



Defence-aligned, mass-market automotive capable: high-power, high-energy sulfur cathodes without polysulfide loss

12/11/2025

Dr. Adrien Amigues

Adrien.Amigues@oxlid.co.uk

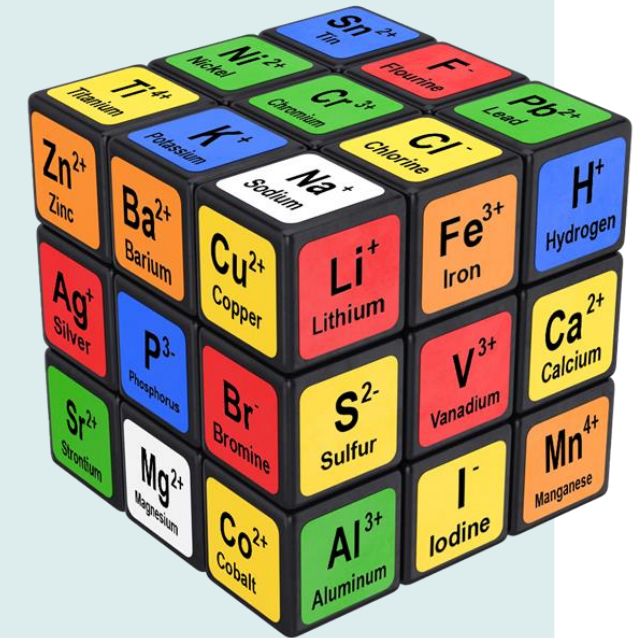
Where The Periodic Table Meets The Rubik's Cube

The Art Of Successfully Delivering The Battery Breakthroughs Needed For The Energy Transition

John Wood

CEO, Gelion (www.GELION.com)

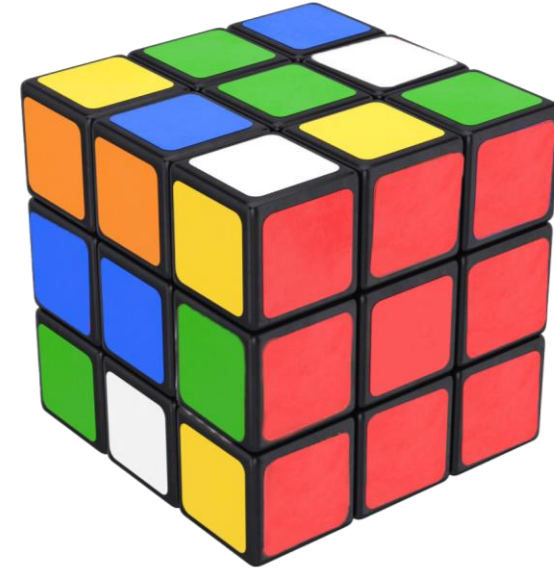
Founder, NOAB Ventures (www.NOAB.Ventures)



Why the Rubik's Cube?

In fact, we need to solve many more than 6 faces!

- Safety
- Cost
- Cycle Life
- Specific energy density
- Volumetric Energy Density
- Power

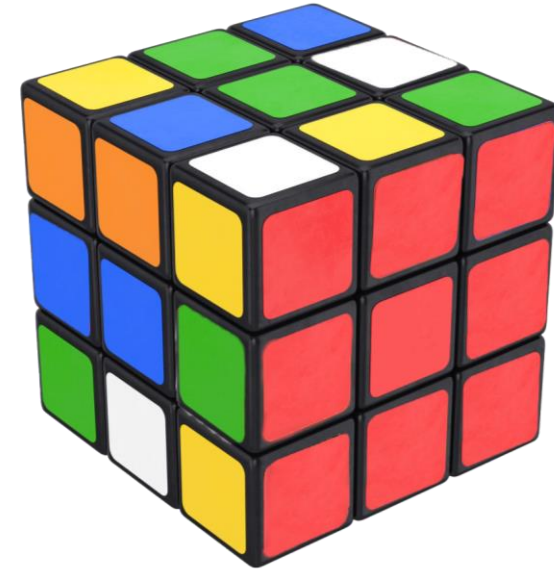


... Solving one face is not enough!

