

# Sustainable Critical Materials





### **Disclaimer**



#### **Summary information:**

This document has been prepared by Neometals Ltd ("Neometals" or "the Company") to provide summary information about the Company and its associated entities and their activities current as at the date of this document. The information contained in this document is of general background and does not purport to be complete. It should be read in conjunction with Neometals' other periodic and continuous disclosure announcements lodged with the Australian Securities Exchange, which are available at www.asx.com.au.

#### **Forward-looking information:**

This document contains, opinions, projections, forecasts and other statements which are inherently subject to significant uncertainties and contingencies. Many known and unknown factors could cause actual events or results to differ materially from the estimated or anticipated events or results included in this document. Recipients of this document are cautioned that forward-looking statements are not guarantees of future performance.

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#### **Financial data:**

All figures in this document are in Australian dollars (AUD) unless stated otherwise.

#### Not financial product advice:

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#### **Investment risk:**

An investment in securities in Neometals is subject to investment and other known and unknown risks, some of which are beyond the control of Neometals. The Company does not guarantee any particular rate of return or the performance of Neometals. Investors should have regard to the risk factors outlined in this document.

#### **Compliance Statement:**

The information in this document that relates to Mineral Resource Estimates for the Barrambie Vanadium/Titanium Project is extracted from the ASX Announcement listed below, which is also available on the Company's website at <a href="https://www.neometals.com.au">www.neometals.com.au</a>.

17/04/2018 Updated Barrambie Mineral Resource Update

17/11/2022 Robust Outcomes From Barrambie Titanium Project PFS

The Company 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 market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

### Purpose









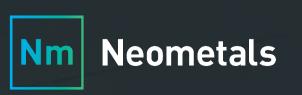
Chris Reed CEO

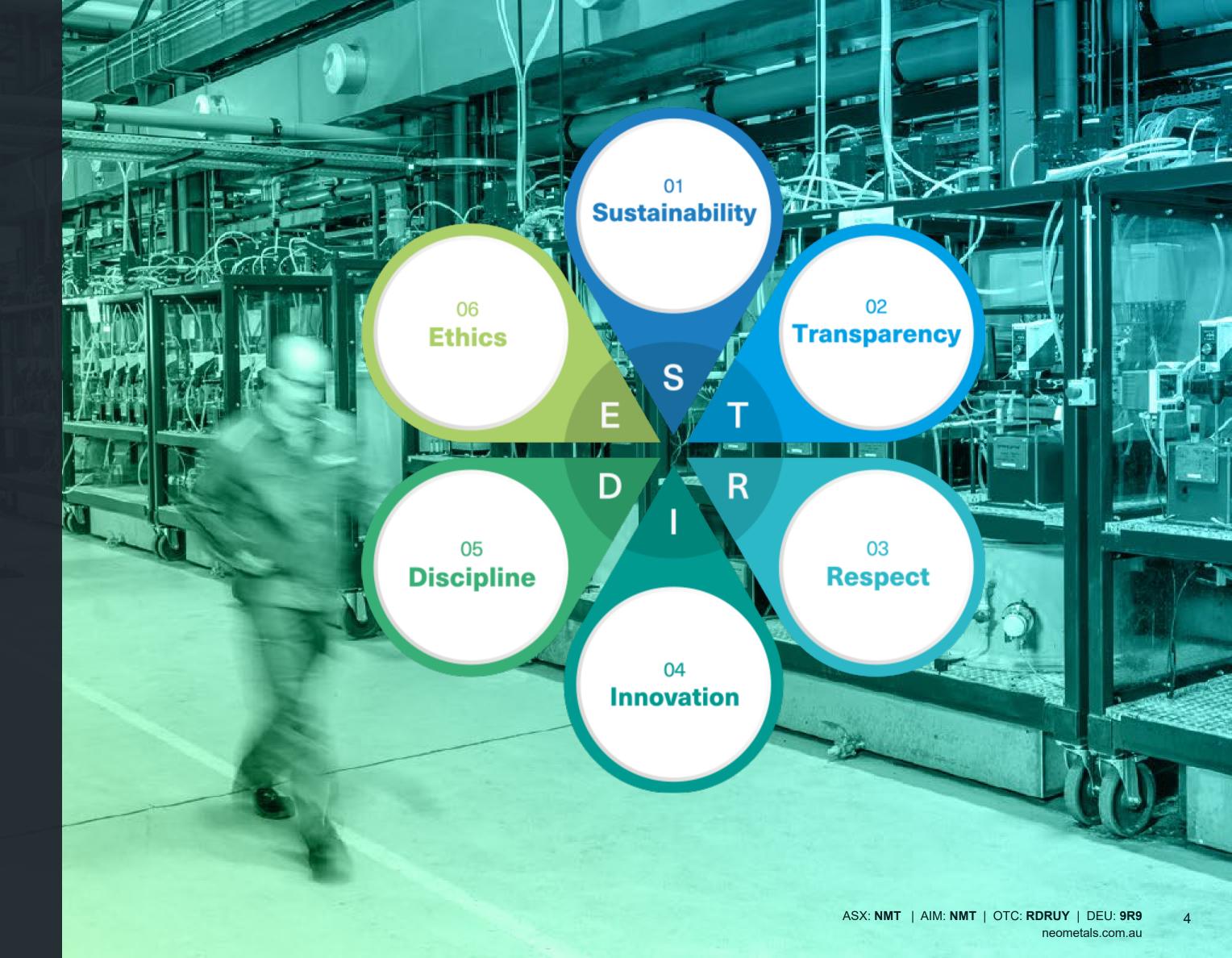




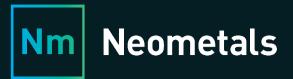
### Values

Our six core values underpin all the Company's activities and are reflected in the acronym STRIDE.



