

Element 25 Limited Investor Update

Building a world-class Zero Carbon Manganese business

January 2022 – Battery Grade High Purity Manganese Sulphate Scoping Study

Element 

Introduction

Disclaimer

This presentation contains only a brief overview of Element 25 Limited and its associated entities ("Element 25") and their respective activities and operations. The contents of this presentation, including matters relating to the geology of Element 25's projects, may rely on various assumptions and subjective interpretations which it is not possible to detail in this presentation and which have not been subject to any independent verification.

This presentation contains a number of forward-looking statements. Known and unknown risks and uncertainties, and factors outside of Element 25's control, may cause the actual results, performance and achievements of Element 25 to differ materially from those expressed or implied in this presentation.

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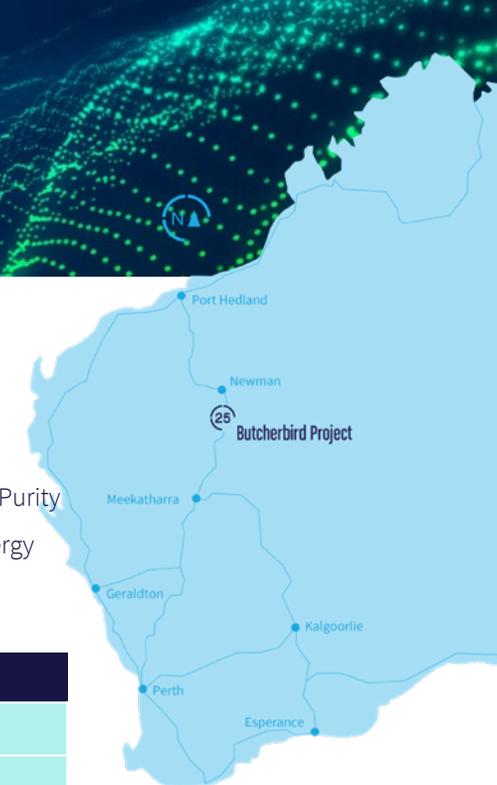
The information contained in this presentation is not a substitute for detailed investigation or analysis of any particular issue. Current and potential investors and shareholders should seek independent advice before making any investment decision in regard to Element 25 or its activities.

Overview

Developing the world class **Butcherbird Manganese Project** in Western Australia to produce high quality **manganese concentrate** and **battery grade** High Purity Manganese Sulphate Monohydrate (**HPMSM**) products for traditional and new energy markets.

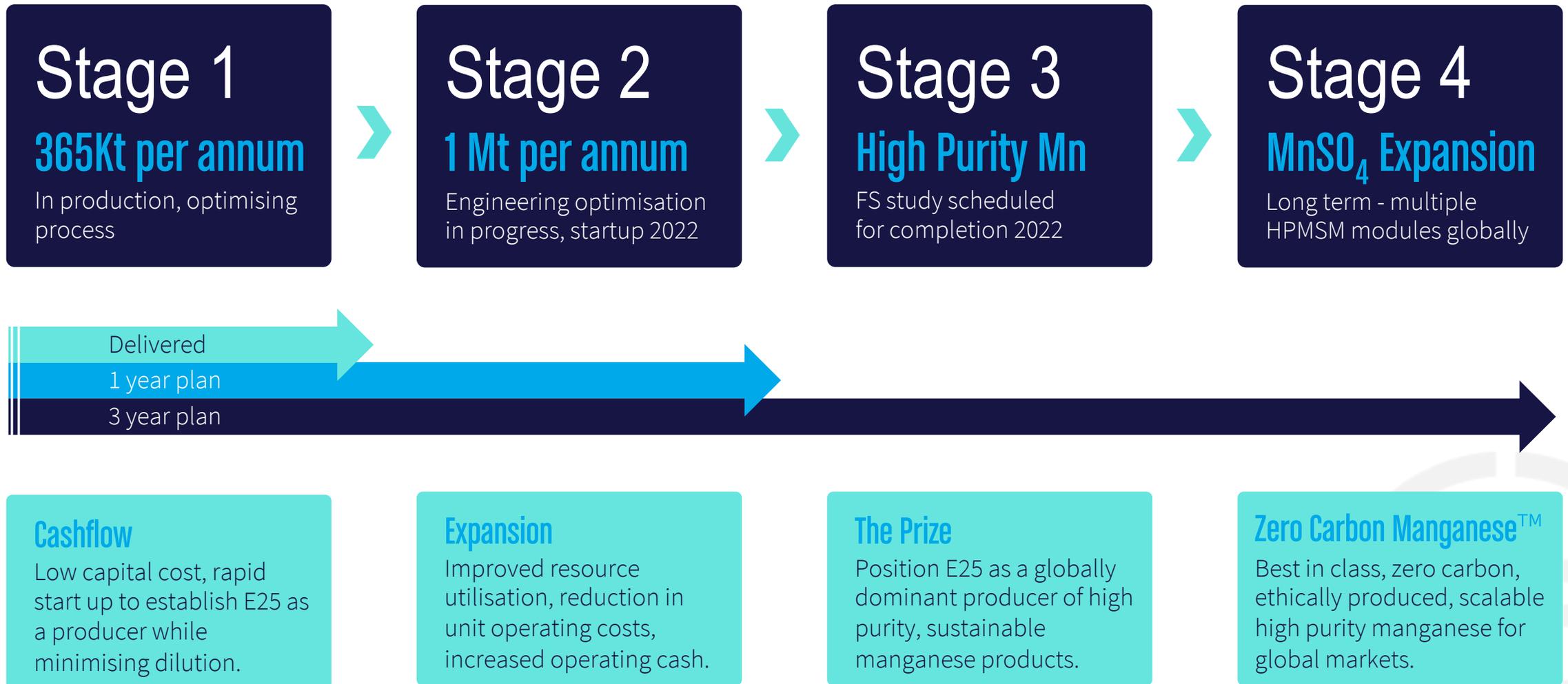
Financial Information	
ASX Ticker	E25
Shares on Issue	153M
Share Price	\$1.415
Debt	Nil

