

HASTINGS

Technology Metals Limited

ASX Stock Code: HAS

Future Producer of
Neodymium & Praseodymium
to the
Permanent Magnet Industry

Investor Presentation
October 2017

All currency amounts are in A\$ unless stated otherwise.

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Exploration Targets

The terms “Target” or “Exploration Target” where used in this presentation should not be misunderstood or misconstrued as an estimate of a Mineral Resource as defined in this context. Exploration Targets are conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain further exploration will result in the determination of a Mineral Resource.

Competent Persons’ Statement

The information in this presentation that relates to Resources is based on information compiled by Lynn Widenbar. Lynn Widenbar is a consultant to the Company and a member of the Australasian Institute of Mining and Metallurgy. The information in this presentation that relates to Exploration Results is based on information compiled by Andrew Border, an employee of the Company and a member of the Australasian Institute of Mining and Metallurgy. Each has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity which they are 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’ (“JORC Code”). Each consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

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Equities Market Statistics

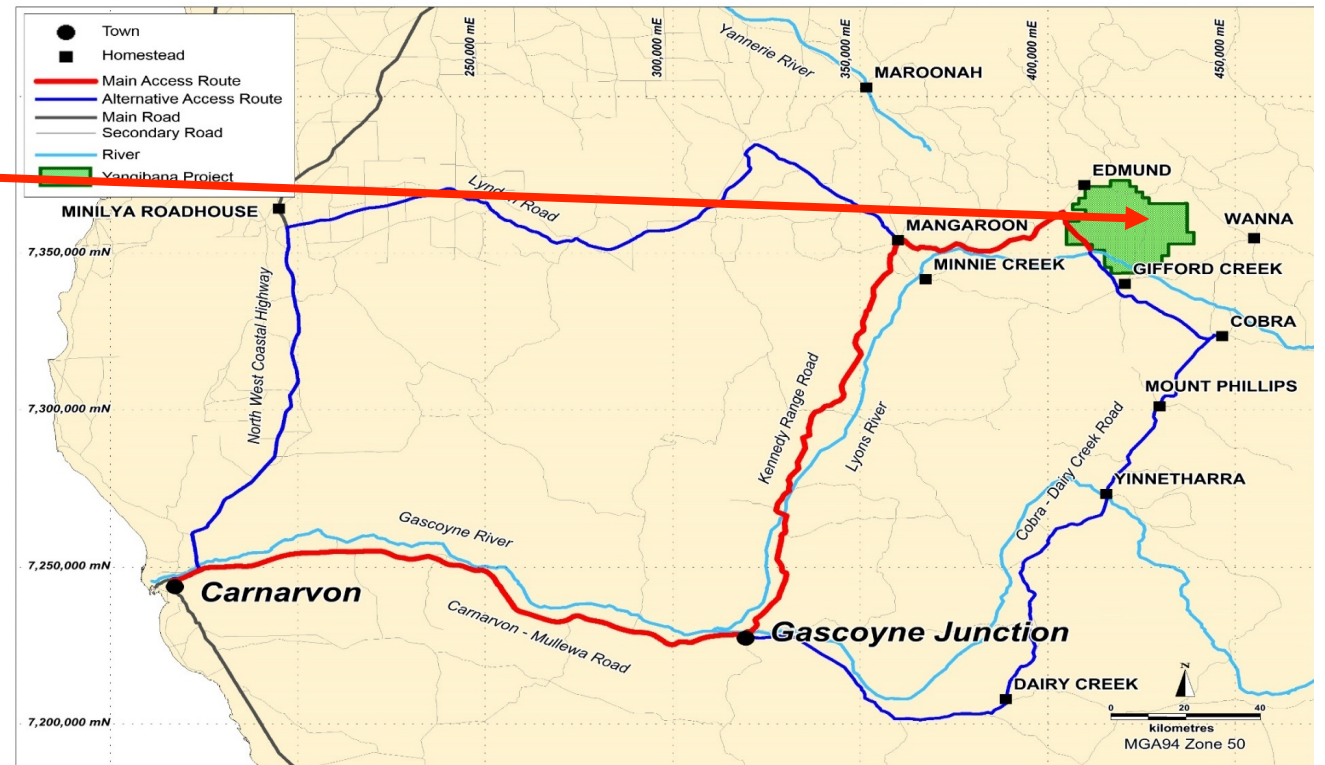
- Market Cap ~ **AUD172m**
- Shareholders ~**1,100 +42% YTD** , Avg Daily Vol ~ 970K
- Top 10 shareholders = 70%
- **Top 5 shareholders:**
 - Charles Lew & Family 29%
 - Mark Chang (founder Job Street) 6%
 - Neil Franks (ex-Glencore) 5%
 - Wide Growth 7%
 - Asia Dragons 6%
- **Share placements:**
 - 2016: Apr @ 10c = A\$10m & Nov @ 11c = A\$3m
 - 2017: Aug @ 20c = A\$16m
- **Net cash as @ 30 Sept 2017 AUD19m**
- **NPV ~ AUD420m & 2.7yrs EBITDA payback**



Western Australia Base

Advantages of geographic location

- Australia Sovereign Risk Rating **AAA/Aaa** (S&P/ Moody's) – **lower cost of capital**
- Highly ranked for **corporate governance** and Rule of Law. (WJP Rule of Law Index 2016)
- Western Australia - long history of **successful mining projects**



Favourable Terrain

Above ground ore outcrops – level terrain, easy to mine

Open Pit Mining on
Flat Terrain

Key Rare Earths:

Neodymium (Nd)

Praseodymium (Pr)

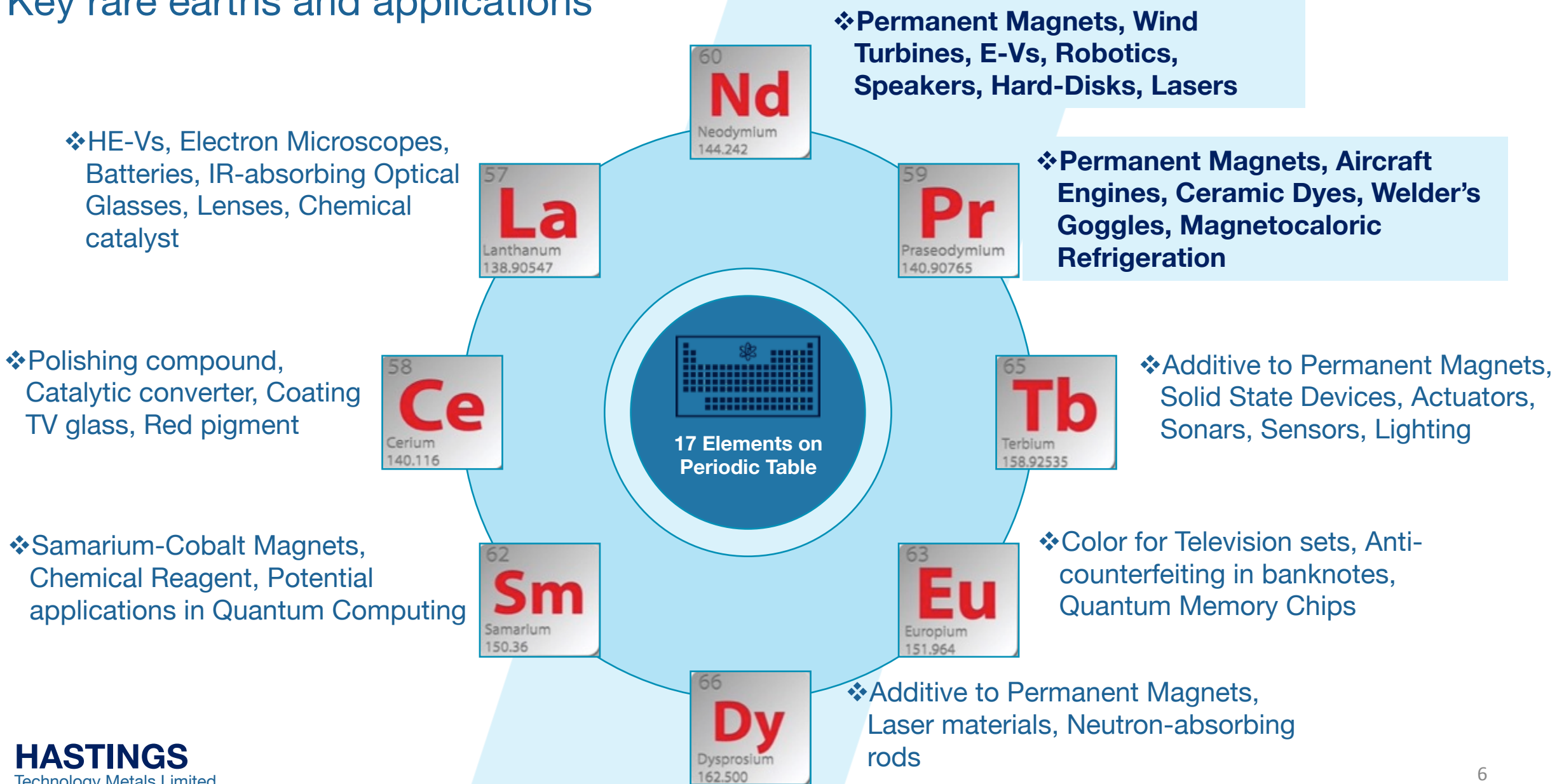
Dysprosium (Dy)

