

londrive completes \$2M placement to advance battery recycling technology

Highlights

- **\$2.0 million Placement completed via the issue of 222,222,222 new londrive shares at \$0.009 per share**
- **Cornerstone participation from major shareholders, Strata Investment Holdings Plc and Ilwella Pty Ltd, underlining shareholder support for the recycling technology**
- **Participation by the Board and Management of \$260,000**
- **Placement received strong support from existing shareholders, with scaling required to manage demand**
- **The funds will be used to finalise the Battery Recycling Pre-Feasibility Study (PFS) , being the gateway to proceeding with a Pilot Plant**
- **The PFS is expected to be completed in the September quarter**
- **londrive's exclusively licensed technology extracts critical minerals from end of life lithium-ion batteries in a unique environmentally sustainable process**

londrive Limited (ASX: ION) ("londrive" or the "Company") is pleased to announce it has received firm commitments from sophisticated and professional investors to raise up to \$2.0 million (before costs) through a placement of up to a total of 222,222,222 fully paid ordinary shares (**Shares**) at \$0.09 each (**Placement**). Due to strong investor support for the Placement, scaling was undertaken to manage demand.

118,571,320 Shares will be issued under the Company's issuance capacity under ASX Listing Rules 7.1 and 7.1A, with the remaining 103,650,902 Shares subject to shareholder approval at a General Meeting anticipated to be held or mid to late July 2024. The Company will make a further announcement in relation to the General Meeting.

The Placement is being managed by Prenzler Group, with cornerstone participation by londrive's two largest shareholders: Strata investment Holdings Plc and Ilwella Pty Ltd. Board and management participation totals \$260,000, with Director participation subject to shareholder approval at the General Meeting.

Proceeds of the Placement will fund the completion of the battery recycling PFS, progress with industry collaborations, early planning and preparations for the Pilot Plant design and build, and general working capital.

The issue price of \$0.009 represents a 10.0% discount to the last traded price of \$0.01 on 29 May 2024 and 18% discount to the 15-day volume weighted average price of \$0.011.

Iondrive Technologies CEO Ebbe Dommissse commented:

"We are thrilled with the successful completion of our capital raise, which underscores the strong support from both existing and new shareholders for our innovative battery recycling technology. The funds will be used to finalise our Pre-Feasibility Study and progress towards establishing a Pilot Plant. I extend my thanks to our existing shareholders for their continued belief in our vision and warmly welcome our new investors."

We are particularly encouraged by the recent recognition locally from the Australian government and regions abroad - UK government, EU and USA – of the importance of advancing battery recycling technologies to support a sustainable future.

We are excited by the progress we have made so far and the promising results emerging from our battery recycling technology. As we move forward, we look forward to updating our shareholders on our continued advancements and milestones."

Battery Recycling Project

Iondrive is currently addressing the inefficiencies, hazards, and high costs associated with traditional lithium-ion battery recycling methods. The Company's hydrometallurgical battery recycling project employs a provisionally patented, environmentally safe, organic solvents-based closed-loop process to separate critical components such as lithium, nickel, cobalt, and manganese from battery black mass without the need for high temperatures or corrosive acids. This approach enables a much smaller environmental footprint compared with traditional processes.

Recent Developments:

- **Large-scale bench trials:** Recently completed at the University of Adelaide, these trials are being independently verified at Independent Metallurgical Operations (IMO) in Perth. It is anticipated that these results will be finalised in July 2024. This verification is crucial for generating process data needed for pilot plant design and economic modelling.
- **Market Research:** A comprehensive study conducted by Rho Motion has highlighted the growing demand for sustainable battery recycling solutions and validated Iondrive's unique value proposition in the market. The study also defined the business landscape for battery recycling from supply, demand, and competitor positions.
- **Execution Strategy:** Iondrive is actively de-risking its execution strategy by evaluating various business models in collaboration with potential industrial partners. Options such as licensing agreements and toll manufacturing are being explored to ensure the most efficient and profitable paths to market are chosen.

Prefeasibility Study Completion & Pilot Plant

Iondrive is navigating the path to completion of the PFS, focusing on technological, commercial, and executional de-risking strategies. This approach ensures a strong foundation for the anticipated Pilot Plant construction planned for financial year 2025. A continuous, fully integrated closed-loop pilot plant process is an important next step following the large-scale bench trials. Scaling the technology to reflect a commercial process operating in continuous mode is essential.

These activities, alongside the completed Rho Motion market research study, and a planned benchmarking study to compare the competitiveness with incumbent processes, comprise a techno-economic evaluation integral to the PFS, which aims to mitigate technical, commercial, and execution risks of the project.

Investor Presentation

A copy of the investor presentation is attached to this announcement.

Authorised for release by the Board of Iondrive Limited.

Further Information

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Iondrive Limited: Company Profile

Iondrive is an emerging leader in battery recycling technology, listed on the Australian Securities Exchange (ASX ticker "ION"). The company's primary focus is on developing and commercialising innovative solutions for lithium battery recycling. Iondrive's Hydrometallurgical Battery Recycling project employs a patented, environmentally safe solvent to gently separate critical components from used batteries, providing a safer and more efficient alternative to currently available methods.

In addition to its battery recycling initiatives, Iondrive holds exclusive worldwide licenses from the University of Adelaide for next-generation battery technologies, including an enhanced performance non-flammable lithium-ion based battery and a low-cost, high cycle life water-based battery.

While the main emphasis is on battery technology, Iondrive also maintains a portfolio of exploration projects in South Korea, focusing on its lithium tenements, where exploration is being funded through an earn-in and joint venture agreement with KoBold Metals.



May / June 2024



INVESTOR PRESENTATION:

Commercialising our DES Battery Recycling Technology

ASX Ticker: ION

Disclaimer

Forward looking statements

This document contains certain forward-looking statements that involve risks and uncertainties. Although we believe that the expectations reflected in the forward-looking statements are reasonable at this time, we can give no assurance that these expectations will prove to be correct. Given these uncertainties, readers are cautioned not to place undue reliance on any forward-looking statements. Actual results could differ materially from those anticipated in these forward-looking statements due to many important factors, risks and uncertainties including those risks detailed from time to time in the Company's announcements to the ASX including, without limitation, risks associated with: 1) the exploration business, such as regulatory matters and the tenure of exploration and mining leases, the results of present and future exploration activities, the impact of fluctuating commodity prices, foreign exchange rates on the business and the ability of the Company to realise value through sale or joint venture of its exploration assets; and 2) the battery technology business, such as the risk that the technologies are not commercially viable, provisional patents may not result in successfully granted national patents, others may independently develop similar or improved technologies or design around patents or patent applications, or that granted patents will provide meaningful protection or competitive advantages. Further risks related specifically to the battery recycling technology are noted in Slide 15. All reasonable efforts have been made to provide accurate information, but the Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement" to reflect events or circumstances after the date of this presentation, except as may be required under applicable laws. Recipients should make their own enquiries in relation to any investment decisions from a licensed investment advisor.

Not an offer of securities

This Presentation is not a prospectus, product disclosure statement or other offering document under Australian law (and will not be lodged with ASIC) or any other law. This Presentation does not constitute an offer, invitation, solicitation or recommendation with respect to the purchase or sale of any shares nor does it constitute financial product or investment advice nor take into account your investment objectives, taxation situation, financial situation or needs.

An investor must not act on the basis of any matter contained in this Presentation but must make its own assessment of the Company and conduct its own investigations and analysis. Before making an investment in the Company, a prospective investor should consider whether such an investment is appropriate to their particular investment objectives and financial situation and seek appropriate advice, including legal, taxation and financial advice appropriate to their jurisdiction and circumstances.

United States and Other jurisdictions

The Company's securities have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the Securities Act), or under the securities laws of any state or other jurisdiction of the United States. Accordingly, the Company's securities may not be offered or sold, directly or indirectly, within the United States or to, or for the account of benefit of, U.S. Persons (as defined in Regulation S under the Securities Act as amended). This Presentation may not be distributed within the United States or to any person in the United States. This Presentation may only be accessed in other jurisdictions where it is legal to do so.

Competent Person's statements

The information in this report that relates to Exploration Results has been compiled by Mr Robert Smillie (MAusIMM). Mr Smillie, who is Exploration Consultant at londrive Limited and a member of the Australasian Institute of Mining and Metallurgy, has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Smillie consents to the inclusion in this presentation of the matters based on the information in the form and context in which it appears and should be read in conjunction with the Company's ASX announcements.



Investment Summary

- End-of-life management for batteries will be a significant issue by 2030
- Potential US\$100B recoverable value through 11 million tpa black mass by 2040¹
- Existing recycling processes are inefficient, costly, and have a large environmental footprint
- ION's provisionally patented method extracts +95% material, has high selectivity for minimal impurities, with minimal impact on the environment
- EU & US are attractive markets with growing demand for recycled material extracted from spent batteries within their own regions
- Clear development timeline of 2030 to meet commercial volumes of end-of-life batteries as regulatory tailwinds take effect
- ION is currently in the midst of a pre-feasibility study (PFS) to de-risk the commercialisation pathway
- Capital raise: a small strategic placement targeting \$1.5 million to complete PFS

¹Rho Motion Report ASX Announcement: <https://wcsecure.weblink.com.au/pdf/ION/02788305.pdf>

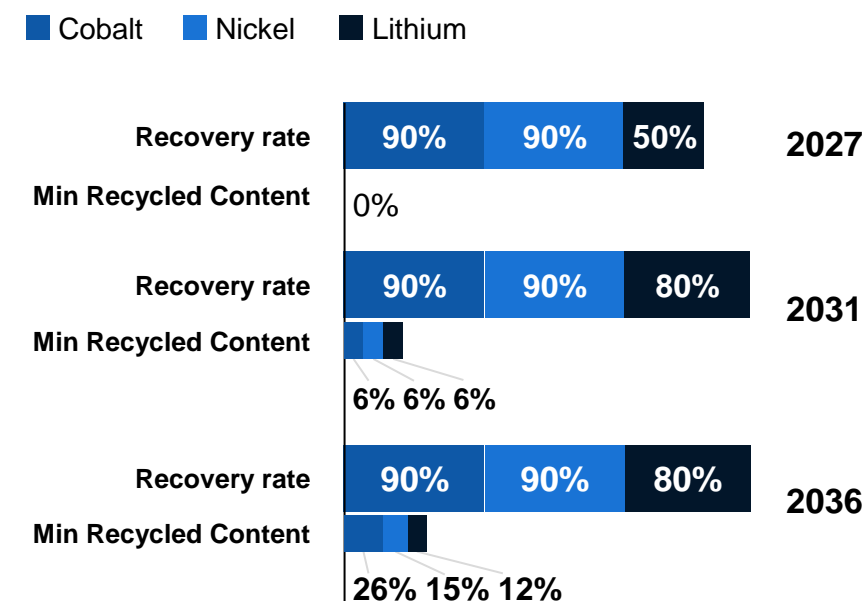
Expected Market for Battery Recycling

ION's DES technology is a clean, efficient and selective recycling method that has the potential to gain significant market share due to growing demand for eco-friendly and efficient battery recycling processes.

