Australian Securities Exchange Announcement **24 January 2022**

King River Resources Limited (ASX:KRR) is pleased to provide this update on its wholly owned subsidiary High Purity Metals Limited (HPM) which holds the High Purity Alumina (HPA) Project. The attached document has been developed to provide detailed information on the industry focus of HPM, its corporate strategy along with the products being commercialised, information on the relevant markets, and recent and upcoming milestones.

This announcement was authorised by the Chairman of the Company.

Anthony Barton
Chairman
King River Resources Limited
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Statement by Competent Person

The information in this report is based on information compiled by Mr Ken Rogers (BSc Hons) and fairly represents this information. Mr Rogers is the Chief Geologist and an employee of King River Resources Ltd, and a Member of both the Australian Institute of Geoscientists (AIG number 2359) and The Institute of Materials Minerals and Mining (IMMM number 43552), and a Chartered Engineer of the IMMM. Mr Rogers has sufficient experience in the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Rogers consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

Powering the 21st Century

High Purity Metals

Origin

01 High Purity Metals is a wholly owned subsidiary under King River Resources, focused on developing the HPA Project.

Mission

02 King River Resources is committed to commercialising the 5N Aluminium Precursor and 4N HPA opportunities in a way that maximises the return on investment for our shareholders.

Process

03 Our ARC process is used to create 5N Aluminium Precursors and 4N HPA.

The ARC process is based on utilising an Aluminium chemical feedstock, then Recrystallisation for purification and Finally Calcination.

Market

04 Our range of high purity products are utilised in the Electric Vehicle battery, LED and optics industries.

Economics

05 Initially a 2,000tpa 5N Aluminium Precursor Plant to minimise the CAPEX for entry into the market with a high rate of return.

Opportunity

06 Ongoing testing with different feedstocks to broaden industry relationships and provide Environmental, Social and Governance (ESG) benefits to others.

High Purity Metals plans to produce:

5N (≥99.999%) high purity aluminium precursor compounds

4N (≥99.99%) high purity alu (HPA)

using our proprietary ARC HPA process, manufactured from an industrial aluminium chemical feedstock.

High Purity Metal's Entry to Market

High Purity Metals are committed to commercialising the 5N Aluminium Precursor and 4N HPA opportunities in a sustainable way that maximises the return on investment for our shareholders.

In June 2021 a Prefeasibility Study into a 9,000tpa 4N HPA operation produced a CAPEX of A$203m which generated annual EBITA of A$193m and project NPV of A$1,043m and IRR of 50.8%.

This progressed in a Detailed Feasibility Study for the 2,000tpa 5N Aluminium Precursor plant which is projected to provide a much lower cost of entry into the market and provide for a greater range of potential products to market.

The smaller footprint also provides more site options to get underway, so we have a simpler process, with a lower CAPEX and OPEX but similar/higher product price margins.

Our process, ARC, stands for Aluminium chemical feedstock, Recrystallisation for purification, and Calcination - and is used to create 5N Aluminium Precursors and 4N HPA. This range of high-purity products is integral to the Electric Vehicle (EV) battery, LED and optics industries.

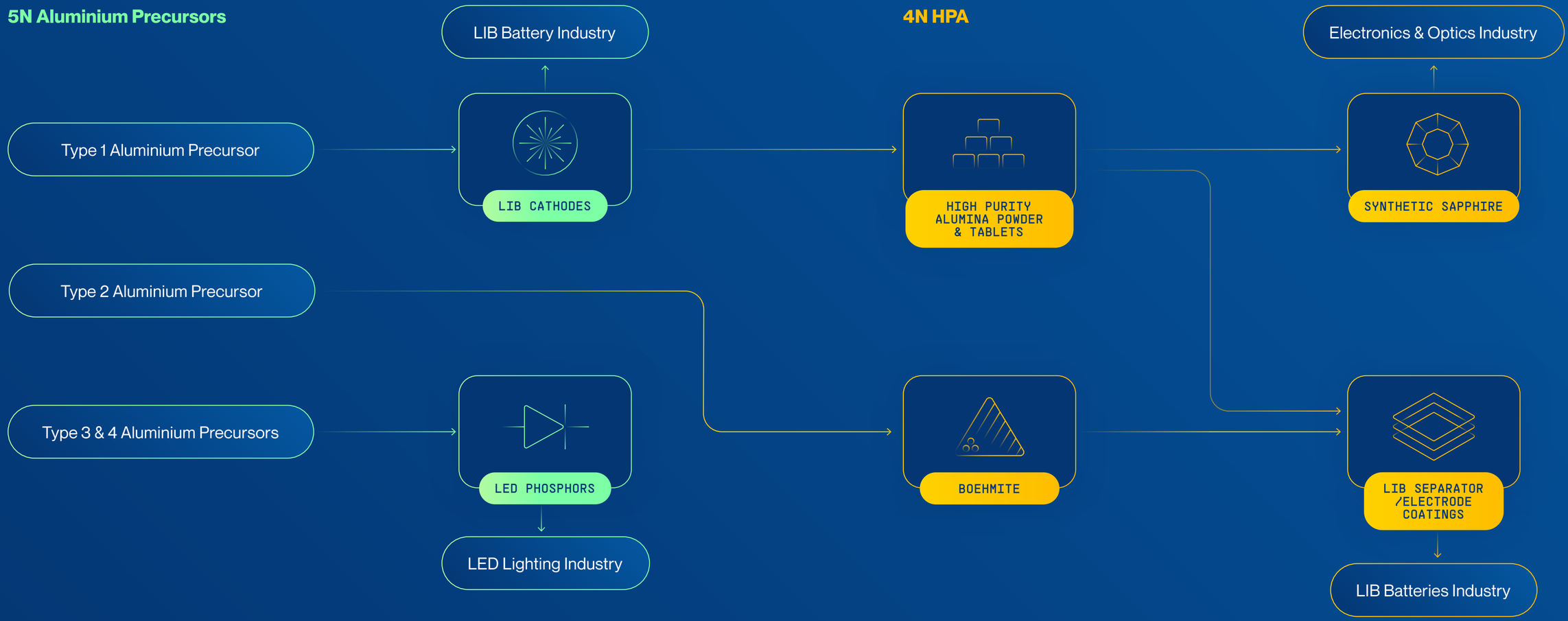
A 5N Aluminium Precursor Plant will initially be built, to minimise the Capital Expenditure (CAPEX) for entry into the market and with an expected high rate of return.

