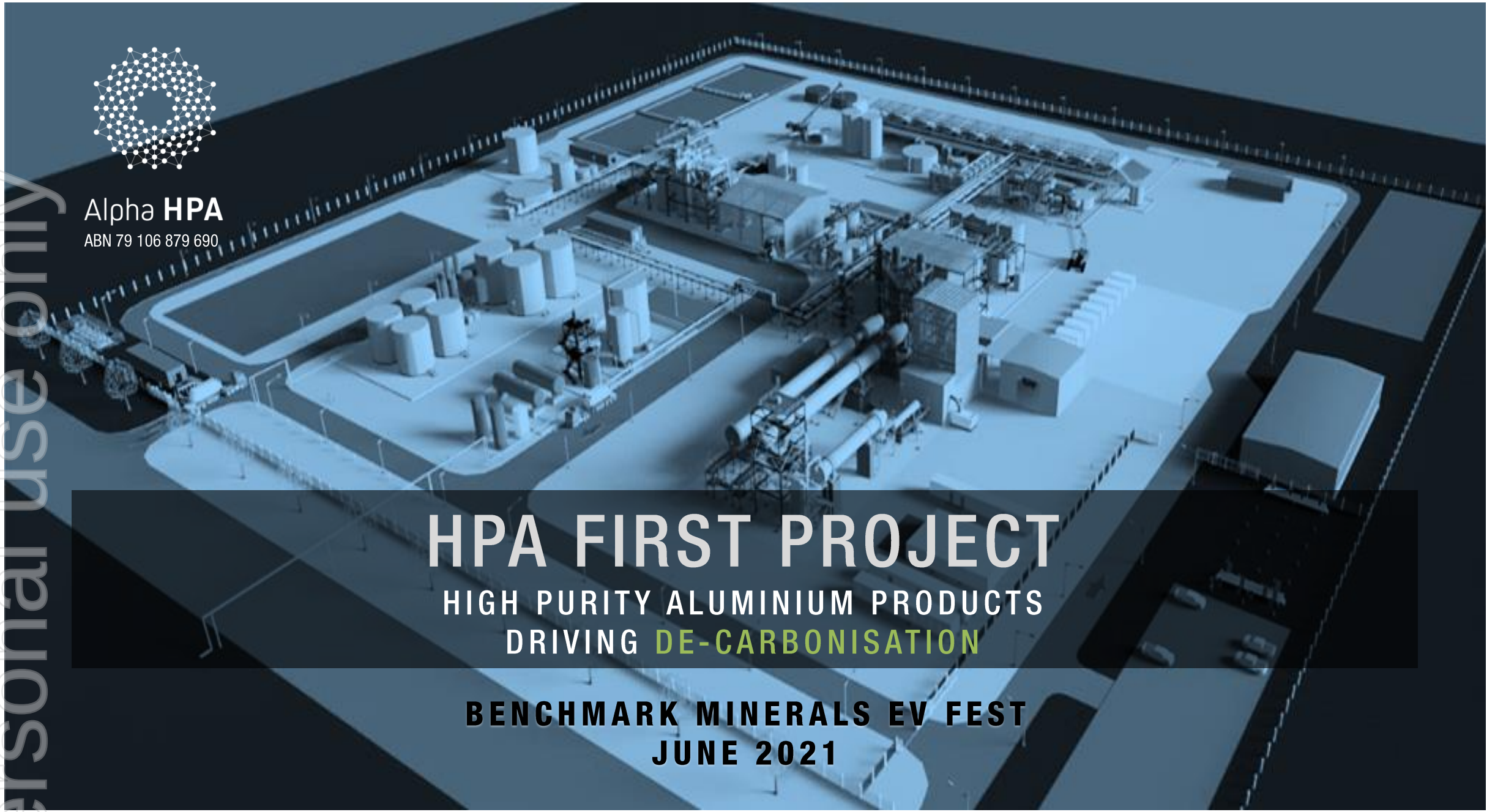

Cautionary Statement

The Definitive Feasibility Study (DFS) referred to in this presentation has been undertaken to assess the technical and financial viability of the HPA First project. The DFS is 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 this DFS will be achieved. To achieve the range of outcomes indicated in the DFS, 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 of the DFS.

Forward Looking Statements

The DFS referred to in this presentation contains certain forward-looking statements with respect to the financial condition, results of operations, and business of the Company and certain plans and objectives of the management of the Company. 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. Investors should consider the forward looking statements contained in this DFS in light of those disclosures.

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Alpha HPA: a brief introduction

- We are a technology/industrial chemical company.

- We offer exposure to the rapidly growing Li-ion battery and LED lighting markets.

- We do this through a suite of <u>ultra-high purity aluminium-based products:</u>

critical raw materials for de-carbonisation

- We can offer these products at disruptive pricing to existing market participants.

- Our proprietary process delivers us this competitive edge (low CapEx/low OpEx, high margins).

- Our “closed loop” process yields a significantly lower carbon footprint than our peer group.

HPA First Project: Status Update

July '19 – Mar '20: HPA First Pilot Plant – +2,000 hrs operation, > 300kg HPA Production

Feb '20: Chemical Counterparty Agreement with Orica – Gladstone Project Location

Mar '20 Definitive Feasibility Study – completed March 2020

Aug '20: Offtake, marketing & financing MOU with Traxys

Sept '20: 2 x High-purity Li-B Pre-Cursor manufacture confirmed

Feb '21: Major Project Permitting Approval (MCU)

Feb '21: HPA Pellets qualifies for sapphire glass manufacture

Apr '21: MOU with Saint Gobain – all products

May '21: HPA powder qualifies for LED phosphor manufacture

May '21: MOU with CleanCo QLD to provide up to 100% Renewable Energy

May '21: Lenders Engineers (ITE) appointed – Final bank technical DD

Current: Global Market Outreach >40 end-user test product shipped, multiple products under Devt.