Why the Rubik's Cube?

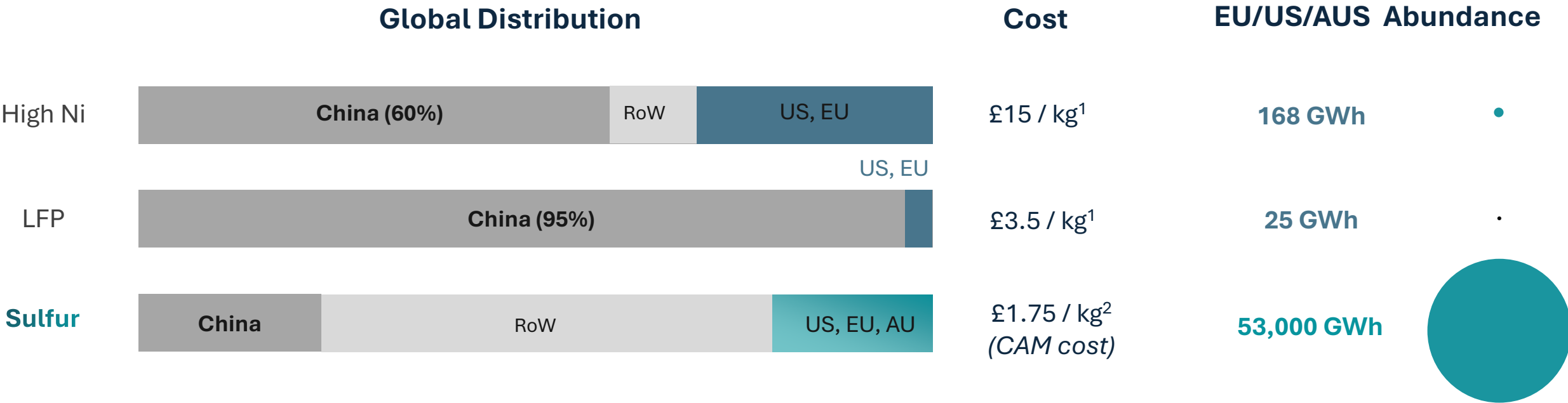
In fact, we need to solve many more than 6 faces!

- Safety
- Cost
- Cycle Life
- Specific energy density
- Volumetric Energy Density
- Power
- Temperature range
- Self-discharge
- Efficiency
- Sustainability
- Resilient supply chain
- Scalability
- Shelf life



Batteries are hard!

Where to start?