- Australia's largest onshore manganese deposit.
- >260 Mt of manganese ore in JORC resources¹.
- Reserve containing 5.22 Mt of manganese².
- 100% owned by Element 25 Limited.
- Located in WA, ranked #1 for mining investment³.
- Ethical, proven, sustainably regulated jurisdiction.
- Simple low-cost mining and processing.
- No blasting or dewatering required.
- Long mine life – 42 years using only 20% of the global resource, potential to improve.
- Outstanding economics²
- Excellent infrastructure: highway and gas pipeline



¹Reference: Company ASX release 17 April 2019. ²Reference: Company ASX Release 3 December 2020. ³Reference: Fraser Institute Annual Survey of Mining Companies, 2019, ⁴Reference: Company ASX Release 26 May 2021, ⁵Reference: Company ASX Release 16 June 2021

Our Strategic Vision...



Not all manganese is created equal



E25 Manganese

Serving the Established...

- Manganese (**Mn**) is the fourth most used metal on earth in terms of tonnage.
- Used in steel, specialty alloys and aluminium products.
- Traditionally the market has been dominated by the steel and alkaline battery industries.
- There is no substitute for manganese in steel.
- **E25 manganese concentrate and EMM feed this market.**

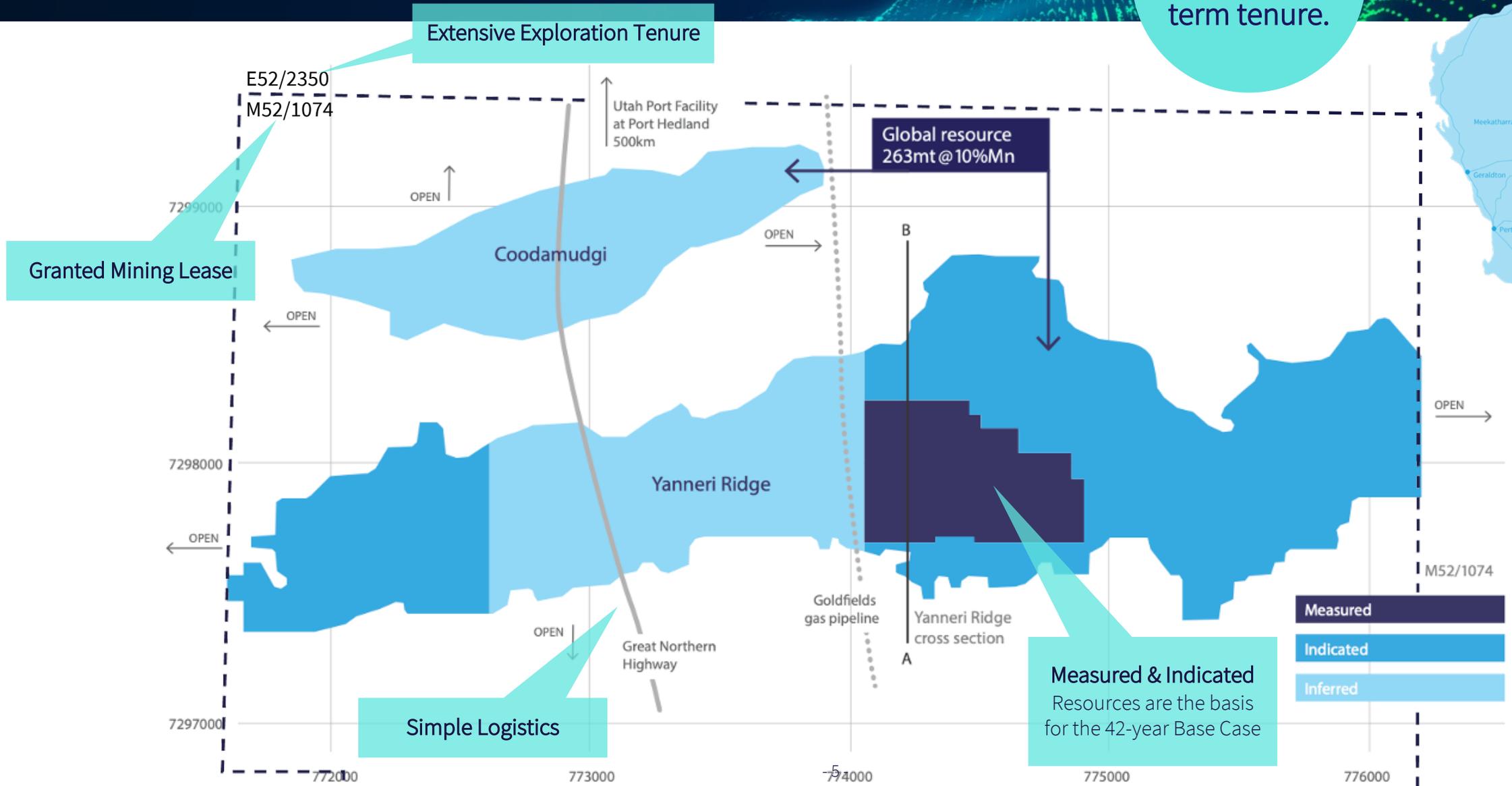
And the Emerging...