Our ARC HPA process is a new approach to the traditional industry process for the manufacture of HPA.

Our ARC process is unique & distinct from the current approach of the industry. We developed a simple method to extract then purify the aluminium from the acid leach solutions when treating mineral concentrates. This allows us to produce 5N Aluminium Precursors and 4N HPA using an industrial chemical feedstock which differentiates us from companies that are synthesising it from Aluminium metal or from Aluminous clays such as kaolin.

High Purity Metals is capitalising on this process to produce a suite of Aluminum Salts, Aluminium Compounds, Boehmite and HPA which are in high demand in the LED, Optics and Battery industries.

Products and Industries



Production and Bottom Line Efficiencies

Representing significant cost and carbon footprint advantages to the industry, HPM's Aluminium precursor manufacturing method our proprietary aluminium purification and manufacturing process allows for the production of 5N purity precursors from a comparably low-priced, and widely-available industrial chemical feedstock.

We have developed our Type 1 Aluminium Precursor for the growing take-up of aluminium-bearing cathode chemistries within high-power lithium-ion batteries (LiB).

Li-B Cathodes Active Materials (CAM) are manufactured by a two-stage process involving initially the co-precipitation of mixed-metal sulphates (precursor CAM or P-CAM), which are then lithiated using lithium hydroxide in a calcination process to make CAM used in the battery cell cathodes.
The growth of high-nickel cathode chemistries has seen a commensurate increased demand for high-purity nickel-sulphates as the key nickel precursor.

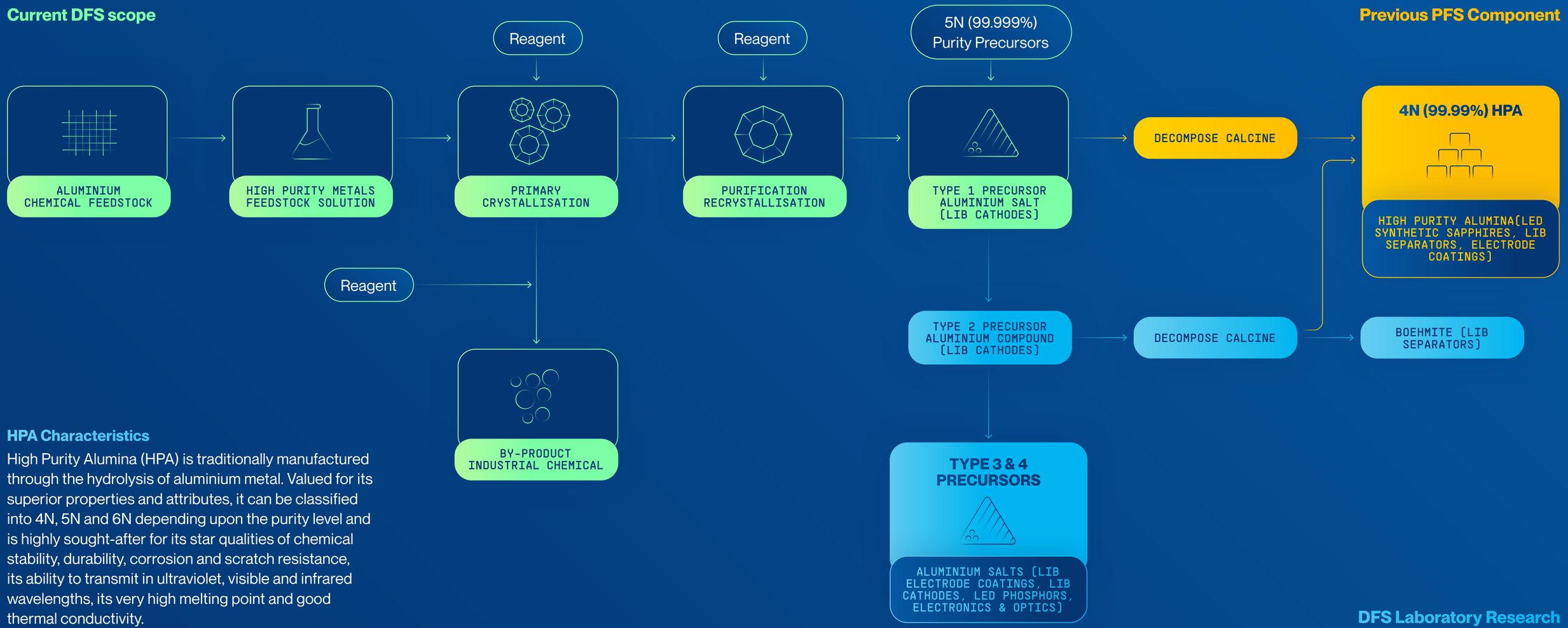
Similarly, increasing adoption of aluminium-bearing CAM (notably NCA and NCMA chemistries) creates a corresponding need for high-purity aluminium salt as the key aluminium precursor. HPM have used the Type 1 Precursor Aluminium salt to create a P-CAM product of NCA chemistry with further optimisation underway and investigation into NCMA chemistry.

We are now in the early stages of targeted contact with CAM and P-CAM manufacturers. Current demand is influenced by product availability, encouraging HPM to focus the DFS plan on producing Type 1 Aluminium salt Precursor for the P-CAM market.

Our Type 2 precursor, which is an aluminium compound, can be processed through to become either Boehmite or 4N HPA, and can be used to make other precursor aluminium salts integral in the lithium battery supply chain.

