



# Talga Group Ltd

Quarterly Investor Webinar

16 February 2023



# Cautionary Statement and Disclaimer

Talga Group Ltd ACN 138 405 419 (the Company) is the issuer of this presentation.

## **Niska Scoping Study**

The Niska Scoping Study is a preliminary technical and economic study of the potential viability of developing the Nunasvaara North, Niska South and Niska North graphite deposits by constructing an integrated mining and refining operation to produce Talga's anode products for Li-ion batteries. It is based on low level technical and economic assessments that are not sufficient to support the estimation of ore reserves or to provide assurance of an economic development case. Further evaluation work and appropriate studies are required before the Company will be in a position to estimate any ore reserves or to provide any assurance of an economic development case or certainty that the conclusions of the Niska Scoping Study will be realised. The Niska Scoping Study is based on the material assumptions outlined in the announcement of 7 December 2020. These include assumptions about the availability of funding. While Talga considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Niska Scoping Study will be achieved. To achieve the range of outcomes indicated in the Niska Scoping Study, funding in the order of US\$1,000 million plus contingencies may be required. Investors should note that there is no certainty that the Company will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares. It is also possible that the Company could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce the Company's proportionate ownership of the deposits covered by the Niska Scoping Study. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Niska Scoping Study.

## **Forward-looking statements**

This presentation contains forward-looking statements. Those forward-looking statements reflect views held only as at the date of this presentation. Any such statement is subject to inherent risks and uncertainties. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement, and such deviations are both normal and to be expected. Recipients must make their own assessment about the likelihood of a matter, about which a forward-looking statement is made, occurring. The Company makes no representation about the likelihood of a matter, about which a forward-looking statement is made, occurring. The Company and its directors, employees, agents, advisers and consultants: give no representation or warranty to a recipient of this presentation as to the accuracy or completeness of the statements contained in this presentation or in relation to any other matter; and to the fullest extent permitted by law, disclaim responsibility for and have no liability to a recipient of this presentation for any error or omission in or for any statement in this presentation, including any liability arising from negligence.

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## **Not a recommendation or financial advice**

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

# Corporate Overview

## ASX:TLG (12 months)



## STOCKMARKET CODES/TICKERS

Primary listing in Australia on the ASX (**TLG**)  
with OTC trading in Germany (**TGX**) and US (**TLGRF**)

## CAPITAL STRUCTURE

Market Capitalisation:	\$565M
Listed Shares:	334.3M
Unlisted Options:	12.1M <sup>(1)</sup>
Cash as at 31 December 2022:	\$23.3M

## MAJOR SHAREHOLDERS

Kinetic Investment Partners	4.8%
Mark Thompson – M. Director	4.3%
Pentwater Capital Management	3.6%
UBS AG (Private Banking)	3.0%
Yandal Investment Pty Ltd	1.6%

**Total number of shareholders 11,814**

# Talga Group

Battery and advanced material supplier with 100% owned graphite resources in Sweden

Strong in-house expertise spans battery materials and processing technology, product development and marketing as well as mineral exploration and mining

Talga is differentiated by:

- › **Full mine-to-anode vertical integration**
- › **Ownership of coating and battery materials production and process technology**
- › **Unique high-grade graphite sources**
- › **Green products and proximity to market**