Terbium (Tb)

Nd & Pr account for ~ 85%
of in-ground economic value

Rare Earths

Key rare earths and applications



Rare Earths Applications

Multiple consumer products



❖ MRI & Medical lasers



❖ PVC stabilisers



❖ Appliances



❖ Light Bulbs



❖ Glassware and Crystal



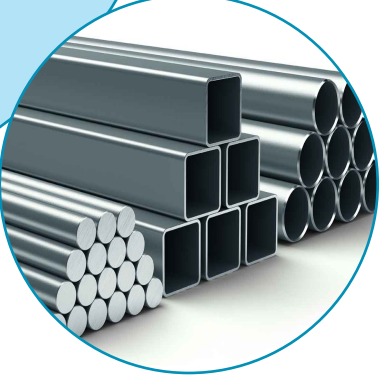
❖ Protective Goggles



❖ Military Applications



❖ Steel & Alloy Production



Permanent Magnets in Consumer/Industrial Products

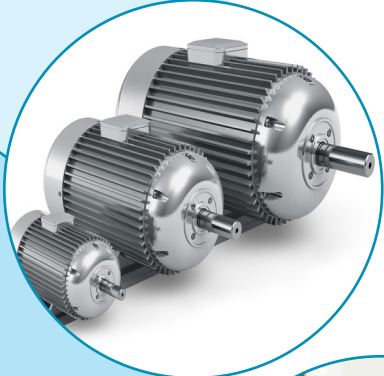
❖ HE-Vs, EVs, Auto-components: seat motors, windscreen, mirror, window winders



❖ Wind Turbines



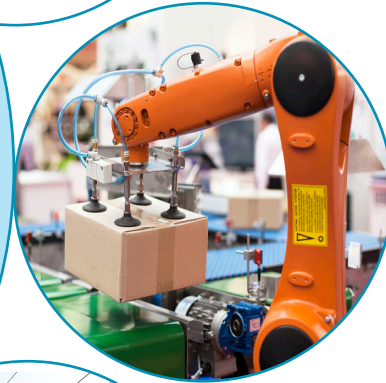
❖ Electric Motors



❖ Electric mobility e-bikes & scooters



❖ Robotics



❖ Disk Drives



❖ High-speed rail – “MagLev”



❖ Mobile devices – speakers, vibration, ringers



EV Revolution - No Turning Back

Rise in demand for EV and HEV



Bloomberg News, 5 July 2017

Volvo Vault to Volts, Planning to Pull Plug on Gasoline – between 2019 and 2021, the company will introduce 5 new 100% electric models



The Times of India, 20 April 2017 - Government Policy for 2030 EV production nationwide
India to only sell electric cars by 2030



Fortune, 8 May 2017

VW says it wants to overtake Tesla and become the leader in electric cars – the German automaker has set itself an ambitious target of 1m electric car sales by 2025

Reuters, 12 Sep 2017

Volkswagen spends billions more on electric cars in search for mass market – plans EUR 20bn in zero-emission vehicles by 2030, will roll out 80 new electric cars across all models by 2025.



The Guardian, 11 July 2017

Black cab turns green as all new electric London taxi launches - under Transport for London (TfL) rules, all new taxis registered from 1 Jan 2018 will need to be electric or capable of zero emissions



Bloomberg News, 11 Sep 2017

China will shortly announce timeline to end the sale of all fossil-fuel vehicles and move to electric transportation.

Tesla Model 3

Major manufacturer switch in EV technology to include Nd permanent magnets

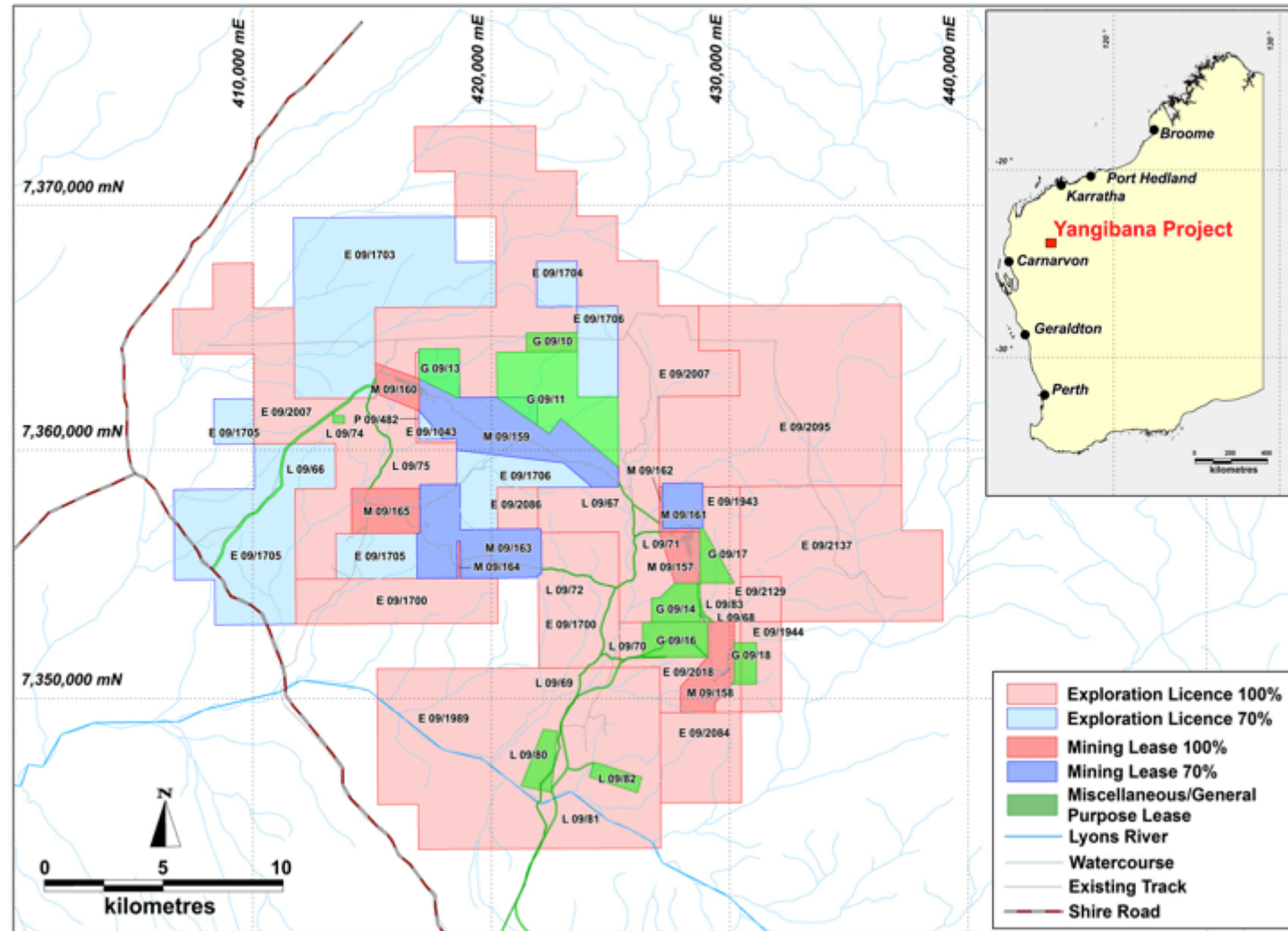


“Documents released by the U.S. Environmental Protection Agency (EPA) have indicated that the Model 3 RWD Long Range carline will use a **3 phase permanent magnet motor as the powertrain motor**... the smaller size/weight, higher torque density and improved efficiency of permanent magnet motors compared to induction motors make them attractive for use in HEV and EVs, as they provide better acceleration, reduce vehicle weight and allow greater space for other components.” - Roskill

Granted Leases

Mining, General Purpose & Exploration Leases

- Total Yangibana area ~ **650 km²**
- 21 years Mining Leases Granted since March 2016 ~ **50 km²**
 - No Native Title Claims on mineralised ground
 - Contain ~ 85% of JORC Resource
- Various Miscellaneous and General Purpose Leases granted supporting infrastructure
- Application lodged for permits to commence mine construction and production plant.*



JORC Resources

High Neodymium and Praseodymium content

- Oct 2017 updated JORC estimate increases Measured Resource by ~ 30% from July 2017, with **total at 20.6m tonnes***
- In-ground ratio of Nd-Pr as % of TREO average from **34% (0.40%/1.18%) to as high as 57%** locally at Simon's Find deposit
- New JORC estimates represent **12% increase** in TREO and **18% increase** in Nd + Pr from prior estimates of July 2017
- Current JORC resource has potential for 20 years of mine life assuming 1m t.p.a. processing**
- Resources contained on Hastings 100% owned ground and smaller portion on 70% JV ground.

