



Talga Resources

Investor Presentation:

“Becoming Europe’s first vertically integrated producer of battery anode materials”



Forward Looking Statement & Disclaimer

This presentation has been prepared by Talga Resources Ltd (ACN 138 405 419) (“Issuer”) for the sole purpose of providing an overview of its current prospects and proposed exploration and development strategy to recipients (“Recipient”). This presentation and its contents are provided to the Recipient in confidence and may not be reproduced or disclosed in whole or in part to any other person, without the written consent of the Issuer. The presentation is based on information available to the Issuer as at the date of the presentation.

This document includes forward-looking statements. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements. Although the Issuer believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this presentation. To the maximum extent permitted by law, none of the Issuer, its directors, employees or agents, advisers, nor any other person accepts any liability for any loss arising from the use of this presentation or its contents or otherwise arising in connection with it, including, without limitation, any liability arising from fault or negligence on the part of the Issuer or its directors, employees or agents. Nothing in this Presentation is a promise or representation as to the future. Statements or assumptions in this presentation as to future matters may prove to be incorrect and differences may be material. The Issuer does not make any representation or warranty as to the accuracy of such statements or assumptions.

The information in this presentation does not take into account the investment objectives, financial situation and particular needs of any Recipient. The Recipient should not make an investment decision on the basis of this presentation alone and the Recipient should conduct its own independent investigation and assessment of the content of this presentation. Nothing in this presentation constitute financial product, investment, legal, tax or other advice. Nothing in this presentation should be construed as a solicitation to buy or sell any security or to engage or refrain from engaging in any dealing in any security.

Photographs, maps, charts, diagrams and schematic drawings appearing in this presentation are owned by and have been prepared by or commissioned by the Issuer, unless otherwise stated. Maps and diagrams used in the presentation are illustrative only and may not be drawn to scale. Unless otherwise stated, all data contained in charts, graphs and tables is based on information available at the date of this presentation. By accepting this presentation the Recipient agrees to be bound by the foregoing statements.

Talga Resources Ltd

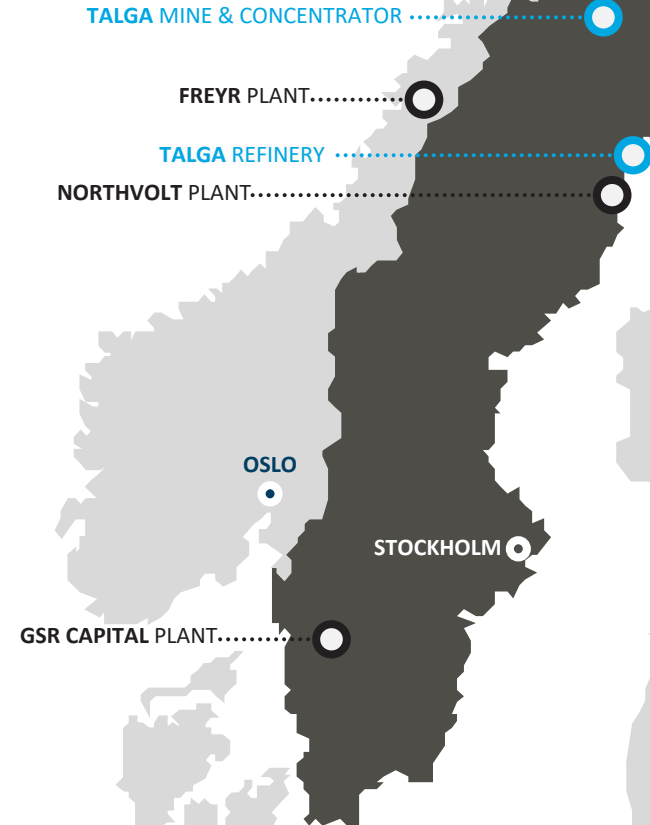
A vertically integrated producer of advanced battery anode materials and graphene additives with own supply of high grade graphite

Focus is on **building Europe's first large scale lithium-ion battery anode plant** to produce Talga's flagship battery anode product Talnode[®]-C

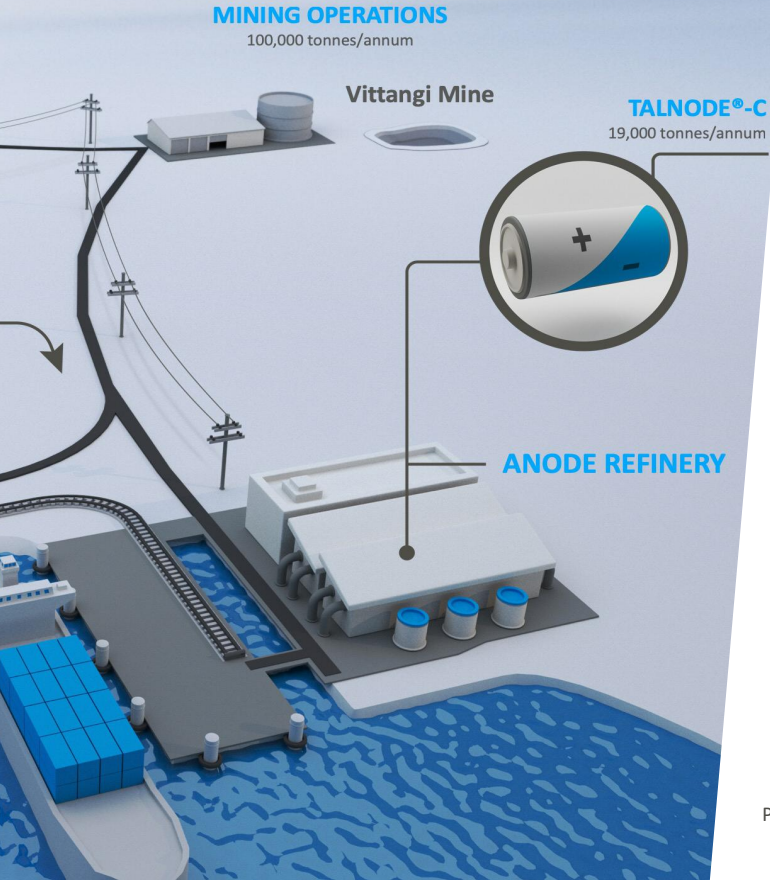
Talnode[®]-C is a **fully coated graphite anode product ready for use** by global battery cell manufacturers

100% ownership of mineral supply, processing and product technology provide security of supply for customers whilst enabling a high margin business creating long-lasting value for shareholders

Talga has built an **in-house team of 35 mining, technology and product professionals include ex-Toyota, Tata, Dyson and Cambridge University alumni** who are leading the Company's creation of ready-to-use products, R&D and customer/product interface



Investment Highlights



High Margin Advanced Materials Business / In-house anode refinery to produce high-margin coated battery anode product (Talnode®-C) for sale directly to Li-ion battery manufacturers

Exceptional Project Economics / May 2019 PFS estimates a \$188m annual revenue over 22 year LOM, US\$1.05bn NPV, 55% IRR, with Stage 1 CAPEX US\$27m and Stage 2 CAPEX US\$147m with 1.5 year Stage 2 payback period

