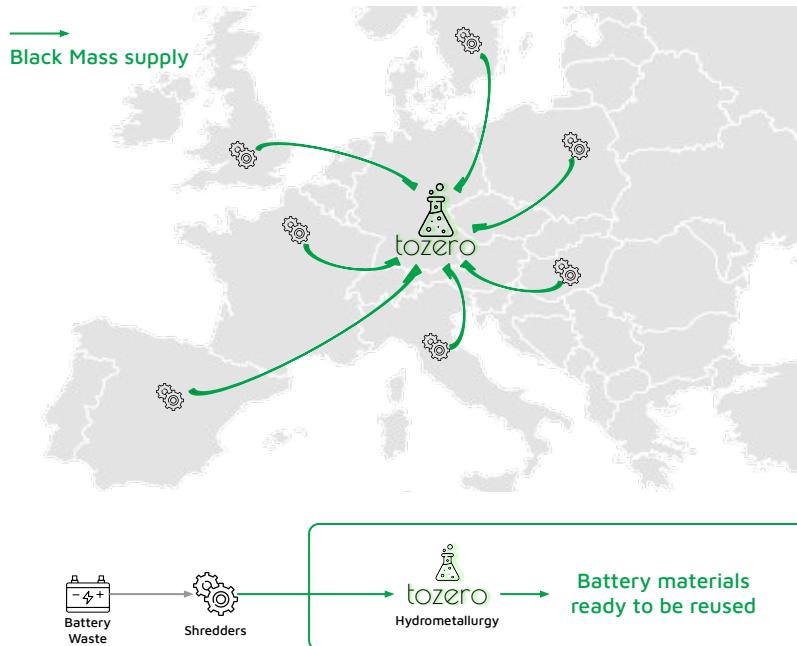


**Not agnostic!**  
Tailored process for NMC batteries only.

**Toxic waste streams**  
Toxic waste occur due to the usage of aggressive chemicals, e.g. sulphuric acids.

Partnering with shredders across Europe will allow us to scale faster than anyone in the field

## We can cover the entirety Europe today!



### Minimizing CAPEX

Shredding is based on undifferentiated technology and holds no IP potential.  
We let our partners handle this



### Simplifying operations

Avoiding complicated and risky handling & storage of LiBs



### Sourcing power

Working with multiple suppliers gives us better prices & more options for Black Mass, a key driver of our unit economics



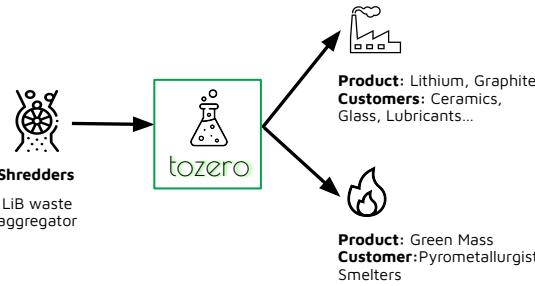
### Maximizing speed

Focusing all efforts on our core recycling activity allows us to move faster than players with ambitions to vertically integrate

# Sourcing Black Mass affordably and upgrading it to battery-grade commodities is a high-margin business

## Today's business:

Leveraging Lithium as a driver of growth and deploying new revenue verticals with **Green Mass**