5N Precursor & 4N HPA Process

Current DFS scope



Previous PFS Component

DFS Laboratory Research

HPA Characteristics

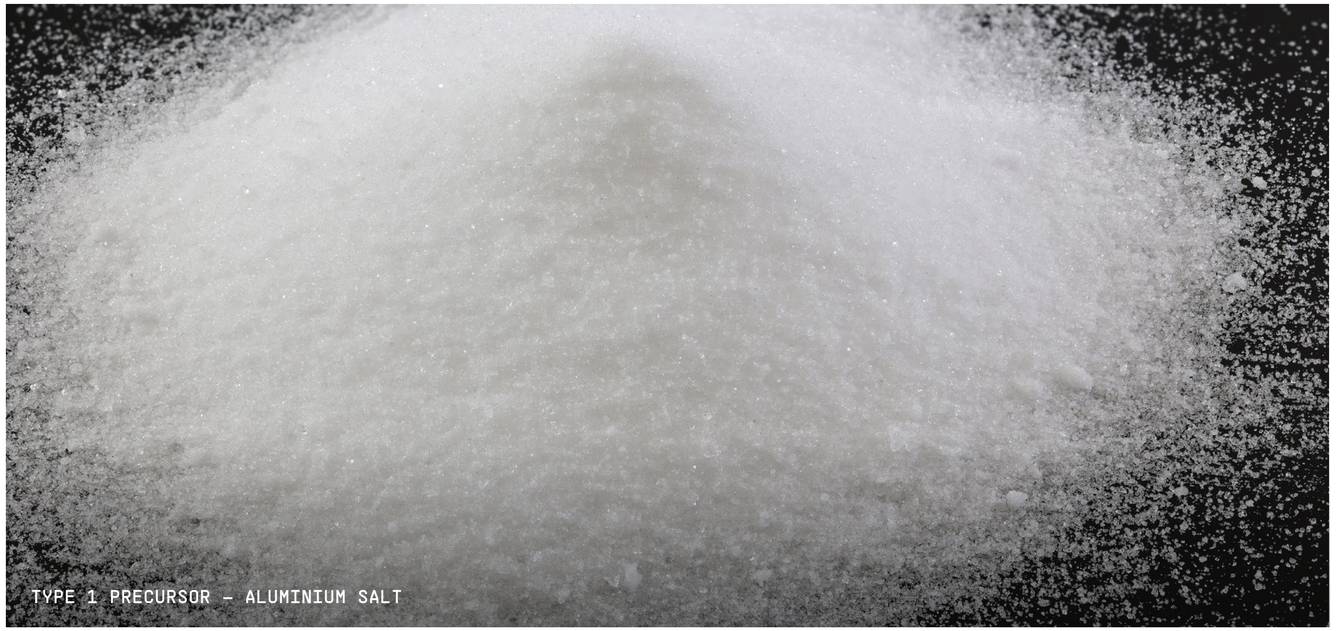
High Purity Alumina (HPA) is traditionally manufactured through the hydrolysis of aluminium metal. Valued for its superior properties and attributes, it can be classified into 4N, 5N and 6N depending upon the purity level and is highly sought-after for its star qualities of chemical stability, durability, corrosion and scratch resistance, its ability to transmit in ultraviolet, visible and infrared wavelengths, its very high melting point and good thermal conductivity.

Type 1 Aluminium Precursor to High Purity Alumina

Successful production of the 5N (99.999% purity) Type 1 Aluminium Precursor which can then be calcined to create 4N (99.99% purity) HPA.

Type 1 Aluminium Precursor & NCA Based P-CAM

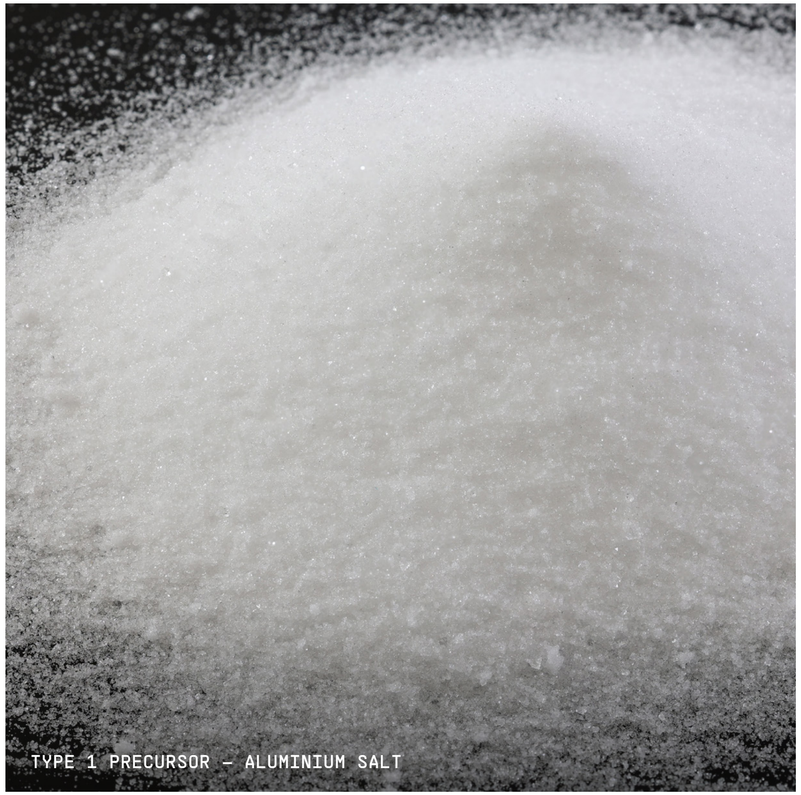
The Type 1 Aluminium Precursor, an Aluminium Salt, can be combined with Nickel and Cobalt to produce a NCA based P-CAM.

