

ASX ANNOUNCEMENT

AUSTMINE FUNCTION PRESENTATION

25 May 2022



Arafura Resources Limited (ASX:ARU) (“Arafura” or the “Company”) is pleased to attach a copy of its presentation for the Austmine CEO Leadership Luncheon. Mr Mark Southey, Chairman presented on the topic “Arafura- Reshaping the Critical Minerals Supply Chain”.

-ENDS-

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“Our goal is to be a trusted global leader and supplier of choice for sustainably mined and processed rare earth products, helping our customers deliver clean and efficient technologies. We are committed to delivering positive intergenerational economic, environmental and social benefits to our stakeholders.”

Arafura – Reshaping the Critical Minerals Supply Chain

Austmine Event
May 2022





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Mineral Resources and Ore Reserves

The information in this presentation that relates to Mineral Resources is extracted from the Company's ASX announcement dated 7 June 2017 (Detailed Resource Assessment Completed) and was completed in accordance with the guidelines of the JORC Code (2012). The information in this presentation that relates to Ore Reserves is extracted from the Company's ASX announcement dated 16 March 2020 (Major Increase in Mine Life for the Nolans Project) and was completed in accordance with the guidelines of the JORC Code (2012). Arafura Resources confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the original market announcements continue to apply and have not materially changed. Arafura Resources confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Production Targets and Forecast Financial Information

The information in this presentation that relates to production targets and financial information is extracted from the Company's ASX announcement dated 11 May 2021 (Nolans Project Update). The production target is based on 12% Proved Reserves, 62% Probable Reserves and 26% inferred resources as reported in the Company's ASX announcement dated 11 May 2021. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised. Arafura confirms that all material assumptions underpinning the production target and forecast financial information derived from the production target set out in the Company's ASX announcement dated 11 May 2021 (including any assumptions referred to in the Company's ASX announcement dated 11 May 2021 that were used from the DFS as set out in the Company's ASX announcement dated 7 February 2019 (Nolans Project Definitive Feasibility Study) or from the Updated Mining Study as set out in the Company's ASX announcement dated 16 March 2020 (Major Increase in Mine Life for the Nolans Project)), continue to apply and have not materially changed.

Corporate Snapshot



Arafura's Vision

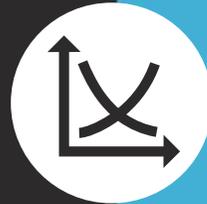
To be the **trusted, leading rare earths partner** of customers in the high impact technologies and **enduringly lift the sustainability of our planet**



Nolans is a **shovel-ready world class NdPr project** in the Northern Territory



NdPr is the key input for high performance **NdFeB permanent magnets**

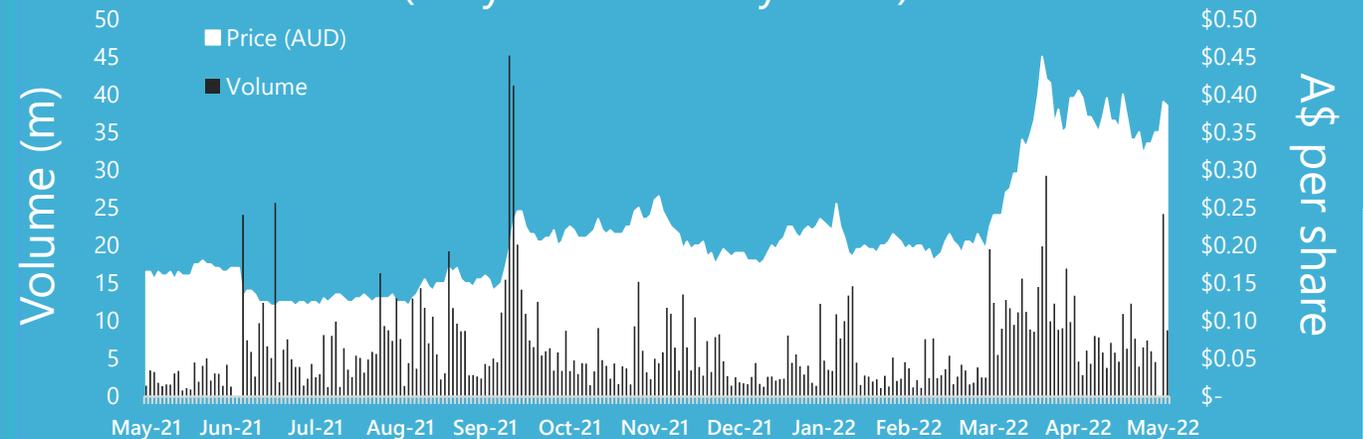


Production is aligned with forecast **supply shortage**

Capital Structure	
ASX Code	ARU
ASX Share Price (20 May 2022)	\$0.385
Shares on Issue	1,550m
Market Capitalisation	\$565.91m
12 Month Liquidity	\$367.39m
Cash*	\$33.50m
Debt	Nil
Enterprise Value*	\$563.41m

**Data based on 31 March 2022 Quarterly Report*

Share Price Performance (May 2021 to May 2022)

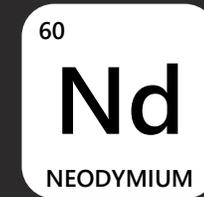


(ASX:ARU)

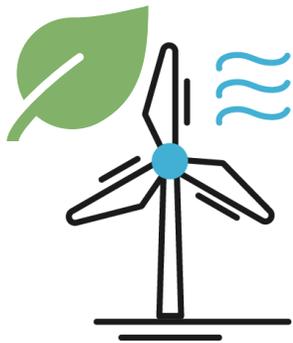
Nolans Project

is the only NdPr focused project in Australia that plans to mine and process ore to oxide at a single site.

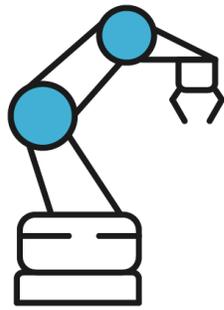
The Nolans Project contains all the Rare Earths but is particularly enriched in the 'Magnet Feed' Rare Earths NdPr



The fastest growing market for NdPr Oxide is in **NdFeB Magnets**. They help make everyday items smaller, lighter, mobile, more efficient and more affordable.



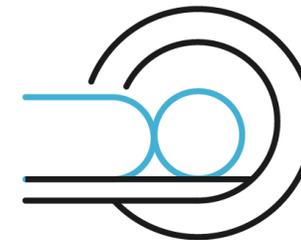
WIND
TURBINES



ROBOTS



ELECTRIC
VEHICLES



MRI
MACHINES



PHONES &
TABLETS



(ASX:ARU)

