



AGM PRESENTATION



Alpha **HPA**

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

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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WE SUPPLY E-MOBILITY

The next major driver of de-carbonisation



Gasoline Only



Average Emissions

380

Grams of CO₂e per mile

Plug-in Hybrid Electric



209

Grams of CO₂e per mile

Battery Electric



154

Grams of CO₂e per mile

Source: Inside EV's (www.insideevs.com)

CO₂ Emissions

50%



WE SUPPLY

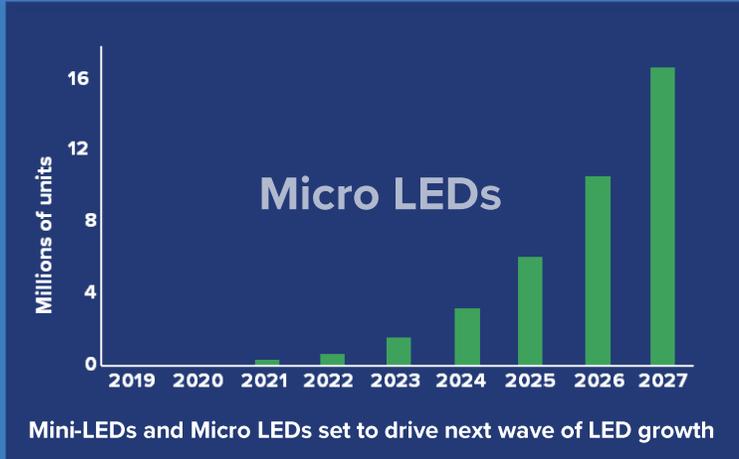
- ✓ HPA for separators
- ✓ Al-precursors for cathode
- ✓ Al-precursors for anode



Alpha HPA

WE SUPPLY LED-LIGHTING

The current technology driver of de-carbonisation



LEDs reduced CO₂e by an est. 570m tons in 2017

Reducing new power stations by 1,250

IN 2017, THE USE OF LEDS TO ILLUMINATE BUILDINGS AND OUTDOOR SPACES REDUCED CO₂ EMISSIONS BY NEARLY

570 MILLION TONNES

75%

PROJECTED ENERGY SAVINGS IN US LIGHT ENERGY CONSUMPTION BY 2035

LED lights are 50-70% more efficient than incandescent

A COMPLETE SWITCH TO LED LIGHTING WORLD WIDE, WOULD PREVENT 1,400,000,000 TONNES OF CO₂ EMISSIONS

ANNUAL CO₂ EMISSIONS SAVINGS FROM GLOBAL LED ADOPTION BY 2035

EQUIVALENT TO 200 MILLION CARS

OR 200 NEW COAL FIRED POWER STATIONS

WE SUPPLY

- HPA for LED sapphire substrates
- HPA for LED phosphors
- Al-precursors for LED phosphors

Alpha HPA

2021: Major Steps Forward

- Multi-faceted MOU with Global Materials Company Saint Gobain
- Development of world leading purity aluminum precursors
- Multiple Products qualified for:
 - Sapphire Glass Production – for LED's and Optics
 - LED Phosphor Production
 - Lithium-ion battery separator coatings
 - Lithium-ion battery electrode coatings
- MOU with CleanCo to supply 100% Renewable Energy
- Definitive Binding Agreements with Orica Australia
- QLD State Government Project Approval
- Launch of the Stage 1 – Precursor Production Facility (PPF)
- Successful \$50M capital raising to fund PPF
- Strategic Assessment Approval for NAIF lending
- Extended global outreach to over 50 potential customers with 8 supply contracts submitted
- Project site secured