June '21: ACCELERATING PRODUCTION OF 5N AI-PRECURSORS - PPF

Pending: Orica Definitive Agreements

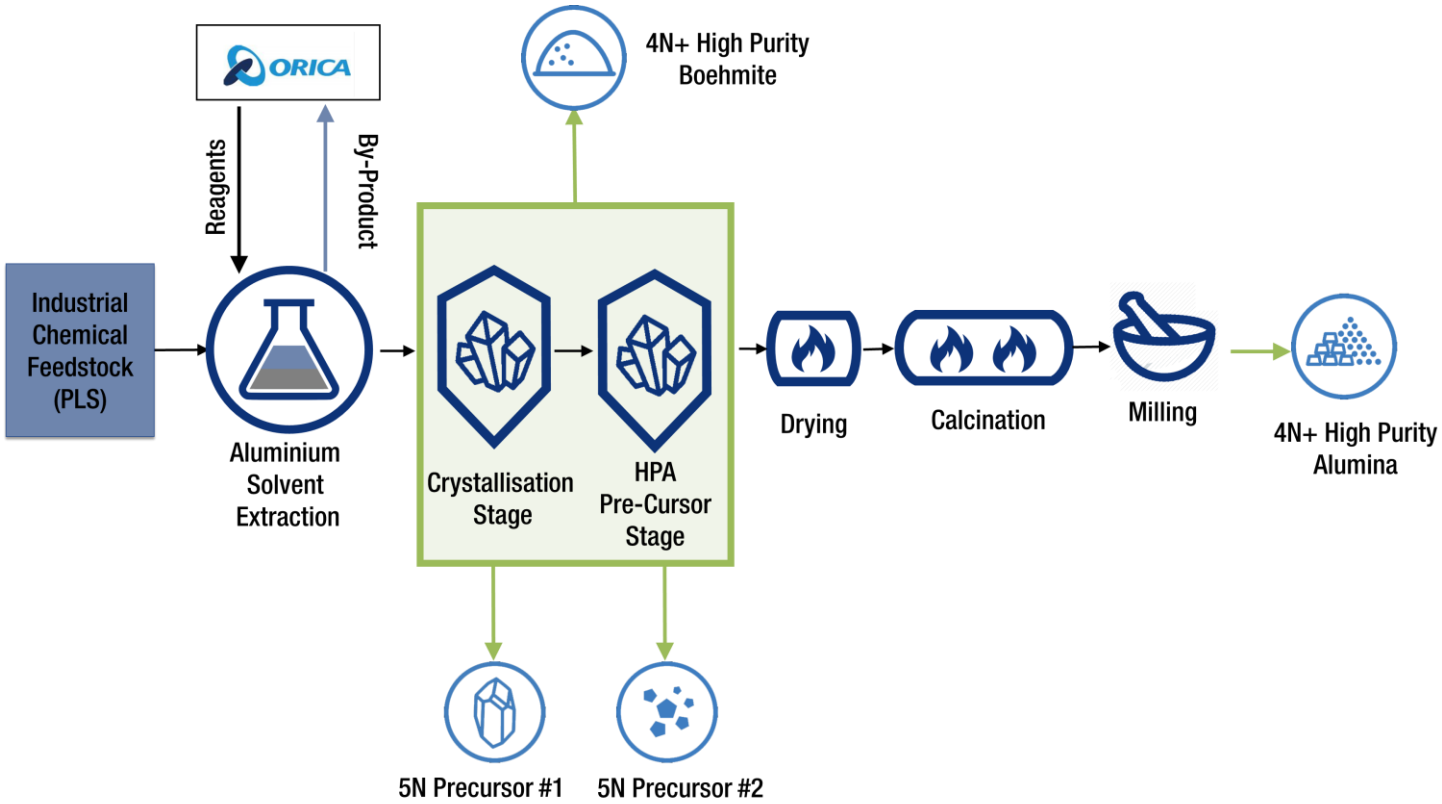
Pending: Large Volume Product Offtakes

Pending: Final Product Mix and DFS Update

Pending: Project Financing and FID

Process Flow Sheet: Low Cost & Flexible

- **Low operational risks:** Front-end atmospheric temperatures and pressures
- **Simplicity:** Ability to recycle reagents as by-products for sale
- **Purity:** Pilot Plant purity reaching 99.9985% HPA purity and +5N purity for Al-precursors
- **Flexibility:** High Purity aluminium stream can be diverted into a full range of products

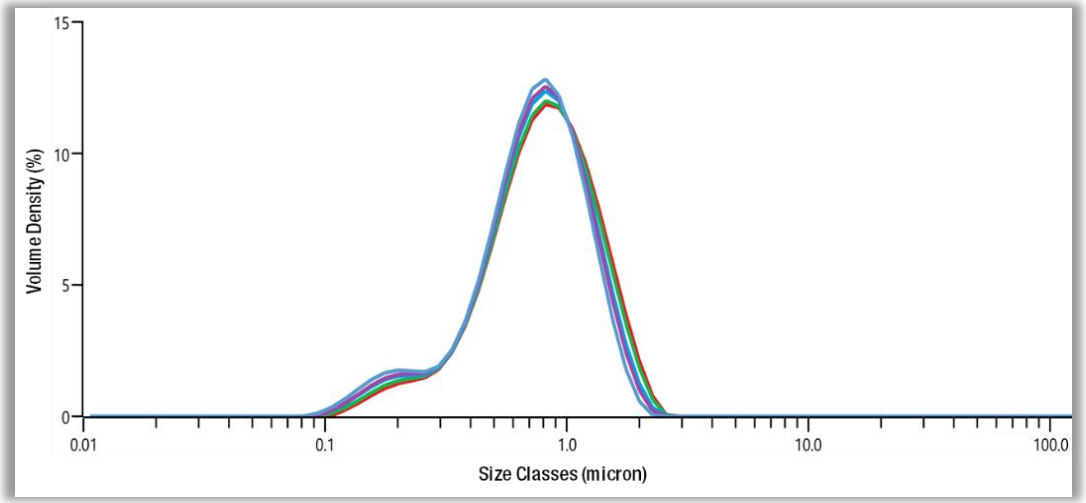


Process Innovation: Ultra fine, unmilled aluminas

- Alpha HPA's process can produce ultrafine HPA powders without milling, preserving purity and morphology

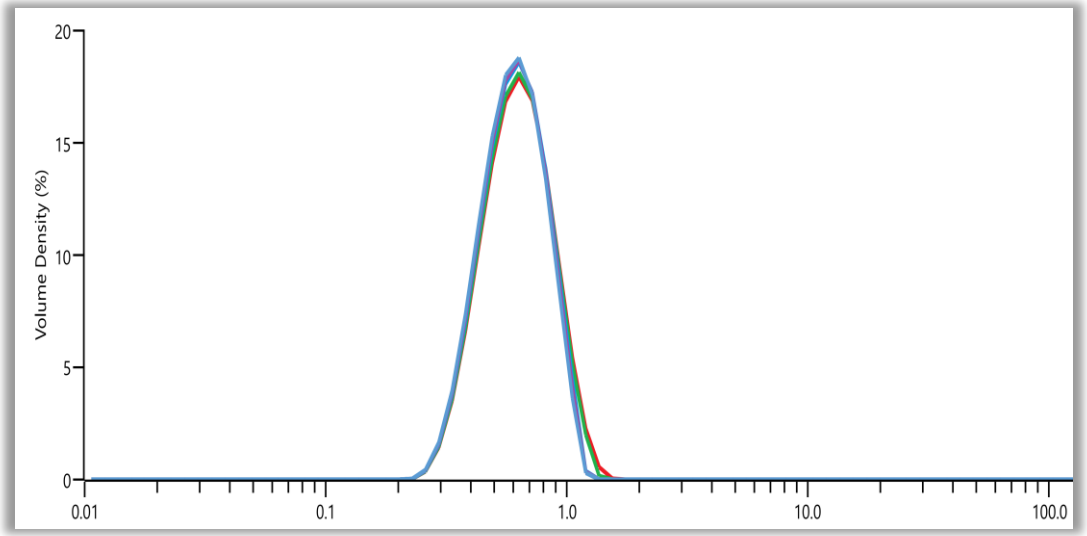
0.1 – 2.1 micron HPA powders

Ideal for layer coating



0.1 – 1.1 micron HPA powders

Ideal for cathode composites



First Project: Ultra High-Purity Aluminium Product Offering

Our Ultra HPA Products

Ultra High Purity Alumina Powder & Tablets

>99.995% (4N5) purity HPA engineered to suit customers specifications such as bespoke particle sized powders, sintered and un-sintered granules and sintered custom ingots.

Ultra Boehmite

A bespoke engineered >99.995% (4N5) purity Boehmite to suit specific customer requirements, ideal for LiB separator coatings and as a precursor for speciality applications.

Ultra Aluminium Nitrate

Our >99.999% (5N) purity aluminium nitrate is the purest product available at commercial scale. Key applications in particle coating, LED, aluminate scintillators and other specialty products.

Ultra Aluminium Sulfate

Our >99.999% (5N) aluminium sulfate is the purest product available at commercial scale. A premium product for synthesis of aluminium cathode active materials (CAM) with NCA, NCMA and NFA.