Markets & Offtake

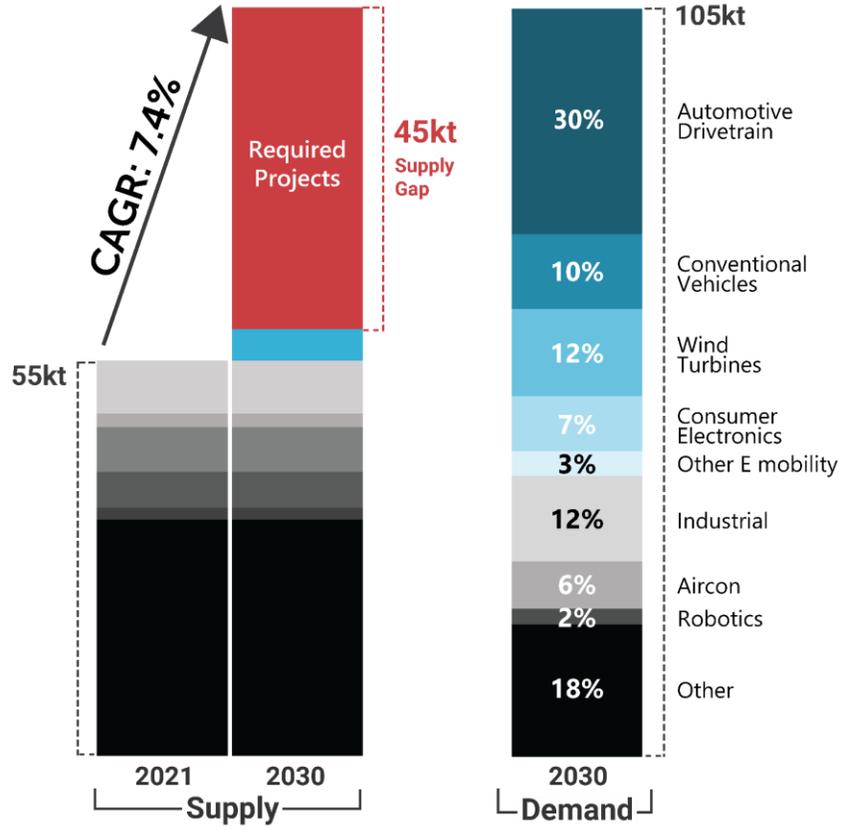


NdPr Supply Gap

Investment in new projects is required to meet demand requirements

- ✓ New supply will lag significantly behind demand growth and only a handful of non - China NdPr projects will be in production in the next 5 years
- ✓ Tighter regulatory and policy controls will constrain China's ability to expand at the same pace and open new mines after a decade of environmental legacy issues
- ✓ China supply growth supports its own China 2025 strategy and downstream industry demand growth in Wind and NEV
- ✓ A secure NdPr supply is the cornerstone of ex-China manufacturing during a decade of growing resource scarcity, bottle-necks and geopolitical tension

NdPr Supply & Demand



Forecast supply gap emerging by 2030 represents in excess of **10 Nolans Projects**

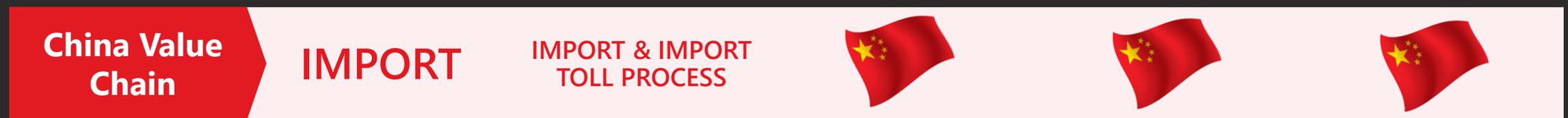


Cumulative Annual Growth Rate (CAGR)



Source: Arafura internal Supply Demand forecast referencing Wood Mackenzie - Rare earth market Outlook to 2050, 2021; CRU - Rare Earth Market Study, 2020; General Administration of Customs of China via Baiinfo January 2022. Supply is primary supply and excludes secondary source of NdPr supply from waste magnet production.

Strategic Importance of Producing an Oxide



1

2

3

4

5

China currently exerts control over most of the global rare earth supply chain. Projects not producing Oxide risk falling into the *Made in China 2025* supply chain.

Arafura plans to produce Oxide in Australia to provide **supply security that will meet sustainability objectives.**

Nolans offtake strategy focused on parties **not aligned with the *Made in China 2025* strategy.**

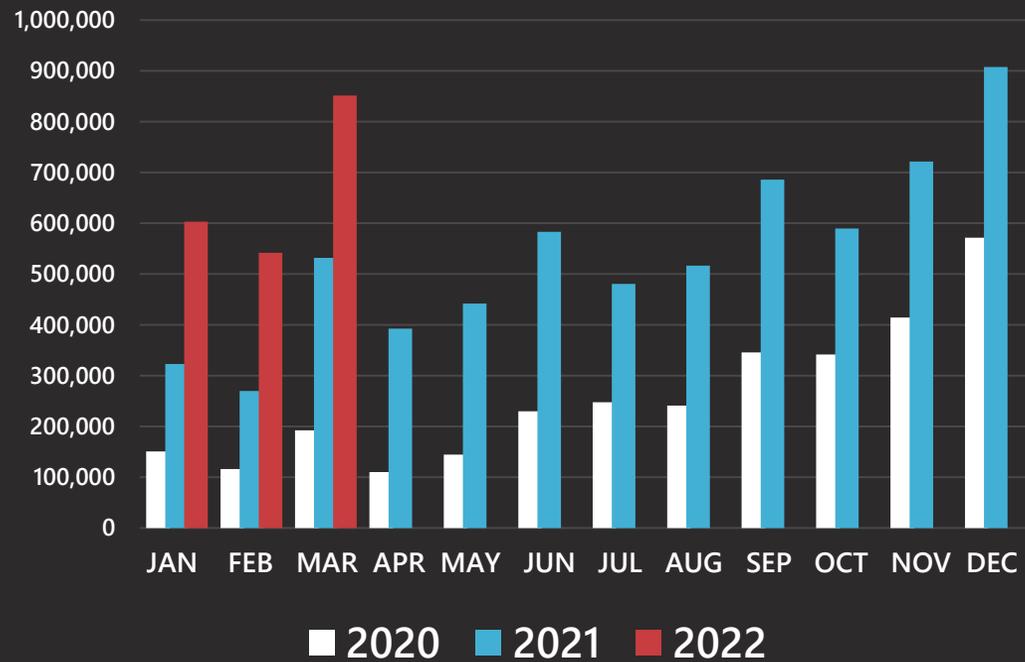
Governments around the world are seeking to partner in opportunities to **diversify the supply chain to prevent disruption.**

Nolans **ore to oxide business model** allows Critical Raw Materials (CRM) supply diversification