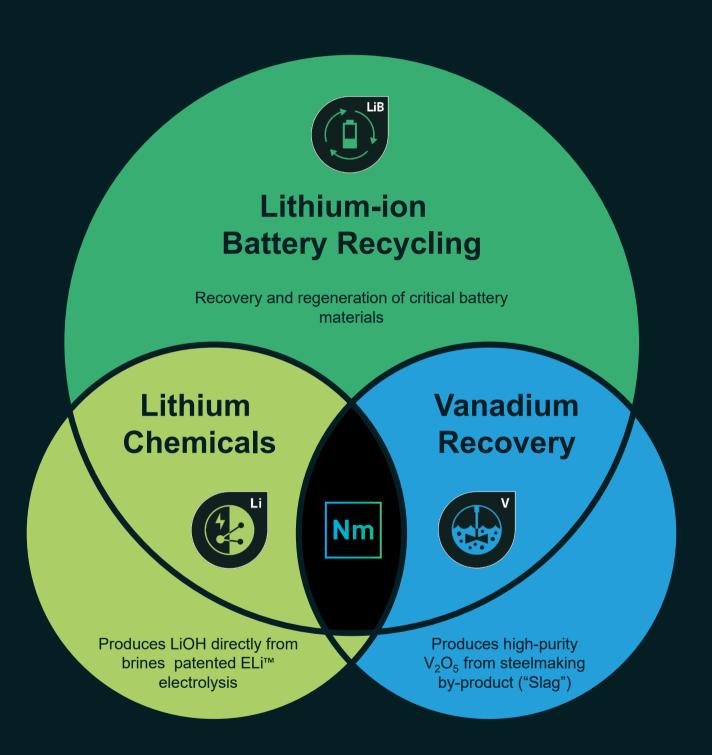


### Focus



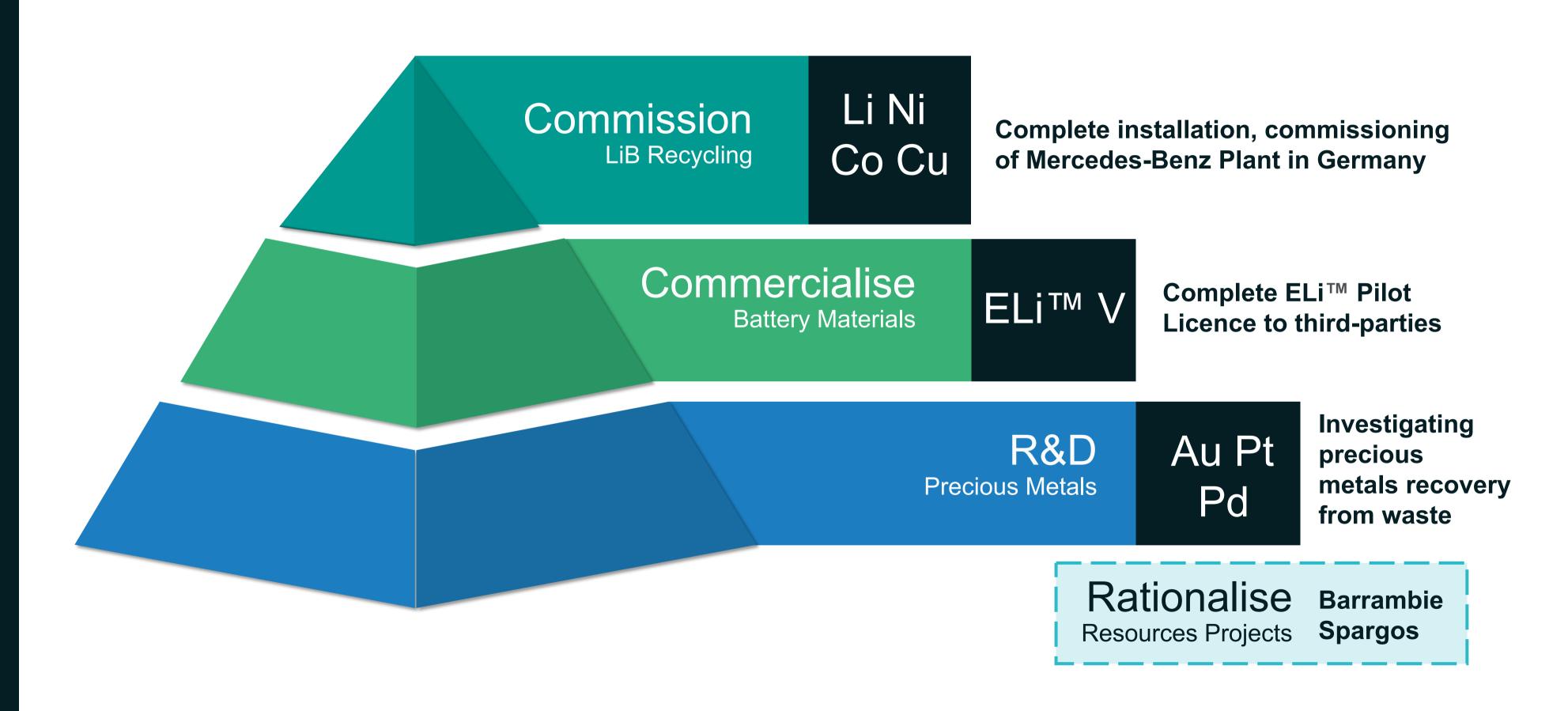
# Commercialising our portfolio of sustainable process technologies to recycle and recover critical materials from high-value waste streams

- Recycling and recovery reduces pollution and ecological footprint vs traditionally mined raw materials
- Demonstrating low-OPEX and carbon footprint at scale with strong partners and Tier 1 customers
- Enables compliance with future regulations to enforce more sustainable, domestic supply chains
- Growing portfolio of technology licences that will generate royalties from critical materials produced



### **2024 Tactical Plan**





### Nm Neometals

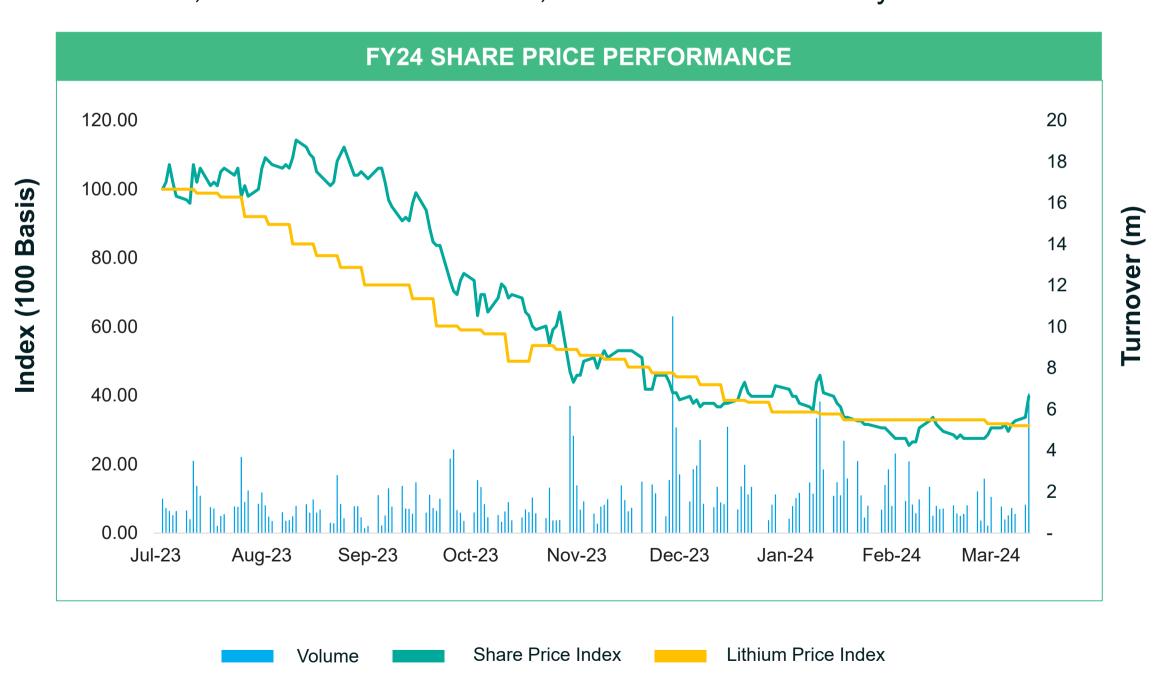
### **Corporate Dashboard**

ASX: NMT OTC: RDRUY		
Shares on Issue (1)	m	622.8
Share Price	A\$	0.20
Market Capitalisation	A\$m	124.5
Cash (31-Dec-23) (2)	A\$m	19.5
Debt (31-Dec-23) (2)	A\$m	_
Investments (31-Dec-23) (2)	A\$m	24.0

BROKER COVERAGE	
EURØZ HART Cavendis	

MAJOR SHAREHOLDERS (3)	
David Reed	5.1%
Institutional Holdings	10.8%
Top 20	28.8%
No. of Shareholders	13,608

Despite transitioning to operations and commencement of construction of first plant to Mercedes, our strong LT correlation (0.9) with lithium resulted in a year to forget. Recycling order book and revenues growing, lithium price forecast to rebound – we have been in lithium since 2009 and developed Mt Marion, this is not our first rodeo, it is the start of our 4<sup>th</sup> cycle.

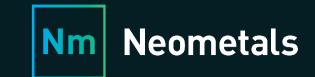


Notes: Market data as at 13 March 2024 (unless otherwise noted)

- 1. Excludes ~15.2m performance rights
- 2. See NMT DecQ Report. Investments includes Receivables
- 3. Sharetrack as at 29 February 2024 and Computershare as at 13 March 2024
- 4. Supporting information available at https://www.asx.com.au/markets/company/NMT

neometals.com.au

### **Capital Conservation**



#### **Right-Sized Teams**

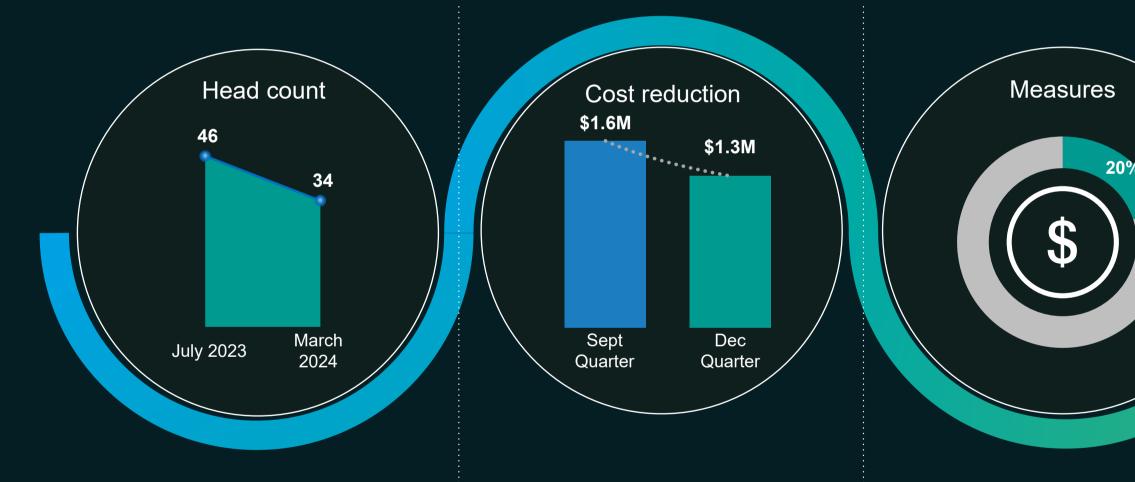
Streamlined resource use, maintaining lean, optimised team structure alignment.