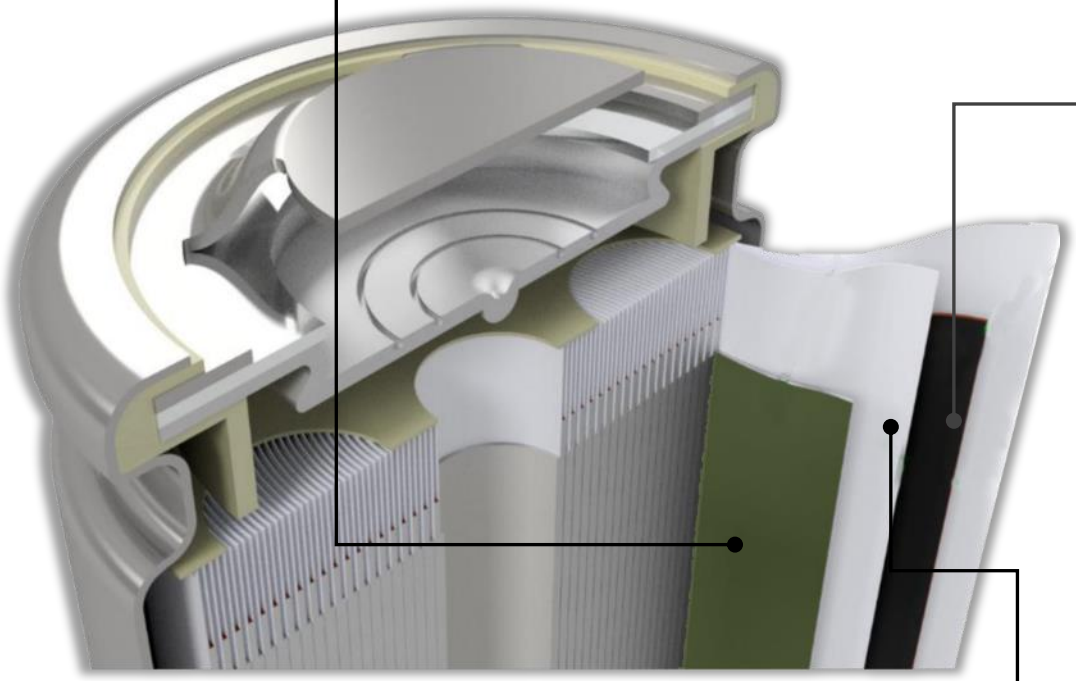
Direct Product Enquiries: https://alphahpa.com.au/our-product/

HPA First Project: Product applications inside the lithium-ion cell

Alpha HPA

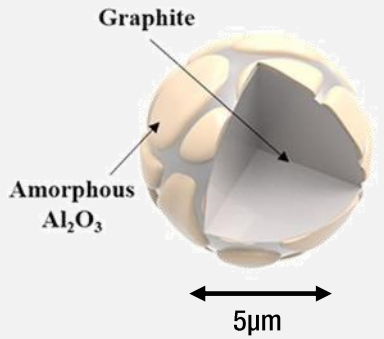
CATHODE

APPLICATION	HPA FIRST PRODUCTS
Alumina particle coating of cathode active materials	5N Purity Al-Nitrate
Co-precipitation of NCA and NCMA cathode active materials	5N Purity Al-Sulfate



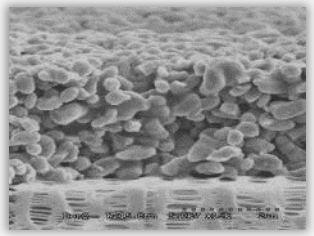
ANODE

APPLICATION	HPA FIRST PRODUCT
Alumina particle coating of graphite anode spheroids	5N Purity Al-Nitrate

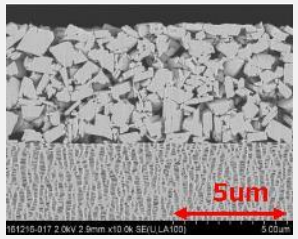


SEPARATOR

HPA Coated Separator



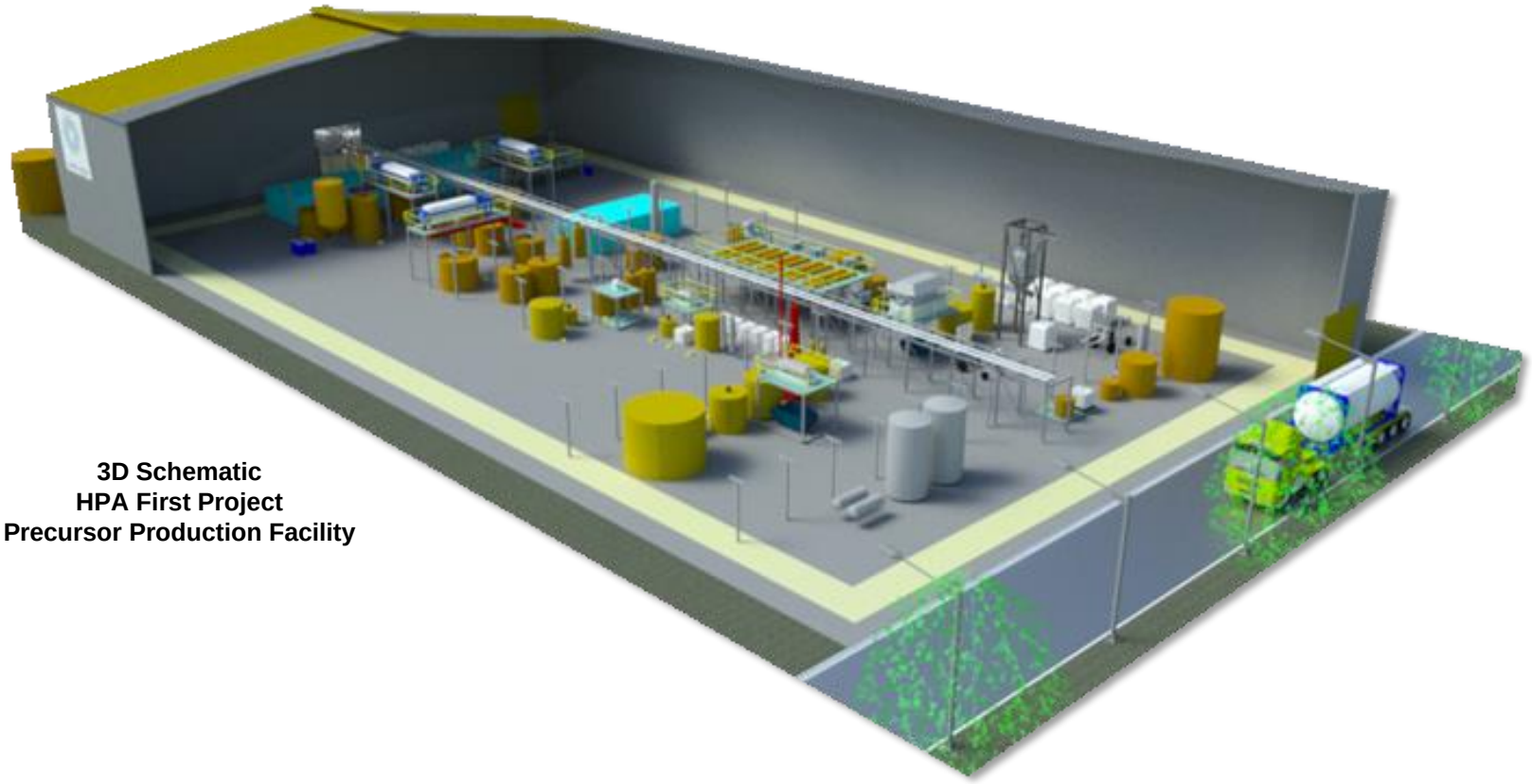
Boehmite Coated Separator



APPLICATION	HPA FIRST PRODUCT
Alumina or boehmite coating of ceramic coated separators (CCS)	High-Purity Alumina Al_2O_3 High-Purity Boehmite Al-O-OH

