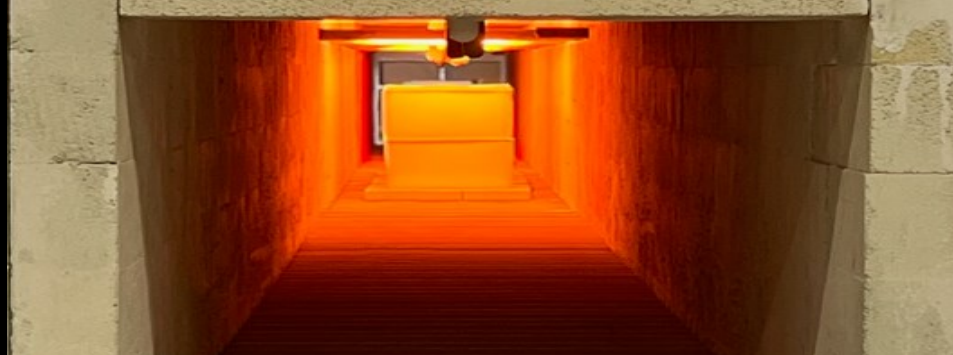
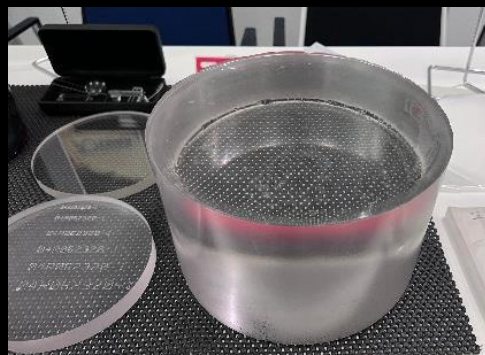


Alpha HPA



**ESTABLISHING A GLOBAL LEADING SUPPLIER OF HIGH PURITY ALUMINIUM MATERIALS TO
HIGH TECHNOLOGY GROWTH SECTORS**

ASX: A4N

CAUTIONARY STATEMENT

The financial projections referred to in this presentation has been undertaken to assess the technical and financial viability of the HPA First project. These projections are based on the material assumptions about the availability of funding and the pricing received for HPA. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the outcomes indicated by these projections will be achieved. To achieve the range of outcomes indicated, additional funding will be required. Investors should note that there is no certainty that the Company will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares. It is also possible that the Company could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the HPA First project. If it does, this could materially reduce the Company's proportionate ownership of the HPA First project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results these financial projections.

FORWARD LOOKING STATEMENTS

This presentation contains certain forward-looking statements with respect to the DFS, financial condition, results of operations, and business of the Company and certain plans and objectives of the management of the Company that are based on the Company's assumptions, expectations, estimates and projections as of the date on which the statements were made. Generally, forward-looking statements can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. These forward-looking statements involve known and unknown risks, uncertainties and other factors which are subject to change without notice and may involve significant elements of subjective judgement and assumptions as to future events which may or may not occur. Forward-looking statements are provided as a general guide only and there can be no assurance that actual outcomes will not differ materially from these statements. Neither the Company, nor any other person, give any representation, warranty, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. In particular, those forward-looking statements are subject to significant uncertainties and contingencies, many of which are outside the control of the Company.

A number of important factors could cause actual results or performance to differ materially from the forward looking statements. Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Investors should consider the forward looking statements light of those disclosures and are cautioned not to place undue reliance on forward looking statements. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.



ALPHA HPA: INTRODUCTION

We are a technology led, speciality chemicals company

We make ultra-high purity aluminium products with a
worlds first process which are:

**CRITICAL RAW MATERIALS FOR
HIGH-TECHNOLOGY GROWTH SECTORS**

HIGH PURITY - HIGH MARGIN - LOW CARBON

Alpha is commercialising in 2 Stages as the

HPA FIRST PROJECT

STAGE 1 – IN PRODUCTION

STAGE 2 – MOVING TO F.I.D.

