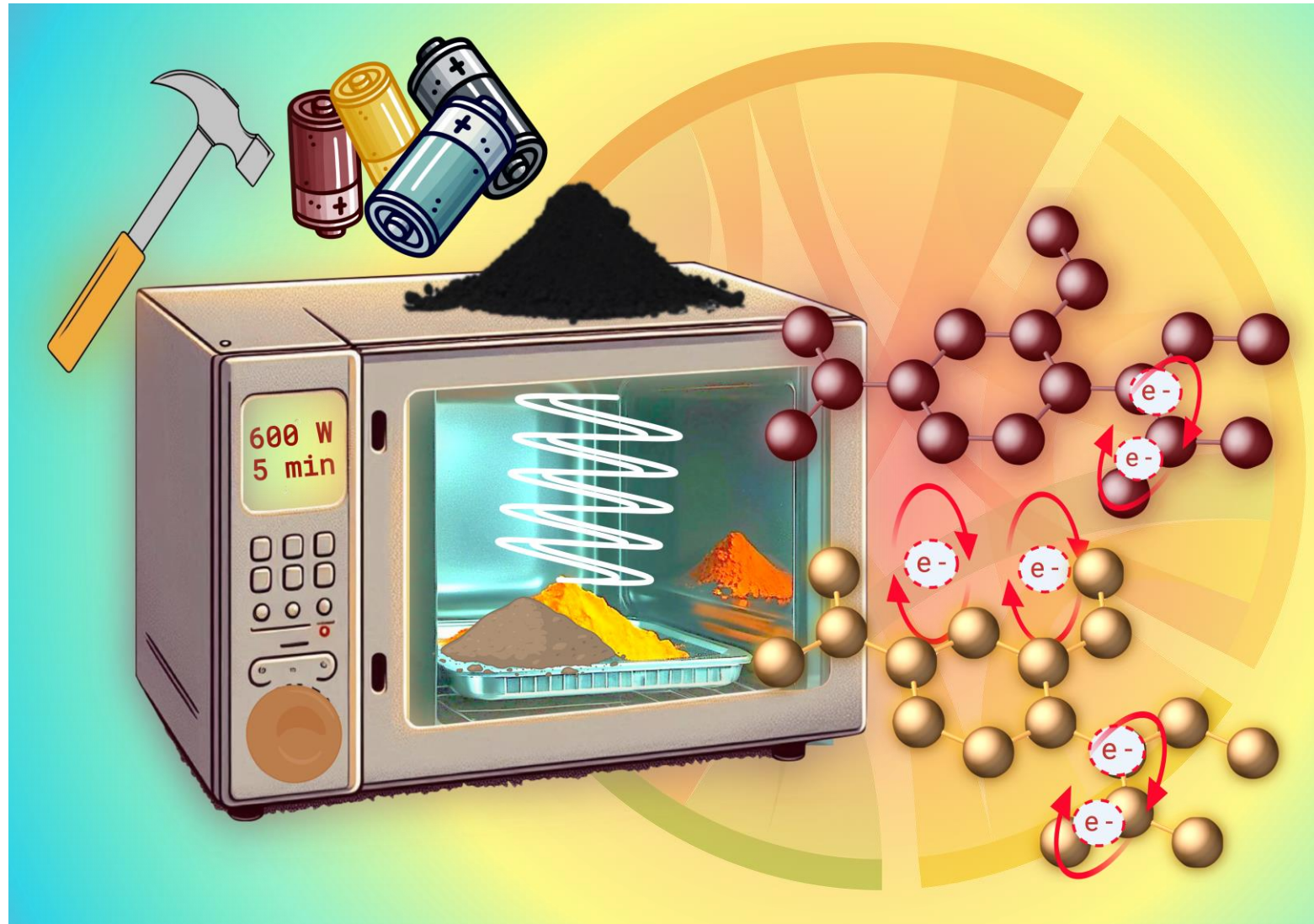


CAMEL - new CARbothermic approaches to Recovery critical METals from spent Lithium-ions batteries