- The electrification of the global vehicle fleet requires vast amounts of cathode materials.
- Nickel and cobalt supplies cannot meet projected demand for new energy vehicle (NEV) growth.
- Batteries are trending toward higher manganese content for safer, more cost-effective solutions.
- **E25 high purity manganese will feed these markets.**



Great infrastructure endowment, fully permitted

100% E25 owned, long term tenure.



Granted Mining Lease

Extensive Exploration Tenure

E52/2350
M52/1074

Utah Port Facility at Port Hedland 500km

Global resource 263mt @ 10%Mn

Coodamudgi

Yanneri Ridge

Goldfields gas pipeline

Yanneri Ridge cross section

Great Northern Highway

Simple Logistics

Measured & Indicated Resources are the basis for the 42-year Base Case

Measured

Indicated

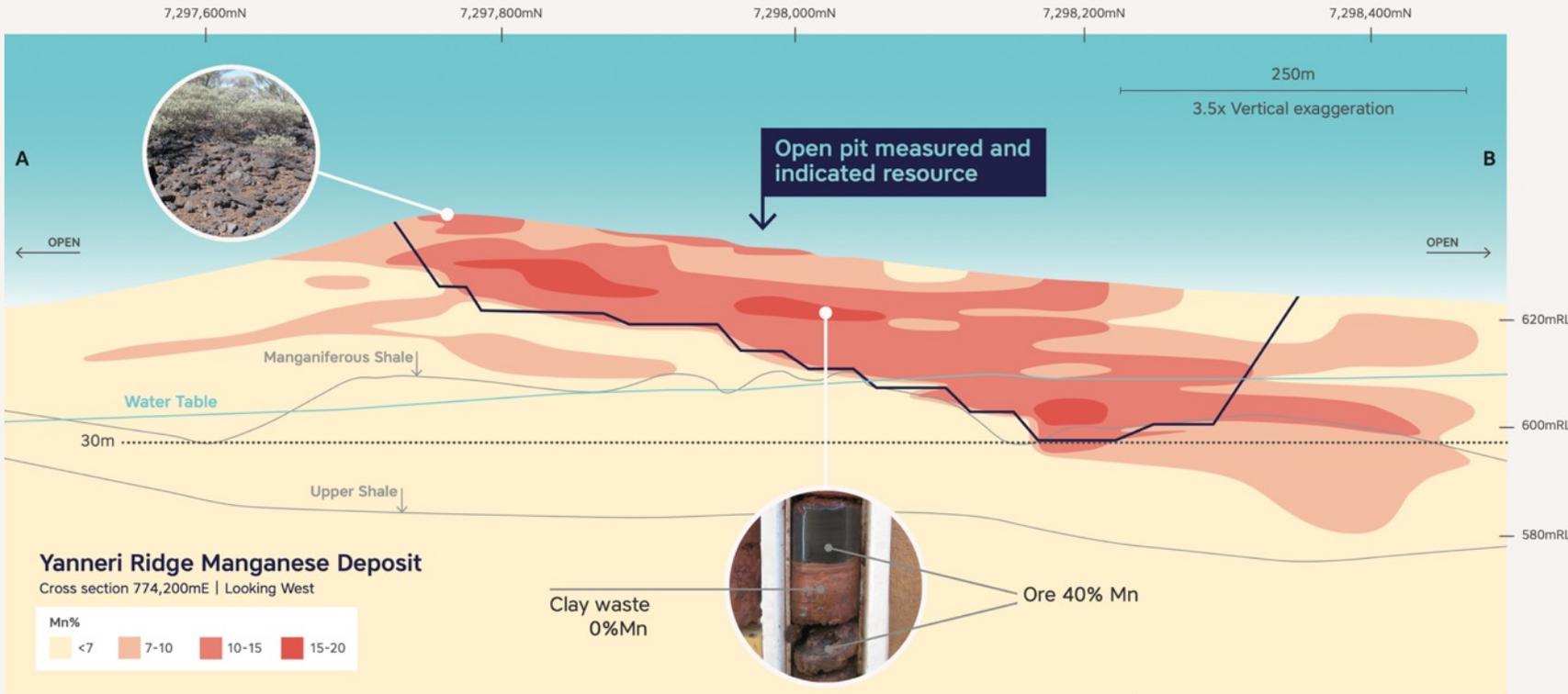
Inferred

M52/1074



Very simple geology equals low-cost, low environmental impact manganese units

Classification	Tonnes (Mt)	Mn (%)	Contained Mn (Mt)
Resource	263	10.0	20.8
Reserve	50.6	10.3	5.22



RESOURCE GROWTH POTENTIAL

- Enough resource base for multi-decade long expansion pathway.
- Can produce concentrate, battery grade HPMSM and EMM without resource limitation.