RioTinto



HPA First Project Site
Gladstone State Development Area,
North Queensland

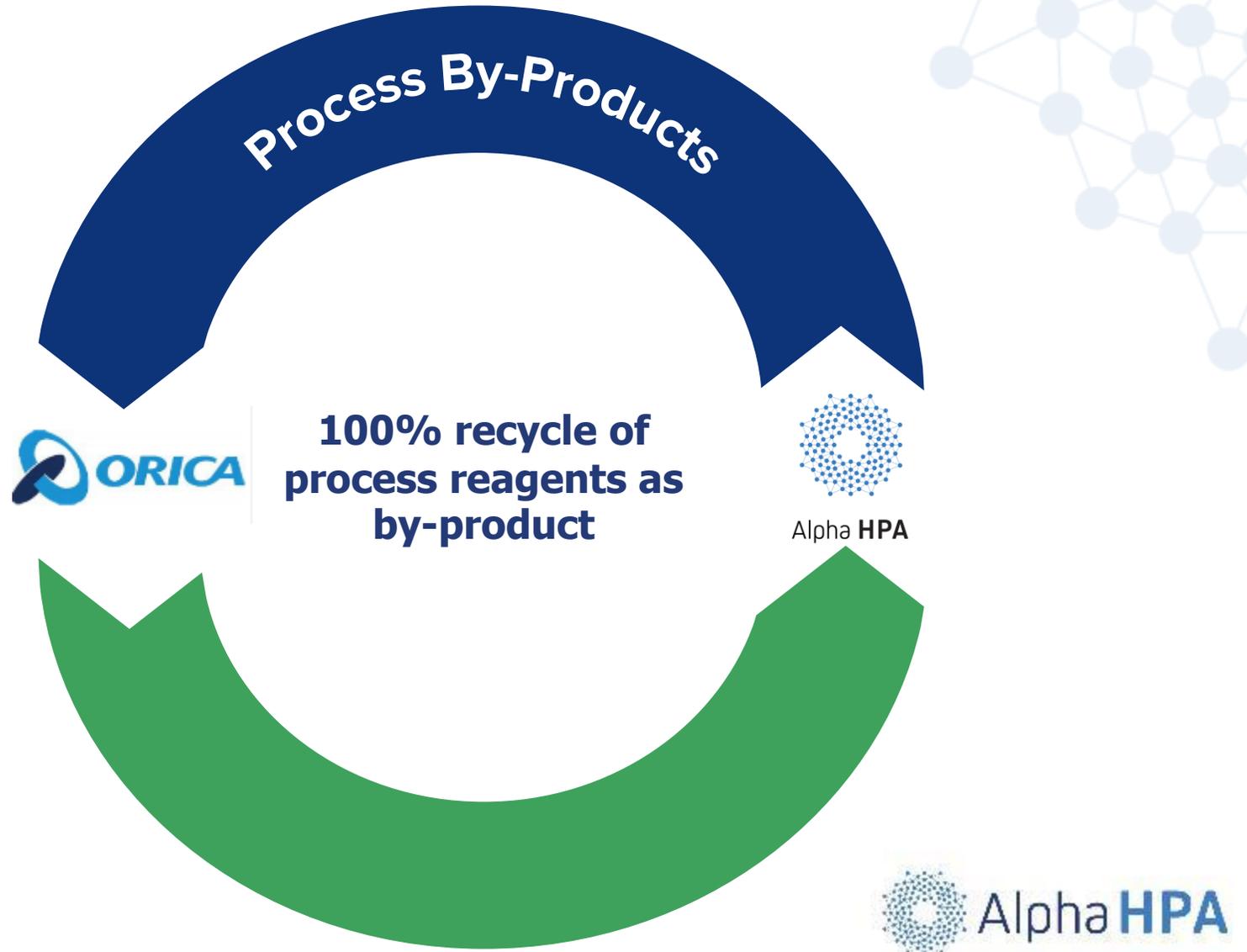
- 10ha project site secured
- Adjacent to Orica Australia to allow for Project Interface
- Term Sheet with Rio Tinto for feed supply

HPA First Project: Location



Alpha HPA & Orica: Project Synergy

- Project partnership with ASX 100 Company Orica (ASX:ORI)
- Binding agreements in place
- Project integration with 100% recycle of process reagents as by-product.