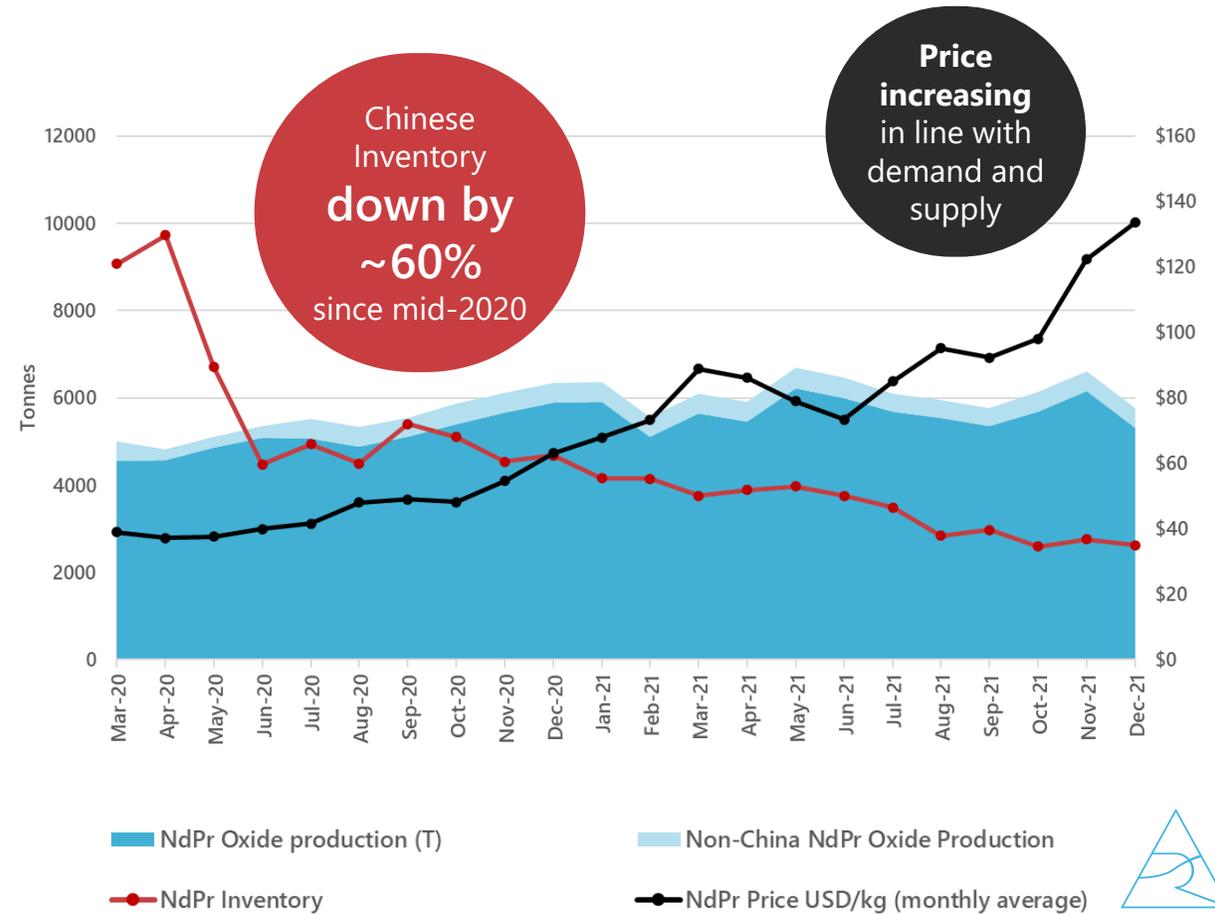
Global EV Sales (BEV+PHEV)

EV sales increased from 3.2 million in 2020 to 6.4 million in 2021 with 2022 showing even more growth.



Source: EV Volumes, Inside EV

NdPr Price Rise



Source: Lynas, BAINFO, Asian Metals

Reference: General Administration of Customs of China via Baiinfo Oct 2021



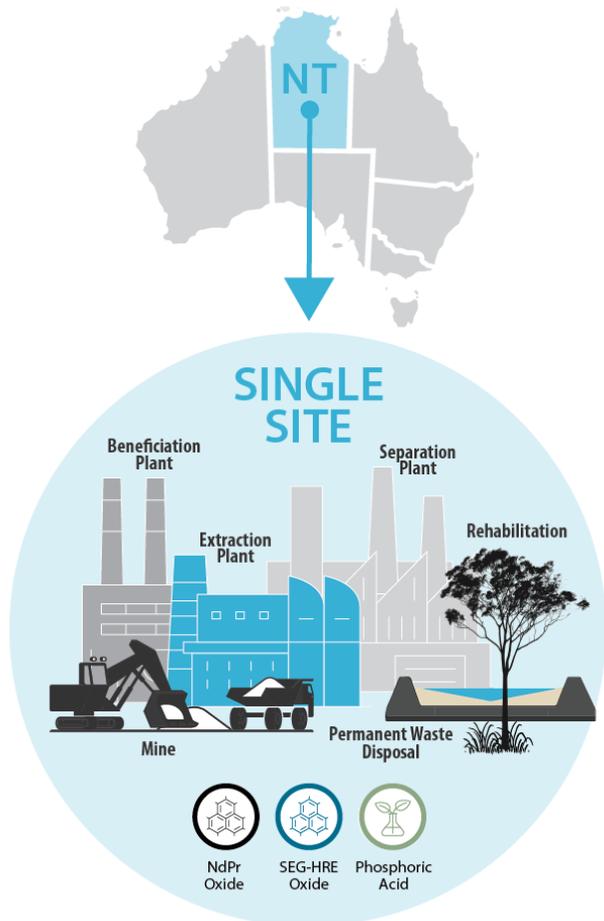
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Nolans Project Overview



Key Facts

Advanced manufacturing onsite
– Ore to oxide at Single Site –
First of its kind in Australia



Nolans aims to supply
~5% of global demand for
NdPr oxide

- ▶ De-risking Costs - FEED commenced August 2021 targeting completion mid 2022.
- ▶ Fixed price EPC contracts for majority of CAPEX.



**30-month
construction
period**

- ➔ \$1 billion initial capital spend
- ➔ Peak workforce of 620



**Minimum
38-year
operational
life**

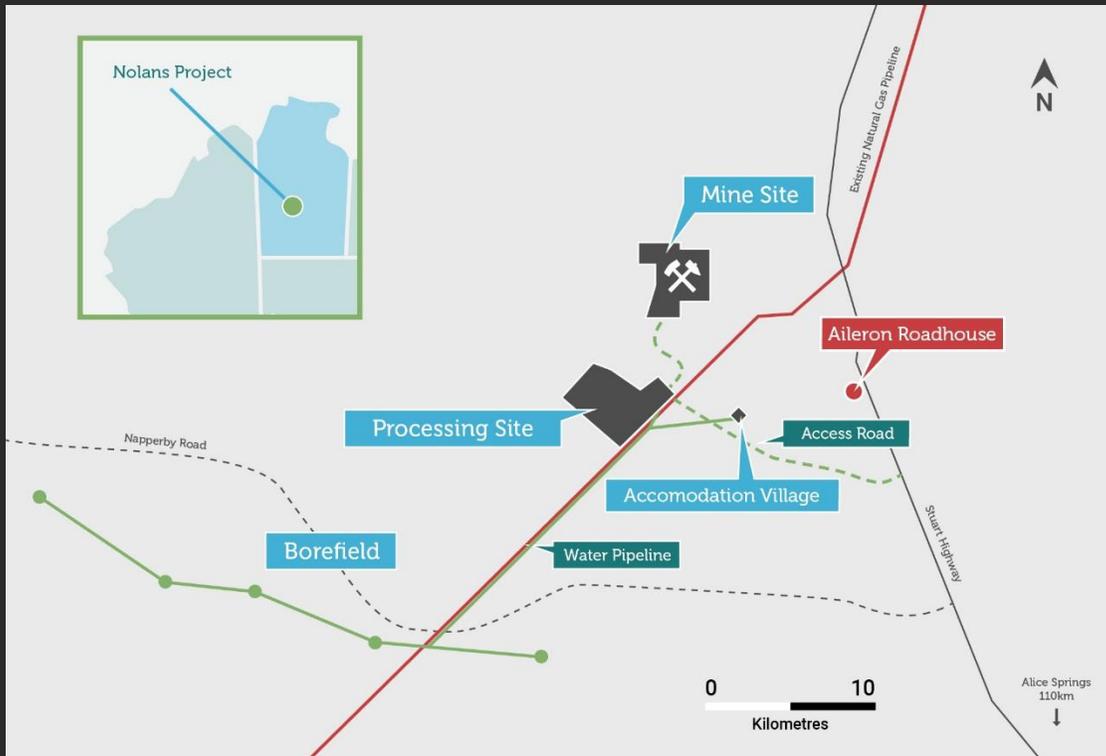
- ➔ \$225 million annual spend
- ➔ 280 direct permanent jobs
- ➔ Expansion potential – open at depth