Total Yangibana JORC Resources (rounded)

Category	Tonnes	Nd ₂ O ₃ +Pr ₆ O ₁₁	TREO	Nd ₂ O ₃	Pr ₆ O ₁₁
		%	%	ppm	ppm
Measured	3,792,000	0.42	1.18	3,350	840
Indicated	8,240,000	0.43	1.27	3,410	870
Inferred	8,527,000	0.37	1.11	2,900	760
TOTAL	20,559,000	0.40	1.18	3,190	820

Hastings 100% owned ground

Category	Tonnes	Nd ₂ O ₃ +Pr ₆ O ₁₁	TREO	Nd ₂ O ₃	Pr ₆ O ₁₁
		%	%	ppm	ppm
Measured	2,921,000	0.42	1.03	3,370	780
Indicated	6,315,000	0.42	1.10	3,360	790
Inferred	6,075,000	0.36	0.95	2,920	700
TOTAL	15,311,000	0.40	1.03	3,190	750

Hastings 70% owned JV ground

Category	Tonnes	Nd ₂ O ₃ +Pr ₆ O ₁₁	TREO	Nd ₂ O ₃	Pr ₆ O ₁₁
		%	%	ppm	ppm
Measured	871,000	0.45	1.64	3,260	1,000
Indicated	1,925,000	0.47	1.84	3,590	1,110
Inferred	2,453,000	0.38	1.49	2,850	900
TOTAL	5,249,000	0.42	1.64	3,190	990

Future Drilling Potential

Increasing JORC Resources & Mine Life

- Aeromagnetic survey in 2016 identified 22 priority mineralised targets for future exploration after 2017. Extend mine life > 10 yrs. (18 Oct 2016)
- Fraser's Southwest Deposit drill results - high grade to 2.00% TREO (25 Oct 2016)
- Auer North Deposit - high grade of 2.08% TREO & 35% – 37% Nd-Pr as %TREO (21 Nov 2016)
- Bald Hill: drill results contain 1.90% TREO & 39% Nd-Pr as % of TREO (7 Jun 2017)
- Drill programme for 2017 - increases M & I Resources to support 10-year mining operation (16-May-2017) – Yangibana & Simon's Find deposits host high Nd & Pr (9 Oct 2017)



Yangibana Advantage – Highest Nd-Pr Ore Body

Comparison of REO Distribution & Basket Value Between Hastings and Major Light RE Producers

RE Oxide/TREO	Unit	Hastings	China		Outside of China	
			Baotou	Sichuan	Mt Weld	Mountain Pass
Lanthanum	%	9.99	25.94	36.50	25.16	33.22
Cerium	%	39.59	50.69	47.90	46.36	49.10
Praseodymium	%	8.01	5.15	4.10	5.38	4.30
Neodymium	%	33.80	15.90	10.00	18.79	12.00
Samarium	%	3.88	1.21	0.70	2.27	0.80
Europium	%	0.84	0.22	0.08	0.47	0.12
Gadolinium	%	1.80	0.39	0.23	0.85	0.17
Terbium	%	0.15	0.05	0.04	0.06	0.04
Dysprosium	%	0.50	0.11	0.06	0.16	0.07
Yttrium	%	1.14	0.25	0.31	0.45	0.10
Other	%	0.29	0.10	0.08	0.05	0.09
Economic Value Factor		1.88	1.00	0.73	1.14	0.81

- REO/TREO composition is based on REO content in beneficiated concentrate
- Economic Value Factor is calculated based on individual % of REE in the ore body x REO prices
- Yangibana: high Nd-Pr content of 42%
- **Yangibana basket price @ USD30.50/kg (Oct 2017)**

Basket Price USD/kg 30.50 16.15 11.75 18.40 13.10

Spot Prices of Rare Earth Oxides (October 2017)

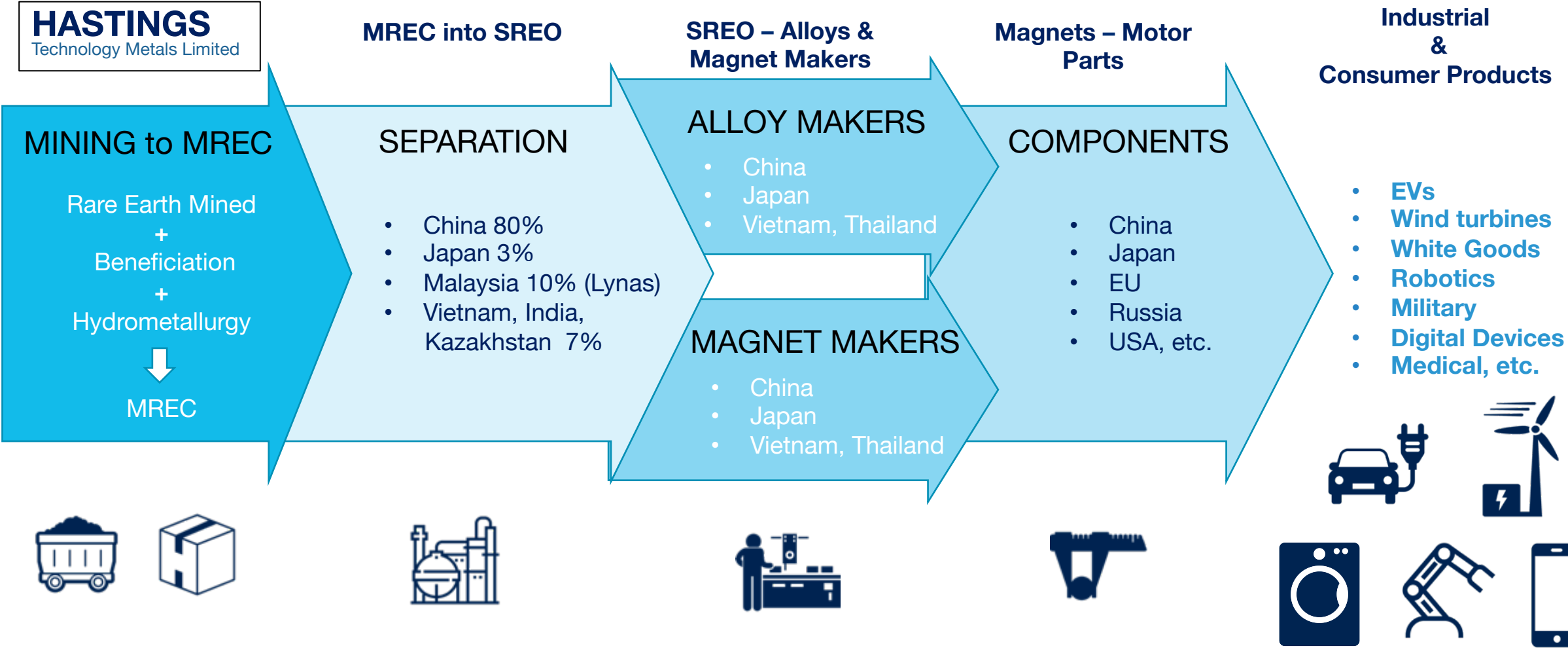
China F.o.B. Export prices 12-Oct-2017 (USD/kg) & YTD change

Lanthanum oxide	La ₂ O ₃	\$ 2.55	+11 %
Cerium oxide	CeO ₂	\$ 2.55	+50 %
Praseodymium oxide	Pr₆O₁₁	\$ 77	+59%
Neodymium oxide	Nd₂O₃	\$ 60	+56 %
Dysprosium oxide	Dy₂O₃	\$ 174	- 2 %
Terbium oxide	Tb₄O₇	\$ 509	+21 %
Samarium oxide	Sm ₂ O ₃	\$ 2.45	+51 %
Europium oxide	Eu ₂ O ₃	\$ 76	+21 %
Erbium oxide	Er ₂ O ₃	\$ 30	+23 %
Holmium oxide	Ho ₂ O ₃	\$ 67	+43 %
Lutetium oxide	Lu ₂ O ₃	\$ 722	+20 %
Yttrium oxide	Y ₂ O ₃	\$ 3.55	+ 11 %