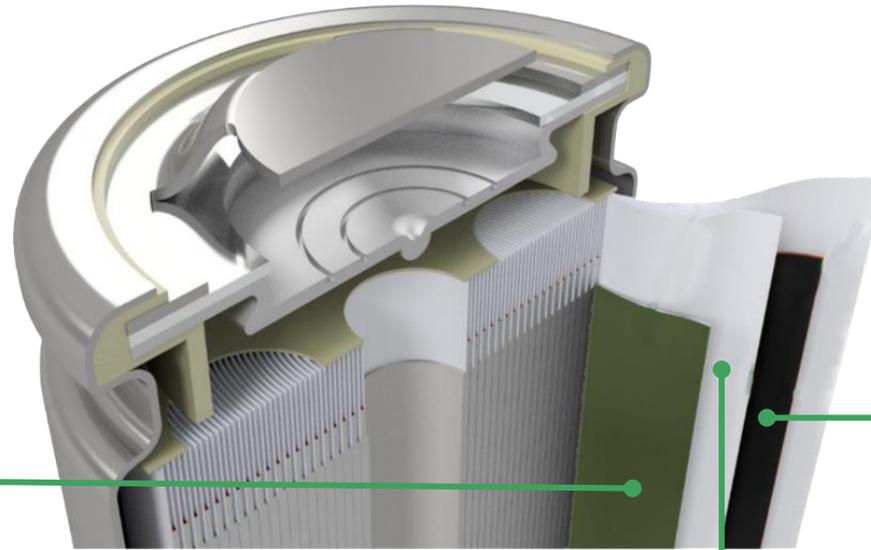


Our products for the lithium-ion cell

CATHODE

Cathode pre-cursors for
NCA & NCMA and
alumina coating

5N Al-Nitrate
+
5N Al-Sulfate



ANODE

Pre-cursors for coating
graphite and silicon
anode

5N Al-Nitrate

SEPARATOR

Ceramic coating for
thermal management

HPA
&
**High Purity
Boehmite**



Our products for LED lights

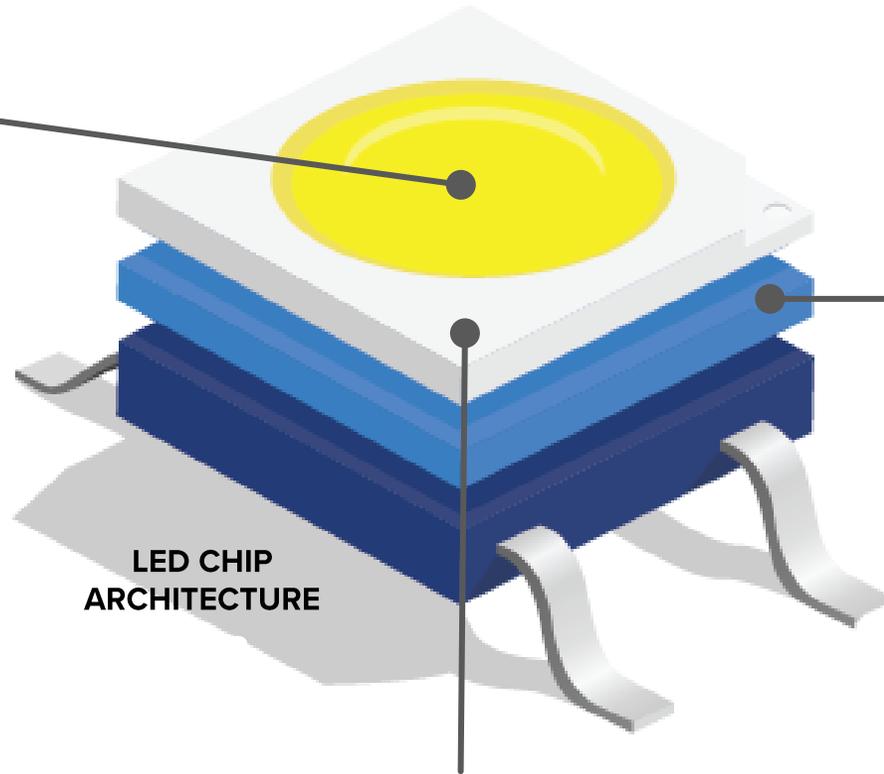
LED PHOSPHORS

Synthesis of Aluminate (YAG) Phosphors for white LEDs

HPA
+
5N Al-Nitrate



Addition of YAG phosphors to LED lighting circuits



