

For personal use only



PILBARA MINERALS

LIMITED



Pilgangoora – the world's leading
lithium development project

Corporate Presentation – February 2018

Important Notices and Competent Person's Statement



Not an Offer of Securities

This document has been independently prepared by Pilbara Minerals Limited ("Pilbara") and is dated 26/02/2018. This document is provided for informational purposes and does not constitute or contain an offer, invitation, solicitation or recommendation with respect to the purchase or sale of any security in Pilbara. This document is not a prospectus, product disclosure statement or other offering document under Australian law or any other law, will not be lodged with the Australian Securities and Investments Commission, and may not be relied upon by any person in connection with an offer or sale of Pilbara securities.

Summary Information

This document contains a summary of information about Pilbara and its activities that is current as at the date of this document unless otherwise stated. The information in this document is general in nature and does not contain all the information which a prospective investor may require in evaluating a possible investment in Pilbara or that would be required in a prospectus or a product disclosure statement prepared in accordance with the *Corporations Act 2001 (Cth)* ("Corporations Act") or the securities laws of any other jurisdiction.

No Liability

The information contained in this document has been prepared in good faith by Pilbara, however no guarantee, representation or warranty expressed or implied is or will be made by any person (including Pilbara and its affiliates and their directors, officers, employees, associates, advisers and agents) as to the accuracy, reliability, correctness, completeness or adequacy of any statements, estimates, options, conclusions or other information contained in this document. No person other than Pilbara is responsible for the preparation of this document. To the maximum extent permitted by law, Pilbara and its affiliates and their directors, officers, employees, associates, advisers and agents each expressly disclaims any and all liability, including, without limitation, any liability arising out of fault or negligence, for any loss arising from the use of or reliance on information contained in this document including representations or warranties or in relation to the accuracy or completeness of the information, statements, opinions, forecasts, reports or other matters, express or implied, contained in, arising out of or derived from, or for omissions from, this document including, without limitation, any financial information, any estimates, forecasts, or projections and any other financial information derived therefrom. Statements in this document are made only as of the date of this document unless otherwise stated and the information in this document remains subject to change without notice. No responsibility or liability is assumed by Pilbara or any of its affiliates (or their directors, officers, employees, associates, advisers and agents) for updating any information in this document or to inform any recipient of any new or more accurate information or any errors or mis-descriptions of which Pilbara and any of its affiliates or advisers may become aware.

Forward Looking Statements

Statements contained in this document, including but not limited to those regarding the possible or assumed future costs, projected timeframes, performance, dividends, returns, revenue, exchange rates, potential growth of Pilbara, industry growth, commodity or price forecasts, or other projections and any estimated company earnings are or may be forward looking statements. Forward-looking statements can generally be identified by the use of words such as 'project', 'foresee', 'plan', 'expect', 'aim', 'intend', 'anticipate', 'believe', 'estimate', 'may', 'should', 'will' or similar expressions. Forward looking statements including all statements in this presentation regarding the outcomes of preliminary and definitive feasibility studies, projections, guidance on future earnings and estimates are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. These statements relate to future events and expectations and as such involve known and unknown risks and significant uncertainties, many of which are outside the control of Pilbara. Actual results, performance, actions and developments of Pilbara may differ materially from those expressed or implied by the forward-looking statements in this document. Such forward-looking statements speak only as of the date of this document. There can be no assurance that actual outcomes will not differ materially from these statements. To the maximum extent permitted by law, Pilbara and any of its affiliates and their directors, officers, employees, agents, associates and advisers: disclaim any obligations or undertaking to release any updates or revisions to the information in this document to reflect any change in expectations or assumptions; do not make any representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence). Nothing in this document will under any circumstances create an implication that there has been no change in the affairs of Pilbara since the date of this document.

Important Notices and Competent Person's Statement



Not Financial Product Advice

This document does not constitute financial product advice or take into account your investment objectives, taxation situation, financial situation or needs. This document consists purely of factual information and does not involve or imply a recommendation of a statement of opinion in respect of whether to buy, sell or hold a financial product. An investment in Pilbara is considered to be speculative in nature and is subject to known and unknown risks, some of which are beyond the control of Pilbara. Before making any investment decision in connection with any acquisition of securities, investors should consult their own legal, tax and/or financial advisers in relation to the information in, and action taken on the basis of, this document.

U.S. Securities Laws

Any securities issued by Pilbara have not been and will not be registered by Pilbara under the United States Securities Act of 1933 ("U.S. Securities Act"). Accordingly, such securities may not be offered or sold in the United States except in transactions that are exempt from, or not subject to, the registration requirements of the U.S. Securities Act.

Mineral Resources and Ore Reserves

Recipients of this presentation outside Australia should note that it is a requirement of the Australian Securities Exchange listing rules that the reporting of ore reserves and mineral resources in Australia comply with the Australasian Joint Ore Reserves Committee Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code"), whereas mining companies in other countries may be required to report their ore reserves and/or mineral resources in accordance with other guidelines (for example, SEC Industry Guide 7 in the United States). Recipients should note that while Pilbara's mineral resource and ore reserve estimates comply with the JORC Code, they may not comply with the relevant guidelines in other countries, and do not comply with SEC Industry Guide 7. In particular, SEC Industry Guide 7 does not recognise classifications other than proven and probable reserves and, as a result, the SEC generally does not permit mining companies to disclose their mineral resources, including indicated and inferred resources, in SEC filings. Accordingly, if Pilbara were reporting in accordance with SEC Industry Guide 7, it would not be permitted to report any mineral resources, including indicated and inferred resources, and the amount of reserves reported by Pilbara may be lower than its estimates. You should not assume that quantities reported as "resources" will be converted to reserves under the JORC Code or any other reporting regime or that Pilbara will be able to legally and economically extract them. In addition, investors should note that under SEC Industry Guide 7, mine life may only be reported based on ore reserves. Mine life estimates in this presentation assume that a portion of non-reserve resources will be converted to ore reserves, which would not be permitted under SEC Industry Guide 7.

Acceptance

By attending a presentation or briefing, or accepting, accessing or reviewing this document you acknowledge, accept and agree to the matters set out above.

Competent Person Statement

Information relating to the mineral resource estimate at the Pilgangoora Project is extracted from the ASX announcement dated 25 January 2017 entitled "*Pilgangoora Resource Update*", information relating to the current ore reserve estimate at the Pilgangoora Project is extracted from the ASX announcement dated 29 June 2017 entitled "*Pilbara More Than Doubles Pilgangoora Ore Reserves*", information relating to the maiden ore reserve estimate at the Pilgangoora Project is extracted from the ASX announcement dated 10 March 2016 entitled "*Pilgangoora Lithium-Tantalite Pre-Feasibility Study*" and information relating to the production target and forecast financial information derived from the production target is extracted from the ASX announcements dated 20 September 2016 entitled "*Pilgangoora DFS Confirms World Class/Lithium Project*" and "*PFS Outlines Compelling 4Mtpa Expansion Option*" (each of which is available at www.pilbaraminerals.com.au). Pilbara confirms that it is not aware of any new information or data that materially affects the information included in these ASX announcements and that all material assumptions and technical parameters underpinning the estimates, the production target and forecast financial information derived from the production target in the announcements continue to apply and have not materially changed.



For personal use only



Company Overview

Pilgangoora Stage 1 Project

Pilgangoora Stage 2 Project

Lithium Markets

Summary

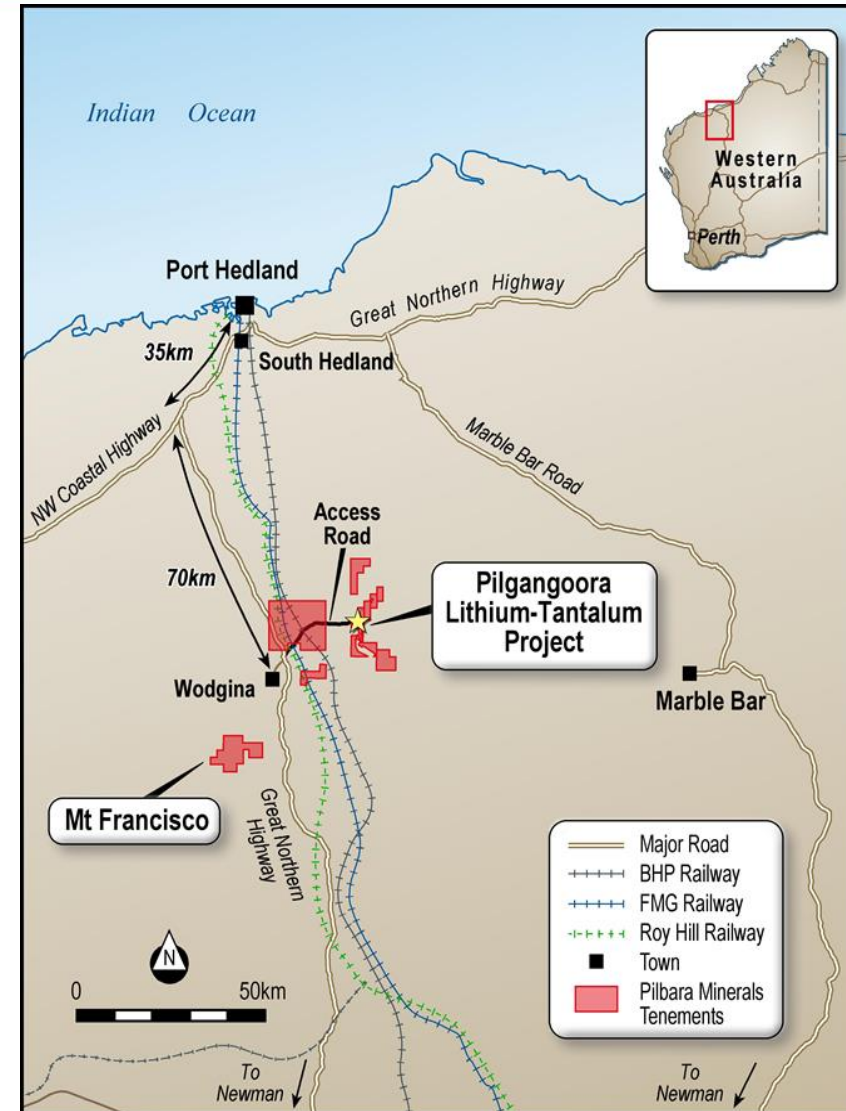
Pilbara Minerals – Overview



- ▶ Pilgangoora is located in the Pilbara region of Western Australia, a proven mining jurisdiction, 120km south of Port Hedland with established transport and port infrastructure
- ▶ 100% ownership interest in the world-class Pilgangoora Lithium-Tantalum Project
- ▶ One of the largest spodumene-tantalite resources in the world, significant further exploration potential
- ▶ 2Mtpa Definitive Feasibility Study (“DFS”) demonstrated technical and financial viability of Pilgangoora development (completed in September 2016)
- ▶ 2Mtpa project is fully funded and advancing rapidly to production, targeting first concentrate from June 2018
- ▶ Cornerstone offtake partners: General Lithium, Ganfeng Lithium and Great Wall Motors
- ▶ 5Mtpa Pre-Feasibility Study (“PFS”) completed in February 2018 delivered exceptional results indicating compelling project economics (inclusive of both Stage 1 and Stage 2):
 - ▶ *Post-tax NPV² of A\$2.1Bn, rapid payback (3 years), and strong IRR (56%)*
 - ▶ *Low LOM cash operating costs¹ of US\$225/tonne CIF; globally competitive*
 - ▶ *LOM average EBITDA A\$382Mpa*
 - ▶ *Annual average production 800ktpa of 6% spodumene concentrate (over 100ktpa LCE equivalent)*
 - ▶ *Stage 2 Capital estimate of A\$207M*
- ▶ DFS on the Stage 2 expansion well underway and on track for completion by mid-2018, paving the way for a Final Investment Decision (“FID”) in Q3 2018, with start of construction by Q4 2018 and commissioning from Q4 2019

1. Cash operating costs include all mining, processing, transport, port, shipping/freight, site based general and administration costs, and corporate administration/overhead costs allocation, state and private royalties and native title costs, and are net of Ta₂O₅ by-product credits

2. Net Present Values (NPV) are presented on a nominal after tax basis using a 10% nominal discount rate



An emerging, low-cost producer of lithium and tantalum in the Pilbara region of Western Australia, a Tier-1 mining jurisdiction

Pilgangoora – Pilbara Minerals, delivering on project execution



For personal use only



Resource Estimation

- ▶ JORC Inferred / Indicated 130Mt Resource completed
- ▶ Massive pegmatite endowment on Pilbara's tenure presents outstanding opportunities for further resource and reserve growth
- ▶ Key global strategic resource



Project Definition

- ▶ Maiden Ore Reserve, 29.5Mt @ 1.31% Li₂O, 134ppm Ta₂O₅ tantalite
- ▶ Outstanding project economics
- ▶ Low cost hard-rock Spodumene production
- ▶ Further ore reserve growth expected, growing mine-life



Detailed Design and Project Planning

- ▶ Updated Ore Reserve of 80.3Mt @ 1.27% Li₂O, 123ppm Ta₂O₅; long mine-life
- ▶ Plant process and design optimisation
- ▶ Product specification and bulk samples to customers
- ▶ Tailings design
- ▶ Opex & Capex updates
- ▶ Updated financial models



Project Execution – from December 2016

- ▶ Updated Resource of 156Mt 1.25% Li₂O
- ▶ Native Title Agreement
- ▶ Mining Leases granted
- ▶ Construction commenced
- ▶ Plant EPC Contract Tender/Award
- ▶ Native Vegetation Clearing Permit
- ▶ Mining Proposal Approval
- ▶ Secure offtake
- ▶ Financing / FID
- ▶ Construction commenced
- ▶ Other construction and operating contracts
- ▶ Commissioning / 1st conc on track from Q2 2018



Pilbara Minerals – overview



Capital Structure

| | | |
|---|-----|---------------|
| Current Share Price (19 February 2018) | A\$ | \$0.84 |
| Shares on Issue | # | 1,646 million |
| Options on Issue ¹ | # | 72 million |
| Market Capitalisation | A\$ | 1,382 million |
| Cash at bank (@ 31 Dec 2017) ² | A\$ | 72 million |
| Top 20 Shareholders | | 47% |
| 3 Month Ave. Daily Volume | | 19.4 million |

¹ Options have a volume weighted average exercise price of A\$0.495 and a volume weighted average time to expiry of 1.3 years

² Excludes US\$100M of restricted cash available from Bond Facility

Key management

| | |
|-----------------------|-------------------------------------|
| Brian Lynn | Chief Financial Officer |
| Alex Eastwood | Company Secretary & General Counsel |
| Dale Henderson | Project Director |
| John Holmes | Exploration Manager |
| Jason Cross | Manager - Projects |
| Anand Sheth | Sales and Marketing Executive |

Board of directors



Tony Kiernan – Non-Executive Chairman

- ▶ Highly experienced public company director and former solicitor with over 30 years' professional experience
- ▶ Currently Chairman and a non-executive director of several ASX-listed resource companies



Ken Brinsden – CEO and Managing Director

- ▶ Mining Engineer with over 25 years' experience including mine management, production and green-fields project development
- ▶ Previously COO and then MD at ASX-listed Atlas Iron Limited, contributing to its growth (including 5 mine developments) from junior explorer to significant Pilbara iron ore producer

Steve Scudamore – Non-Executive Director

John Young – Non-Executive Director

Nick Cernotta – Non-Executive Director

An emerging, low-cost producer of lithium and tantalum in the Pilbara region of Western Australia, a Tier-1 mining jurisdiction

Pilgangoora – Quality Product Streams



Testwork and now pilot scale metallurgical programs deliver outstanding results and demonstrate the class of the Pilgangoora project as a large-scale, low cost supplier of quality lithium raw materials:

- ▶ **Chemical Grade concentrates, Genuine 6% Lithia (SC6.0) – low iron spodumene concentrates for the battery market;**
- ▶ **Technical Grade concentrates proven in pilot scale testwork;**
 - ▶ **7.22% Lithia and 0.12% Fe_2O_3 (SC7.0) spodumene concentrates for the glass and ceramic markets**
- ▶ **Tantalite concentrates suitable for the entire global market, with first offtake for primary concentrate (4-5% Ta_2O_5) established with Global Advanced Metals (GAM).**

Downstream Processing Opportunities:

- ▶ *The Company continues to engage in non-binding discussions with potential joint venture partners for downstream processing opportunities both within and outside China, including Korea. While discussions remain incomplete, the Company remains optimistic that such discussions may deliver a strategic opportunity to participate further in downstream chemical conversion and processing*



Flotation Pilot Plant - Milling, Conditioning, De-sliming and Reagents

Pilgangoora lithium products suit the entire lithium raw material market, including historical segments and new demand growth areas



For personal use only



Company Overview

Pilgangoora Stage 1 Project

Pilgangoora Stage 2 Project

Lithium Markets

Summary

Stage 1 – 2Mtpa Overview



- ▶ DFS completed in September 2016; subsequent update to reflect higher ore reserve (80.3Mt) further enhances project economics
- ▶ 41 year project life based on 80.3Mt reserve
- ▶ LOM average annual production:
 - ▶ *approximately 320ktpa of 6% spodumene concentrates, and*
 - ▶ *approximately 315,000lbs of tantalite in concentrate*
- ▶ Estimated LOM cash operating of USD 277/t CIF¹
- ▶ Total capital cost of A\$284M; \$122M spent to December 2017
- ▶ 2Mtpa project fully funded following successful debt and equity raisings in 2017
- ▶ First production targeted by June 2018 with committed offtake agreements in place for 300ktpa of spodumene production



¹ Cash operating costs include all mining, processing, transport, port, shipping/freight and site based general and administration costs, allocation of corporate administration/overhead costs, State and private royalties and native title costs and are net of Ta₂O₅ by-product credits.