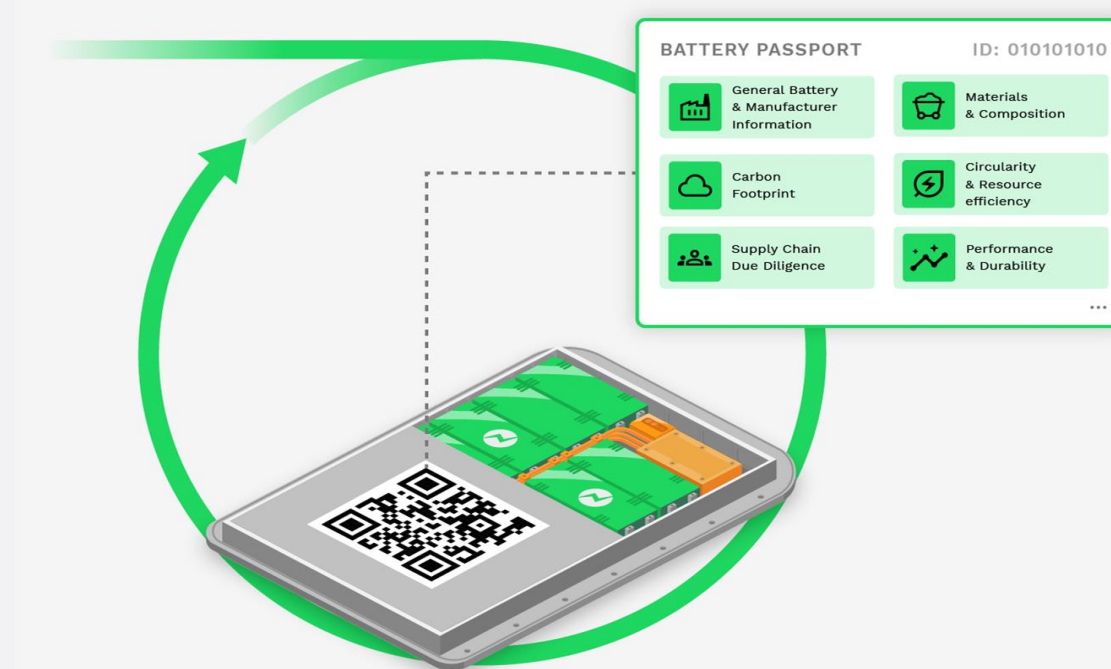
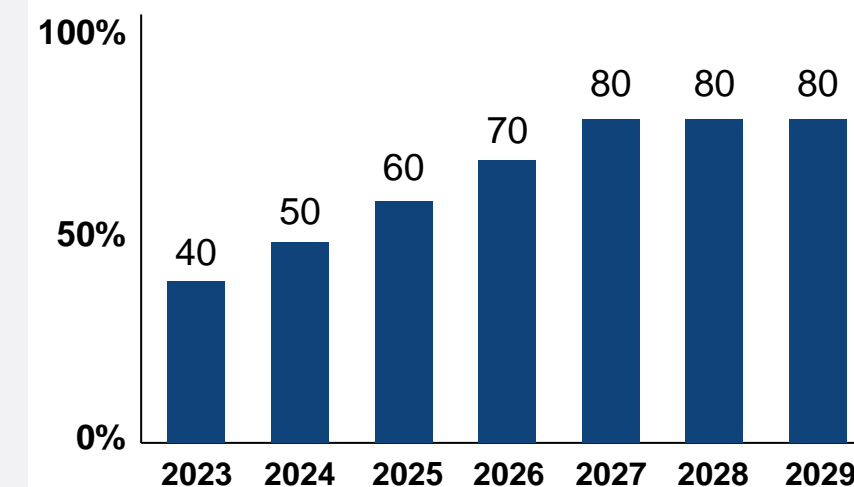
- USA & EU drive for sovereign energy transition capabilities requiring critical minerals, in light of increasing geopolitical tensions
- EU requiring OEMs to be responsible for battery end-of-life management via "battery passports"
- EU now classifies black mass (expended batteries ready for recycling) as hazardous material, limiting exports
- EU legislation to require new EV batteries to include a minimum threshold of recycled critical minerals
- Culminates in a 2030 intersection of regulatory deadlines and growth in available black mass volume
- Incumbent recycling methods are challenged to meet these new demands - incineration, use of toxic acids, energy-intensive



EU targets for material recovery rates and minimum levels of recovered contents



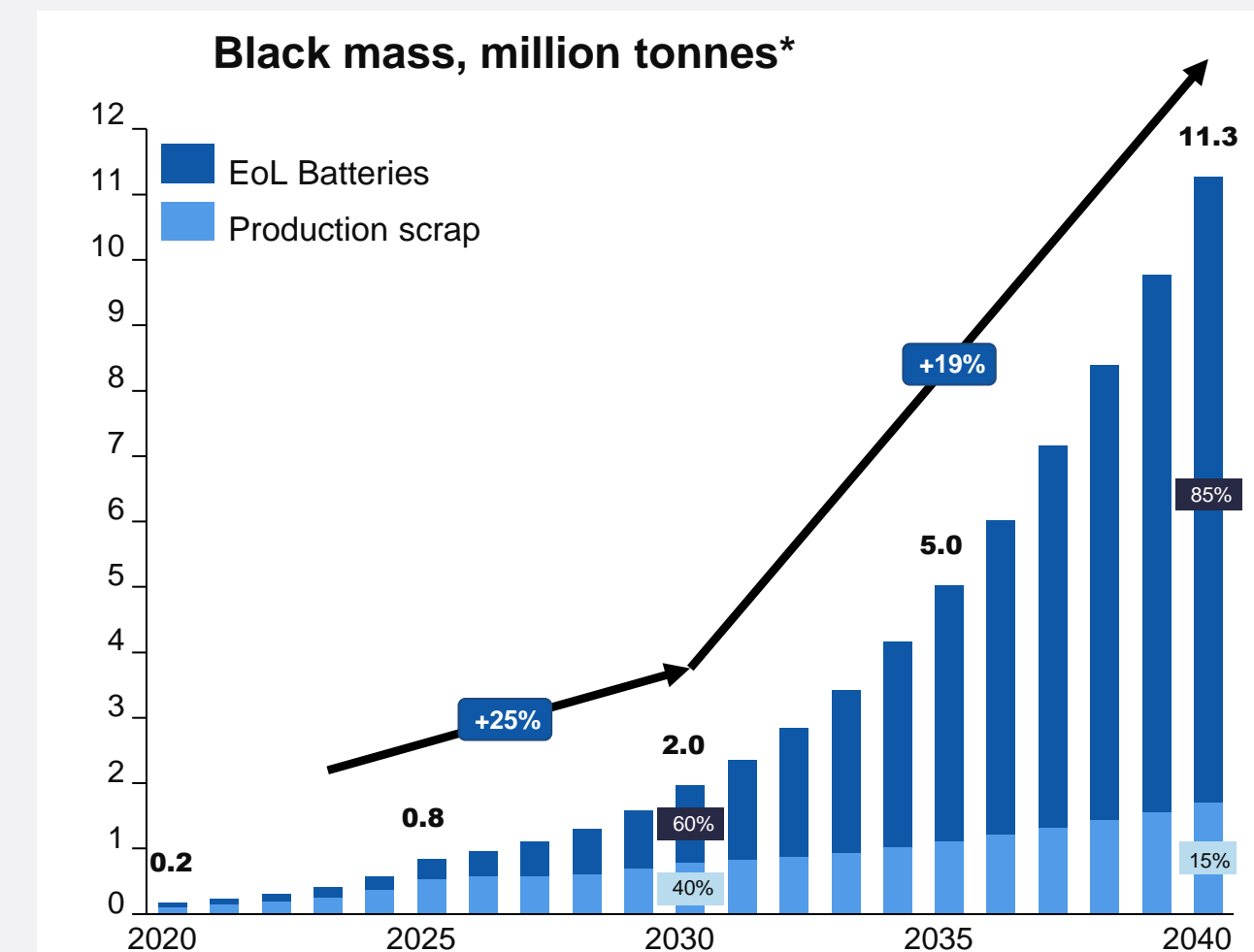
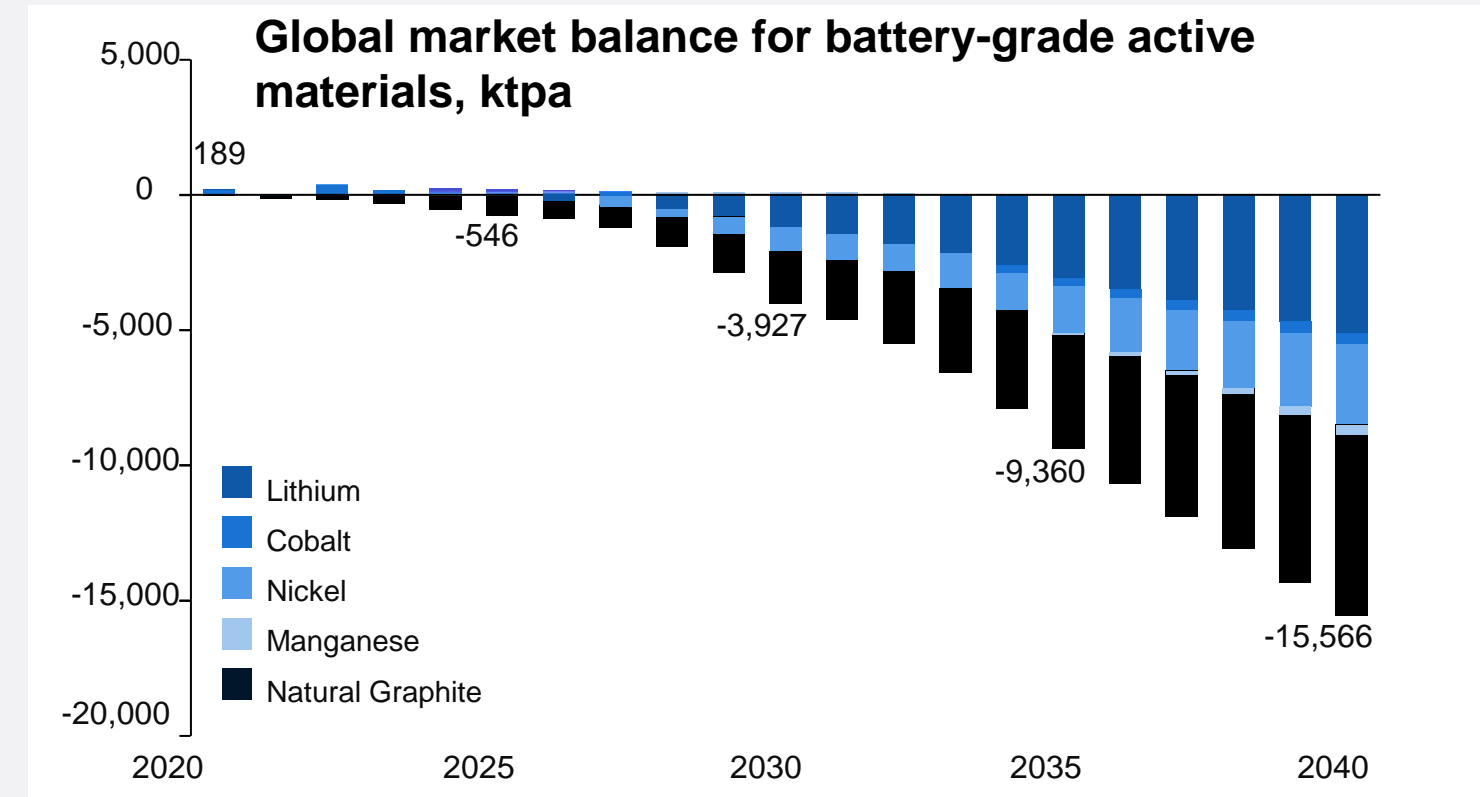
IRA Clean Vehicle requirements on the percentage of the value of critical minerals



