

Syrah Resources and Graphite Market

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Corporate Background

Syrah Resources: Only major new supplier of natural graphite

Operations

- First production November 2017
- Customer shipments commenced January 2018
- First revenue received February 2018

Global supplier of flake graphite

- Sales agreements with global customer base
- Exposure to high growth markets – graphite is key component in Li-Ion battery anodes
- Diversified end markets including battery & industrial
- First significant graphite exporter to China

Largest natural graphite producer

- Balama Tier 1 asset: 17% grade, LoM > 50 years, 350ktpa capacity
- Targeting first quartile cash costs
- Market share ~40% by 2020

Value accretive strategy

- Aim to be the first integrated battery anode material producer outside China
- Optionality to expand Balama production
- One of the largest vanadium deposits in the world



SYRAH RESOURCES

Q1 2018 Highlights

Health, Safety and Community	<ul style="list-style-type: none"> - Strong safety record continues with Total Recordable Injury Frequency Rate (TRIFR) of 0.8 - President of Mozambique, His Excellency Mr Filipe Nyusi, officially opening the Balama Graphite Operation at an onsite inauguration in April
Balama Graphite Operation	<ul style="list-style-type: none"> - Fines dryer repaired and operational post quarter end, ahead of schedule - Q1 production of 11.2kt. Production below plan, current production rates improving with increased recoveries, plant throughput and stability to deliver significant uplift in daily production - Plant consistently producing carbon grade >95% and particle size distribution within specification - Targeting lower end of 2018 production guidance of 160,000 to 180,000 tonnes¹ - Cost base well positioned for C1 production costs <US\$400/t by end of 2018
Sales and Marketing	<ul style="list-style-type: none"> - Sales and qualification shipments commenced in January to all major customer markets - Positive qualification feedback from > 20 customers across industrial and battery markets - Additional spot and term sales contracts settled in Q1, further contract negotiations well advanced - Basket price impacted by qualification shipments, higher fines production and China pricing - Higher basket price expected in H2 2018 given full sales and production profile, product consistency and grade premium
Battery Anode Material (BAM) Project	<ul style="list-style-type: none"> - BAM site Letter of Intent to purchase an industrial site in Vidalia, Louisiana with strong local community support - Positive results from testing reconfirm Syrah's BAM products have essential core properties required by global battery industry - Targeting production of first purified spherical graphite by end 2018 - Feasibility study to determine size and economics of potential larger commercial facility to be completed by end Q3 2018
Finance	<ul style="list-style-type: none"> - Cash on hand US\$80.5m as at 31 March 2018 - Forecast cash balance end Q2 2018 ~US\$55m - Timing of BAM major capital expenditure post site selection will be made in conjunction with Balama cash flow profile

(1) Refer to ASX announcements titled "Syrah finalises Balama Graphite study and declares maiden ore reserve" released on 29 May 2015, "Syrah increases Balama Reserves and awards Laboratory Contract" released on 15 November 2016. All material assumptions underpinning the production target in these announcements continue to apply and have not materially changed.



Balama Graphite Operation: Production rates improving

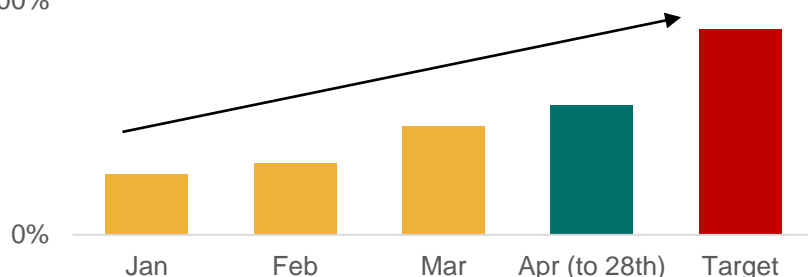
2018 Production target of 160kt – 180kt

- Targeting lower end of guidance 160kt to 180kt¹
- Planned production ramp up 25% H1, 75% H2 – Q2 and H2 profiles broadly similar to original plan
- Operating costs in line with expectations, well positioned to achieve C1 <US\$400/t² by end 2018
- Strong plant throughput performance post dryer repair, combined with continued improvement in graphite recoveries and improved plant stability positions the operation well for continued progressive production ramp up, with maximum daily production achieved in April of 470 tonnes