Accelerating Production: Precursor Production Facility (PPF)

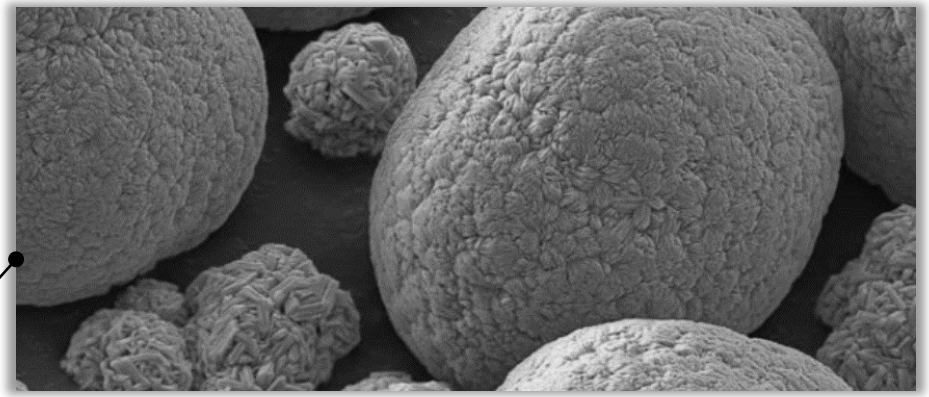
- PPF designed to fast-track commercial volumes of 5N Al-precursors at ~200 tonnes per annum of 5N Al-Sulfate & Al-Nitrates
- Also able to deliver bespoke volumes of HPA and boehmite (1-5 tonnes per annum)
- To be constructed within Alpha's existing HPA First Project site at Gladstone
- Fully vendor quoted CapEx ~A$27.6M
- Targeting August 2022 Production



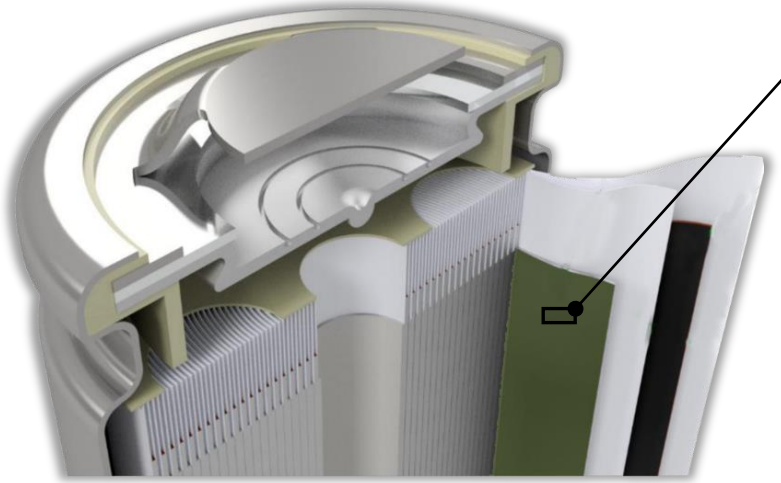
3D Schematic
HPA First Project
Precursor Production Facility

5N Al-Sulfate (Al-Precursor #2): Key Markets & Applications

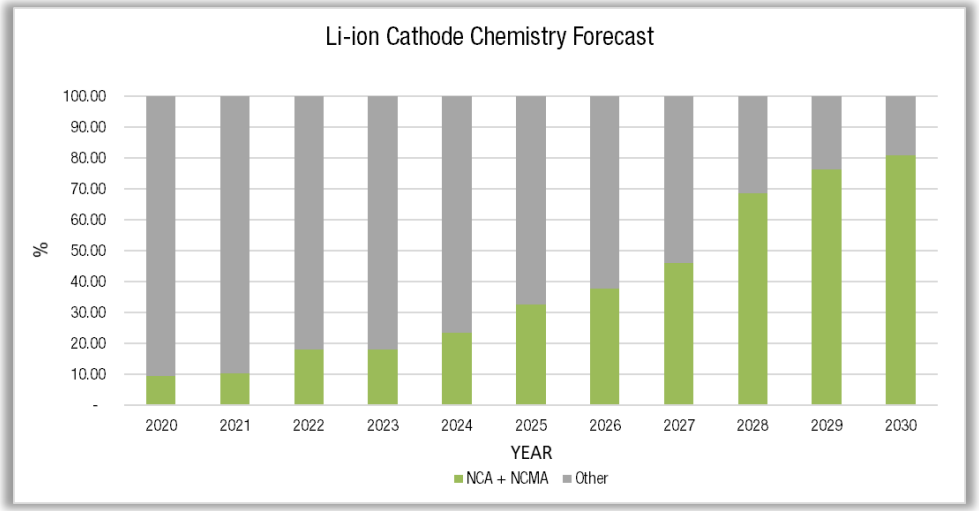
- For synthesis of aluminium-bearing, lithium-ion battery cathode active materials (CAM)
- Used in aluminium bearing cathode chemistries, ie:
  - NCA (eg: Tesla)
  - NCMA (eg: GM)
- NCA + NCMA chemistries forecast ~80% of all Li-B cathode by 2030 (UBS)
- Alpha HPA's precursor considered the highest purity globally



SEM of NCA Cathode Active Materials (CAM)



Lithium-ion battery breakaway



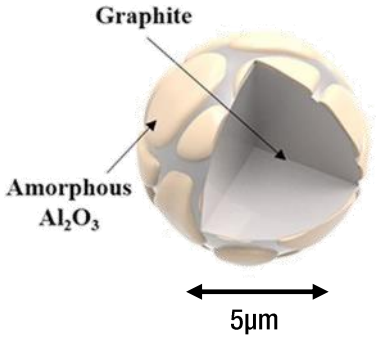
NCA + NCMA Cathode Chemistries ~80% by 2030
Source: UBS – Dec 2020

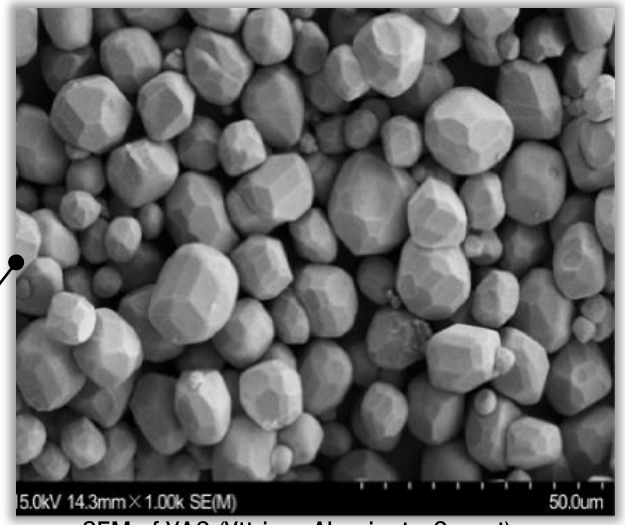
5N Al-Nitrate (Precursor #1): Key Markets & Applications

Alpha HPA

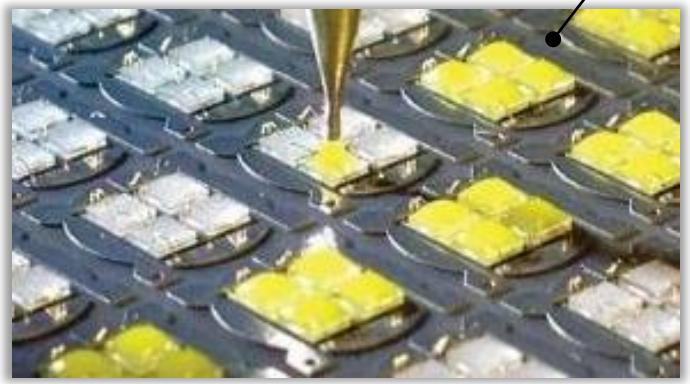
Multiple applications including:

- Particle coatings: - including Li-B electrode particles
- LED-phosphor synthesis – focus on mini & micro LEDS's
- Scintillators – optical laser crystals (YAG)
- **Other applications including**
  - Photonics/Optics
  - Dielectrics
  - Photovoltaics
  - Nanomaterials
  - Functional coatings
- End-user recognition as the highest purity Al-nitrate available

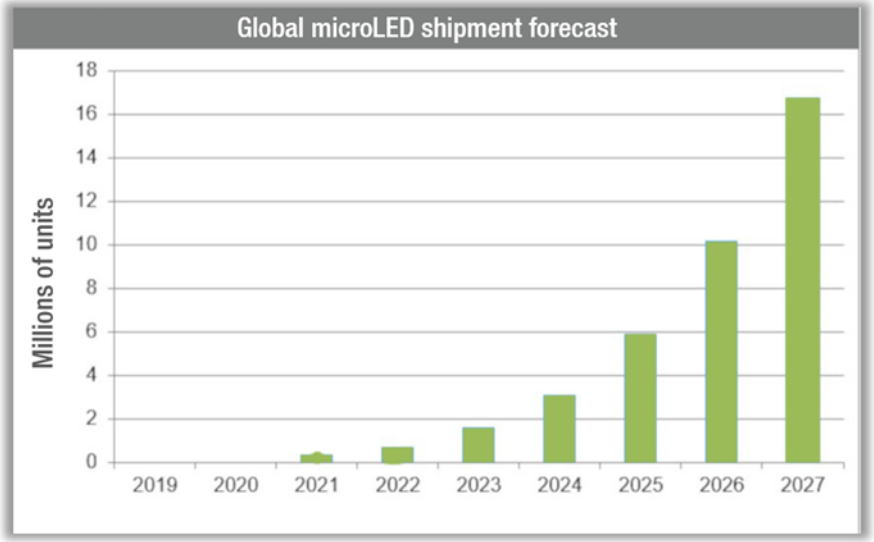




SEM of YAG (Yttrium-Aluminate-Garnet)



Addition of YAG phosphors to LED lighting circuits



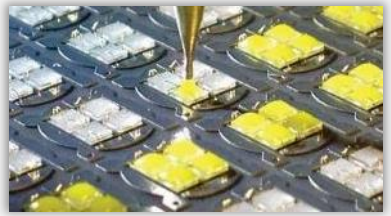
Graphic: Forecast growth in micro-LEDs to 2027
Source (www.microled-info.com)

HPA First Project: Product applications inside LED lights

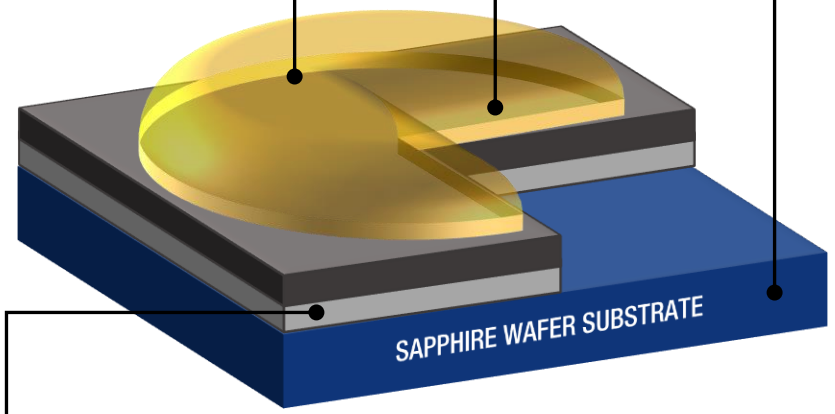
Alpha HPA

ALUMINATE PHOSPHORS

APPLICATION	HPA FIRST PRODUCT
Synthesis of Aluminate (YAG) Phosphors for white LEDS	HPA + 5N Al-Nitrate



Phosphor cap



Ga-N circuit & Active Layers

LED CHIP ARCHITECTURE

SAPPHIRE SUBSTRATE

APPLICATION	HPA FIRST PRODUCT
Sapphire Glass wafer substrate	High-purity alumina pellets and powder

ALOX Technology: Successful sapphire glass manufacture

- High quality, single crystal sapphire boule grown by premium sapphire glass manufacturer ALOX Technology
- Alpha HPA now in discussions with ALOX on commercial supply

