

# Andromeda The Great White Mineral Company

Annual General Meeting – Managing Director's Report

22 November 2023

#### ASX:ADN

#### andromet.com.au

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#### Currency

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#### Assumptions and Notes for Financial Information on 2023 DFS this presentation:

Further details on the 2023 DFS and the assumptions and notes for the 2023 DFS can be found in the Company's ASX Announcement '2023 Definitive Feasibility Study Results' released on 24 August 2023.

#### Third party data from consultants and government agencies

Andromeda has relied on information provided by specialist consultants and aovernment agencies in preparing this presentation. Andromeda has reviewed all information to the best of its ability but does not take responsibility for its accuracy or completeness, or reliability of such information.

#### **Competent Person's Statements**

The data in this presentation that relates to Mineral Resource estimates for The Great White Deposit and the Chairlift Deposit is based on information evaluated by Mr Eric Whittaker who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Whittaker is the Chief Geologist of Andromeda Metals Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Whittaker has over 30 years of experience in the mining industry. Mr Whittaker consents to the information in the form and context in which it appears. Mr Whittaker is entitled to participate in Andromeda's employee incentive plan.

The data in this presentation that relates to Mineral Reserve estimates for The Great White Deposit is based on information evaluated by Mr John Millbank who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Millbank is the Director of Proactive Mining Solutions Pty Ltd, an independent mining consultancy, and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he is undertaking, to aualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Millbank consents to the information contained in this presentation being used in the form and context in which it appears. Mr Millbank, or any of the entities he directly controls, has no financial interests in Andromeda Metals Ltd or any of its subsidiaries.

#### Photographs, images, diagrams, charts and maps

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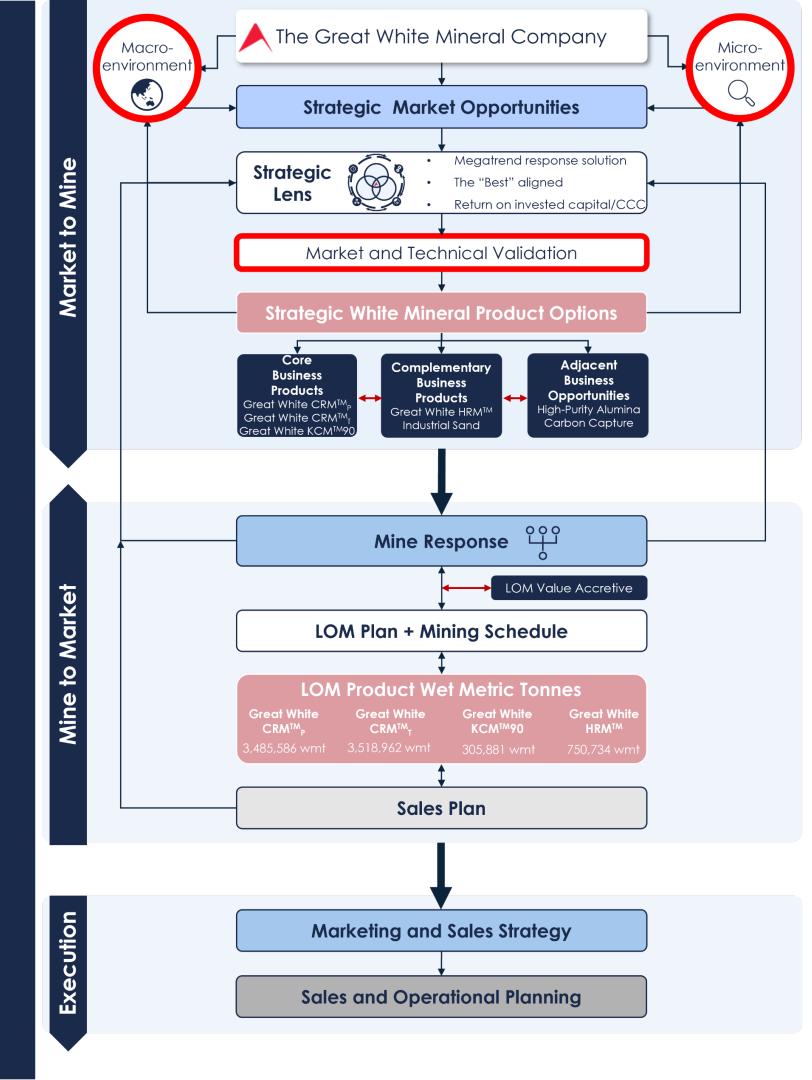
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Unless otherwise stated, all data contained in the charts, graphs and tables is based on information available at the date

## Key driver of the 2023 DFS is the Commercial Strategy review

Identified a product portfolio that balances a rigorous segmented market to mine approach with a disciplined and optimised mine to market response.