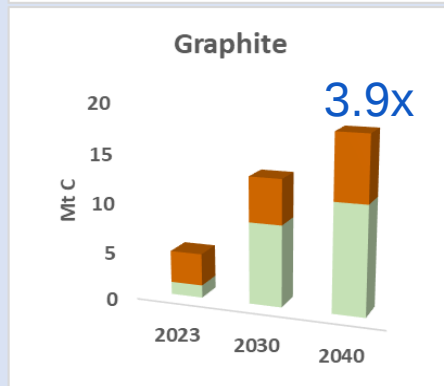
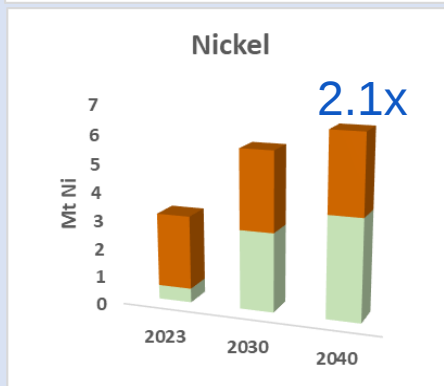
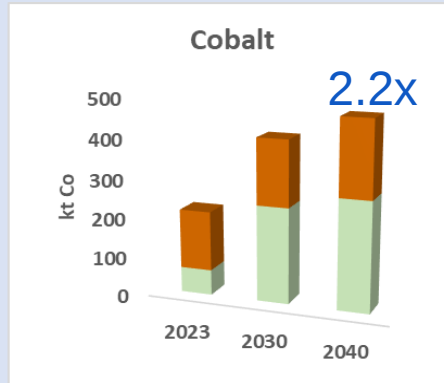
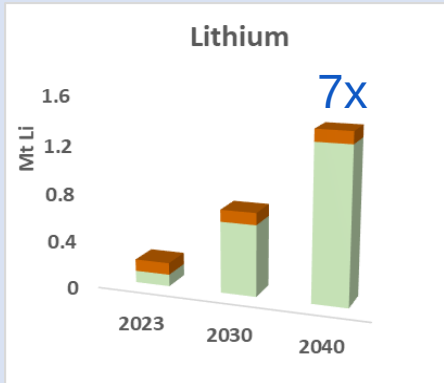
Tech4Lib
Spent lithium-ion battery recovery

<https://tech4lib.unibs.it>
<https://caramel.unibs.it>

Antonella Cornelio
antonella.cornelio@unibs.it

Go electric!