Pilgangoora Project – Overview



For personal use only



Pilgangoora Project – construction progress



Power Plant



Ball Mill



For personal use only

Pilgangoora Project – construction progress



Central Pit Pre Strip



TMF Construction



Concentrate handling/storage

For personal use only

Stage 1 Offtake secured **Strong industrial relationships with offtake partners**



- ▶ Stage 1 (2mpta) 10-year 160,000tpa 6% chemical-grade spodumene concentrate offtake signed with Ganfeng Lithium

- ▶ *Pricing based on a 6-month pricing mechanism that takes into account the Chinese import and domestic prices of lithium carbonate plus a floor price mechanism*
- ▶ *Option for Ganfeng Lithium to extend another 5 + 5 years*



- ▶ Stage 1 (2mpta) 6-year 140,000tpa 6% chemical-grade spodumene concentrate offtake signed with General Lithium

- ▶ *Pricing based on a 6-month pricing mechanism, set quarterly, that takes into account the Chinese import and domestic prices of lithium carbonate plus a floor price mechanism*
- ▶ *Option for General Lithium to extend another 4 years*
- ▶ *Option for Pilbara to participate in downstream chemical facilities*



General Lithium Corporation

- ▶ 2-year 100,000lb of contained Ta₂O₅ as primary 4-5% concentrates offtake signed with Global Advanced Metals

- ▶ *Covers a portion of the forecast annual tantalite production from Stage 1 of forecast of 321,000lbs per annum in a lower grade concentrate category*



GLOBAL
ADVANCED METALS

Direct Shipping Ore (DSO)



For personal use only

- ▶ *Mine Gate Sale Agreement with Atlas Iron Limited to deliver a minimum of 1.0 million tonnes of unprocessed ROM lithium-tantalum material from April 2018.*
- ▶ *DSO opportunity expected to capitalise on current strong demand for lithium feedstock in the Chinese market to generate an early source of revenue and cash-flow from the Pilgangoora Project with minimal additional capital expenditure.*
- ▶ *Atlas will pay Pilbara Minerals at the mine gate and then utilise its existing Pilbara processing and logistics infrastructure to crush and ship the DSO to China's Sinosteel through its Utah Port facility in Port Hedland.*
- ▶ *The agreement delivers an attractive fixed US\$ base price per wet metric tonne of mine gate material sold, commencing in April 2018 on the basis of 100kt per month.*

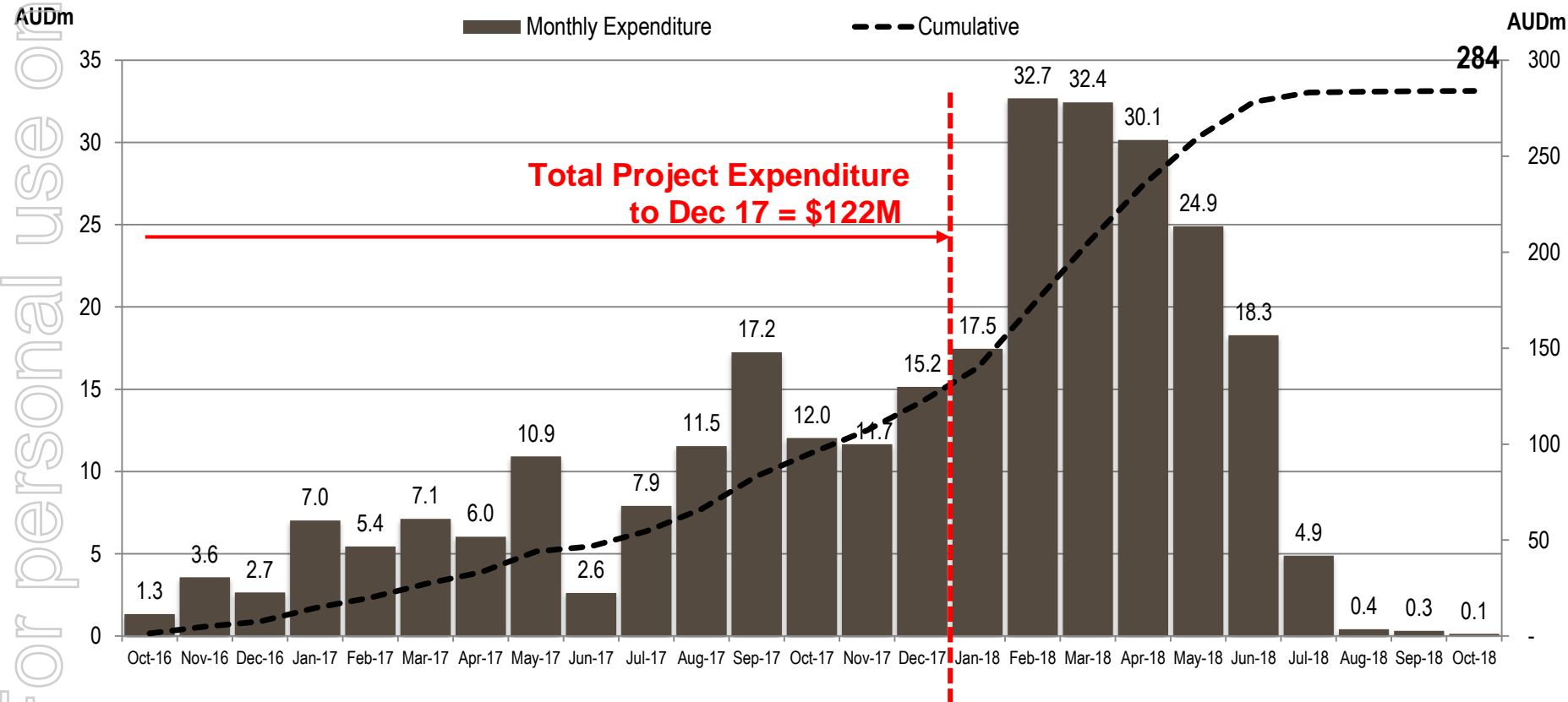


Pilgangoora – Stage 1 capital costs



Project Capital Expenditure Forecast by Month (from 1 Jan 18)

For personal use only



Remaining project capital costs funded from:

- Existing cash on hand
- A\$130M secured Nordic Bond
- Existing sources including project contingency and A\$20M management reserve (previously raised)
- Options exercise
- Direct Shipping Ore sales
- Customer Pre-payments
- USD\$15M working capital facility¹

Total forecast expenditure of \$284M is inclusive of the 2mtpa operation plus \$10M for additional works to support near term stage 2 development and minor capital for DSO program.

1. Permitted under the Nordic Bond facility, however subject to finalising the banking process



For personal use only



Company Overview
Pilgangoora Stage 1 Project
Pilgangoora Stage 2 Project
Lithium Markets
Summary

Stage 2 - 5Mtpa Expansion Overview (PFS Results)



- ▶ Modest incremental capital to expand to 5Mtpa of AUD 207m
- ▶ LOM average annual production, after Stage 1 and 2 production ramp-up:
 - ▶ *approximately 800ktpa of 6% spodumene concentrates, and*
 - ▶ *approximately 780,000lbs of tantalite in concentrate*
- ▶ Mine life of 17 years; First production planned for Q4 2019; Committed offtake agreements in place for up to 600ktpa of spodumene concentrate
- ▶ Forecast Net Present Value (NPV²10%, post-tax) of AUD 2.1Bn; Project payback of approximately 3 years (on cumulative capital)
- ▶ Projected annual average EBITDA increases to AUD 383m
- ▶ Estimated LOM cash operating costs¹ reduced to USD 225/t CFR demonstrating economies of scale compared to the Stage 1 project
- ▶ Expansion project subject to further feasibility work, market analysis and Pilbara Board approval

Stage 2



1. Cash operating costs include all mining, processing, transport, port, shipping/freight and site based general and administration costs, allocation of corporate administration/overhead costs, State and private royalties and native title costs and are net of Ta₂O₅ by-product credits.
2. NPV is presented on a 10% nominal basis after tax basis.

Stage 2 - 5Mtpa Expansion

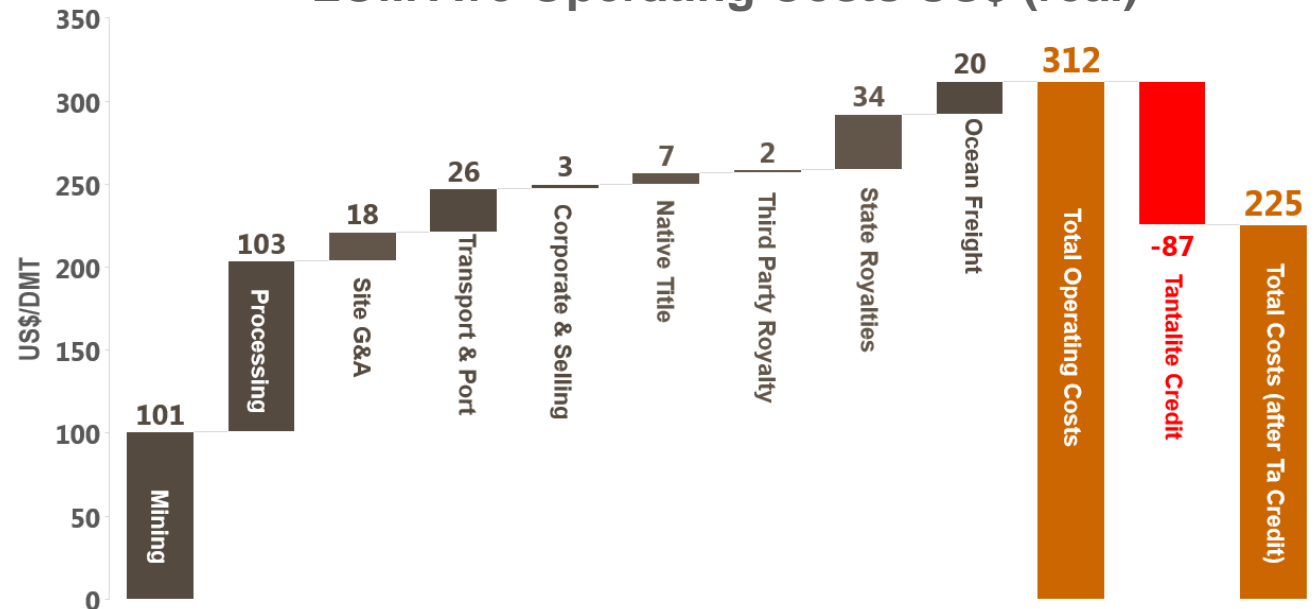


- ▶ DFS now in progress and on track for completion by mid-2018, paving the way for a Final Investment Decision (FID) in Q3 2018, start of construction by Q4 2018 and commissioning from Q4 2019.
- ▶ The 5Mtpa expansion of Pilgangoora will position Pilbara Minerals to meet the surging demand for lithium raw materials globally, with its expansion plans strongly supported by its cornerstone customers and strategic partners including its previously announced strategic offtake and financing arrangements with Ganfeng and Great Wall Motor Company.
- ▶ The balance of the currently uncommitted production from the Stage 2 expansion currently the subject of discussions with a number of interested parties.

Stage 2 capital estimate of A\$207M

| CAPITAL ITEM | VALUE (M) |
|----------------------------------|----------------|
| Process Plant and Infrastructure | \$145.3 |
| Owners Costs | \$35.2 |
| Other Costs | \$10.5 |
| Contingency | \$15.9 |
| TOTAL | \$206.9 |

LOM Ave Operating Costs US\$ (real)



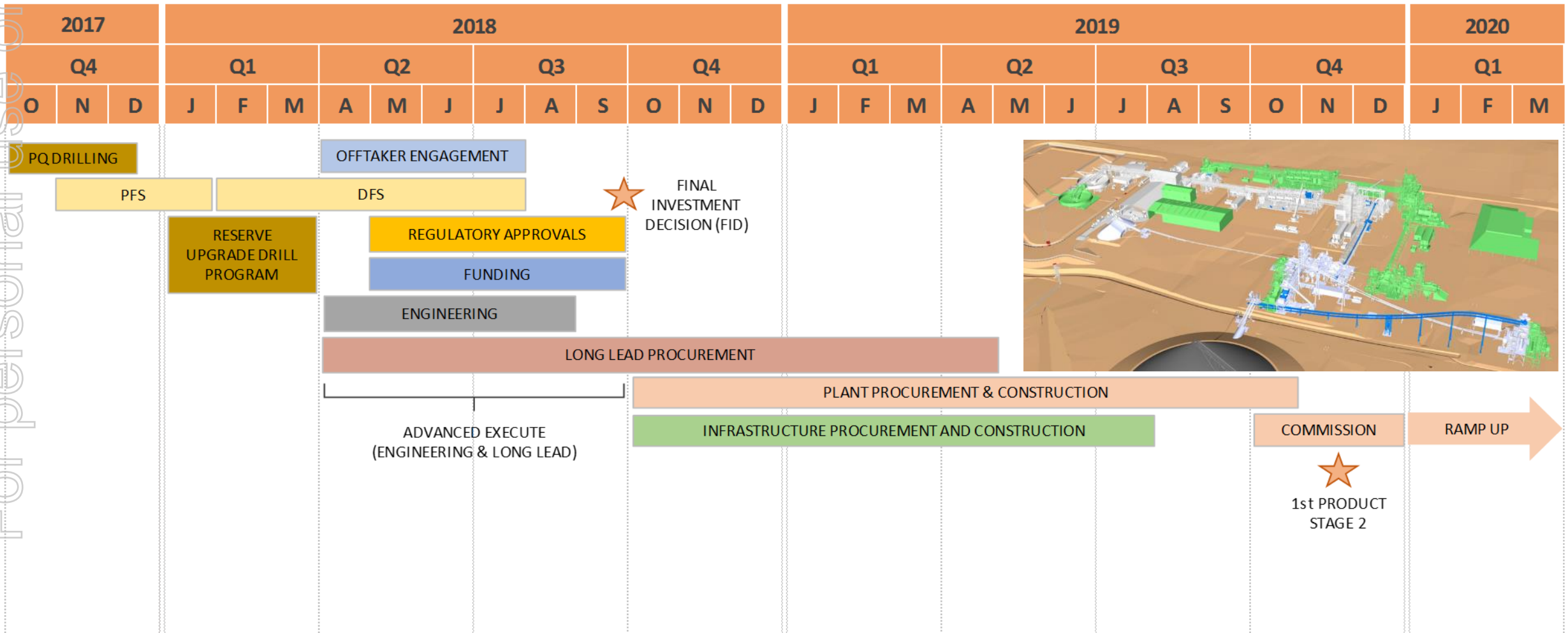
For personal use only

5Mtpa Expansion - Project Delivery Schedule



PILGANGOORA STAGE 2 - PRELIMINARY DELIVERY SCHEDULE

For personal use only



Stage 2, 5Mtpa Expansion Project – Off-take and Associated Funding



Great Wall and Ganfeng Lithium off-take arrangements will underpin the Stage 2 5Mtpa expansion of the Pilgangoora Project, while also providing off-take-linked debt financing solutions for a significant proportion of the Stage 2 capital requirements.

- ▶ Offtake agreement for 75,000tpa
- ▶ Additional 75,000tpa available subject to providing USD 50m cash pre-payment or debt finance facility.
- ▶ An initial 5 year term, with the ability to extend for up to a further 10 years via two 5-year options. Includes market based pricing with a floor price mechanism.
- ▶ A\$28M equity subscription already provided to fast track 5Mtpa DFS.
- ▶ Opportunity for Pilbara to participate in downstream conversion plant.



Great Wall

- ▶ Offtake agreement for 75,000tpa
- ▶ Additional 75,000tpa available subject to providing AUD 65m cash pre-payment or debt finance facility.
- ▶ An initial 10 year term, with the ability to extend for up to a further 10 years via two 5-year options. Includes market based pricing with a floor price mechanism.



- ▶ Remaining uncommitted production (200-240kt SC6.0 basis), currently the subject of discussion with a number of interested parties along with associated funding for the balance of Stage 2 requirements.

Current discussions



For personal use only



Company Overview
Pilgangoora Stage 1 Project
Pilgangoora Stage 2 Project

Lithium Markets
Summary



The way we Generate, Use, Distribute and **Store** energy is changing.

Lithium Ion rapidly becoming the **dominant** rechargeable battery technology.

Electric Vehicle uptake driving the growth in demand, followed by energy storage.

The Lithium-ion Battery is the storage of choice



Super Energy Density



Lighter, more compact & portable



Longer life-cycle and more cost efficient



More environmentally friendly

Batteries are the fastest growing segment of Lithium Demand



Transportation

Cars, buses, bikes.