# Talga Operations

Perth, Australia

***Group head office***

Luleå & Kiruna, Sweden

***Anode production & graphite deposits***

Cambridge, UK

***Product and R&D technology centre***

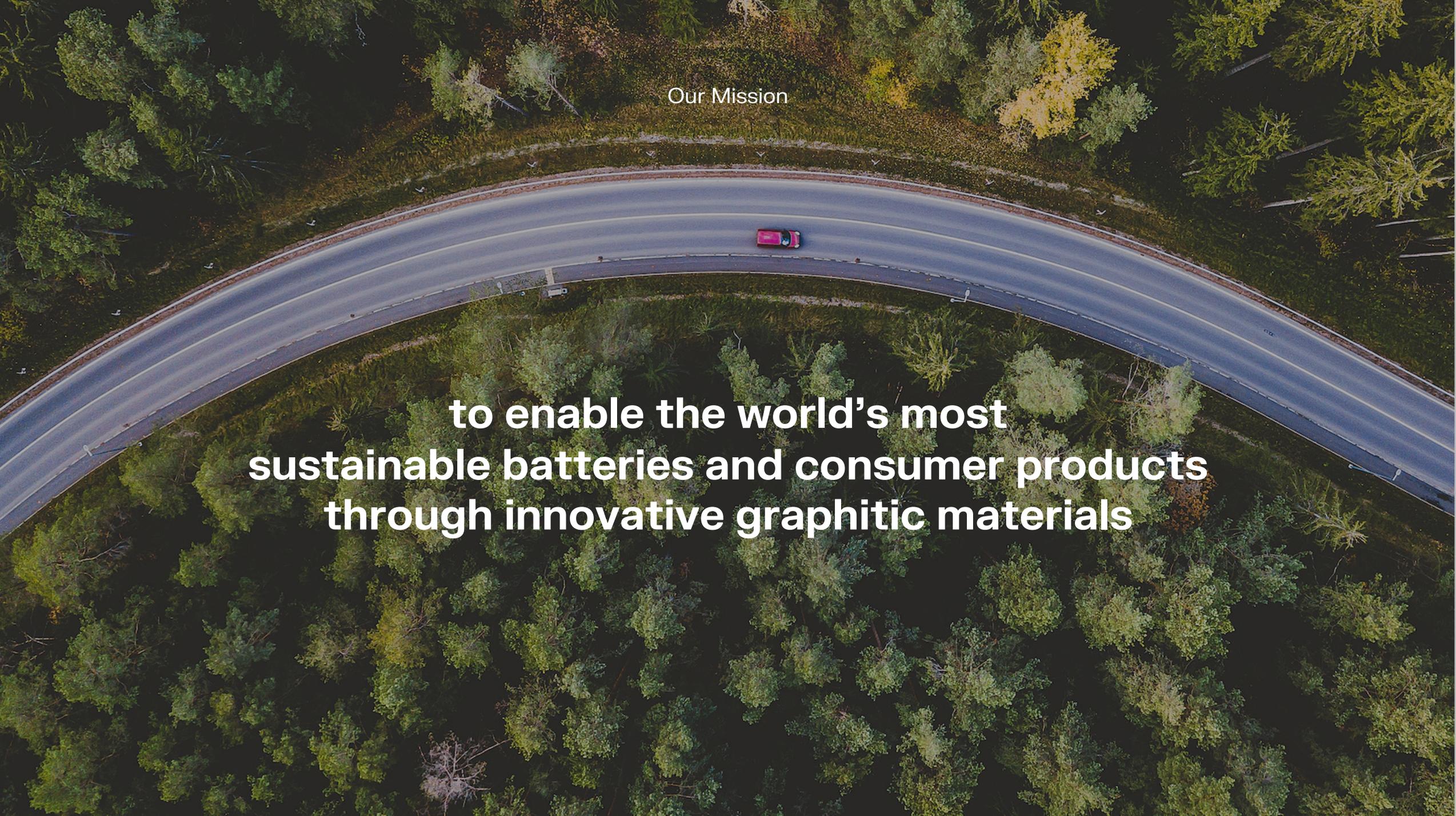
Rudolstadt, Germany

***Production process pilot facility & EU customer network***

Osaka, Japan & Hong Kong

***Commercial offices & product development***



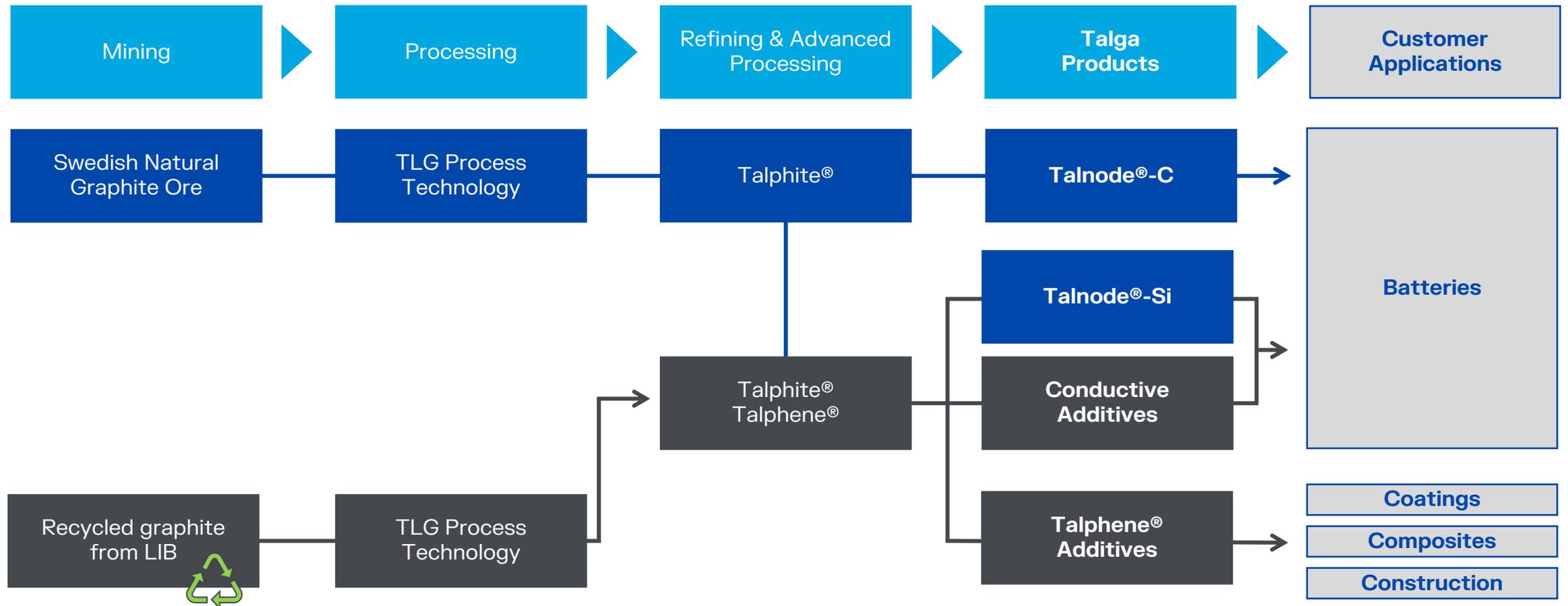
An aerial photograph of a winding asphalt road that curves through a dense forest. A small pink car is driving on the road. The text "Our Mission" is centered at the top of the image.