(ASX:ARU)

Close to existing key infrastructure

- ✓ Stuart Highway 10 km east
- ✓ Water supply 25km southwest
- ✓ Alice Springs railyard, airport and other services 135km south
- ✓ Amadeus natural gas pipeline- adjacent to project site
- ✓ Tailings and process wastes at site



Long Life Asset

RESOURCES	TONNES (m)	RARE EARTHS TREO %	PHOSPHATE P ₂ O ₅ %	NdPr ENRICHMENT %
Measured	4.9	3.2	13	26.1
Indicated	30	2.7	12	26.4
Inferred	21	2.3	10	26.5
TOTAL	56	2.6	11	26.4

As announced on 7 June 2017. 1% TREO cut-off grade. Numbers may not compute exactly due to rounding. "NdPr enrichment" is the proportion of TREO comprising Nd₂O₃ and Pr₆O₁₁.

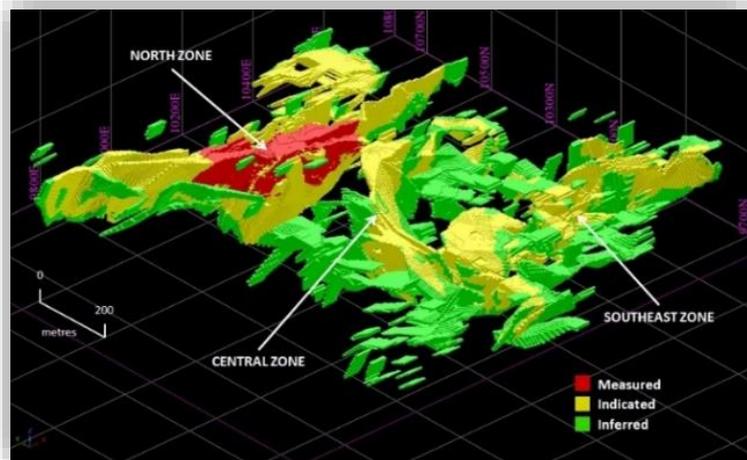
RESERVES	TONNES (m)	RARE EARTHS TREO %	PHOSPHATE P ₂ O ₅ %	NdPr ENRICHMENT %
Proved	5.0	3.0	13	26.2
Probable	24.6	2.8	13	26.5
TOTAL	29.5	2.9	13	26.4

As announced on 16 March 2020. Numbers may not compute exactly due to rounding. "NdPr enrichment" is the proportion of TREO comprising Nd₂O₃ and Pr₆O₁₁.

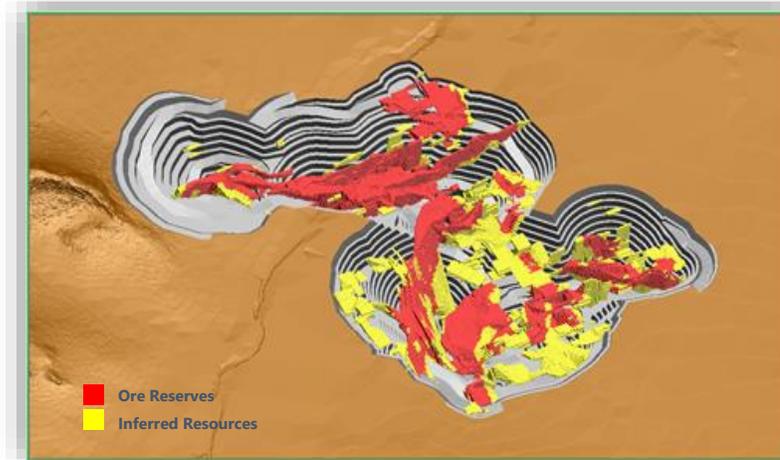
NdPr rich & open at depth

- ✓ Over 90km drilled to define and classify material types
- ✓ 29 year Ore Reserves
- ✓ 38 year Mining Inventory
- ✓ Single pit
- ✓ Expansion potential

Mineral Resources



Ore Reserves



Project Economics

Mining and Production		
Mine Life (years)	38	
NdPr Oxide (tpa)	4,440	
SEG/HRE Oxide (tpa)	474	
Phosphoric Acid (tpa 54% P ₂ O ₅ MGA)	144,393	
Financial	US\$	A\$
Capital Cost (\$m)	837	1,150
NdPr Oxide (US\$/kg)	US\$87/kg	120
Rare Earth Sales Revenue (\$m/pa)	388	534
Phosphoric Acid Sales Revenue (\$m/pa)	58	79
Mining Costs (\$m/pa)	(30)	(42)
Processing Costs (\$m/pa)	(105)	(145)
General and Administration Costs (\$m/pa)	(15)	(21)
EBITDA (\$m/pa)	257	354
KPI Analysis	US\$	A\$
Operating Cost \$/kg NdPr	33.91	46.60
Operating Cost \$/kg NdPr net of P ₂ O ₅ credit	24.76	34.06
NPV ₈ after tax (\$m)	1,011	1,402
IRR after tax (%)	18.1%	

The Project Economics table is based on the assumptions and estimates set out in the Nolans Project Update (refer Project Update ASX Announcement dated 11 May 2021), which also utilises a long-term NdPr oxide price assumption of US\$87/kg notwithstanding that the significant increases in NdPr pricing since the Project Update. Average production and costs are calculated as the arithmetic annual average following the anticipated two year ramp up and excluding the final years of production from low grade stockpiles. The Company has made preliminary observations in relation to a number of factors that may have an impact on the cost of the Nolans Project (refer March 2021 Quarterly Report ASX Announcement dated 29 April 2022). The extent of any potential impact will continue to be monitored as part of the FEED process. The Company will provide an update to ASX on any material changes once an overall assessment of the impact has been completed, prior to FID