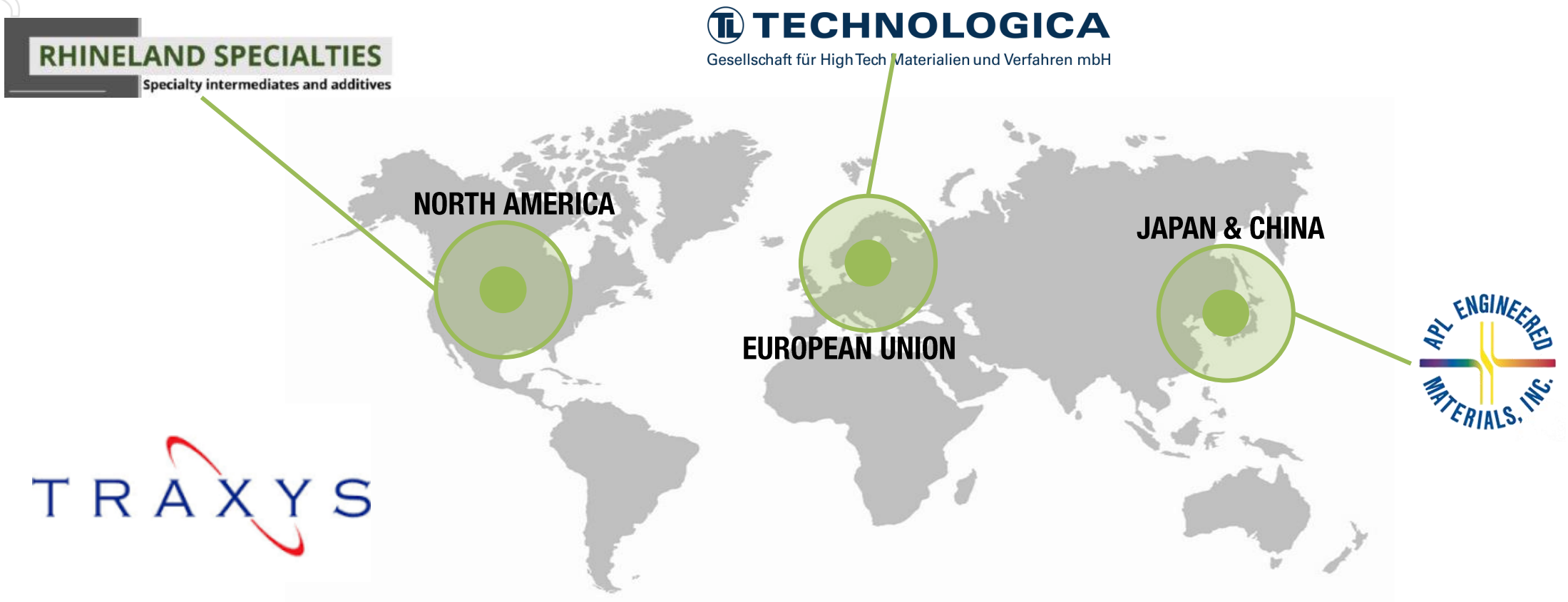
Alpha HPA's sintered pellets

Crucible stacking

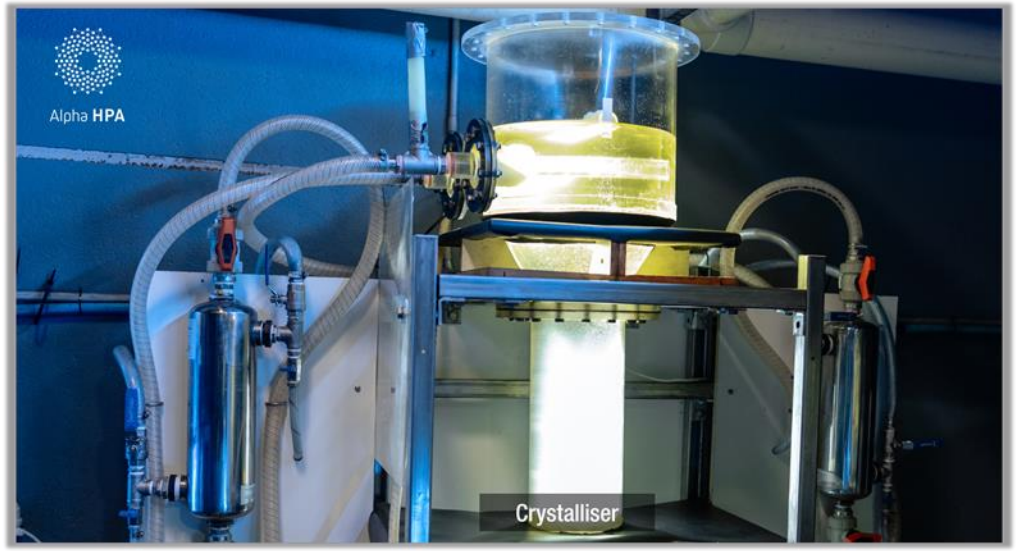
Single crystal boule

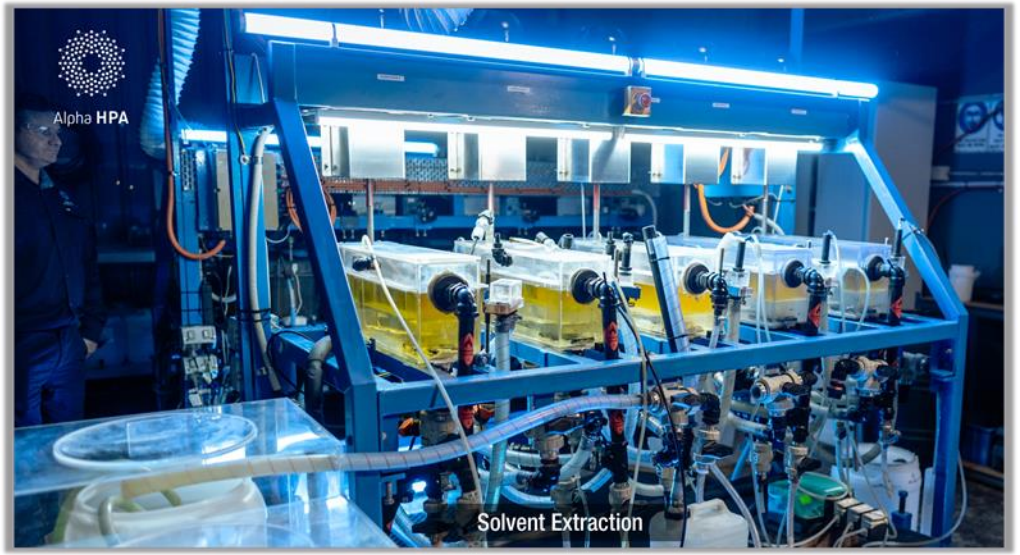
HPA First Project: Global Distribution Network

- Through a spectrum of MOU's. Alpha HPA has built a global marketing network for precursor sales into battery and speciality markets in key technology jurisdictions



HPA First Project: Brisbane Demonstration Plant





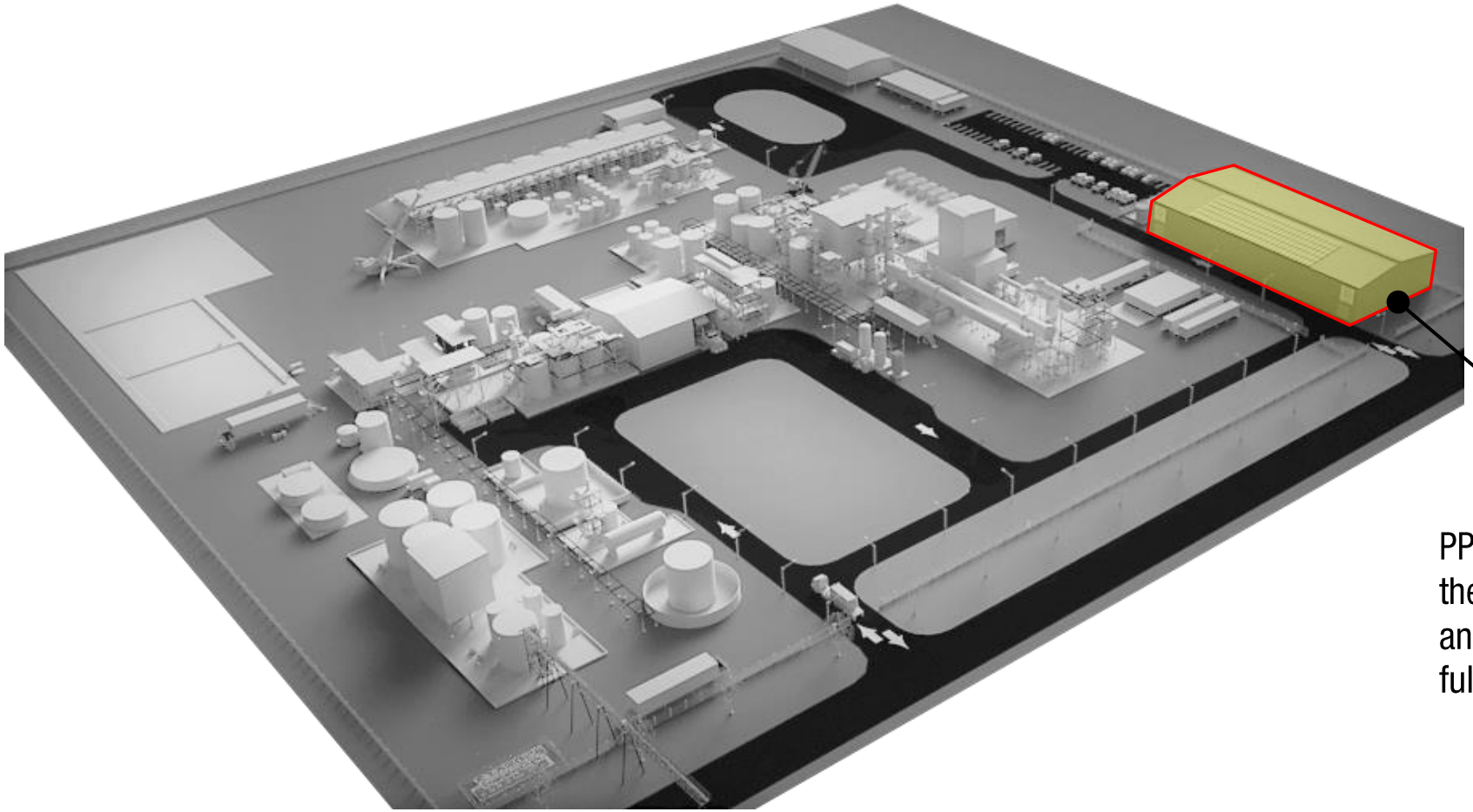
Project Location

- The Orica MOU has been negotiated on the basis of reagents supply and by-product offtake delivered from/to Orica's facility in Yarwun, QLD, within the Gladstone State Development Area ('GSDA').
- On this basis, Alpha HPA has executed a land contract with Economic Development Queensland ('EDQ') on a suitable 10ha land parcel within the GSDA, being Lot 12/SP239343.
- **MCU Approval received February 2021 - MCU modification and EA expected July/August 2021**

HPA First Project Site – Gladstone State Development Area, North Queensland

Project Layout: PPF and Full Scale Facility

- The PPF to be constructed within the HPA First Project Footprint
- To be incorporated into the Full Scale HPA First Plant as a dedicated unit for 5N Al-Precursor #2.