Tier 1 Location / Swedish location providing access to Europe's booming battery manufacturing industry

Highest Grade Graphite Resource / 100% owned Vittangi Graphite Project JORC 2012 Resource of 16.9 Mt @ 25.6%Cg with world leading grade provides premium long life raw material supply to Talga's downstream processing facilities

Corporate Snapshot

Capital Structure

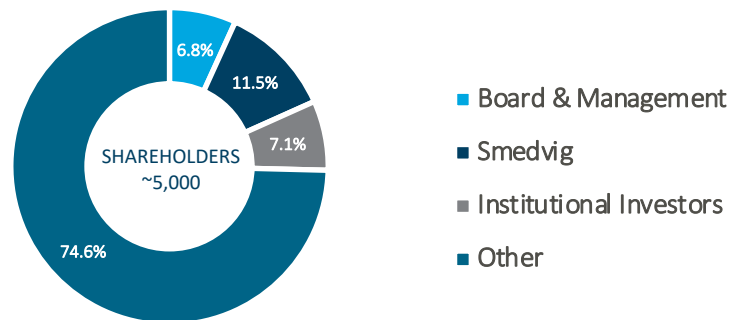
ASX Code:	TLG
Share on Issue	222.2m
ASX Share Price	A\$0.55
Cash (EO September Qtr)	A\$5.6m
Debt	Nil
Market Cap	A\$122.2m
Enterprise Value	A\$116.6m

Board of Directors

Terry Stinson	Chairman
Mark Thompson	Managing Director
Grant Mooney	NED
Steve Lowe	NED
Ola Rinnan	NED
Andrew Willis	NED

NOTE: MARKET CAP AND ENTERPRISE VALUE AS AT 12 NOVEMBER 2019.

Share Price Year To Date

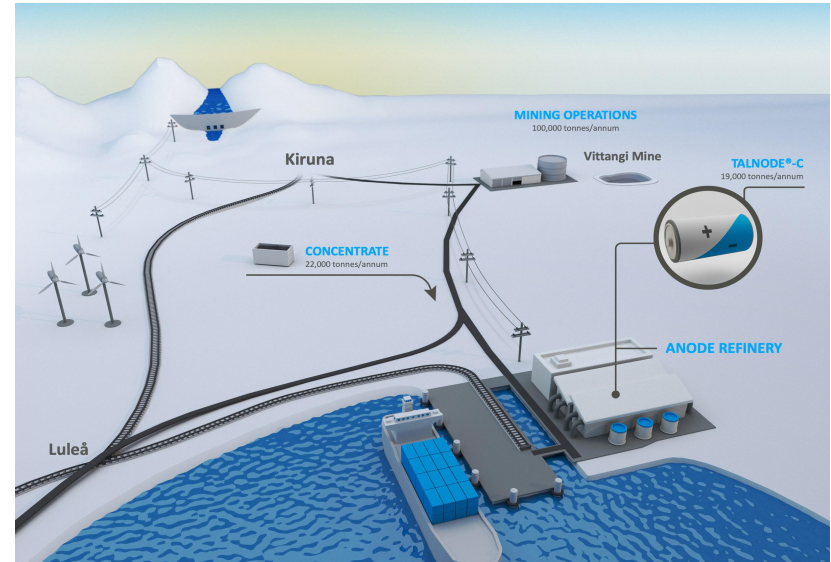


Talga Anode Project - Overview

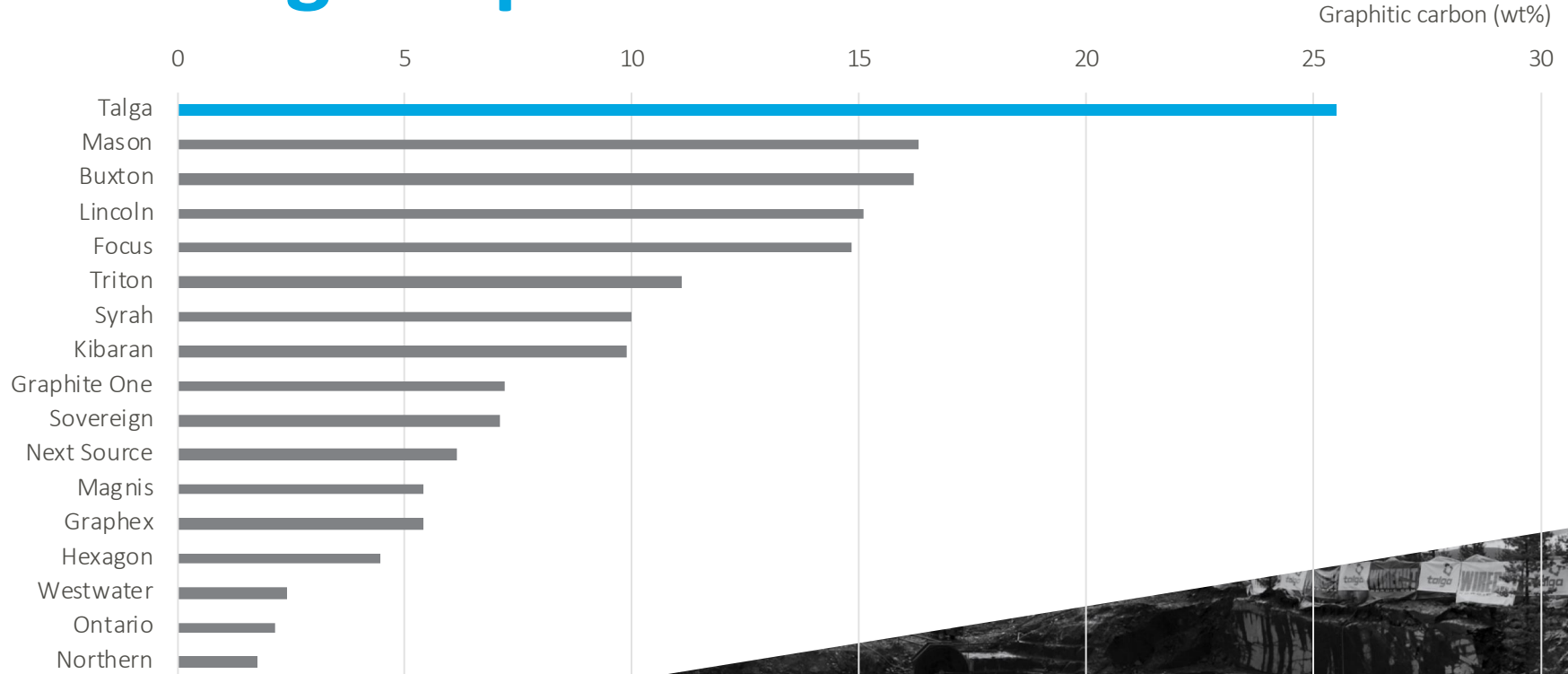
BUILDING A SWEDISH ANODE PLANT TO SUPPLY LITHIUM-ION BATTERY INDUSTRY

Talga is building a world class anode plant in northern Sweden to supply the growing global demand for Lithium-ion batteries

- Project integrates a high-grade natural graphite mine and concentrator to a wholly owned anode refinery close to major European battery factories
- Close proximity to road, rail and export facilities
- In-house technology and low cost/low CO₂ grid power makes Talga a globally competitive, sustainable producer
- Permit processes underway for mining, processing and refining



Leading Graphite Resource Grade



SOURCE: PUBLISHED JORC/NI43-101 GLOBAL MINERAL RESOURCE GRADE. SEE APPENDIX FOR FURTHER INFORMATION.