#### **Reduce Overheads**

Strategic cost reduction initiatives yield significant administration and corporate savings.

#### **Austerity**

Directors agree to decrease director fees and KMP agree to forego STIs.



- Head count reduction from 46 as of July 1, 2023 to 34 on March 7, 2024 with reduced activities across non-core business units.
- A reduction in Administration and Corporate costs of 19% quarter on quarter.
- 20% reduction in NED fees from Jan 1, 2024.
- C-suite forego STIs for FY24

### Neometals Has the Right Team to Deliver



#### Experienced executives backed by a board of skilled specialists

#### **Board of Directors**



40+ years in legal consultancy, corporate management, and diverse board experience including roles at Matrix Composites, DGB Investment Funds Pty Ltd and Bilton Canning.

#### **Chris Reed** Managing Director/CEO



co-founded Reed Resources. Holds degrees in commerce and mineral economics. AusIMM member.

#### Dr. Natalia Streltsova Independent Non-Executive Director



PhD chemical engineer, 25+ years in minerals industry. Senior roles at WMC, BHP, Vale. International expertise. Non-executive director.

#### **Douglas Ritchie** Independent Non-Executive Director



Senior executive with 35+ years, notably with Rio Tinto. Extensive international corporate experience, including China.

#### **Dr. Jennifer Purdie** Independent Non-Executive Director



30+ years leadership across mining, energy, manufacturing **sectors.** Senior roles at Adani Renewables, Rio Tinto and Alcoa.

#### **Les Guthrie** Independent Non-Executive Director



40+ years experience in global corporate and project management. Notable roles at BHP, BG Group.