Sulfur is abundant, low cost and globally available

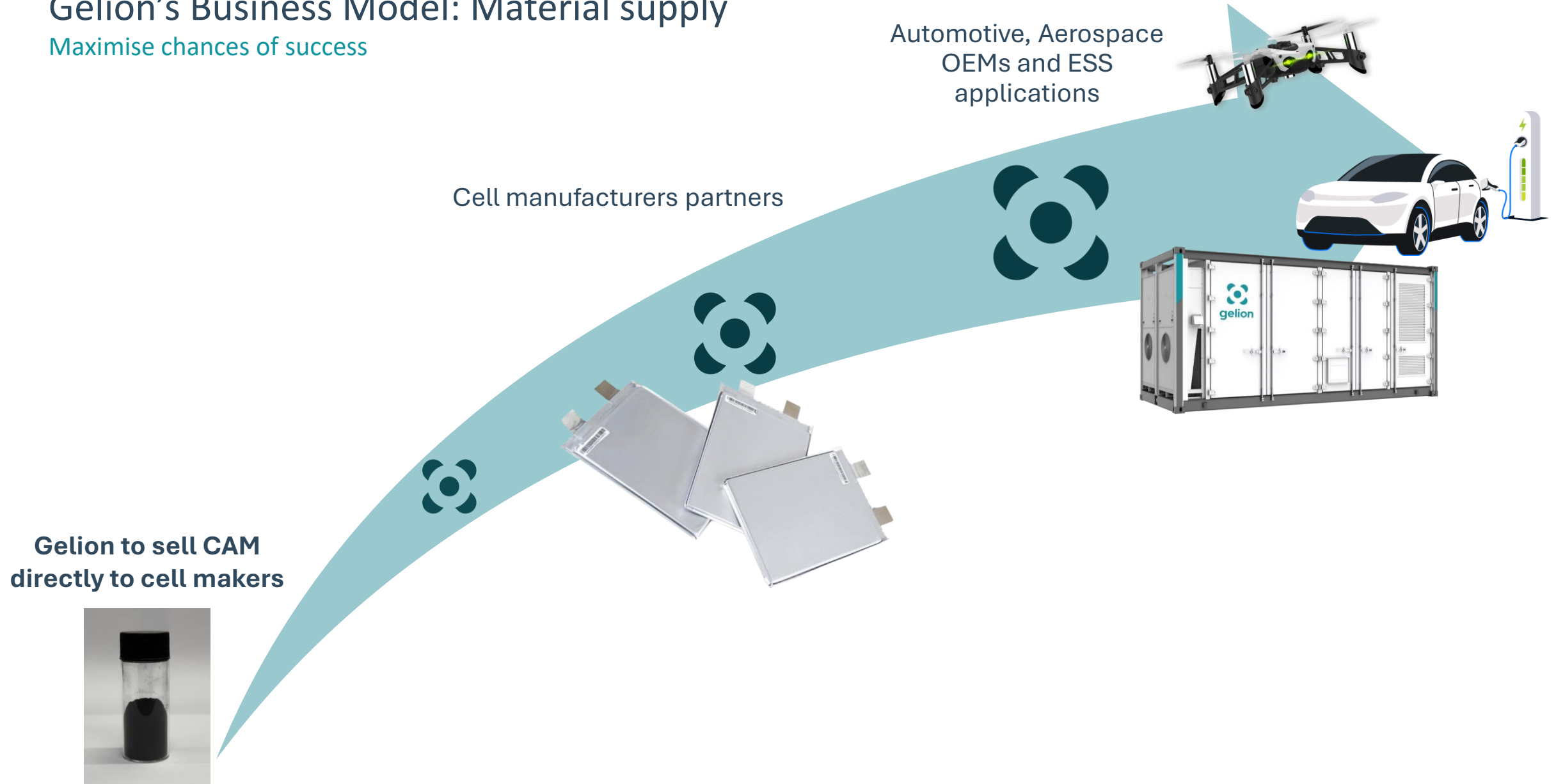
¹ Intercalation Station Battery Component Price Report - Feb 2025
² Projected cost at GWh p.a. scale production, Faraday Insights – Issue 8: - July 2020
[Who supplied the largest volume of EV batteries in 2023? \(autovistagroup.com\)](https://www.autovistagroup.com/who-supplied-the-largest-volume-of-ev-batteries-in-2023/)
[Analysis of global battery production: production locations and quantities of cells with LFP and NMC/NCA cathode material - Fraunhofer ISI](https://www.fraunhofer.de/en/press-releases/2023/04/analysis-of-global-battery-production)
[Lithium-Ion Battery Roadmap – Industrialization Perspectives Toward 2030 \(fraunhofer.de\)](https://www.fraunhofer.de/en/press-releases/2023/04/lithium-ion-battery-roadmap-industrialization-perspectives-toward-2030)
³<https://www.fortunebusinessinsights.com/industry-reports/cathode-materials-market-101078>



Our mission is to establish sulfur as a standard cathode material in mainstream battery manufacturing