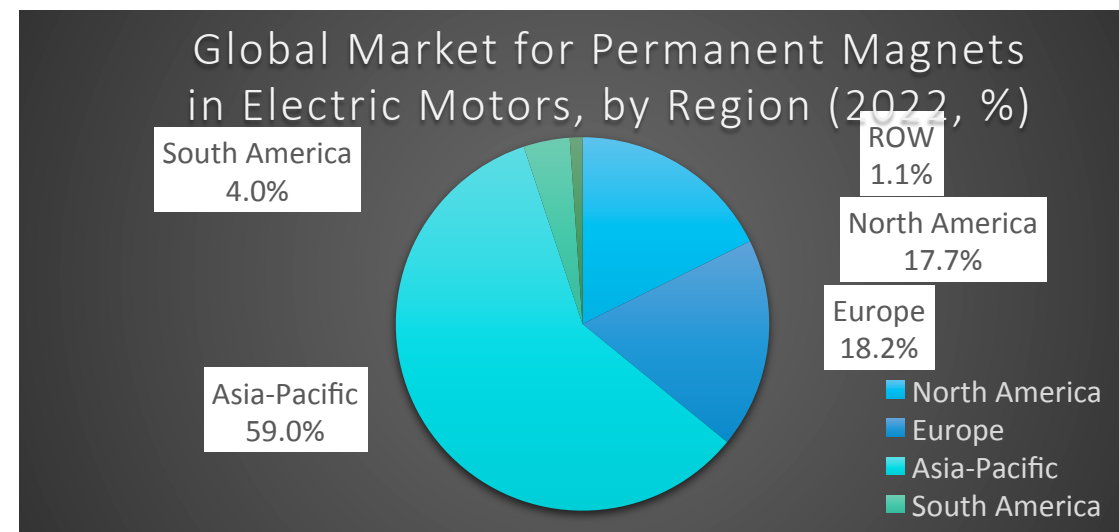
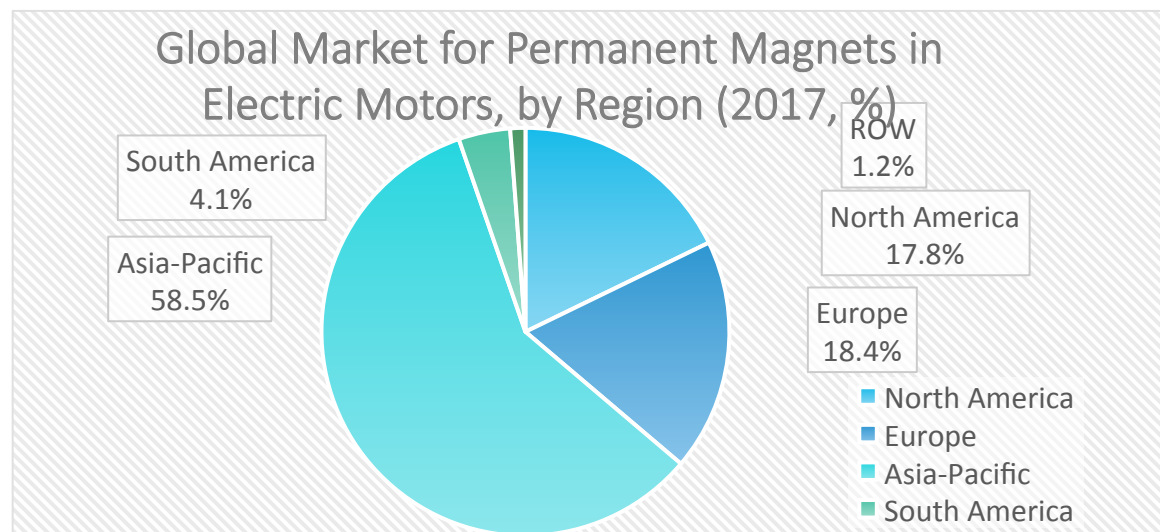
From Mining to Magnets

The Supply Chain to Permanent Magnets – From Ore to Finished Products



Global Permanent Magnet Electric Motor Market

Region	2016 (Million USD)	2017 (Million USD)	2022 (Million USD)	CAGR (%) 2017-2022
North America	665.7	719.9	1,087.6	8.6
Europe	688.1	744.2	1,118.3	8.5
Asia-Pacific	2,168.3	2,366.1	3,625.2	8.9
South America	152.5	165.8	245.8	8.2
Rest Of World (ROW)	44.6	48.5	67.5	6.8
Total	3,719.2	4,044.5	6,144.4	8.7



Economics of Magnets

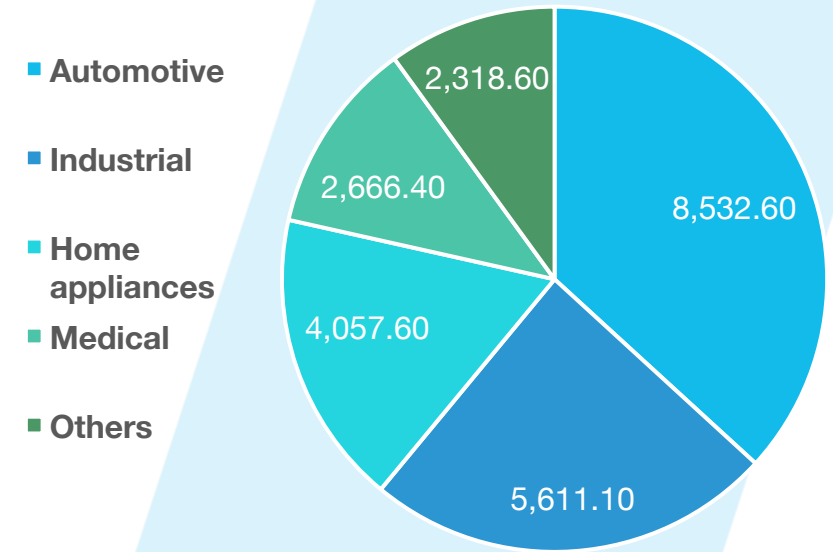
NdFeB cheapest by strength per unit/sqcm

Materials	Average Price (\$/lb.)	Average Max. Energy Product (MGOe)	\$/MGOe
Hard Ferrite	2.0	3.5	N/A
NdFeB	75.0	30.0	2.3
Samarium-Cobalt	162.0	22.0	7.4
AlNiCo	27.0	8.0	3.4

Considering weight, material costs and overall strength, the NdFeB magnet offers the **best value for money**

Application	2016 USDm	2017 USDm	2022 USDm	CAGR% 2017-2022
Consumer electronics	1,933.9	2,090.8	3,078.0	8.0
Electric motors	1,888.9	2,074.6	3,287.3	9.6
Sonic equipment, magnetic sensors, actuators and transducers	1,131.8	1,228.5	1,846.8	8.5
Medical devices	951.9	1,025.1	1,514.4	8.1
Generators	914.5	984.4	1,514.4	9.0
Others	674.7	732.2	1,071.0	7.9
TOTAL	7,495.7	8,135.6	12,311.9	8.6

Global Market for Permanent Magnets - by Industry 2022 (USD m)



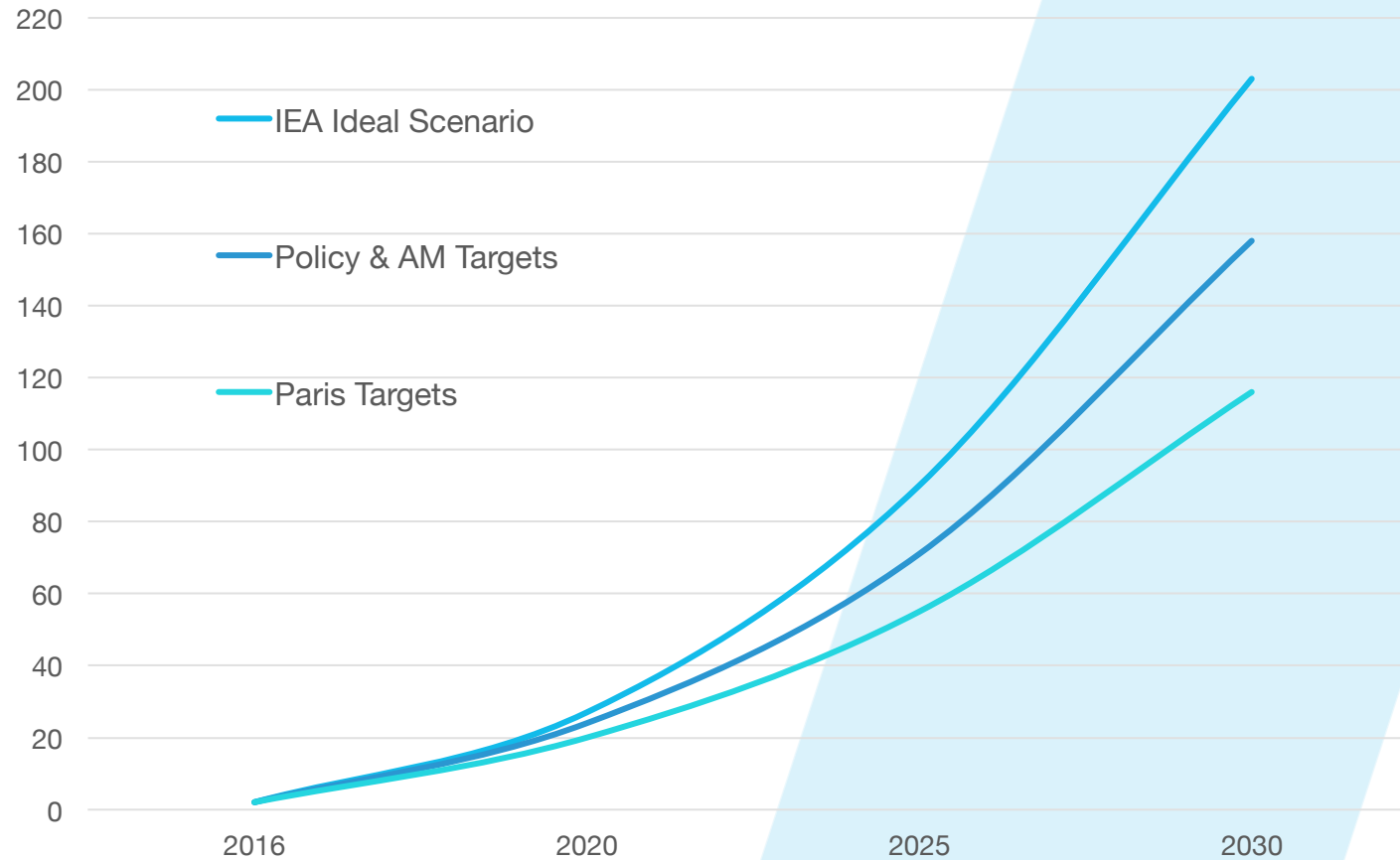
Overall sales of Nd magnets forecast to increase across several industries:

- **Automotive (EV)**
- **Aerospace**
- **Defense**
- **Medical**
- **Electronics**

Policy Targets – Impact on Production of EVs

Strong increase inevitable

Deployment scenarios for EVs to 2030 in millions



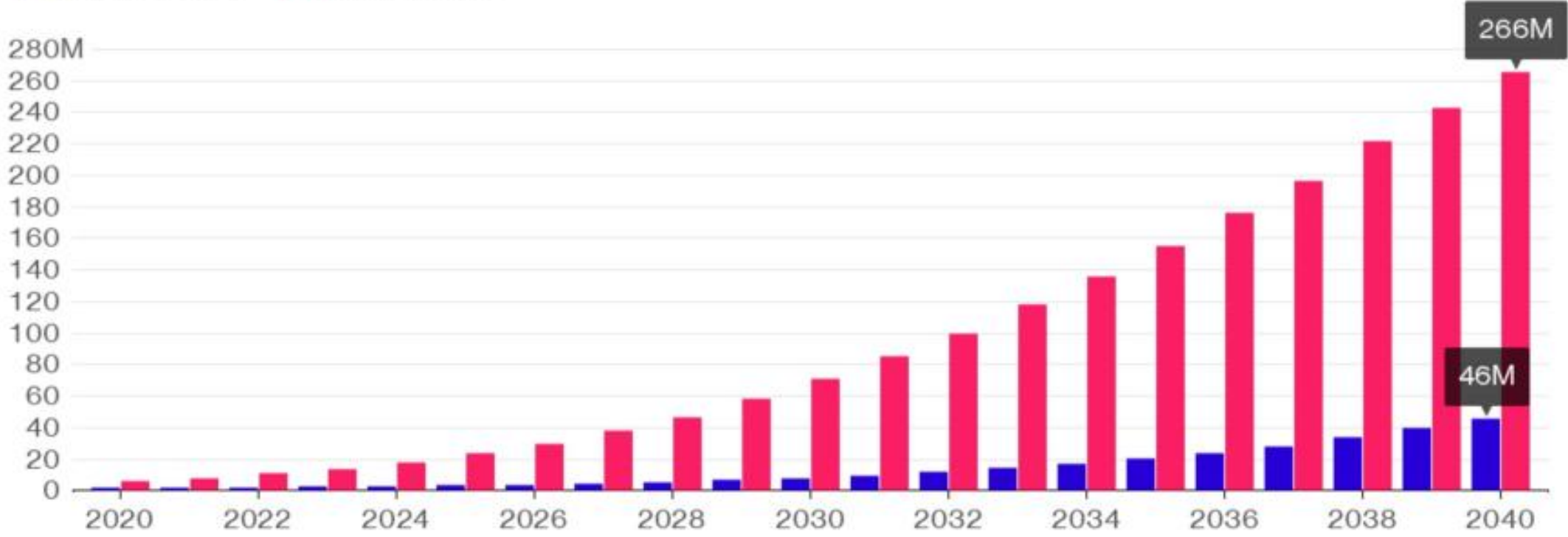
- **2016 – Total EVs ~ 2m**, representing 0.2% of global vehicle fleet
- Paris Targets ~ **120m EVs by 2030**
- Subsequent government policy announcements and targets set by auto manufacturers (AM) ~ **160m by 2030**
- IEA ideal scenario to reduce global temperatures ~ **200m by 2030**
- **EVs potential to grow 100X over next 12 years**

OPEC's revised EVs growth forecast jumps 5x

Growing Expectations

OPEC's electric vehicle forecast grew by almost 500% last year

■ 2015 Forecast ■ 2016 Forecast



Source: Bloomberg New Energy Finance

Major Growth Applications

Demand drivers for permanent magnets from new technologies



Wind turbines

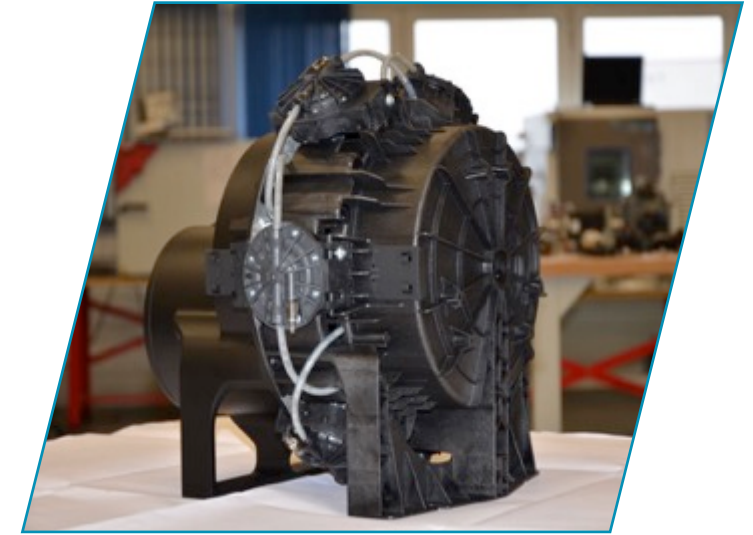
GWEC projects wind capacity to reach 2,110 GW – 5X increase from today.

est. ~ 10,000 to 15,000 t.p.a. additional Nd-Pr*



Electric Vehicles

Policy changes;
Manufacturer EV Targets;
est. ~ 10,000 to 15,000 t.p.a.
additional Nd-Pr**

