

An aerial photograph of a paved road winding through a dense, lush green forest. The road is dark and has white dashed lines. The trees are thick and vibrant green, creating a textured canopy. The overall scene is serene and natural.

Startups als Impulsgeber für Innovation -  
Etablierung einer Kreislaufwirtschaft in der  
Batterieindustrie

TRULY BRINGING LITHIUM-ION BATTERY WASTE  
tozero

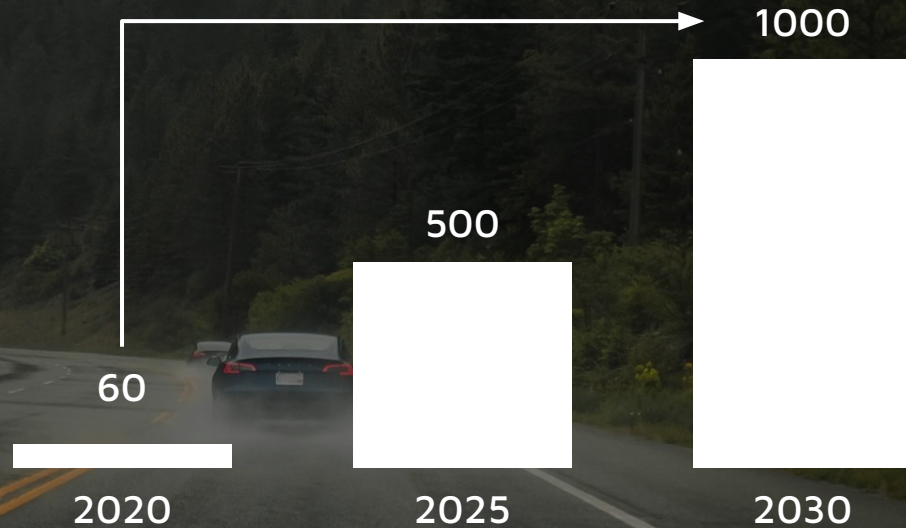
# Climate Change Is Humanity's Most Complex Problem



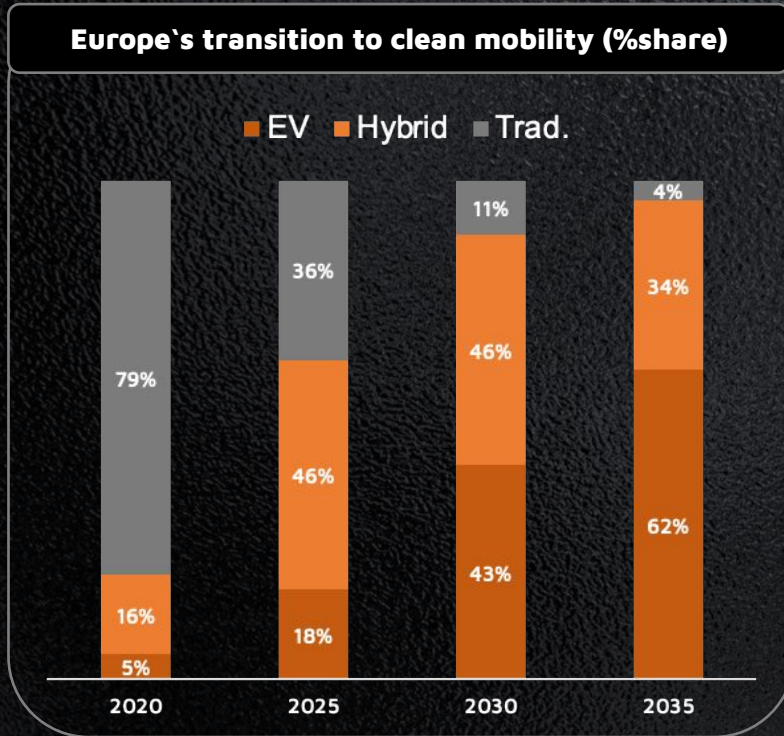
We require to bring 51b t greenhouse gas emissions globally to zero