ENVIRONMENTALLY BENIGN OPERATION

- Ore from surface
- No explosives required
- No waste water
- One reagent – water
- Extremely low levels of contaminants

Stage 1: Project Delivery Complete – Engineering Optimisation Progressing



ROM Stacks

Process Water Storage

Processing Plant

Ore Stockpiles
Feedstock for
HPMSM
conversion

Tails Storage

Main Access
Road

New Energy Vehicle (NEV) Demand Growing MUCH Faster

58% by 2040

percentage of new vehicles that will be EV or hybrid

54 million

EV passenger sales by 2040

from 2033

decline emissions from road transport

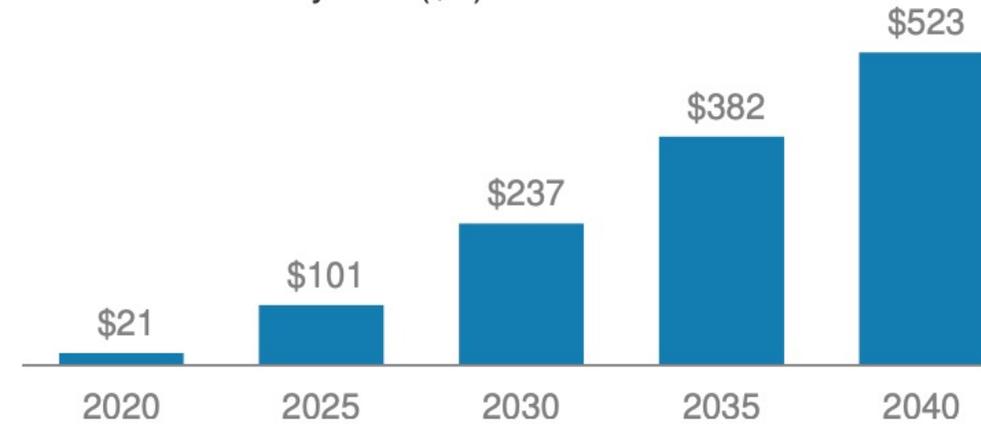
17.6M by 2040

barrels of oil displaced by EVs each day

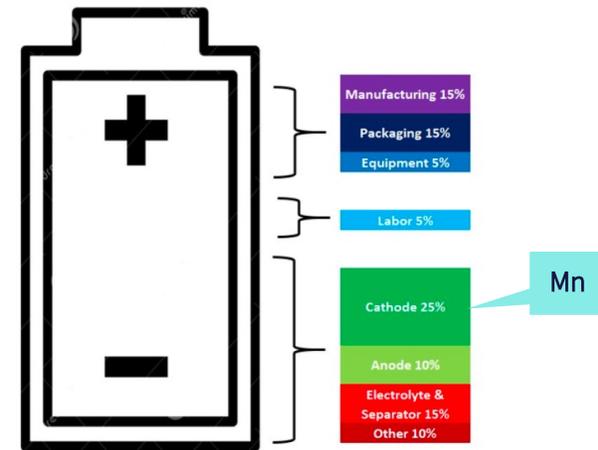
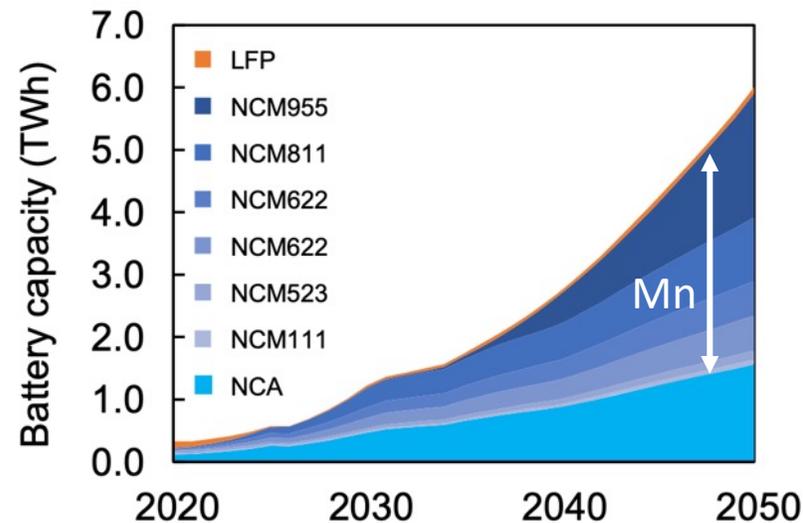
“It is reasonably straight forward to do a cathode that is two-thirds nickel and one-third manganese...”

Elon Musk, Tesla

Global EV Battery TAM (\$B)



Source: Company data, Morgan Stanley Research



If not manganese, then what?