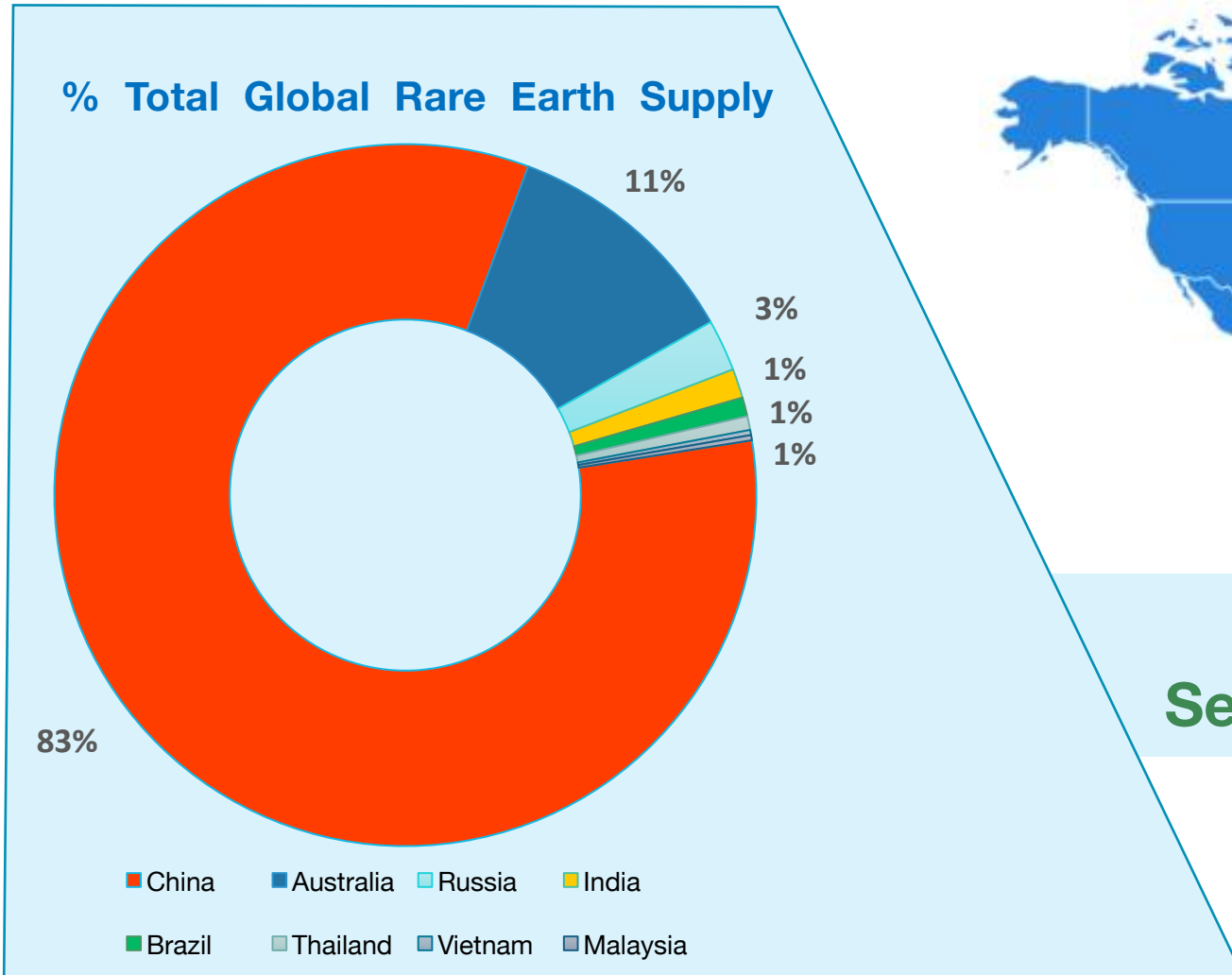


New innovations Magnetocaloric Refrigeration

30% to 50% more energy efficient,
zero CFC usage. **(Mostly Nd-Pr)**
NdFeB ~ 1kg per unit
Additional demand 6,300 tonnes p.a.
by 2025

Global Rare Earth Supply 2016

Supply diversification increasingly strategic



HASTINGS

Second source Supply outside of China

2016 Global Supply 126,000 MT

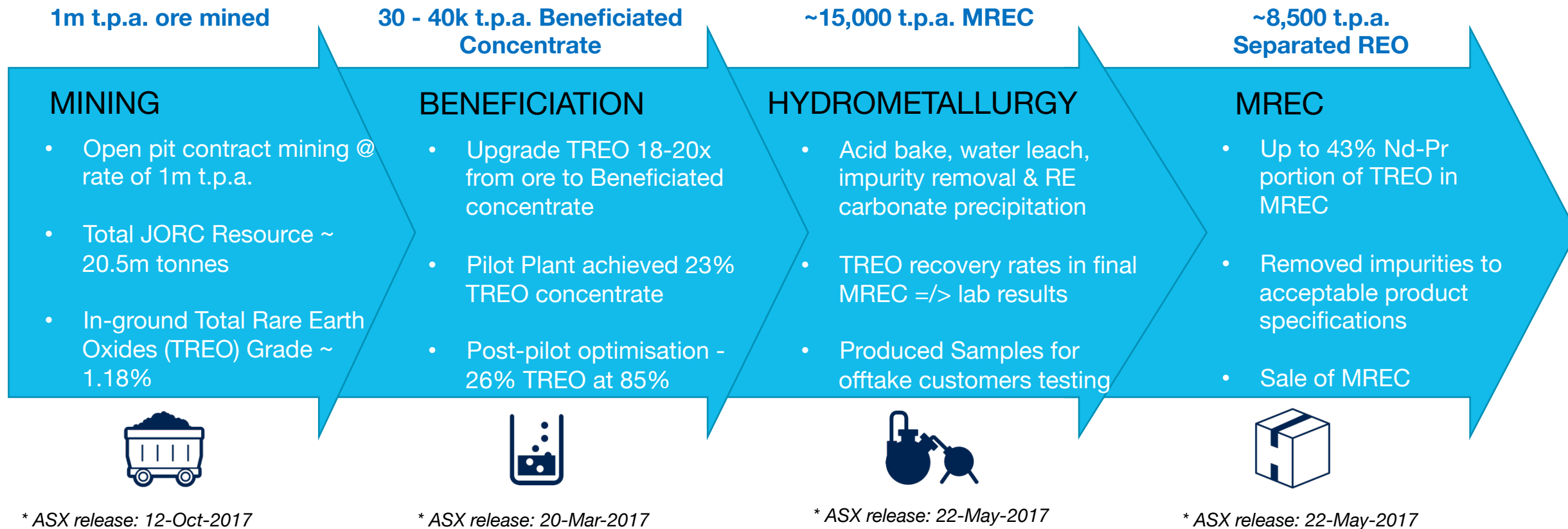
Excluding Illegal Supply

China aggressively targeting illegal mining in 2017 – expected to reduce global supply.

The Yangibana Process and Product

The Steps from Ore to Mixed Rare Earth Carbonate (MREC)

Successful Beneficiation and Hydrometallurgy pilot plant test-work proves simple and effective production process flow sheet



Yangibana Beneficiation Flowsheet

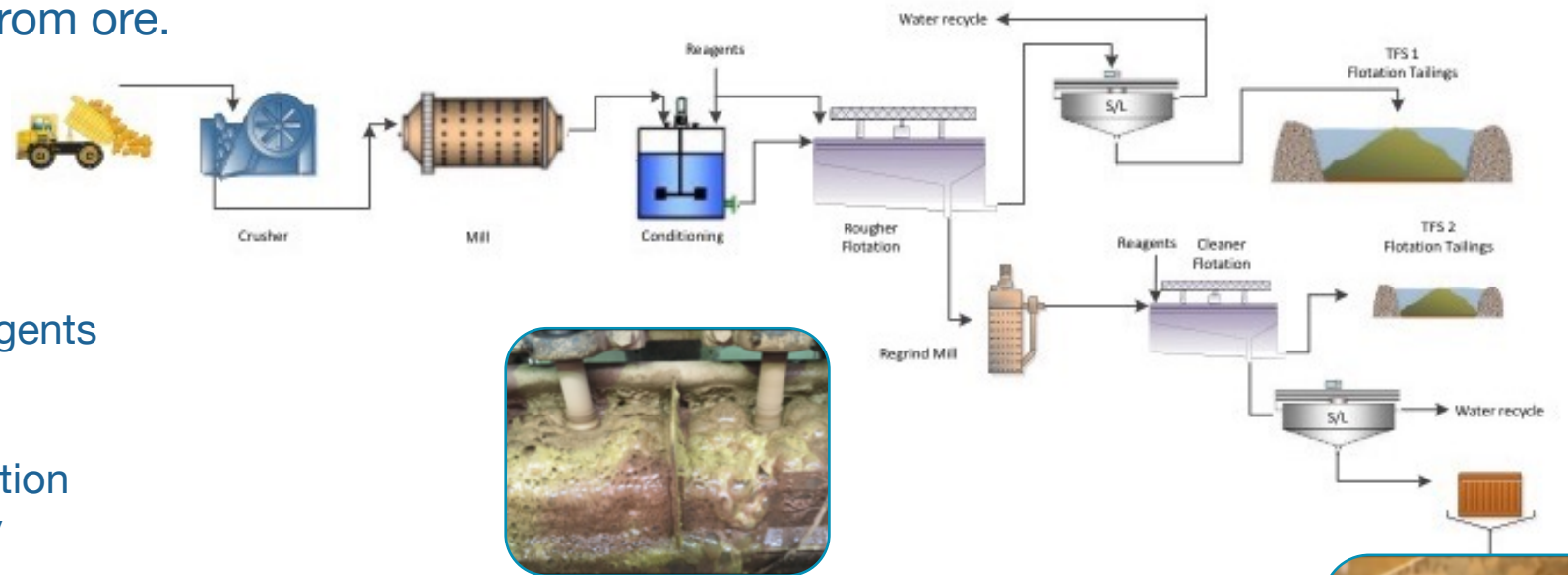
Successful completion of pilot plant test work

Continuous Pilot Plant Test - Successfully validated simple and effective flowsheet

Confirmed 70% TREO recovery rates and a concentrate upgrade to 23% TREO ~ 18 times from ore.



Flotation Pilot Plant Operation at ALS, Perth



Monazite Flotation from pilot

Final flotation concentrate to hydrometallurgy pilot



- Achieved lower consumption of reagents thereby lower OPEX costs.
- Recent post-pilot Process Optimisation achieved up to 85% TREO recovery
- Preliminary engineering design work for full scale processing plant underway

Yangibana Hydrometallurgy Flowsheet

Successful completion of pilot plant test work at ANSTO

Hydrometallurgy Pilot plant undertaken for three phases:

- Acid bake
- Water leaching & impurity removal
- Carbonate product precipitation