Ga-N circuit & Active Layers

SAPPHIRE GLASS WAFERS

Sapphire crystal growth cut to sapphire wafer

HPA Pellets

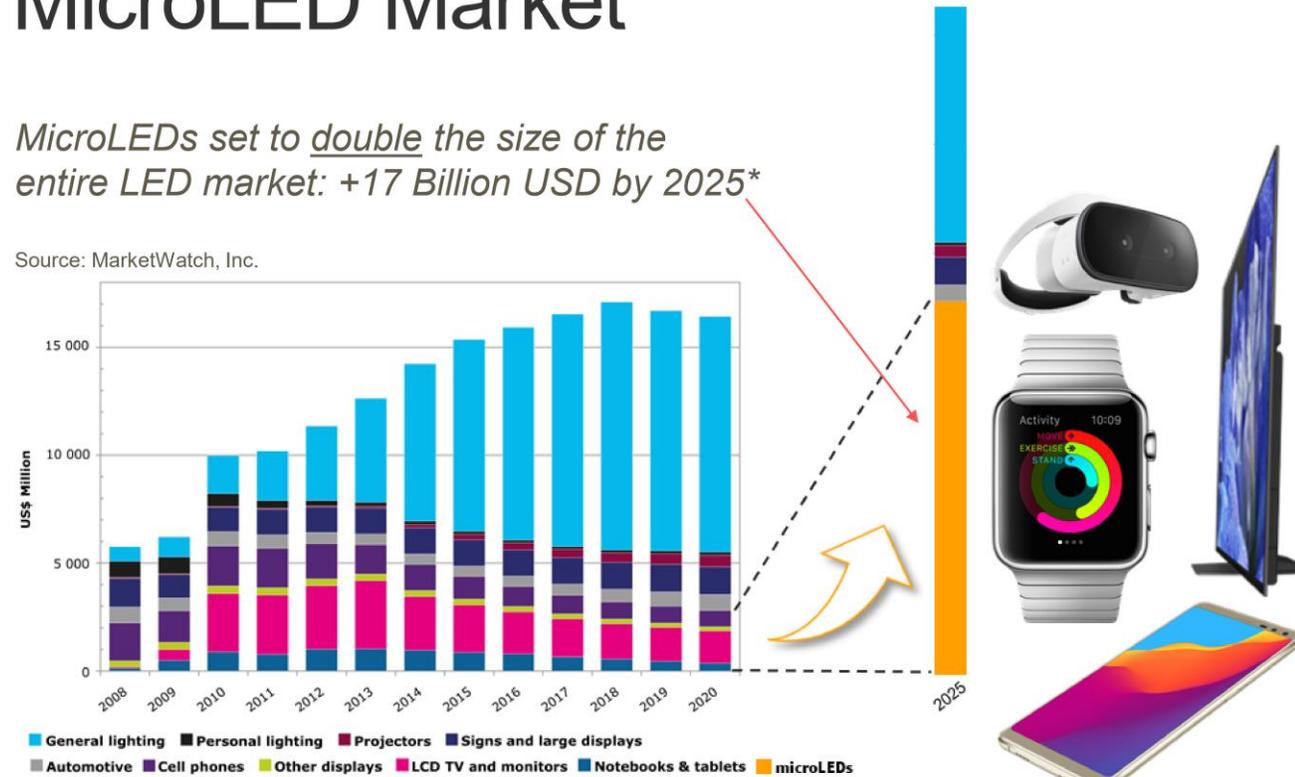
5N Aluminium-Nitrate: Micro-LED's

- Adoption of micro-LED's has the potential to double existing LED market
- Micro LEDs's require nano-size phosphors
- Nano-size phosphors increasingly require 'wet process' synthesis >> using Al-nitrate

MicroLED Market

MicroLEDs set to double the size of the entire LED market: +17 Billion USD by 2025*

Source: MarketWatch, Inc.