Aumento della domanda entro il 2040, rispetto al 2023



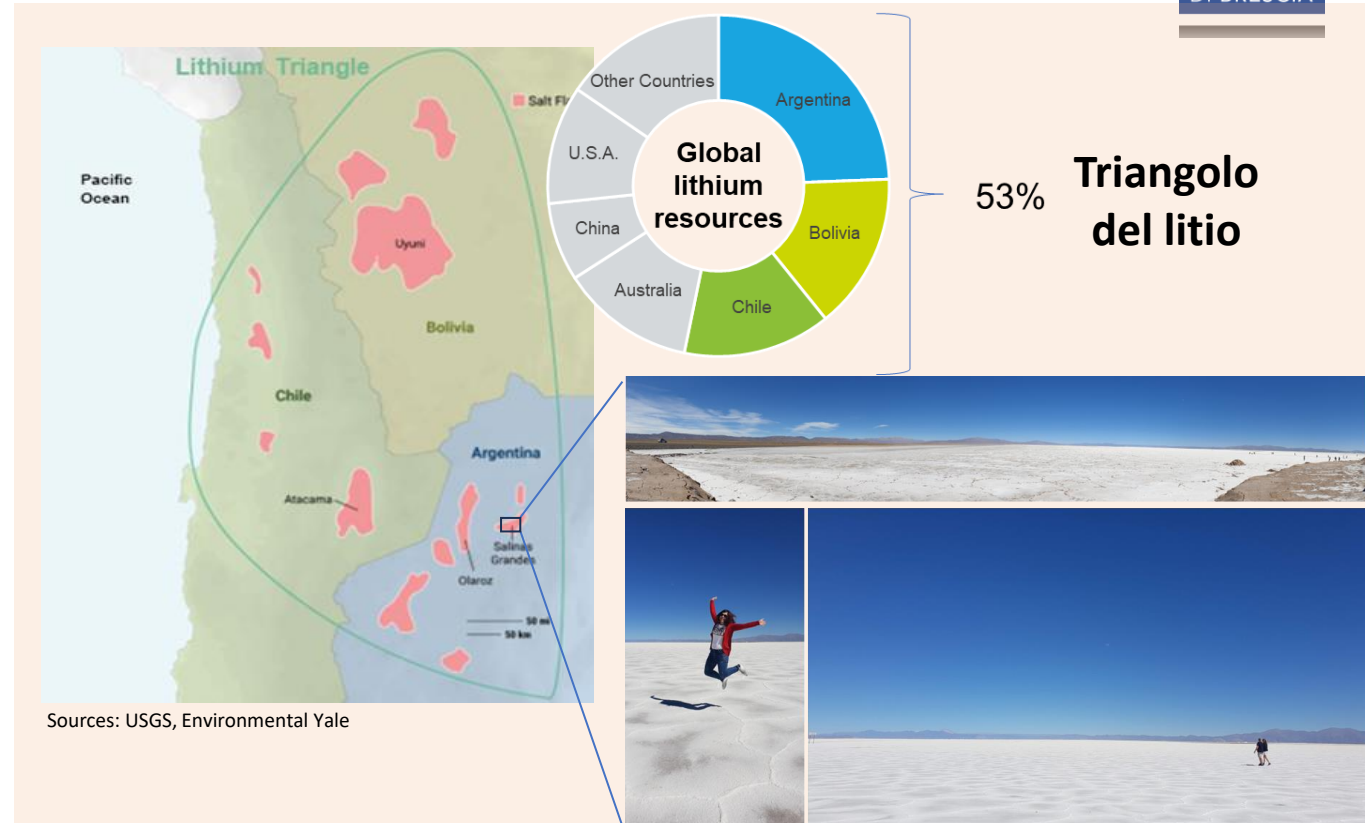
Data source: IEA 2024



Elementi chiave per la produzione di veicoli elettrici e sistemi di accumulo di energia.



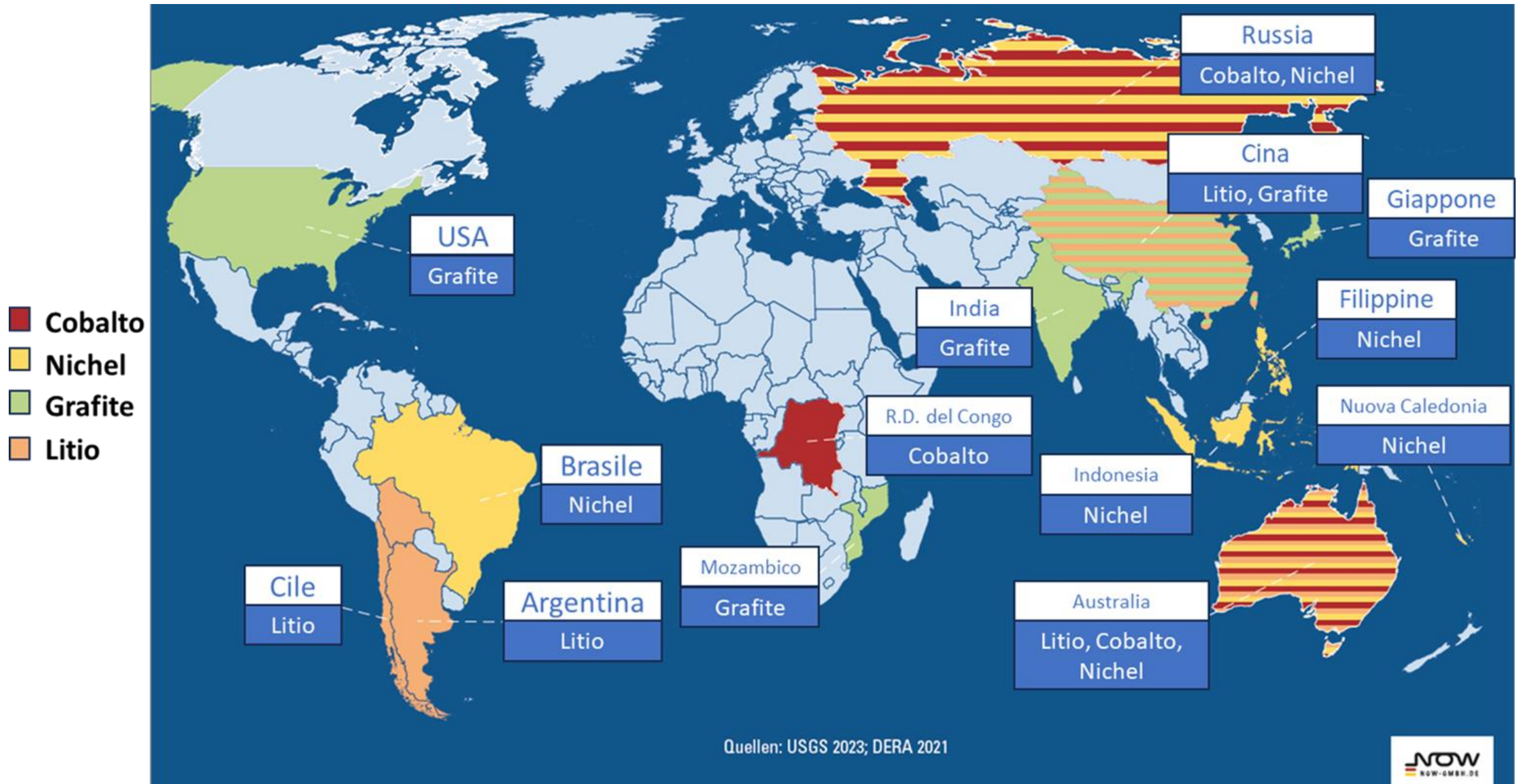
Inclusi nella lista delle materie prime critiche a rischio di esaurimento entro il 2030.