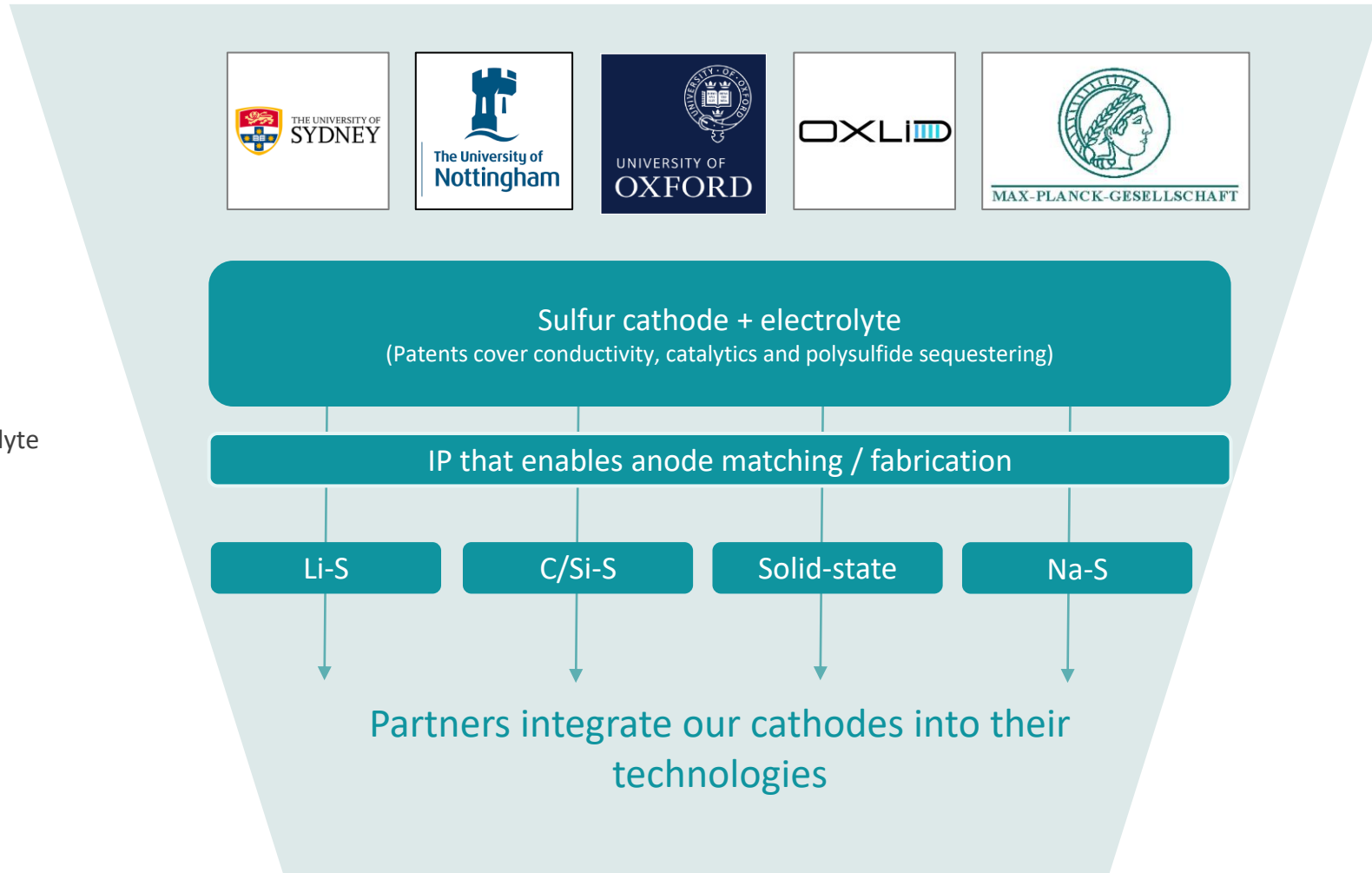
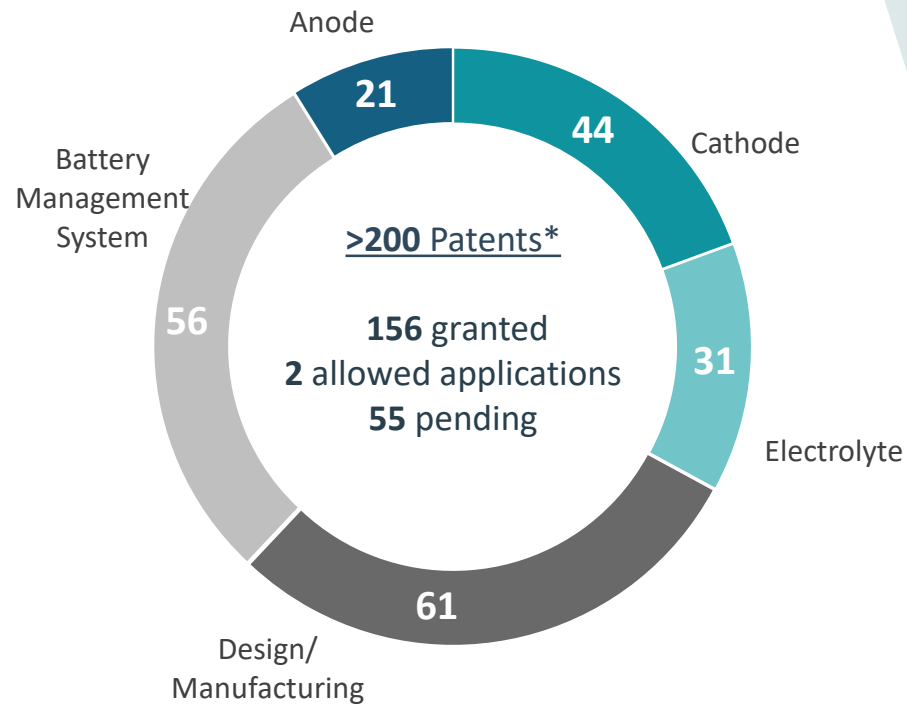
Gelion's Business Model: Material supply