#### **Business Unit Heads**



#### Recycling



**Christian Reiche** Head of Recycling



RioTinto





\_ithium









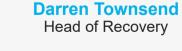
**Michael Tamlin** 

Head of Lithium



#### Recovery











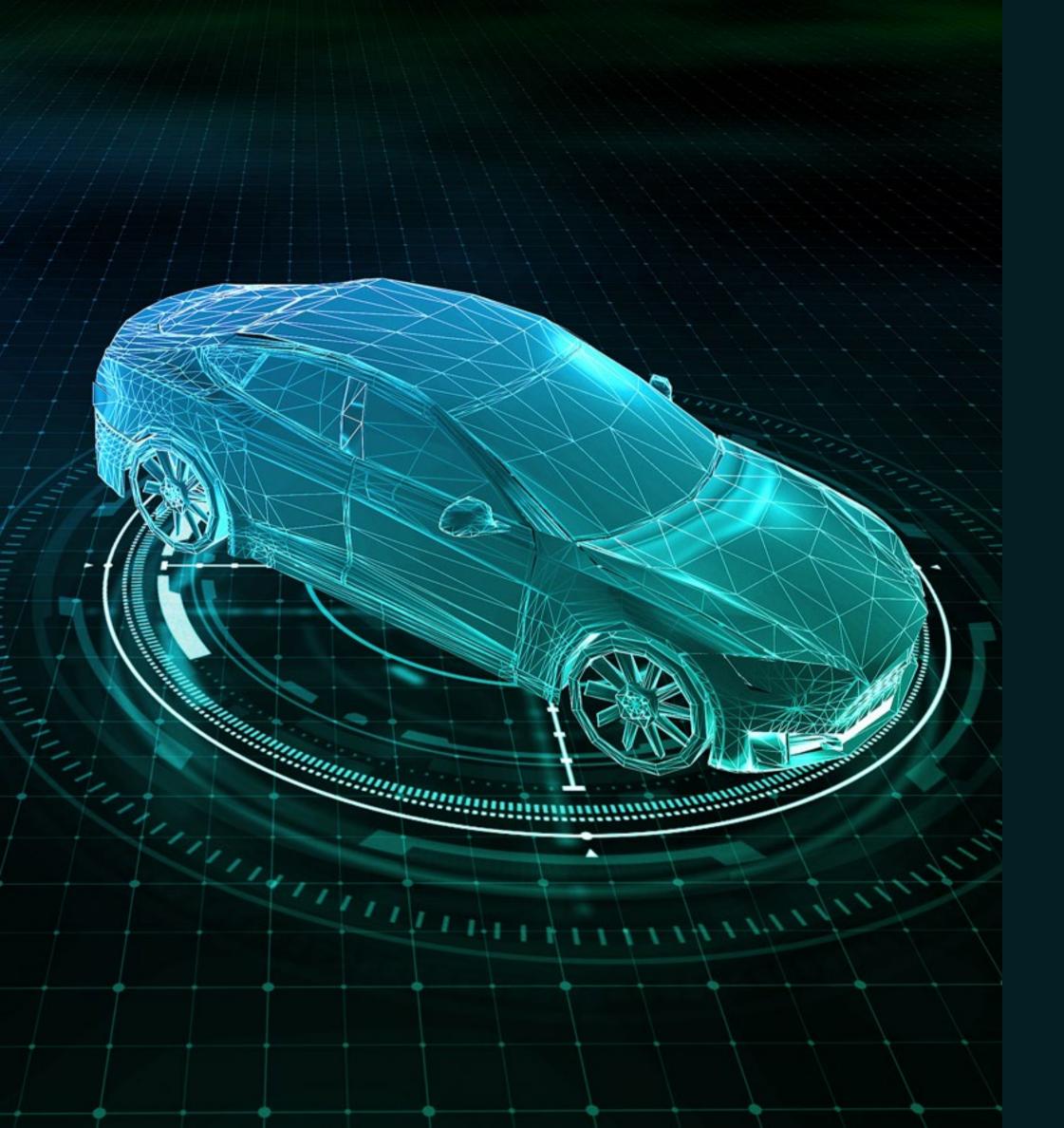
#### **CFO/Company Secretary**



**Jason Carone** CFO / Company Secretary









# Lithium-ion Battery (LiB) Recycling

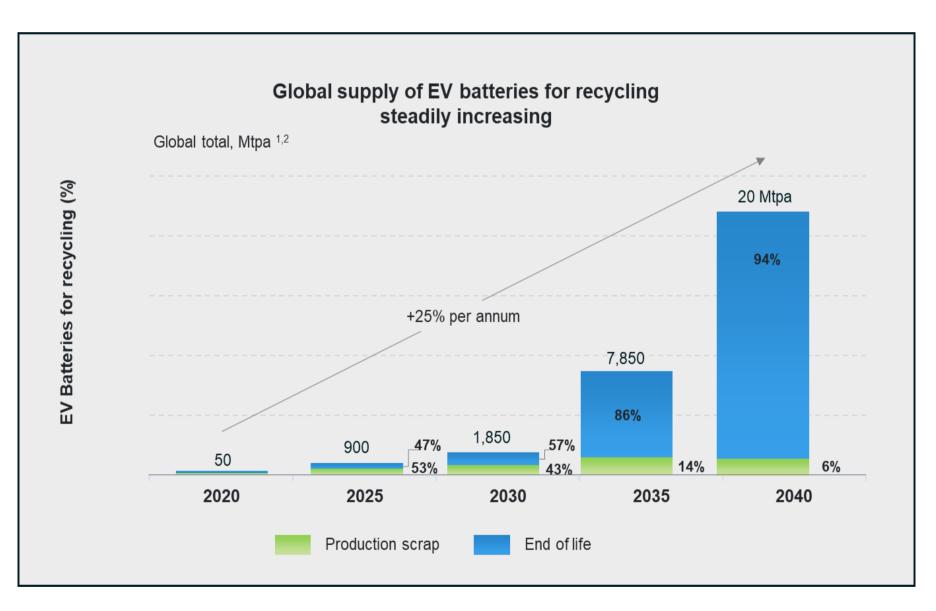
# Primobius

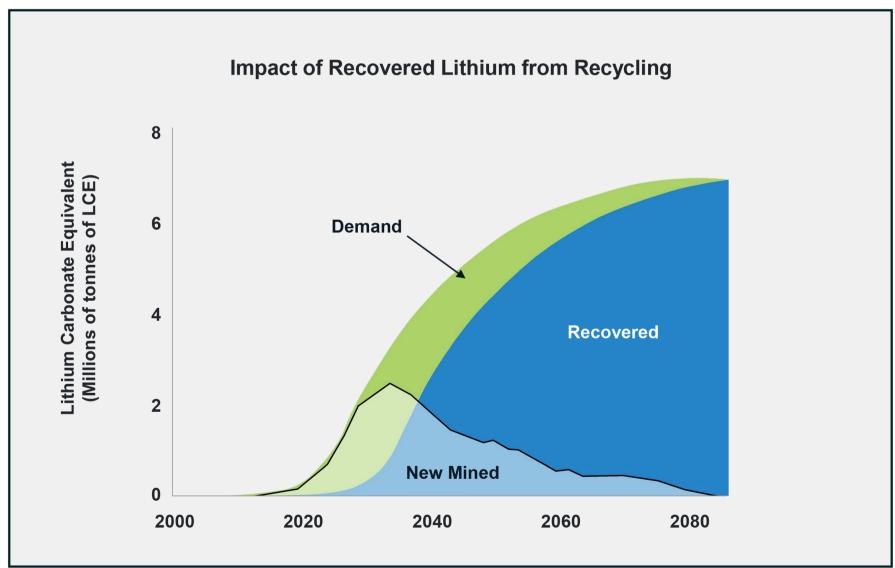




### A Fast Growing and Critical Market

- Regulatory move to mandatory recycling driven by security of supply and environmental sustainability
- Demand for recycling by EV and battery OEM's -25% CAGR
- China dominated supply and recycling, Europe and North America underserviced





Source: McKinsey Battery Insights (2023)

Source: Argonne NL – Presented by Linda Gaines at IMLB2022

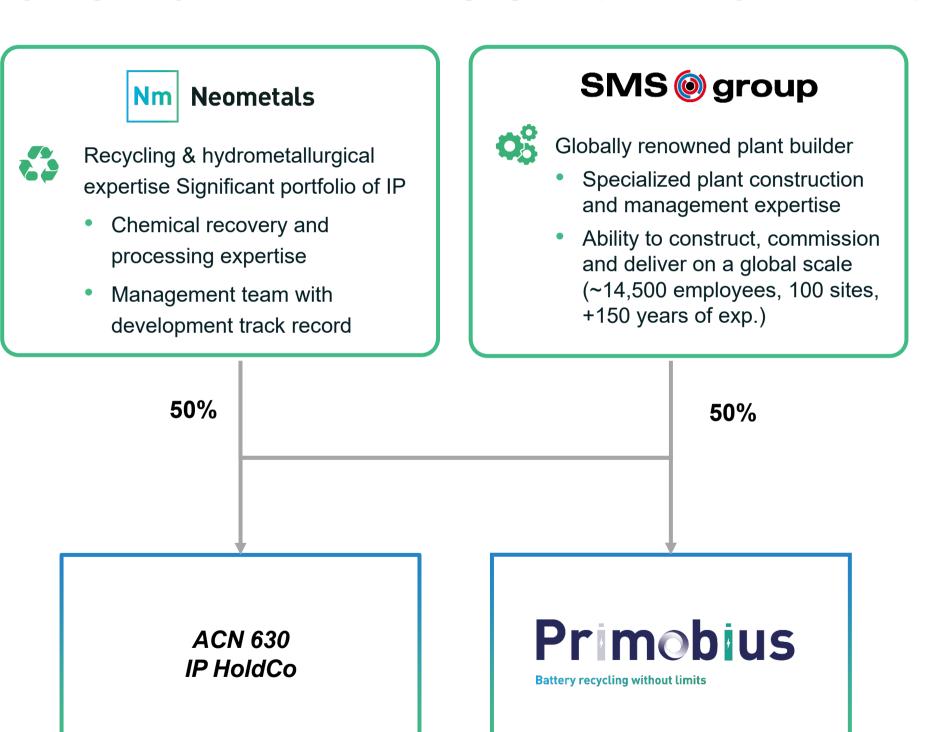
<sup>&</sup>lt;sup>1</sup> Numbers are rounded. <sup>2</sup> 2023 Q1





# Global Plant Building Partner & Flexible Business Models to maximise market share

Synergistic joint venture leveraging complimentary skills & experience to deliver best-in-class recycling solutions



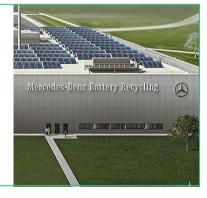


LiB Disposal Facility Hilchenbach, Germany





Mercedes-Benz
Pilot Plant
R&D collaboration





Stelco in NA
Redivium in UK,
Italy, Scandinavia,
Balkans

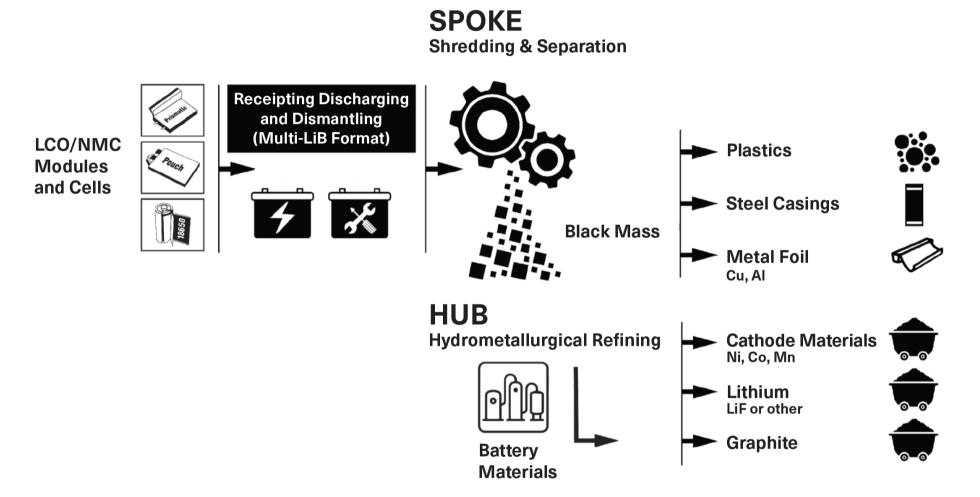






### Sustainable Competitive Advantages for Plant Owners

Patented, environmentally-friendly recycling solutions



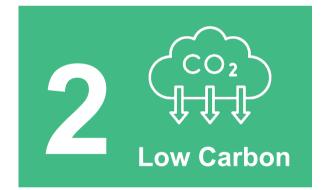
**FINALIST** 

2022

Sustainability Award



By-products ensure essential lithium produced at substantial discount to spot & forecast price



Replacement of carbonheavy traditional mined and processed raw materials



Ensures compliance with regulations for recycling efficiency and minimum recycled content in future