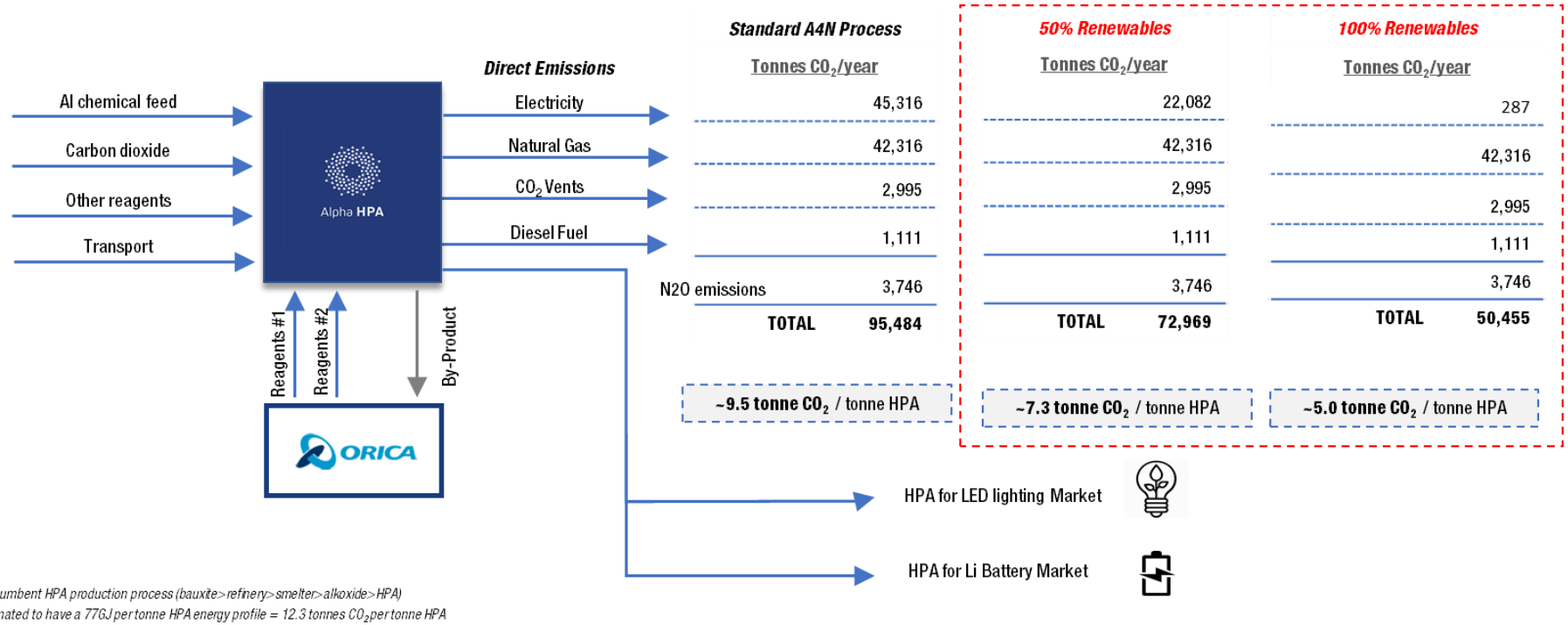


PPF to be constructed within the HPA First Project footprint, and then incorporated into the full-scale commercial plant.

HPA First Project: Carbon Footprint

- Alpha HPA has a MOU with CleanCo (QLQ) for up to 100% renewable energy supply
- 100% renewable energy supply represents a 59% reduction in Co2 emissions vs the incumbent (alkoxide) HPA process

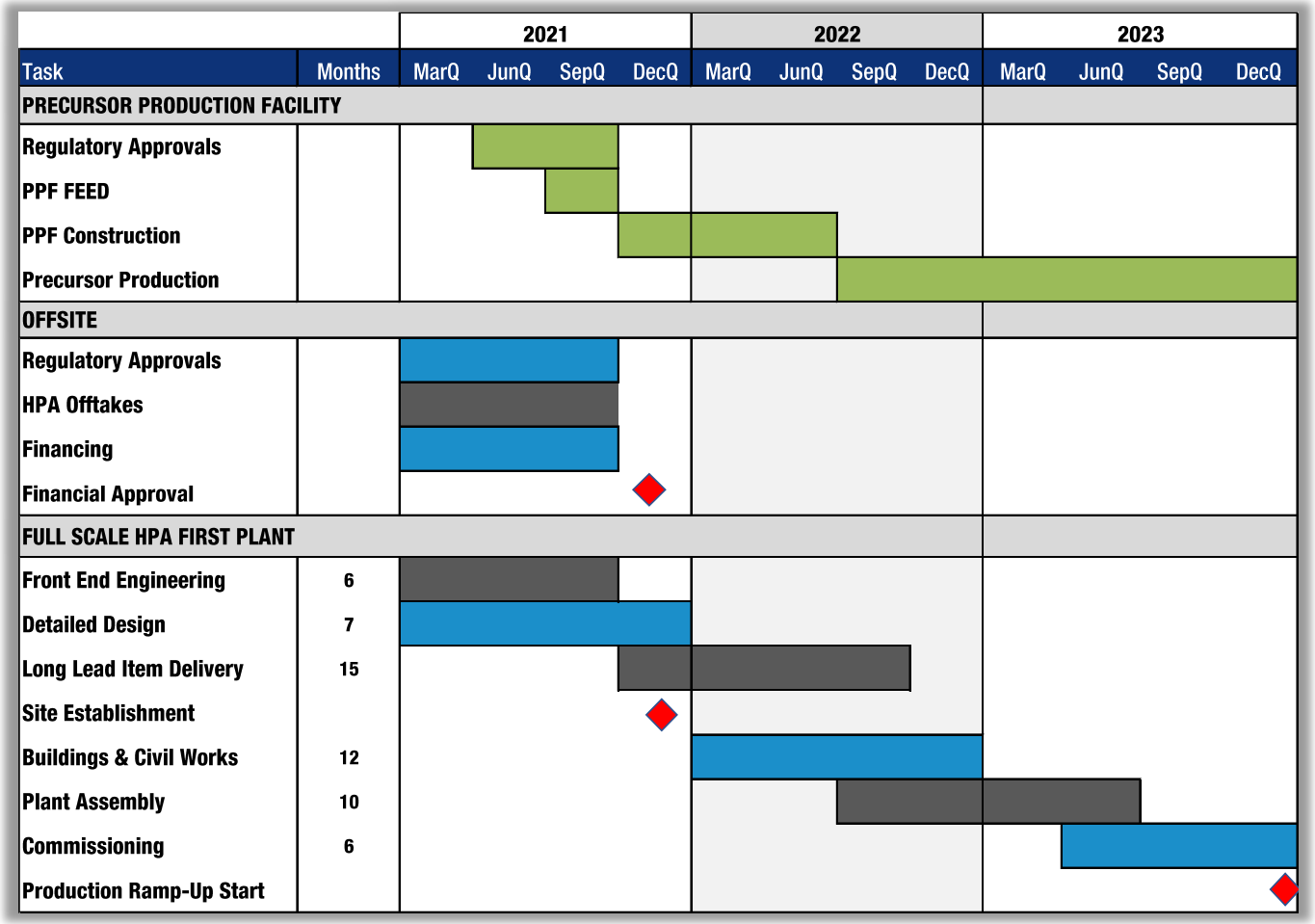
Item	Tonnes CO_2 per tonne HPA	
Incumbent alkoxide process	12.44	
		CO_2 Reduction
HPA First Project - process baseline	9.5	22.4%
HPA First Project - 50% renewable electricity purchase	7.3	41%
HPA First Project - 100% renewable electricity purchase	5.04	59%