Flotation optimisation improving recoveries

Recoveries

100%



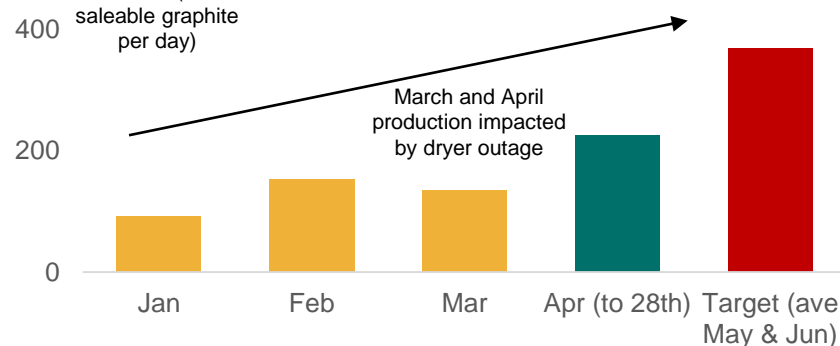
Daily production increasing

Production (tonnes saleable graphite per day)

400

200

0

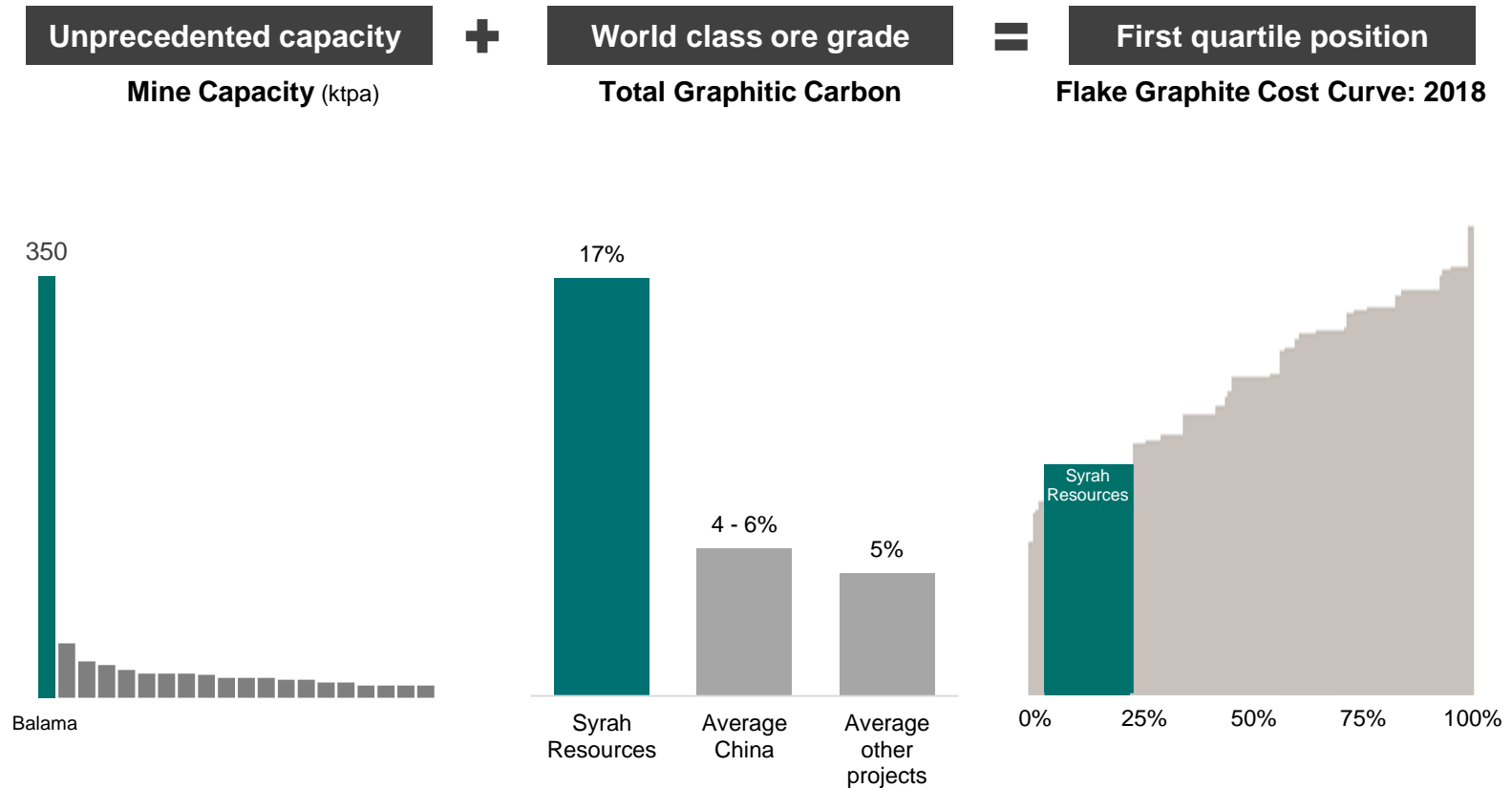


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- (2) C1 cash operating costs (FOB Port of Nacala, excluding government royalties and taxes)



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Largest capacity, high consistent quality, and a long life asset enables Syrah Resources to be the global graphite leader



Source: Syrah Resources

Balama is a tier 1 asset – simplicity and scale give access to market share without complexity

Commodity

Flake Graphite

Copper

Iron Ore

Zinc



Largest mine

Balama
Mozambique

Escondida
Chile

S11D (Carajas)
Brazil