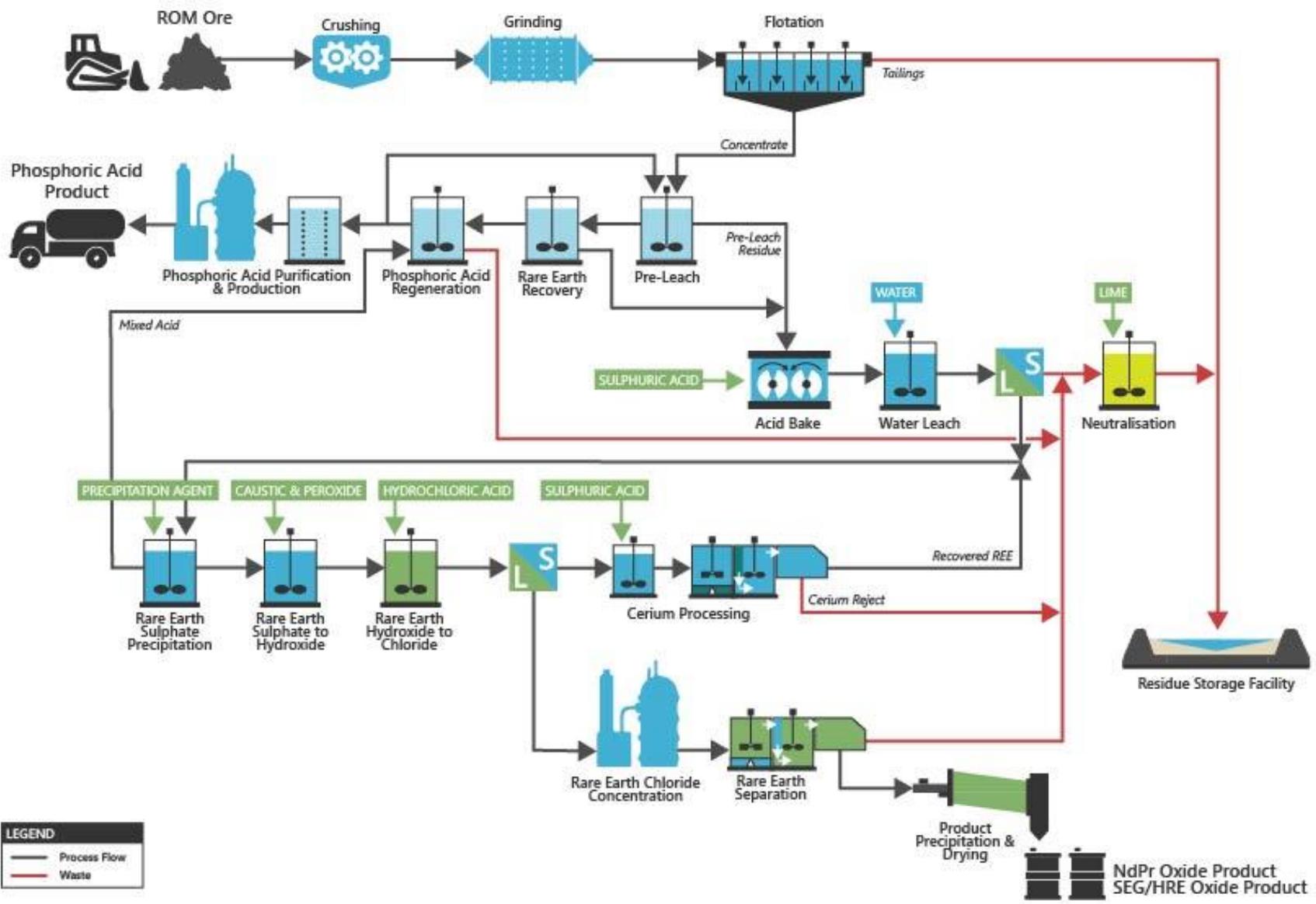
Robust economics based on long term NdPr price of **US\$87/kg**

Current price US\$140/kg*

- ✓ **Post-tax NPV₈ of A\$1.4 billion and IRR of 18.1%**
- ✓ **Capital cost A\$1,150m when including full acid plant upfront**
- ✓ **Annual average EBITDA of A\$354m**
- ✓ **Low-cost producer at US\$24.76/kg NdPr**
- ✓ **Single site advantage**

* Shanghai Metals Market (23 May 2022)

Process Flowsheet



(ASX:ARU)

Shovel Ready



Regulatory



Security of Tenure & Social License to Operate



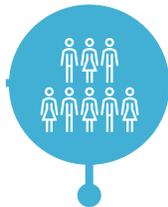
Technical



Commercial

- ✓ Customer verification of oxide products
- ✓ Australian Government provide conditional letters of support for \$300M in debt
- ✓ \$30m Grant awarded under the Federal Government’s Modern Manufacturing Initiative (MMI).
- ✓ Joint statement of cooperation signed with Korea Mine Rehabilitation and Mineral Resources Corporation KOMIR
- ✓ Mandated lead debt arrangers appointed to arrange debt financing facility
- ✓ Offtake MoU with Hyundai Motor Corporation for up to 1,500tpa NdPr Oxide
- Other offtake engagement well advanced

Progress Towards Construction



Arafura's Owners' team including personnel from KBR and Wave ramping up



Hydrometallurgical Plant FEED commenced August 2021



Non-Process Infrastructure FEED early works progressing



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Project Funding



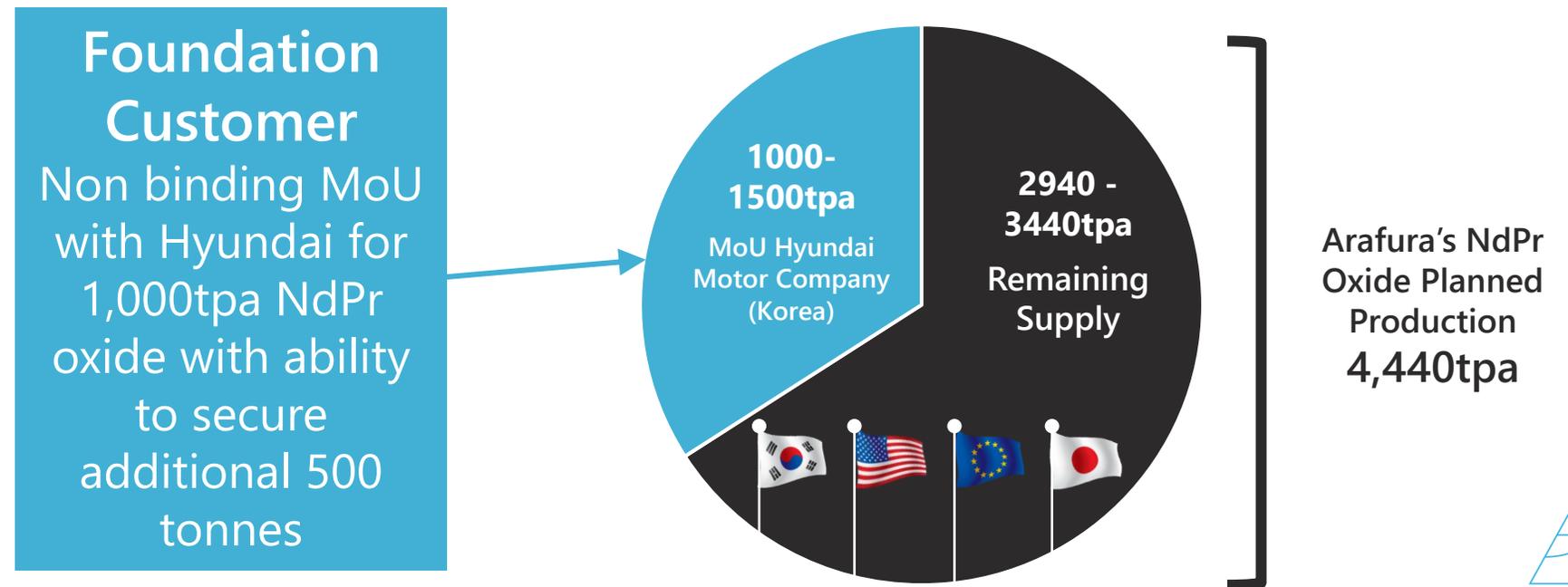
Offtake Strategy

Current indicative sales opportunities				MoUs	
USA	Europe	Japan	Korea	Korea	China
~9,225tpa of NdPr Oxide				1000-1500tpa	1,800tpa ²
Original Equipment Manufacturers (OEM), Wind Turbine Manufacturers, E-Motors, Magnets				MoU Hyundai Motor Company	MoU JingCi Material Science MoU Tianhe Magnetics

1/3 Planned Production under MoU with Hyundai



Arafura is in discussions with more than **10 parties** for **>260% of Planned Production¹** with a view to **secure 85% as binding offtake**



Targeting NdPr users not aligned with *Made in China 2025* strategy



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1. Planned Production refers to the average annual production from Nolans of 4,440 tpa (Refer ASX Announcement dated 11 May 2021).
 2. Volumes allocated to China may be reduced where offtake is secured in other jurisdictions. Arafura will keep the market informed of entry into any binding offtake arrangements.