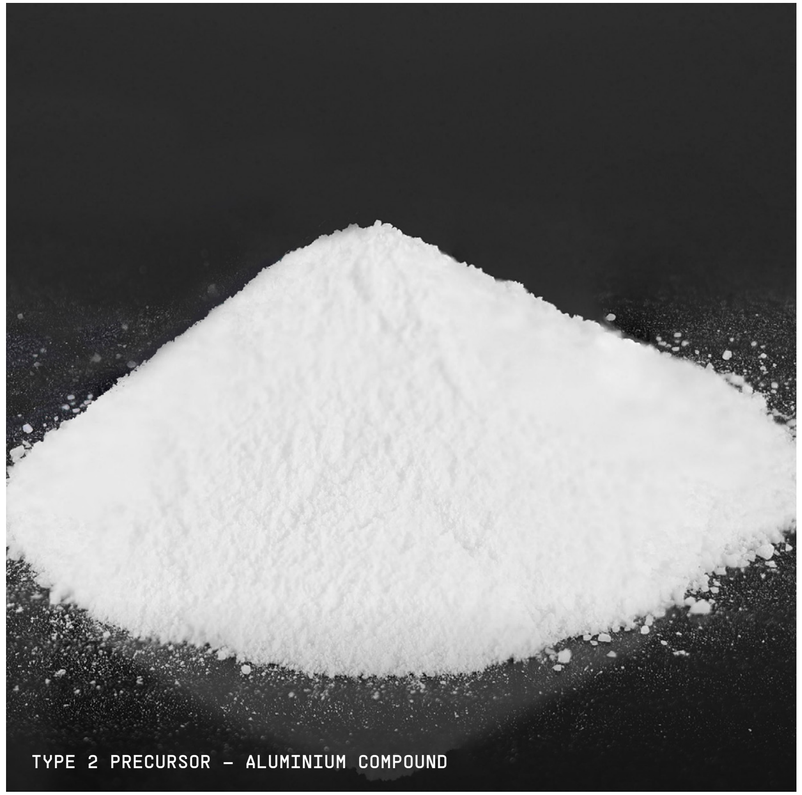

TYPE 1 PRECURSOR – ALUMINIUM SALT

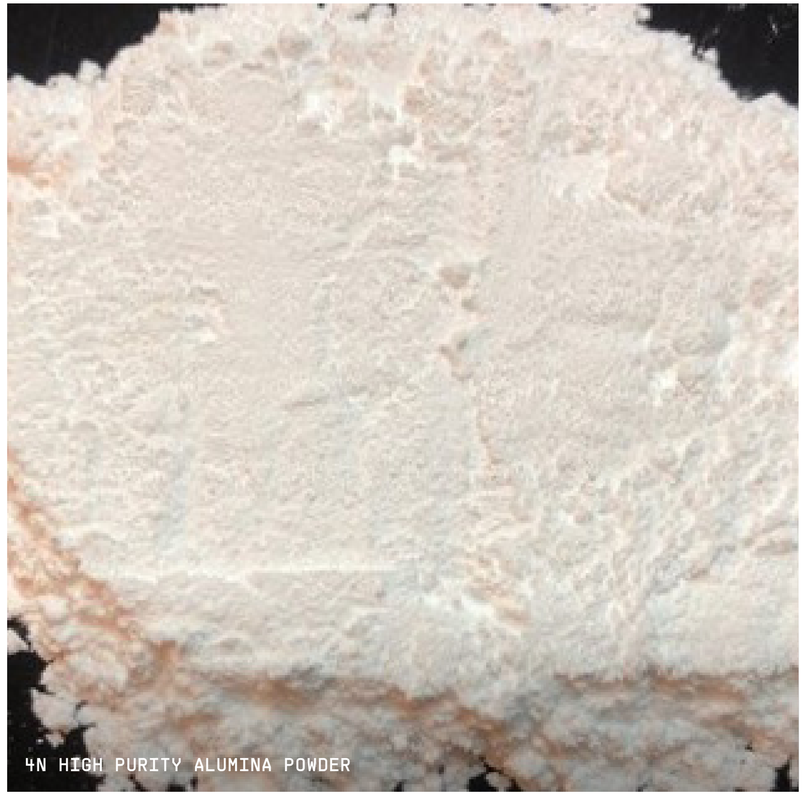

NICKEL-COBALT-ALUMINIUM (NCA) BASED P-CAM

Type 2 Aluminium Precursor – Aluminium Compound

The Type 1 Precursor can be converted into our Type 2 precursor which is an Aluminium Compound that provides a more economical and environmentally friendly route to producing Boehmite and HPA.


TYPE 1 PRECURSOR – ALUMINIUM SALT


TYPE 2 PRECURSOR – ALUMINIUM COMPOUND

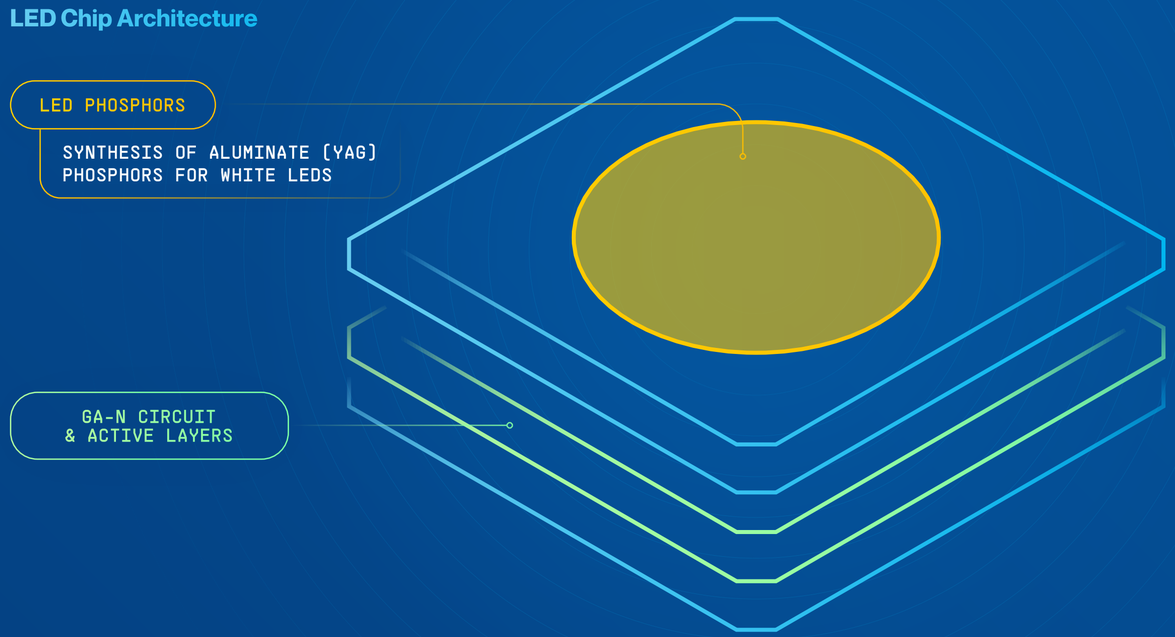

4N HIGH PURITY ALUMINA POWDER

At High Purity Metals, we have been working relentlessly to develop an integrated, robust process for the manufacture of ultra-high-purity (5N) 99.999% aluminium precursor salts as the first stage of a development plan that includes (4N) 99.99% HPA.