***Electrification  
will cause an  
exponential  
growth in  
lithium-ion  
battery  
production.***

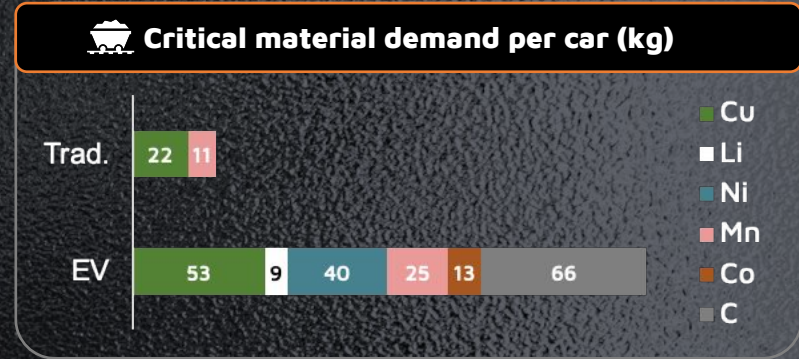
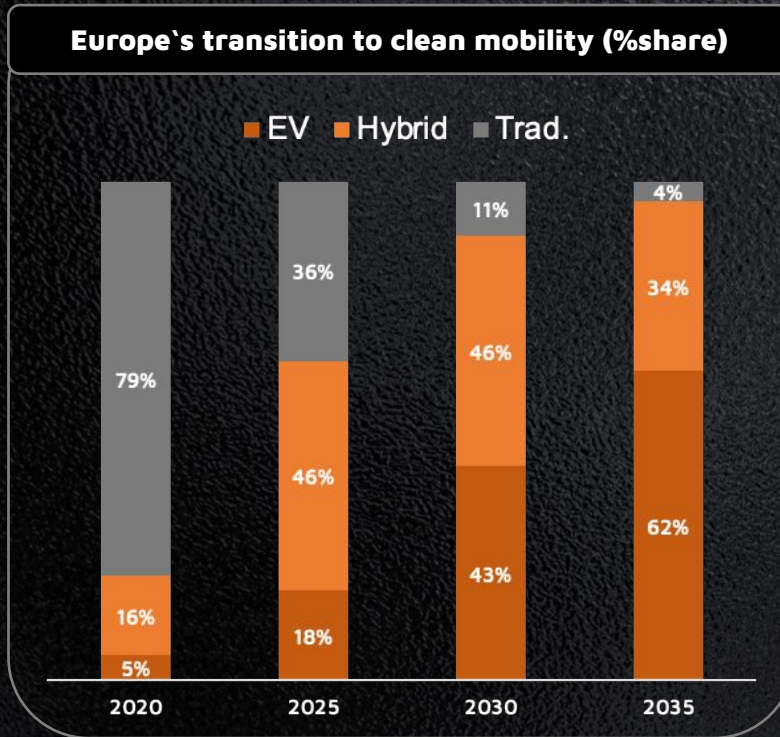
↑ >20x  
Europe's battery  
production in GWh



# Rising climate awareness leading to an accelerated electrification causing surging battery material demand as well as waste