Rho Motion Market Study

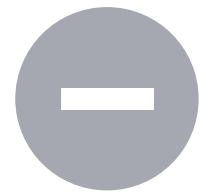
Potential: 11 million tpa black mass by 2040 = US\$100B recoverable value

- londrive positioning to be an early mover in a rapidly growing battery recycling landscape
- Compounding factors of environmental regulation, supply chain security, and growing demand for EVs
- Recycling expected to increase its market share of battery minerals to 60% by 2040 (remaining 40% from mining)
- IONs eco-friendly method holds the potential for a significant advantage over incumbent technology in light of new legislation
- Comprehensive de-risking efforts are underway ahead of anticipated pilot plant construction in FY2025
- Emphasis on the importance of industry partnerships and collaboration with governments
- Commercial sustainability was highlighted by Supply (securing of black mass and identified suppliers) and Demand (offtake agreements with identified potential customers)



Source: Rho Motion Market Study

ION has scope to disrupt incumbent technology



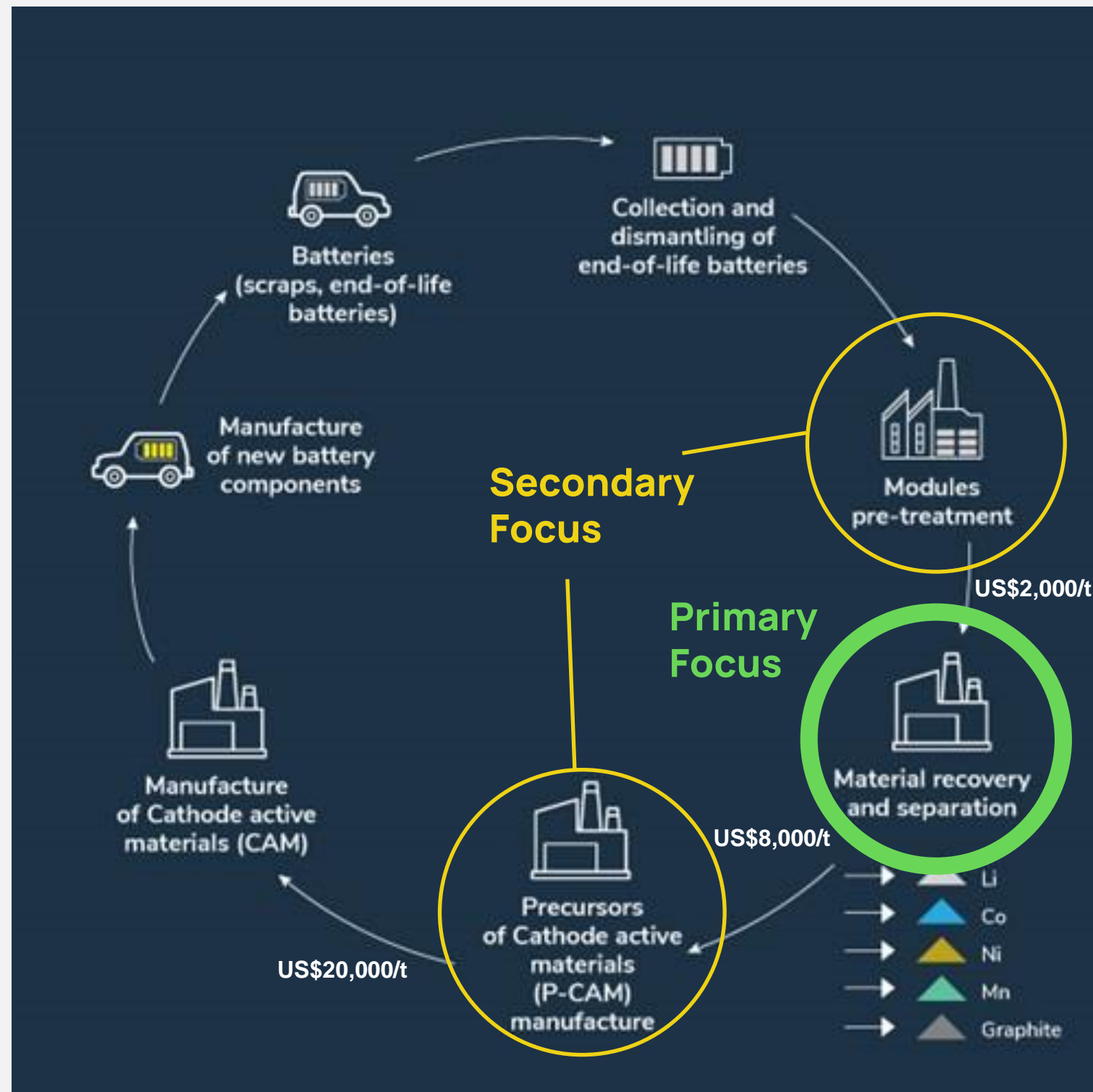
Incumbent Recycling Technology

- Requires incineration (pyrometallurgy) or toxic acids/bases (hydrometallurgy) to extract valuable materials
- Significant, costly toxic waste treatment is needed to prevent environmental impact
- Energy-intensive processes are unattractive for ESG considerations, and erodes profitability and incentive to reclaim recyclable materials
- Minimal ability to selectively separate critical minerals, requiring more intensive post-processing
- Unappealing process for EU and USA markets due to high cost, environmental footprint and safety concerns



ION Innovative Recycling Technology

- Uses Deep Eutectic Solvents (DES) in conjunction with benign organic solvents
- Non-toxic solvents in a closed-loop process has a small environmental footprint creating attractive opportunities in green energy transition
- All solvents are reclaimed, consuming only a negligible volume enhancing the economics of the process
- Results show a high degree of separation of valuable critical minerals (selectivity) with very high recovery rates (95%+)
- ION expects strong appeal to the growing market for recycled battery materials in ESG-sensitive markets in EU and USA due to eco-friendly, safe, efficient process



Our Innovative DES Process

ION's Deep Eutectic Solvents (DES) Battery Recycling Technology is used in conjunction with benign, biodegradable organic solvents to recover critical minerals (Li, Mn, Co and Ni).

- Our exclusively licensed and provisionally patented technology is applied through a series of hydrometallurgical unit operations to reclaim an expected +95% of critical minerals from Li-ion batteries
- Large-scale bench trials to date are indicating that negligible volumes of solvents will be lost
- Our method is safe & efficient and will enable a more secure supply chain for EV batteries through the green energy transition
- Future development to expand the process to include valorisation of recovered metals to pCAM materials

Pre-Feasibility Study: Delivery Focus

● Complete ● In Progress ○ Pending



In Progress Pre-Feasibility Study

● Complete
 ● In Progress
 ○ Pending

londrive is on track for the completion of the pre-feasibility study in June, focusing on technological, commercial, and executional de-risking strategies. These de-risking activities ensure a strong foundation for successfully executing the commercialisation pathway for our recycling technology.

Technology

- University of Adelaide large-scale bench trials
- 3rd party large-scale bench trials
- Process input for project scoping
- High-level process engineering design of 10,000 tpa black mass plant
- Cost estimation (Capex & Opex)

Commercial

- Rho Motion market study
- Economic viability modelling
- 3rd party benchmarking
- Cost driver deltas

Execution

- Stage-gate project execution model
- Team & Staff

Strategic Partnerships

- Approach potential industry partners in USA & EU
- Technology partnerships (equipment & engineering)
- MOUs & LOIs for consortium participation
- Explore supply and off-take agreements

Large-Scale Bench Trials

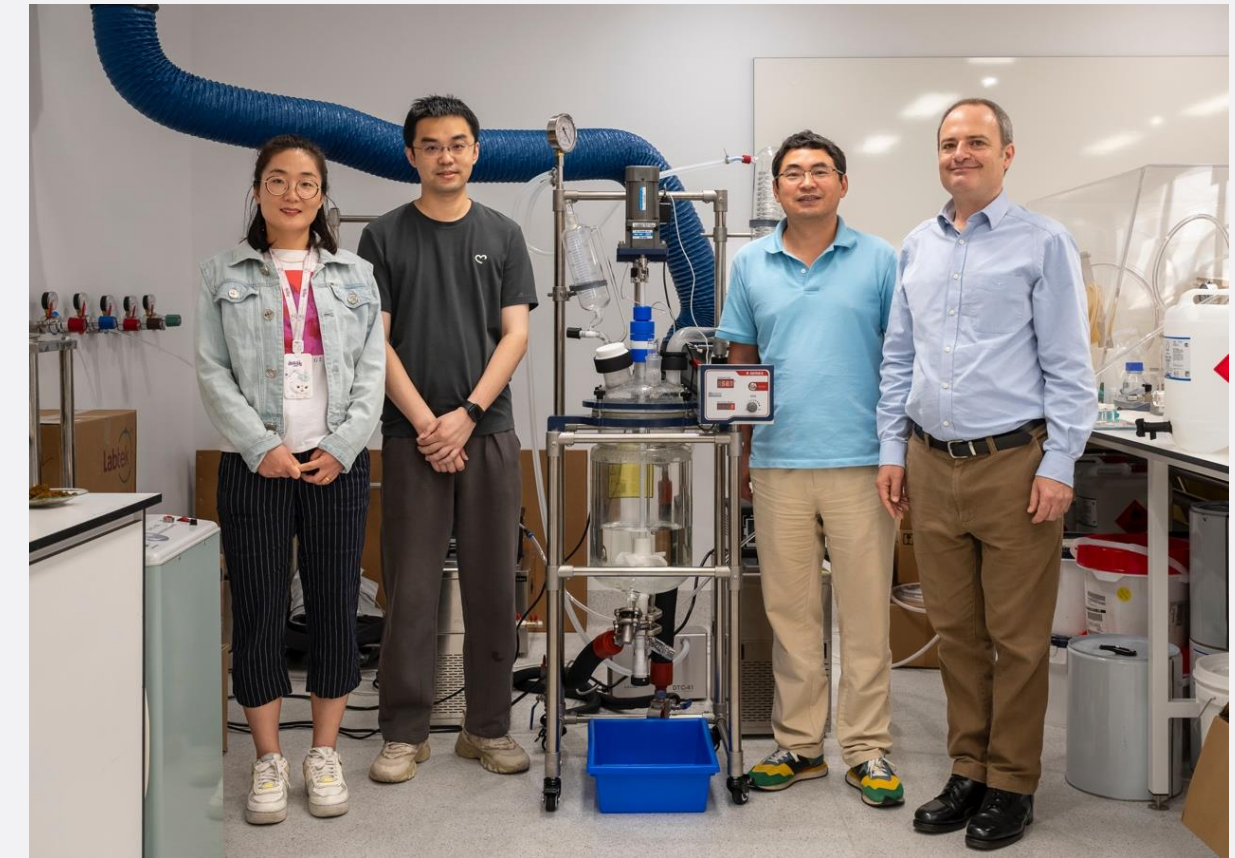
Investigating the DES process in larger volumes to determine scalability, quantify solvent losses, and an accurate mass balance.