Maximise chances of success

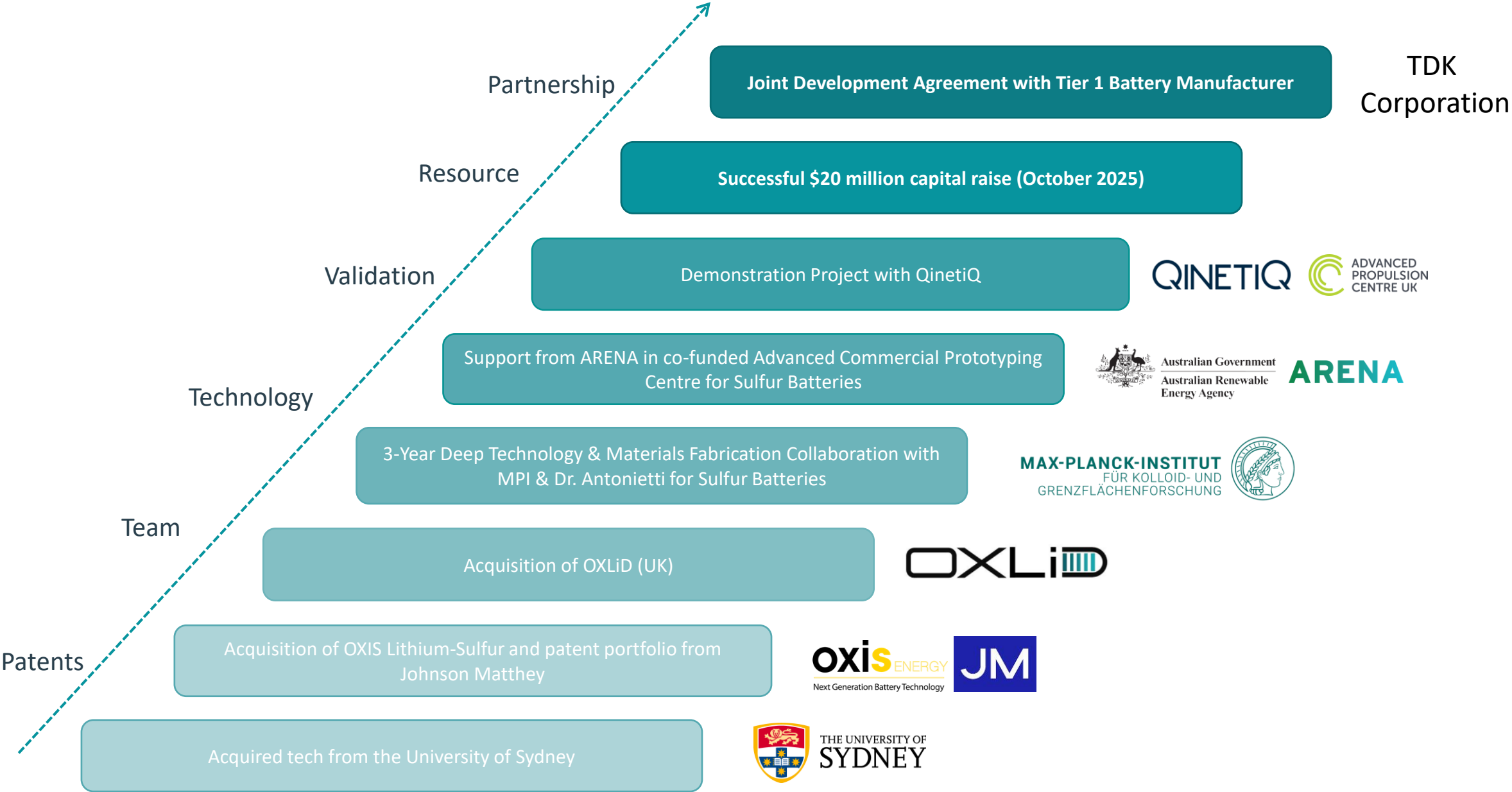


We partner with technology providers long-term to integrate our materials into their devices