# 2023 DFS delivers a 65% NPV increase to \$1.01 Billion Average annual EBITDA increased by 59% to \$130 million

The 2023 DFS follows a comprehensive commercial strategy review and approach to developing the world-class, high quality halloysite-kaolin of The Great White Deposit.

Improvement in Net Present Value (**NPV**) compared to the 2022 DFS is driven by:



Further details on the 2023 DFS and the assumptions and notes for the 2023 DFS can be found in the Company's ASX Announcement '2023 Definitive Feasibility Study Results' released on 24 August 2023.

The 2023 DFS financial model methodology has been verified by an independent financial consultant.



### Safe and sustainable development

Adopting a low-impact approach to processing and mining

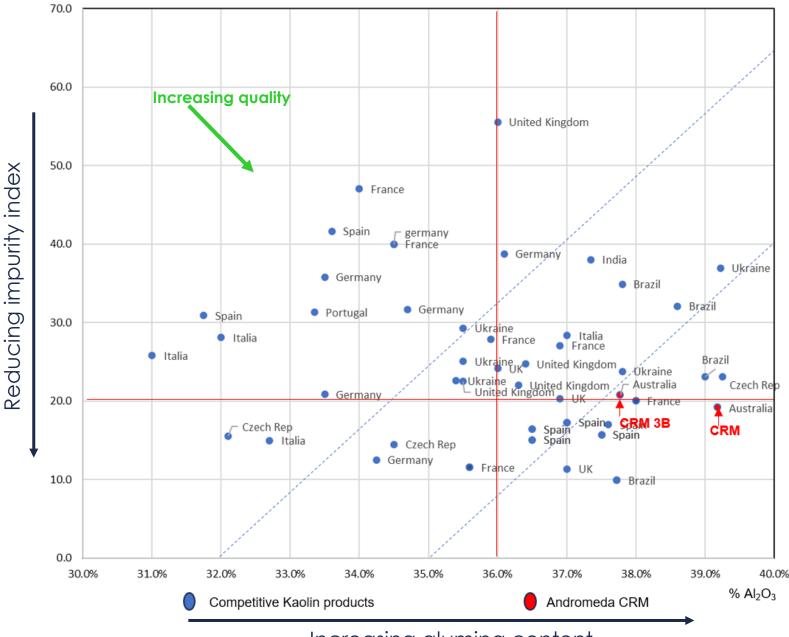
Plan to improve Scope 1 and Scope 2 emissions, to meet or exceed global industry benchmarks

## Established above market high value in use in the global high quality kaolin market

Independent testing confirms Great White CRM<sup>TM</sup> as a market leading product

### Value-in-use test work conducted by ITC

- Great White CRM<sup>™</sup> and Great White KCM<sup>™</sup>90 world class brightness, colour and aluminium to iron ratio was confirmed independently by ITC and IberoClays.<sup>10</sup>
- Globally, Andromeda estimates an identified contestable market for high quality ceramic tiles of 340–500 ktpa.<sup>11</sup>



Increasing alumina content

10 Testwork was carried out by IberoClays and the Instituto de Tecnologia Ceramica in 2023.

11 Work commissioned by Andromeda, "overview of the Ceramic tile market' (Galesk Consultancy S.L.U, 2023).







# Technical Marketing of Great White CRM™

Test results confirm superior performance in key market segments

### **CERAMIC TILE BODY**

Kaolin	CRM (1097)	Interval
Reject at 40 μm (%)	0.4	0-2
Dry bulk density (g/cm <sup>3</sup> )	1.32	1.55-1.67
Linear shrinkage at 1180°C (%)	6.5	3.0-6.6
Linear shrinkage at 1280°C (%)	12.5	6.0-12.4
Water absorption at 1180°C (%)	28.7	19.3-25.4
Water absorption at 1280°C (%)	15.7	6.4-20.3
L* at 1280°C	96.8	91.5-97.4
a* at 1280°C	0.0	-0.2 - 0.6
b* at 1280°C	3.2	2.2-7.3