University of Adelaide Bench Scale Trials - Complete

- Results to date indicate that DES battery recycling process does scale with larger volumes
 - Lower recoveries of metals owing to sub-optimised mixing that will be improved in follow-up work
 - High selectivity on par with early trials
- Solvent losses of less than 2% are achievable
 - As the largest cost driver, this is critical for the economics of the process

3rd Party Independent Trials - In Progress

- Undertaken at Independent Metallurgical Operations (IMO) in Perth
- Aimed at independently verifying our technology & generating necessary process data for design of pilot plant
- Due to be completed in the coming weeks



Pilot Plant

Timeline

6-month construction in FY2025

2-year operation

→ Design and construction of a DES battery recycling Pilot Plant

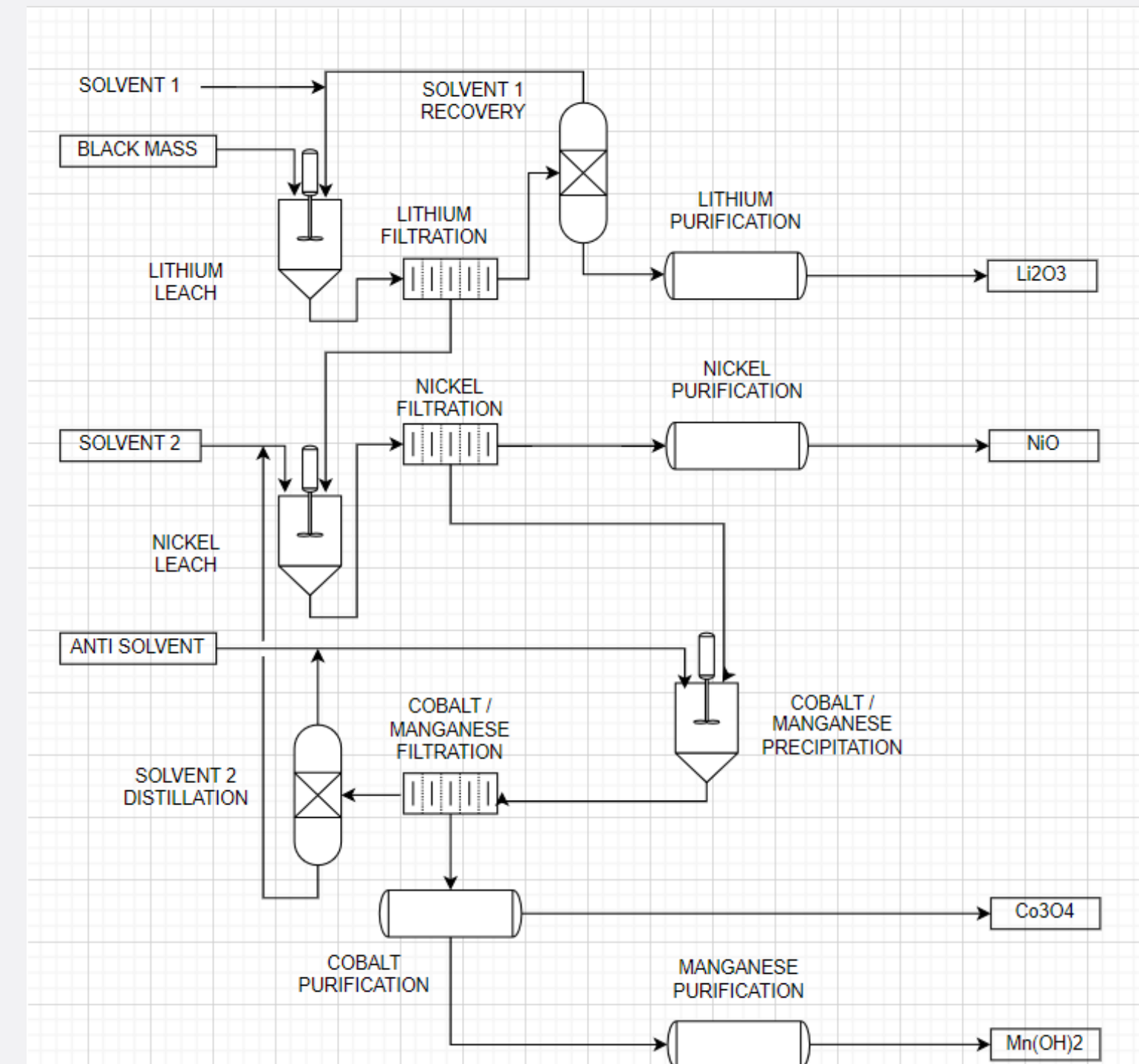
- A major de-risking step on commercialisation pathway
- Continuous, fully integrated, closed-loop system representative of a large-scale commercial operation
- Will be a test vehicle for process development & optimisation

→ Funding to be provided by a subsequent Capital Raise together with non-dilutive grants and rebates:

- \$1m pa Grant awarded to UoA for ARC Battery Recycling Training Centre (ION contribution of \$0.2m pa, largest industry participant)
- Matched CRC-P grant application to be submitted in June, outcome known from September 2024
- Other eligible expenditure claimable under the 43.5% R&D tax rebate¹

¹Refer ASX announcement 15 August 2023

DES Process Flowsheet



Leadership Team



Michael McNeilly

Chair
BA Econ

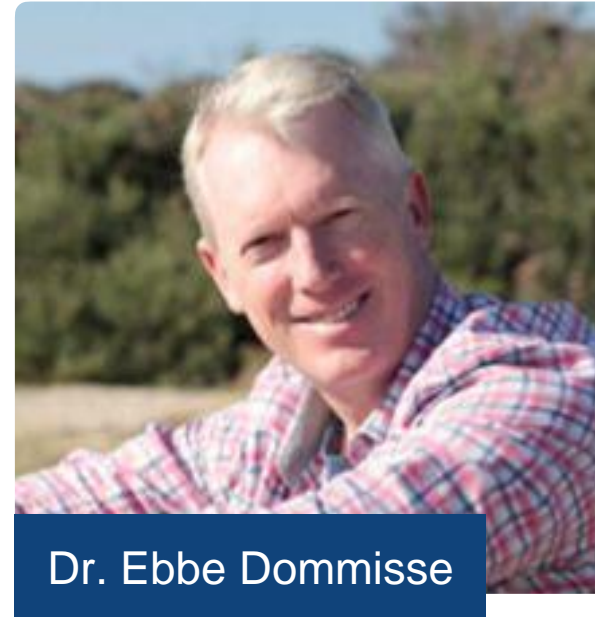
- Chief Executive Officer of Strata Investments Holdings Plc.
- Extensive experience in listed companies and is currently NED of ASX-listed Cobre Limited.
- Sits on several private company Boards within the Strata Investments Tiger Group.
- Past Board appointments include MOD Resources Limited (up to acquisition by Sandfire in November 2019), Metal Capital Limited, Greatland Gold Plc and Connemara Mining Plc.



Dr. Jack Hamilton

NED
PhD (Chem Eng)

- Highly accomplished senior executive and board director
- Significant leadership roles incl. Director of NorthWest Shelf Ventures for Woodside, overseeing Australia's largest resource project.
- NED roles include commercialisation of start-ups notably Calix Ltd and AnteoTech Ltd



Dr. Ebbe Dommissie

CEO
B.Eng (Chem) MSc PhD MBA GAICD

- Seasoned professional with over 25 years of commercialising technologies, execution, and manufacturing.
- Previously served as the COO at Circa Group, an Australian startup that commercialised a biochemical process from lab-scale to commercial scale.
- Prior, as GM of Pact Group, an ASX-listed manufacturer, responsible for establishing a world-class plant in Indonesia.



Ray Ridge

CFO & Company Secretary
B.Acc & Fin

- A senior financial and commercial professional with over 30 years experience across a diverse range of industries.
- CFO and capital markets experience with four other ASX listed companies, with two in technology commercialization.
- Previous roles include National GM Commercial in a large global engineering firm (now WSP Global) and CFO of the agricultural products division of Elders Limited.



Jeff Ritoe

Strategic Advisor Commercialisation
MA International Law

- Energy professional with 20 years of experience in negotiating commercial agreements, acquisitions and divestments in the energy industry.
- Worked for French energy company ENGIE in multiple jurisdictions
- Currently advises private and public clients on critical raw materials with a special focus on battery materials
- Brings together producers and consumers of battery materials

Additional ION Assets

UoA Partnership Agreement

Strategic partnership agreement with the University of Adelaide to have first option to new battery technology.

→ IP Engine

Sodium Aqueous Battery tech

Patented Na-aq battery design with high-performance cathodes and highly reversible anodes for long-life & high energy for BESS market.

→ SPA or Licensing options

Next-gen safe Li-ion NCM-811 Battery tech

Patented non-flammable high performance NCM-811 with high energy density and long cycle life for BEV market

→ SPA or Licensing options

Lithium Exploration (KoBold Metals JV)

Exploration across ION's five Lithium Projects in South Korea is being funded by KoBold up to A\$7m over 5 years to earn a 75% interest.