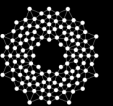


- **STAGE 1: IN PRODUCTION**
- **STAGE 2: FINALISING F.I.D.**



**HPA First Project Site
Gladstone State Development Area
100% RENEWABLE ENERGY**

HPA FIRST PROJECT: GLADSTONE QLD



AlphaHPA

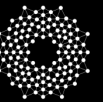


STAGE 1: IN PRODUCTION





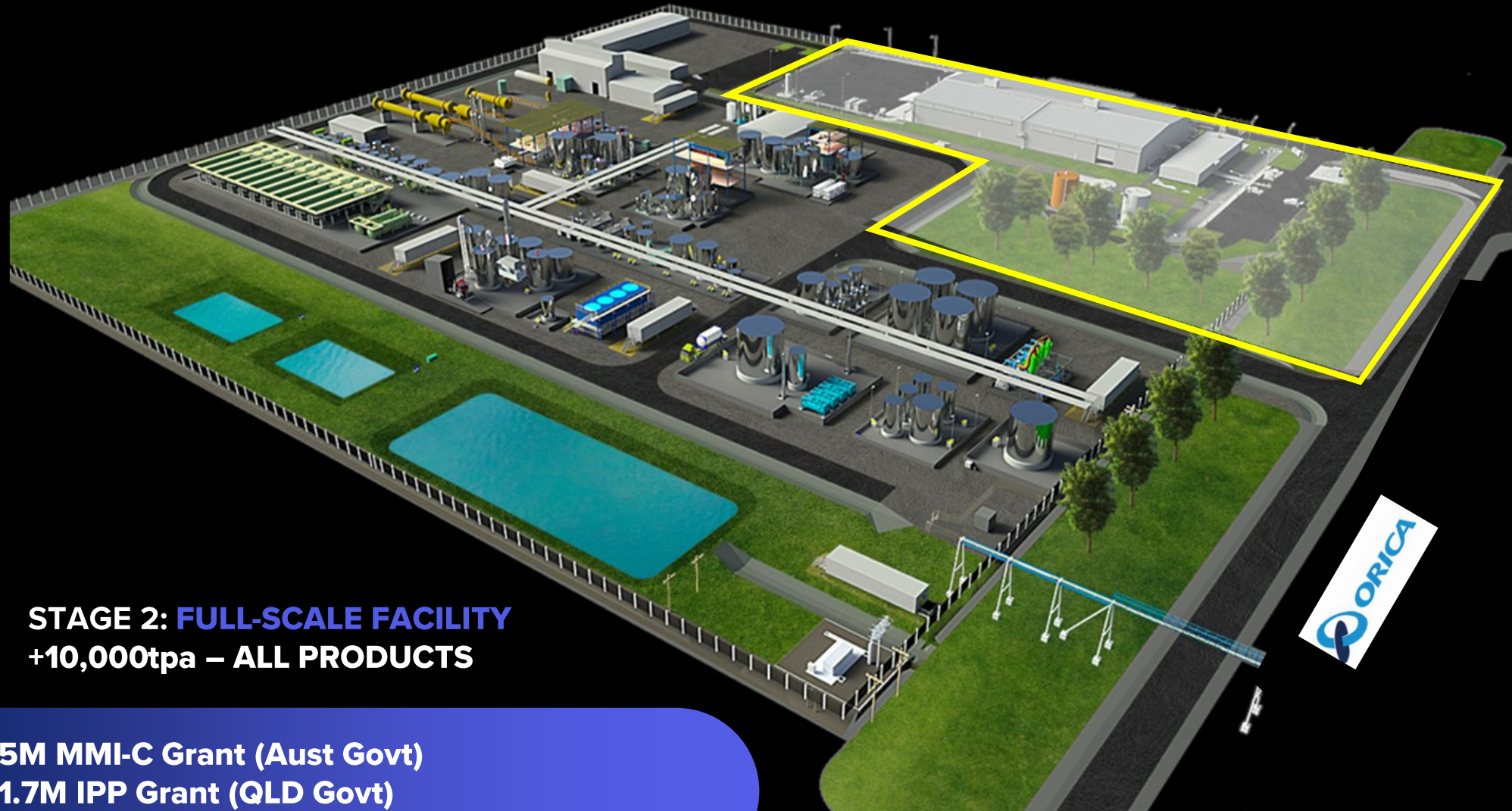
STAGE 1: HPA CIRCUITS



Alpha HPA

PROJECT LAYOUT:

STAGE 1: IN PRODUCTION
+350tpa – ALL PRODUCTS



STAGE 2: FULL-SCALE FACILITY
+10,000tpa – ALL PRODUCTS

- \$45M MMI-C Grant (Aust Govt)
- \$21.7M IPP Grant (QLD Govt)
- \$400M in Aust Govt Loan support (EFA+NAIF)

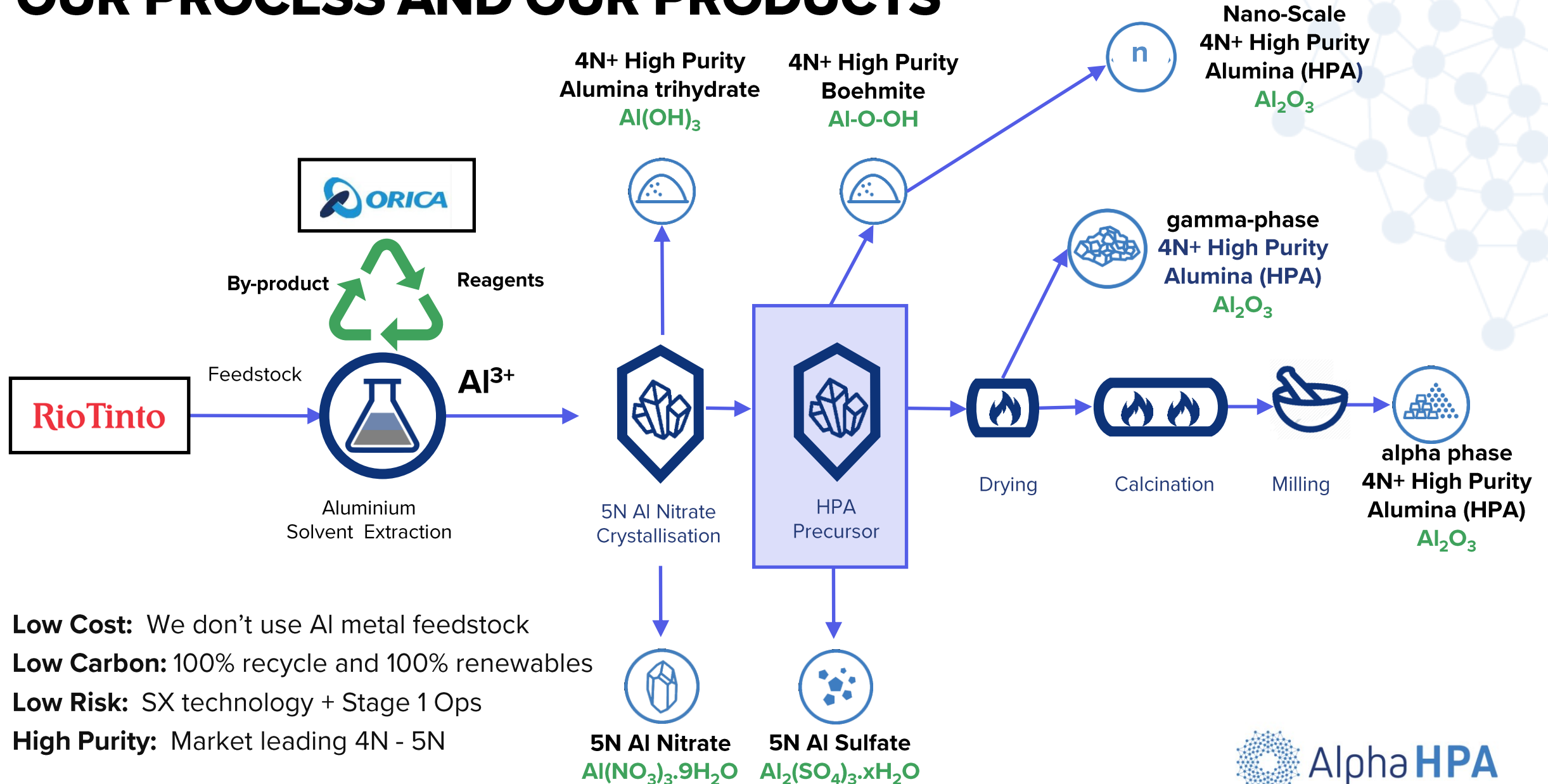
COMPREHENSIVE GOVERNMENT SUPPORT

- \$45M MMI-C Grant (Aust Govt)
- \$21.7M IPP Grant (QLD Govt)
- \$400M in Aust Govt Loan support (EFA+NAIF)



Alpha HPA staff hosting Prime Minister of Australia Anthony Albanese, Federal Minister of Resources Madeleine King, Queensland Premier Steven Miles, and Queensland Minister of Gladstone Glenn Butcher

OUR PROCESS AND OUR PRODUCTS



Low Cost: We don't use Al metal feedstock

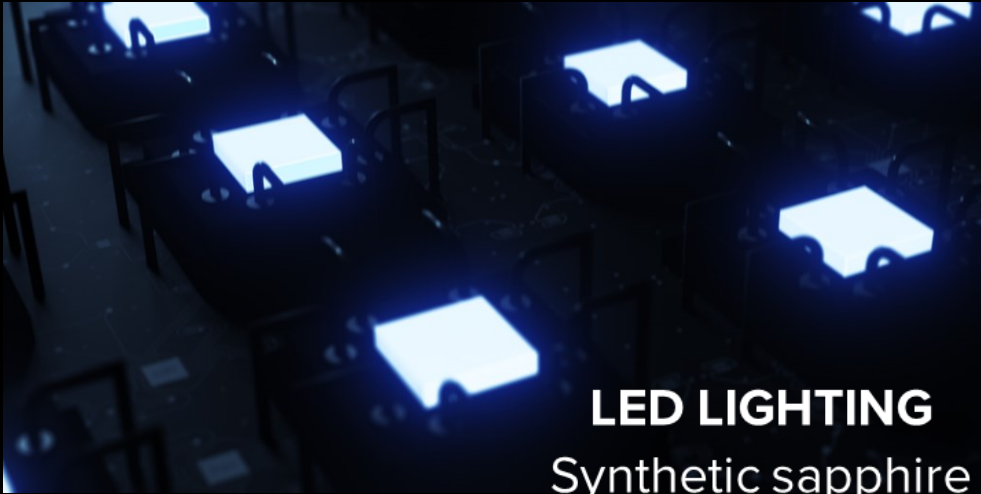
Low Carbon: 100% recycle and 100% renewables