- Validated for use in blends where Great White **CRM<sup>TM</sup>** lends superior chromatic coordinate properties compared to the interval values of standard kaolins in the market
- Great White CRM<sup>TM</sup> (and Great White KCM<sup>TM</sup> 90) • tested in glaze applications as showing considerably higher mechanical strength compared to standard
- High mechanical strength can reduce glaze **defects** during the manufacturing process



- Premium slabs and porcelain tiles in super and ultra-white use micronized zircon
- Value in use work supports a 10-15% reduction in zircon by using Great White CRM<sup>™</sup>

## Technical Marketing of Great White CRM™ Next Steps

- Additional Institute of Ceramic Technology (ITC) study commissioned to independently validate zircon replacement potential. Results expected by end of December 2023
- Further leveraging ITC partner and sponsor relationships through their pioneering university – business cooperation system:
  - Final validation with **industrial scale tile production**, conducted in cooperation with an ITC sponsor and **Tier 1 multinational**
  - Facilitating and fast-tracking additional future sales through leading ceramics businesses in Europe

# Positioned to be the industrial mineral of choice in the global ceramics market

Great White CRM™

properties and applications<sup>1</sup>

Top 3 Iron/Alumina ratio  $(Fe_2O_3/Al_2O_3)$  of global kaolin samples

High brightness is retained in high temperatures, with very good colour evolution, which is valued in high quality porcelainware and ceramic tiles

High dry mechanical strength is highly valued in large format porcelain tiles

Strongly positioned to offer exceptional value in use in:

### Porcelain tableware; large format porcelain ceramic tiles and glazes; and super and ultra-white premium porcelain tiles and slabs

1 As determined by testing conducted on Great White CRM™ by Instituto de Tecnología Cerámica (ITC), located at the University of Castellón in Spain, and IberoClays.





Zircon-replacement potential in super and ultra-white premium slabs and porcelain tiles

## Outcomes from September meetings in Europe Discussions centred on CERSAIE Ceramics Conference in Bologna, Italy

Discussions progressed based on LOI received from Iberoclays – discussions targeting 15,000-20,000 tpa during the first 3 years of production.

Qualifications with Italian super-white porcelain tile manufacturers

Qualified as a supplier to **Tier 1 technology supplier** for manufacture of **porcelain tiles and slabs**  HoA signed with Opaque Ceramics for discussions on sale and distribution of Great White CRM<sup>™</sup> and new zircon-kaolin product development

#### South-East Asia –

 qualifications with multinationals that have operations in the region

# **TRAXYS – Non-binding Heads of Agreement Signed**

Leading Global Industrial Minerals Trading Company

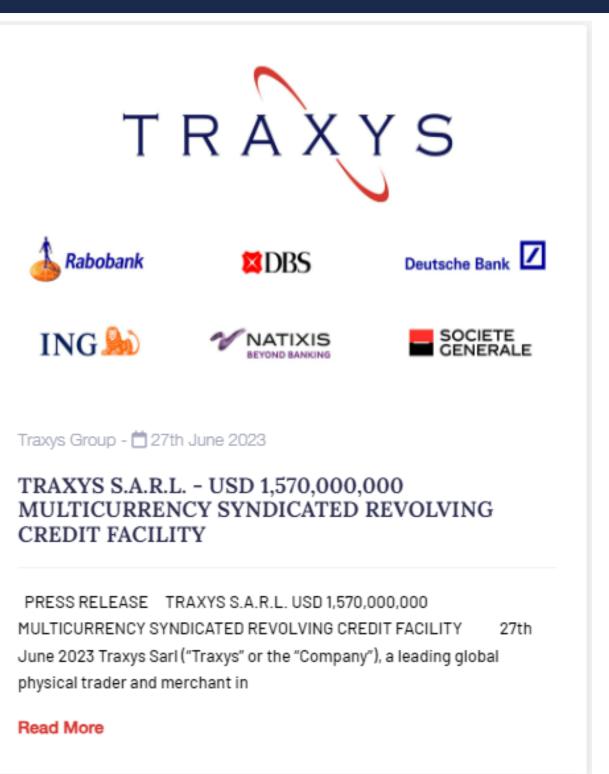
### Global industrial minerals presence and reach

• Recently announced US\$1.57 billion multi-bank revolving credit facility



t = tonnes tpa = tonnes per annum wmt p.a. = wet metric tonnes per annum





# **TRAXYS – Non-binding Heads of Agreement Signed**

Comprehensive strategic relationship

### **HEADS OF AGREEMENT – Key terms for discussions:**

- Targeting a term of 5 years, with first shipment Q1 2025
- Option for 60 or 90-days pre-shipments advances, during the first 24 months of production