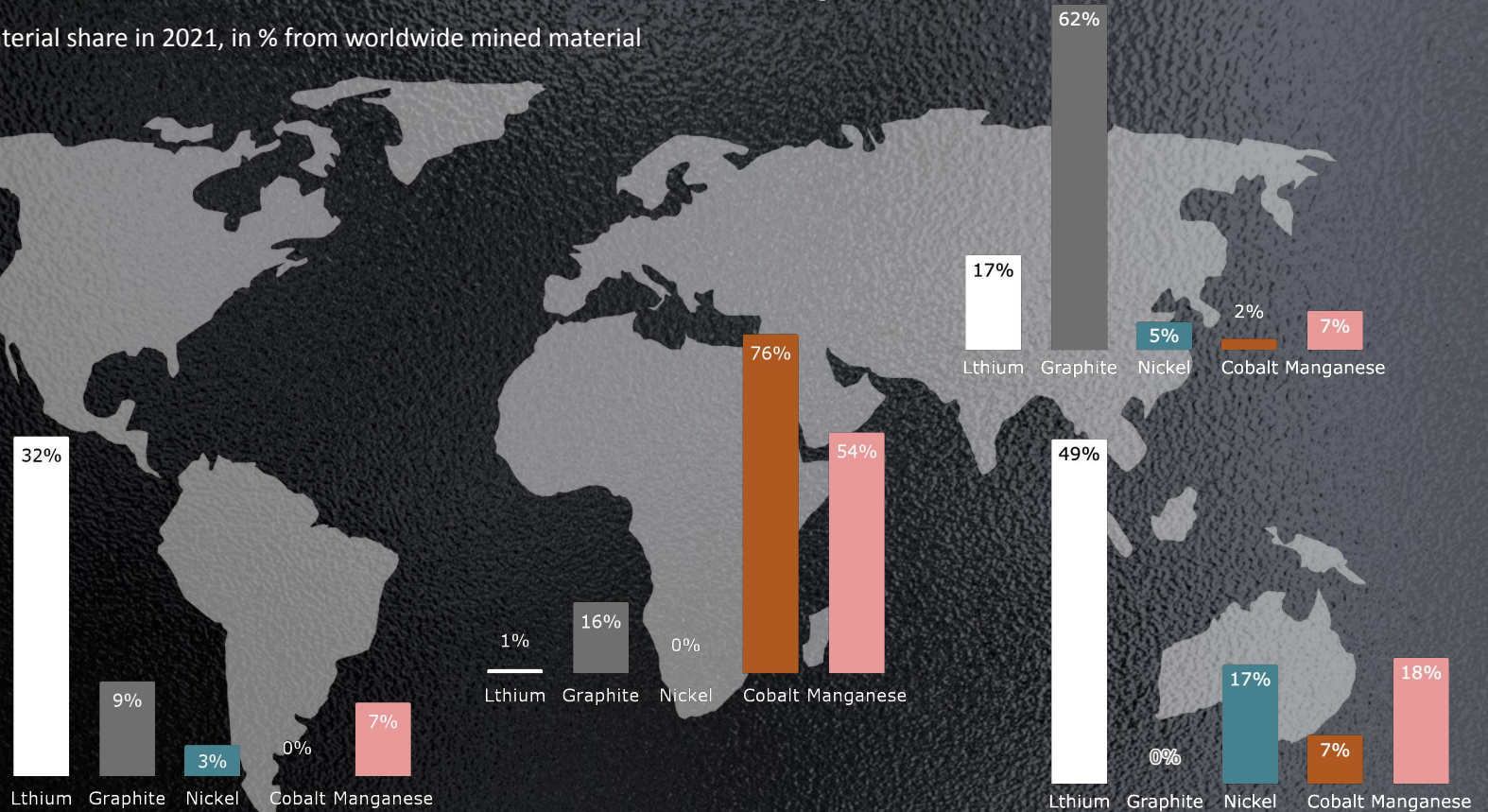


# Rising climate awareness leading to an accelerated electrification causing surging battery material demand as well as waste



# Battery materials are rarely found in Europe

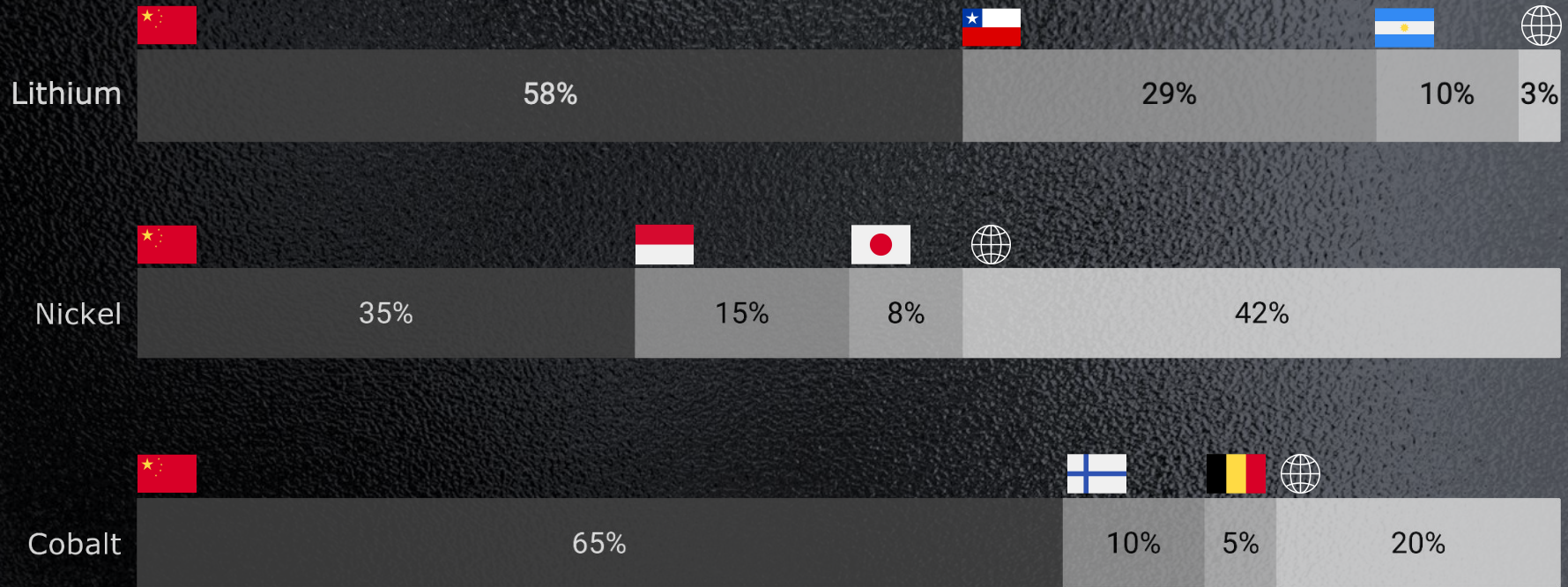
Mined raw material share in 2021, in % from worldwide mined material



Source: United States Geological Survey, Roland Berger (2021)