Low Risk: SX technology + Stage 1 Ops

High Purity: Market leading 4N - 5N



APPLICATIONS: HIGH TECHNOLOGY GROWTH SECTORS



LED LIGHTING

Synthetic sapphire
LED phosphors



LITHIUM-ION BATTERY

Cathode coating
Cathode doping
Anode coating



OTHER

Specialty Catalysts
Technical Ceramics
Adsorbents for lithium DLE

SEMICONDUCTORS

Thermal interface materials
Chemical mechanical
polishing (CMP) slurries

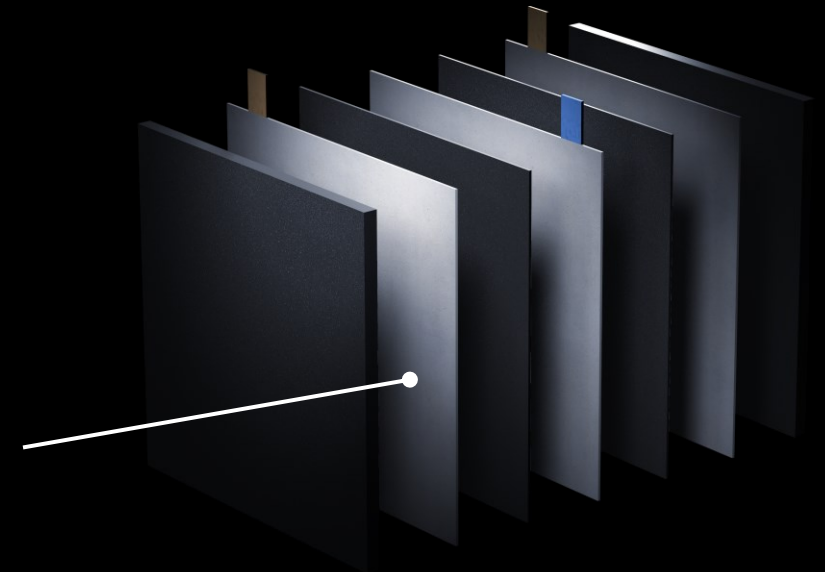
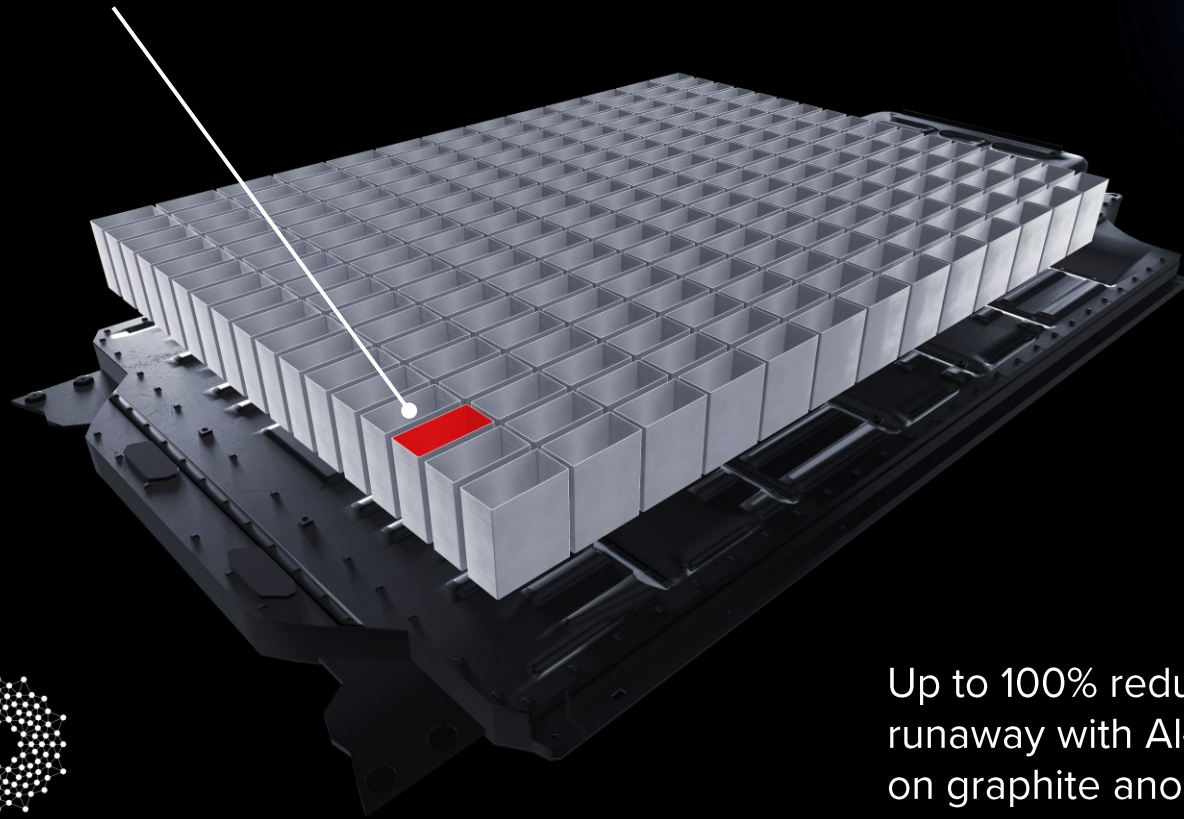


Alpha HPA

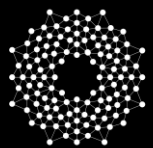
WE MAKE BATTERIES SAFER

ALPHA'S UNIQUE ABILITY TO MAKE ULTRA HIGH PURITY AL-NITRATE UNLOCKS A KEY LI-ION BATTERY SAFETY COATING TECHNOLOGY

Zero propagation from battery pack with high purity (Al-O-OH) boehmite coated cell casings



Up to 100% reduction in thermal runaway with Al-O-OH coatings on graphite anode materials