LED Lighting

High Purity Alumina (HPA) is an in-demand, critical ingredient for the production of synthetic sapphire, which is integral to the manufacture of many components essential for everyday living. It is irreplaceable and this high-value, high-margin product has extensive applications in many areas, including:

- LED lighting systems
- Semiconductor wafers used in the electronics industry
- Lithium-Ion (Li-ion) batteries
- Scratch-resistant glass in smartphones, optical instruments, watches, televisions
- Medical bioceramics - dental & orthopaedic implants, hip joint ‘balls’
- Artificial gemstones



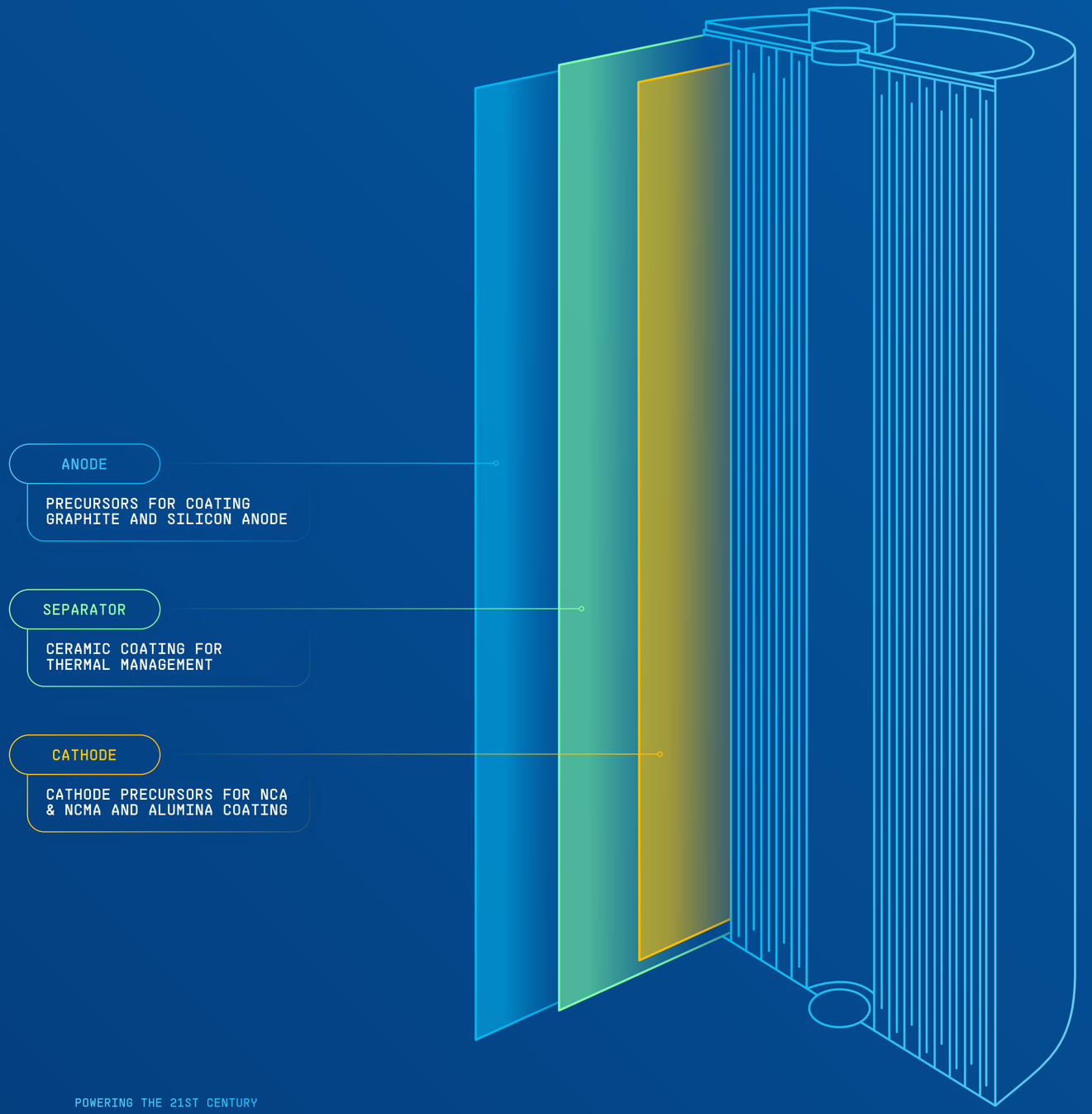
Escalating Market Demand

Aluminium Precursors and HPA are high purity forms of aluminium salts and compounds required by high technology industries. They are premium priced materials with significant annual demand growth forecasts, driven primarily by two fast accelerating sectors: the sapphire/LED industry and the rapidly expanding lithium-ion battery industry.

Global HPA demand was approximately 19,000tpa in 2018 and it is estimated that this demand will multiply at a compound annual growth rate (CAGR) of 30% (2018-2028).

By 2028, HPA market demand is predicted to be approximately 272,000tpa, driven by the increasing worldwide use of LEDs, as well as the escalating demand in the lithium-ion battery industry for the burgeoning electric vehicle (EV) market.

HPA is also used as a coating on the separator sheets and a coating on the anode in lithium-ion batteries.