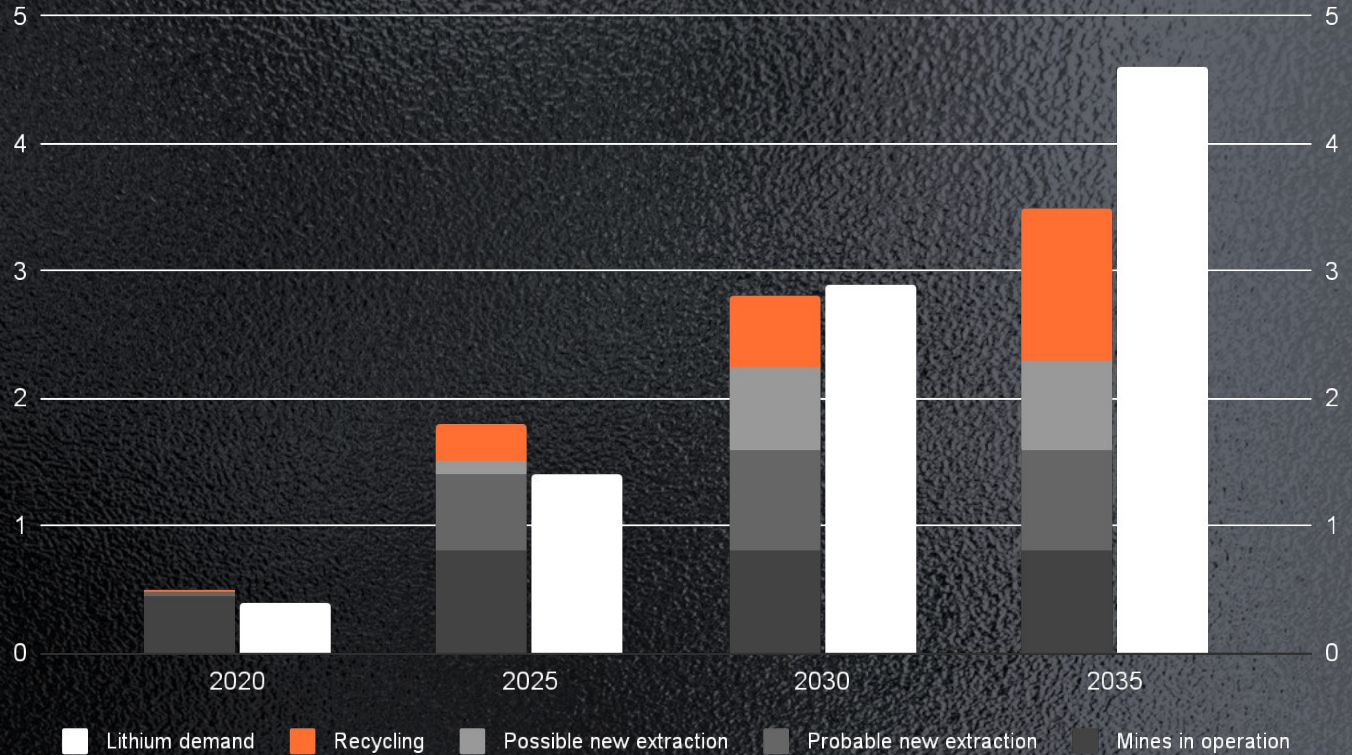
# Also, most (pre-)processing of battery materials is done outside of EU