Alpha HPA

SUPPLYING HIGH POWER SEMICONDUCTORS

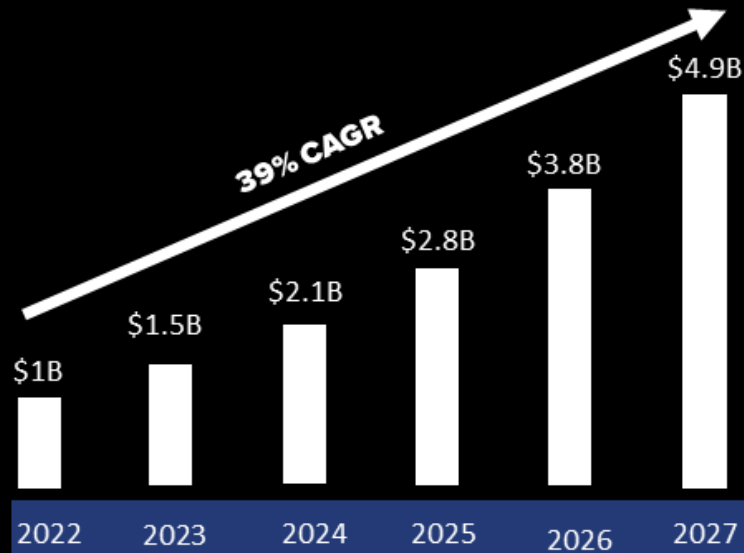
HPA and HPA precursors for:

- polishing
- packaging

Demand link to high power semiconductors

- First sales in place
- Semiconductor sector LOI in place for up to 1,000tpa HPA

Value of SiC Semiconductors in EV's (US\$M)

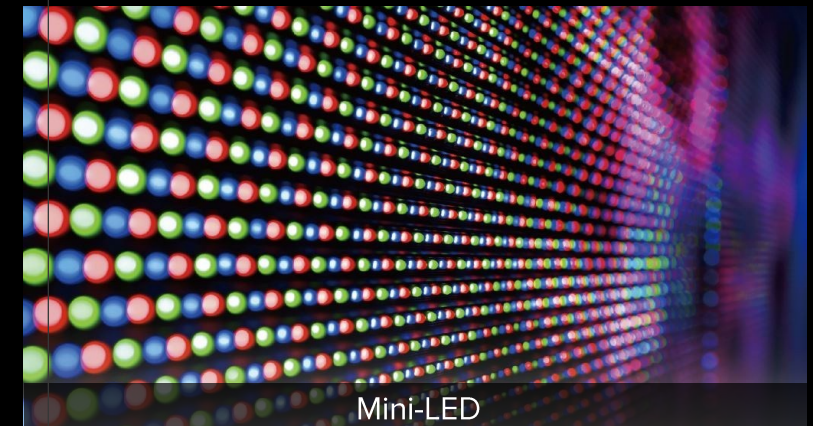
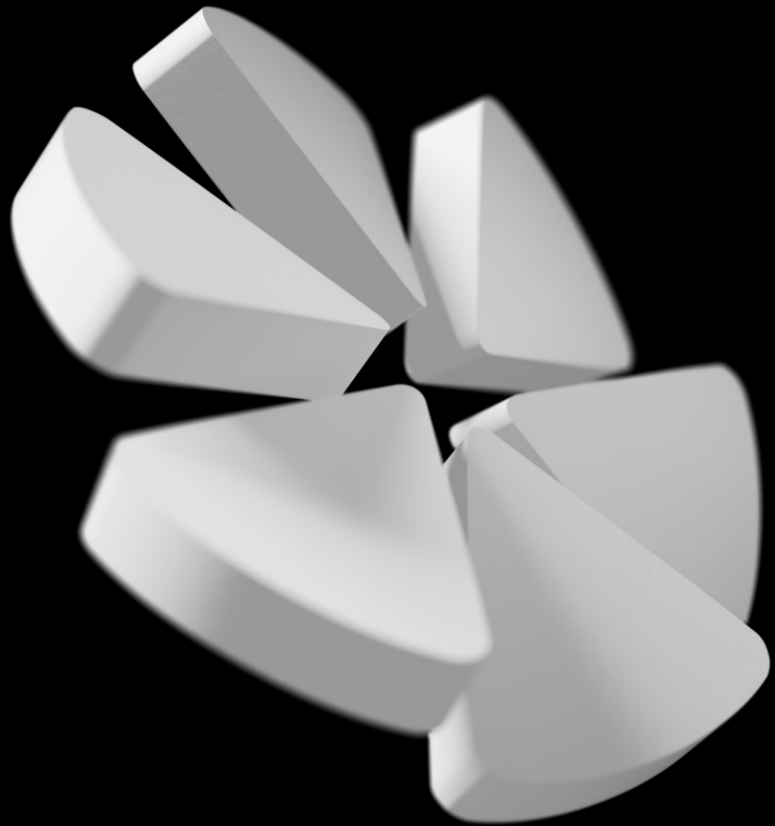


Source: Wolfspeed



Alpha HPA

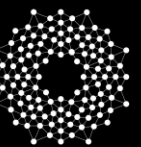
SUPPORTING NEXT-GENERATION LED TECHNOLOGY



Alpha's custom HPA tablets for sapphire glass supporting the next generation of LED semiconductor technology



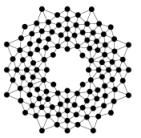
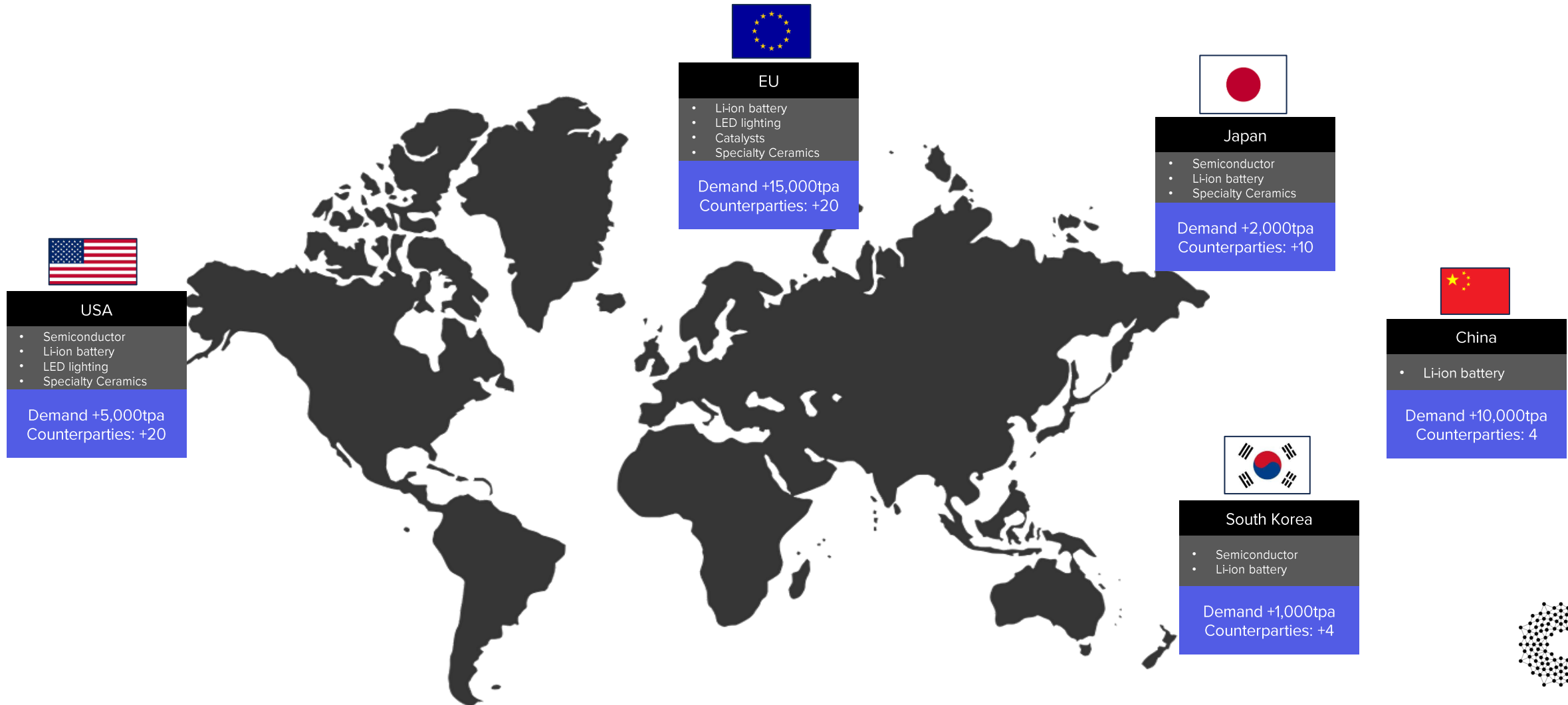
Alpha **SAPPHIRE**