26.3%

CAGR*
(Roskill)



Consumer Electronics

+ power tools +e-mobility

7.5%

CAGR
(Roskill)



Renewable Grid Storage

16.5% - 35%

CAGR
(Roskill)

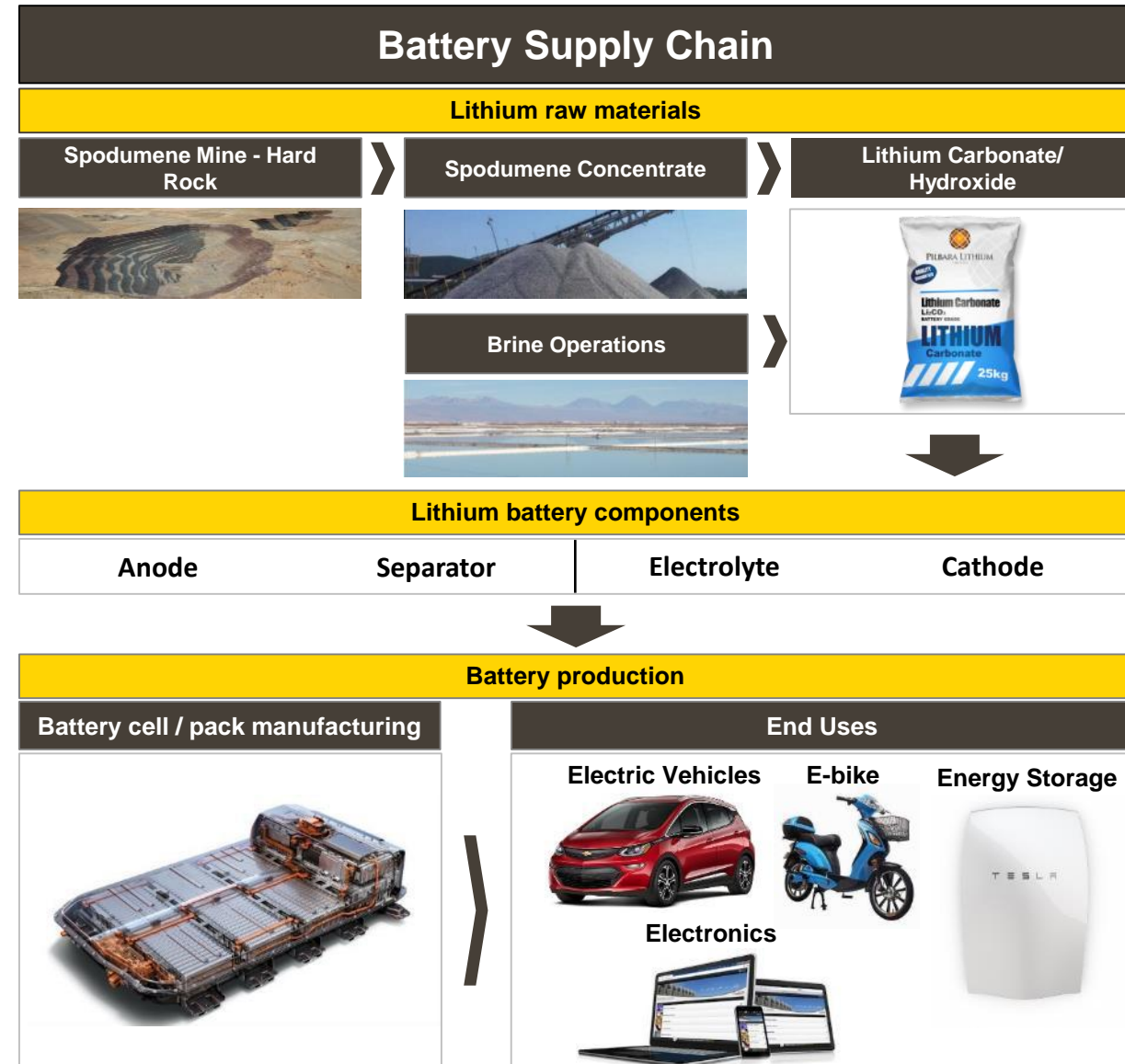
CAGR
(Industrial
Minerals)

* CAGR is 2016 to 2026

Lithium raw materials The key ingredient of the improved battery supply chain



- ▶ Lithium raw materials are the vital ingredient for lithium battery technology
- ▶ Lithium is sourced predominantly from:
 - ▶ *hard-rock mining of spodumene deposits;*
 - ▶ *extracting lithium from brine deposits*
- ▶ Australia is the world's largest producer of spodumene concentrate with three mines in production
- ▶ The Pilgangoora deposit is one of the world's largest lithium-tantalum resources
 - ▶ *Measured, Indicated and Inferred Resources of 156.3Mt @ 1.25% Li₂O (lithia) and 128ppm Ta₂O₅*
- ▶ Spodumene ore is processed into a spodumene concentrate (6% Li₂O) and then converted into a lithium carbonate or lithium hydroxide to be utilized in lithium battery components
 - ▶ *Approximately 7.5t of 6% Li₂O spodumene concentrate is required to produce 1t of lithium carbonate (at 90% recovery)*
 - ▶ *Approximately 6.75t of 6% Li₂O spodumene concentrate is required to produce 1t of lithium hydroxide monohydrate (at 90% recovery)*

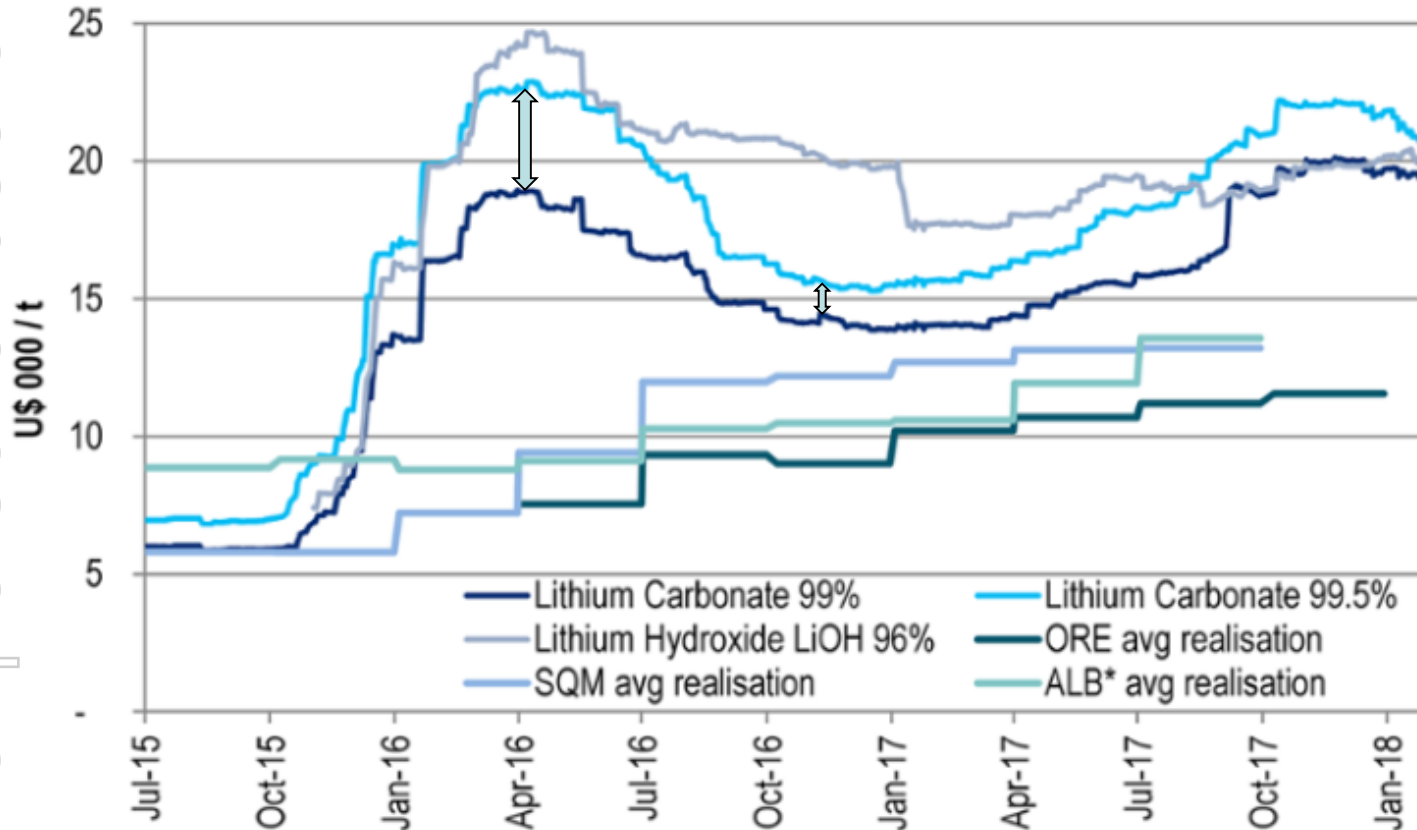


Lithium Raw Material Prices – Grade Differential



For personal use only

Lithium Carbonate/Hydroxide Prices (US\$/t)



Source: Company reports, AsianMetal, Citi Research

Lithium Carbonate ≈99% Technical Grade
Lithium Carbonate ≥99.5% Battery Grade

Price Variance – Battery Grade vs Technical Grade over recent history

Minimum ↑ - +USD\$1,200/tonne
 Maximum ↓ - +USD\$3,500/tonne

Upgrading an ‘Industrial or Technical Grade’ product to achieve ‘Battery Grade’ products costs more money as evidenced by the price traces opposite;

- Spodumene concentrates are typically ‘cleaner’ than brine sources of supply and therefore readily upgrade to Battery Grade product after chemical conversion, and
- They are likely cheaper than brine sources of supply for the Battery grade specification and especially for Hydroxide products.

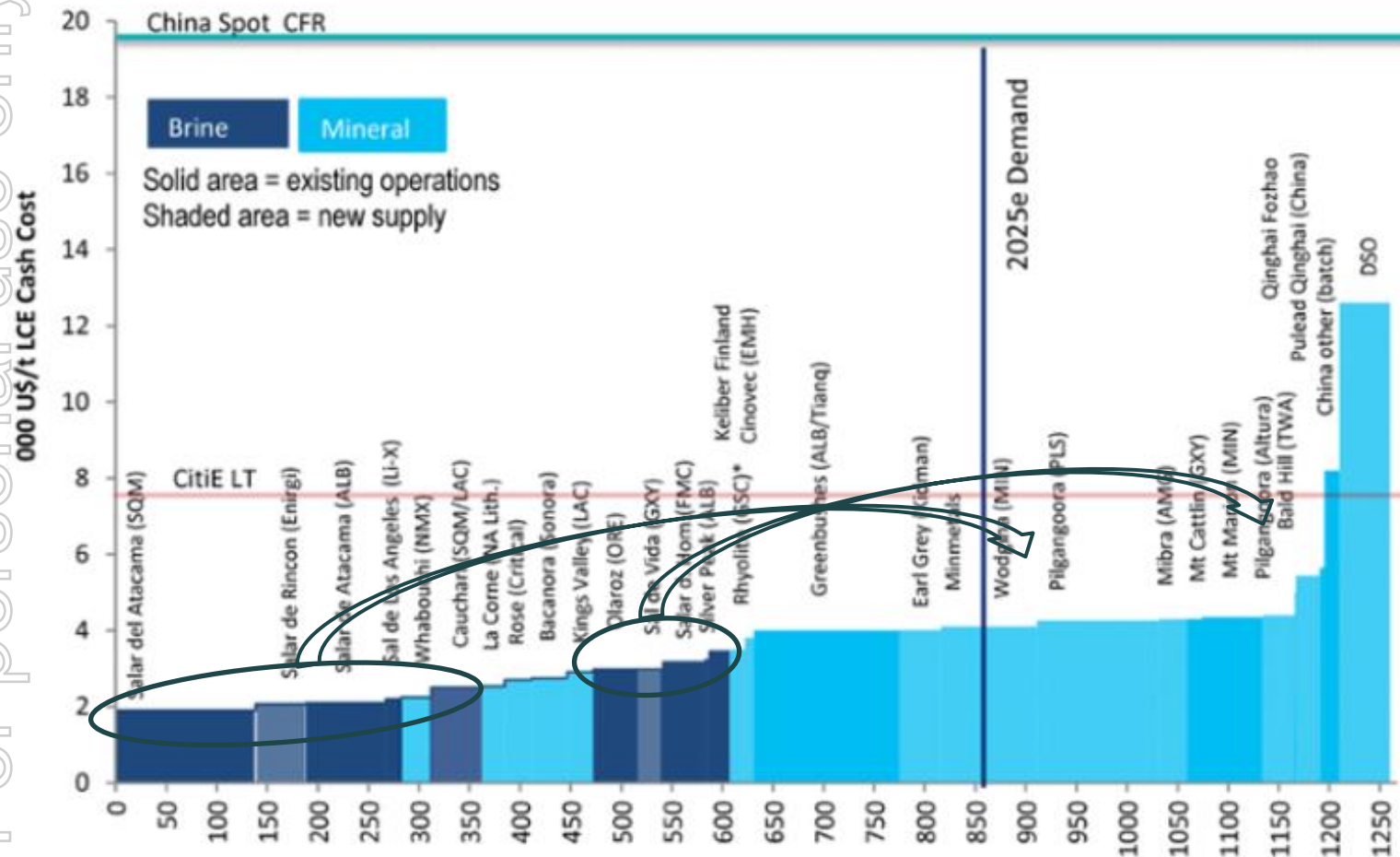
Hard-rock lithium raw material is ideally suited to the higher quality requirements arising from battery demand growth

Global Cost Curve – Product Grade Matters.....



For personal use only

Lithium Producers Cash Cost Curve (US\$/t) in LCE terms



Source: Citi Research Estimates, Company reports, Roskill

Global cost curves are not ‘normalised’ for Battery Grade specifications, i.e. $\geq 99.5\%$ purity lithium carbonate

By far, the majority of brine production does not meet Battery Grade specifications and therefore has to have more money spent on it to achieve the higher, in-demand specification for the battery world.

Several implications –

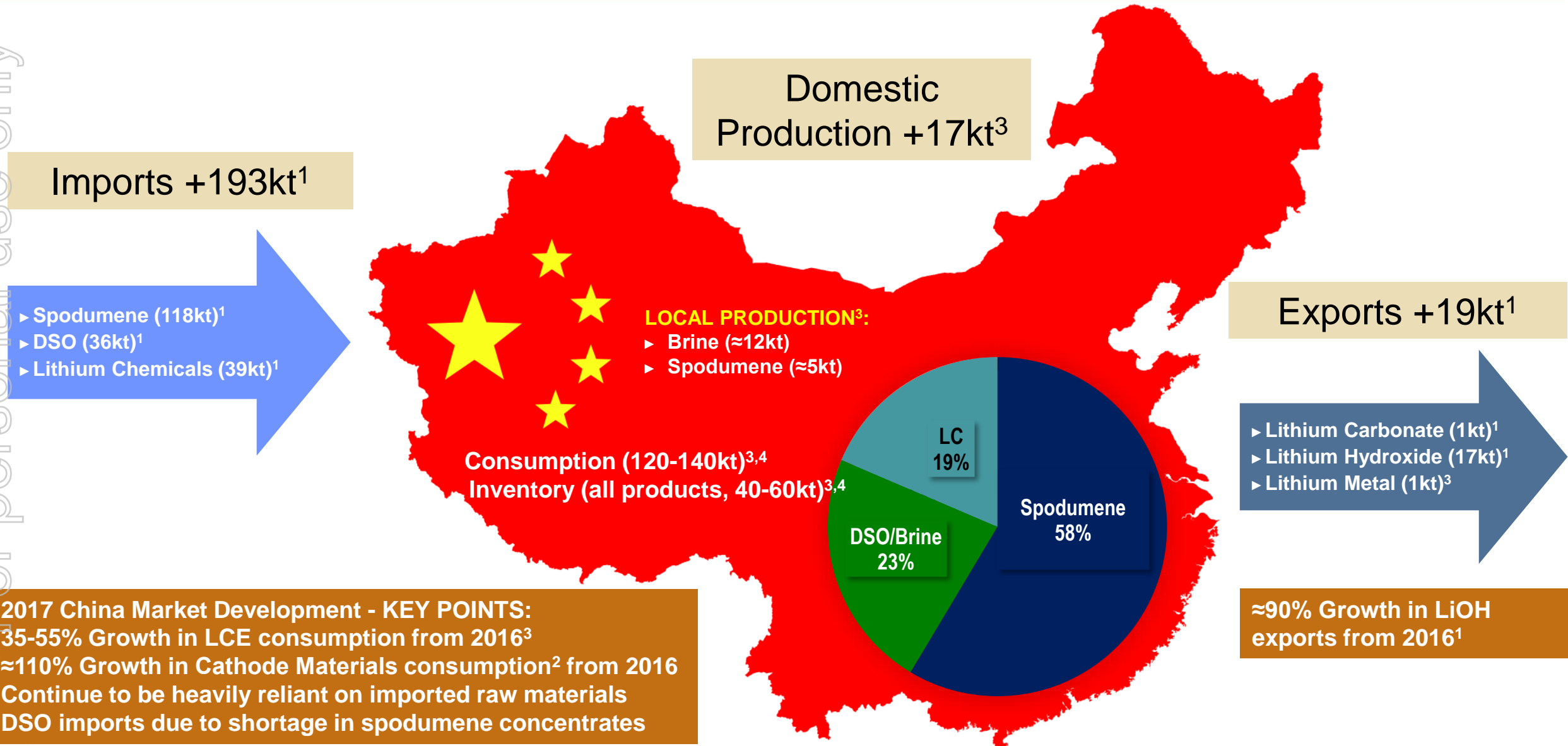
- Conventional wisdom on the relative cost of brine versus hard rock production is being broken down
- The growth in Battery Grade demand favours further hard rock supply to market because of its quality advantages/speed to market
- This could get worse for brines over time as further purity is sought to improve battery technology
- Chilean brines have the added cost of additional royalties (circa USD\$3,000/t at current carbonate pricing of US\$14,000/t) – not reflected in cost curve.