Processed material share in 2021, in % from worldwide processing capacity



***We will face a significant supply gap from mining starting in 2026***

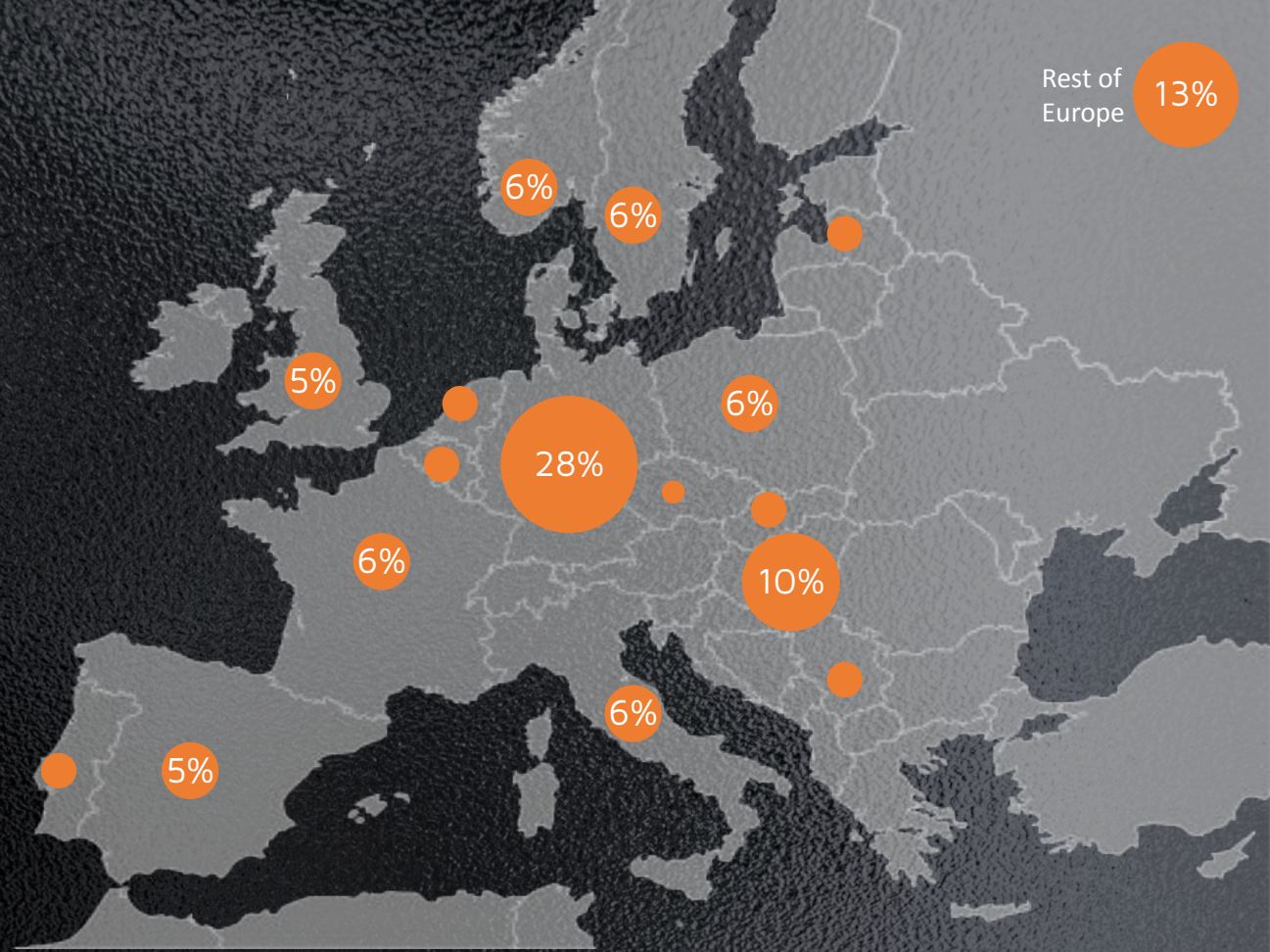
Forecasted global lithium supply and demand (in million tons Lithium Carbonate Equivalent)



Sources: BCG 2022, S&P Global Market Intelligence

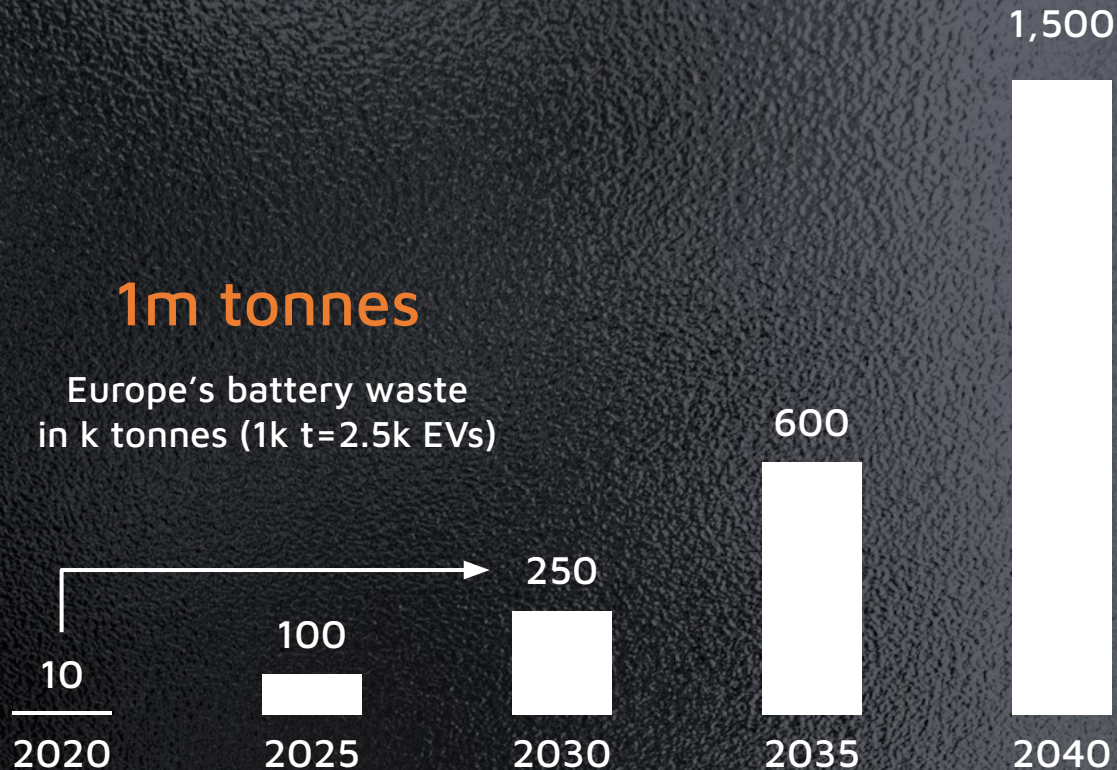


***Announced  
battery  
production in  
Europe to  
reach 2 TWh***



Source: Battery News (Feb 2023)