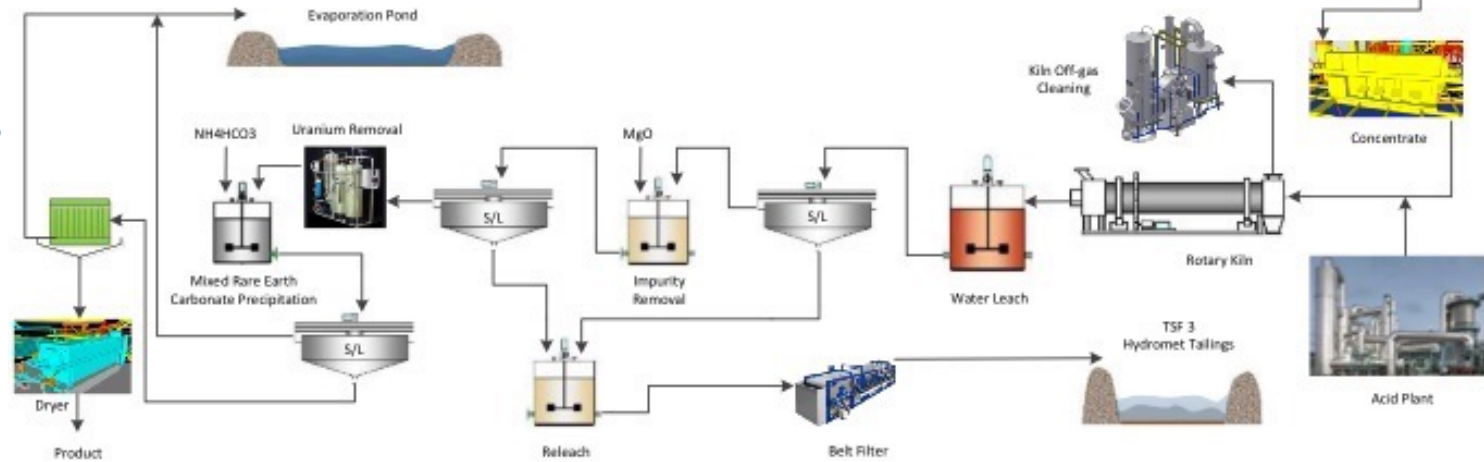
All three phases achieved or exceeded lab results

Produced 50 kg high purity MREC sample for customers containing **40.8% Nd & Pr as % of TREO**

Key engineering data collected for DFS and for industrial process plant design

Process	TREO Recovery
Water Leaching	>94%
Impurity Removal	95%
Carbonate precipitation	>98.5%
Overall Recovery	88%

Final flotation concentrate from beneficiation pilot



Neutralisation & Precipitation Circuit



Water Leach Circuit

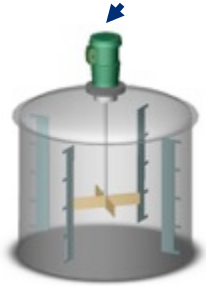


Acid Bake Kiln from Pilot

Downstream Toll Treatment

Estimated Tolling cost USD 2.50/kg (based on 15,000 tons MREC)

Mixed Rare Earths
Carbonate (MREC)



MREC Dissolving



Separation with
Solvent Extraction



Separated REE
Precipitation



Dewatering of Precipitated Solids

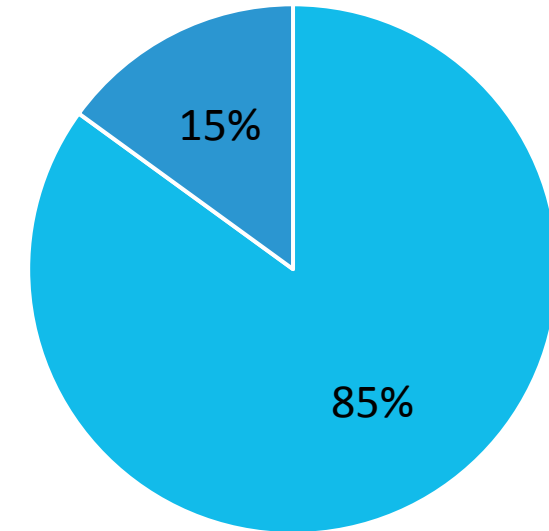


Tunnel Furnaces

Calcination of Precipitated Solids

Separated RE Oxides to
RE Metal/Magnet Maker

Global Separation Capacity



■ China ■ Outside of China

Separation capacity outside of China includes the separators in Malaysia, India, Vietnam, Kazakhstan/eastern EU, etc.

Capital Expenditure

Ensuring an efficient and effective utilisation of capital and reducing project risk

- Substantial progress in reducing CAPEX since PFS (from \$420m to below \$339m)
 - Optimised and re-engineered process plant utilising data from pilot plant test-work **
 - Sourcing from global vendors to reduce Equipment and Construction costs
 - Availability of good second-hand equipment given mining downturn in WA
- Ongoing CAPEX reduction by management before and during construction
- Objective is to lower cost for construction of mine and production plant by buying reconditioned plant and machinery and China sourcing where practical

CAPEX targets	
	<u>AUD m</u>
Engineering	40.7
Procurement – Plant & Machinery	66.5
Procurement – Civils & Infrastructure	25.4
Construction – Plant & Machinery	77.4
Construction – Civils & Infrastructure	76.3
Commissioning Support by vendors	3.7
Owner’s Project Management Team costs	2.2
Site Office Expenses/Travelling	1.5
Construction Insurances	0.5
Contingencies (15%)	45
TOTAL CAPEX	~339 m*

Annual Operating Expense

Estimated Annual Operational Costs

- Substantial OPEX cost savings due to:
 - Optimised consumption of reagents identified in pilot plant test-work
 - Recycling and re-using by-products of process plant**
 - Lower transportation costs
- OPEX costs ~ **AUD16.35/kg (USD12.25/kg)** producing 8,500 t.p.a. TREO from MREC @ AUD 0.75/USD1.00
- Estimate of Depreciation and Finance costs ~ **AUD5.35/kg (USD4.00/kg)**
- Estimate pre-tax profit margin (after tolling fee) **AUD15.60/kg (USD11.75/kg)** at Oct-17 prices.

Assumes 2020 production year and 8,500 tonnes TREO in MREC	
	<u>AUD m</u>
Mining Costs – based on 1m t.p.a. mined	43.1
Reagents – Beneficiation & Hydrometallurgy	44.2
Power & Kiln Fuel	22.1
Labour & Accommodation	20.4
Equipment Hire & Maintenance	5.4
Consumables + General Contracts	2.1
Product Transportation	2.6
Estimated Annual Operating Costs (Excluding Interest & Depreciation)	~139 m*

Timetable to Production

Milestones to production by 2H 2019

PROJECT IMPLEMENTATION SCHEDULE FOR YANGIBANA RARE EARTHS PROJECT																													
Activities	2017					2018										2019													
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
Definitive Feasibility Study (DFS)	█	█	█	█	█																								
Permitting & Approvals	█	█	█	█	█	█	█	█	█	█	█	█	█																
Design for Access Road & Bulk Earthwork for Accom Camp				█	█	█	█	█																					
Construct Access Road & Accomodation Camp							█	█	█	█	█	█	█	█	█	█													
Basic Engineering Design (BED)							█	█	█	█																			
Detailed Engineering											█	█	█	█	█	█	█	█	█	█	█	█							
Procure Long Lead Equipment - Rotary Kiln				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█				
Procure Long Lead Equipment - Sulphuric Acid Plant					█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█					
Procurement (other equipment & bulk material)											█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█		
Production Plant Construction														█	█	█	█	█	█	█	█	█	█	█	█	█	█		
Commissioning																								█	█	█	█		
Commercial Production Start																											▼		
Ramping Up Production (On-specs and to design capacity)																									█	█	█		

Above shows only the main Tender Packages

█ Critical Path

Early Works on Site

Part of Total Capex

	AUD m
Preliminary Engineering Design	3.0
Access Roads (18km)	6.0
Accommodation camp	7.0
River crossings (Lyons & Falls Creek)	3.0
Long Lead Time Procurement	5.0
Dual Listing Expenses	3.0
Contingencies	3.0
Total	30.0



Board of Directors

Experienced Directors and Management Team



Tony Ho

**Non-Exec. Director
& Chair of Audit
Committee**

- Chartered Accountant
- Non-Exec Chairman of Greenland Minerals and Bioxyne
- 35+ years in senior corporate management with Brazin, Yates and Dolomatrix



Guy Robertson

**Finance Director &
Company Secretary**

- 30+ years CFO experience
- CFO for various ASX listed junior mining companies
- Senior finance executive in Jardine Matheson Group in Hong Kong and Australia including Jardine Lloyd Thompson, Colliers Jardine, and Franklins Limited



Charles Lew

Executive Chairman

- Corporate Finance Director HG Asia Securities 1990 - 1997
- MD of ABN Amro Investment Bank Singapore 1997 - 2000
- Independent Director of RHB Banking Group 2004 - 2016
- 30+ years experience in investment banking in London with HSBC & Robert Fleming and Singapore
- Private investor and entrepreneur



**Jean Claude
Steinmetz**

**Non-Exec. Director /
Commercial Director**

- Previously Chief Operating Officer for Lynas Corporation
- 25+ years Involved in the chemical industry with Rhodia and General Electric
- Chairman of the Auto Plastic and Innovative Materials Committee of Sino-EU Chemical Manufacturers Association



Aris Stamoulis

**Executive Director /
Director**

Corporate Finance

- 20+ years experience in banking & finance
- Worked for Deutsche Bank and Morgan Stanley in various roles in London, Singapore and Hong Kong

Management Team

In depth experience and specialised skills



Viv Roberts

Director of Mining Operations

- 30+ years mine operations experience
- 15 years senior leadership roles including GM Operations for Roy Hill Iron Ore Project, GM at Fortescue's Christmas Creek mine, Alliance Manager for Thiess Mining (BHP) & GM for BC Iron.
- Member of AusIMM, WA Mining Club and AICD.