58% by 2040

percentage of new vehicles that will be EV or hybrid

54 million

EV passenger sales by 2040

from 2033

decline emissions from road transport

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barrels of oil displaced by EVs each day

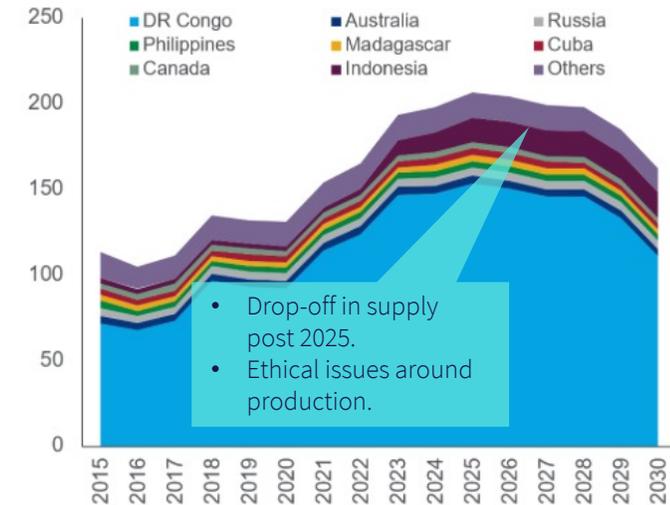
“We would like to get out of cobalt altogether and have a zero cobalt situation.”

Doug Parks, GM Executive VP

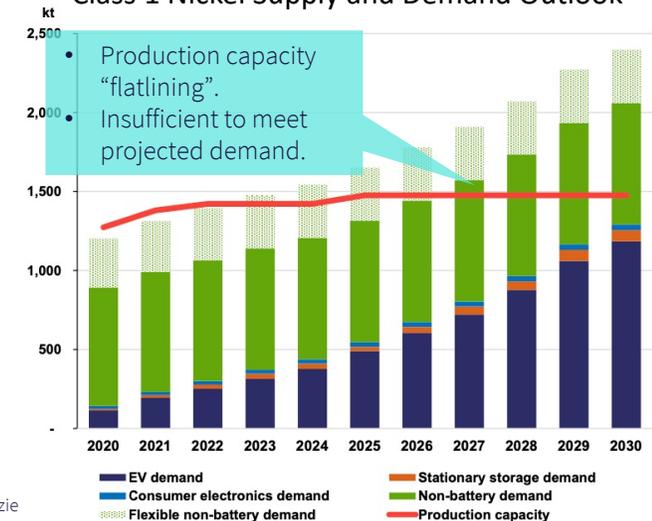
The Verge, December 2021

- Manganese is the cheapest, most abundant of the NMC cathode materials (Ni,Mn,C).
- Nickel and cobalt have supply constraints, manganese does not.
- For cobalt, there are serious ethical concerns around production methods¹.
- Manganese is perfectly placed to provide the material needed to satisfy the worlds hunger to electrify.
- **Battery makers have manganese rich cathode designs in their roadmaps post 2025.**

Global mined cobalt output (Kt)



Class 1 Nickel Supply and Demand Outlook



¹<https://www.visualcapitalist.com/ethical-supply-the-search-for-cobalt-beyond-the-congo/>

If not manganese, then what?