After Battery Grade quality adjustments, brine sourced supply is moving well up the cost curve

China market overview – 2017 snapshot (Lithium Carbonate Equivalent)



For personal use only



2017 China Market Development - KEY POINTS:
 35-55% Growth in LCE consumption from 2016³
 ≈110% Growth in Cathode Materials consumption² from 2016
 Continue to be heavily reliant on imported raw materials
 DSO imports due to shortage in spodumene concentrates

Sources
 1. ImpExp.com
 2. Asian Metals
 3. Company Estimates
 4. Consumption and inventory presented as a range, given the speed of market development and inherent uncertainty as to actual growth in consumption

Massive expansion of Lithium ion battery making capacity underway

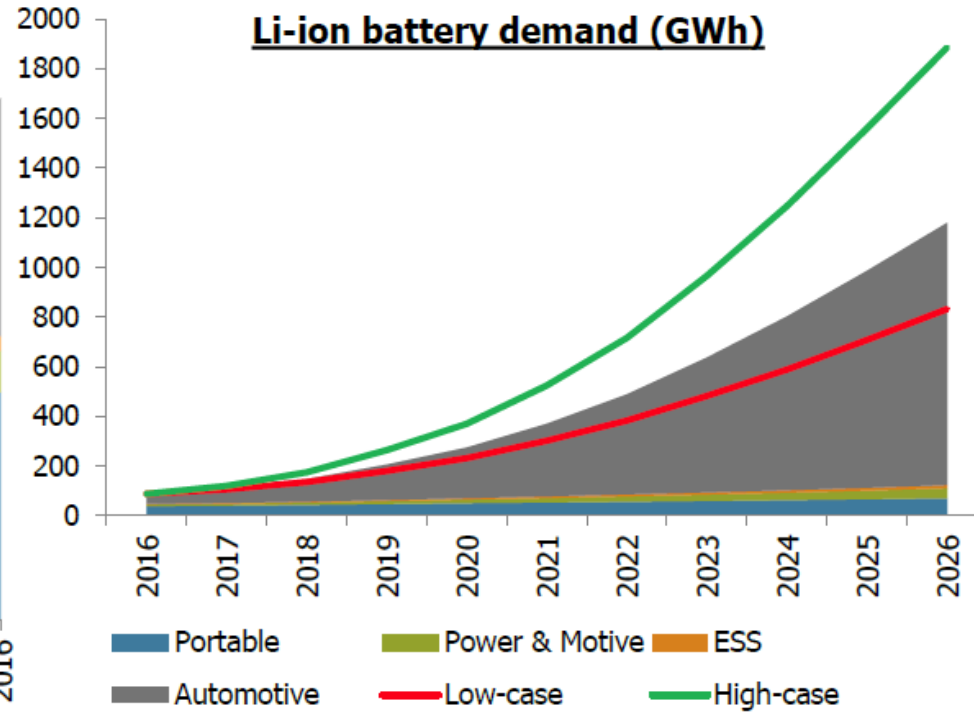
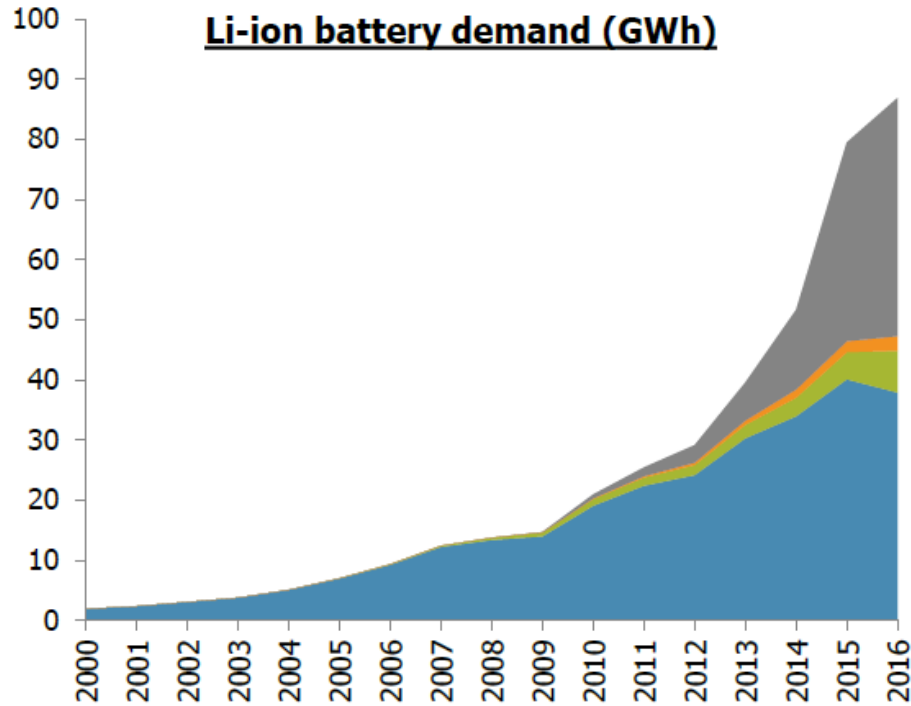


For personal use only

The past



The future



Source: Roskill



More than USD20bn of committed investment expected to result in new battery manufacturing expansions that will increase global production capacity significantly and drive production costs down



For personal use only



Company Overview
Pilgangoora Stage 1 Project
Pilgangoora Stage 2 Project
Lithium Markets

Summary



Low-cost and high quality lithium products

Significant resource scale and grade

Outstanding project economics and ability to substantially grow production

Offtake and full Stage 1 project funding secured

Rapid pathway through construction and production from Q2 2018

Ideally placed to capitalize on robust lithium market outlook and demand

Ideal project location, low-cost, large scale, growth to 5Mtpa processing capacity and premium product quality position Pilgangoora to be a key supply solution to the burgeoning lithium raw material market





Supplementary Information

Board of Directors



| | | |
|------------------------|-------------------------------|---|
| Tony Kiernan | Non-Executive Chairman | Highly experienced company director and former solicitor with over 30 years' professional experience. Currently Chairman and a non-executive director of several ASX-listed resource companies. |
| Ken Brinsden | Managing Director | Mining Engineer with over 22 years' experience including mine management, production and green-fields project development. Previously MD at ASX listed Atlas Iron Ltd contributing to its growth from junior explorer to significant Pilbara iron ore producer. |
| Steve Scudamore | Non-Executive Director | Highly experienced public company director. His career includes more than three decades with senior roles in Australia, London and Papua New Guinea. |
| John Young | Non-Executive Director | Geologist and Corporate Member of the AusIMM with over 25 years' experience in the global exploration and mining industry. Ten years' direct experience managing tantalum, tungsten and molybdenite projects. |
| Nick Cernotta | Non-Executive Director | Highly experienced mining executive with over 30 years' experience. Recently the Director of Operations with Fortescue Metals Group (FMG) and previously the Chief Operating Officer for Macmahon Holdings Limited. |

For personal use only

Management Team



| | | |
|-----------------------|--|---|
| Brian Lynn | Chief Financial Officer | Chartered Accountant with more than 25 years' experience in the Australian resources sector. Prior to joining Pilbara Minerals, Mr Lynn served as the Chief Financial Officer at Atlas Iron Limited and spent 12 years as the Chief Financial Officer and Company Secretary at ASX listed Mincor Resources NL. |
| Alex Eastwood | Company Secretary and General Counsel | Lawyer with over 22 years' experience as a commercial lawyer, company secretary and corporate finance executive. Previously held partnerships with two international law firms. |
| Dale Henderson | Project Director | Civil Engineer experienced in major project delivery and operations management within the resources industry. This has included both brown-fields and green-fields environments for several commodity types. His experience includes working for several resource development operators including Fortescue Metals Group, Chevron, Occidental Petroleum and Solid Energy. Mr Henderson's most recent experience with Fortescue Metals Group has included leading both operations optimization and the project delivery for the Stage 1 Magnetite development for the Iron Bridge Joint Venture. |
| Anand Sheth | Sales and Marketing Executive | A technical and marketing professional with more than 17 years' experience in the international marketing and global sales of lithium, tantalum minerals and lithium chemicals. Mr Sheth was Marketing Manager of Talison Minerals for 10 years and 4 years as Sales and Marketing Director at Galaxy Resources. Mr Sheth received his Bachelor of Technology in Ceramic Engineering from Institute of Technology, Banaras Hindu University in India in 1985. |
| John Holmes | Exploration Manager | Accomplished geologist with over 25 years' experience in the mineral exploration industry and has a wealth of experience in precious metal, base metal, coal and industrial minerals projects throughout Australasia, Canada, and South America. He is a Member of the Australian Institute of Geoscientists and a Competent Person under the JORC code. |
| Jason Cross | Manager Projects | Management professional with over 20 years' consolidated experience working across a variety of projects including mining, ports, infrastructure, mineral processing, business improvement and IT. Prior to joining Pilbara Minerals, held the role of Manager – Projects at Atlas Iron which involved the establishment and delivery of various mines and the development of the in-house project delivery capability. Jason holds a Master of Science in Project Management, and is PMP and Prince2 accredited. |

Highly experienced management team with strong experience in exploration, mining and corporate management.
Key metallurgical staff with significant experience in Lithium HMS, flotation and tantalum gravity recovery.



For personal use only



Lithium Ion Battery Technology

Lithium Market

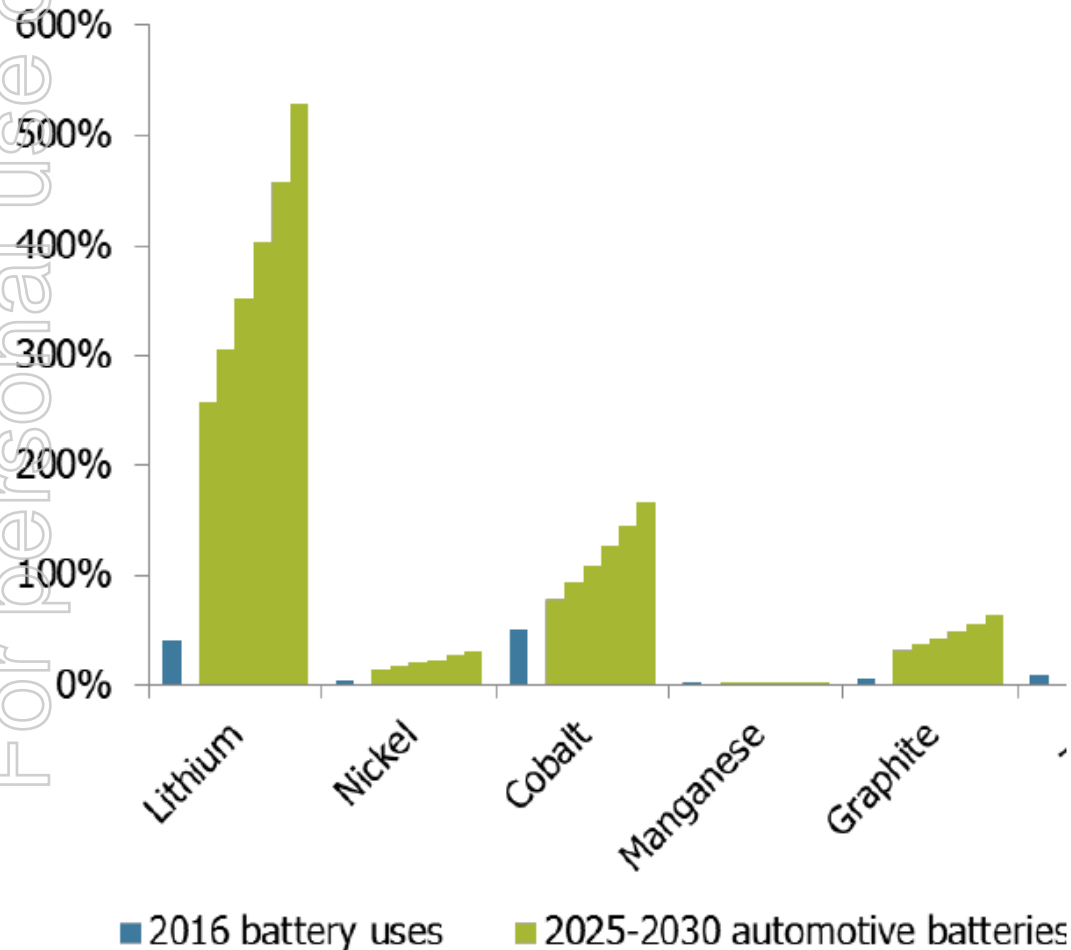
Pilgangoora Project



Leverage to Lithium Ion Battery Materials

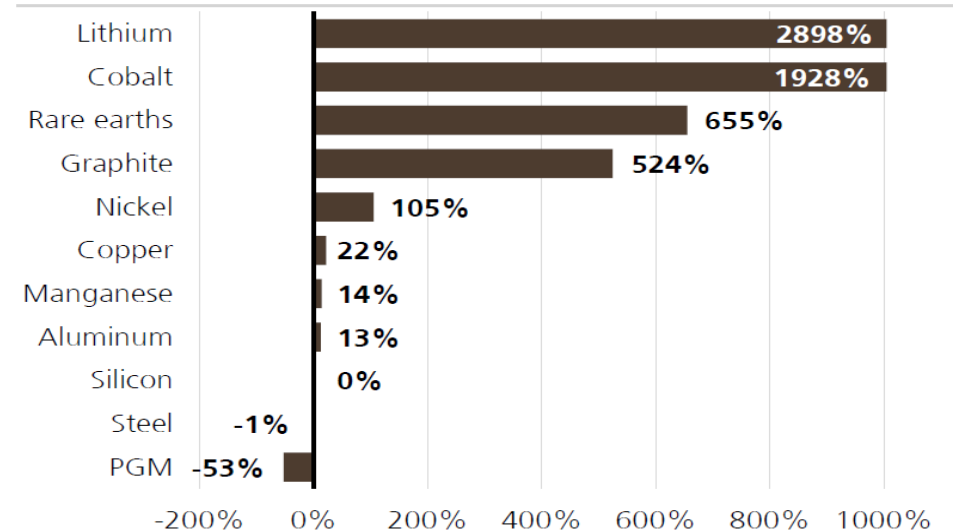


Impact of automotive batteries on total market size (% of 2016 total market size)



- ▶ The leverage to Lithium Ion battery materials sits with Lithium
- ▶ Massive market growth required in lithium raw materials to contribute to growth in battery industry:
 - ▶ 250% supply growth to 2025
 - ▶ >500% supply growth to 2030
- ▶ It's often said that there is plenty of lithium in the ground and, while true, to meet burgeoning market demand it has to come out of the ground
 - ▶ *Requires time and investment, neither of which have been activated while significant capital flows downstream in lithium ion battery manufacturing capacity*

Incremental commodity demand in a 100% EVB world (% of today's global production)



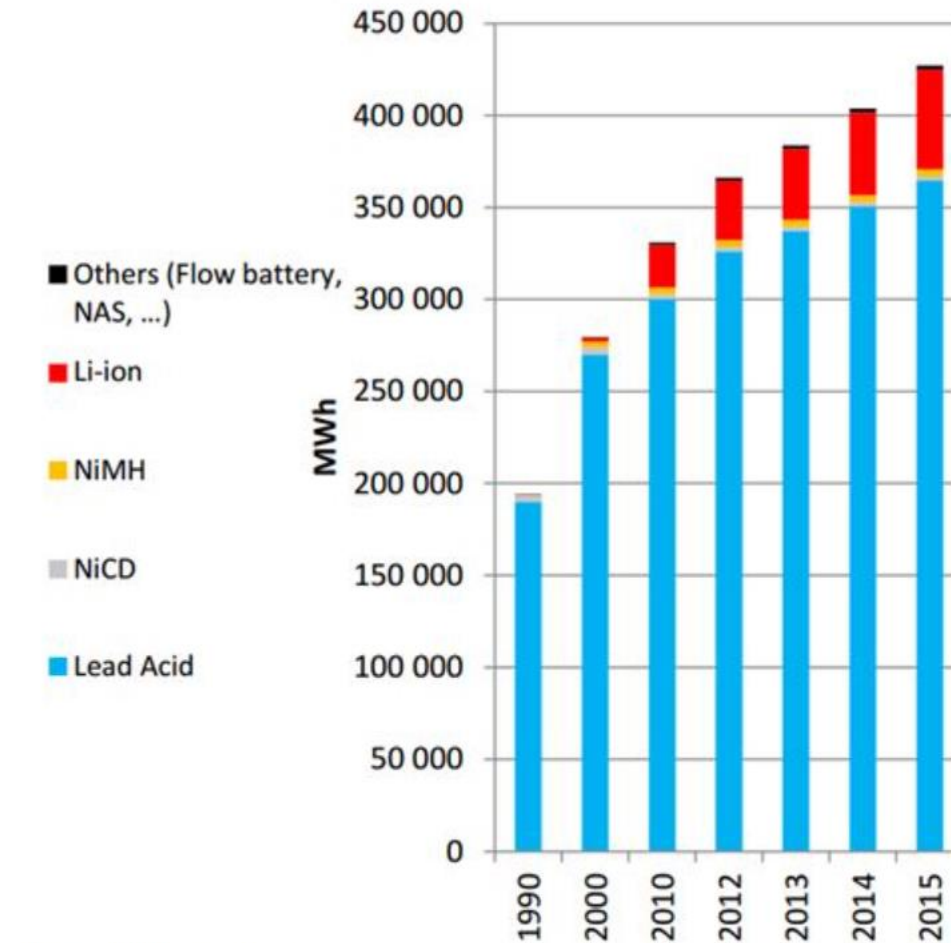
Source: Roskill

Source: UBS

Lithium ion batteries – Market Potential



For personal use only



Battery market share (Avicenne Energy)

New markets being created and a further substantial driver of Lithium ion consumption...