#### Direct sales of Great White CRM<sup>™</sup>

- Targeting 20,000 30,000 wmt p.a. for the first Stage
- Potential geographies of Turkey, Middle East, • Scandinavian countries, and Latin America (LATAM)

#### Direct sales of Great White HRM<sup>™</sup>

- Targeting 10,000 15,000 wmt p.a. for the first Stage
- Potential geographies of Europe, Middle East and Africa (EMEA), India and the Persian Gulf region
- End-user validation and homologation and certification ٠ for each market to be completed

### Potential equity and debt arrangements:

- - facilities

### Andromeda CEO has extensive past experience with Traxys Leadership team, across a portfolio of metals and minerals:

- Zircon
- Aluminum



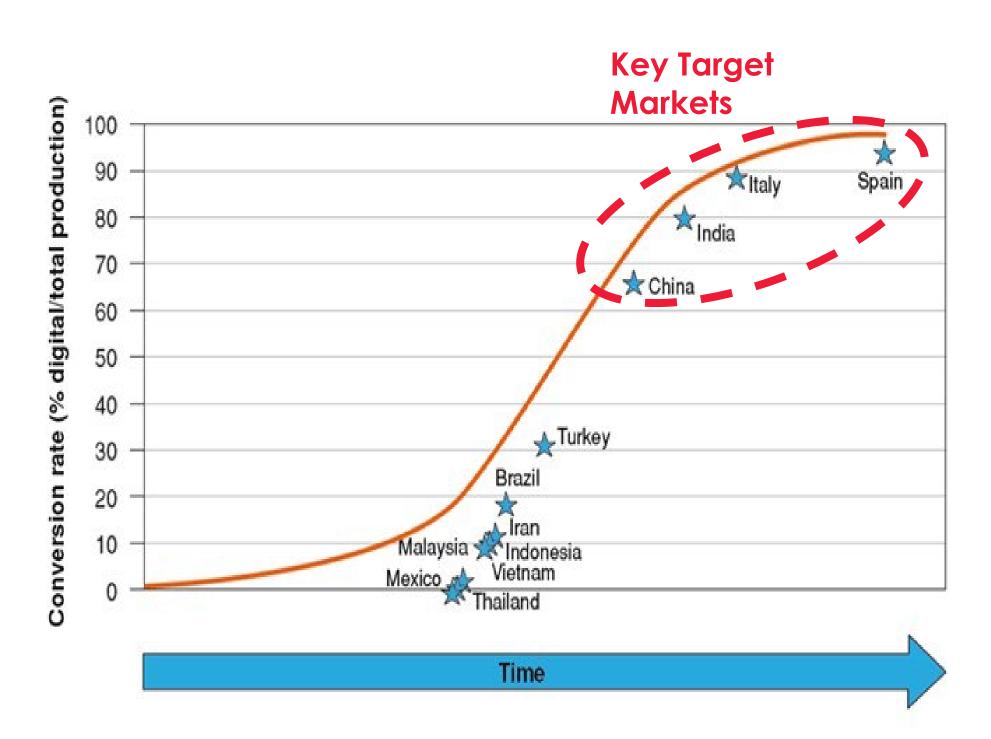
 Participation in pre-FID funding raises Contribution towards funding requirements following FID, including potentially as a cornerstone equity investment or via the provision of working capital

Concentrates Titanium Oxide  $(TiO_2)$ 

## **Global Markets - India**

Favourable freight rates and free trade<sup>1</sup> agreement make India an attractive market

- Second largest ceramics market in the world<sup>2</sup> ٠
- Ceramic tile production in 2024 forecast to be 3.3 ٠ billion square metres, with CAGR of 9-10%
- India's growth is supported by it being the world's • most populous country, having recently surpassed China
- Average economic growth rate of 5.5% p.a. over the ٠ past decade
- India has overtaken the United Kingdom to become • the world's fifth largest economy



Source: Ferrari (2016).