→ SPA Option

Legacy Exploration Assets

ION is advancing opportunities to monetise its 100% owned exploration leases in South Korea, prospective for Copper, Gold, Silver and REE.

→ SPA Option

Capital Structure

CORPORATE STRUCTURE:

Ordinary Shares	486.3m
Share Price (29 May 2024)	AUD\$0.010
Market capitalisation	AUD\$4.9m
Cash (31 March 2024)	AUD\$2.4m
Enterprise Value (EV)	~AUD\$2.5m

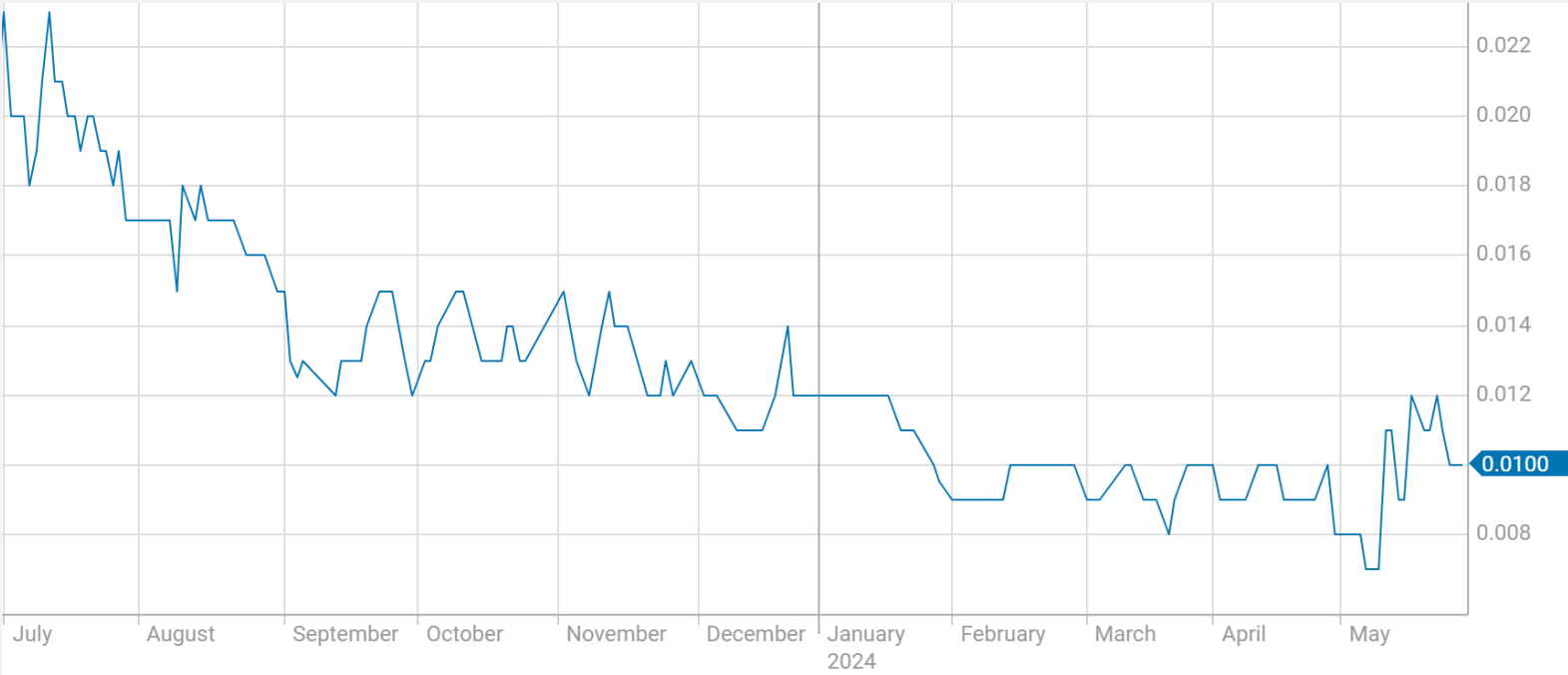
OPTIONS/PERFORMANCE RIGHTS:

ESOP incl. Directors various dates & prices	40,780,000
Options ex \$0.027 30 Dec 2024	63,000,000
Performance Rights (will expire 26 Nov 2024)	10,000,000

SUPPORTIVE STRATEGIC SHAREHOLDERS - MAJOR SHAREHOLDERS (>5%)

Strata Investment Holdings Plc	~19.2%
Ilwella Pty Ltd	~15.0%

ION SHARE PRICE GRAPH F24

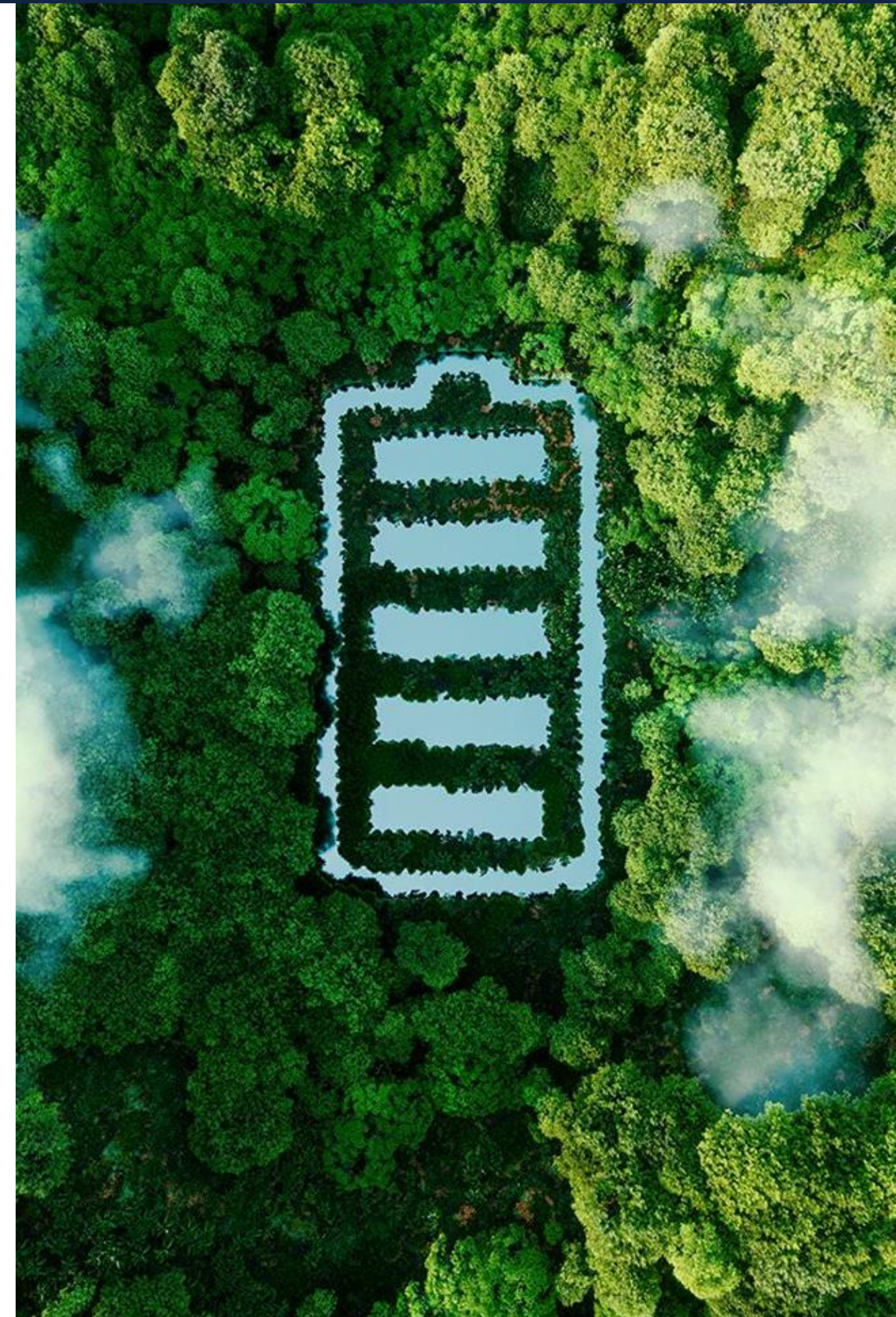


Investment Opportunity

Placement targeting \$1.5m, with ability to accept over subscriptions

- Cornerstone by supportive existing shareholders (Strata & Ilwella)
- Board, management & IR consultant participating
- Large-scale bench trials nearing completion = indicating technical scalability and high solvent recovery (solvent recovery is critical to process economics)
- Strong Government & Industry interest in the EU
- Funds raised to complete PFS by August 2024 (economics including benchmarking)
- Pilot Plant construction in F25, subject to funding (maintaining early mover advantage)
- Opportunity for priority participation in subsequent funding of Pilot Plant – quantum to be minimised through non-dilutive funding:
 - \$5m ARC Grant awarded for Battery Recycling Training Centre (ION largest industry participant)¹
 - CRC-P grant application submit June, outcome known from September 2024
 - Eligible Australian expenditure claimable under the R&D Tax Incentive
 - Monetisation of other ION assets (other battery technology & SK exploration assets)

¹Refer ASX Announcement: <https://announcements.asx.com.au/asxpdf/20230815/pdf/05smnwc3w5d3sz.pdf>



Company Risks

This document contains certain forward-looking statements that involve risks and uncertainties. Although we believe that the expectations reflected in the forward-looking statements are reasonable at this time, we can give no assurance that these expectations will prove to be correct. Given these uncertainties, readers are cautioned not to place undue reliance on any forward-looking statements. Actual results could differ materially from those anticipated in these forward-looking statements due to many important factors, risks and uncertainties including those risks detailed from time to time in the Company's announcements to the ASX including. Without limitation, such risks related to the Company's recycling technology include:

- Completion of the PFS in the coming months may indicate the recycling technology is not commercially/economically viable
- Future economic viability of the recycling process may be impacted by 1) changes in commodity prices (Lithium, Manganese, Cobalt, and Nickel); 2) changes in the availability and prices for inputs to the recycling process, and 3) exchange rates.
- Future viability of a commercial scale recycling plant will be dependent on appropriate offtake agreements and access to black mass (spent Lithium battery material)
- Provisional patents may not result in successfully granted national patents, or if granted, may not provide meaningful protection or competitive advantage

- Development of a pilot plant and a subsequent commercial scale plant are subject to relevant approvals/permits and the ability to raise the necessary funding through equity, debt, joint venture partners, government grants and the sale of other company assets.
- Despite the scaled up bench trials undertaken to date, there remains a residual risk that the required metal recoveries or re-usable solvent recoveries may not be at the level needed for an economically viable process at commercial scale
- Others may independently develop similar or improved technologies or design around patents or patent applications
- Attraction and retention of key staff
- There is no guarantee of success in securing non-dilutionary grant funding to support the pilot plant construction.
- Changes in the regulatory environment may materially impact support for battery recycling.