The lower the cost of the lithium ion battery, the greater the market application and China is now a key driver in lowering the cost of the batteries as they scale-up production



For personal use only



Lithium Ion Battery Technology

Lithium Market

Pilgangoora Project













Independent research group, Roskill, significantly upgrades Lithium Outlook

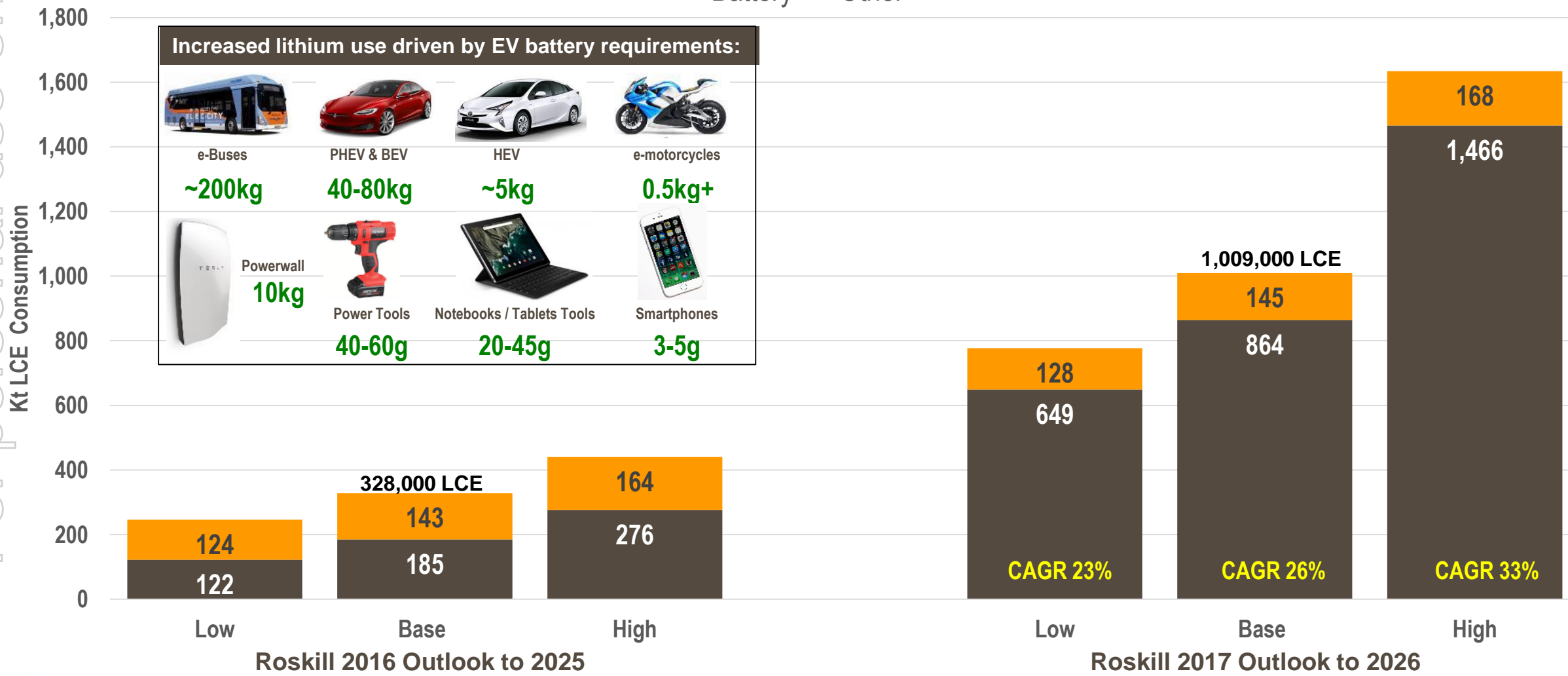
Significantly increased outlook driven by Li-Ion Battery demand in Electric Vehicles

For personal use only

■ Battery ■ Other

Increased lithium use driven by EV battery requirements:

| | | | |
|--|--|--|--|
|  e-Buses ~200kg |  PHEV & BEV 40-80kg |  HEV ~5kg |  e-motorcycles 0.5kg+ |
|  Powerwall 10kg |  Power Tools 40-60g |  Notebooks / Tablets 20-45g |  Smartphones 3-5g |

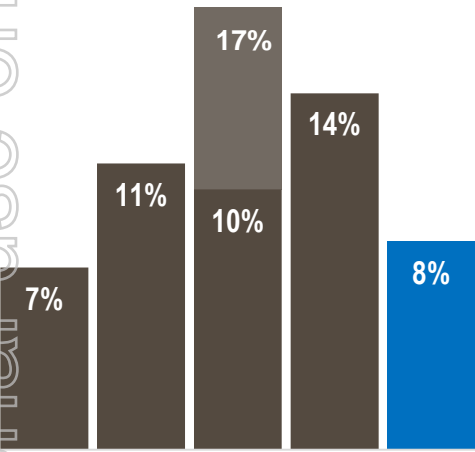


Transition to Electric Vehicles – Exponential Adoption Curve

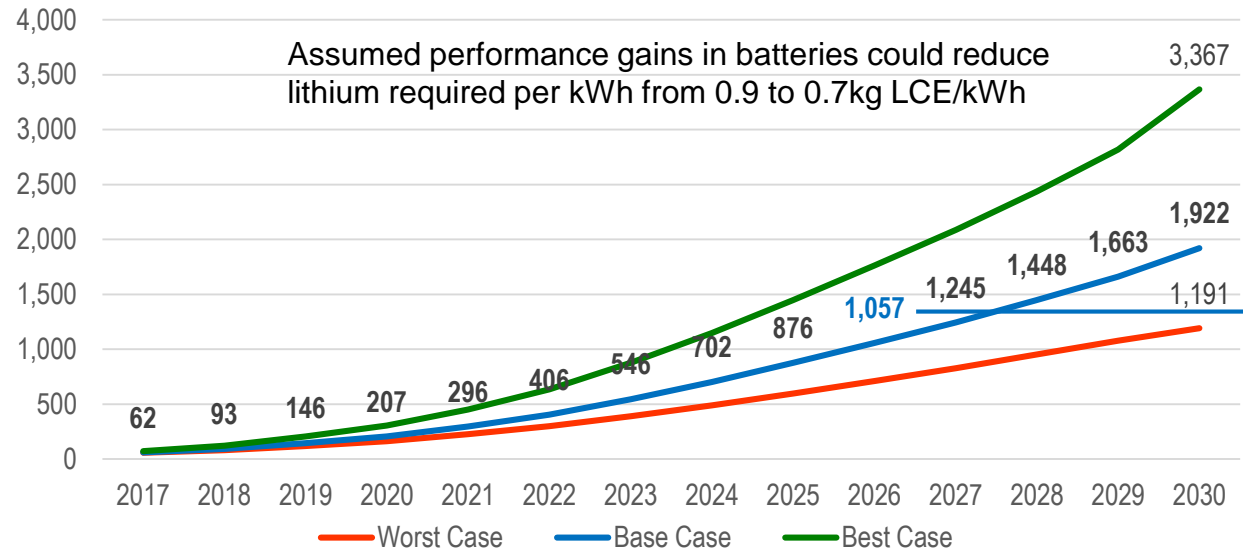


2025 Forecast EV Penetration Rates

(% of total vehicle sales)

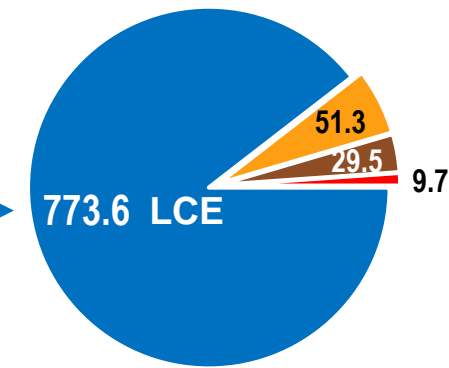


Roskill's forecast scenarios for sales of EV's (GWh)



LCE Demand in Li-ion batteries

10 x growth from 83kt (2016) to 864kt (2026)



Roskill 2026 Forecast

Vehicle Manufacturers:

Established car makers fear being left behind in the technology battle or being shut out of car markets:

- New pure electric vehicle manufacturers such as **Tesla, BYD, Faraday Future, Lucid Motors** competing with traditional ICE companies. Tesla mass market Model 3 now in production.
- All **Volvo** cars to be electric or hybrid from 2019. Between 2019 and 2021, the firm will introduce five 100% electric models. **Volkswagen** is targeting 25 percent of its sales to be electric by 2025.
- **BMW** Group expects electrified vehicles to account for between 15–25% of sales by 2025. BMW Group already has nine electrified models on the market and has plans to convert all models to electric drive trains.

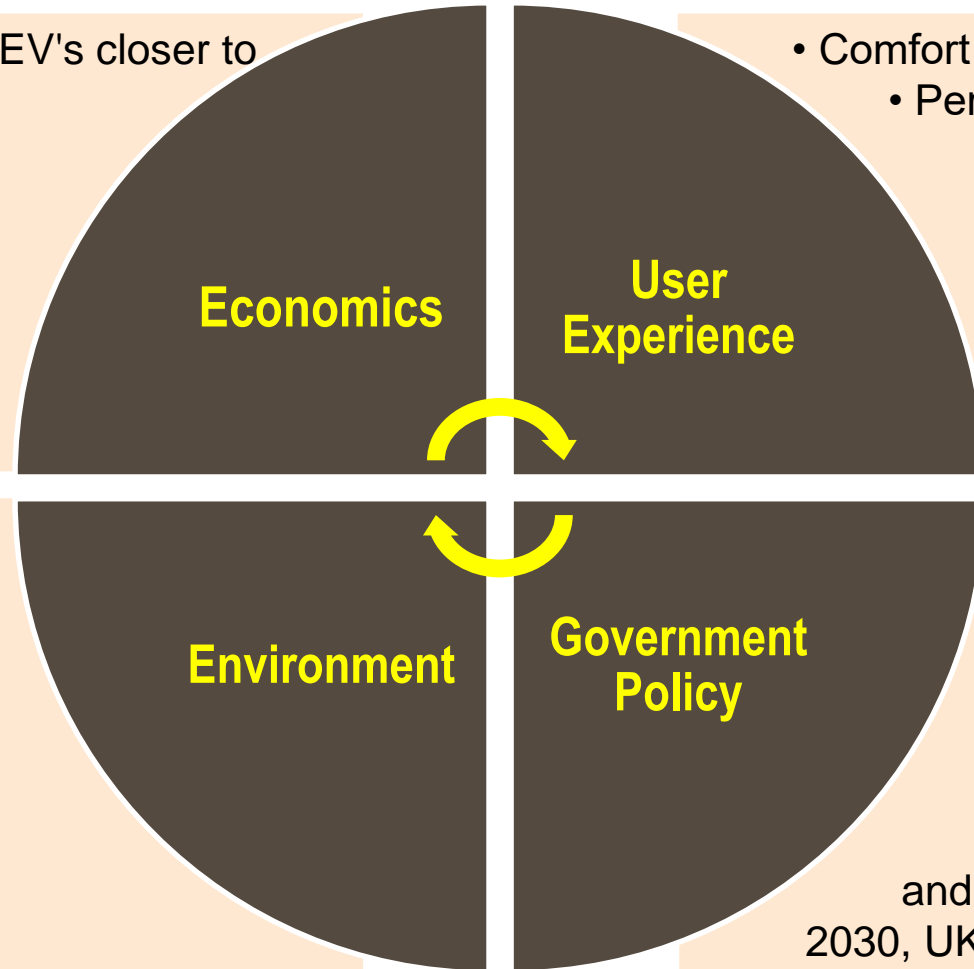
Transition to Electric Vehicles – Factors Driving Adoption



Momentum growing from consumers, car manufactures and regulators – EV's fast becoming mainstream – tipping point is accelerating

- Reduction in Battery Costs bringing EV's closer to price parity with ICE (by ~ 2020)
- ICE Resale values likely to decline significantly and be factored into purchasing behaviour sooner.
- Lower Life Cycle ownership cost (lower maintenance with fewer moving parts, lower fuel cost, increased lifespan)

- CO2 Emissions
- Urban air quality
- Noise



- Comfort (noise, smooth acceleration)
- Performance (speed, acceleration)
 - Features (use of space - no large engine or fuel tank, integrated electronics and Autonomous features)
 - Improvement in range (battery capacity, recharging options, speed of charging)
 - Development of charging infrastructure (increase in electric distribution options)

- Government grants/incentives to early EV adoption
- Legally-binding carbon targets
- Levies on drivers of ICE vehicles.
- Rules and regulations about autonomous vehicles
 - Govt mandates (eg banning petrol and diesel cars- Norway 2025, Germany 2030, UK & France 2040)

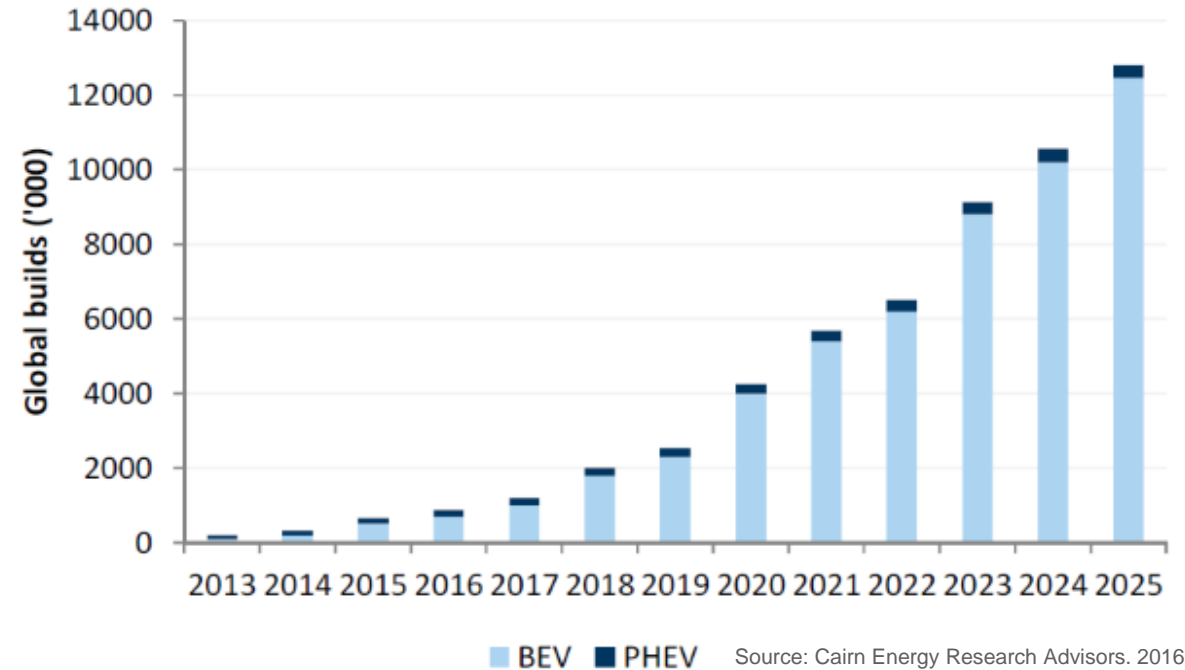
For personal use only

Global motor vehicle lithium demand growing strongly



- ▶ Tesla Model 3 deliveries started in August 2017 with a long range battery life of 310 miles with a starting retail price of USD 35,000 (>500,000 pre-orders)
- ▶ Volkswagen investing \$84Bn to bring 300 EV models to market by 2030 (80 models by 2025)
- ▶ Mercedes Benz plans to spend \$10Bn in EV development and outlined plan to offer electric option for every car by 2022
- ▶ Volvo committed to all new models to be electrified by 2019
- ▶ General Motors said it plans to phase out gas-powered vehicles for an "all-electric future" with plans to launch 20 all-electric cars by 2023
- ▶ Ford plans \$11 billion investment, 40 electrified vehicles by 2022
- ▶ BMW i3 plans to have 25 electric cars, plug-in hybrid models by 2025
- ▶ China EV Joint Ventures announced – Ford, Volkswagen, Daimler, Renault-Nissan
- ▶ China, Japan and Korean Government policy strongly supports EVs with large rebates, zero sales tax and free licensing