Vittangi Mine & Concentrator



23.5%
ORE GRADE

Ore Reserve grade
as used in PFS



100K
TPA

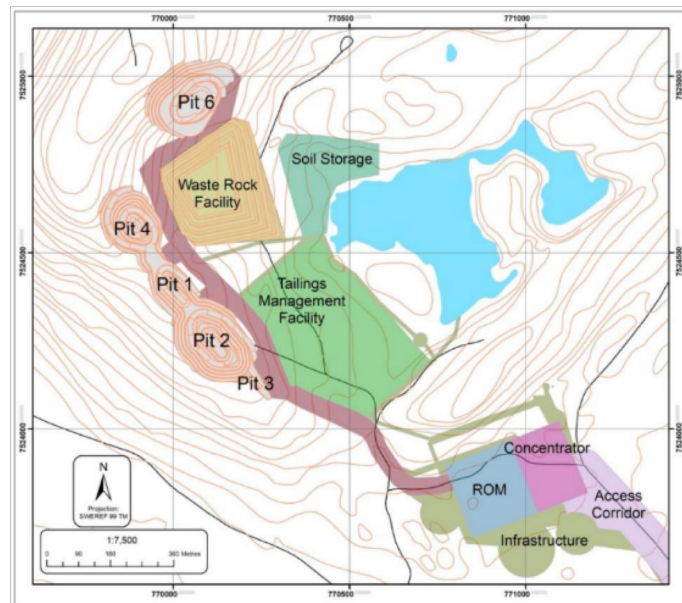
Ore throughput rate at
onsite concentrator



22
YEARS

Project mine life solely
from 2Mt Ore Reserve

**PFS based solely on 1.9Mt ore reserve – part of
Vittangi Project total 16.9Mt @ 25.6%Cg**



Open pit mine sequence to backfill and
rehabilitate as the operation progresses

Luleå Anode Refinery



LOW
CO₂ POWER

Sustainable grid power
from hydroelectricity



19K
TONNES

Average annual (year 3-22)
anode production



2020
CONSTRUCTION

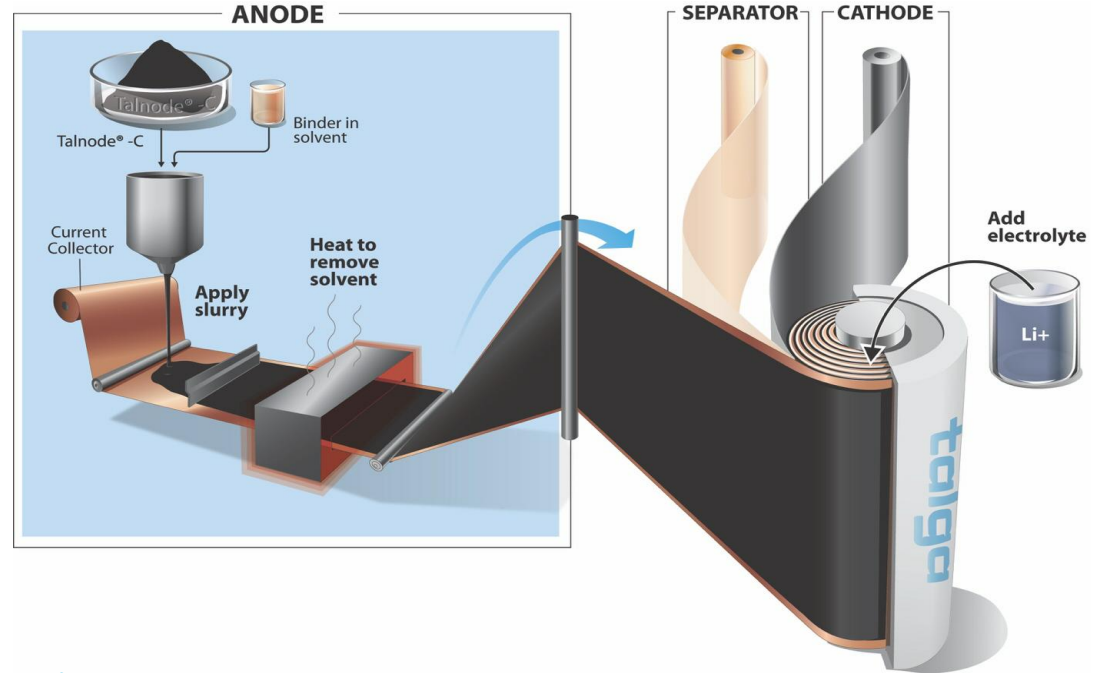
First module construction
then operation to 2043+

Refinery purifies, shapes and coats the Vittangi flake concentrate into 'coated spherical anode' product Talnode[®]-C for battery manufacturers