Other risks include the impact of future changes in general economic conditions on the Company, including the Company's ability to raise sufficient capital to fund ongoing operations, and risks associated with the Company's other assets including its battery related technologies and its exploration business in South Korea.



Thank you

Dr Ebbe Dommisse

CHIEF EXECUTIVE OFFICER

[IonDrive LinkedIn](#)

[IonDrive X \(Twitter\)](#)

E | ebbe.dommisse@iondrive.com.au

W | www.iondrive.com.au

Appendices

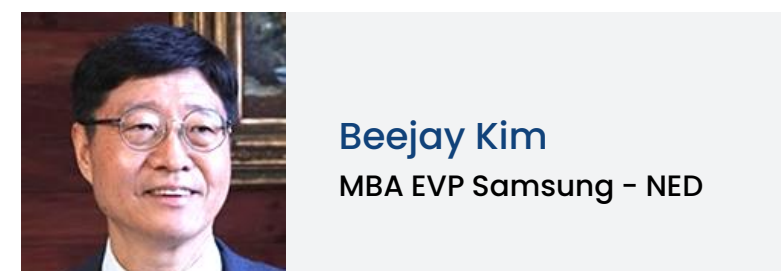
IonDrive Board



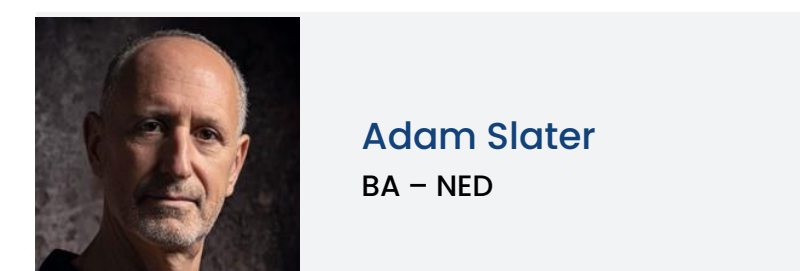
- Chief Executive Officer of Strata Investments Holdings Plc.
- Extensive experience in listed companies and is currently NED of ASX-listed Cobre Limited.
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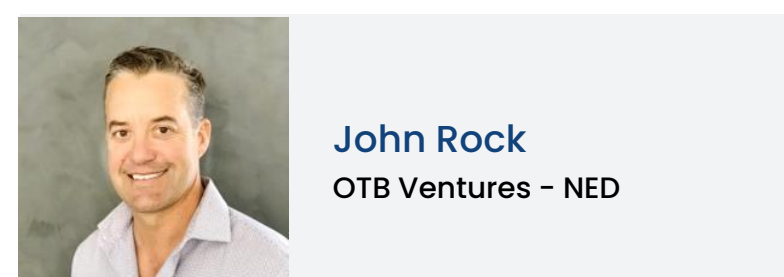
- Highly accomplished senior executive and board director
- Significant leadership roles incl. Director of NorthWest Shelf Ventures for Woodside, overseeing Australia’s largest resource project.
- NED roles include commercialisation of start-ups notably Calix Ltd and Anteo Diagnostix Ltd



- Professional project manager who has had a long career with Samsung C&T Corporation and Hyundai Engineering and Construction Company over 30 years.
- As a senior executive for Samsung C&T, Mr Kim led projects in several countries and regions including the Middle East, Australia and South-East Asia. This includes more recent positions of Vice President and Regional Representative of Saudi Arabia LLC and Head of MENA Regional Headquarters in the UAE for Samsung C&T.



- Three decades of invaluable experience in the commodities industry.
- Led the development of the commodity division at CWT Limited, a company listed on the SGX, from 2007 to 2018. Pivotal to the growth in the CWT commodities division, which accounted for over 80% of Group revenues (S\$12 Billion out of S\$14 Billion) and in excess of 50% of the Group’s profits.
- Current primary focus towards venture capital, contributing his expertise to multiple company boards and advisory committees.



- Extensive leadership, entrepreneurial and commercialisation experience.
- Directly involved with the IDT business since its inception.
- Co-founder and Director of OTB Ventures, a company with the specific mandate of finding, nurturing, and commercialising early-stage University technologies.



- Seasoned professional with over 25 years of commercialising technologies, execution, and manufacturing.
- Previously served as the COO at Circa Group, an Australian startup that commercialised a biochemical process from lab-scale to commercial scale.
- Prior, as GM of Pact Group, an ASX-listed manufacturer, responsible for establishing a world-class plant in Indonesia.



- A senior financial and commercial professional with over 30 years experience across a diverse range of industries.
- CFO and capital markets experience with four other ASX listed companies, with two in technology commercialization.
- Previous roles include National GM Commercial in a large global engineering firm (now WSP Global) and CFO of the agricultural products division of Elders Limited.



- Energy professional with 20 years of experience in negotiating commercial agreements, acquisitions and divestments in the energy industry.
- Worked for French energy company ENGIE in multiple jurisdictions
- Currently advises private and public clients on critical raw materials with a special focus on battery materials
- Brings together producers and consumers of battery materials

Company Background

Unique partnership with leading Battery Research Institution to commercialise breakthrough technologies, with a strong focus on commercialising our DES battery recycling technology.



Extensive De-Risking

Undergoing thorough de-risking efforts through ongoing PFS to push DES battery recycling technology toward commercialisation



Commercial Management

Refreshed Management team and Board, with addition of experienced individuals with backgrounds in the battery sector, successful start-ups and commercialising breakthrough technologies



Patented Breakthrough Tech

IP to three technologies available for commercialisation or monetisation

- Hydrometallurgical Battery Recycling
- Safer Lithium Metal Batteries
- Next-gen Aqueous Sodium Batteries



Stakeholder Support

Supportive shareholder base, Government funded research projects and extensive network of potential industry partners in Korea, the EU, the USA & regionally



Industry Leading Research

IDT has a strategic partnership agreement with the University of Adelaide leveraging their significant investment into next-generation battery research led by world-class laureate researchers



Battery Industry Connectivity

Operating in South Korea since 2016, ability to leverage of our first mover advantage in a country at the forefront of the Energy Transition



UoA Partnership: The Arrangement

The University of Adelaide, in addition to being ranked in the top 1% of universities in the world, has a leading-edge laboratory with a large investment into the research and development of energy storage technologies, led by two Laureate professors, Professor Shizhang Qiao and Professor Zaiping Guo.

Under a Strategic Partnership Agreement (SPA), IDT has a first right to acquire or enter into an exclusive worldwide license of the IP from projects identified as appropriate for commercialisation. Three such projects have been formalised to date, protected by four patent applications.

The SPA includes:

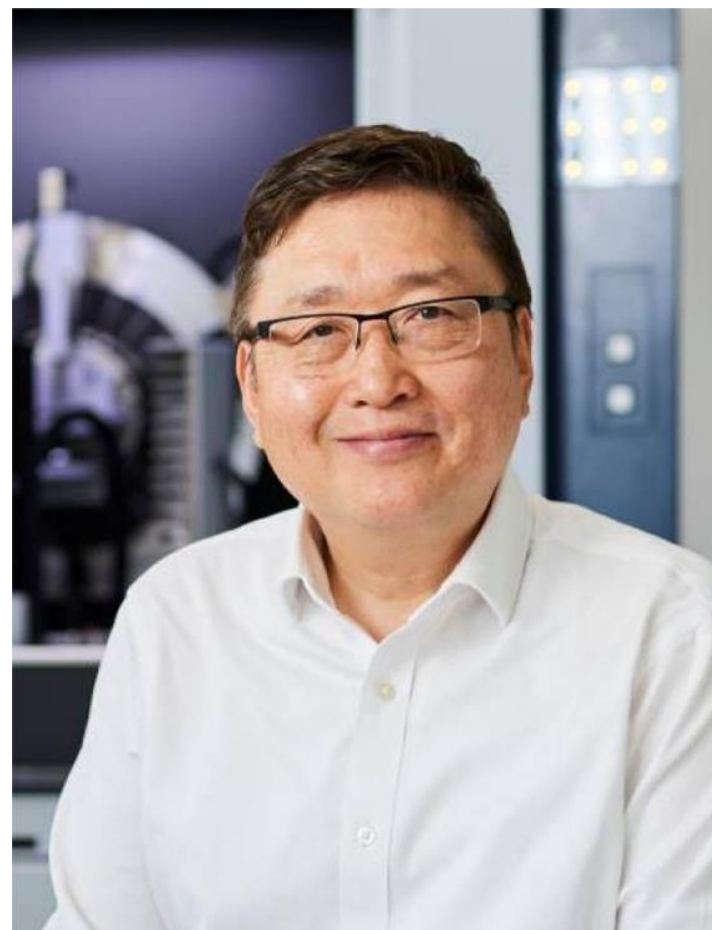
- IDT holds a right of first option to acquire or exclusively license the technology invented by the UoA team.
- A framework for identifying further battery related technology appropriate for commercialisation.



UoA Partnership: The Professors

Laureate Professors Shizhang Qiao & Zaiping Guo

The Australian Laureate Fellowship is an Australian professorial research fellowship awarded by the ARC. Fellowship represents a commitment to playing a significant, sustained leadership and mentoring role in building the country's internationally competitive research capacity.

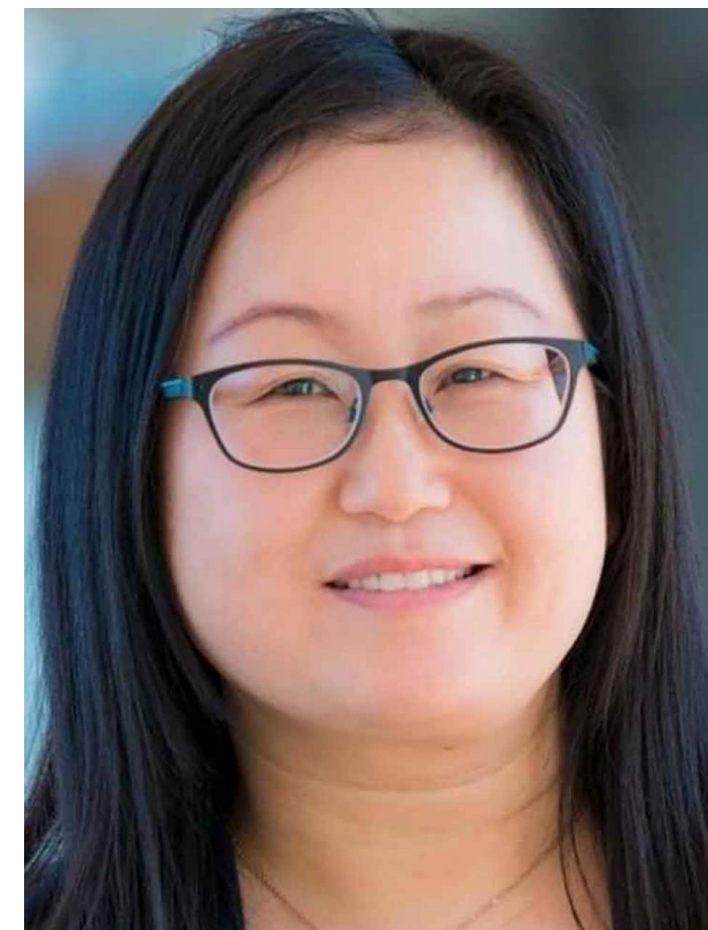


Prof. Shizhang Qiao

LAUREATE
PROFESSOR

Professor Shizhang Qiao joined the School of Chemical Engineering of the University of Adelaide as a professor in the inaugural Chair of Nanotechnology, and is the founding Director of Centre for Materials in Energy and Catalysis (CMEC). Recently recognised as the [#1 Material Sciences researcher](#) in Australia & 44th globally.