Flagship Project with Strong Government Support

Major Project Status: Formal recognition of the national strategic significance of the Project through its economic and employment contribution to the Northern Territory.



Critical Minerals Strategy implemented by the **Critical Minerals Facilitation Office (CMFO)** which supports the development of resources, downstream processing and global supply chains.

Critical Minerals Facility of \$2Billion managed by **Export Finance Australia (EFA)** 10-year program or until finance equivalent to \$2 billion provided.

The Northern Australia Infrastructure Facility (NAIF) offers up to \$5 billion over 5 years in finance to encourage and complement private sector investment in infrastructure that benefits Northern Australia.

Modern Manufacturing Initiative (MMI) dispensing \$1.3B in grants to build scale in manufacturing and supply chain opportunities
Priorities in critical mineral processing and clean energy



**Flagship Project:
Strong Support**

**Letter of Support
\$200m**

**Letter of Support
\$100m**

**Awarded
\$30m**

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Targeted Funding Structure

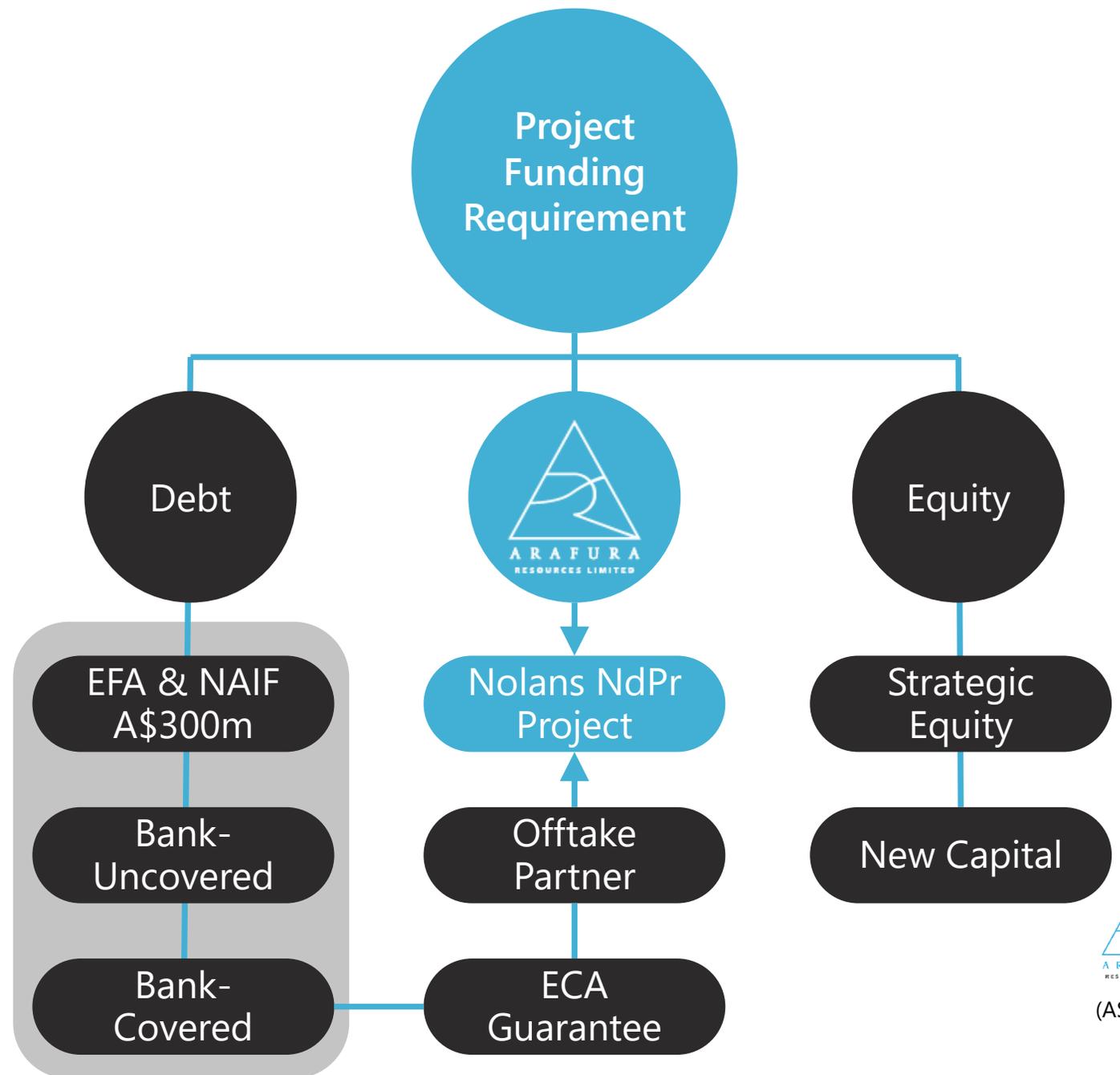
Debt

- ✓ Commercial lenders appointed to lead the DD process and the structuring of the transaction
- ✓ NAIF & EFA will support A\$300m of debt subject to further DD and credit approval
- ✓ Offtake drives the participation of untied ECA funding

Equity

- ✓ \$30m MMI Grant reduces Equity component
- ✓ Strategic Equity considered by potential offtake partners

*Lead mining project finance institutions
Societe Generale and National Australia
Bank appointed as mandated lead
arrangers*



Environment, Social, Governance



ESG Leadership

Key Pillars

 Supply Chain Integrity

 Emissions

 Waste and Water

 First Nations



*"Arafura's ESG commitment is to be a trusted global leader and **supplier of choice** for **sustainably mined and processed rare earth products**, helping our customers deliver clean and efficient technologies. We are committed to delivering positive intergenerational economic, environmental and social benefits to our stakeholders."*

Key Initiatives



**Best Practice
GHG Emissions &
Water
Management**

Net Zero Commitment
Pursuing deep renewable energy and storage integration into plant design
Water reduction strategy



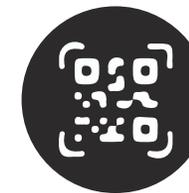
**Sustainability
Reporting**

Phase 1: 2021 report meets global ESG ratings agencies and reporting standards
Phase 2: accelerating to best practice for production phase through metric-based continuous assessment, disclosure and systems
Aligning to TCFD, GRI etc.