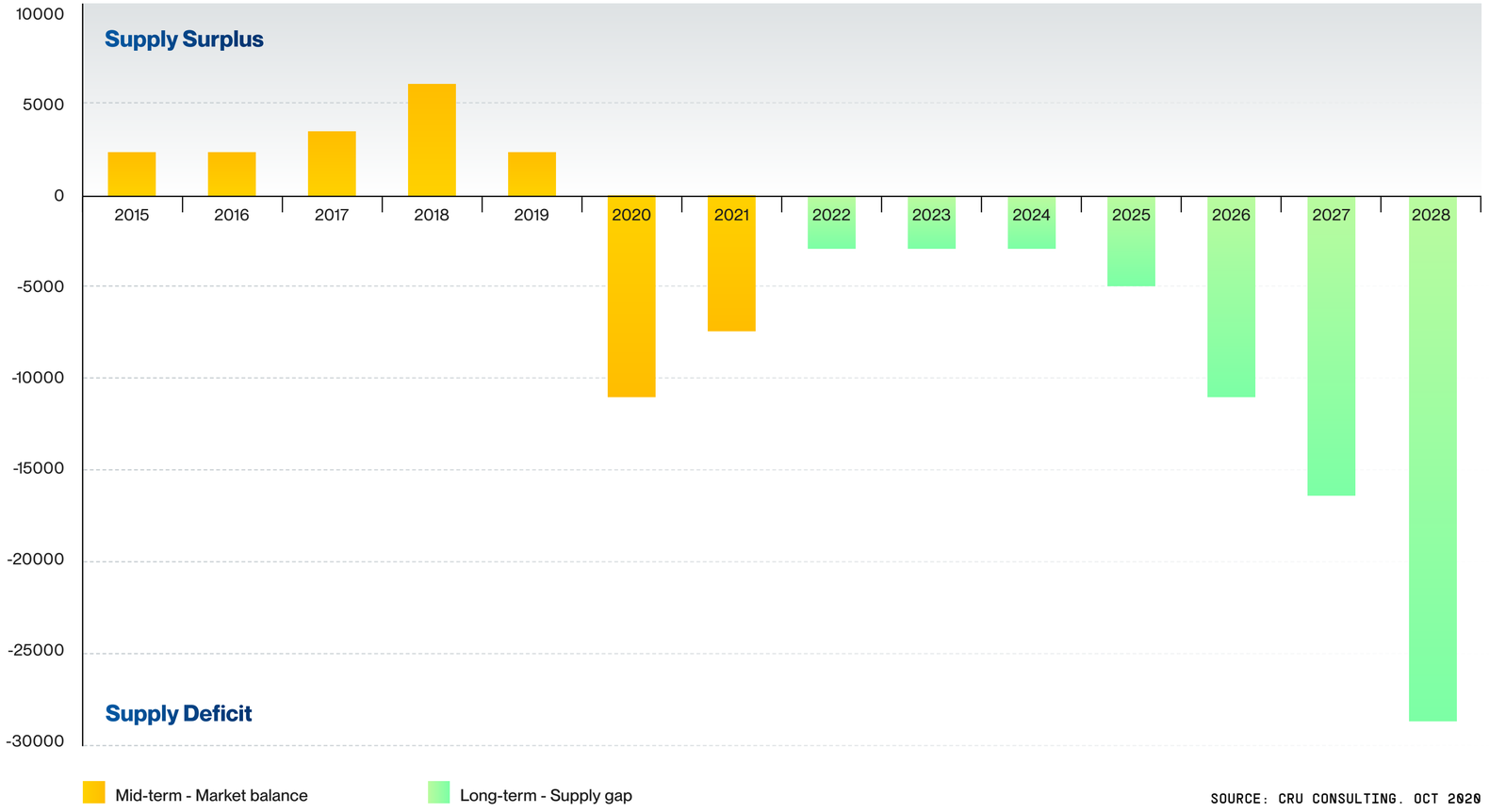
Market Dynamic and Application

The ability to produce a variety of 5N Aluminium precursors based on market needs and still have the potential to make HPA in the future based on the project economics previously reported in our HPA PFS is an attractive proposition.

High Purity Metals recently produced high purity aluminium precursor salt for the first time in the laboratory scale pilot plant. Achieving better than 5N purity on this first campaign was an excellent outcome. Similar >5N purity results were obtained in Campaigns 2 and 3. The subsequent campaigns will provide more product for market samples and prove that we can repeatedly produce this level of purity with our process.

The potential market for HPA and its aluminium = precursors is immense up to a 30% compound annual growth rate (CAGR) for 4N.

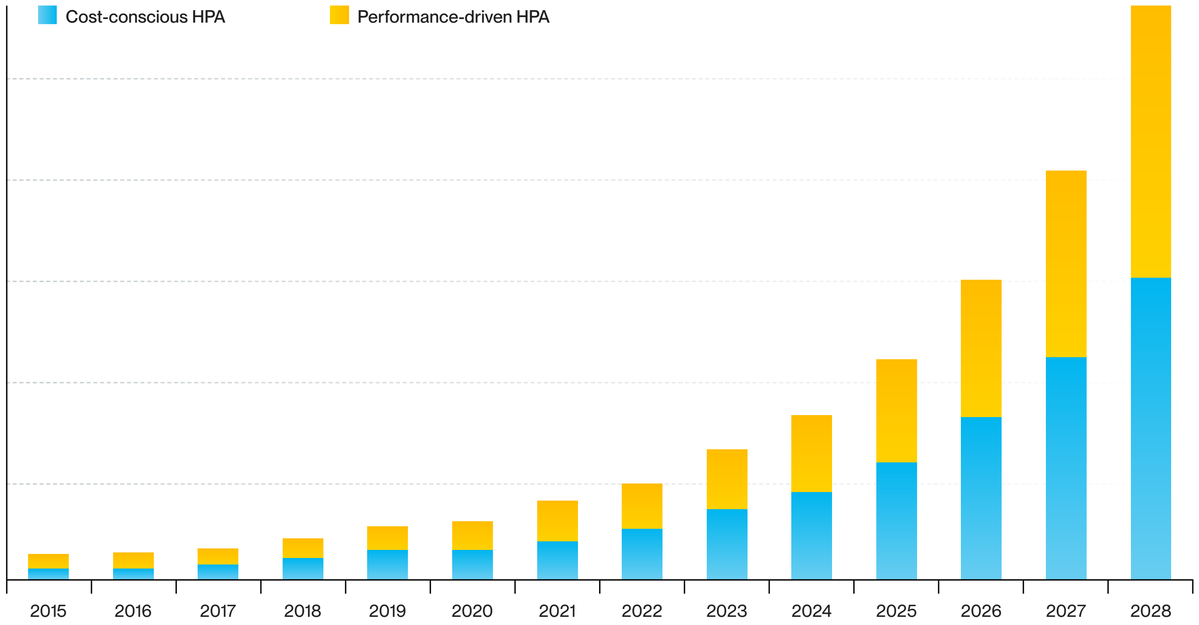
HPA is forecast by independent market research groups. HPM is doing its own research on the precursors by discussions with end-users and market research groups, so we will be in a better position to report on this in the future. However, we are optimistic, supported by the recent reports by other players and projected demand for EVs.