[Read Bio](#)



Prof. Zaiping Guo

LAUREATE
PROFESSOR




Professor Zaiping Guo is an ARC Australian Laureate Fellow at School of Chemical Engineering & Advanced Materials, The University of Adelaide. She has won multiple awards for her work on rechargeable batteries amongst other fields.

[Read Bio](#)

Sodium Aqueous Battery Technology

Three innovative technologies relating to the cathode, anode and electrolyte components of Lithium-ion Batteries (LIBs).

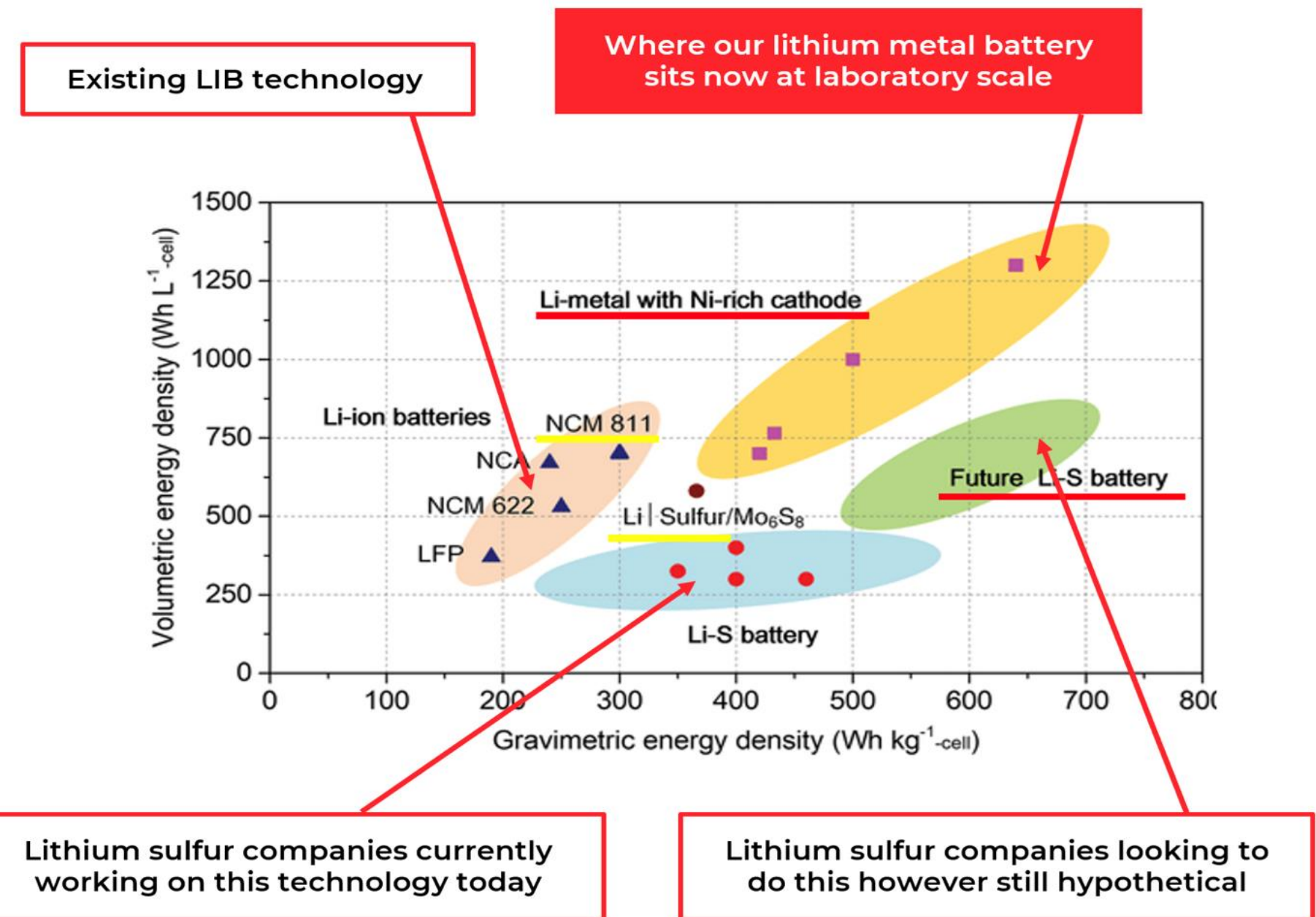
Together these components can be used to create a next-generation lithium battery system that has a very high energy density/capacity, long cycle life and is safe/non-flammable, or may be commercialised individually:

-  A groundbreaking, patented lithium metal anode that allows LIBs to reach theoretical maximum energy density.
-  A new cathode material with higher Ni content to increase energy density and doping technology to increase structural stability to enhance longevity
-  An electrolyte that is non-flammable

IDT's non-flammable Li-ion battery **approaches the theoretical maximum energy density**, bringing lithium metal battery technology to the next phase.

Pilot testing (TRL5/6) has shown the design improves the energy storage, increases the life cycle of the cell, and significantly reduces the risk of lithium fires allowing for safer use and easier transportation.

Comparison of these results against published material, and positive industry feedback, provide indicators of the potential for industry adoption of these technologies.

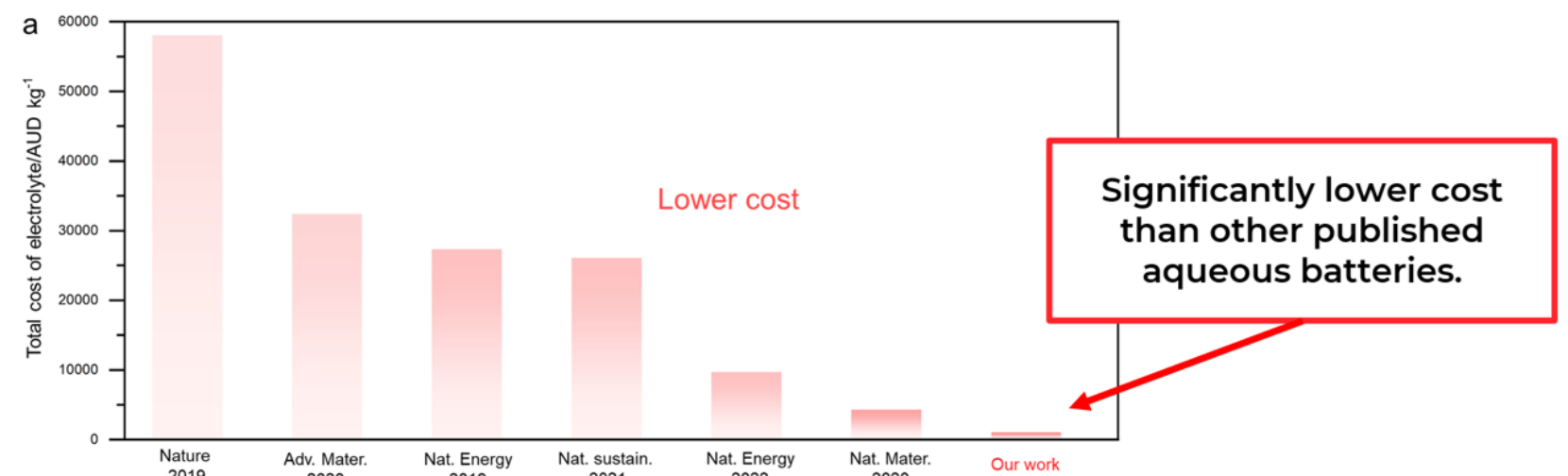
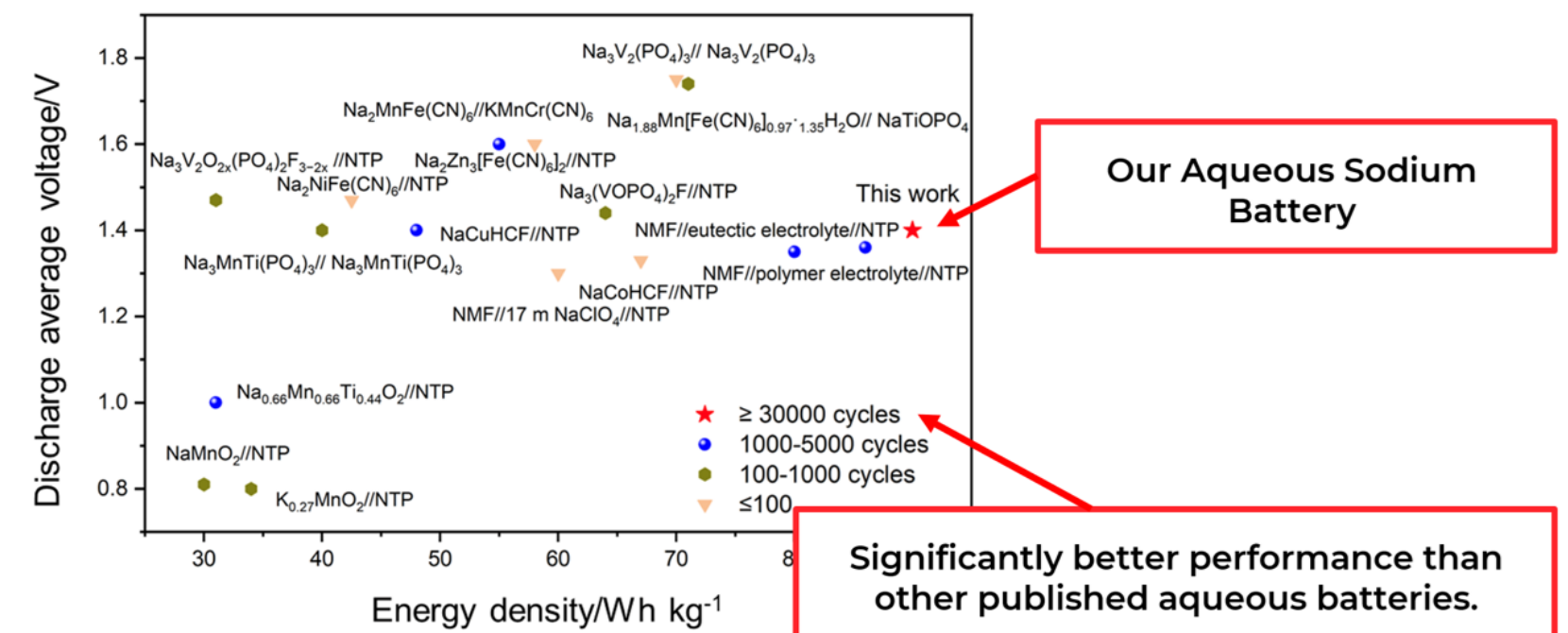


Next-Gen Safe Li-ion NCM-811 Battery Technology

Water based batteries are particularly suited to grid energy storage. Sodium-ion batteries offer a cheaper alternative to LIBs as sodium is an abundant element in nature minimising reliance on critical minerals, while having significantly longer life cycle than Li-ion cells - capable of operating for more than three times the charge cycles. The historic technical challenge with water-based batteries is relatively low energy density which ION's technology has increased 3-fold to be comparable to LIBs.