Rampura Agucha
India



Market share

15 – 20% in 2018
35 – 40% at full capacity

~5% in 2017

~5% at full capacity

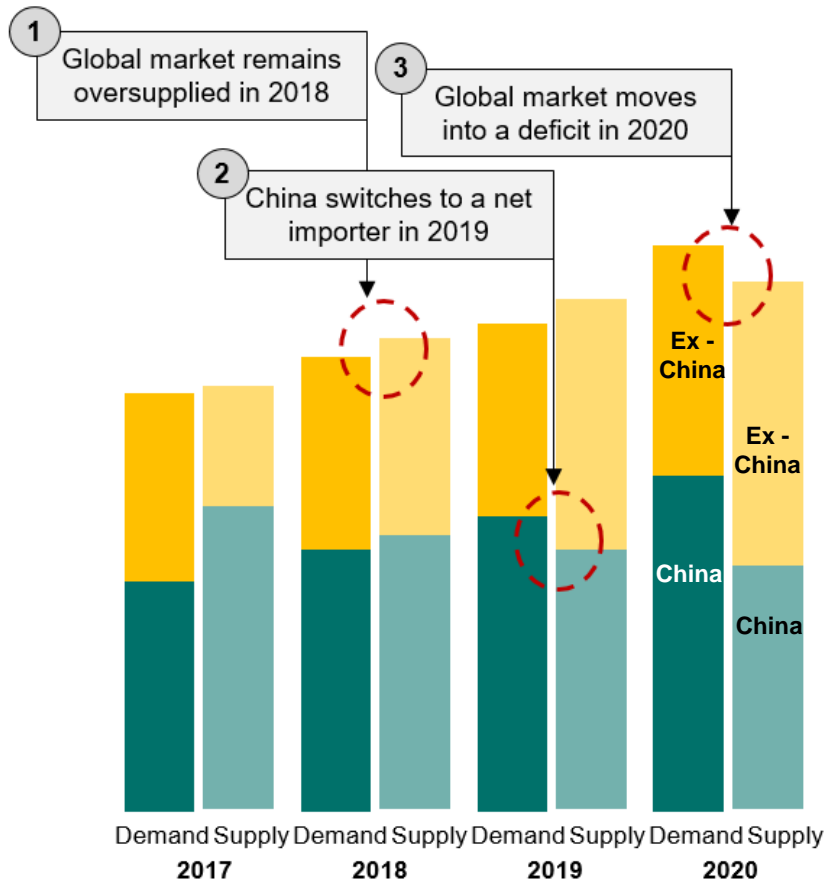
~5% in 2017

Graphite Market



China and the global flake graphite market is moving towards a supply deficit in the near term

Global flake graphite market



Source: Syrah Resources internal demand and supply model

Supply

- Majority of incremental global supply is from Syrah Resources before 2021
- China's higher cost supply to rationalise over the coming years due to resource depletion and environmental pressures; stabilises thereafter

Demand

- Almost all incremental demand growth comes from the lithium ion battery sector in the short and long term
- Other applications such as expandable and shapes are high value per tonne but low volume markets