**Li and C sold at unrefined to technical grade, including green + domestic premiums**

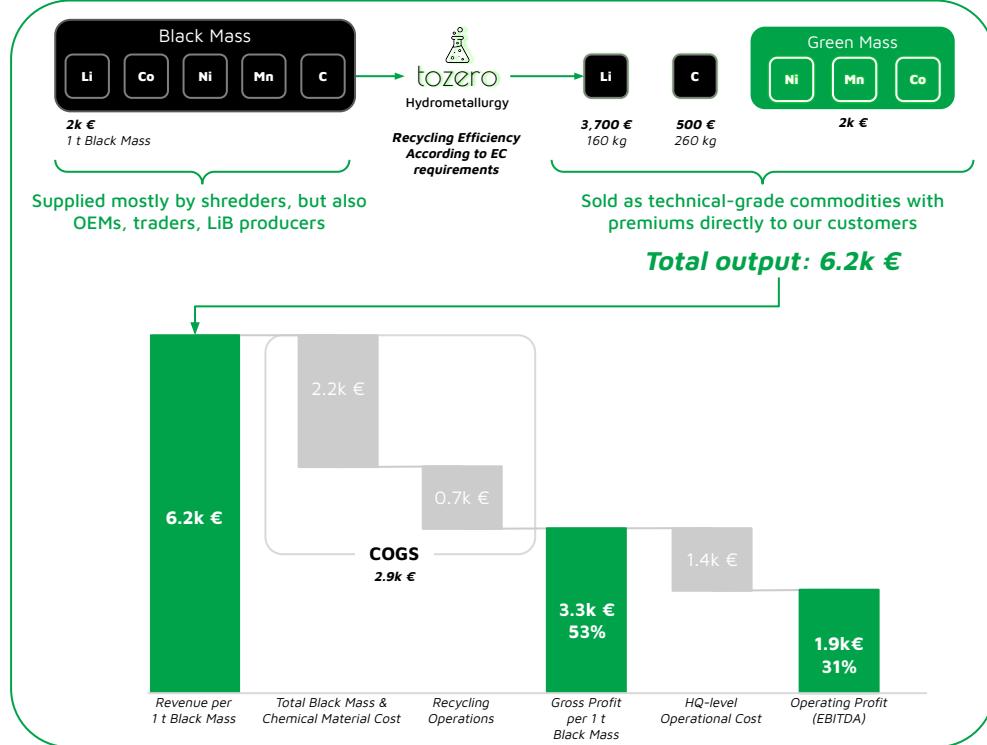
**Green Mass (GM)** is the resulting black mass after Li and C extraction. Particularly valuable to pyro players to remain operative and avoid **1)carbon taxes and 2)impurities**

Prices are based on the London Metal Exchange (LME) for input and output  
European Commission (EC) requirements by 2030+: 80% recovery for Li

For easy display abbreviations stand for: Lithium Carbonate (Li), Graphite (C). Prices are from Q4 2023 average.

## Commercial Plant 2026 (10kt/a)

Economics for 1 t of Black Mass input (lithium at 19€/kg)



**Compared to others:**

**50% higher GP and >7x less OPEX & CAPEX**

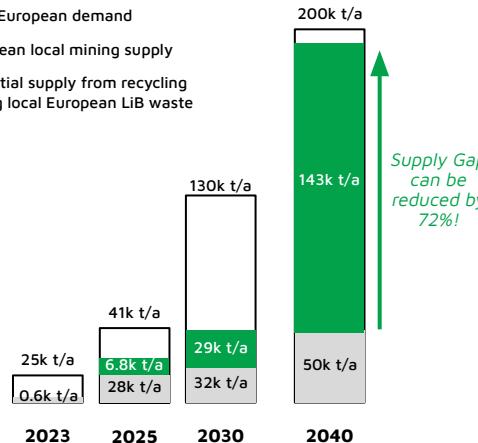
**>50% higher recovery & 20% higher purity for lithium.**

We are on path to dominate the €30bn+ European recycling market (global market is €100bn+)  
– at full capacity our 1st commercial plant will generate annual revenues of €60mn+

### Shortage of supply makes recycling imperative...

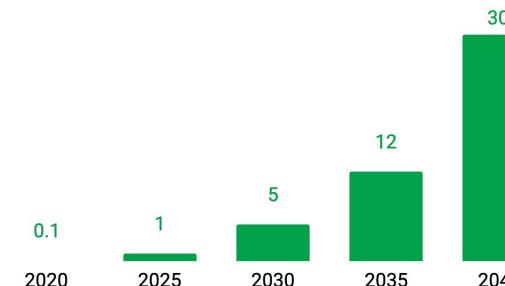
#### Europe lithium “white gold” demand and availability locally