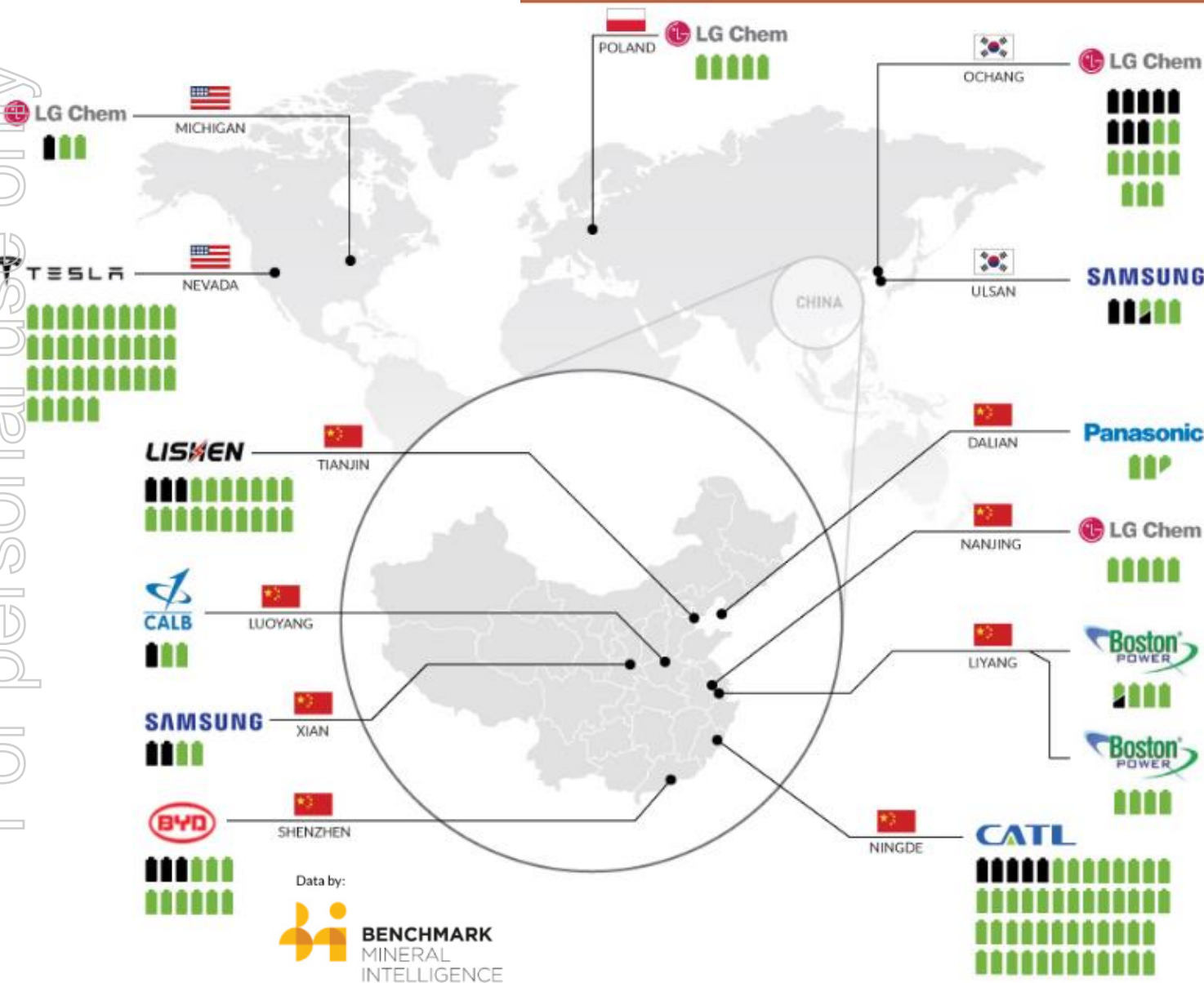
Global EV Builds



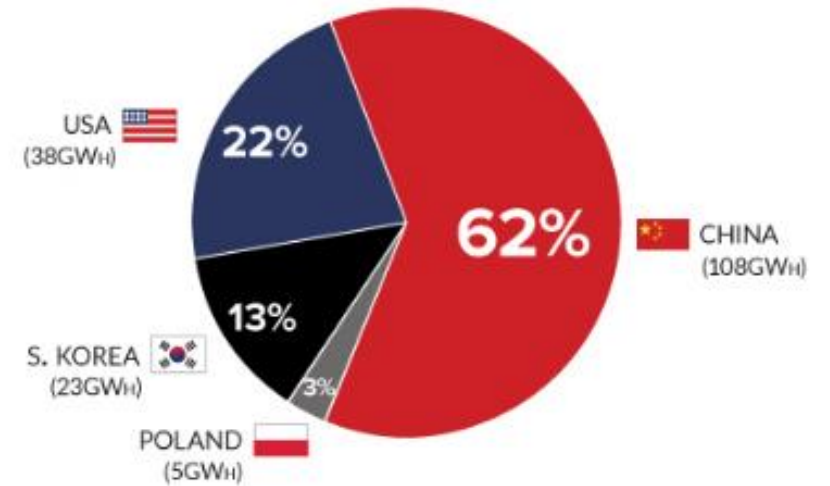
Leading the Charge for Lithium-Ion Megafactories (EV only)



For personal use only



By 2020, mass production of lithium-ion batteries will still be concentrated in just **four countries**.



Estimated 521% increase between 2016 and 2020:

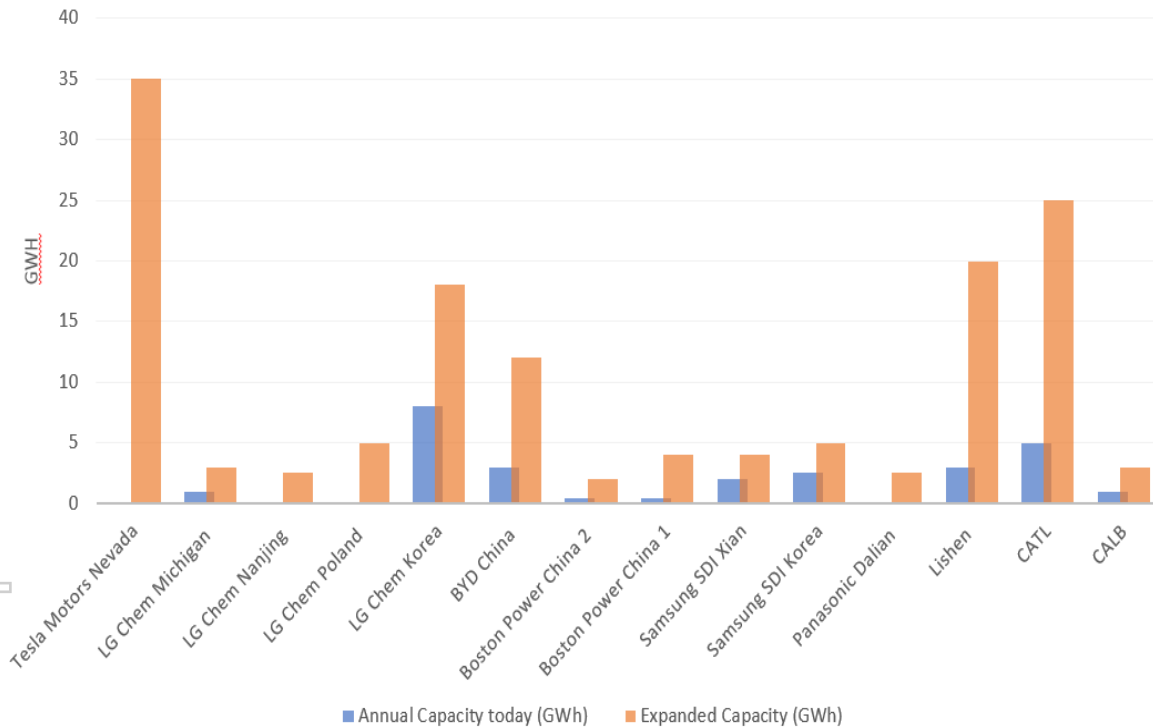
| | 2016 Capacity (GWh) | 2020 Capacity (GWh) | % of Global Total (2020) |
|---------------|---------------------|---------------------|--------------------------|
| United States | 1.0 | 38.0 | 22% |
| China | 16.4 | 107.5 | 62% |
| Korea | 10.5 | 23.0 | 13% |
| Poland | 0.0 | 5.0 | 3% |
| Total | 27.9 | 173.5 | 100% |

Relates to batteries for EV's only.

Massive expansion of Lithium ion battery making capacity underway

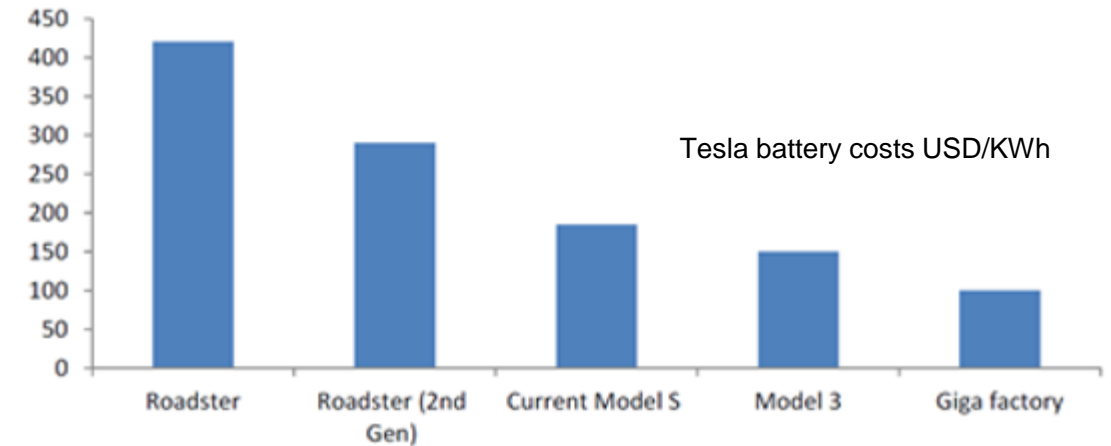


Battery making capacity set to increase significantly



- ▶ Significant expansion through entire lithium-ion supply chain, including major chemical conversion capacity expansion (spodumene to Carbonate & Hydroxide) over the coming five years

Battery Costs continue to decline (2008 – late 2017)...



...driving mass adoption of lithium ion batteries as to 'go-to' battery technology, including for transport applications.....

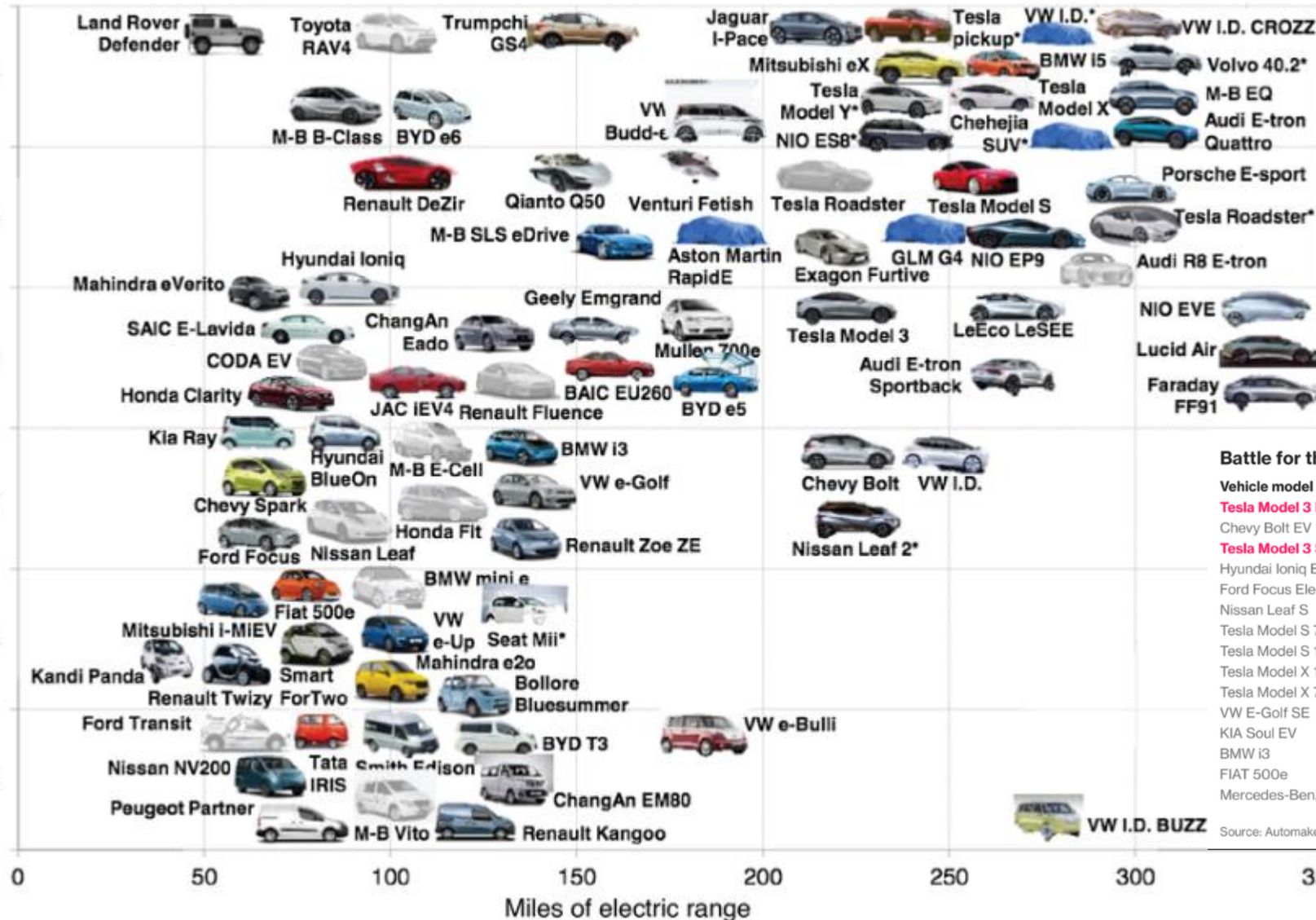
More than USD20bn of committed investment expected to result in new battery manufacturing expansions that will increase global production capacity significantly and drive production costs down

Increasing availability and choice of Electric Vehicles



Models by style and range available through to 2020:

For personal use only



Tesla Model 3 released with 2 battery types:

- Standard – 220 Miles
- Long Range – 310 Miles

Current EV's on the market:

Battle for the Cheapest Range

| Vehicle model | Range | MSRP | Price-per-mile of vehicle range |
|-------------------------------|------------------|-----------------|---------------------------------|
| Tesla Model 3 Range+ | 310 miles | \$44,000 | \$141.94 |
| Chevy Bolt EV | 238 | 37,495 | 157.54 |
| Tesla Model 3 Standard | 220 | 35,000 | 160.54 |
| Hyundai Ioniq Electric | 124 | 29,500 | 237.90 |
| Ford Focus Electric Hatch | 115 | 29,120 | 253.22 |
| Nissan Leaf S | 107 | 30,680 | 286.73 |
| Tesla Model S 75D | 259 | 74,500 | 287.64 |
| Tesla Model S 100D | 335 | 97,500 | 291.04 |
| Tesla Model X 100D | 295 | 99,500 | 337.29 |
| Tesla Model X 75D | 237 | 82,500 | 348.10 |
| VW E-Golf SE | 83 | 28,995 | 349.34 |
| KIA Soul EV | 93 | 33,950 | 365.05 |
| BMW i3 | 114 | 42,400 | 371.93 |
| FIAT 500e | 84 | 32,995 | 392.80 |
| Mercedes-Benz B250-e | 87 | 40,000 | 458.62 |

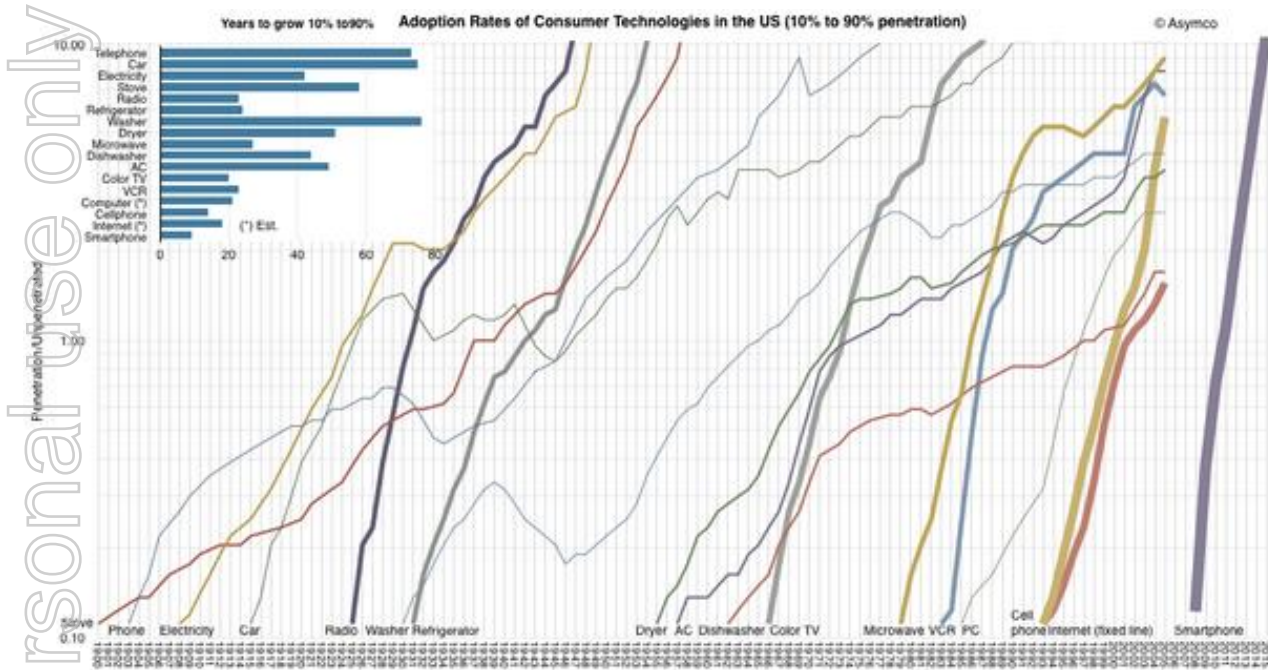
Source: Automaker figures

Bloomberg

Technology Adoption



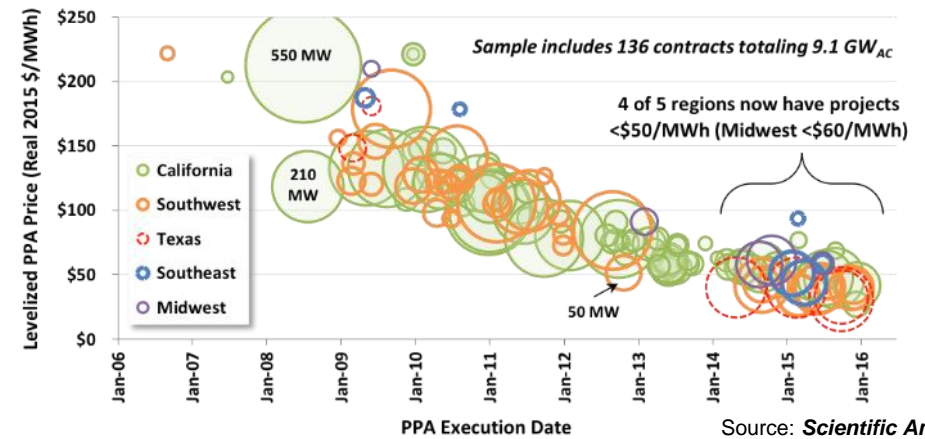
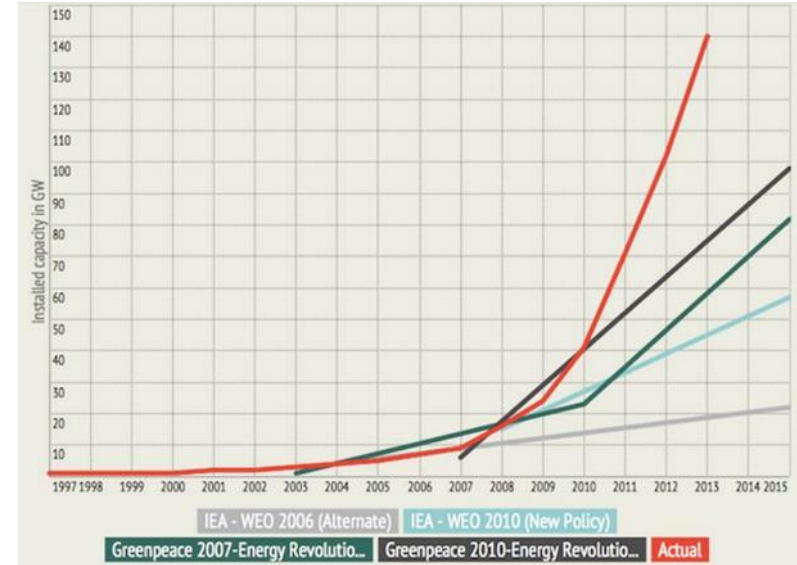
Adoption Rates of Consumer Technology



“There are two kinds of forecasters: those who don’t know, and those who don’t know they don’t know.”