Alpha **HPA**

OUR PRODUCTS - GEOGRAPHIC DEMAND

- Summary of geographical spread of demand interest and number of counterparties in qualification



MARKET OUTREACH AND PRICING

- Extensive 4+ year global market outreach
- Detailed, technically driven understanding of market and applications
- Pricing obtained by interviews, sales, refined quotations and LOI's
- Comprehensive database of pricing available for Alpha's materials

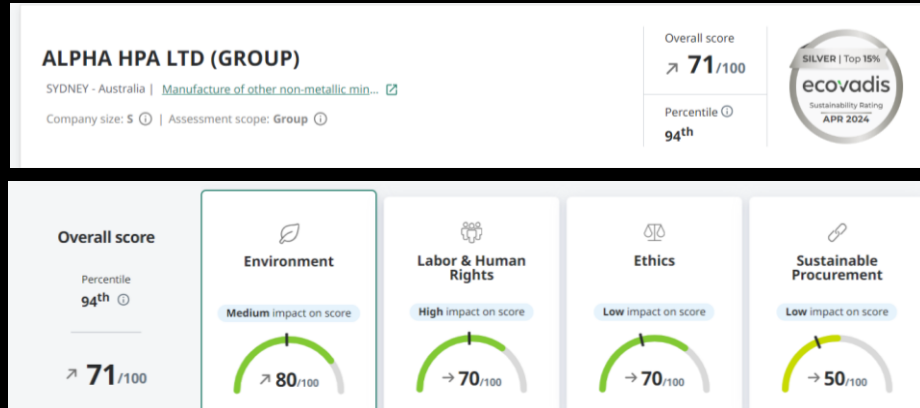


Product Pricing (US\$/kg)

| Product | Alpha HPA Market Discovery | | | | Independent Consultants | | |
|--------------------------------|----------------------------|-------|--------------------------|----------|-------------------------|---------|----------|
| | Low | High | Demand Vol Weighted Avg* | HPA Eq** | CM Group (FY27) | GLG | HPA Eq** |
| 5N Purity Aluminium Nitrate | 15.0 | 350.0 | 18.5 | 123.3 | n/a | 20 - 30 | 125.0 |
| 4N5+ Purity Alumina | 20.0 | 68.5 | 32.0 | 32.0 | 39.3 | n/a | 39.3 |
| 4N5+ Purity Alumina for pucks | 20.0 | 30.0 | 25.0 | 25.0 | 35.0 | n/a | 35.0 |
| 4N5+ Purity Gamma Alumina | 13.0 | 30.0 | 20.3 | 20.3 | 27.5 | n/a | 27.5 |
| 4N5+ Purity Alumina Trihydrate | 12.5 | 20.0 | 15.0 | 23.1 | 19.4 | n/a | 29.8 |
| 4N5+ Purity Nano-Alumina | 33.0 | 44.0 | 43.0 | 43.0 | 50.0 | n/a | 50.0 |