***...this will  
cause an  
explosion  
in waste.***



**>60%**  
**deriving**  
**directly from**  
**production**  
**scrap**



**25%**  
Consumer  
Electronics



**14%**  
EVs



**1%**  
Energy  
Storage



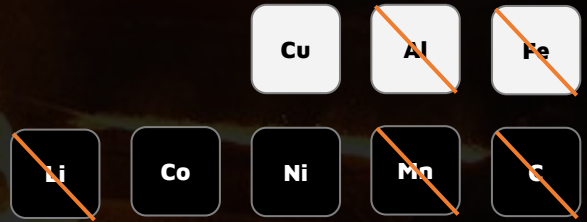
**60%**  
Production  
Scrap

**Status quo of  
"recycling" is  
smelting  
batteries in  
1400°C...**

End-of-life  
LiBs



Thermal  
treatment



**European  
Commission is  
pushing new  
regulations  
by 2030+...**



70% Collected

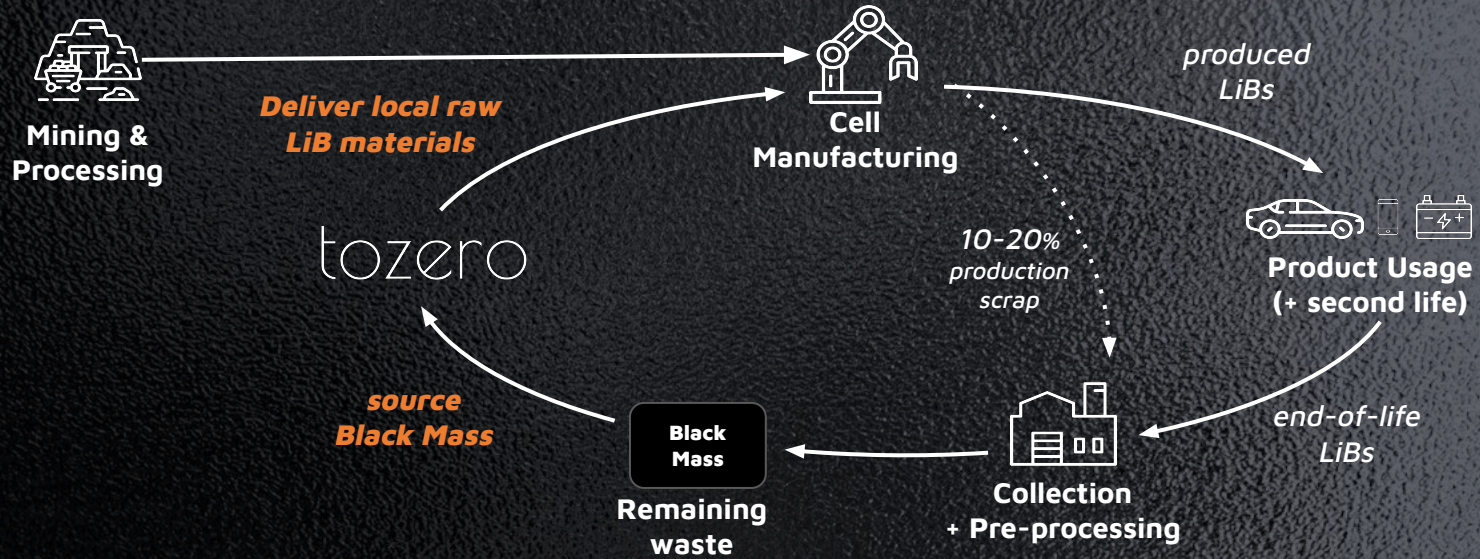


Recovery Rates  
95%: Co, Ni, Cu  
80%: Li

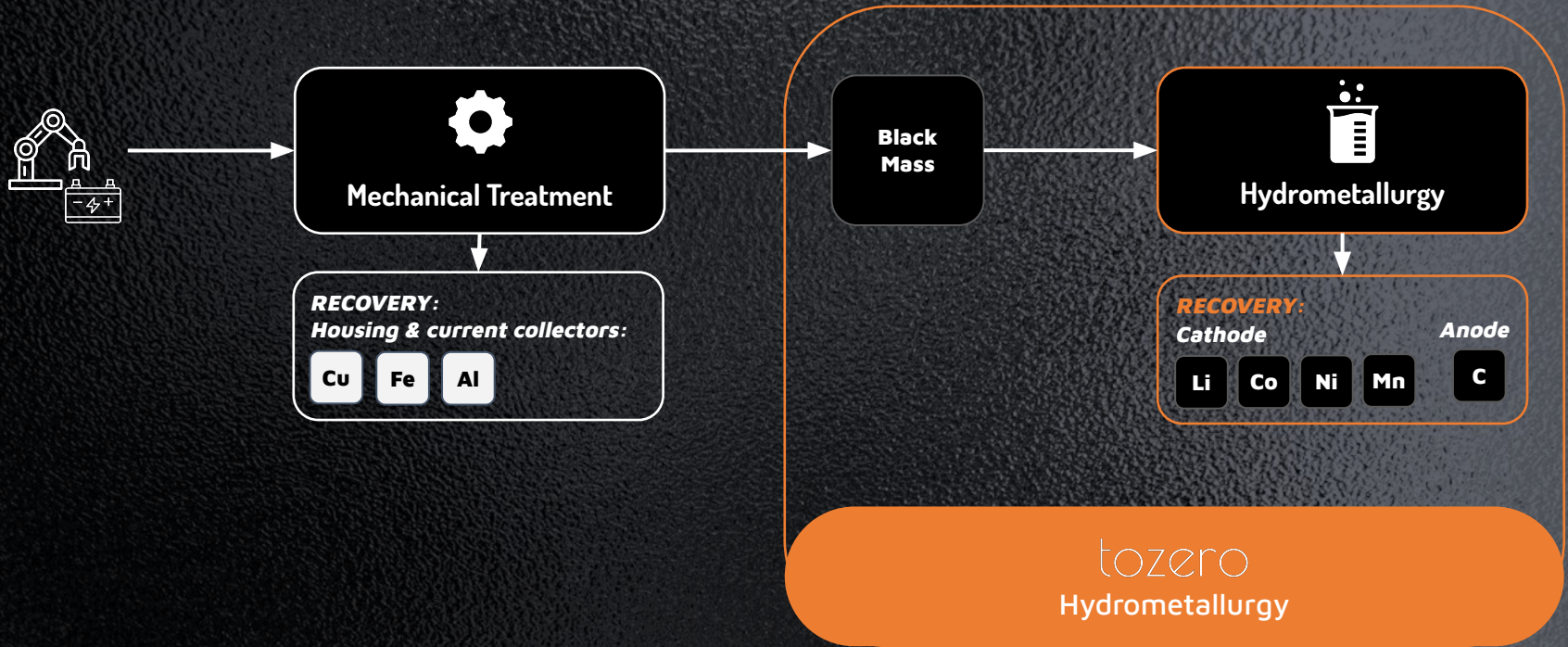


Recycled Input  
16%: Co  
6%: Ni, Li

tozero truly closes the loop by returning recycled raw materials back into the battery supply chain

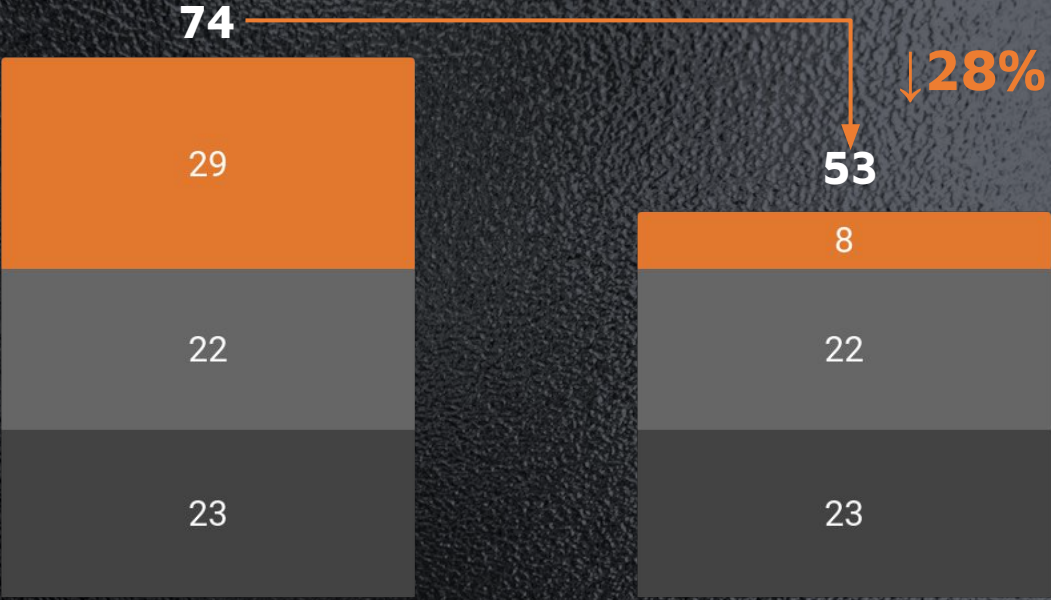


# The new approach: Many players are establishing capacity in the first part of the recycling chain, and we are scaling HYDROMETALLURGY