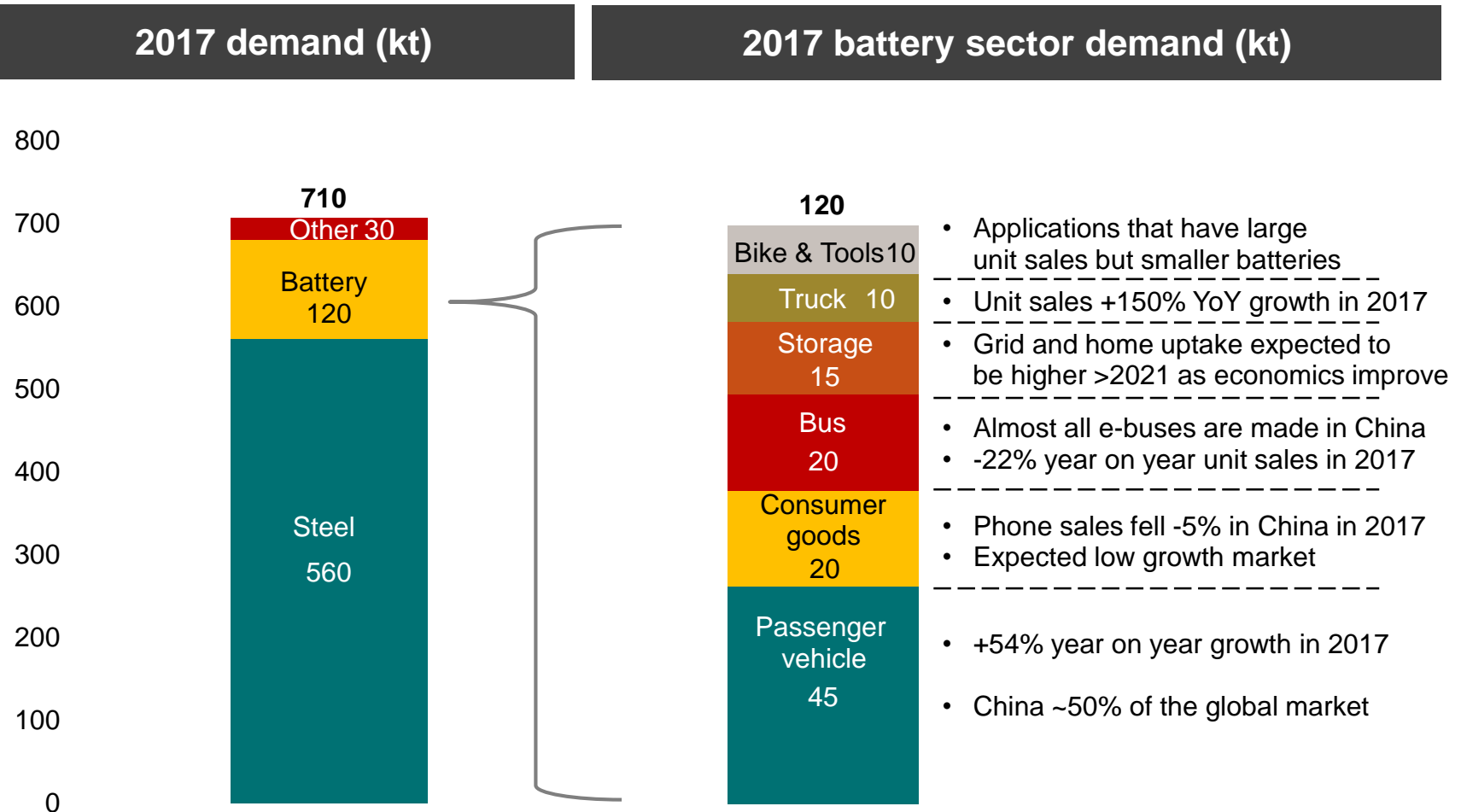
Trade

- Global trade flows will structurally change as China moves to a net importer in 2019/20 as Chinese anode production grows
- Ex-China users currently sourcing graphite from China will require additional sources of supply

Price

- Syrah expects China's movement from a net exporter to importer to support prices

Steel remains a major market; lithium ion battery demand the fastest growing demand sector for graphite