ESG: INDEPENDENT CERTIFICATION

SUSTAINABILITY RATING

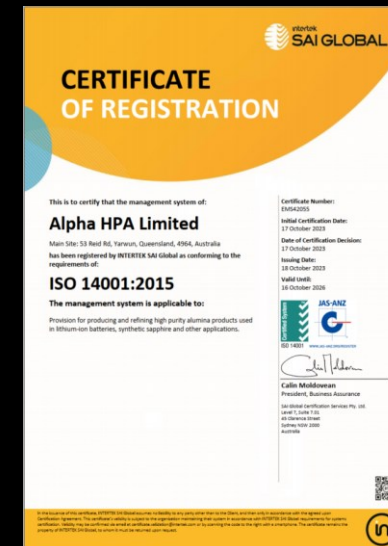


SUSTAINABILITY

ISO CERTIFICATION



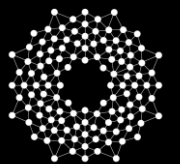
QUALITY



ENVIRONMENTAL MGMT



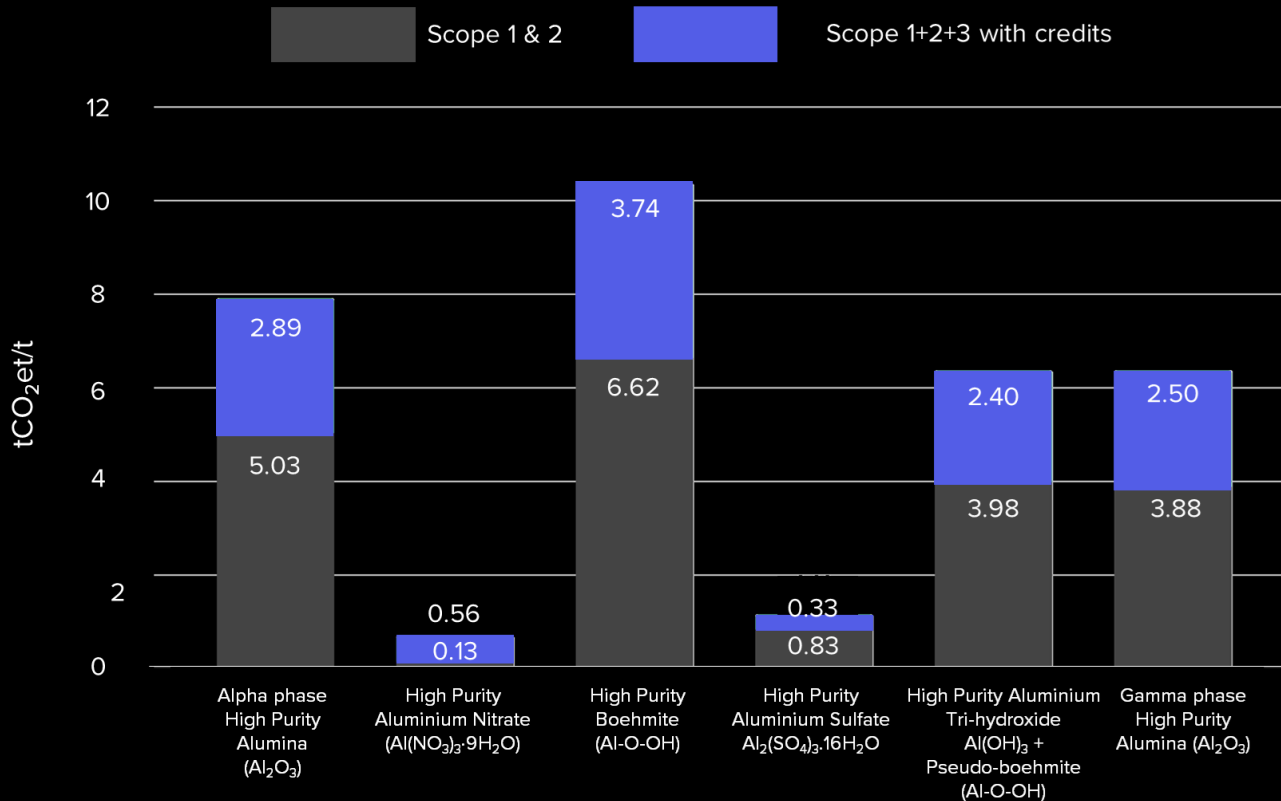
WORK, HEALTH & SAFETY



Alpha HPA

WORLD LEADING EMISSIONS


50-70% lower CO₂ emissions over incumbent (alkoxide) process



~71% lower total emissions in feedstock and production process combined compared to the incumbent process

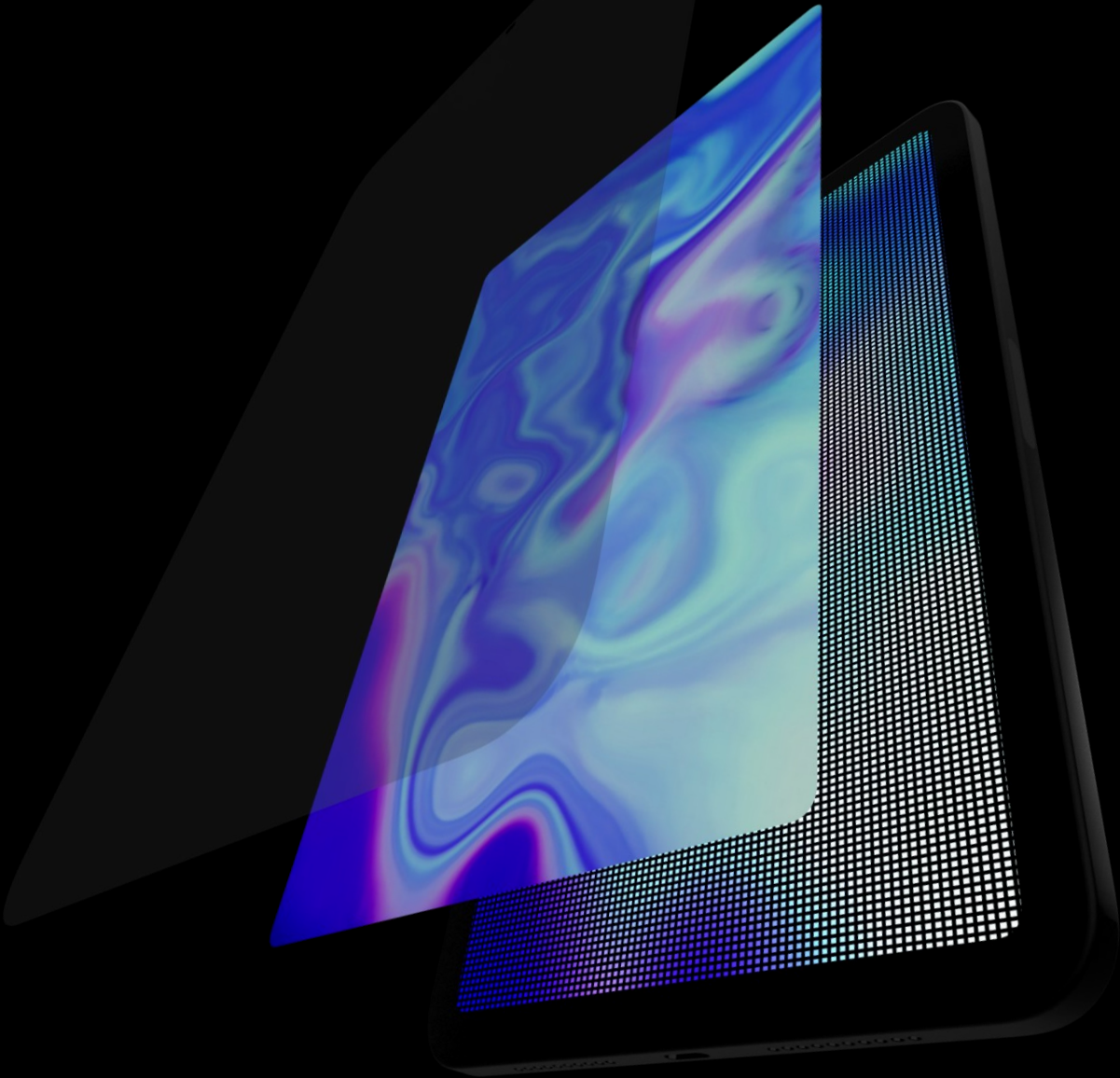
EMISSIONS REDUCTIONS

1. We do not use Al metal as feedstock
2. We recycle our reagents
3. We use 100% renewable energy

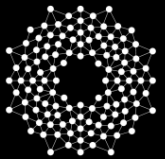
Independent emissions analysis by  Carbon Chain