**IRMA Pending
Member**

Completed the IRMA Ready Pilot Program testing.
On launch will complete the IRMA Ready Certification standard



**Traceability –
Blockchain
Technology**

Aligned with customers' best practice ESG expectations
Allow tracing of Nolans sustainably produced products through entire supply chain to customers



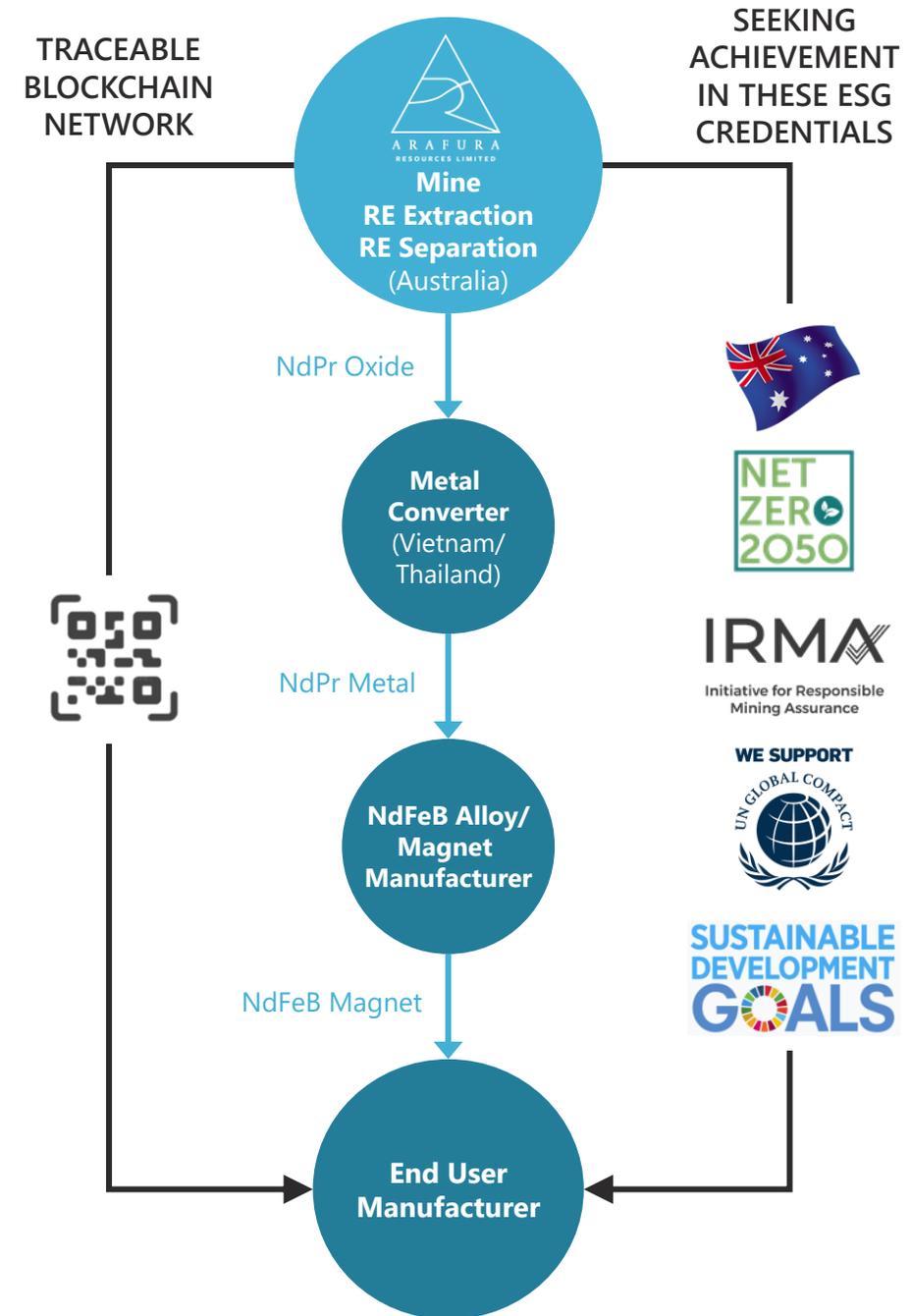
**Innovation and
Technology**

Downstream value add opportunities
Commenced Study on low-carbon metallisation process
Progressing study into Hydrogen integration into plant and operations

Supply Chain Integrity

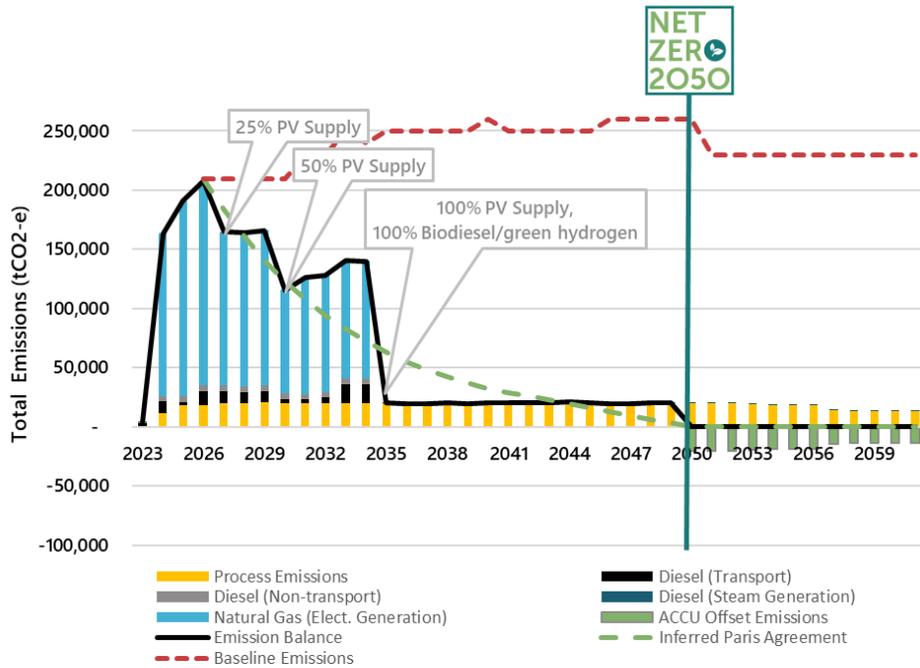
Transparent, traceable NdPr supply

- 1** Ore to NdPr oxide processing at the project site establishes a product supply chain that is traceable, otherwise difficult to achieve if an intermediary product was produced for the China value chain.
- 2** A high level of transparency throughout the supply chain can facilitate the use of blockchain technologies to capture and secure data as the product is refined to a final NdFeB magnet.
- 3** With confidence customers can validate and be assured the rare earth materials purchased and used in their NdFeB magnets are from Arafura – A global leader for sustainably mined and processed rare earth products.