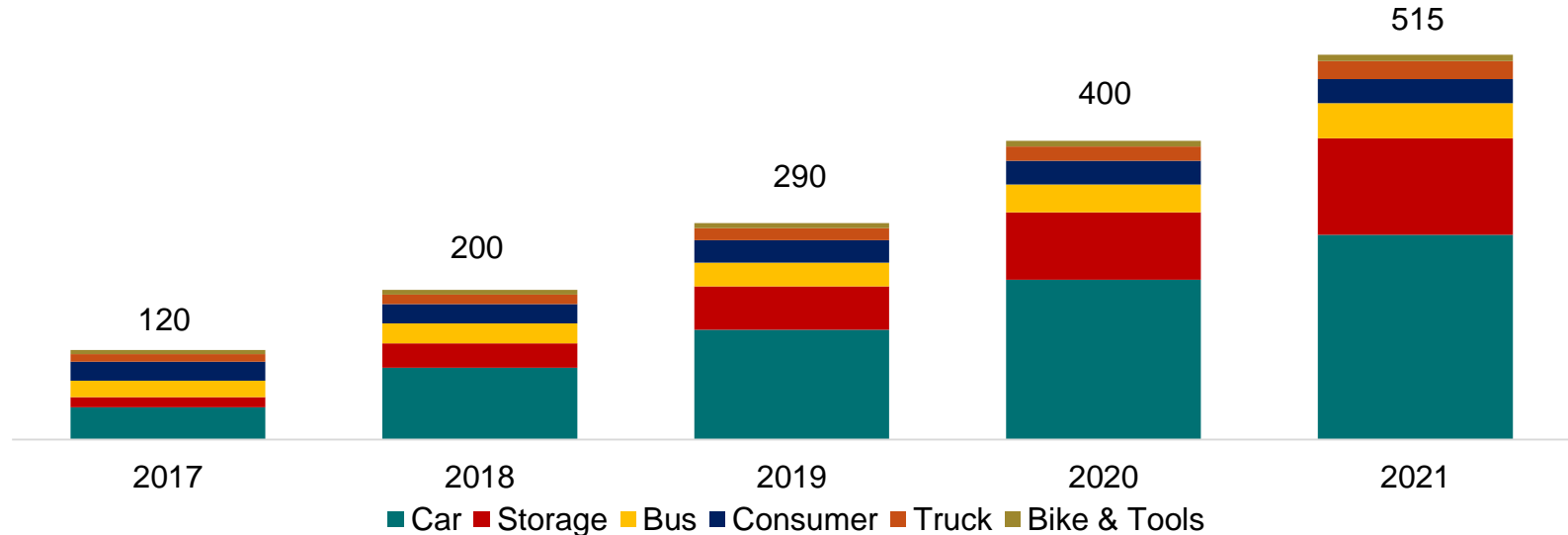
Source: Syrah Resources internal supply and demand model, CEIC, World Steel Association

Natural flake graphite market outlook: Battery sector

Rapid growth of lithium ion battery market expected

- Syrah estimates an increase in demand of nearly 400kt from the battery sector between 2017 and 2021, to ~500kt
- Assume an electric vehicle penetration rate of 5.5% (global) and 9% (China) to reach 2021 demand forecast
- Expect lithium ion batteries used for energy storage to be a major market after 2021

Lithium ion battery demand by end use application (kt)