>200 Patents Across Sulfur and Solid-State Battery Value Chain

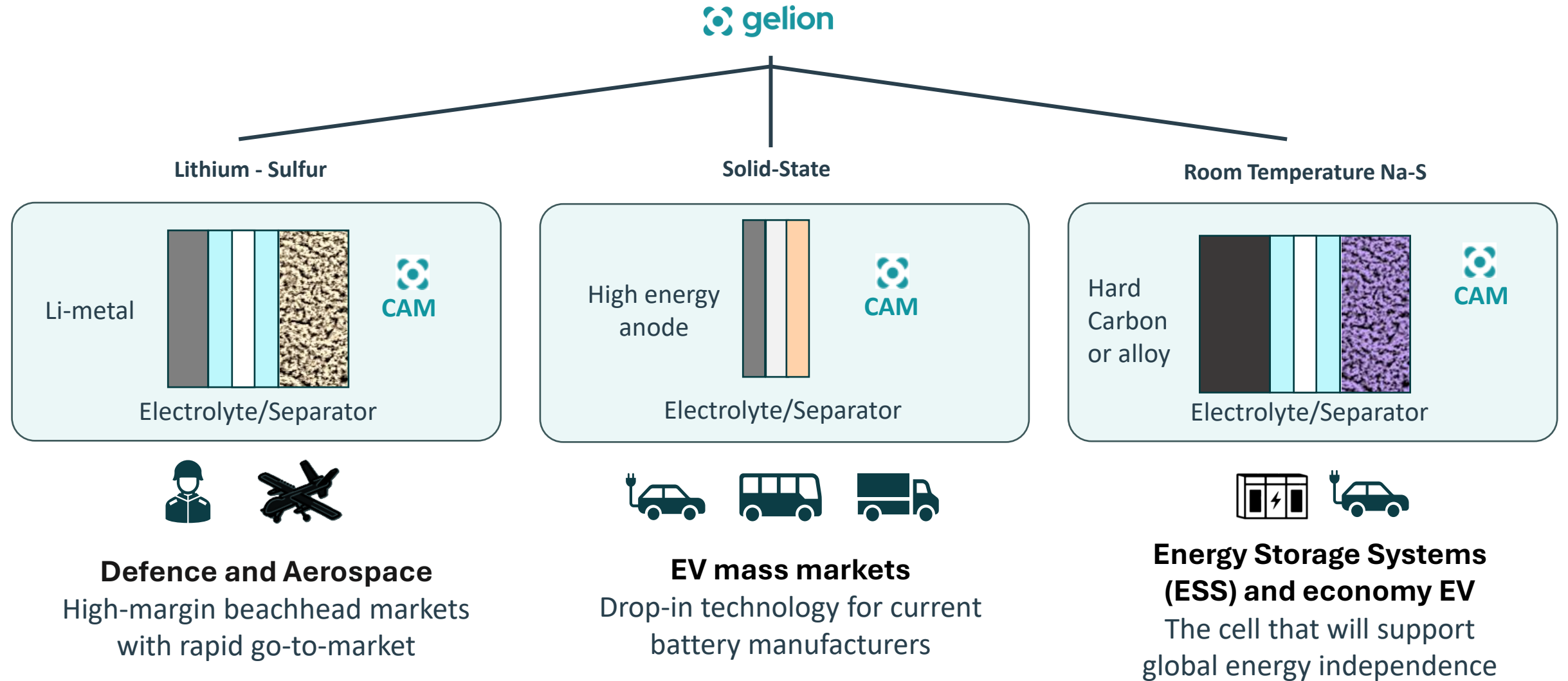


Our journey



Applications

We work with our partners to optimise materials for specific application requirements