Volkswagen

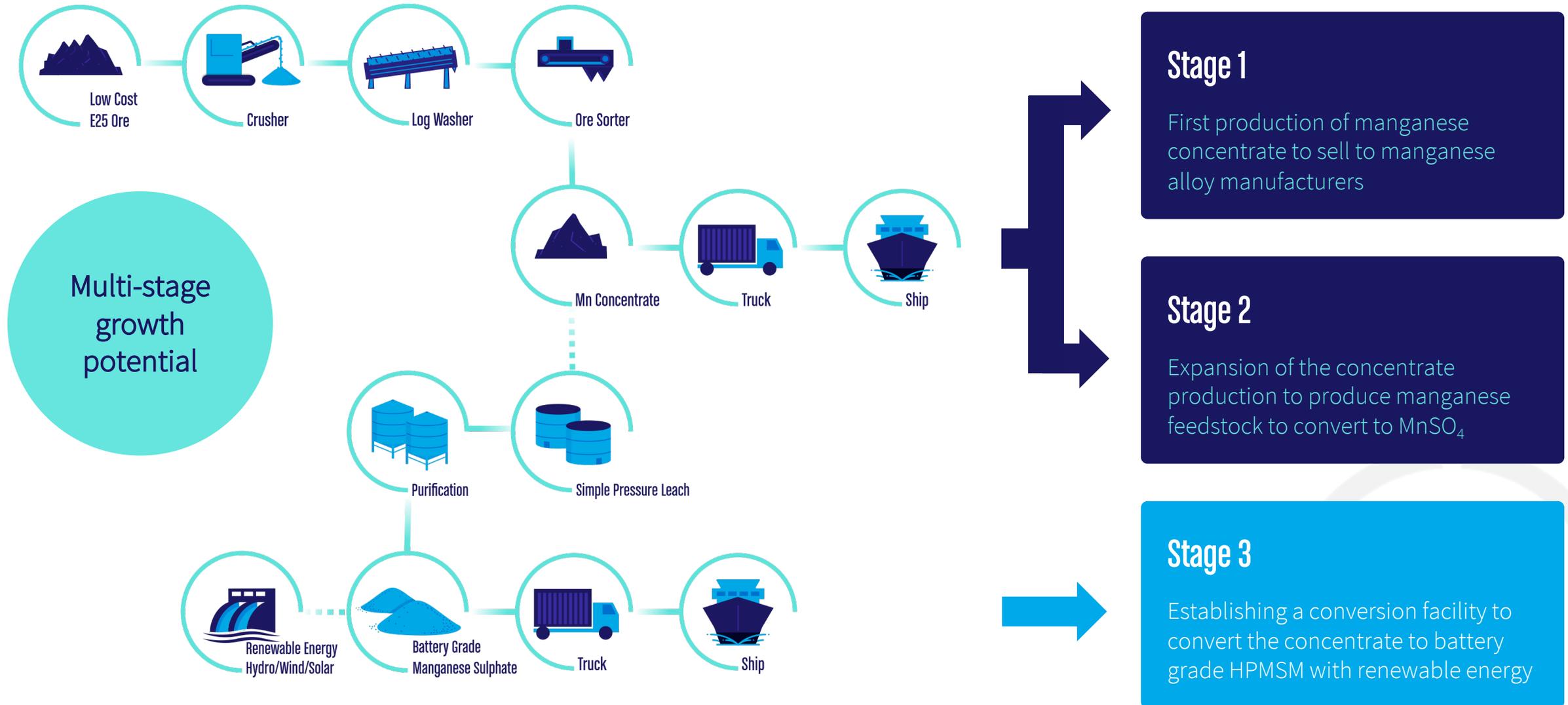


TESLA



- OEMs including VW, Tesla and Stellantis have announced moves to high **manganese** cathodes.
- High **manganese** means better energy density and lower cost.
- Transition will require large volumes of high purity **manganese** sulphate (HPMSM).
- Some analyst estimates predict a deficit of up to 1.3Mt per annum by 2030.
- Element 25 is targeting this market for its decade long growth strategy.
- Discussions underway in relation to potential offtake partners in this segment.

Our Goal - Zero Carbon High Purity Manganese...



Low cost, efficient HPMSM process – significant improvements...

Current Manganese Concentrate Processing Technologies

- Leach - sulphuric acid leach of African/Local carbonate ores or roast reduction.
- Purification – fluoride and/or sulphide reagents (waste)
- Dissolution of high purity EMM into $MnSO_4$ solution (high energy costs).
- Slow kinetics, high embedded energy, not ESG compliant.
- Geopolitical/jurisdictional issues come into play.

Element 25 Process

- Leach – rapid, low temperature leach using readily available CO_2 neutral reagent.
- Purification – minimal purification required, simple process.
- Low energy consumption and significantly reduced residue volumes.
- Residue streams may be able to be repurposed, further minimizing residue volumes.
- Jurisdictional advantages – Tier 1, ESG compliant location.
- These enhancements are also complementary to the production of EMM.

Problems with Current Technologies

Large volumes of waste residues
Toxic Reagents
Inefficient
Higher Cost
Outdated processing technology

Advantages of E25 Process

More efficient (fast kinetics, reduced energy)
Minimises reagent requirements
Reduced carbon intensity
Lower volumes of waste residues
Non-toxic residues may be able to be repurposed.

Conversion of concentrate to HPMSM – EV fuel, Scoping Study delivered...

- Compelling economics.
- Modular, multi-stage growth strategy.
- Volumes tailored to demand growth.
- Development strategy flexibility.
- Designed to capture EV transition value opportunity.

MnSO₄

50,000 t/a

expanding to 150ktpa over three expansion stages



A\$1.52 billion

NPV₈ post-tax



47%

IRR pre-tax

A core part of the E25 growth strategy to become a globally significant high-purity manganese producer.