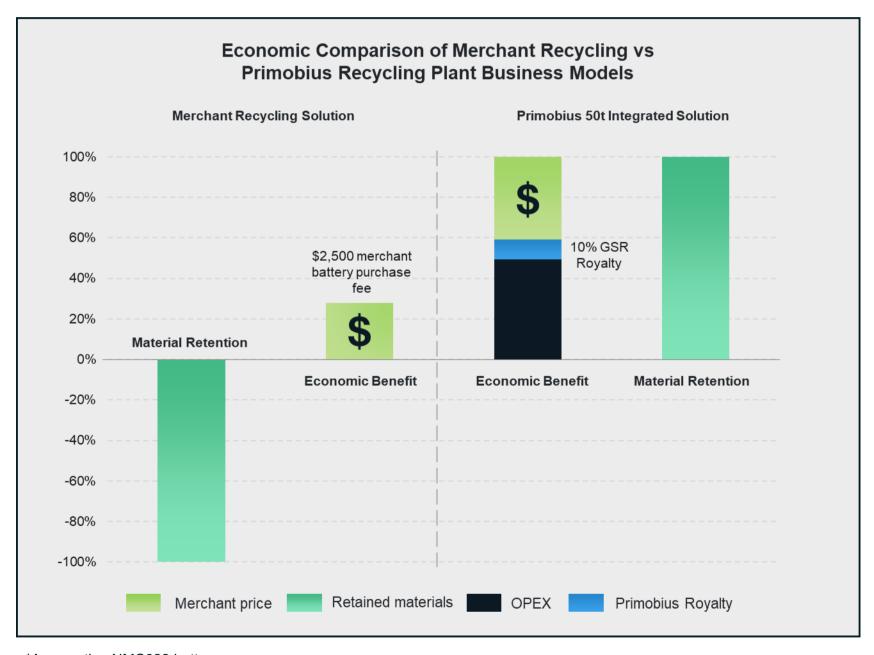




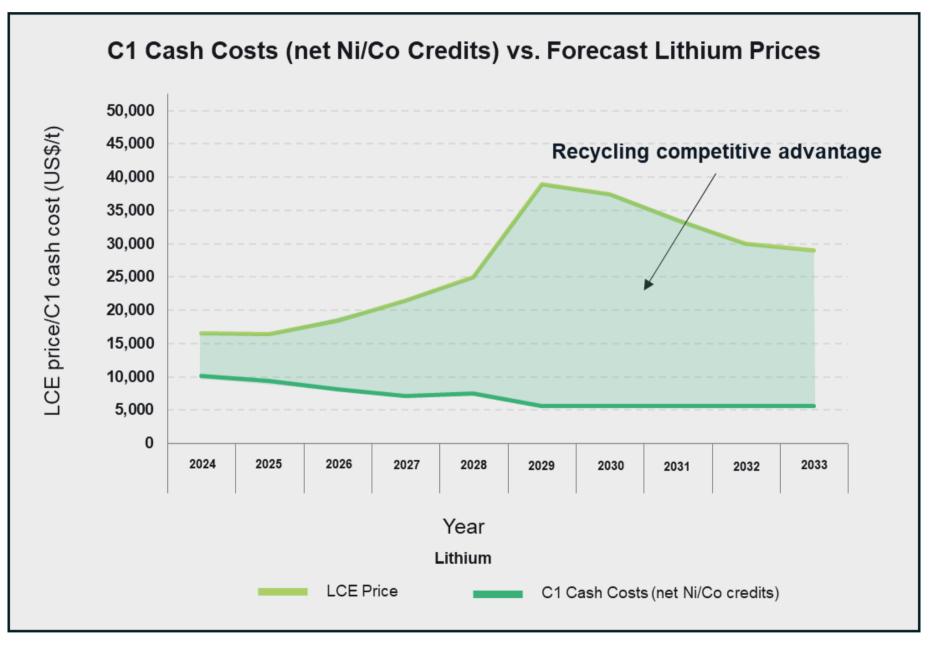
### Raw Material Cost and Supply Certainty



- We enable customers to recover/regenerate own battery materials resilient, circular supply chain
- We deliver a long-term, sustainable competitive advantage over purchasing on market







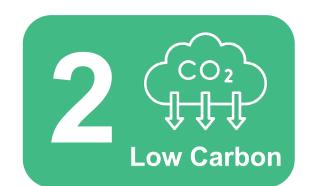
Note: C1 cash costs net Ni/Co by product credit

Source: Primobius 2023 ECS (operating cost and production). For further information and assumptions refer to ASX announcement 'Battery Recycling "Hub" Engineering Cost Study Results' released 1 August 2023.

Consensus Economics (nickel/cobalt price), Benchmark (LCE forecast price)

Note: Please refer to slide 32 for forecast pricing table

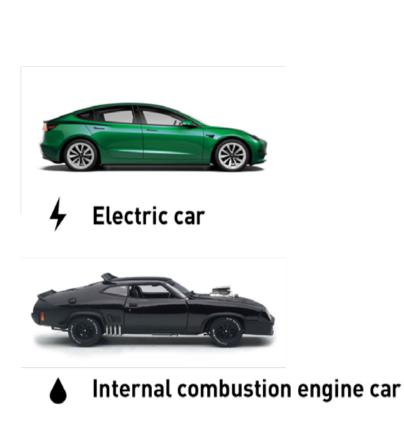


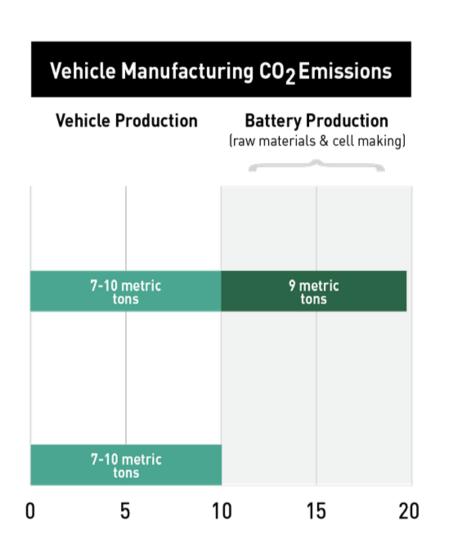


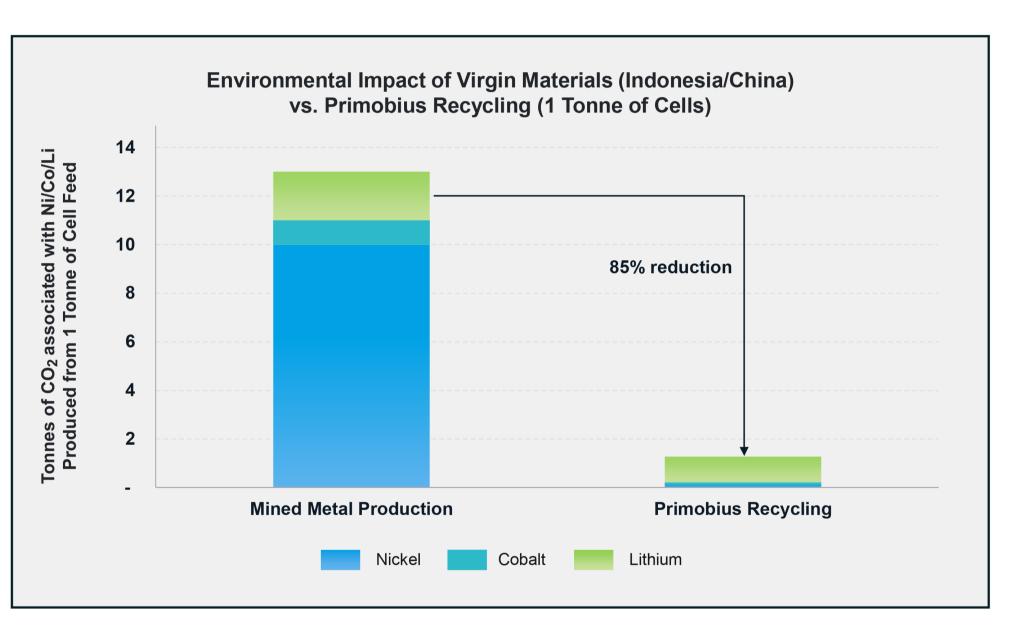
### **Lower Emission Certainty**



- Reduces the need to mine virgin materials
- Makes the CO<sub>2</sub> advantage of EV more meaningful over combustion engine given the absence of mining







Source: Duesenfeld

For further information, refer to ASX release dated 19-Dec-2023 – "Primobius Recycling Process Achieves 85% Reduction in Carbon Emissions"

Adapted from Minviro 2023 LCA Report by NMT. Excludes minor/by-product footprints. Source: NMT ECS (battery composition) and Minviro 2023 LCA report.

