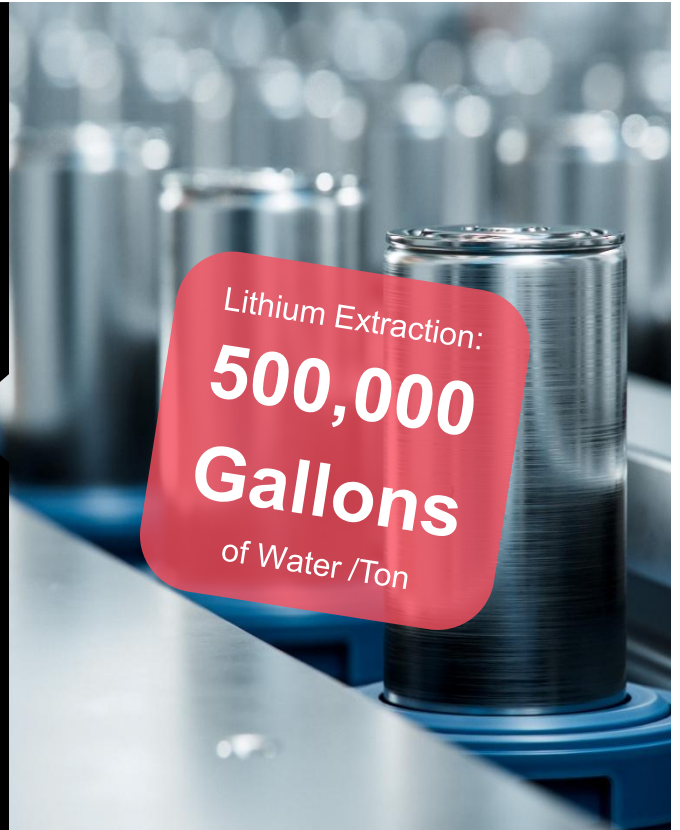


# FutureBridge

## What is?

### The Lithium Battery Bottleneck and its Trade-Off

- Lithium batteries power the EV boom and renewable energy storage, but a worsening supply chain bottleneck threatens their growth.
- Lithium demand is surging, but with China refining 60% of supply, geopolitical and supply chain risks grow. Mining constraints and material shortages have already pushed battery prices up over 20% since 2021.
- Lithium extraction is highly water-intensive, threatening vital ecosystems and water security. On World Water Day, the UN Water Conference convened to address these growing sustainability challenges.



## What if?

### Circular Battery Economy Could Break Mining Dependence

By 2035, direct recycling could rival extraction efficiency, and by 2040, a circular battery economy could supply 50%+ of lithium, cobalt, and nickel needs, cutting mining reliance.

- Industry leaders Redwood Materials, Umicore, and Li-Cycle are recovering 95% of key metals
- EU battery passport mandates (2027) and recycled content rules drive a closed-loop supply chain.
- Efficient battery recycling and second-life use could cut new lithium, cobalt, nickel, and manganese demand by 3% in 2030, 11% in 2040, and 28% by 2050.



## What now?

### The BIG questions

While recycling promises to reduce dependence on newly mined materials, will it be enough?

- Can recycling ramp up quickly enough to supply key materials?
- Will government policies and subsidies make large-scale battery recycling economically viable?
- How will automakers adapt if recycled materials become the primary feedstock?
- What will the impact be on lithium mining investments and resource-dependent economies as recycling expands?



## About FutureBridge

FutureBridge is a techno-commercial consulting and advisory company. We track and advise on the future of industries from a 1-to-25-year perspective to keep you ahead of the technology curve, propel your growth, identify new opportunities, markets and business models, answer your unknowns, and facilitate best-fit solutions and partnerships using our platforms, programs, and access to global ecosystems and players.