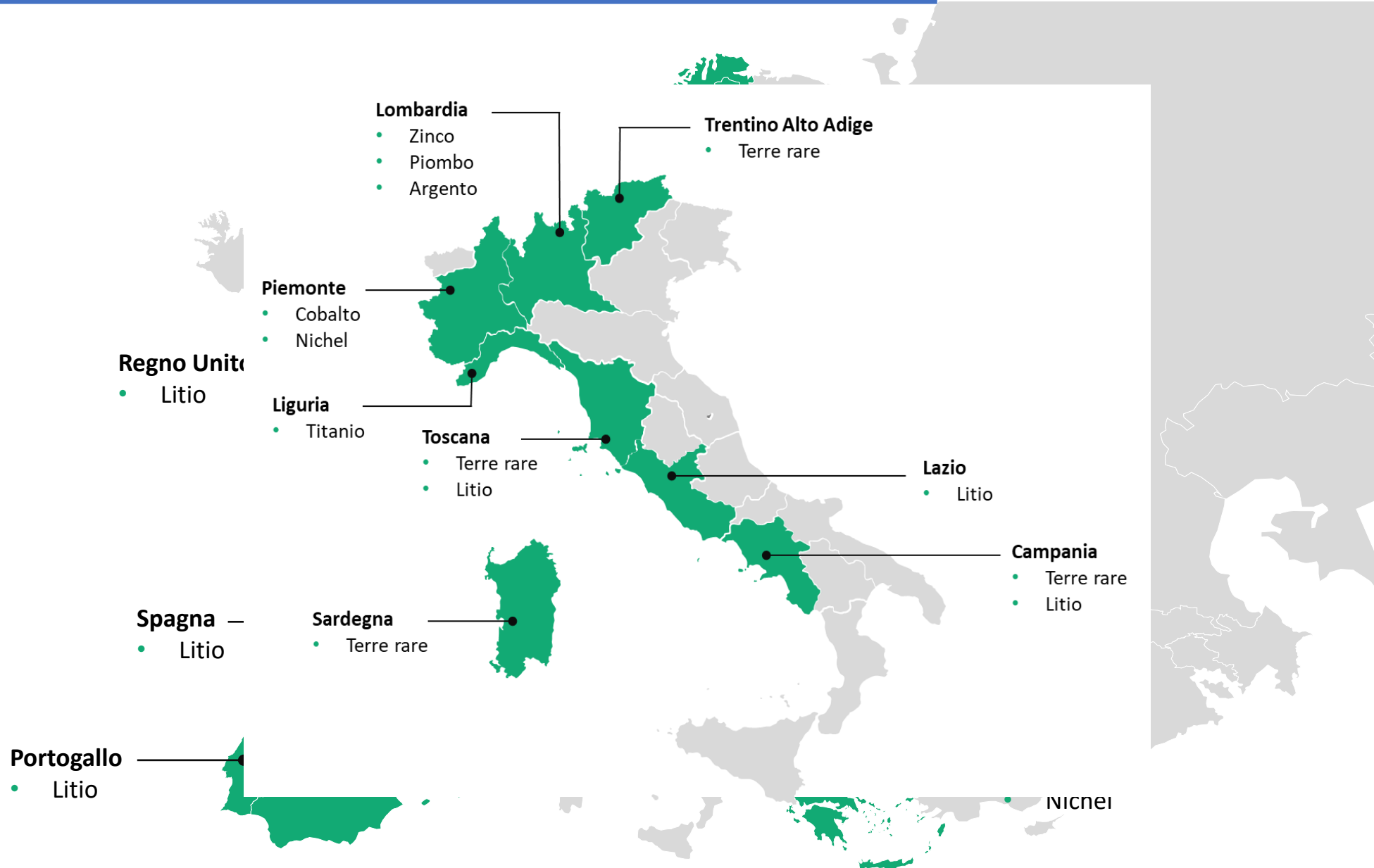
Problemi ambientali e sociali



Materie prime critiche



Materie prime critiche in Europa



Progetto CARMEL



Ministero
dell'Università
e della Ricerca

-Tecnologia brevettata
-Premio EIT Raw Material

Ministero delle Imprese e del Made in
Italy

- Intellectual Property Award

FISA

Progetto europeo