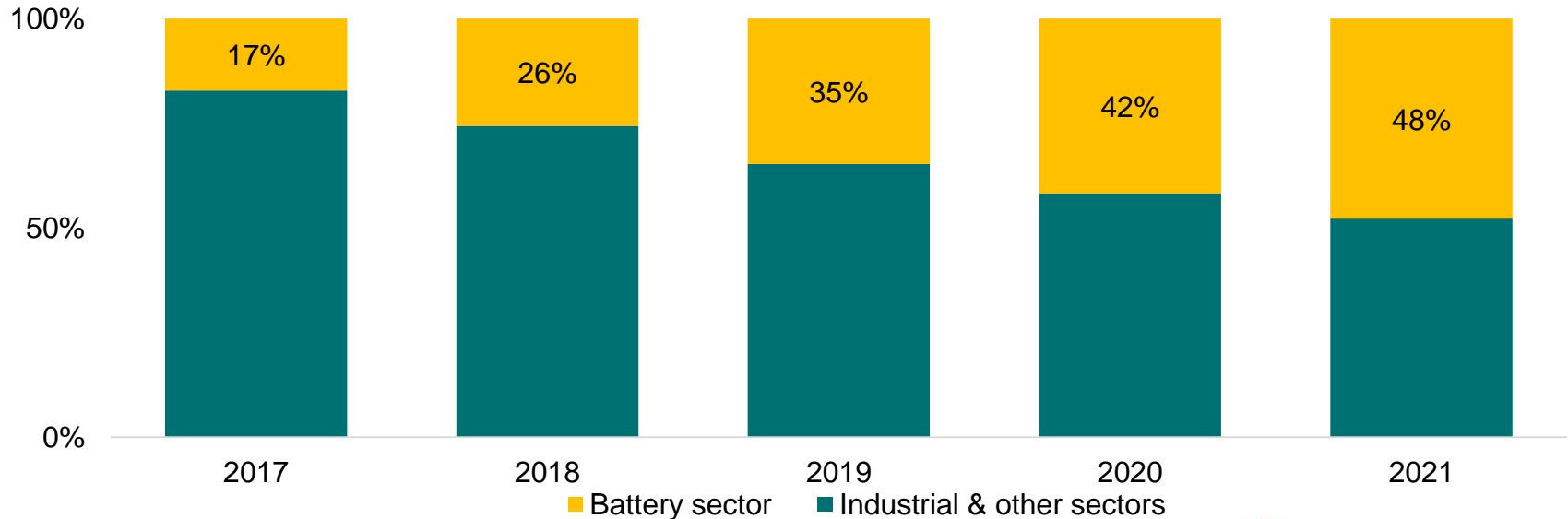


Source: Syrah Resources internal demand and supply model

Natural flake graphite is transforming into a commodity driven by lithium ion battery demand

- Natural graphite market is structurally shifting from a market influenced by industrial applications towards one that is driven by applications using lithium ion batteries
- Demand for flake graphite from the lithium ion battery sector expected to be near 50% in 2021, from 26% in 2018
- Other markets such as expandable applications are high value per tonne, but remain small volume applications (<30kt in 2017)

Natural Flake Graphite Demand Composition



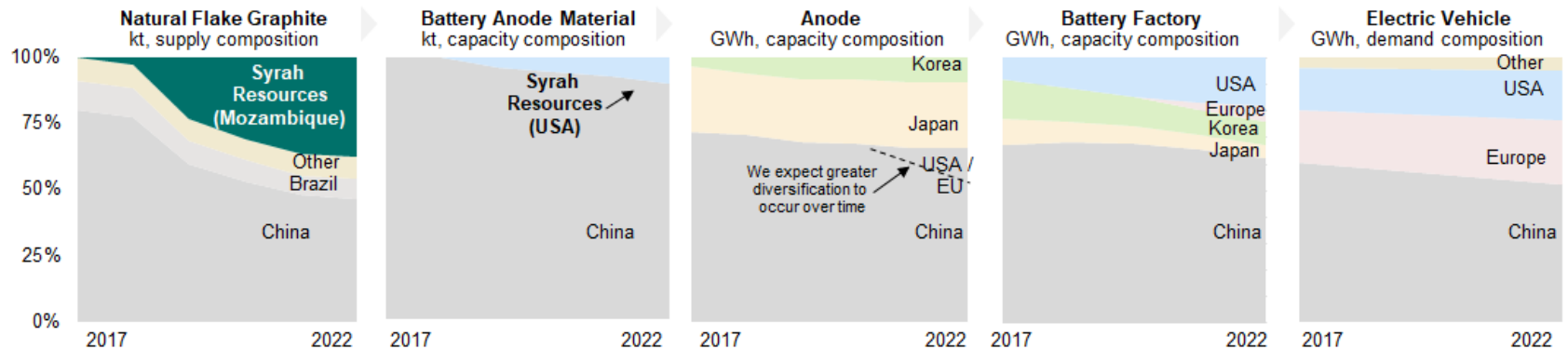
Source: Syrah Resources internal demand and supply model



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Downstream strategy to produce spherical graphite is driven by an opportunity to be the first major and integrated producer outside China

Anode supply chain



Key players

Supply chain risk



Syrah decreases raw material supply risk



Reduced diversification without Syrah's BAM products



Low level of diversification



High level of diversification



High level of diversification

Syrah's downstream strategy continues to target first spherical production in 2018

