IMPOSSIBLE MINING

NAATBatt INTERNATIONAL

Responsible Robotic Mining of Seabed Battery Metals
Metal Extraction using Bacteria without Roasting or Leaching

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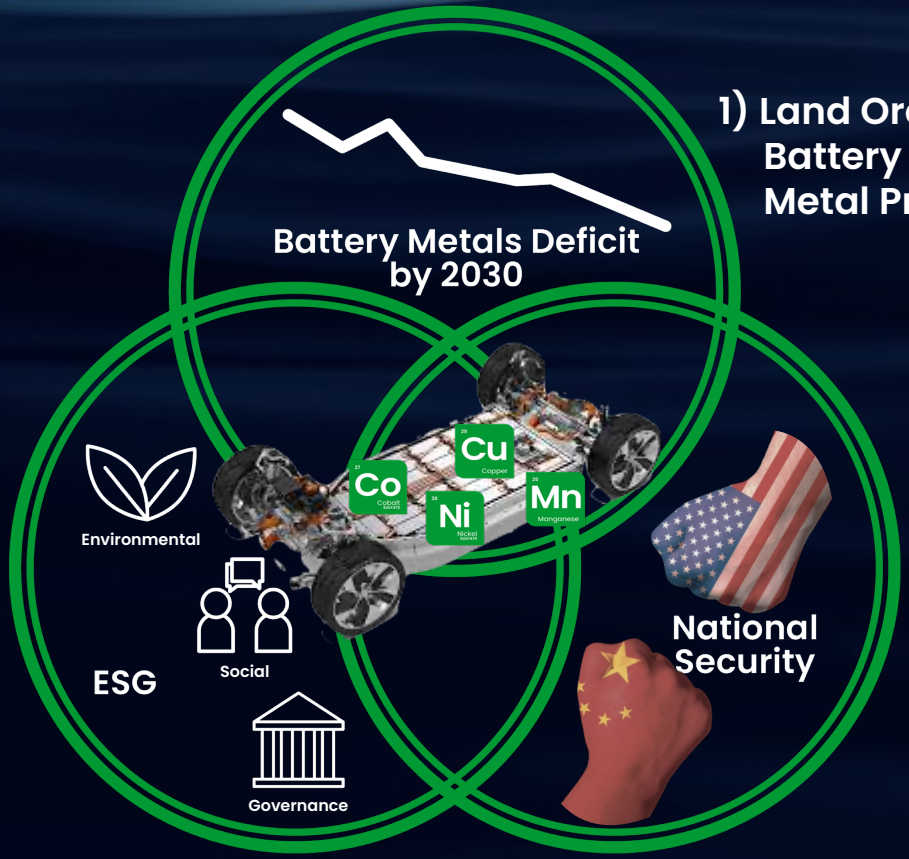
B Corporation

Key Problems with Li-Ion Battery Supply Chain

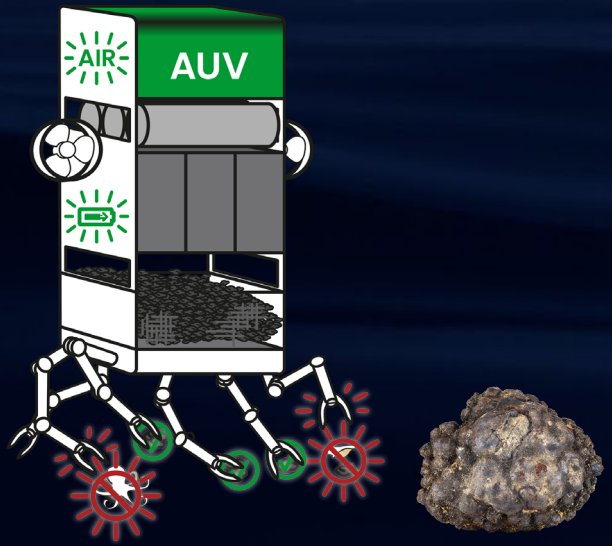
1) Land Ore Grades Decreasing
Battery Metal Deficit by 2025
Metal Price increases

2) Increasingly unacceptable ESG impacts

3) China Control High-risk Locations Transportation costs

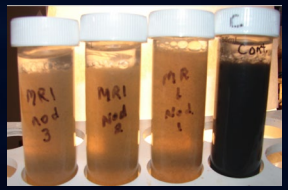


Company Summary



Robotic collection of polymetallic nodules

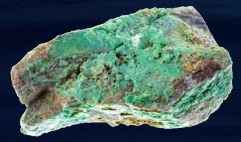
- Abundant (largest source of battery metals)
- High grade (>5x Higher Grade Than Land-based Mines)
- Low production cost (33% less than competitors)
- Very Low ESG impact
  - selective pickup, no serious harm



Bio-Extraction ('microbes breathing rocks')

- Naturally occurring bacterial respiration
- No use of acids or reagents
- Low energy (carbon neutral)
- Patents pending
  - ore processing and battery recycling

Bio-Extraction Process



Terrestrial Ore

Li-Ion Black Mass

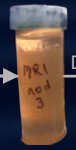
Polymetallic Nodules

1: Comminution

~100 microns

2: BioExtraction

4: Biomass/ Metal Separation



Dissolved metals

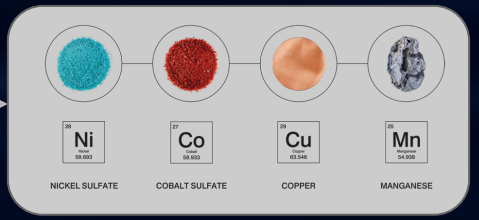
3: Biomass

Fresh biomass

Shewanella & *Geobacter* group

5: Recovery

Commercial Grade Trace Metals



metal recovery ~85%

water and Nutrients

Process water and Residues

New technology developed by us

Summary & Ask

- **Signed partnership with nodule license holder**

- **Ni and Co Supply**
  - Unlocks large resources of Ni & Co
  - Vastly superior ESG performance
  - More reliable & scalable
  - Lowest costs

- **Looking for partners**
  - To supply ‘green’ Ni & Co Sulfate
  - To test bio-extraction on used cells (black mass)

PDF Slides

https://impossiblemining.com/naatbatt