- Total European demand
- European local mining supply
- Potential supply from recycling taking local European LiB waste



### ...and drive >30x market growth

#### European Battery Recycling Market in bn €

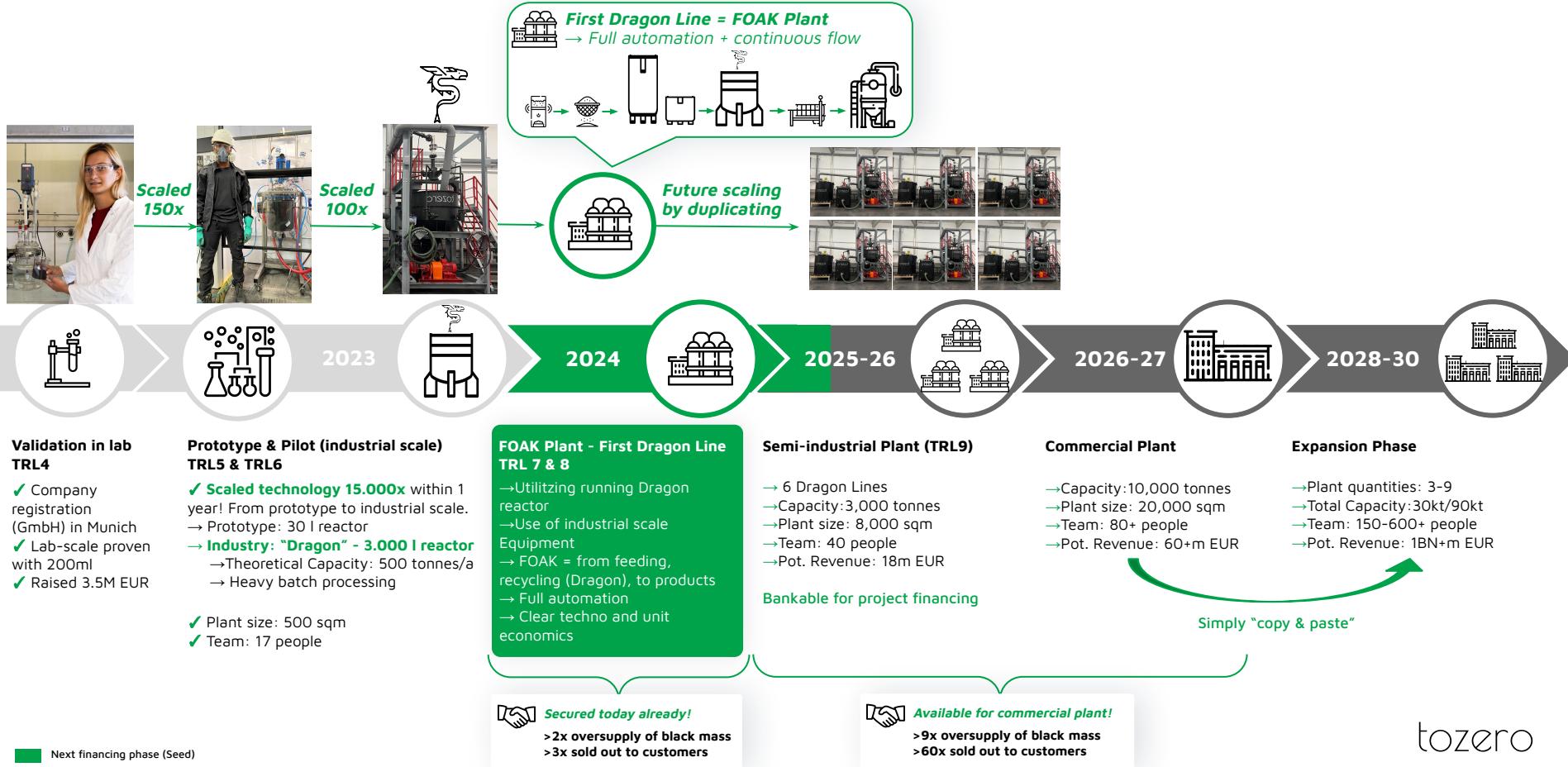


#### Our first commercial plant in 2026 will:

- Capture 6% of European market
- Process 10k t of Black Mass (30k t LiBs)
- Producing 2.000 t of Lithium
- Supply over 600k EVs (6% recycled content)
- Generate €60mn+ in annual revenue