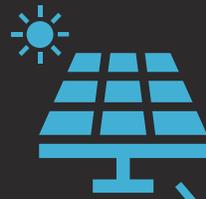


Emissions

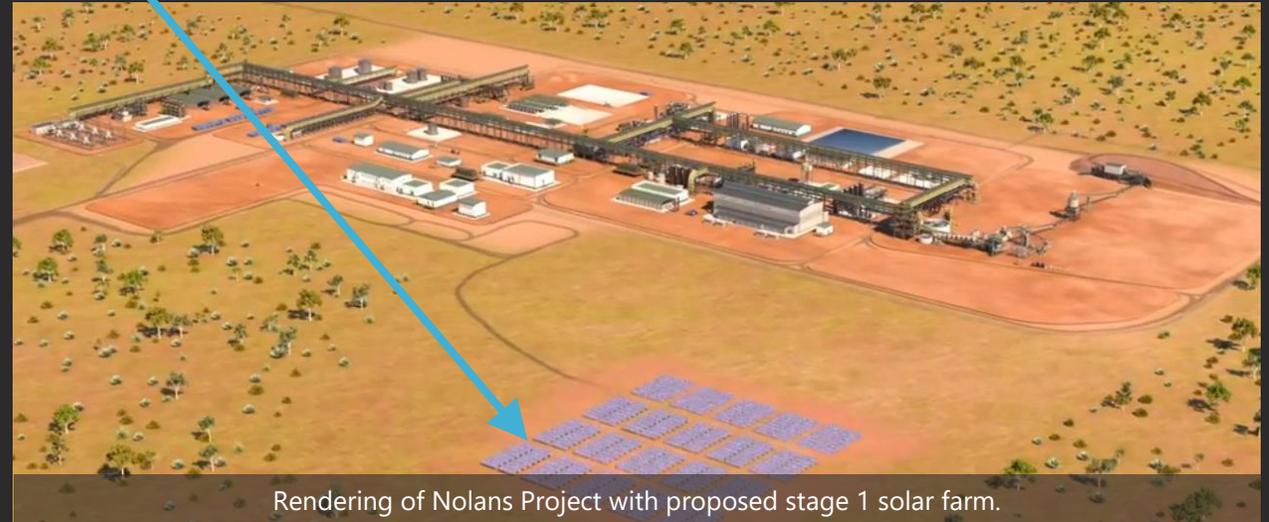
Leading edge CO₂ Reduction Strategy



- Exploring multiple emission abatement models aligned with Science Based Targets initiative (SBTi)
- World Class solar resource and prospective wind resource on site
- Gas consumption substituted over project life with renewable energy, storage and renewable fuels



Stage 1 solar farm with potential to generate 1 megawatt (MW) of power per hectare.



Rendering of Nolans Project with proposed stage 1 solar farm.

- Proposed staged development to substitute 100% of electricity generation from natural gas to PV solar with the expectation of future deployment of stationary energy storage with developing technologies.
- 75% of GHG emissions from natural gas for electricity generation, 9% from natural gas for process use.
- Assessing technologies to substitute process gas for steam including solar steam, hydrogen

Waste and Water

Approved End to end Management

- ✓ Approved end to end waste management solution
- ✓ Waste rock dumps designed to “encapsulate” naturally occurring radioactive materials (NORM) rock at mine site
- ✓ Mine area surface water management captures sediment
- ✓ Residue storage facility (RSF) for containment of waste residue processed at site
- ✓ Progressive rehabilitation of RSF during Life of mine.



Arafura’s single site processing model provides traceable product and waste management systems which is aligned with customers’ ESG expectations.



Environmental Approval and Project Costing includes all costs for Waste Management System and Rehabilitation.

Rendering of Nolans Project Residue Storage Facility (RSF).



First Nations

Indigenous Engagement and Development

Best Practice Indigenous Engagement

- Extensive **Social Studies** conducted
- Community & stakeholder engagement
 - Engagement with local community & business
 - **Indigenous people & Traditional Owners**
 - All levels of government
 - Employment strategy developed
- **Health and Safety** to workforce & general public

- ✓ An agreement has been signed with the three native title holder groups over the Project through the Central Land Council (CLC)
- ✓ Local and Indigenous Procurement Plan in place
- ✓ Comprehensive long-term consultation



Committed to 20% Indigenous Employment Target



(ASX:ARU)



Contact Information



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Experienced Board



Mark Southey



Chris Tonkin



Quansheng Zhang



Cathy Moises



Darryl Cuzzubbo

NON-EXECUTIVE CHAIRMAN

Mark Southey has previously held senior executive positions with Honeywell and ABB both in Australia and internationally, and more recently was part of the global executive leadership team within WorleyParsons, where he held the position of Group Managing Director for the Minerals, Metals and Chemicals Sector. He is Chair of Arafura Resources' Remuneration and Nomination Committee and is a member of the Audit and Risk Committee.

NON-EXECUTIVE DIRECTOR

Chris Tonkin has over 35 years' experience as a senior business executive with a broad industry background in business generation, management, and strategy development. He is a member of Arafura Resources' Remuneration and Nomination and is the Chair of the Audit and Risk Committee.

NOMINEE DIRECTOR

Quansheng Zhang holds a Doctoral degree in Engineering and a Masters degree in Geophysical Prospecting. He is based in Nanjing in the Peoples Republic of China and is the General Manager of Hong Kong East China Non-Ferrous Mineral Resources Co Ltd (HKECE). Quansheng has over 30 years of mineral prospecting and exploration experience, and expertise in mineral resource surveys and geophysics.

NON-EXECUTIVE DIRECTOR

Cathy Moises has extensive experience in the resources sector having worked as a senior resources analyst for several major stockbroking firms including McIntosh (now Merrill Lynch), County Securities (now Citigroup) and Evans and Partners where she was a partner of that firm. More recently in 2017-2019, Cathy was Head of Research at Patersons Securities Limited. Ms Moises is also a non-executive director of WA Kaolin Limited and an advisory panel member for Argonaut Resources Fund.

NON-EXECUTIVE DIRECTOR

Darryl has over 30 years' experience in global roles in multi-commodity resources, services and manufacturing, holding both Senior Executive and Executive Director roles over a very successful career. He brings a wealth of knowledge and experience in both the resources and manufacturing sectors having run major operational assets and led the development and execution of significant breakthrough strategies to deliver major projects.

Experienced Management



Gavin Lockyer

MANAGING DIRECTOR

Gavin Lockyer's diverse, global experience has provided management and leadership opportunities in a range of disciplines including; Accounting, Financial & Investment Banking, Major Resource Development & Operations, and Global Bank Treasuries. Over the past 20 years his career has exposed him to business practices in North America, Europe, and Australasia.



Peter Sherrington

CHIEF FINANCIAL OFFICER

Peter commenced employment with Arafura in 2008 as Commercial Manager and was appointed Chief Financial Officer in July 2013. He has more than 20 years' experience in professional and corporate roles in Perth. Prior to working with Arafura, he held senior finance and commercial positions with several ASX and public unlisted entities. He has also worked in public practice for 10 years in the areas of business services and corporate advisory.



Stewart Watkins

GENERAL MANAGER PROJECTS

Stewart has over 30 years' experience in many facets of the mining industry including operations, engineering consulting, project development and management. This has included a wide range of roles including corporate and business management, business development, project/study management, process design, commissioning and process plant operation. Stewart is a Fellow of the AusIMM.



Lloyd Kaiser

GENERAL MANAGER SALES & MARKETING

Lloyd has more than 10 years' experience in the sales and marketing of industrial minerals into high value sector markets including the nuclear, automotive, and advanced ceramics sectors. Prior to joining Arafura, he held several senior positions in account management, business development and marketing across a diverse range of commodities and chemicals including alumina, coal, industrial minerals, refractories, and ceramics.