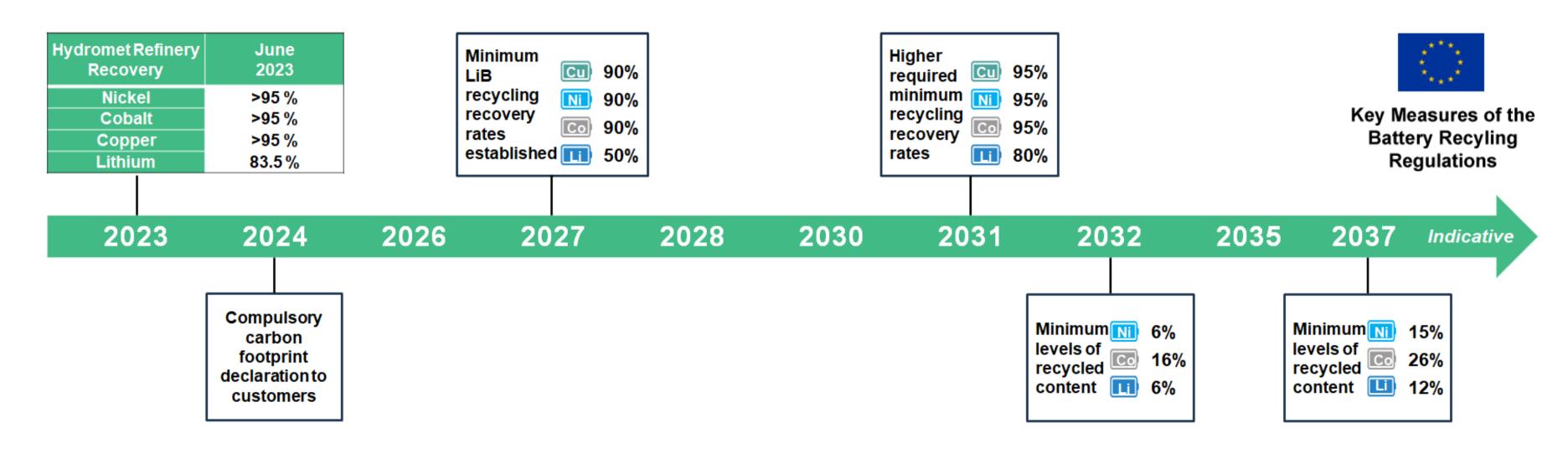




### **Licence-To-Operate Certainty**

LiB

- Recycling is mandatory under EU Battery Regulations
- We enable minimum recycled content to be met





#### European regulations are pushing the responsibility to "close the loop" to the OEMs

**Terminology:** Electric Vehicles (EV) | Light Means of Transport (LMT) batteries providing power for the traction to wheeled vehicles such as electric scooters and bikes, with a capacity above 2 kWh | Portable (Consumers can easily remove and replace batteries themselves)

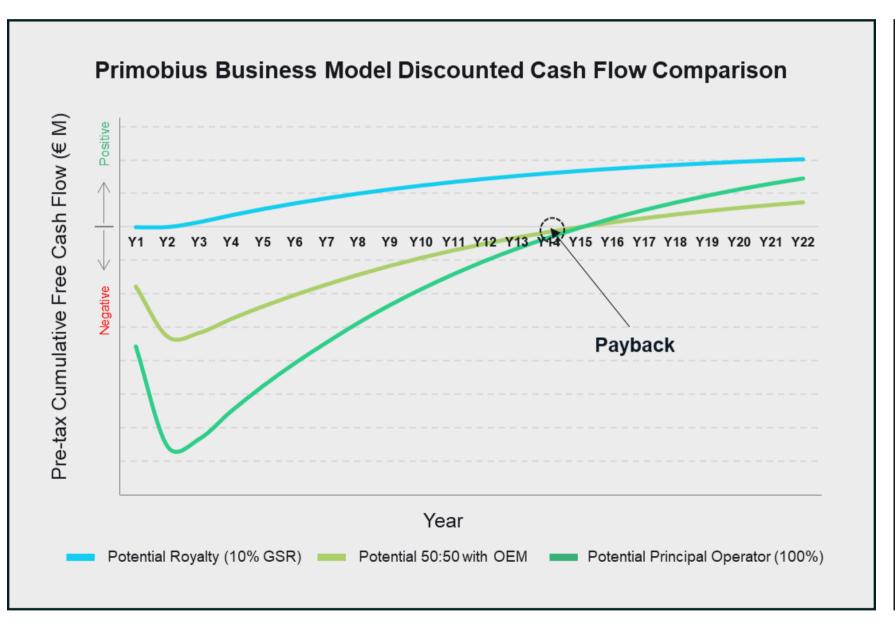
Source: European Commission, FCAB

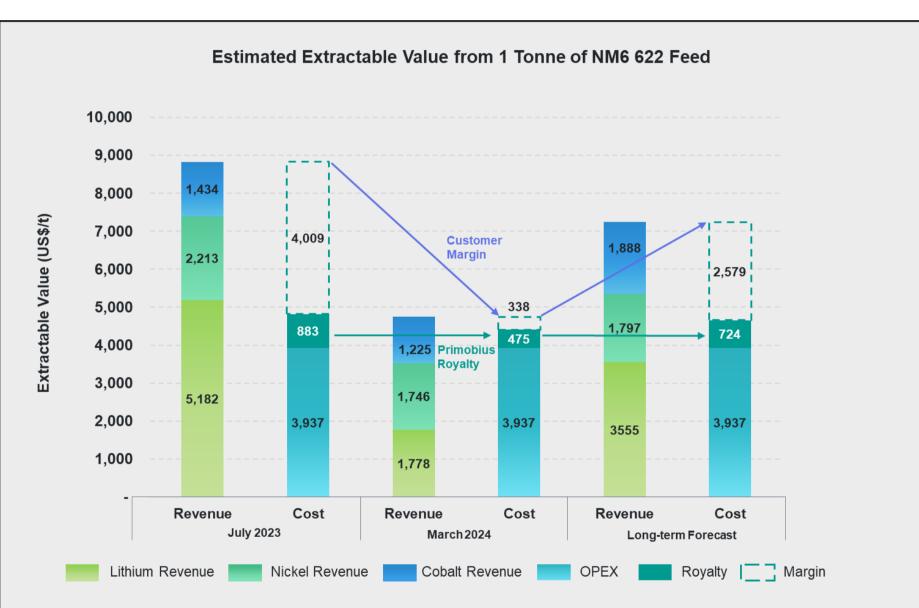




### Plant Supply & Licensing is our Preferred Model

- No capex, only working capital during build, faster pathway to cashflow
- More resilient revenues, not exposed to cost inflation, less margin compression in low price environments





Source: Primobius 2023 ECS (production and OPEX estimates). For further information and assumptions refer to ASX announcement 'Battery Recycling "Hub" Engineering Cost Study Results' released 1 August 2023.

Benchmark Mineral Intelligence (lithium carbonate forecast), Consensus Economics (nickel/cobalt forecast), Golden Dragon (lithium fluoride premium)

Note: Please refer to slide 32 for forecast pricing table





### Mercedes-Benz: Demonstrating our Process/Plants at Scale

#### Strong validation by a marquee OEM of our business models





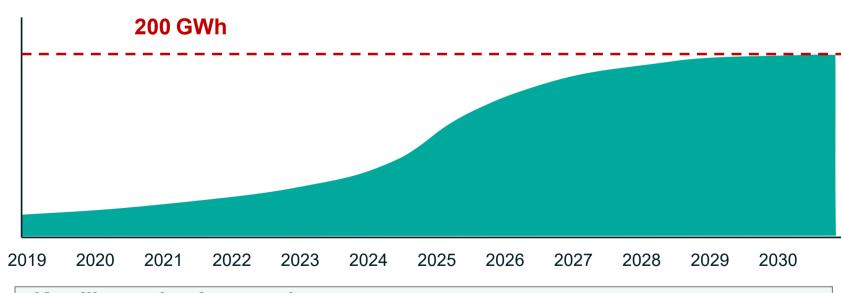




#### **Cooperation agreement with Mercedes-Benz**

- MB issued purchase orders for 2,500tpa Integrated Recycling Plant in Kuppenheim, Germany (+€30M)
- Royalty-free under long-term research collaboration
- Evaluating industrial-scale solution on commercial basis

#### **Mercedes-Benz Target Cell Production\*\***



#### **Key Illustrative Assumptions**

- ~10-year battery life
- ~4.5MWh to tonne of battery



#### POTENTIAL MERCEDES-BENZ EOL LIB RECYCLING REQUIREMENTS BY 2040



### 900ktpa of batteries

Potential EOL recycling requirement by 2040 with additional volumes potentially available from production scrap

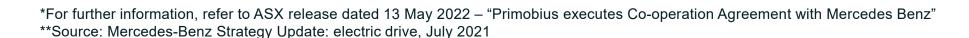




5 x 200,000tpa Plants

Required to process\*

\*Based on Neometals assumptions.