SOURCE: CRU CONSULTING. OCT 2020

Escalating Market Demand

Market Dynamic and Application



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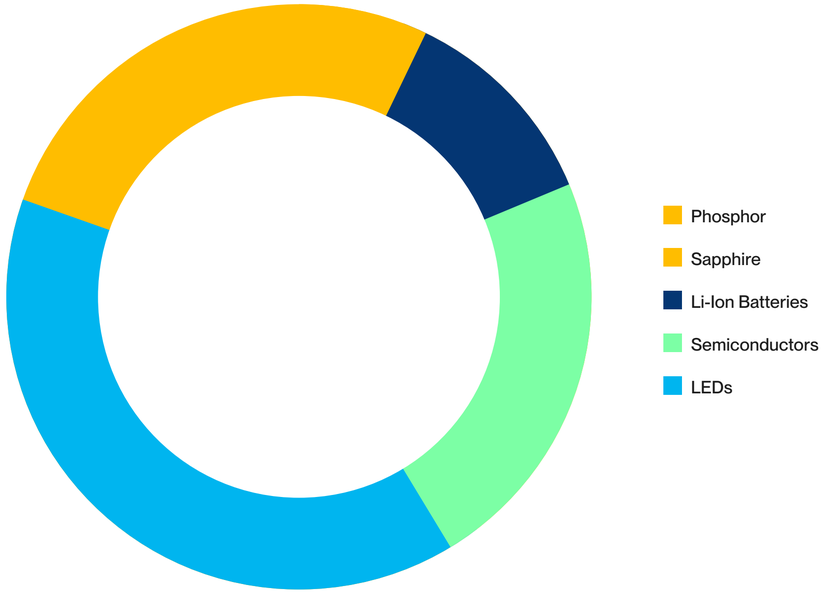

SOURCE: CRU CONSULTING. OCT 2020

Research and Development

With considerable investment in R&D, we expect to imminently have product samples available to send out to end-users for qualification in their process. Demonstrating our capability, we are also conducting ongoing experiments on manufacturing P-CAMs.

Industry relationships, monitoring of battery technology evolution and ongoing discussion with new and potential customers will keep our 5N Aluminium precursor products at the forefront of market demand. Sustained process and product development will maintain optimal production efficiencies and project economies.

Alternative chemical feedstocks are also being explored, to de-risk our supply chain and/or improve our process, and to investigate how we can extract value from what would otherwise be a waste stream from other process industries.

We have joined the Future Battery Industries Cooperative Research Centre (FBICRC) supporting two strategic projects;

- Cathode Precursor and Active Material Production Pilot Plant, and
- Development and application of Vanadium Redox Flow Batteries

Which also provides engagement with a range of complementary companies in the industry. HPM will continue to investigate new feedstocks and P-CAM chemistries that would benefit potential partners, and any process optimisations that could reduce CAPEX or OPEX.

The commissioning of the laboratory scale pilot plant is completed. There is flexibility in the location of the pilot plant. We have an industrial site that is suitable and high-level discussions are underway.

What's Next

2022 and beyond

Depending which companies become involved with the project, there may be opportunities to co-locate the plant.

The Definitive Feasibility Study on Type 1 Aluminium Salt Precursor Production Facility is expected to be completed in May 2022. Anticipating positive results, it will be full steam ahead. Ideally, we will have all the required finance, agreements and a JV partner in place and building can begin. These measures will accelerate the construction schedule at minimum risk.

As societies transition to clean energy, battery storage, electric vehicles, being more power conscious with LED lighting taking over the lighting industry and our obsession with portable electronics, not to mention our evergrowing population, the future looks good.

Carbon Footprint & the Environment

Does the production process take care of ecological standards?

With regard to environmental standards, the HPM project uses chemicals that are readily and safely traded in local industry. The main by-product from our production is also a commercially traded commodity. The operation of our plant would not present any greater risk to the environment those other typical industrial processes. We are continuously looking for environmental improvements that have process and financial benefits.

Minimal waste

Using locally available chemical feedstocks removes the need to have a mine feed the on-site processing plants, and the Aluminium Precursor - HPA plant can be located wherever it is best suited, and this location would be heavily influenced by industry relationships and a qualified workforce. With byproducts from our processes that are commercially traded materials, a waste storage facility is not required. Furthermore, ongoing testing with different feedstocks will broaden industry relationships and enrich Environmental, Social and Governance (ESG) benefits for the greater good.

Safe practices with a lower carbon footprint

High Purity Metals aims to minimise waste, energy, water and pollutant to create a cleaner, greener solution for customers.

The traditional method of creating 5N Aluminium Precursors and 4N HPA is to take an aluminium ingot produced by an energy intensive smelting process and chemically dissolve it into solution and then further process to remove the final impurities to achieve the required purity. Our process can achieve the results with fewer process steps and a smaller carbon footprint.

Investigation is ongoing to apply our process to the waste streams of other industries, to greatly increase the ESG credentials of both companies. In addition, HPM is continuously looking at ways to simplify and improve the efficiency of the ARC process, in order to reduce water, power and chemicals used in the process, compared to traditional processes. By-products are sold back into the chemical industries for re-use in other industrial applications.