***Incumbent HPA production process (bauxite>refinery>smelter>alkoxide>HPA) estimated to have a 77GJ per tonne HPA energy profile = 12.3 tonnes CO_2 per tonne HPA*

Project Schedule: PPF Accelerates Production

- Inclusion of the PPF accelerates production by >18 months
- Targeting full commercial scale production by late CY2023



Board & Management

Norman Seckold
Chairman

40+ years in the full time management of natural resource companies. Past Chairman and Director of listed companies including Bolnisi Gold NL, Timberline Minerals Inc., Perseverance Corporation Limited, Valdora Minerals NL, Palmarejo Silver and Gold Corp.
Currently Chairman of Santana Minerals Limited and Sky Metals Limited and Deputy Chairman of Nickel Mines Limited.

Rimas Kairaitis
Managing Director

20+ years experience in minerals exploration and project development in gold, base metals and industrial minerals. Led the geological field teams to the discovery of the Tomingley and McPhillamy's gold deposits in NSW and steered the Hera gold-lead-zinc Project from discovery through commercial production. Previously founding Managing Director and CEO of ASX-listed Aurelia Metals. Currently a Director of Sky Metals Ltd.

Peter Nightingale
Director and CFO

30+ years as a Director or Company Secretary for a range of resource companies including Pangea Resources Limited, Timberline Minerals Inc., Perseverance Corporation Limited, Valdora Minerals NL, Mogul Mining NL and Bolnisi Gold NL.
Currently a Director of Nickel Mines Limited and Prospech Limited.

Justin Werner
Non-Exec. Director

20+ years' mining and management experience. Previously consulted to a number of blue chip mining companies including BHP, Rio Tinto and Freeport McMoran.

Successful track record of mine discovery and development.
Currently Managing Director of Nickel Mines Limited.

Tony Sgro
Non-Exec. Director

Chemical Engineer with 45+ years' senior management experience in the supply of specialised equipment to the process industries with an emphasis on mining and oil & gas.

Co-founder, Director and General Manager of Kelair Pumps for 36 years.

Cameron Peacock
Non-Exec. Director

Mr Peacock is an finance and equity market professional. Over the last 20+ years he has worked in numerous finance focused roles across banking, private equity and equity capital markets. Cameron also covers the Investor Relations and Business Development functions with Alpha HPA and Nickel Mines Ltd.

Rob Williamson
C.O.O.

Rob is a mechanical engineer and joins the Company having recently rebuilt and started up a new 155ktpa SX zinc refinery in the USA in the capacity of Vice President and GM of the facility and ideally placed to bring 20 years of experience in large facility operations to Alpha HPA. Rob is based in Brisbane and responsible for building a Project delivery team for our HPA project in Gladstone.

Corporate Snapshot

Alpha HPA

TRADING INFORMATION

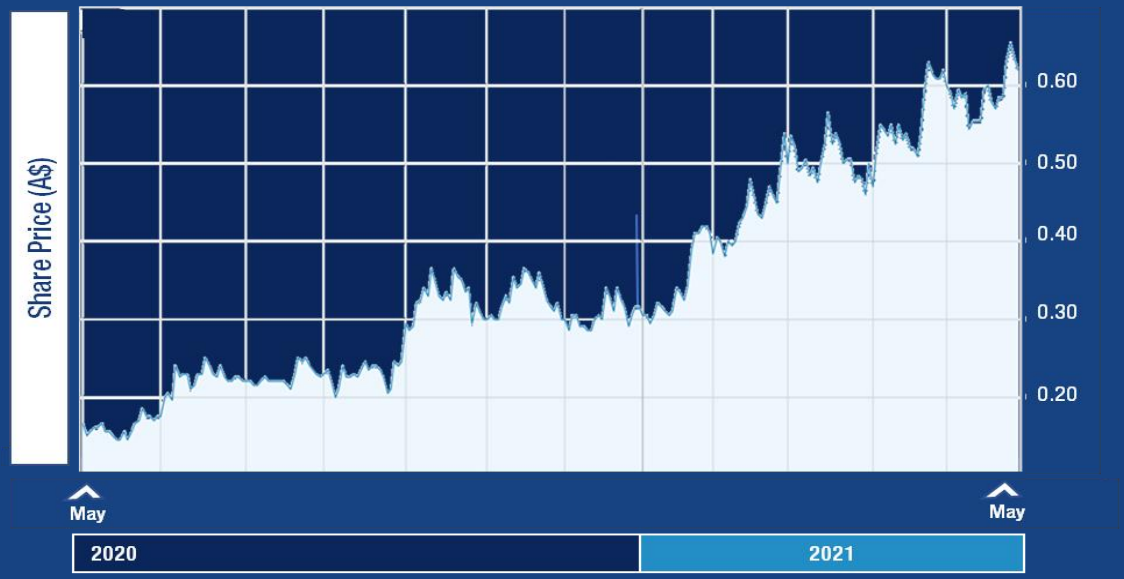
ASX CODE	A4N
Share Price (28-05-2021)	~62c
52-week trading range	14c – 67.5c
Issued Shares	692.4M

CAPITAL STRUCTURE

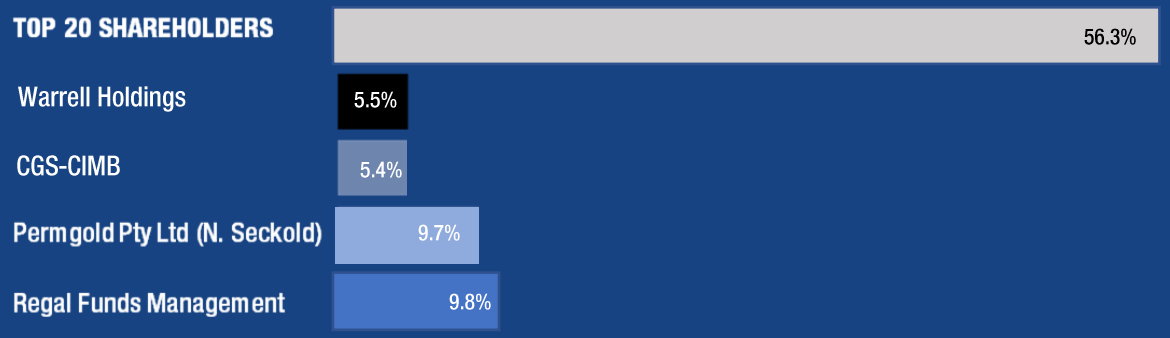
Issued Shares	692.4M
Unlisted options (@20c)	5.0M (expire 30 June 2021)
Unlisted options (@20c)*	10.0M (expire 31 July 2022)
Unlisted options (@30c)	39.0M (expire 31 July 2022)
Unlisted options (@35c)*	5.0M (expire 31 July 2023)
Unlisted options (@35c)	26.0M (expire 31 July 2023)
Market Cap	$429M
Est Cash (28-05-2021)	~$3M
Enterprise Value	$426M

* Licensor Options

SHARE PRICE PERFORMANCE – 12 MONTHS



SHAREHOLDERS



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