Apple LuxVue (Acquired)

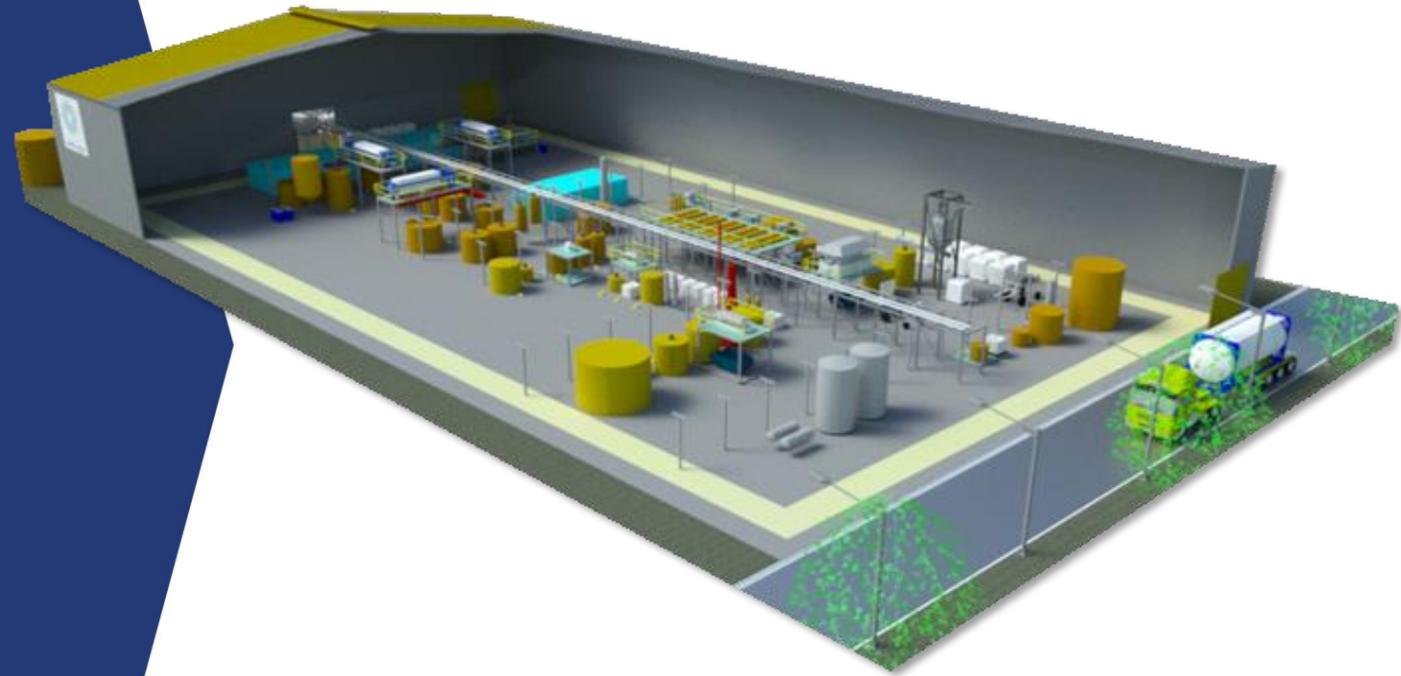
Facebook mLED InfiLED Plessey (Acquired)

Intel Aledia Capital (Equity Invest.)

Google g1o (Equity Invest.)

Near term production: Precursor Production Facility (PPF)

- **Fully funded PPF construction underway** to fast-track production of 5N Al-precursors at ~200 tpa
- Also delivering 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
- **Construction Commenced**
- Targeting August 2022 Production



3D Schematic
HPA First Project
Precursor Production Facility

Stage 1: Precursor Production Facility (PPF)