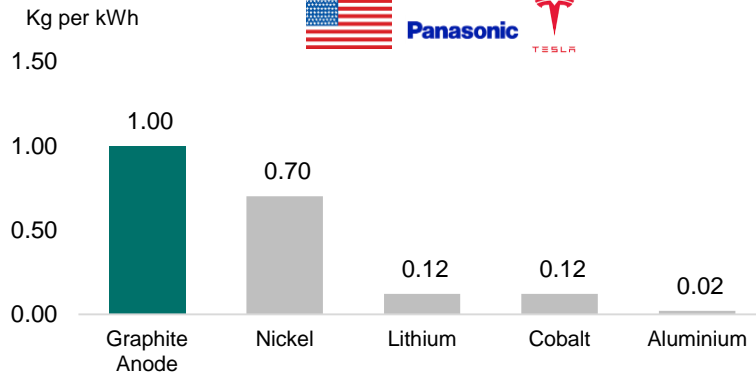
Downstream strategy checklist

2016	2017	2018
Downstream strategy communicated to the market	Agreement with Cadenza for testing and research	Testing and benchmarking results released
USA and Louisiana selected as location	Engineering design begins and long lead items ordered	Site selection finalised
Customer discussions commenced	Ongoing customer specification and volume research	Customer and partner discussions continuing
Marubeni offtake agreement signed	Product roadmap development	Feasibility study Due by end of Q3
		First production Due by end of 2018

Graphite anode mass in lithium ion battery is consistent and largely agnostic of cathode chemistry

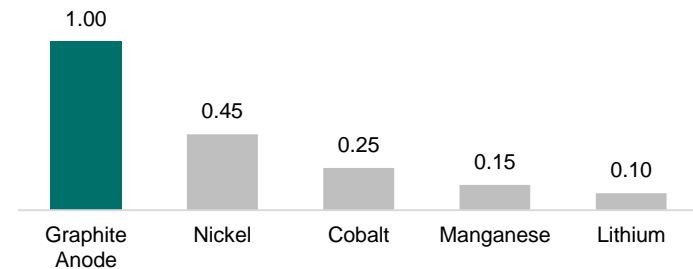
Nickel Cobalt Aluminium (NCA)

Preferred by



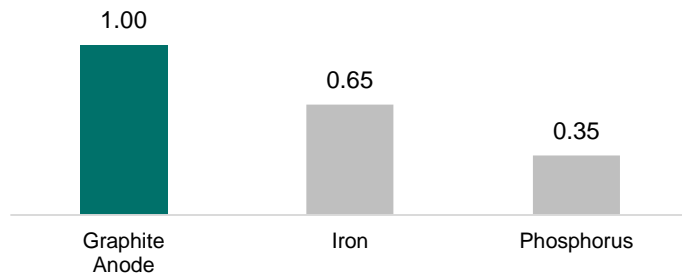
Nickel Manganese Cobalt (NMC1)

Preferred by



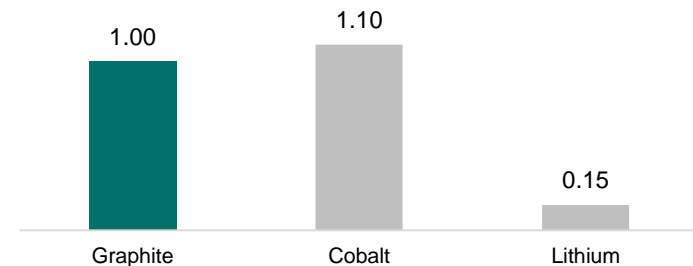
Lithium Iron Phosphate (LFP)

Preferred by



Lithium Cobalt Oxide (LCO)

Preferred by



■ Anode
■ Cathode Materials

Source: Syrah Resources

Each kg of natural graphite anode material requires >2kg of natural flake graphite

(1) NMC 523 Chemistry



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Syrah establishing solid foundation as only major new supplier of graphite to battery market

Summary

- Syrah remains the only major new supplier of flake graphite to world's lithium ion battery market
- The largest, one of the lowest cost and highest quality producers of natural flake graphite in the world
- Will establish a position in the battery supply chain through value added processing of graphite for anode materials
- Sales agreements with industrial and battery market customers
- Natural graphite market is moving towards a deficit as Syrah ramps up production
- Strong demand profile outlook for natural graphite from lithium ion batteries expected to structurally change the market