A\$200 million

capital cost including working capital



19 months

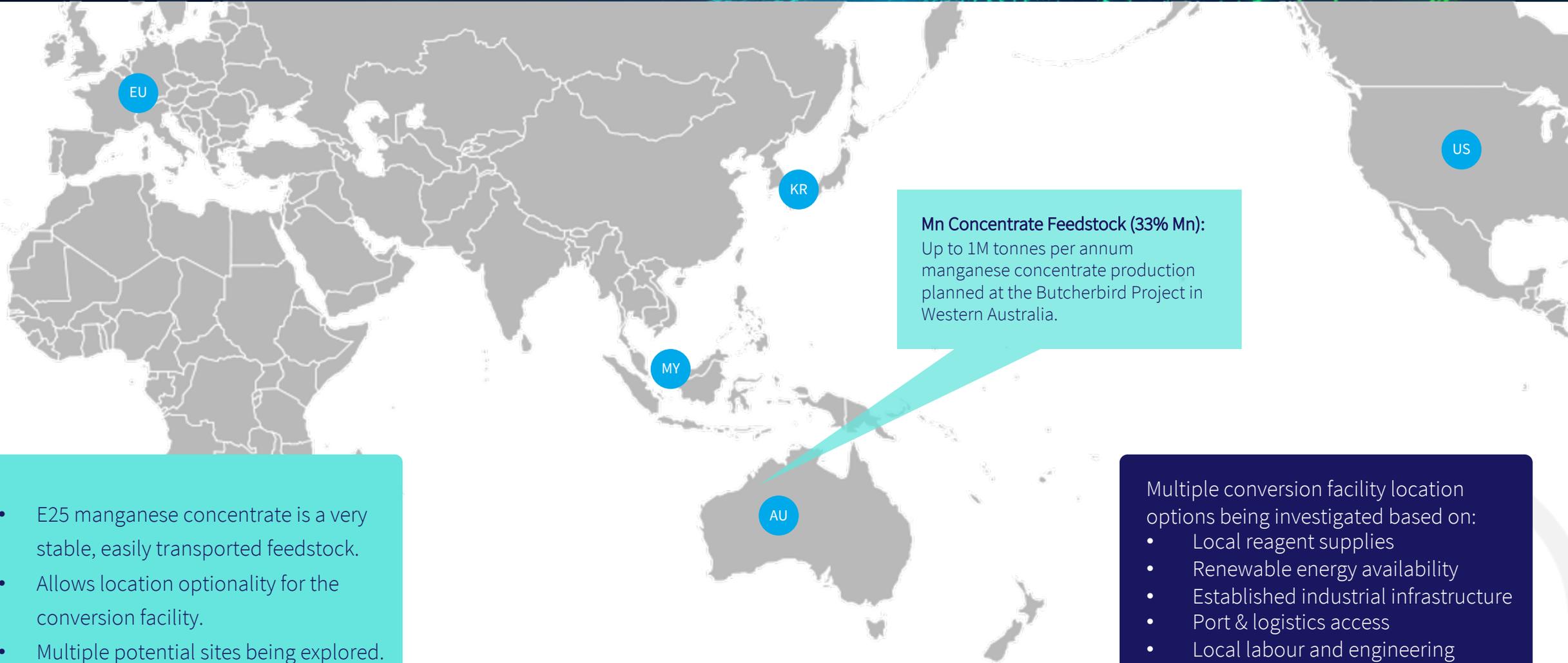
payback period
60:40 debt:equity



December 2024

commissioning
scheduled

Stage 3 Processing Location Optionality – Multiple Plant Potential



- E25 manganese concentrate is a very stable, easily transported feedstock.
- Allows location optionality for the conversion facility.
- Multiple potential sites being explored.

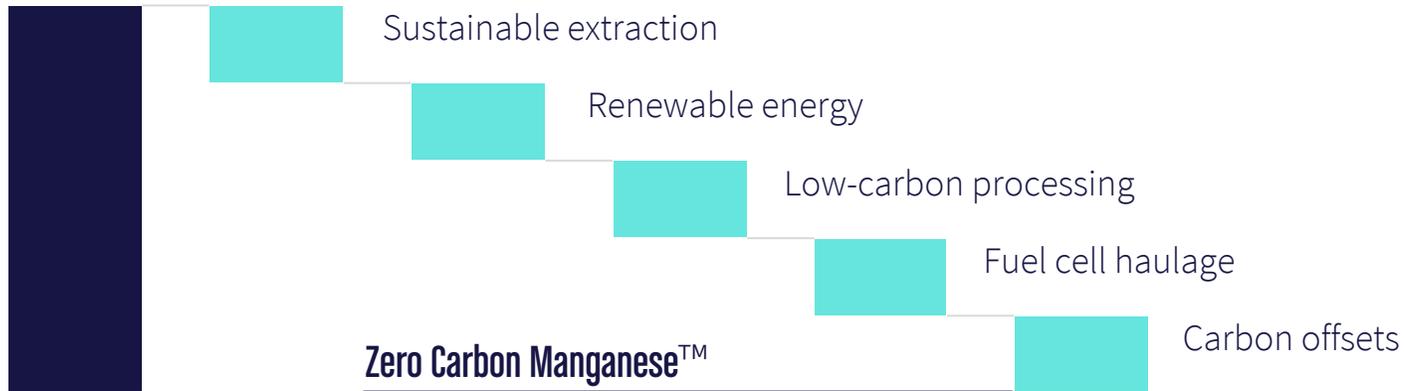
- Multiple conversion facility location options being investigated based on:
 - Local reagent supplies
 - Renewable energy availability
 - Established industrial infrastructure
 - Port & logistics access
 - Local labour and engineering capability

Our Journey - Element 25 has a well advanced flowsheet and business strategy...