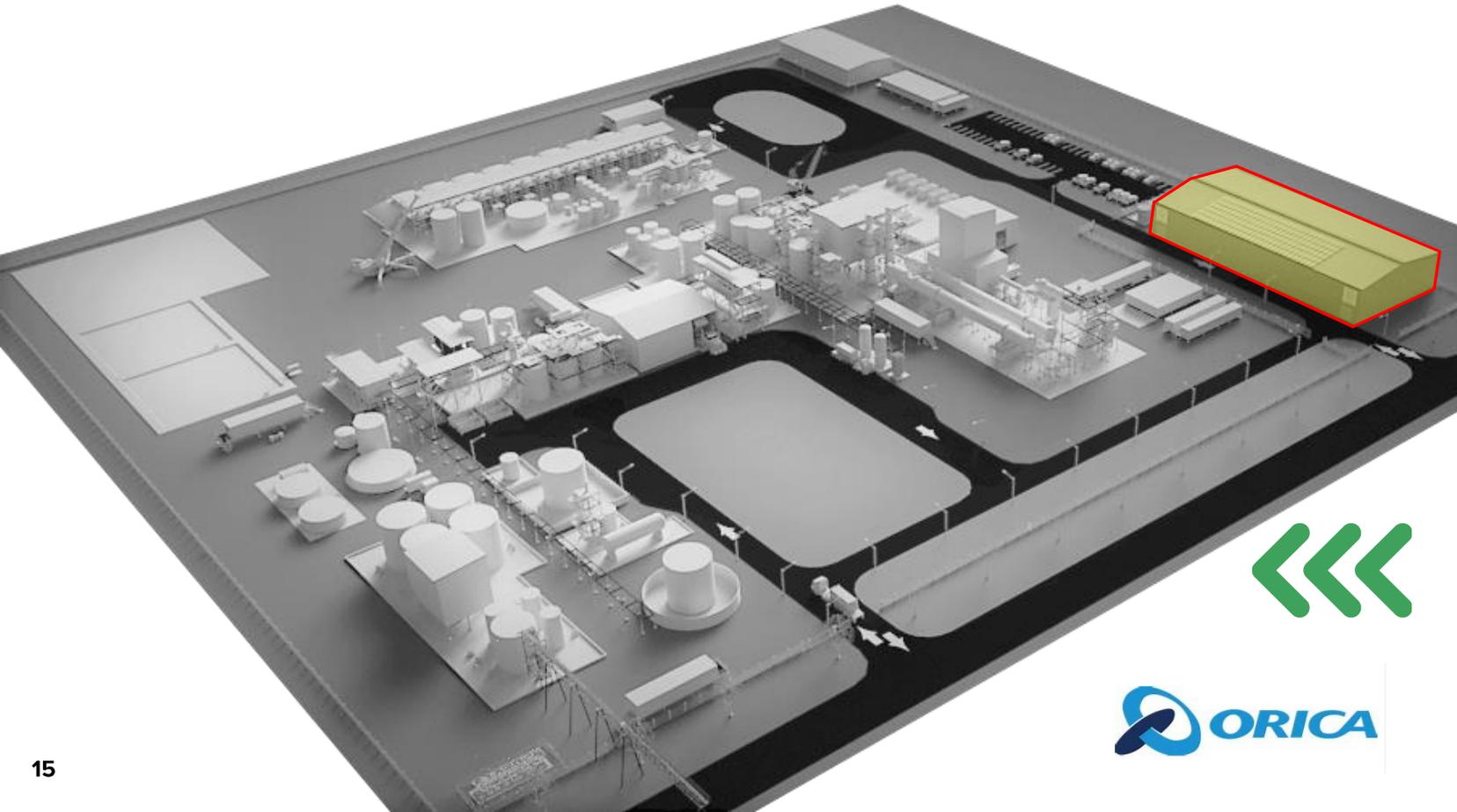


PPF: September 2022



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-Sulfate.
- alphahpa.com.au/our-projects



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



Orica to supply reagents and offtake by-product for both the PPF and the full-scale facility