Anode Product: Talnode-C

FULLY COATED <10 μ m ACTIVE ANODE POWDER READY FOR CELL MANUFACTURER USE

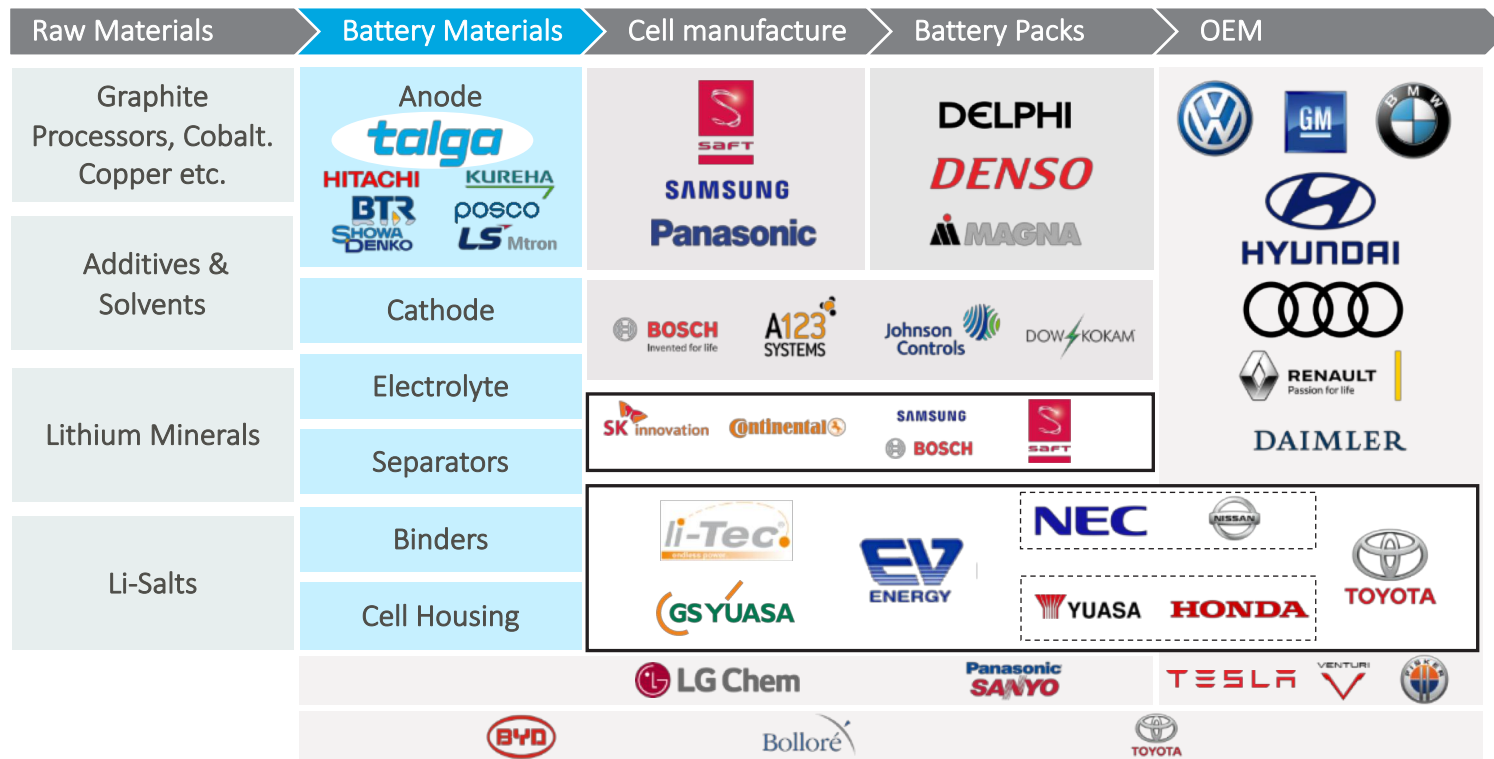


❄️ Freezing temperature performance

📈 High power and fast charge

🌐 Semi-synthetic properties

Position in Supply Chain



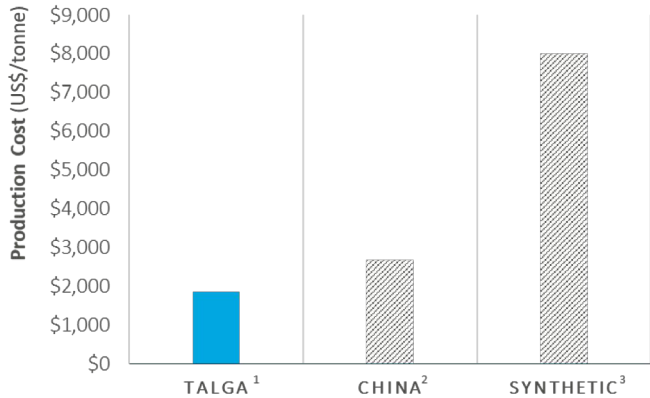
SOURCE: RECRUIT, AVICIENNE. / NOTE: SELECTED LI-ION SUPPLY CHAIN COMPANIES/NOT ALL MARKET PARTICIPANTS ILLUSTRATED. THE COMPANY CAUTIONS THAT IT IS NOT PRESENTLY PARTY TO SUPPLY AGREEMENTS WITH THE PARTIES NAMED ABOVE. HOWEVER, ON THE BASIS OF THE COMPANY'S CURRENT DISCUSSIONS WITH THESE OR SIMILAR PARTIES, THE COMPANY CONSIDERS THAT IT HAS A REASONABLE BASIS FOR THE VIEW THAT CAN FILL THIS POSITION IN THE SUPPLY CHAIN. THE COMPANY CAUTIONS INVESTORS AGAINST APPLYING UNDUE WEIGHT ON THE ABOVE.

High Margin Business Model

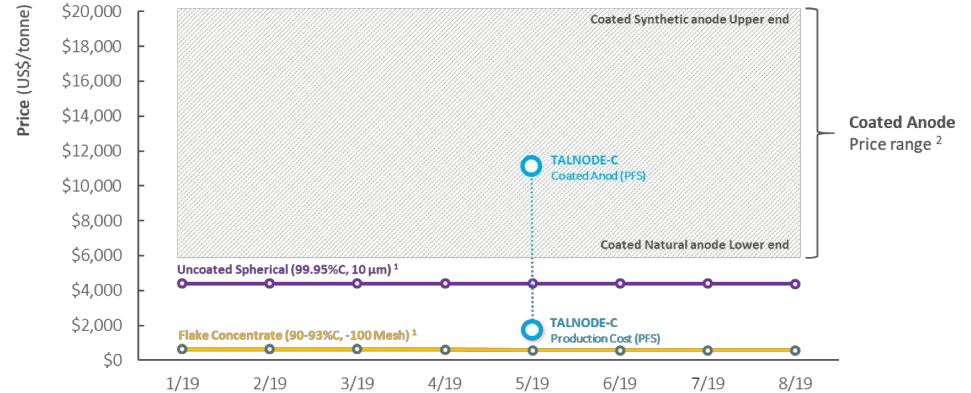
Vertically integrated business model allows Talga to upgrade its graphite ore to **high value advanced anode material** for direct use in lithium-ion batteries **capturing margins from the complete supply chain**

Low costs are driven by the very **high grade graphite ore**, access to **low cost, low CO₂ hydro power** and **unique natural anode sized flake** with much higher process yield compared to standard energy intensive milling processes

Globally Low Cost Producer of Coated Anode



Anode Price vs Graphite Price



SEE: ¹ ASX:TLG 23 MAY 2019. / SOURCES: FIGURE 1: ² BENCHMARK MINERAL INTELLIGENCE PRESENTATION: 'CHINA' REFERS TO COATED NATURAL GRAPHITE ANODE PRODUCED IN CHINA, BASED ON BULK SALES AND MID-POINT AVERAGE COSTS AS OF H1 2018. ³ RECRUIT REPORT: 'SYNTHETIC' REFERS TO COATED ANODE MADE FROM SYNTHETIC GRAPHITE SOURCE e.g. NEEDLE COKE. FIGURE 2: BENCHMARK MINERAL INTELLIGENCE - FOB CHINA, ² BROKER RESEARCH AND UNPUBLISHED INDUSTRY SOURCES 18-19