— [John Kenneth Galbraith](#)

Solar – Installed Capacity, Estimates vs Actual and the influence of cost



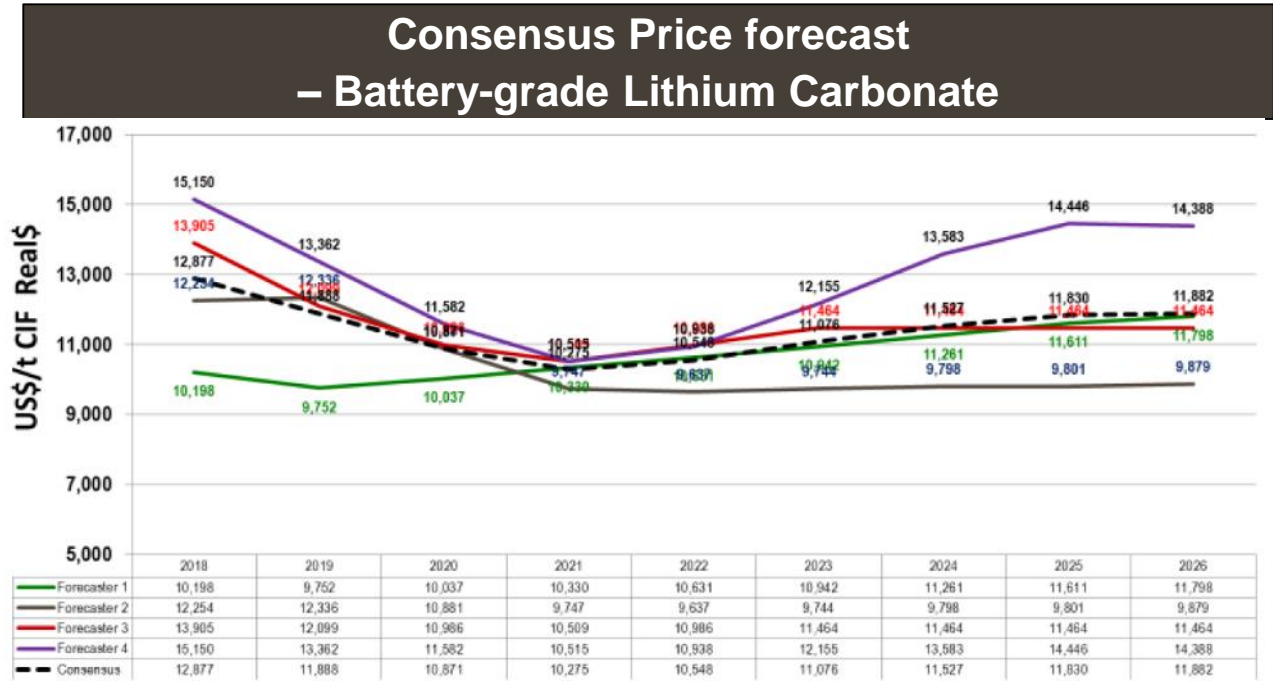
Source: *Scientific American*

Technology adoption in consumers markets has accelerated over time, and adoption rates often out-perform estimates

Pricing – outlook strong



- ▶ Ganfeng Lithium, General Lithium and Great Wall spodumene offtake price based on relativity to the combined Chinese domestic and import market pricing outcomes for battery grade lithium carbonate
 - ▶ *Offtake contracts include floor price protection*
- ▶ Expectation that Chinese domestic battery grade carbonate pricing and import pricing will converge over time
- ▶ Remaining concentrate priced against the consensus spodumene price forecast
- ▶ Recent spodumene price settlements for 2017 of USD 905/t FOB Esperance (Galaxy Resources) USD 841/t CFR China (Neometals) (SC6.0 basis) & Tawana USD 880 FOB Esperance
- ▶ Pilbara's pricing formula aligns with the spodumene pricing currently being achieved in the market
- ▶ Robust operating margins expected for the Project based on current price forecast (average of USD 594/t CIF China assumed in 5Mtpa PFS)



Great Wall Motors - China's largest SUV and pickup manufacturer



For personal use only

- Listed on the Hong Kong & Shanghai Stock Exchanges
- Market capitalisation of RMB 120Bn ~US\$19Bn
- >60,000 employees and produces ~1 Million vehicles per year from 4 vehicle manufacturing bases.
- SUVs sold under the “Haval” brand (87% of sales) with new premium SUV brand named “Wey” released this year.
- Each vehicle platform in this brand is designed to accommodate either the standard engine, plug-in hybrid or full electric vehicle within the same body.
- Aiming to produce around 500,000 electric and hybrid cars a year by the early 2020s.



Ganfeng Lithium – China's largest fully integrated lithium company



For personal use only

Established in 2000 in Jiangxi Province, China, Ganfeng Lithium has a capacity of around 35,000tpa of LCE and produces lithium carbonate, lithium hydroxide, lithium metals, butyl lithium, and a number of other lithium compounds

Ganfeng Lithium is currently commissioning an additional 20,000tpa LCE and is proposing further developments of another 45,000tpa LCE

Ganfeng Lithium is listed on the Shenzhen Stock Exchange (SHZ:002460) with a market capitalization of RMB 45 Bn (USD ~7Bn)

Ganfeng Lithium has interests in the Mt Marion spodumene project in Australia (43.1%), Lithium America's Caucharí-Olaroz brine project in Argentina (USD 165m in debt and equity) and International Lithium Corporation's Mariana brine project in Argentina (17.6%) & Blackstairs Project in Ireland (51%)

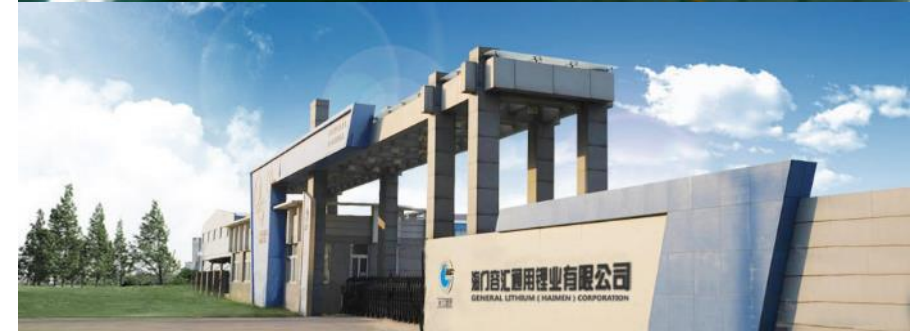


General Lithium – a major producer of lithium chemicals in China



For personal use only

- ▶ Listed on NEEQ, Beijing, Code No: 837358 with a market capitalisation of RMB 2.6Bn (USD ~410m)
- ▶ Currently produces 8,000tpa of Lithium Carbonate (LC) & 2,000tpa of High Purity LC 4N (99.99%)
- ▶ Recently commissioned 5,000tpa of Lithium Iron Phosphate (LFP), Li battery cathode powder material in Qinghai Province
- ▶ Expansions continuing to add another 16,000tpa of Lithium Hydroxide (LiOH) & LC conversion capacity in Jiangxi Province to be commissioned mid 2018, with further expansions being planned
- ▶ One of the top quality producers of Battery Grade LC in China, with established sales to a broad list of major Chinese Li battery cathode powder manufacturers



General Lithium Corporation



For personal use only



Lithium Ion Battery Technology

Lithium Market

Pilgangoora Project

Resources & Reserves

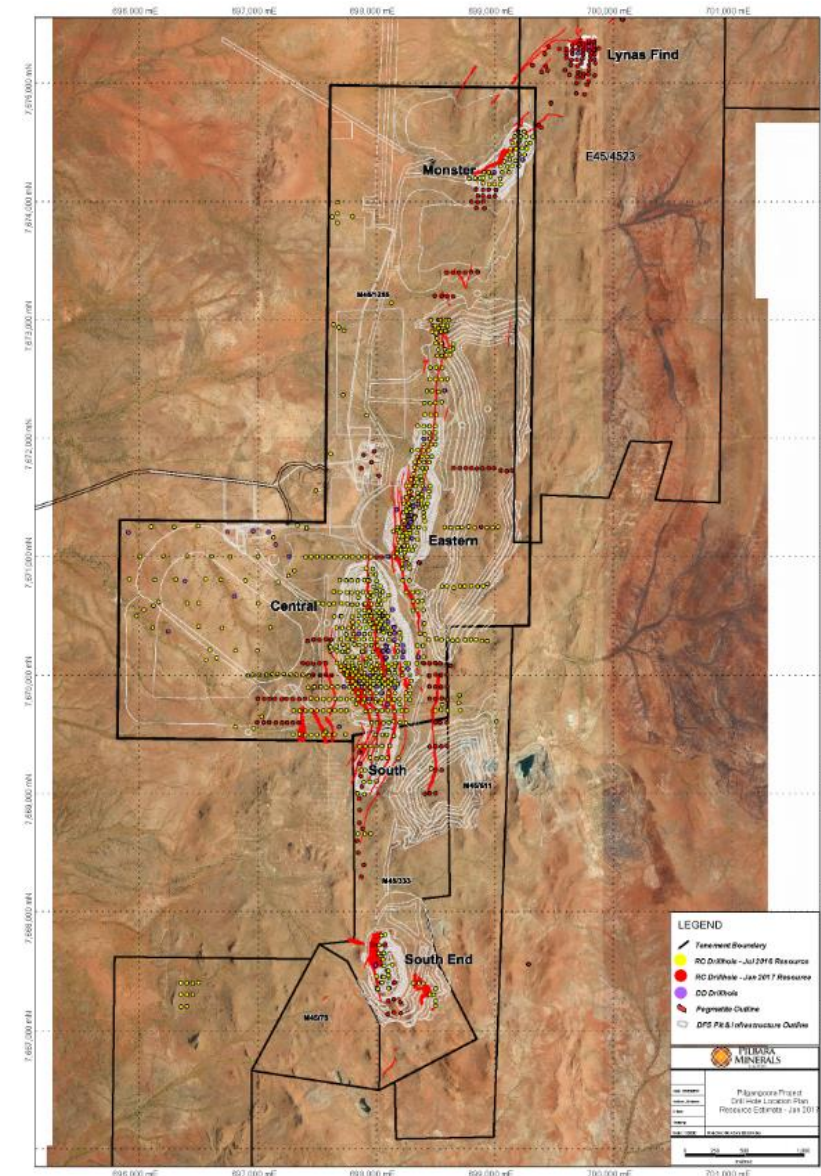


JORC Mineral Resources: 25 January 2017

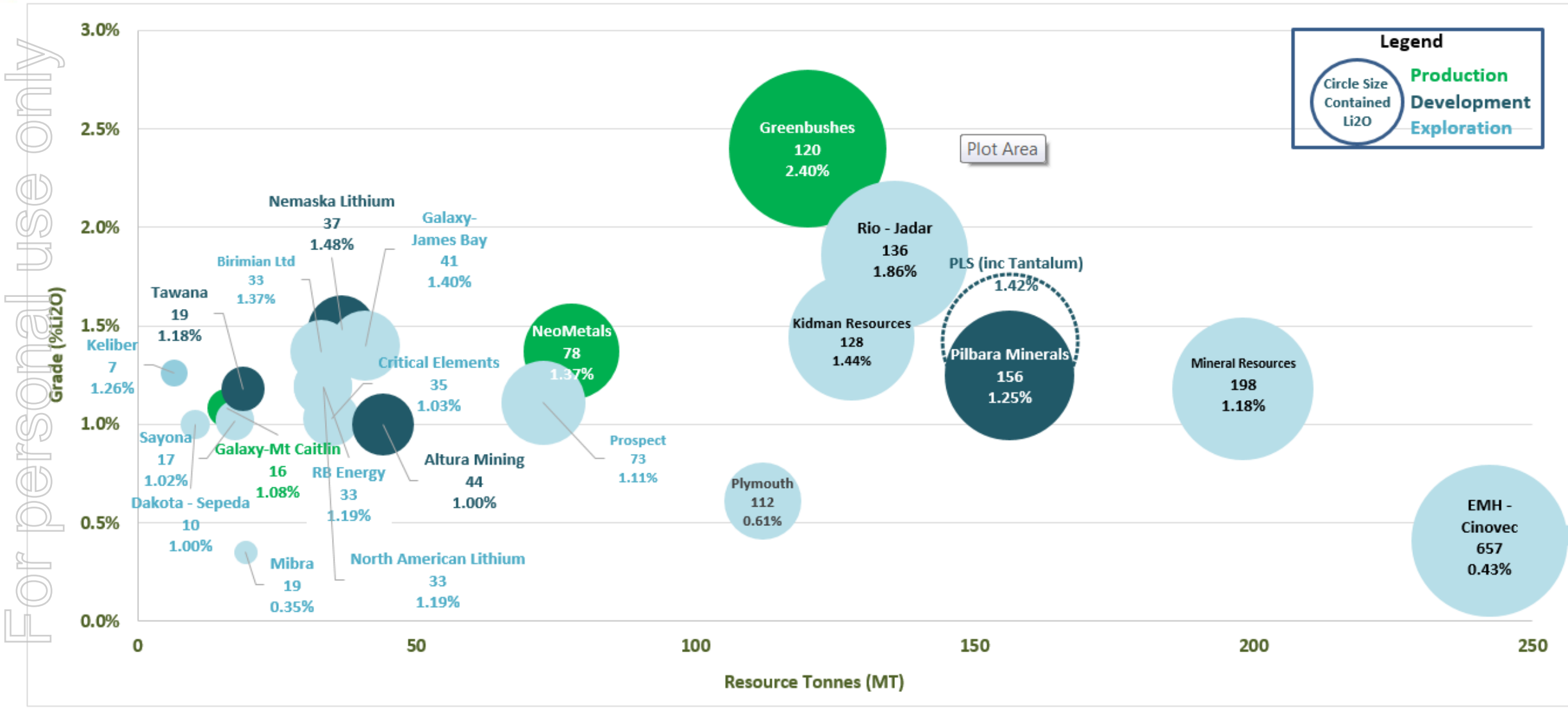
| Category | Tonnage (Mt) | Li ₂ O (%) | Ta ₂ O ₅ (ppm) | Fe ₂ O ₃ (%) | Li ₂ O (T) | Ta ₂ O ₅ (Mlbs) |
|--------------|--------------|-----------------------|--------------------------------------|------------------------------------|-----------------------|---------------------------------------|
| Measured | 17.6 | 1.39 | 151 | 0.44 | 244,000 | 5.9 |
| Indicated | 77.7 | 1.31 | 125 | 0.58 | 1,017,000 | 21.5 |
| Inferred | 61.1 | 1.13 | 125 | 0.71 | 691,000 | 16.8 |
| Total | 156.3 | 1.25 | 128 | 0.61 | 1,952,000 | 44.2 |

JORC Ore Reserves: 29 June 2017

| Category | Tonnage (Mt) | Li ₂ O (%) | Ta ₂ O ₅ (ppm) | Fe ₂ O ₃ (%) | Li ₂ O (T) | Ta ₂ O ₅ (Mlbs) |
|--------------|--------------|-----------------------|--------------------------------------|------------------------------------|-----------------------|---------------------------------------|
| Proved | 17.3 | 1.30 | 141 | 1.03 | 230,000 | 5.4 |
| Probable | 62.9 | 1.25 | 119 | 1.10 | 790,000 | 16.5 |
| Total | 80.3 | 1.27 | 123 | 1.08 | 1,020,000 | 21.8 |