<sup>1</sup> Australia-India Economic Cooperation and Trade Agreement (ECTA): https://www.dfat.gov.au/trade/agreements/in-force/australia-india-ecta <sup>2</sup> India, Ceramics Tile Market, MECS, Edition Year 2022-23



## India – Heads of Agreement signed with Opaque Ceramics Discussions on distribution of Great White CRM<sup>TM</sup> and new product development

### Sale and Distribution of Great White CRM<sup>™</sup>

- 5,000-10,000 wmt p.a. of Great White CRM™ •
- For direct sales and distribution into the ceramic tile, ceramic glaze, porcelain tableware and sanitaryware markets in India
- Potential to target other markets, including Bangladesh, Sri Lanka, Middle East, Saudi Arabia and Oman

### Opaque's existing range of zircon-based products used to opacify (whiten) ceramics:





### **New Product Development**

New product development, utilising an additional 5,000-10,000 wmt p.a. of Great White kaolin

Focus on expanding or enhancing Opaque's existing range of Opaque zircon-based products

Leveraging unique qualities of Great White kaolin, including high-brightness and its zircon replacement potential.

## Great White HRM<sup>™</sup> commercialisation Strategic Alliance Agreement signed with Hallett Group

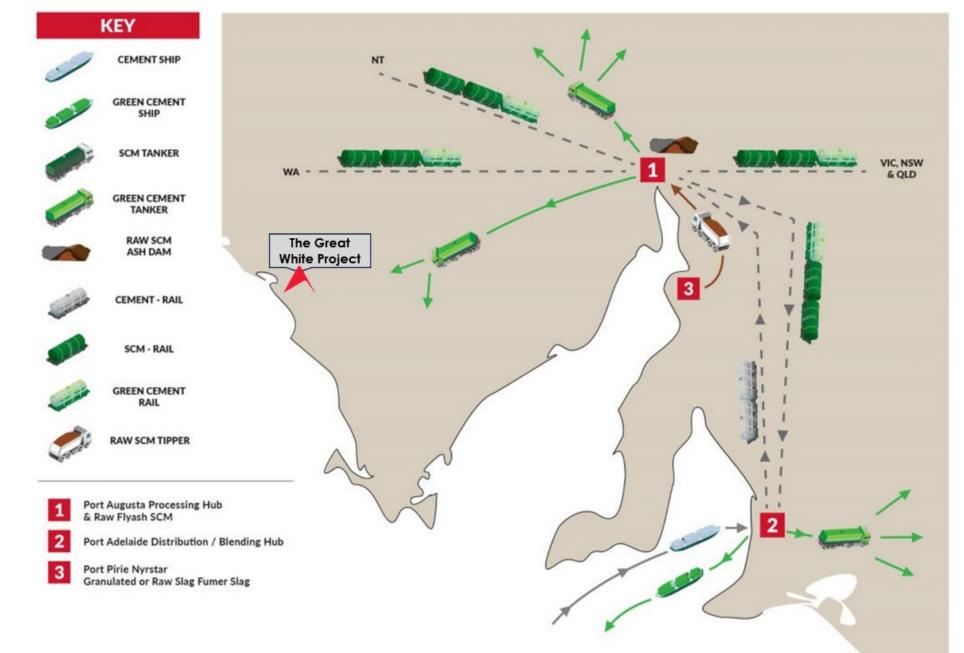
#### STRATEGIC ALLIANCE – Intent to commercialise Great White HRM™

- Develop the market in Australia for Great White HRM™
- Commercialise use of Great White HRM<sup>™</sup> in various applications, including reduced cement concrete, reduced fines concrete, improved performance shotcrete, backfill and other building products

#### HALLET GROUP

- Established in 1978, it has grown to become the largest integrated supplier of building and construction materials in South Australia
- A supplementary cementitious materials (SCM) company with a range of products focused on lowering the carbon footprint of concrete
- Potential to assist Hallett Group in:
  - Expanding market share in the markets for low carbon concrete, shotcrete and fines reduction concrete
  - Replacing some of the 300,000 tonnes of cement Hallett Group currently imports each year
  - Hallett Group's \$125 million Green Cement Transformation Project centred in Port Augusta
  - Formulations for the concrete supply industry, such as for the upcoming \$15 billion River Torrens to Darlington Project (T2D) major roadworks project undertaken by the South Australian Government

#### Hallett Group's Green Cement Transformation Project - with location of The Great White Project





## **Commercial Position**

Good progress towards a high-quality, sustainable, growing revenue line

CUSTOMER	Market / Region	Year 1	Year 2	Year 3	
Plantan Yamada	Japan	5	10	10	Binding Offtake Agreement
Foshan Gaoming	China	15	15	30	
IMCD	Australia/NZ	5	5	5	Term Sheet Agreement
Iberoclays	Mediterranean	15	20	20	Advanced Opportunity
Opaque Ceramics	India	7	15	15	
Traxys	Various	20	30	30	
Hallett Group	Australia				New Opportunity
TOTAL VOLUME TO BE CONTR	RACTED (tonnes)	67	95	110	