Booming EU Battery Demand

0Kt

SUPPLY TODAY

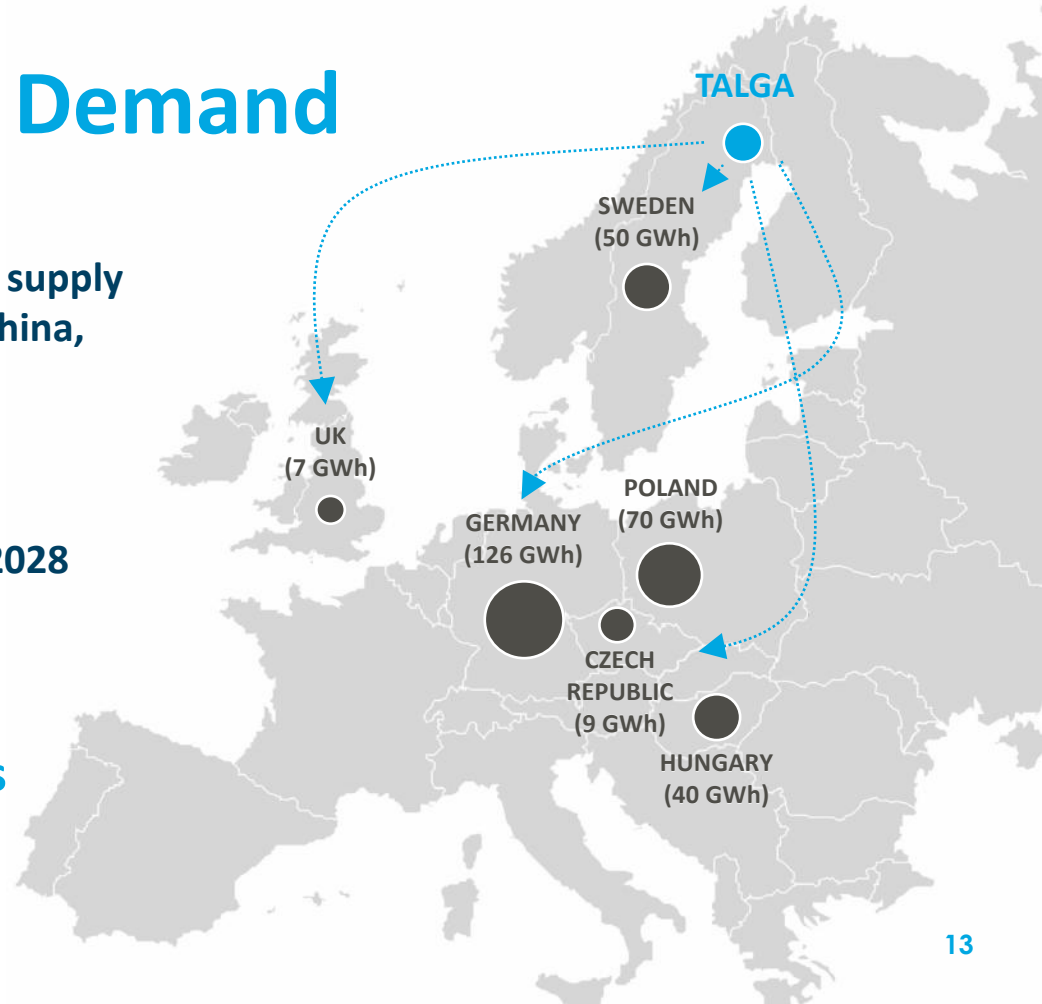
Current graphite anode supply
(100% imported from China,
Japan and Korea)