HPA First Project: Brisbane Plant >>>



Crystalliser



Pre-Cursor Room



Pelleting Room

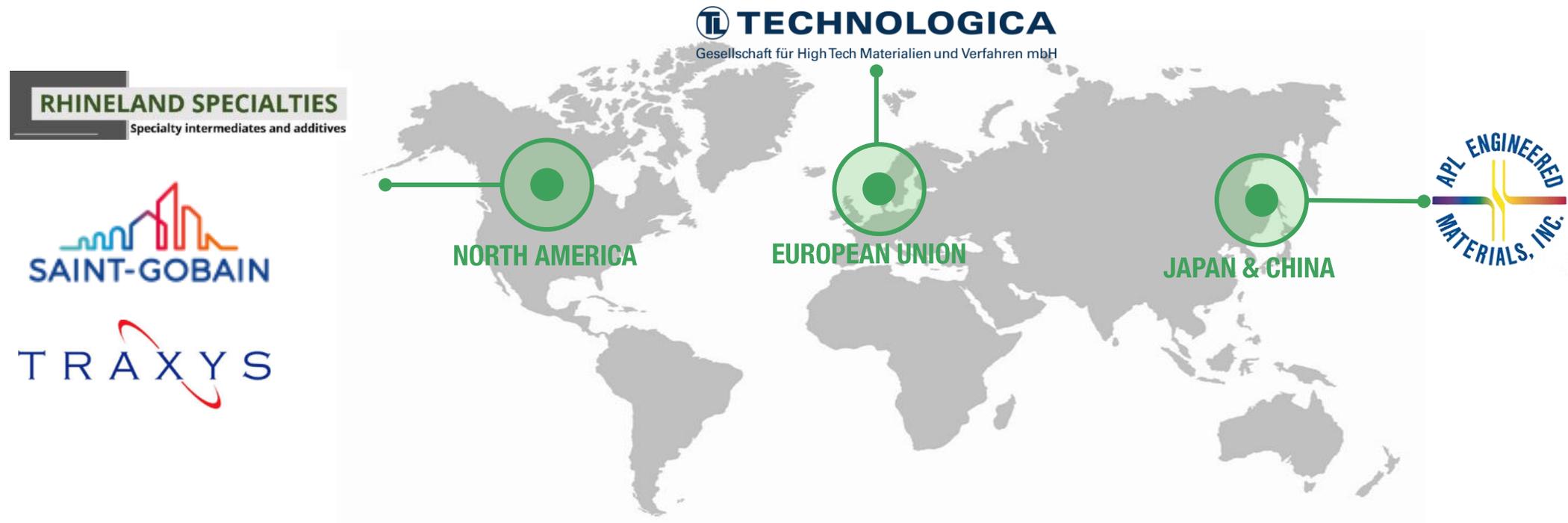


Solvent Extraction

- Continuously operating facility, with over 3,500 operating hours
- Aluminium nitrate production to date >5,100kg
- Servicing specialty sales and continued product test orders

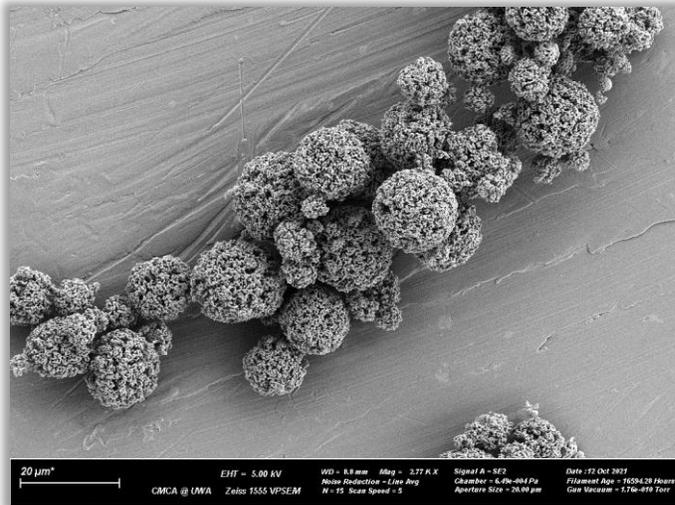
HPA First Project: Global Product Marketing

- Global Marketing Network established
- >80 product samples now distributed globally to >40 end users
- Products qualified for sapphire glass, LED phosphors and separator coatings
- Al-nitrate and HPA sales commenced
- **Sept 2021:** Multiple (8) bids submitted for high value supply contracts