## Update on other projects

Divestment of non-core assets and tenements

### **Drummond Epithermal Gold Project**

- Sale to Trigg Minerals Limited COMPLETED
- 29.5 million shares (valued at \$295,000) allotted, as consideration and reimbursement of expenses and
- Upfront payment of \$27,000 in cash and a cash refund of \$7,500 in respect of the environmental bonds, received

### Wudinna Gold Project

- Agreement executed for sale of remaining 25% interest in relevant tenements to Cobra Resources Limited
- Consideration of \$500,000 in cash and \$1,000,000 in shares of • Cobra

### **Carbon Capture & Conversion Project**

- Andromeda retains ownership of Project intellectual property (IP) and business opportunity
- Strategic Review, conducted as part of revised Commercial Strategy, determined it as an Adjacent opportunity
- Carbon Capture Pilot Plant a decision has been made to recycle the contained steel
- Progressing discussions with potential suitable industry partners to determine most appropriate path forward

1. Refer to ASX Announcement 16 November 2023 'Chairlift Kaolin Deposit Mineral Resource Estimate'

### **Camel Lake Project**

### Chairlift Kaolin Deposit Mineral Resource Estimate<sup>1</sup>





• Remote location and access issues has led to a decision being made to allow the exploration rights of tenement to expire

• Inaugural combined Inferred Resource of 53.5 million tonnes (Mt): • 27.0 Mt of Bright White, low titanium kaolinised granite (Chairlift CRM) 26.5 Mt of rheology modifier kaolin (Chairlift HRM)

## Next Steps – H1 2024

Traxys	Progress discussions towards <b>binding agreements</b> for <b>financing arrangements</b> , including <b>potential cornerst</b>
Environmental Bond	Lodgement of <b>Environmental Bond</b> and payment into be paid in order to <b>access resource</b> in support of pro- <b>purposes</b>
Opaque Ceramics	Progress discussions towards <b>binding offtake agreeme</b> development and customer testing of new zircon-ka
Hallett Group	<b>HRM commercialisation</b> aligned with market opportu Hallett Group portfolio of projects – concrete, shotcre
Stage 1A+	<b>Cost/benefit analysis</b> of potential expansion from 50k based on <b>market demand</b> , including the inclusion of supporting a <b>higher level of debt</b>
Financing	Working towards <b>binding offtakes agreements</b> to lock <b>debt and equity funding mix</b>



## offtake commitments and one equity investment

### o Native Vegetation Fund are to oducing samples for marketing

ent for Great White CRM™ and olin product

unities in South Australia and ete, low-fines cement

(tpa to 100ktpa (Stage 1A+), India market, potentially

k in revenue that optimises the

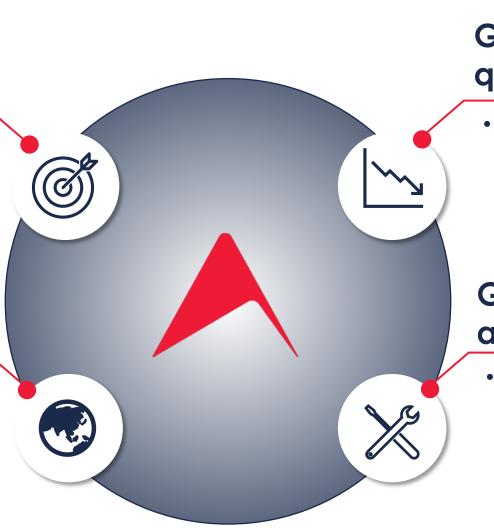
# Why "now"? Forces making "now" the right time for developing The Great White Project

### Unique, high quality, large resources

- Defined, very high value in use
- Clear view on target segments

### **TGWP** set for development

- Construction ready
- Required permits in place
- Progressing funding discussions





### Global depletion of highquality kaolin deposits

Porcelain tableware market

# Geopolitical forces impacting access to existing supply

Requiring new formulations for ceramic tiles with high value minerals



# Andromeda The Great White Mineral Company

For more information about the Company, please visit our website, <u>www.andromet.com.au</u> or contact:

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