303Kt

DEMAND 2028

For graphite anode by 2028

Talga's Swedish anode production is
located in fastest growing market

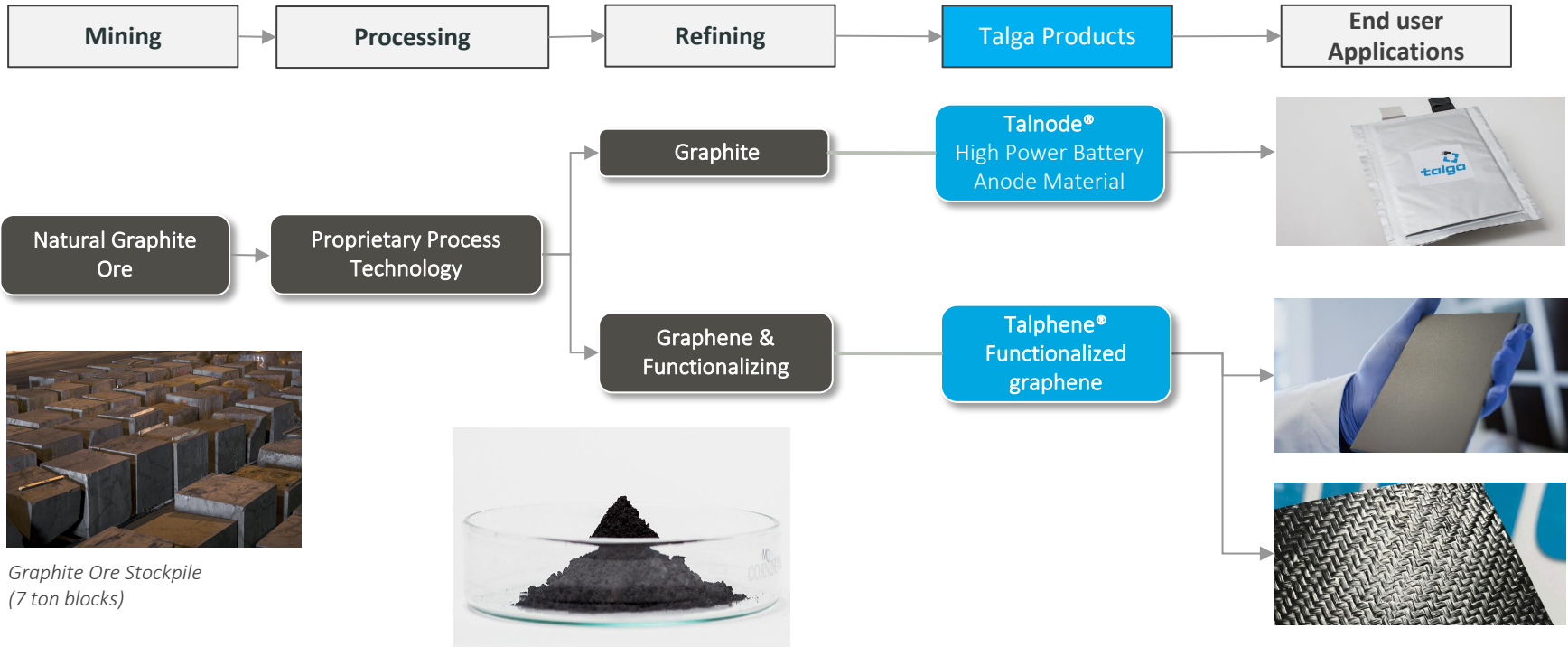


Executing on Anode Project Plan

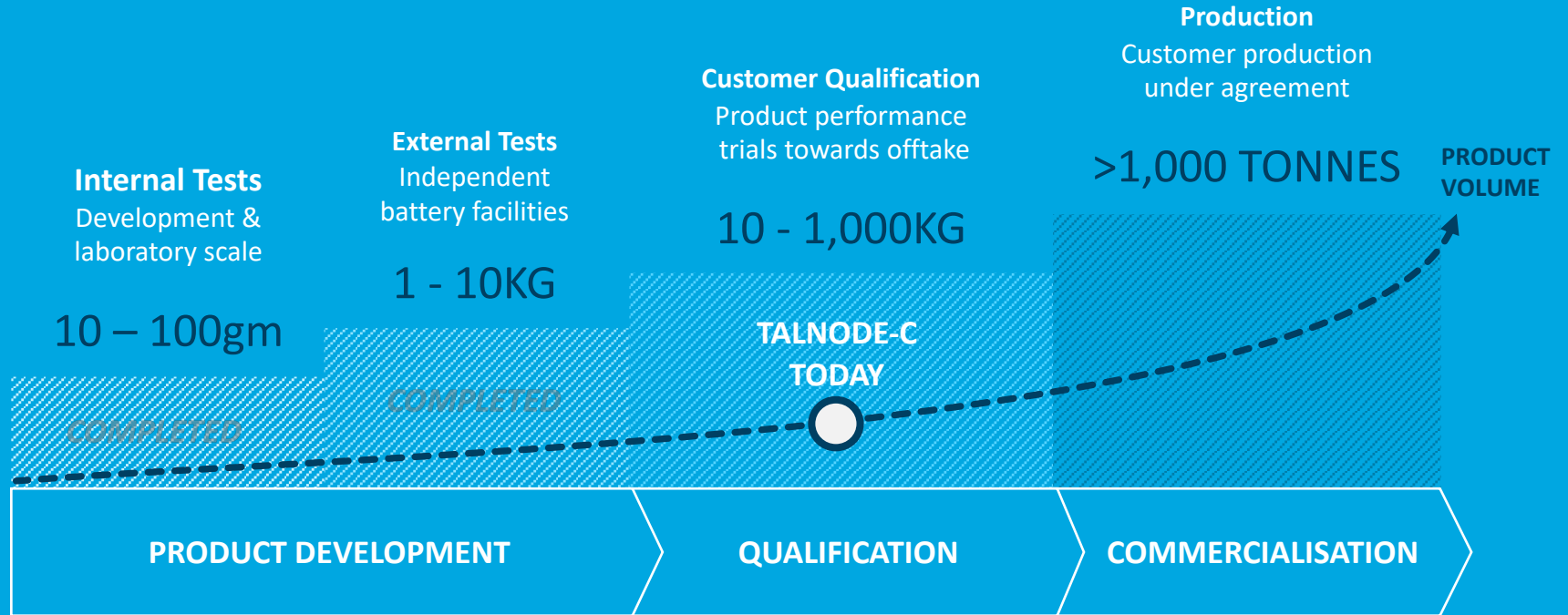
Sample Scale Up and Project Development Stages

Talga Production Overview

MINE-TO-PRODUCT BATTERY ANODE MATERIAL AND GRAPHENE ADDITIVE SUPPLY CHAIN



Talnode Path to Market



Anode materials require customer testing in batteries at increasing volumes to enter long term contracts

Rudolstadt-Schwarza Industrial Estate, Thuringia, Germany



Talga Pilot Plant



Talga Pilot Plant

Q1 2020 Pilot Plant Scale Up

INCREASED TALNODE-C SAMPLE PRODUCTION FOR CUSTOMER QUALIFICATION

Stockpile Ore
Talga, Sweden



2,000m³
graphite ore



Mill, Flotation & Purification
Talga, Germany



Coating & Shaping
Talga, Japan



Thermal Treatment
Talga, Japan



Product Order Size: 50-1,000kg Talnode-C

Staged Development Underway

HIGH VALUE, LOW VOLUME OPERATION LOWERS ENVIRONMENTAL FOOTPRINT



Stage 1 commencement planned for 2020, with output of 5,000 tonnes of Talnode-C over two years from trial mining of 25,000 tonnes of ore processed via toll-milling and first Luleå Refinery module

Stage 2 commissioning proposed for 2023, once the exploitation concession has been received, with full-scale integrated mine-to-anode production of approximately 19,000tpa of Talnode-C for 22 years