Alpha HPA

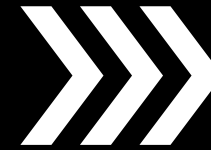
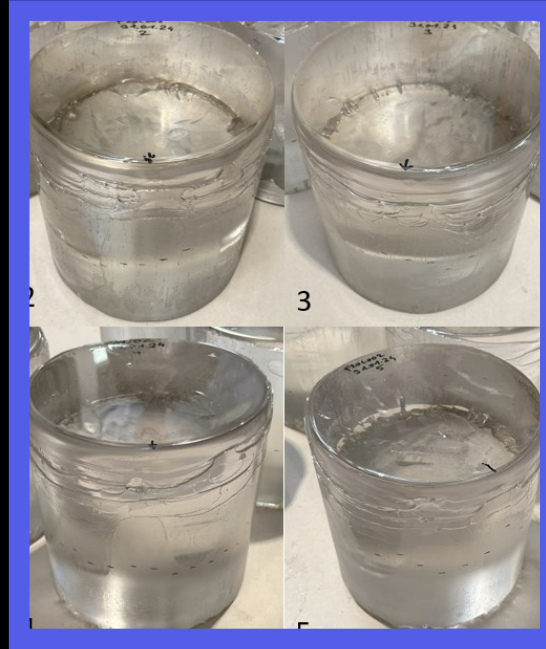
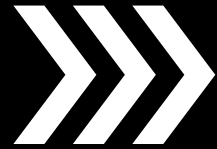
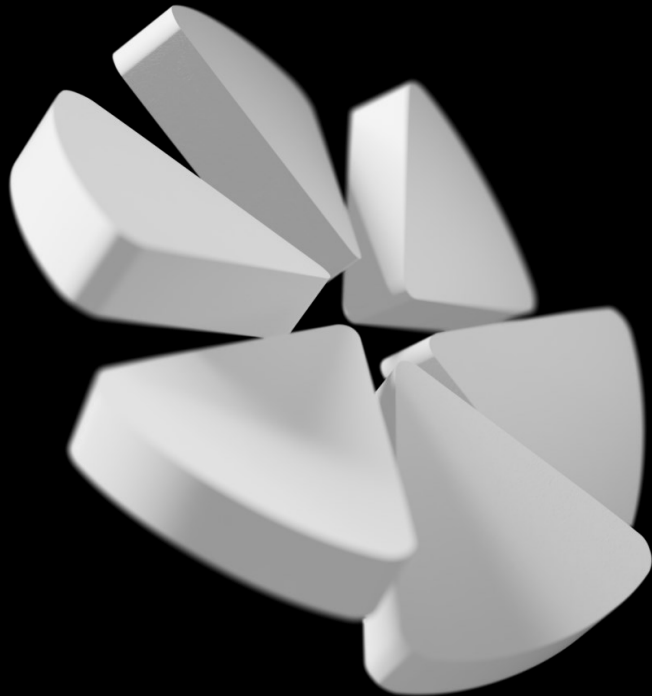


Alpha **SAPPHIRE**

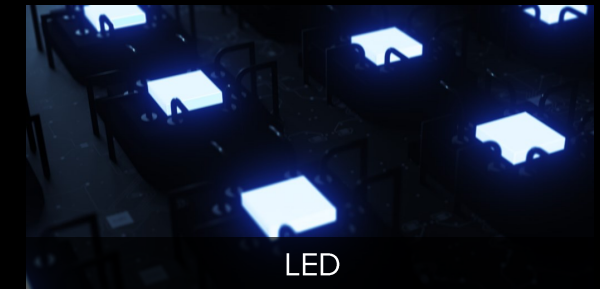


Alpha**HPA**

ALPHA SAPPHIRE: ADDING DOWNSTREAM VALUE TO HPA



Sapphire optics



LED



- **September 2023:** \$30M QIC funding to secure sapphire business for QLD
- **November 2023:** \$40M equity financing to match QIC

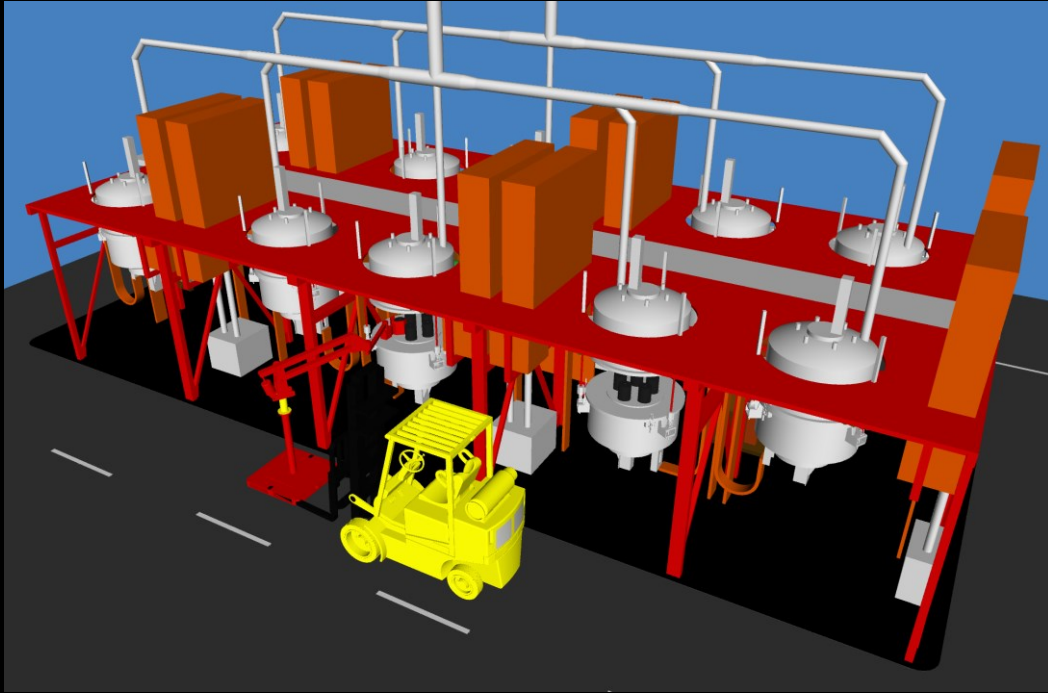


Alpha **SAPPHIRE**



Alpha **HPA**

ALPHA SAPPHIRE: UNIQUE SECTOR OPPORTUNITY

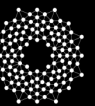


- **First Sapphire Growth Units now fully installed – first sapphire early May**

- **Technology Disruption:** Access to new Ebner-Fametec Technology
- **Supply Crunch:** End-user desire to de-link from Russia-China production
- **Demand Pull:** Major new demand from micro-LED adoption

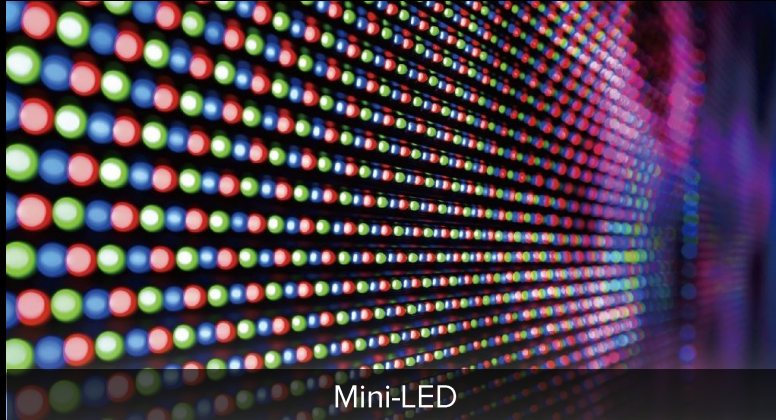


Alpha **SAPPHIRE**



Alpha **HPA**

ALPHA SAPPHIRE: COMPELLING ECONOMICS



Mini-LED



Micro-LED



Sapphire optics



Sapphire optics

Annual EBITDA (USD) - post QIC Royalty

| | Per single growth unit | Per 50 growth units | Per 100 growth units |
|------------------|------------------------|---------------------|----------------------|
| Base case | \$516,000 | \$25,800,000 | \$51,600,000 |
| High case | \$693,000 | \$34,600,000 | \$69,300,000 |

- Targeting mini & **micro-LED** and **Sapphire Optics** markets
- 50 growth units are at steady state operation post FY25, and once the 100 growth units are in steady state operation post FY26.