Pilgangoora – a globally significant hard rock lithium resource



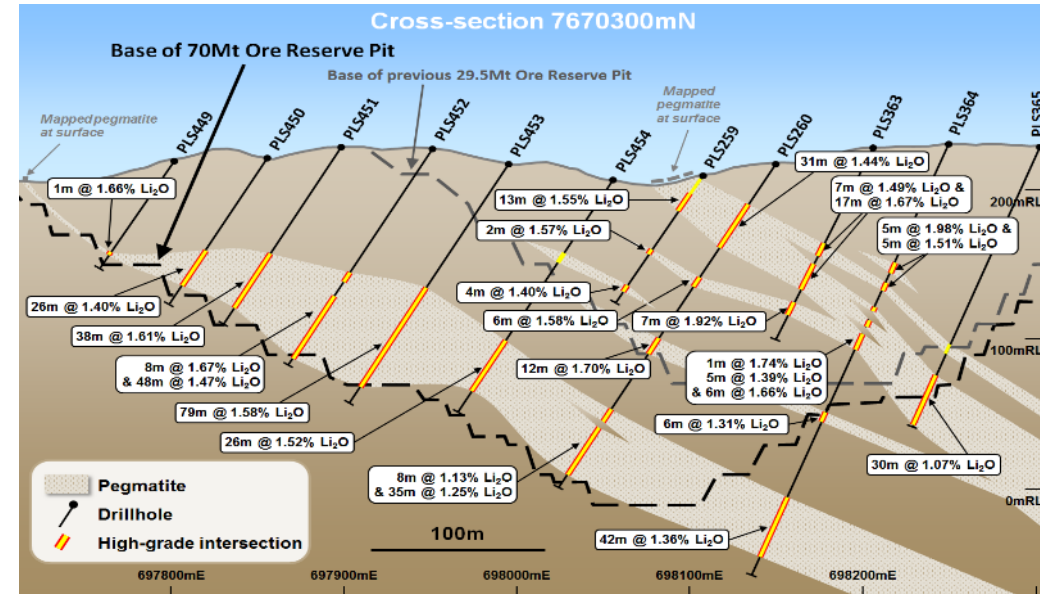
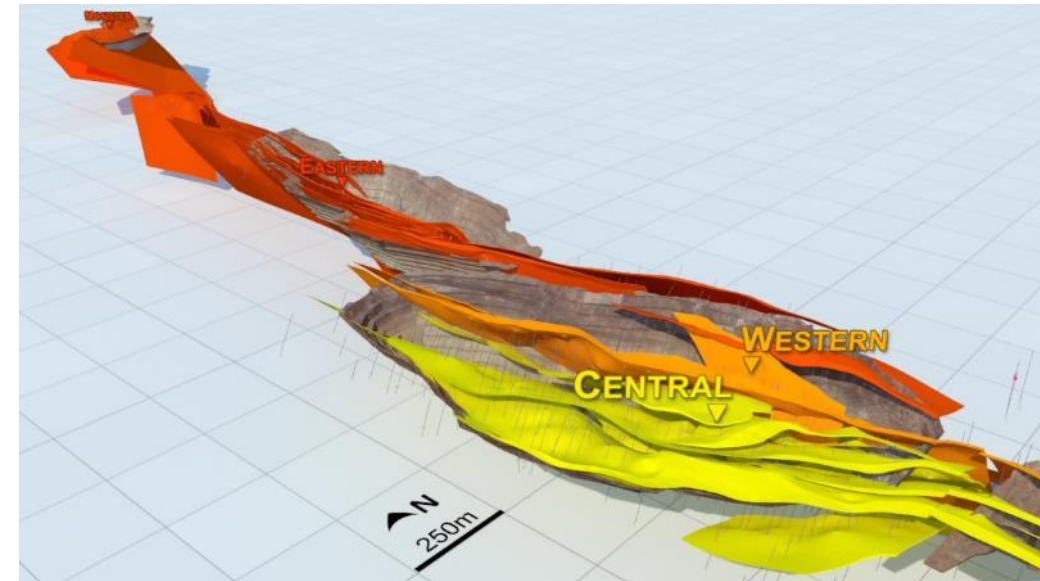
Note: Tantalum adjusted resource size includes consideration of the revenue of tantalum by-product. Source: Published resource estimates by project owners. Note that resources estimates for projects other than Pilgangoora may have been prepared under different estimation and reporting regimes and may not be directly comparable. Pilbara has not verified, and accepts no responsibility for, the accuracy of resources estimates other than its own. Readers should use appropriate caution in relying on this information.

Pilgangoora – mining A straightforward open pit mining development



For personal use only

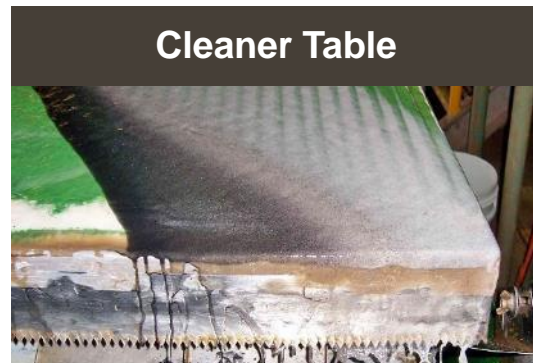
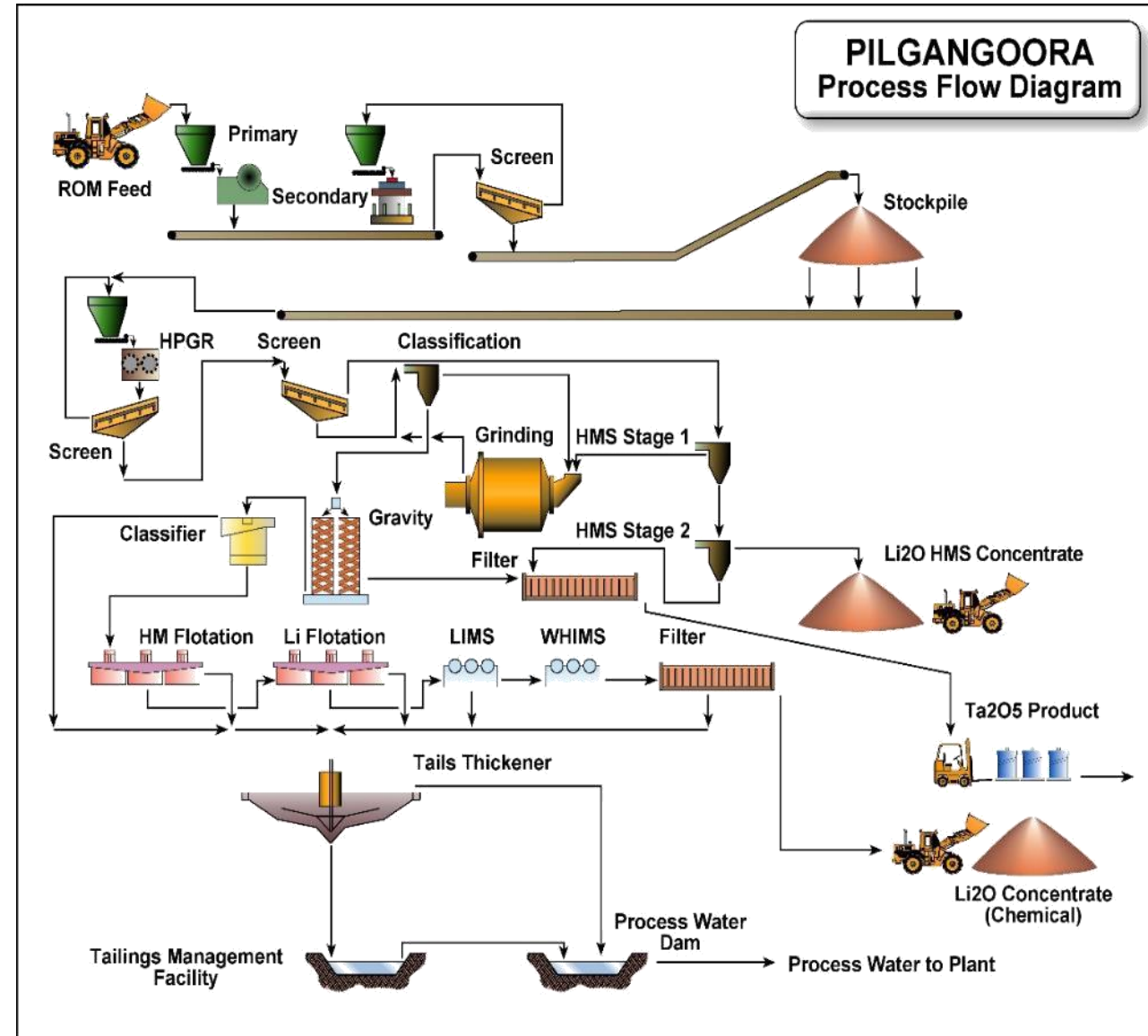
- ▶ Measured, Indicated and Inferred Resource of 156.3Mt @ 1.25% Li₂O and 128ppm Ta₂O₅ containing 1,952,000 tonnes Li₂O, and including 44Mlbs Ta₂O₅ (Mineral Resource Update ASX release dated 25 January 2017)
- ▶ Ore Reserve of 80.3Mt @ 1.27% Li₂O and 123ppm Ta₂O₅ (Ore Reserve Update ASX release dated 29 June 2017)
- ▶ Conventional drill and blast and open pit mining proposed, 100 tonne mining fleet
- ▶ 5Mtpa ore feed – 17 year mine life.
- ▶ LOM strip ratio of 3.85:1:1 (waste: ore tonnes)
- ▶ MACA Mining commenced mining from central pit in January 2018.



Pilgangoora – processing



- ▶ Industry standard processing flowsheet
 - ▶ *Spodumene concentrate produced at three mines in Western Australia*
- ▶ 2-stage heavy media separation
- ▶ Gravity separation, tantalite recovery
- ▶ Grinding leading to oxide flotation
- ▶ Low/High intensity magnetic separation
 - ▶ *High grade chemical spodumene concentrate (SC6.0 specification)*
 - ▶ *High grade tantalite concentrate (up to 30% Ta₂O₅)*
- ▶ Processing targeted to commence Q2 2018



Pilgangoora – mine to ship **Contracted logistics chain proposed**



- ▶ Road transport from mine site to Wedgefield Storage Facility
 - ▶ *127km via Great Northern Highway utilising double road trains*
- ▶ Product storage at Wedgefield and loaded into shipping containers
- ▶ Transport from Wedgefield (~16km) to Port Hedland Berth 2
- ▶ Ship Loading with mobile harbour crane via Rotabox
- ▶ Shipment via handysize vessels (30kt)
 - ▶ *~11 shipments pa in full production*

Trucking



Storage



Wedgefield
Storage Facility

Loading – Rotabox



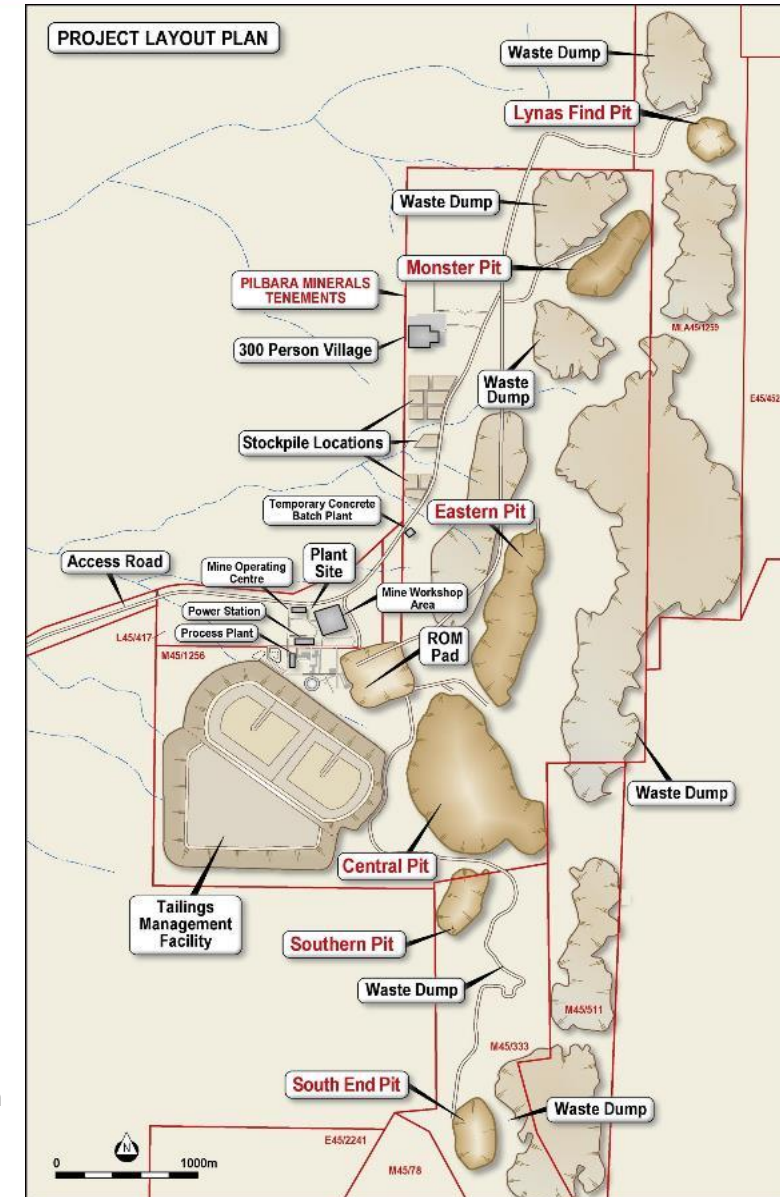
Port



Project highlights – 5Mtpa (inclusive of Stage 1 and Stage 2)



| Metric | Unit | PFS 5Mtpa |
|---|------------------|-----------|
| Life of Mine (LOM) | Years | 17 |
| LOM Ore Mined | Mt | 80.4 |
| LOM Waste Mined | Mt | 310.1 |
| LOM Strip Ratio | (waste:ore) | 3.85 |
| Plant Feed Rate | Mtpa | 4.67 |
| Average Lithium Head Grade | % | 1.26 |
| Average Lithium Recovery | % | 75.0 |
| Average Tantalum Head Grade | % | 121 |
| Average Tantalum Recovery | % | 56.9 |
| Average Spodumene Concentrate Production (LOM) | ktpa | 800 |
| Average Tantalite Production (LOM) | k lbs pa | 780 |
| Average Lithium Price | US\$/t CIF Real | 594 |
| Tantalite Forecast Price | US\$/lb FOB Real | 89 |
| Forecast FX Rate | AUD:USD | 0.75 |
| Stage 1 Remaining Capital Cost (from 1 Jan 18) | A\$M | 162 |
| Stage 2 Capital Cost | A\$M | 207 |
| Average LOM Total Operating Costs ¹ (Real\$) | A\$/t product | 416 |
| Ave LOM Operating Costs ¹ (after Tantalite Credit) | A\$/t product | 300 |
| Ave LOM Operating Costs ¹ (after Tantalite Credit) | US\$/t product | 225 |
| Average Annual EBITDA (Real \$) | A\$M | 383 |
| NPV ² (10% Discount Rate) | A\$M | 2,099 |

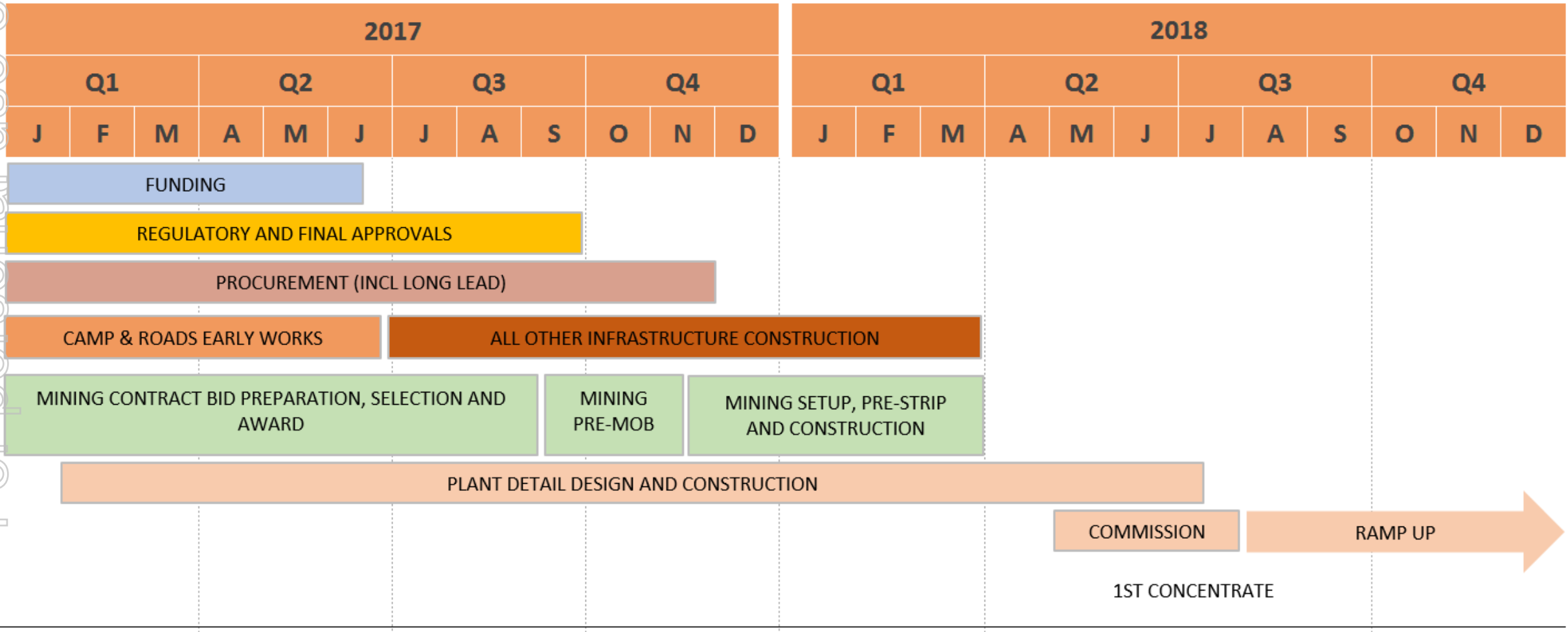


1. Cash operating costs include all mining, processing, transport, port, shipping/freight and site based general and administration costs, allocation of corporate administration/overhead costs, State and private royalties and native title costs and are net of Ta₂O₅ by-product credits.
 2. NPV is presented on a 10% nominal basis after tax basis.

2Mtpa - A rapid pathway development and production



PILGANGOORA PROJECT DELIVERY SCHEDULE



For personal use only