### Plant Supply and Licensing Portfolio

First 21,000 tpa plant supply and licence into the North American Market for end-of-life EV's



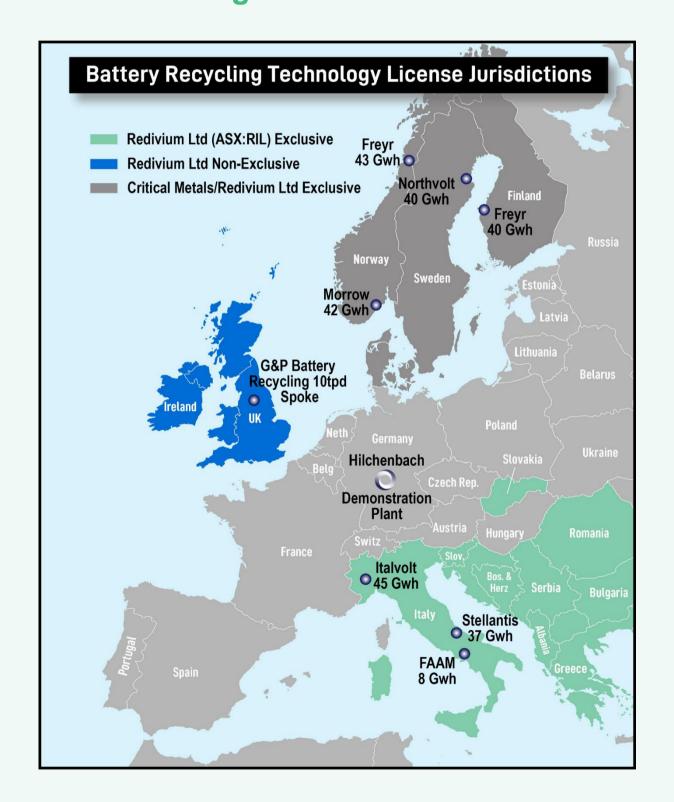


#### in North America

**Partnership** 

- Exclusively licensed to Stelco for end-of-life LiB's in North America with exception of German OEMs for a 10% gross revenue royalty<sup>(1)</sup>
- Primobius has option to acquire 25–50% of the equity in Stelco's recycling SPV, if exercised the licence will be royalty free
- Stelco will be responsible for supply of LiB feedstock and the securing of sites for plants

### Technology Licences (10% GSR) Neometals largest shareholder in licensees



<sup>\*</sup>For full details refer to Neometals ASX release dated 31 December 2021 titled "Primobius to Enter North America with Stelco for Recycling of Electric Vehicle Batteries"

<sup>(1)</sup> Scope for reductions in the royalty rate depending on IRRs generated, and a minimum royalty fee in cases of stalled recycling production.





### **Upcoming Catalysts and Financial Milestones**

- Build our order book from conversion of commercial prospects, plant supply profits in instalments over contract
- Achieve product readiness for 21,000tpa plants in 2025 and larger plants in 2027
- Build royalty portfolio as order books transition to production revenues start 1H 2027 from Stelco<sup>(1)</sup>

	1H 2024	2H 2024	1H 2025	2H 2025	1H 2026	2H 2026	1H 2027
2,500tpa Integrated - MB	Commence Fabrication / Installation	Complete installation Start Commissioning	Complete Commissioning Steady State	R&D Collaboration	R&D Collaboration	R&D Collaboration	
21,000tpa Integrated <sup>(1)</sup> - Stelco			Plant Offer/Purchase Order/Option Decision	Commence Fabrication	Commence Installation	Complete Installation Commence Commissioning	Complete Commissioning Steady State Royalties
200,000tpa Integrated					Commence Class 3		Commence Class 2





### Lithium Chemicals

#### **ELi™ Processing Technology**

Reed Advanced Materials ("RAM") 70% Neometals / 30% Mineral Resources Ltd

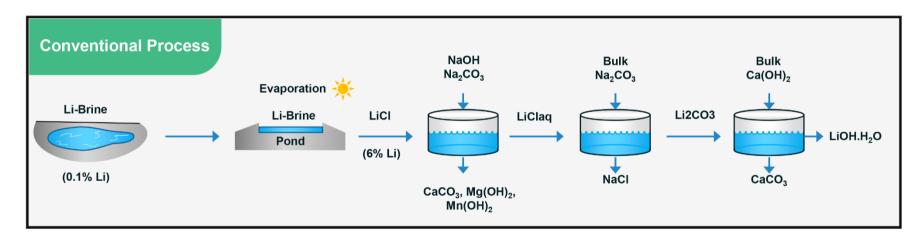


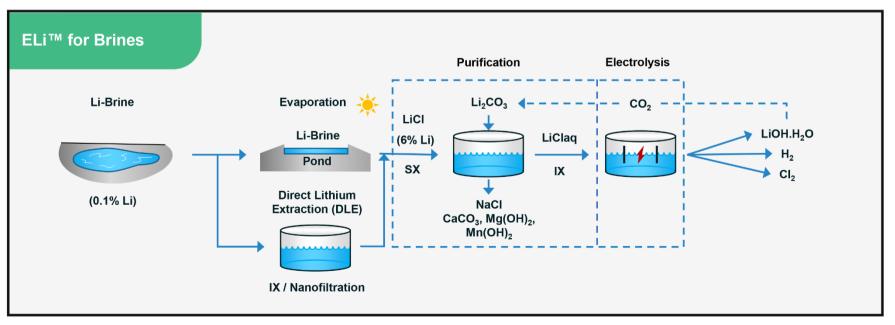


### Piloting Lithium Hydroxide Direct from Brine deposits in '24

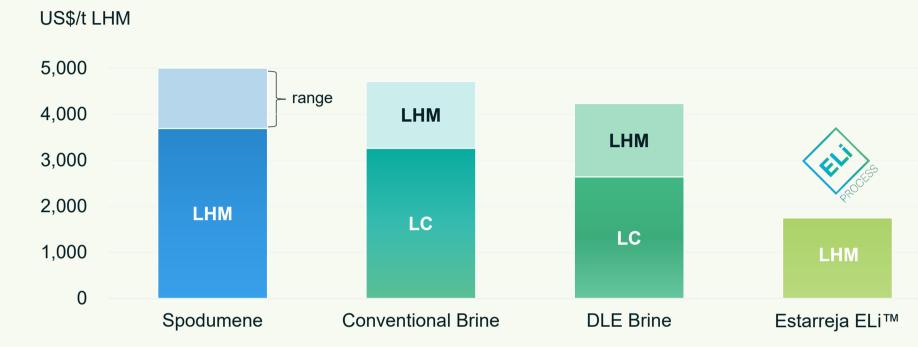
#### Finalising technology package for licensing

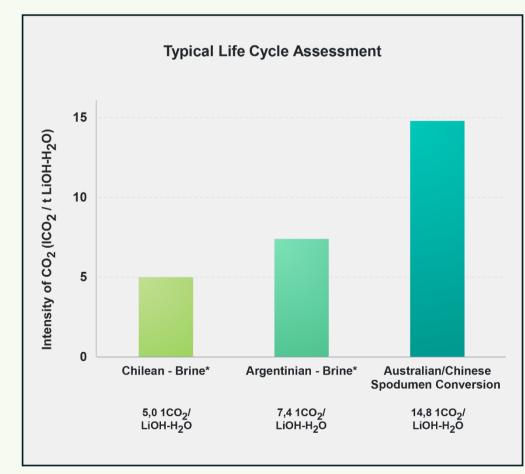
- 60% global lithium resources are in brine deposits
- Highly efficient process produces battery-quality lithium hydroxide directly from brine at potentially lowest cost
- Utilises off-the-shelf chlor-alkali electrolyser equipment
- Electricity enables replacement of imported soda ash/caustic soda reagents, lower carbon footprint