Stage 1 Mining and Refinery

Q2 2020 – Q4 2022 STAGE 1 MINING OPERATION AND ANODE REFINERY

2020 Trial Mining
Talga, Sweden

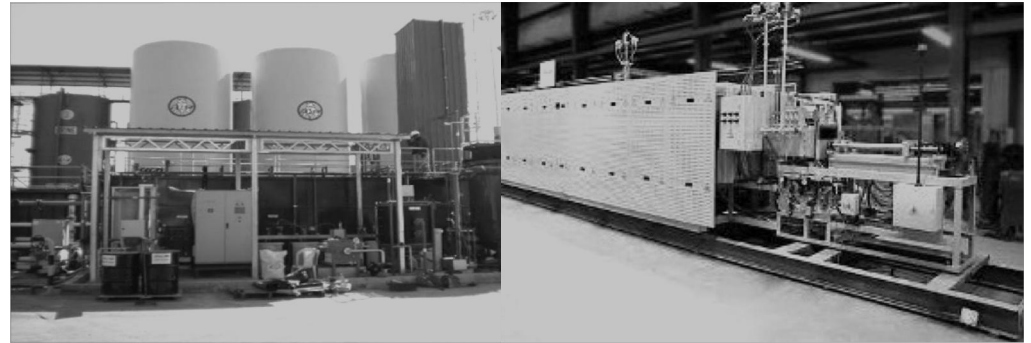


25,000 ton
graphite ore

Mill & Flotation
Tolling, Finland



Purification, Coating, Shaping & Thermal Treatment
Talga, Sweden



Stage 1 Anode Refinery:
2,500 ton/year coated, shaped active anode powder

Production: 2,500 ton/year Talnode-C

Stage 2 Mining and Refinery

Q1 2021 (22 YEAR MINE LIFE) STAGE 2 MINING OPERATION AND ANODE REFINERY

Full Scale Mining Operation
Talga, Sweden

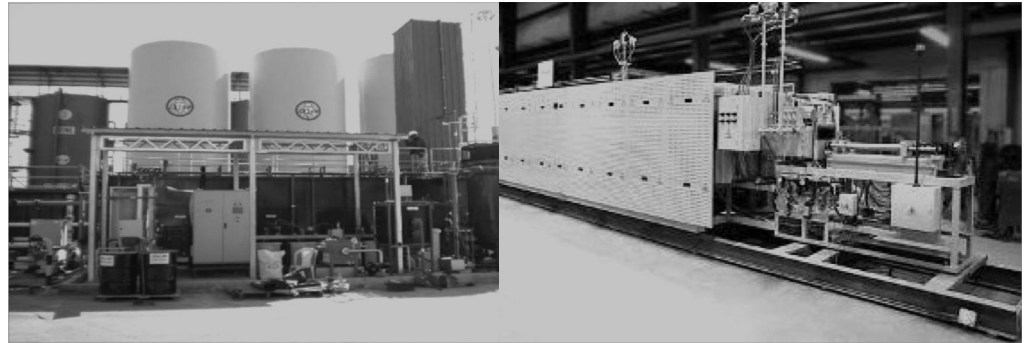


100,000 ton/year
graphite ore

22,000 ton/year
graphite concentrate



Purification, Coating, Shaping & Thermal Treatment
Talga, Sweden



Stage 2 Anode Refinery:
19,000 ton/year coated, shaped active anode powder

Production: 19,000 ton/year Talnode-C

Exceptional PFS Project Economics

PFS HAS ESTABLISHED HIGH ECONOMIC PERFORMANCE FROM STAGED DEVELOPMENT

\$1,056M
NET PRESENT VALUE

Estimated pre-tax project
net present value

55%
IRR

Estimated pre-tax project
internal rate of return

\$188M
ANNUAL REVENUE

Estimated LOM 22 year
annual steady state revenue

\$27M
STAGE 1 CAPEX

Capturing near term
market opportunities

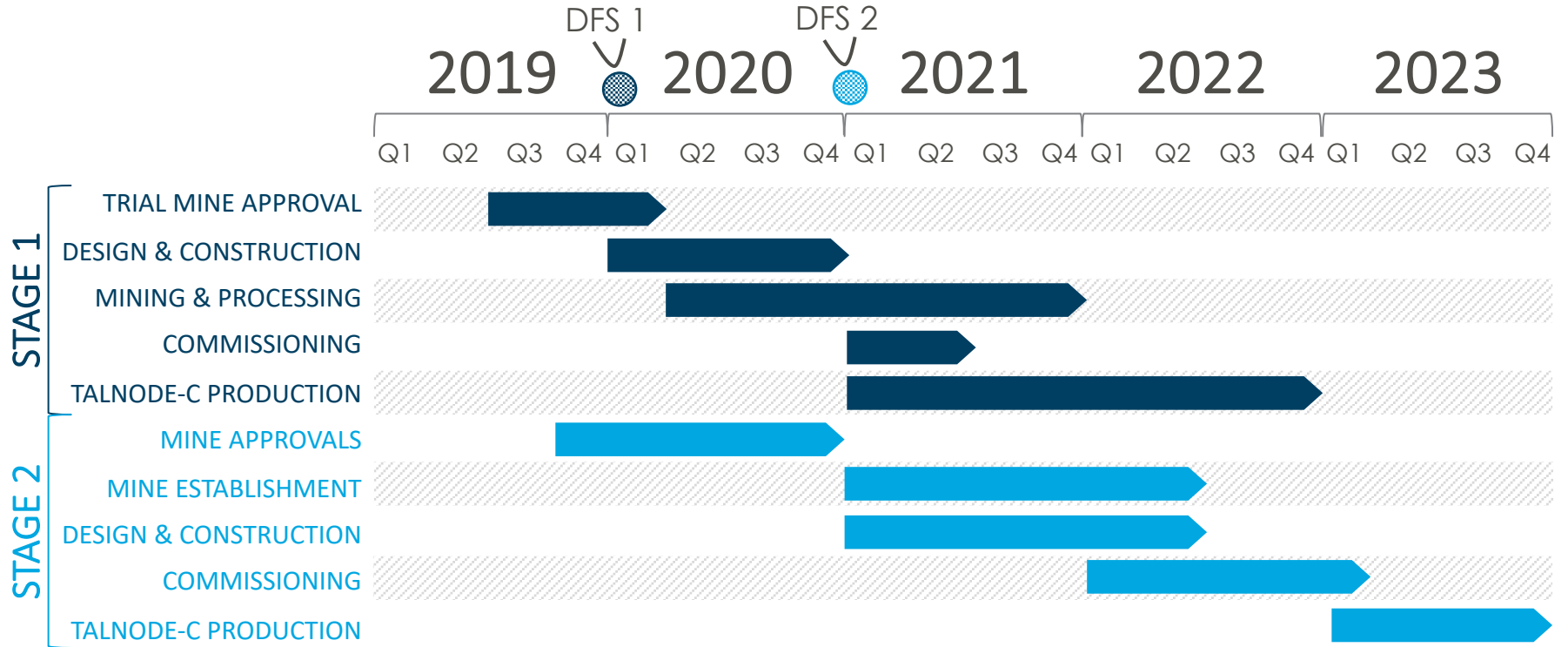
\$147M
STAGE 2 CAPEX

Capturing margins in
value-added project

1.5 YEAR
PAYBACK PERIOD

At Stage 2 steady state
production

Indicative Timeline



New Technology Pipeline



In-house technical and material capability to create battery innovations and respond to market technology changes



Talnode-X: Formulated graphite anode for 20C ultra-fast charge (0-100% in 3 minutes)



Talnode-Si: Graphene silicon-anode for higher energy density (up to 1,100mAh/g in half cells at present)



Talnode-E: Carbon replacement for metallic lithium anode in solid state batteries



Technical Partners

IN-HOUSE AND COLLABORATIVE PRODUCT DEVELOPMENT

Innovate UK



Department for
Business, Energy
& Industrial Strategy



JM Johnson Matthey
Inspiring science, enhancing life


BILLERUDKORSNÄS

 **WV**
THE UNIVERSITY OF WARWICK

SCHUNK 



BOSCH



The
University
Of
Sheffield.

BIOMER
TECHNOLOGY



UNIVERSITY OF
CAMBRIDGE

FARADION
Advanced Energy Storage Solutions

 **Leclanché**
Energy Storage Solutions

SEE: ASX:TLG 5 FEB 2018, 26 MAR 2018, 4 SEP 2018, 15 JAN 2019, 2 OCT 2019, 8 OCT 2019 & 24 OCT 2019



Activities & Newsflow

Customer qualification sample production **ramping up with strong customer demand**

Rudolstadt process facility upgrade underway for DFS metallurgical work and increasing anode market samples

Offtake and project financing discussion underway with range of parties underway

Application submitted to authorities for Stage 1 (25,000t trial mine and 5,000t Talnode-C production) target approval by Q1/CY2020

Definitive feasibility study underway targeting March 2020 for investment decision

Discussions underway with range of parties including sovereign wealth funds and banks, anode & battery makers (customers) and their trading houses/equity funding groups

Competent Person Statements

The information in this report that relates to Graphite Resource Estimation for the Vittangi Project is based on information compiled by Oliver Mapeto and reviewed by Albert Thamm. Both Mr Mapeto and Mr Thamm are consultants to the Company. Mr Mapeto is a Member of both the Australian Institute of Mining and Metallurgy (Membership No.306582) and Australian Institute of Geoscientists (Member No 5057) and Mr Thamm (Member No 203217) is a Fellow Member of the AusIMM. Both Mr Mapeto and Mr Thamm have sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this document and to the activity which both 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”). Mr Mapeto and Mr Thamm consent to the inclusion in this report of the Matters based on this information in the form and context in which it appears.

The information in this report that relates to the Mineral Resource Estimate and metallurgical results for the Vittangi Graphite Project was first released to ASX on 27 April 2017 and 10 April 2019 respectively. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of the Mineral Resource Estimate, that all material assumptions and technical parameters underpinning the Mineral Resource Estimate continue to apply and have not materially changed.

The information in this report that relates to Reserve Estimation is based on and fairly represents information that has been compiled by John Walker. Mr Walker is a Principal Mining Engineer with Golder Associates Ltd. who act as consultants to the Company. Mr Walker is a Professional Member of the Institute of Materials, Minerals and Mining (Membership No.451845) a Fellow of the Institute of Quarrying (Membership No.22637) and a Fellow Member of the Geological Society (Membership No.1021044). He has been involved in the mining industry for 30 years acting in various roles including production, project development and consulting. Mr Walker has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity 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”). Mr Walker consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this report that relates to Reserve Estimation was first released to ASX on 23 May 2019. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of the Reserve Estimation, that all material assumptions and technical parameters underpinning the Reserve Estimation continue to apply and have not materially changed.