# Total CO2e battery cell production emissions for a NMC battery (in kgCO2e per kWh)

**Battery production with recycled materials has ↓28% CO2**



Virgin Raw Materials

Recycled Materials

Raw Material    Active Material Production    Cell Production

Source: McKinsey Battery Insights (2023)





# Stellar Team Passionate About Creating A Sustainable Future



**Sarah Fleischer**  
Co-Founder & CEO



**Martin Leu**  
People & Culture



**Sabareesh Gopalakrishnan**  
Plant Operator



**Maximilian Blume**  
Business Developer



**Wenjun (Zac) Qiu**  
Business Developer



**Tim Zinkl**  
Business Developer



**Klara Keck**  
Business Developer



**Dr. Jorge Gamarra Garcia**  
Hydrometallurgical Engineer



**Selim Çapar**  
Hydrometallurgical Engineer



**Sachin Samarakone**  
Hydrometallurgical Engineer



**Djordje Ivkovic**  
Instrumentation & Control Engineer



**Lennart Morlock**  
Mechanical Engineer



**Matthias Gmeiner**  
Mechanical Engineer



**Dr. Ksenija Neumann**  
Co-Founder & CTO



Headquarter (Munich, Germany)  
Office and Production Site



**Nebojša Ilić**  
Chemical Engineer



Backed by a strategically selected investor base in a €3.5m pre-seed round

## Institutional investors

led by



with participation from



## Angel investors



**Jochem Heizmann**  
Former board member



**Daniel Schulte-Hillen**  
Full-time Business Angel



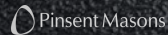
**Hendrik Braun**  
Serial Entrepreneur



**Jonas Rieke**  
Co-founder



**Sven Schulte-Hillen**  
Partner



**Nicolas Stadtmeyer**  
Managing Director



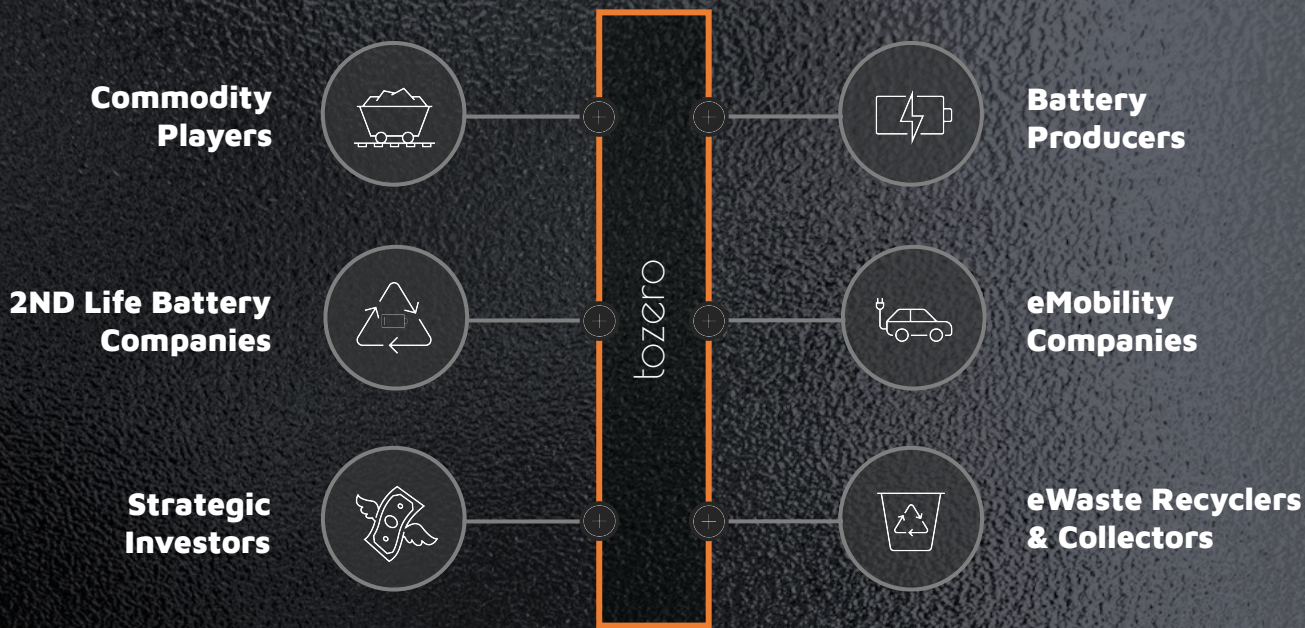
**Maximilian Wühr**  
Co-founder



**Moritz Krause**  
Engagement Management



**Join our  
mission and  
make  
eMobility  
circular!**



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tozero



**Dr. Ksenija Milicevic Neumann**

Co-founder & CTO

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