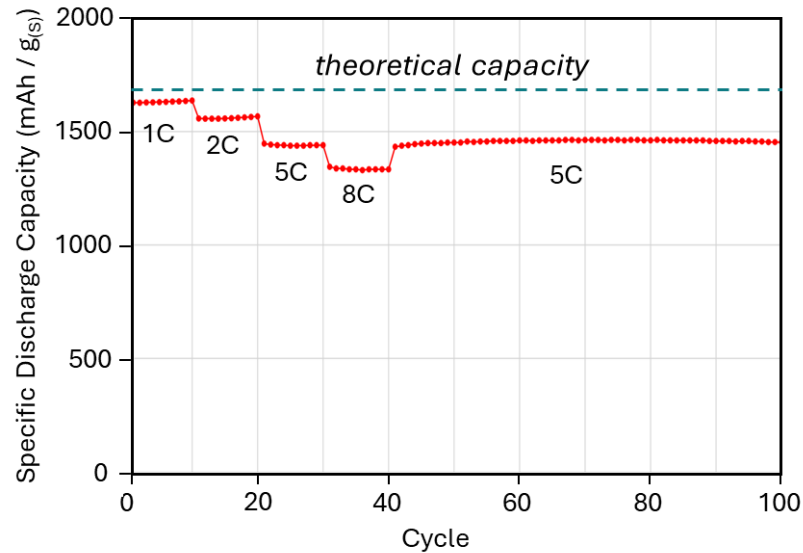
Gelion's CAM technology

High energy, high power and long-cycle life, suitable for mass markets



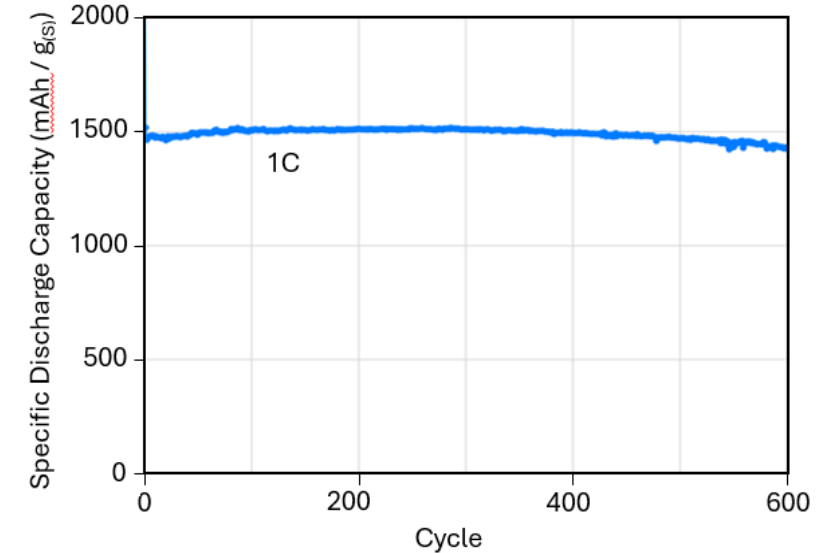
High performance in both Li and Na liquid cells