Recent & Upcoming Milestones

December 2020 to July 2021

- The ARC HPA process is successful in treating locally available chemical feedstocks removing the need for the a mining operation
- Successful production of >4N (99.99%) purity High Purity Alumina (HPA). (25 Mar 2021)
- Prefeasibility Study complete based on a 9,000tpa 4N HPA plant with a CAPEX of AUD $203M. (16 Jun 2021)
- Employed an experienced professional to lead High Purity Metals and engage with the industry (26 Jun 2021)
- 5N (99.999%) purity Type 1 Aluminium Salt Precursor compounds produced using the ARC process. (27 Jul 2021)

September 2021 to January 2022

- 5N Aluminium Precursors became the focus of the company strategy for commercialisation. (8 Sept 2021)
- COMO Engineers awarded the Definitive Feasibility Study. (5 Oct 2021)
- High Purity Metals joins the Future Battery Industries Cooperative Research Centre supporting two strategic projects, “Cathode Precursor and Active Materials Production Pilot Plant” and “Development and application of Vanadium Redox Flow Batteries”. (6 Oct 2021)
- New Aluminium precursors and NCA P-CAM product development achieved in the laboratory (3 Nov 2021)
- Laboratory scale pilot plant successfully produces >5N 99.999% purity Type 1 Aluminium Salt Precursor in three campaign runs (2 Dec 2021 and 10 Dec 2021).
- 5N Type 1 Precursor – Campaign 4 successful
- Improved new Precursor path to HPA under development

Upcoming

- Definitive Feasibility Study: 2000tpa Type 1 Aluminium Precursor Production Facility
- The DFS remains on track to be completed by early May 2022 (as per ASX release 5 Oct 2021)
- Plant Location: The reduced footprint and nontoxic nature of the process provides flexibility in determining the location
- Attendance at the 2022 Inter Battery Expo in Seoul, Korea
- Partnerships / MOUs / Offtake agreements – Establish these with strategic industry companies and investors.

Key Technical Advisors

KRR's HPA Project development technical team consists of a small group of experienced professionals working in conjunction with several specialised consultant companies to complete test work and studies on all major aspects of the project to deliver the PFS.

COMO ENGINEERS

Process plant design, logistics, and capital and operating cost estimates

RAMBOLL GROUP

Environmental and Social studies and Permitting

FTI CONSULTING

Financial modelling and analysis

CRU INTERNATIONAL

Market study on HPA

SOURCE CERTAIN INTERNATIONAL

Hydrometallurgical testwork, analytical testing and concept design

Doug Flanagan
CEO – High Purity Metals

Mr Flanagan is a qualified engineer, BEng (Hons), with considerable experience, a broad technical and leadership skill base having over 25 years experience in the Mining and Energy industries. Experienced in all stages of a project's lifecycle from initial business development though to construction of multi-billion dollar plants, he has been integral to the delivery of base and precious metal projects, rare earths, and oil and gas projects in Australia, Zambia, Malaysia and Central and North America.

As the CEO he will continue to develop and execute our business and market strategies. Research, target and develop new markets to find new opportunities and build relationships with potential clients or business partners. Manage and lead our engineering subcontractors, driving existing projects to successful commercialisation.

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"The Preliminary Feasibility Study (PFS) information included in this overview is taken from the High Purity Alumina Prefeasibility Study ASX announcement lodged on 16 June 2021 and subsequent HPA Project update announcements, this overview should be read in conjunction with all HPA Project announcements."

This overview announcement was authorised by the KRR Chairman Mr Anthony Barton.

Cautionary Statements

This overview is for information purposes only. Neither this overview nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of shares in any jurisdiction. This overview may not be distributed in any jurisdiction except in accordance with the legal requirements applicable in that jurisdiction. All persons should consider seeking appropriate professional legal, financial and taxation advice in reviewing this overview and the PFS and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. The provision of this overview and the PFS, nor any information contained in this overview and the PFS, or subsequently communicated to any person in connection with this overview and the PFS, should not be taken as constituting the giving of investment or financial advice to any person. This overview and the PFS do not take into account the individual investment objective, financial or tax situation or particular needs of any person. The Prefeasibility Study (PFS) referred to in this overview is a study of the potential viability of the KRR Kwinana HPA Project. It has been undertaken to determine the technical and economic viability of an HPA refining operation at Kwinana (Project). Further evaluation work including pilot studies and appropriate studies are required before the Company will be in a position to provide any assurance of an economic development case. The PFS is based on the material assumptions summarised in the Summary of Material Assumptions and Modifying Factors description and tables in the PFS ASX announcement lodged on 16 June 2021. These include assumptions about the availability of funding. 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 range of outcomes indicated by this PFS will be achieved. To achieve the range of outcomes indicated in the PFS funding in the order of A$203 million will likely 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 Project or other assets. If it does, this could materially reduce the Company's proportionate ownership of the Project or other assets. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the PFS.

General and Forward-Looking Statements

The contents of this overview and the PFS reflect various technical and economic conditions, assumptions and contingencies which are based on interpretations of current market conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly and without notice over relatively short periods of time. Consequently, actual results may vary from those detailed in this overview and the PFS. Some statements in this overview and the PFS regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Such forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. When used in this overview and the PFS, words such as, but are not limited to, "could", "planned", "estimated", "expect", "intend", "may", "potential", "should", "projected", "scheduled", "believes", "proposed", "aim", "target", "opportunity", "nominal", "conceptual" and similar expressions are forward-looking statements. Although the Company believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements. The contents of this overview and the PFS are also subject to significant risks and uncertainties that include, but are not limited, those inherent in chemical processing plant development and production, metallurgical and processing technical problems, the inability to obtain and maintain licences, permits and other regulatory approvals required in connection with processing operations, competition for among other things, capital, acquisitions of lands and skilled personnel, incorrect assessments of the value of projects and acquisitions, changes in commodity prices and exchange rates, currency and interest rate fluctuations and other adverse economic conditions, the potential inability to market and sell products, various events which could disrupt operations and/or the transportation of products and fuel, reagent and raw material inputs, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, environmental, native title, heritage, taxation and other legal problems, the potential inability to secure adequate financing and management's potential inability to anticipate and manage the foregoing factors and risks.

Statement by Competent Person

The detail in this overview is based on information compiled by Ken Rogers (BSc Hons) and fairly represents this information. Mr. Rogers is the Chief Geologist and an employee of King River Resources Ltd, and a Member of both the Australian Institute of Geoscientists (AIG number 2359) and The Institute of Materials Minerals and Mining (IMMM number 43552), and a Chartered Engineer of the IMMM. Mr. Rogers has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Rogers consents to the inclusion in this report of the matters based on information in the form and context in which it appears.