#### **Estimated Opex Comparison (Conversion to LHM)**





Source: SQM 2024





## Vanadium Recovery

Vanadium Recovery Process Technology 100% Neometals

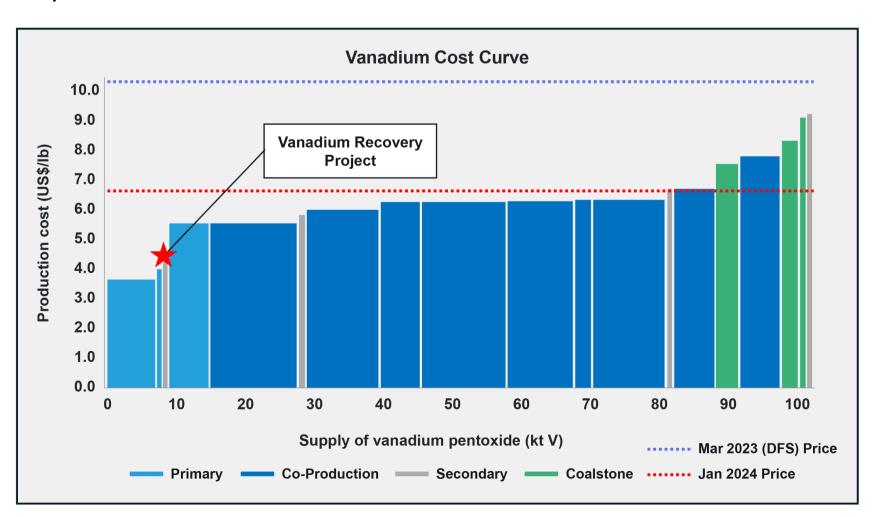




### Commercialising Low Cost/Carbon Vanadium from Steel Slag

#### Potential first commercial licensing opportunity

- EU patent pending, hydrometallurgical process produces high purity (+99.5%) vanadium pentoxide from steel slag utilizing CO<sub>2</sub> as primary reagent – sequesters carbon in by-product
- Conventional equipment configured in a fully-piloted novel process
- DFS completed 2023, feedstock/offtake agreements in place









# Barrambie Titanium and Vanadium

**Barrambie Titanium and Vanadium Project** 100% Neometals





### **Barrambie Titanium Deposit**

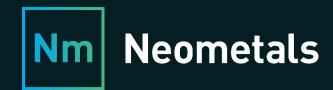
#### Tenement maintenance in parallel with sale preparations

- One of the highest-grade titanium deposits globally
- Granted mining lease and approval for 1.2Mtpa mining operation
- Ministerial approval to construct up to 3.2Mtpa processing plant, timeframe extension application in progress
- Successful pilot plant production of gravity concentrates and commercial scale smelting proved value-in-use



MINERA	The Track	ORE RESERVE**	LIFE OF MINE	PRODUCTS
280.1N @ 9.18% T		27.6Mt @ 22.3% TiO <sub>2</sub>	13 Years	Year 1: 1Mt DSO Years 2 - 13: 1Mtpa MGC
OPEX	PAYBACK	CAPITAL COSTS	PRE TAX NPV <sub>10</sub>	FREE CASH FLOW***
A\$195/t product	2.9 years	A\$215.3M	A\$374.9M IRR 45%	A\$1106.1M First 5 Years A\$103.3M pa
** Probable *** Free	ls ASX release dated 17 cashflow is pre-tax and 70, Average sales price		eral Resource Update"	

For full details refer to Neometals ASX release dated 15 May 2023 titled "Barrambie PFS and Ore Reserve Update"



# Summary



### Sustainability at Our Core



Neometals is committed to optimising finite resources using circular practices to benefit society and the environment for a sustainable future



### Awards / 2022

Technology -Winner

Winner in 2022 under the 'Best **Technology' category** 

 AIM awards, in association with the London Stock Exchange, recognise the quoted companies and entrepreneurs who have harnessed AIM to fulfil their ambition and growth potential.



#### **BBB** Rating

 MSCI ratings measure a company's management of financially relevant ESG risks and opportunities.



#### **Green Economy Mark**

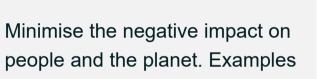
Qualified in 2022 for the London Stock Exchange's Green Economy Mark, an accreditation that recognises companies generating commercial revenues from products and services that contribute to positive environmental outcomes and the global green economy.



include:

#### **Environmental** Care





- Carbon neutrality with tree sequestration
- Lifecycle Assessment (LCA) for VRP shows potential carbon negative vanadium production
- Updated LCA in progress for recycling
- Task Force on Climate-Related Financial Disclosures climate risk workshops



#### Community **Benefits**



#### **People**



#### **Ethics and Accountability**

Shared economic and social outcomes. Examples include:

- ✓ \$1.5m of research & development focused on decarbonisation, critical metals and energy storage
- \$150k on community contributions consisting of ~\$50k for secondary and University scholarships and ~\$100k for sponsorships and donations

Foster and environment where employees are valued and supported to fulfil their potential. Examples include:

- ✓ Anti Bribery and Corruption training
- Employee, Environmental, Social and Governance Policy adopted

Continually operate in an ethical and transparent manner. Examples include:

- √ 114 volunteer hours contributed
- √ 33% female board representation
- √ 11 hours of training for all staff / annum

### Neometals' Unique Value Proposition



Neometals is at the forefront of the low carbon production of battery materials via recycling

2	Clear <b>strategy</b> to commercialise technologies into <b>vast TAM</b> with energy transition policy tailwinds
	Enabling sustainable critical materials – decarbonising supply chains, supporting circular economy
	Proprietary green processing technologies underpinning low-cost, low-carbon materials
	Unique flexible <b>business models</b> targeting low-capex, low-risk licensing royalty income
	Robust pipeline with tier-1 <b>customer validation</b> – recycling technology partner to Mercedes
	Strong team with track record leveraging partnerships / JV's



## Thank you







# Appendix







### **Appendix**

#### **Commodity Forecast Prices**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Lithium Price (US\$ / t, real)	16,525	16,475	18,500	21,500	25,000	39,000	37,500	33,500	30,000	28,980
Nickel Price (US\$ / t, real)	16,945	17,421	17,891	17,954	17,566	18,416	18,416	18,416	18,416	18,416
Cobalt Price (US\$ / t, real)	35,917	36,951	38,971	41,230	41,176	43,956	43,956	43,956	43,956	43,956





### **Barrambie Mineral Resource and Ore Reserve Estimate**

#### Global Mineral Resource as at 17 April 2018<sup>1</sup>

	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	187.1	9.61	0.46
Inferred	93.0	8.31	0.40
Total	280.1	9.18	0.44

#### High Grade V<sub>2</sub>O<sub>5</sub> Mineral Resource (at 0.5% V<sub>2</sub>O<sub>5</sub> cut-off)<sup>2</sup>

	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	49.0	16.93	0.82
Inferred	15.9	16.81	0.81
Total	64.9	16.90	0.82

#### High TiO<sub>2</sub> Mineral Resource (14% TiO<sub>2</sub> cut-off)<sup>2</sup>

	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	39.3	21.18	0.65
Inferred	14.3	21.15	0.58
Total	53.6	21.17	0.63

<sup>(1)</sup> Based on Cut-off grades of ≥10% TiO<sub>2</sub> or ≥0.2% V<sub>2</sub>O<sub>5</sub>

#### Barrambie Titanium Ore Reserve Estimate - November 2022\*\*

Ore Reserve	Ore Tonnes	TiO <sub>2</sub>	V <sub>2</sub> O <sub>5</sub>	Fe <sub>2</sub> O <sub>3</sub>
Category	(Mt)	(%)	(%)	(%)
Probable	44.5	18.7	0.61	44.1

Cut-off is based on net value (revenue minus selling, processing, administration and incremental ore mining costs) >\$0/t on a diluted block-by-block basis from the paramaters used in the pit optimisation. Ore Reserves reported are within the Mineral Resource estimates.

This relates roughly to a 10% TiO<sub>2</sub> cut-off.

<sup>(2)</sup> The high-grade titanium and vanadium figures are a sub-set of the total Mineral Resource. These figures are not additive and are reporting the same block model volume but using different cut-off grades

<sup>\*</sup>For full details refer to Neometals ASX release dated 17th April 2018 titled "Updated Barrambie Mineral Resource Estimate"