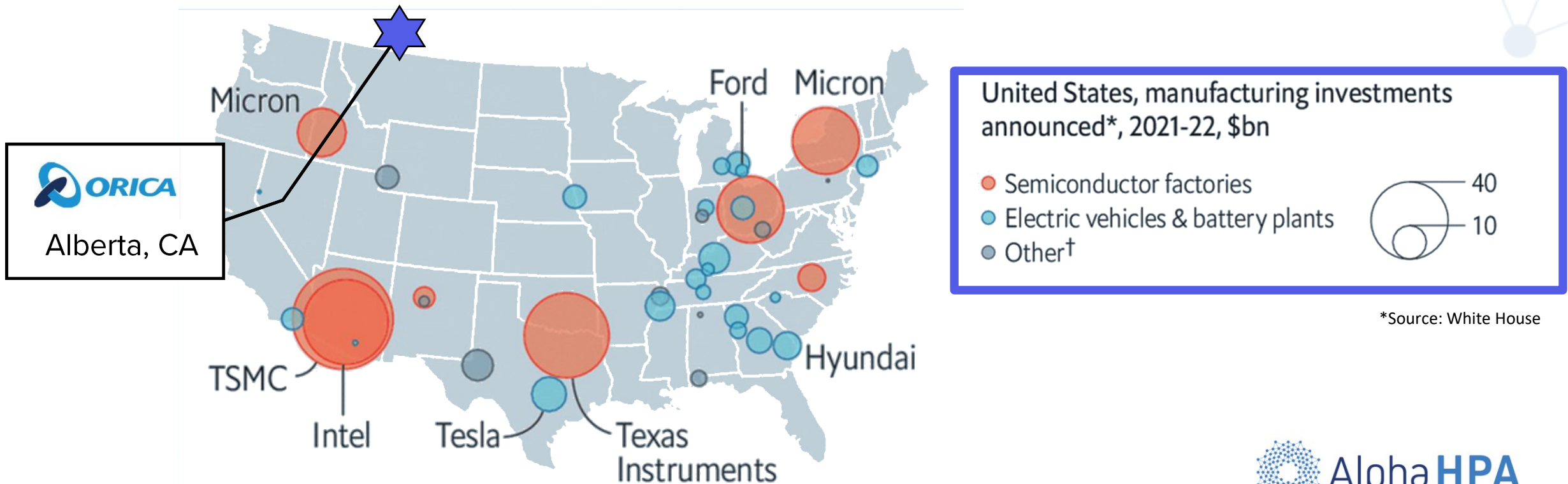
Alpha **SAPPHIRE**



Alpha **HPA**

ORICA STRATEGIC INVESTMENT:

- ASX 100 Company Orica Ltd (ASX: ORI) acquired a 5% strategic interest in Alpha HPA (Nov 2022)
- Orica and Alpha have worked together on the HPA First Project since 2019
- The investment builds upon binding arrangements to supply chemical reagents and offtake by-products at the HPA First Project, Gladstone
- Significant external endorsement of the capability, safety and operability of the process
- MoU signed to assess high purity aluminium products plant in North America (Alberta)



CORPORATE SNAPSHOT

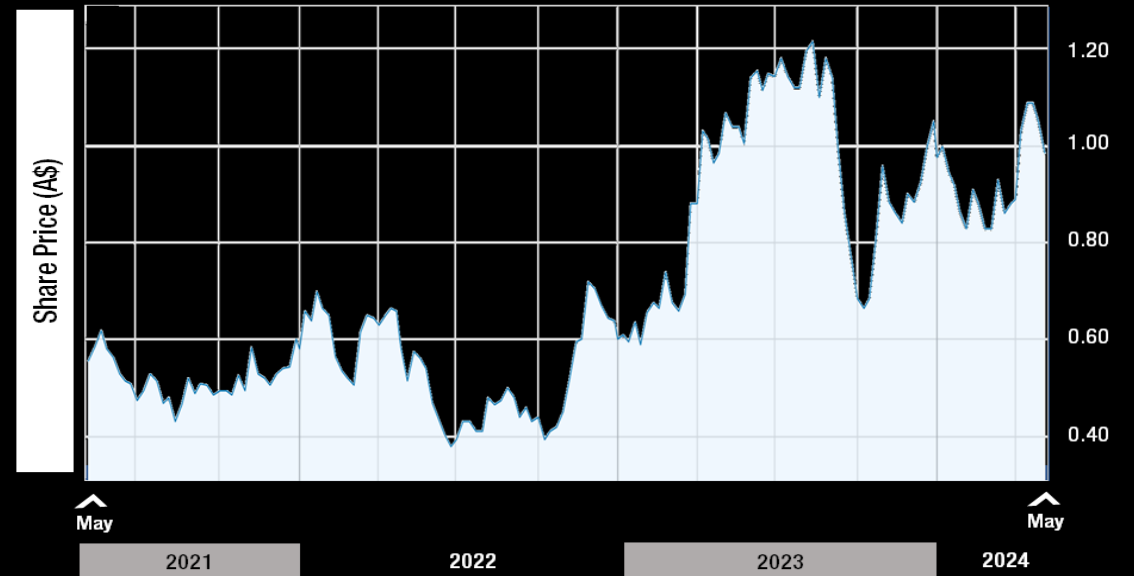
TRADING INFORMATION

| | |
|--------------------------|-----------------|
| ASX CODE | A4N |
| Share Price (07/05/2024) | ~\$0.98c |
| 52-week trading range | \$0.56 – \$1.22 |
| Issued Shares | 933.8M |

CAPITAL STRUCTURE

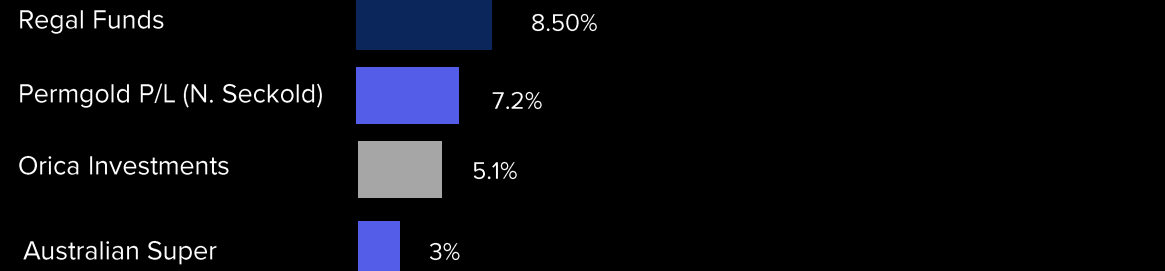
| | |
|-------------------------|-----------------------------|
| Issued Shares | 933.8M |
| Unlisted options (@90c) | 8.8M (expire 30 April 2025) |
| Unlisted options (@90c) | 3M (expire 31 Aug 2025) |
| Market Cap | ~\$915M |
| Est Cash (30/03/2024) | ~\$30M – No Debt |
| Enterprise Value | \$885M |

SHARE PRICE PERFORMANCE – 3 YEARS



SHAREHOLDERS

TOP 20



Thank You

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