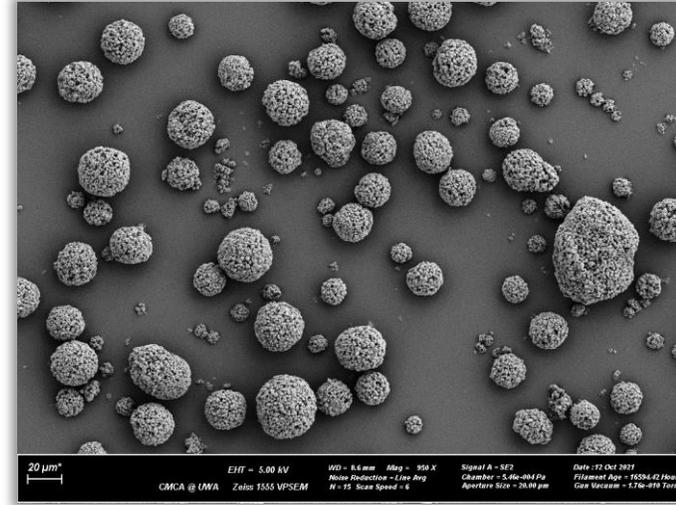


Product Marketing: Understanding our Customers

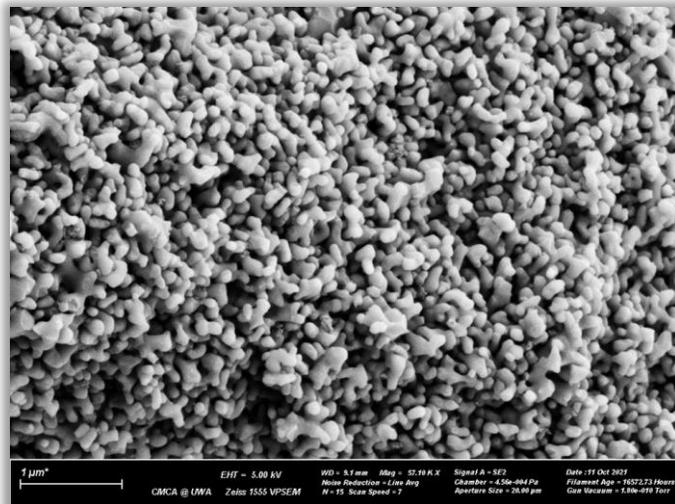
- Detailed technical interaction allows us to deliver to our customers requirements



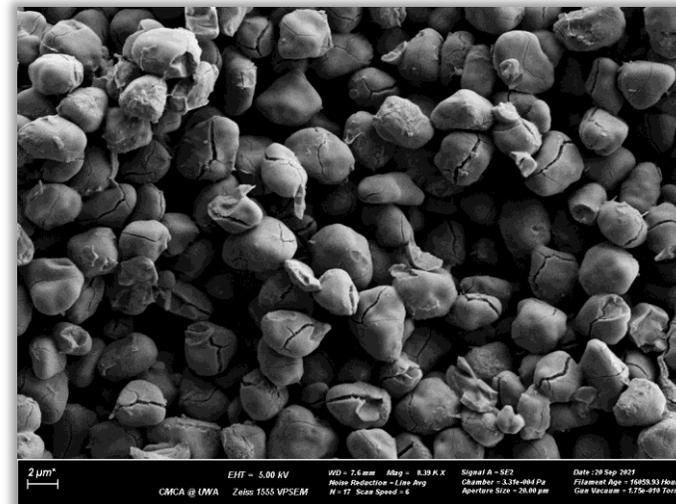
HPA spheres for Japanese electronics OEM



Dispersible boehmites for US ceramics OEM



Sub micron HPA for German based LED phosphor OEM



HPA coated Li-B anodes for EU anode OEM

AlphaHPA

Corporate Snapshot

TRADING INFORMATION

ASX CODE	A4N
Share Price (23/11/2021)	~52.5c
52-week trading range	14c – 67.5c
Issued Shares	793.3M

CAPITAL STRUCTURE

Issued Shares	793.3M
Unlisted options (@20c)*	10.0M (expire 31 July 2022)
Unlisted options (@30c)	34.0M (expire 31 July 2022)
Unlisted options (@35c)*	5.0M (expire 30 Sept 2023)
Unlisted options (@35c)	26.0M (expire 31 July 2023)

Market Cap	\$416.5M
Est Cash (30-09-2021)	~\$40M – No Debt
Enterprise Value	\$376.5M

* Licensor Options

SHARE PRICE PERFORMANCE – 12 MONTHS



SHAREHOLDERS

TOP 20

Regal Funds	7.46%
Permgold P/L (N. Seckold)	8.5%

55%



THANK YOU



Alpha HPA