Lithium - Sulfur

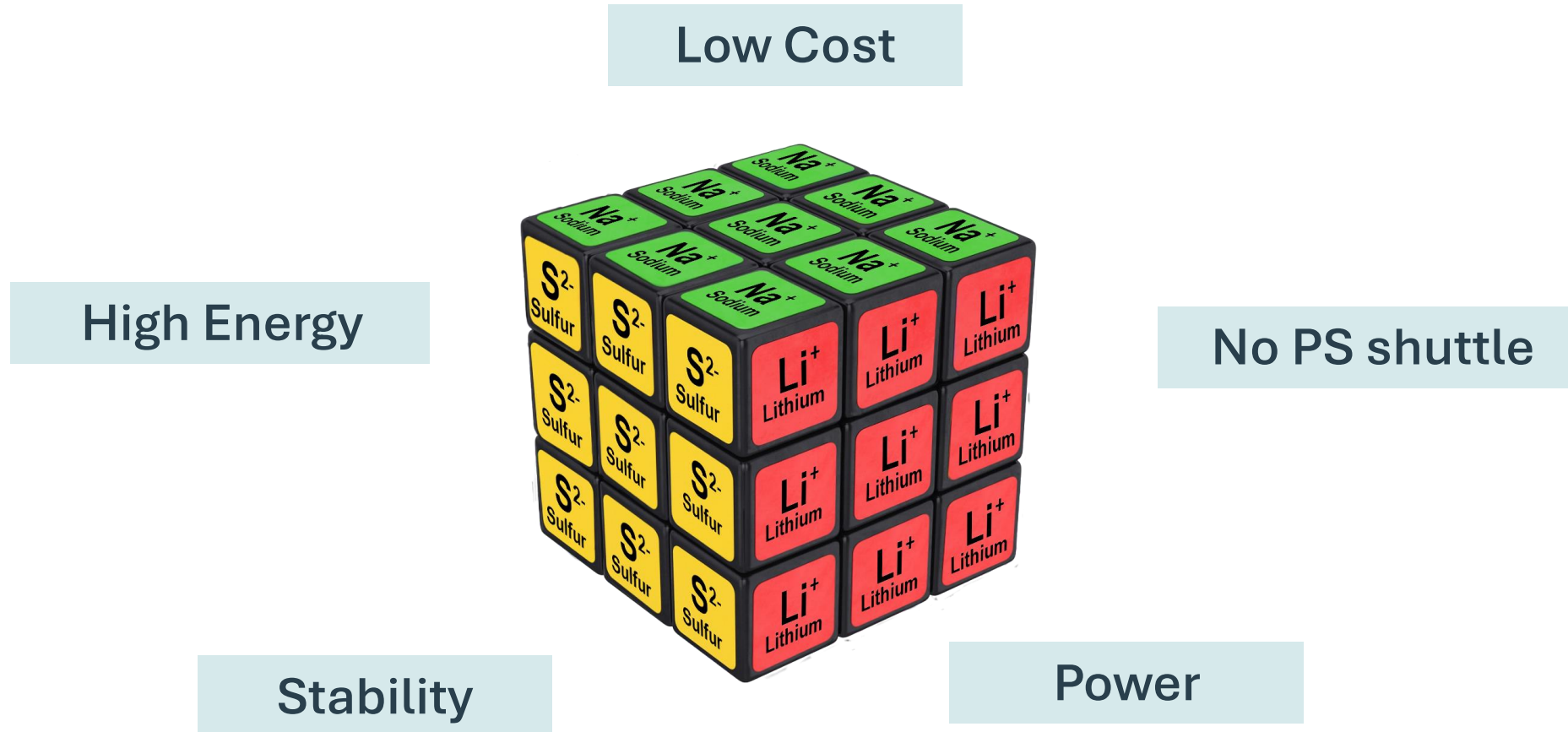


- High w.t.% sulfur content
- Excellent cathode stability
- High power
- No polysulfide dissolution/shuttle
- No LiNO_3
- Compatible with liquid ether/carbonate electrolytes

Sodium - Sulfur



Defence-aligned, mass-market automotive capable: high-power, high-energy sulfur cathodes without polysulfide loss



... Solving the Whole Cube ...

Questions?

Adrien Amigues

President UK & Europe, Gelion (www.GELION.com)



info@gelion.com



gelion.com



<https://www.linkedin.com/company/gelion/>