Three innovative technologies relating to the cathode, anode and electrolyte components - a patented novel layer on the cathode, titanium compound-based anode and sodium chloride-based electrolyte that significantly reduces the reactivity of the anode with alkaline electrolyte, leading to dramatic improvements in energy density and cycle life.

- Results from research at pilot-scale (TRL5/6) have exceeded performance of known published material for similar batteries both in terms of theoretical energy maximum in combination with a life of over 200 cycles in pouch cell format.
- Importantly, these results have been achieved while using low-cost inputs and excluding the use of organic electrolytes.
- Independent verification by 3rd party consultancy, TMPR, have confirmed that the Value Proposition is compelling on the metrics of Performance, Safety and Cost
- The focus of upcoming research is to further increase theoretical energy density maximums, life cycle and capacity which will accelerate any potential commercial adoption particularly as it is believed that water-based batteries can be manufactured using existing lithium-ion battery manufacturing lines.



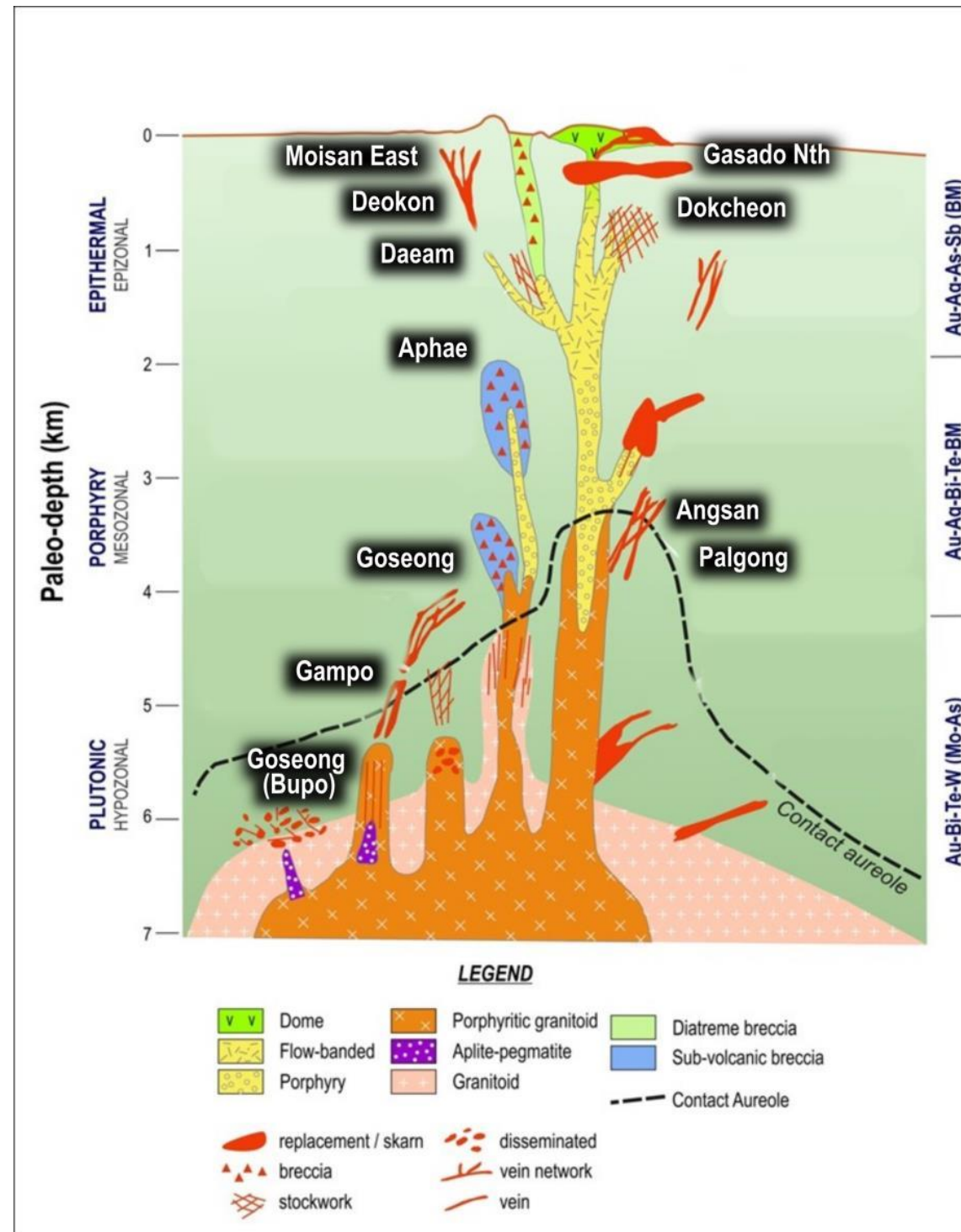
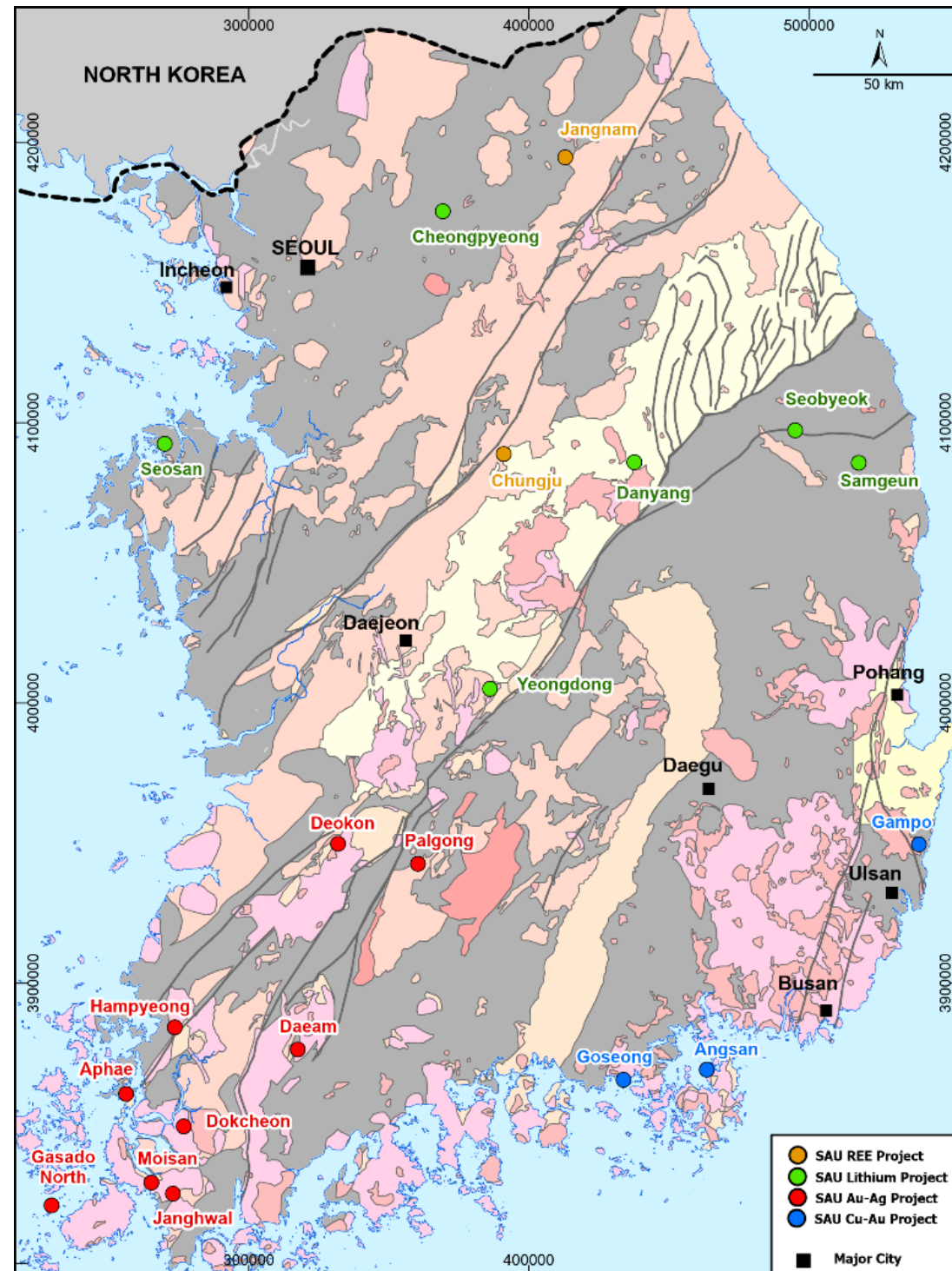
KoBold Metals Earn-In & JV



- Earn-in and Joint Venture Agreement with Kobold Metals on 5 Lithium Projects executed in November 2023 - \$7M Earn-in & JV over 5 years
- Kobold is a private exploration and technology company backed by Bill Gates, Jeff Bezos, Jack Ma, Andresen Horowitz
- KoBold Team commenced fieldwork at Samgwen, Seobyeok in November 2023; extensive program planned for 2024

KoBold Team at Seobyeok Li Project December 2023

ION Au-Ag-Cu Projects Geologic Settings



ION Precious Metal + Cu Projects

Deokon Ag-Au

Aphae Au-Ag

Dokcheon Au-Ag

Palgong Au-Ag-Cu-Pb-Zn

Goseong Cu-Au-Ag

Gasado North Au-Ag

Moisan East Au-Ag

Daeam Au-Ag

Angsan Au-Ag-Cu