The information in this report that relates to Graphite Resource Estimation for the Jalkunen and Raitajärvi Projects is based on information compiled and reviewed by Mr Simon Coxhell. Mr Coxhell is a consultant to the Company and a member of the Australian Institute of Mining and Metallurgy. Mr Coxhell has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this document and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves” (“JORC Code”). Mr Coxhell consents to the inclusion in this report of the Matters based on this information in the form and context in which it appears.

The information in this report that relates to the Mineral Resource Estimate for the Jalkunen and Raitajärvi Projects were first released to ASX on 27 August 2015 and 26 August 2013 respectively. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of the Mineral Resource Estimate, that all material assumptions and technical parameters underpinning the Mineral Resource Estimate continue to apply and have not materially changed.

The information in this report that relates to production targets or forecast financial information derived from a production target was first disclosed in the Company's announcement of 23 May 2019 titled 'Outstanding PFS results support Vittangi graphite development'. The Company confirms that all the material assumptions underpinning the production targets and forecast financial information derived from the production targets continue to apply and have not materially changed.

Appendix

PFS Key Outcomes

CONFIRMS TECHNICALLY AND FINANCIALLY ROBUST PROJECT

PARAMETER	UNITS	OUTCOME
Annual ore mining rate	tonnes	100,000
Average annual production of Talnode-C	tonnes	19,000
Life of Mine (LOM)	years	22
Pre-tax NPV ₈ (real)	\$M	\$1,056
Pre-tax IRR	%	55%
Capex Stage 1	\$M	\$27
Capex Stage 2	\$M	\$147
Payback	years	1.5
Talnode-C average price	\$/t product	\$11,250
Revenue (LOM)	\$M	\$4,148
Cash cost of production of Talnode-C	\$/t product	\$1,852
EBITDA (LOM)	\$M	\$3,254
Net profit before tax (LOM)	\$M	\$3,133

NOTE: PFS STUDY DETAILS FOR THE VITTANGI GRAPHITE PROJECT, ESTIMATED KEY ECONOMIC OUTCOMES ALL IN USD.
SEE: ASX:TLG 23 MAY 2019

JORC Graphite Reserve & Resources

Ore Reserve ^{3, 6}	Tonnes	Graphite (% Cg)
Nunasvaara (JORC 2012)	1,935,000	23.53
Proven	0	0
Probable	1,935,000	23.53

Mineral Resources ^{1, 2, 4, 5, 7, 8, 9}	Tonnes	Graphite (% Cg)
Vittangi Nunasvaara (JORC 2012)	12,300,000	25.57
Indicated	10,700,000	25.7
Inferred	1,600,000	23.9
Vittangi Niska (JORC 2012)	4,600,000	25.8
Indicated	4,600,000	25.8
Jalkunen (JORC 2012)	31,500,000	14.9
Inferred	31,500,000	14.9
Raitajärvi (JORC 2004)	4,300,000	7.1
Indicated	3,400,000	7.3
Inferred	900,000	6.4
Total Mineral Resources	52,700,000	

NOTE: ¹ MINERAL RESOURCES ARE INCLUSIVE OF ORE RESERVES.

² MINERAL RESOURCES ARE REPORTED AT VARIOUS CUT OFF GRADES: NUNASVAARA 17% Cg, NISKA 10% Cg, JALKUNEN 5% Cg AND RAITAJÄRVI 5% Cg.

³ ORE RESERVE IS REPORTED AT A CUT OFF GRADE OF 12% Cg.

⁴ ERRORS MAY EXIST DUE TO ROUNDING.

SEE: ASX:TLG ⁵ 27 APR 2017, ⁶ 23 MAY 2019, ⁷ 15 OCT 2019, ⁸ 27 AUG 2015 AND ⁹ 26 AUG 2013

Peer Comparison Information

MINERAL RESOURCES ESTIMATE GRADE JORC/NI43-101

Company	Project	Stage	MRE Grade	Cut-off Grade	Information Source
Talga	Nunasvaara	Development	25.5	17	ASX Announcement, 27 April 2017 https://www.asx.com.au/asxpdf/20170427/pdf/43hrrm62qg5hp8.pdf
Mason	Lac Guéret	Development	16.3	6	Company Website, 19th September 2019 www.masongraphite.com/projects/lac-gueret-graphite-project/default.aspx
Buxton	Yalbra	Development	16.2	4	Company Interim Financial Report, 16 March 2016 www.asx.com.au/asxpdf/20160316/pdf/435w84kwc5j5gl.pdf
Lincoln	Kookaburra Gully	Development	15.1	5	ASX Announcement, 19 December 2013 www.asx.com.au/asxpdf/20131219/pdf/42lqg554lxp15w.pdf
Focus	Lac Knife	Development	14.8	3	Press Release, 28 January 2014 www.marketwired.com/press-release/focus-graphite-reports-92-increase-measured-indicated-mineral-resource-categories-its-tsx-venture-fms-1873218.htm
Syrah	Balama Mozambique	Operating	10.0	3	ASX Announcement, 29 March 2019 www.asx.com.au/asxpdf/20190329/pdf/443w7j8hbl9gtd.pdf
Triton	Balama North Nicanda Hill	Development	11.1	3	Company Website, 19th September 2019 www.tritonminerals.com/projects/balama-north/#nicanda
Kibaran	Epanko	Development	9.9	8	ASX Announcement, 31 March 2017 www.asx.com.au/asxpdf/20170331/pdf/43h5qh0m1jmf4h.pdf

Peer Comparison Information

MINERAL RESOURCES ESTIMATE GRADE JORC/NI43-101

Company	Project	Stage	MRE Grade	Cut-off Grade	Information Source
Sovereign	Mallingunde	Development	7.1	4	Company Website, 19th September 2019 www.sovereignmetals.com.au/projects
Graphex	Chilalo	Development	5.4	2/5	ASX Announcement, 28 August 2019 www.asx.com.au/asxpdf/20190828/pdf/447xrt01m63qyp.pdf
Next Source	Molo	Development	6.13	2	Company Website, 19 September 2019 www.nextsourcematerials.com/graphite/molo-graphite-project
Graphite One	Graphite Creek	Development	7.2	6	Company Website, 19 September 2019 www.graphiteoneresources.com/projects/graphite-creek/resource-estimates/
Magnis	Nachu	Development	5.4	3	ASX Announcement, 1 February 2016 www.asx.com.au/asxpdf/20160201/pdf/434rl82h51bvd7.pdf
Hexagon	McIntosh	Development	4.45	3	ASX Announcement, 5 April 2019 www.asx.com.au/asxpdf/20190405/pdf/4442qj43jg_xh5x.pdf
Westwater	Coosa	Development	2.39	1	Company Website, 19 September 2019 www.westwaterresources.net/projects/graphite/coosa-graphite-project
Ontario	Kearney	Development	2.14	1.10	Company Website, 19 September 2019 www.ontariographite.com/s/kearney_mine.asp
Northern	Bissett Creek	Development	1.74	1.02	Company Website, 19 September 2019 www.northerngraphite.com/project/bissett-creek-project/overview/