NEXT-LIB

2022

2021

Microonde
commerciale



2023

Microonde da
laboratorio



2025

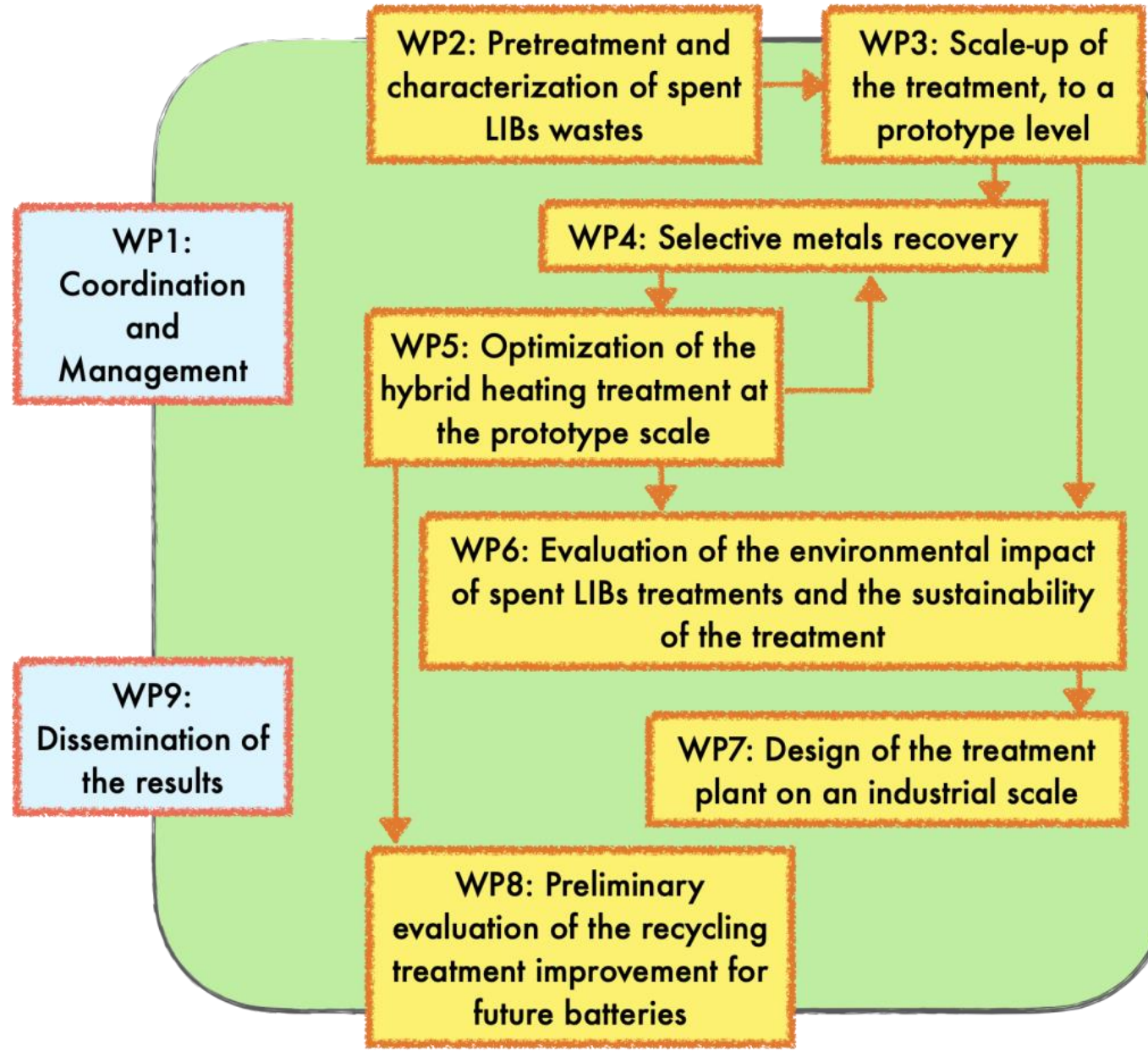


15 ricercatori coinvolti
3 dipartimenti



-Fondo MITO
-Premio 2031 (percorso messo in palio
da Paradigma Exponential Hub)
-Tech4Lib (finanziato da Fondazione Cariplo)

Work Packages (WPs)





GRAZIE PIÙ