■ Historical ■ Projected

Zero Carbon Manganese™ – ESG considerations integral to our thinking



Sustainable Extraction



Renewable Energy
Powered Processing

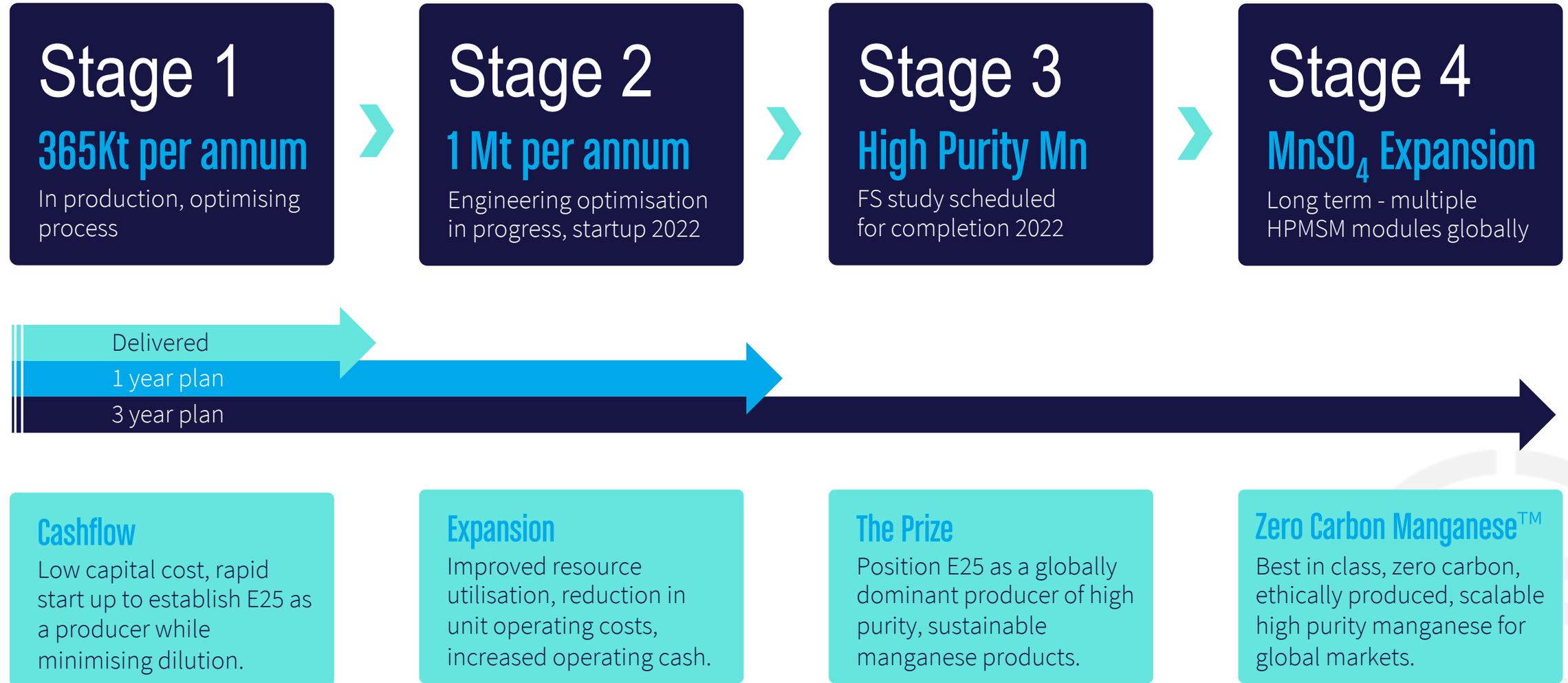


New Energy Fuel

Other potential pathways that Element 25 is investigating:

- Extensive wind and solar resource data set collected at site (>1 year)
- Energy modelling confirmed cost advantage with renewable solutions
- Green hydrogen powered mine fleet and bulk haulage
- Battery powered bulk haulage trucks to be made available in Australia shortly
- Green hydrogen reduction reagent potential (similar to “Green Steel”)
- Supply chain transparency and ESG accounting
- Collaboration with other ESG focused companies to pursue new solutions

Our Strategic Vision...



Thank you

For more information, please contact Element 25 Limited:

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Element 

Reserves and Resources

Maiden Ore Reserve¹

Category	Tonnes (Mt)	Mn (%)	Contained Mn (Mt)
Proved	14.4	11.5	1.65
Probable	36.2	9.8	3.56
Total	50.6	10.3	5.22

Global Mineral Resource²

Category	Tonnes (Mt)	Mn (%)	Si (%)	Fe (%)	Al (%)
Measured	16	11.6	20.6	11.7	5.7
Indicated	41	10.0	20.9	11.0	5.8
Inferred	206	9.8	20.8	11.4	5.9
Total	263	10.0	20.8	11.4	5.9

- 89% conversion of measured and indicated resources to reserve.
- Maiden Reserve only exploits approximately 20% of global mineral resource.
- Excellent potential for future expansion.
- More drilling has potential to add to global resource.

¹Reference: Element 25 Limited ASX release dated 19 May 2020.

²Reference: Element 25 Limited ASX releases dated 17 April 2019.

Competent Person's Statement

The information in this presentation that relates to Exploration Results is based on information compiled by Mr Justin Brown who is a full-time employee of the Company and is a member of the Australasian Institute of Mining and Metallurgy. Justin Brown has sufficient experience which is 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'. Justin Brown consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

All references to Mineral Resources pertain to the ASX release dated 17 April 2019. The Company confirms that all material assumptions, underpinning the estimations continue to apply and have not materially changed.

All references to Mineral Reserves pertain to the ASX release dated 19 May 2020. The Company confirms that all material assumptions, underpinning the estimations continue to apply and have not materially changed.

For further information on Element 25 Limited and its Projects please visit its website at www.element25.com.au which contains copies of all continuous disclosure documents to ASX, Competent Persons' Statements and Corporate Governance Statement and Policies.

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