Andy Border

General Manager Exploration

- 35+ years experience as a geologist
- Rare earths, copper, gold and industrial minerals
- Recent roles include Exploration Manager, COO and MD of a number of ASX-listed companies with projects in Australia and elsewhere.



Pit Wah Chung

Chief Financial Officer

- 18+ years experience in financial reporting and tax
- Regional Financial Controller of Lifestyle Investment Group. CFO of Muddy Murphy's Holdings and Breadtalk Group Ltd
- Chartered Accountant of Singapore & fellow member of The Association of Chartered Certified Accountants (ACCA).



Kok Hoong Leong

Project Director

- 38 years' engineering experience, 15 years in project management
- Senior Project Manager at Lynas Malaysia/ Lynas Corp. responsible for Phase 2 production plant
- Project manager with PETRONAS for two petrochemical plants



Valerie Quay

Legal Counsel

- Trained & Qualified Lawyer , Barrister at Law Middle Temple UK
- Focus area and experience in corporate and commercial law
- Management & strategy consulting with Mckinsey & Co.

Specialised Technical Team



Dr Kwan Wong

KYSPYmet Mineral Processing Consultants - Flotation Specialist

- 50+ years practicing metallurgist with extensive flotation treatment experience in rare earth
- Evaluation of beneficiation flotation test work, plant performance & commissioning; pilot plant test programme design and execution
- Specialist speaker in flotation workshops.
- Worked on 9 REO oxide development projects in Australian and overseas



Narelle Marriott

Principal Engineer – Beneficiation

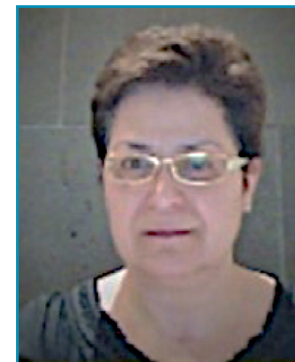
- 14+ years experience in the minerals processing and mining industry
- Experienced in process and flowsheet development for beneficiation plants
- Worked on 5 pilot plant operations in comminution and flotation of nickel, copper, uranium, iron ore and RE industries



Robin Zhang

Process Engineering Manager

- 20+ years experience in R&D, project engineering, plant commissioning & operations
- 8 years at Lynas Corporation, Senior Technical Services Manager & Senior Project Development Manager
- 11 years with Gansu Rare Earth Group - one of the largest rare earth companies in China - Deputy Director of Technical Centre



Dr Nursen Guresin

Senior Metallurgist

- 30+ years experience in the mining industry
- Expertise in physical (crushing, grinding concentration processes) and chemical (hydrometallurgy, pyro-metallurgy electrometallurgy) ore processing
- Experienced in engineering studies metallurgical test work, site work (optimisation, trouble shooting, trials), audits, due diligence, Competent Person and NI 43-101 Reports, consultancy, research and lecturing

Three off-take MOUs signed

Strong level of interest and demand for Yangibana high Nd-Pr MREC

- **Baotou Sky Rock Rare Earth New Material Co. Ltd** – 2,500 tonnes per annum (*1 Aug 2017*)
 - Sky Rock produces high tolerance NdFeB permanent magnets. Main products include
 - Sintered Neodymium Magnets
 - Sintered Samarium Cobalt Magnets
 - **China Rare Earth Holdings Ltd** – 2,000 tonnes per annum (*1 Sept 2017*)
 - CREH started business in 1987 and listed on HKEX in 1999
 - Established manufacturer of rare earth derived and refractory products
 - **Qiandong Rare Earth Group (GQD)** – 1,500 tonnes per annum (*13 Sept 2017*)
 - GQD founded in 1988
 - Through 11 subsidiary companies involved in all parts of the rare earth product supply chain.
- Selling price will be set at average of 3 months market prices prior to shipment
 - On going negotiations for off-take agreements with Germans and Japanese customers

NPV & Sensitivity Analysis

Management estimates pre-DFS

**NPV of Project
Payback (EBITDA)**

**AUD420m
2.7 years**

Basket Price	USD 20/kg	USD 25/kg	USD 30/kg	USD 35/kg
NPV @ 8% (AUDm)	- 40	117	274	420
Pre-tax Profits (AUDm)	10.6	53.1	95.6	138.1

- **Projected Profits after Tax (conservative)**

** Full Year production @ 90% capacity*

- **Breakeven basket price****

*** Assumes funding cost*

USD 50 - 55m

USD 21/kg basket price

Model assumptions:

Mine Life

8.5 years

Discount Rate

8%

Basket Price

USD35.00

Costs increase

3% per annum (based on CPI)

Basket Price increase

Flat throughout**

USD/AUD

AUD 0.75c

**For every 10% increase in Basket Price, the impact on NPV is ~ AUD100m

Aug 2017 Basket Price high = USD 37.50/kg = NPV of AUD 540 m

Listed Chinese Rare Earth Producers

Listed on SSE / HKEX

Company Name	Ticker	Price	Mkt Cap (USDm)	PE		PB	
				17F	18F	17F	18F
China Northern Rare Earth Group High-Tech Co Ltd	600111:CH	15.14	8,308	232.9	194.1	6.5	6.3
China Molybdenum Co Ltd	603993:CH	7.14	21,689	45.8	34.0	4.0	4.0
Aluminum Corp of China Ltd	601600:CH	8.09	16,866	39.1	19.9	2.9	2.6
Xiamen Tungsten Co Ltd	600549:CH	29.03	4,765	42.9	33.5	4.1	3.3
China Minmetals Rare Earth Co Ltd	000831:CH	13.85	2,052	166.0	NM		
Rising Nonferrous Metals Share Co Ltd	600259:CH	42.82	1,952	120.4	NM		
China Rare Earth Holdings Ltd	769:HK	0.60	180	NM	NM		

Source: Bloomberg & Citic CLSA @ 23 Oct 2017

Project Funding – 2H 2017 and beyond

- Total Funding required for **CAPEX** ~ **AUD 339m** (Debt: Equity mix 35% : 65%)

- **Equity**

August 2017 private placement @ 20c (completed)
4Q 2017 (pre money valuation @ ~ \$175m)
1Q 2018 – pre-IPO financing*

AUD m

16

15 - 20

50 - 75

Proposed Dual Listing (implied valuation AUD600 -700m)
(Planned for 3Q 2018)

125

Indicative IPO valuation 2020 PER @ 10x vs market comparables on SSE of 20 – 230x (2018)

- **Debt** (various options for funding under discussion)

AUD m

Mezzanine* – dim sum bond, exchangeable, etc.

50 - 175

Senior/Subordinated Project Financing

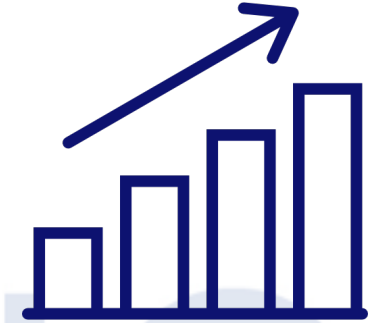
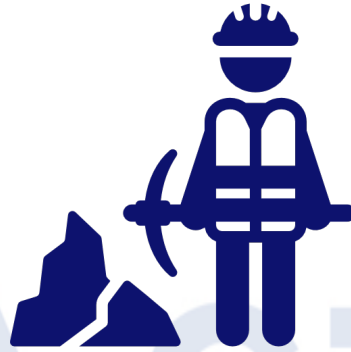
100 - 150

Export Credit Agency Financing

100 - 120

*Either pre-IPO or Mezzanine

Hastings Overview



- **Experienced management team** with rare earth production experience
- Definitive Feasibility Study (DFS) due **end Nov 2017**
- **Off-take MOUs signed with 3 Chinese producers;** ongoing discussions with Europeans and Japanese
- **Mining Lease granted for 21 yrs** since March 2016
- **Non-China source of supply** of Mixed Rare Earth Carbonate (MREC) with **high NdPr content**
- High basket price: **USD30.50/kg vs USD21/kg breakeven cost**
- Mine construction **1Q 2018**
Production **4Q 2019**
- JORC Resource Estimate currently @ **20.6m tonnes**
- **NPV (est) @ AUD420m,** EBITDA payback 2.7 years
- **EVs exponential growth of 5x** from 2020 to 2040
- **Market Cap AUD170m,** attractive valuation compared to peers
- **Cash in hand AUD19m**
No debt

The background of the slide is a light blue-tinted image. On the right side, there is a close-up of a calculator with several buttons visible, including one with a plus sign. Below the calculator, there is a stack of coins. In the foreground, a document is visible with a line graph. The graph has a vertical axis with numerical values: 6,000, 6,250, 6,500, and 6,750. The graph shows a fluctuating line that generally trends upwards. Below the graph, there is a table with columns labeled 'Aug', 'Sep', and 'Oct'.

Thank you.

Q & A