By 2030, we will capture 25% of Europe's recycling market, producing 25.000 t of Lithium

With technology de-risked, compliant with regulatory requirements and proven to work in larger-than-lab equipment, we turn our focus towards larger plants with industrial-scale equipment



With technology de-risked, input secured, and already sold out for the next years - we have to build our plant fast

### Black Mass Supply: oversupplied



#### 2025 Semi-industrial Plant (3 k t)

3X

Supply: >10.000 t secured  
3x over supply for operations  
2025 operations: 3.000 t



#### 2026 Commercial Plant (10 k t)

9X

Pipeline: >90.000 t available  
9x over supply for operations  
2026 operations: 10.000 t

### Customers: sold out



#### 2025 Semi-industrial Plant (3 k t)

Output: >18.000.000 EUR Revenue  
Demand exceeding planned output (see below)

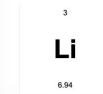


#### 2026 Commercial Plant (10 k t)

Output: >60.000.000 EUR Revenue  
Pipeline highly exceeding planned output (see below)



### Pilot Projects: 3 Pilots with OEMs



→ proof lithium recovery

#### Automotive OEM: 2 pilots signed



Goal: Q1-Q2 2024  
Process NMC LiB each

Duration:  
Q1-Q2 2024

#### Industrial OEM: 1 pilot signed



Goal:  
Process NMC LiB

Duration:  
Q1-Q2 2024



**Sarah Fleischer** | Co-Founder & CEO  
2x startup founder  
Led Forto's strategy and partnerships  
Shaped Luxembourg's space industry  
Won first-ever SpaceX Hyperloop contest  
TUM, Mechanical Eng.



**Dr. Ksenija Milicevic Neumann** | Co-Founder & CTO  
Worked on multiple projects in sustainable metallurgy  
10+ years of work experience in metallurgy  
Leading strategic research projects  
Acquired multi-million R&D grants  
RWTH Aachen, Metallurgical Eng.



**Maximilian Blume**  
Senior Business Developer  
*Exp. in B2B relationship with OEMs and SMEs*



**Zac Qiu**  
Business Developer  
*Exp. in B2B relationship with Chinese OEMs and battery producers*



**Sabareesh Gopalakrishnan**  
Plant Operator  
*Exp. in leading 120+ ppl process engineering plants*



**Dr. Jorge Gamarra Garcia**  
Senior Hydrometallurgical Engineer  
*Exp. in battery recycling at various universities*



**Selim Çapar**  
Senior Hydrometallurgical Engineer  
*Exp. in working at Turkey's largest cobalt mine*



**Djordje Ivkovic**  
Instrumentation & Control Engineer  
*Exp. in mechatronics and sensor technology at various companies*



**Martin Leu**  
People & Culture



**Matthieu Faustin**  
Business Operations & Finance



**Tim Zinkl**  
Founder's Associate



**Sachin Samarakone**  
Hydrometallurgical Engineer



**Anna Cassidente**  
Prototype Mechanical Engineer



**Florian Wolf**  
Mechanical Engineer



**Mine Kocatus**  
Chemist



**Wenyi Dai**  
Chemical Engineer



**Nadja Berger**  
Chemical Engineer



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TRULY BRINGING LITHIUM-ION BATTERY WASTE  
**tozero**

We are raising our second round.  
Join the mission. Contact us.

Sarah Fleischer (CEO)  
sarah@tozero.solutions