Our Mission

**to enable the world's most  
sustainable batteries and consumer products  
through innovative graphitic materials**

# Talga Technology and Products Map

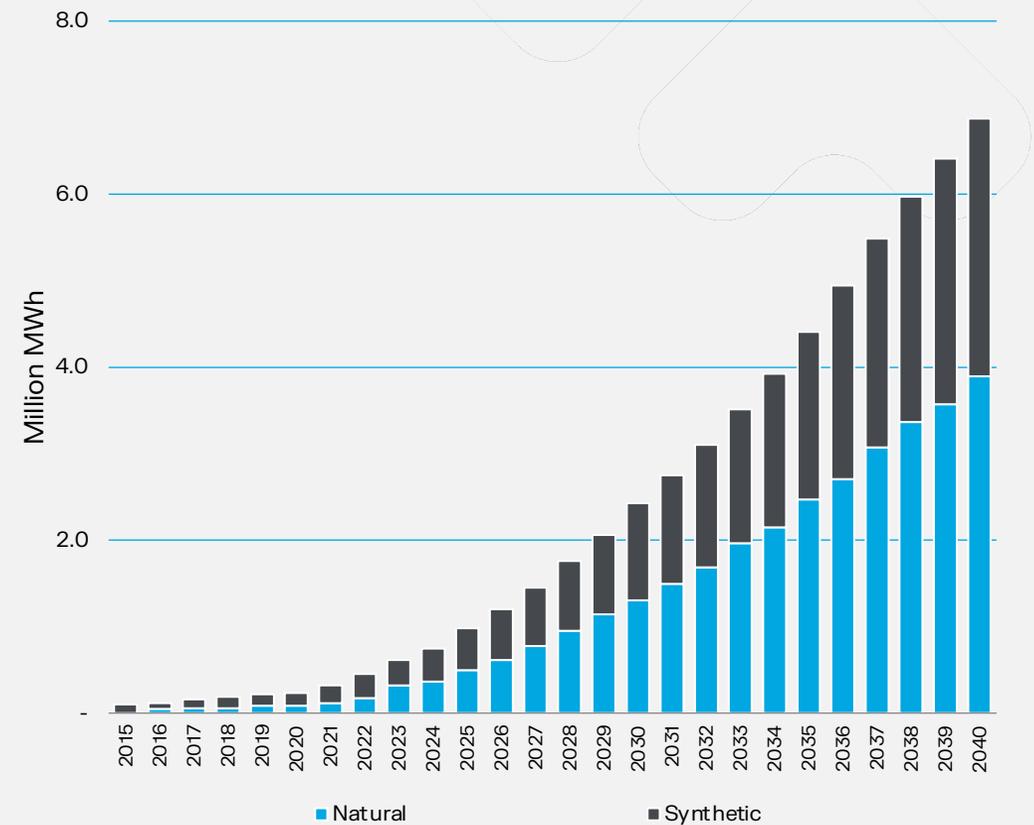
Diverse range of battery and advanced materials produced from graphite sources



# Anode industry poised for growth

- ✓ Q4 2022 EV sales rose, full year sales expected to reach over 10 million units
- ✓ Auto demand for anode material also continued to rise throughout Q4 2022
- ✓ Natural graphite anode prices remained largely stable during Q4 2022, despite pricing pressure from customers and rising feedstock costs
- ✓ Forecast deficit in the graphite -100 mesh market (preferred size for EV anode)
- ✓ Europe set for a significant shortfall of domestic anode supply this decade

Forecast Battery Anode Demand



See: ASX:TLG 30 January 2023.

Source: Q4 2022 Rho Motion Battery Outlook, Benchmark article "[What to expect for graphite in 2023?](#)", Benchmark article "[Europe faces cathode and anode shortage in drive to EVs](#)".

Source: Benchmark Mineral Intelligence.

# European location near to vast battery demand

Planned battery capacity >1.1TWh by 2030 requires >1.3Mt graphite anode per annum

VOLKSWAGEN

northvolt®

Panasonic

V O L V O

 **talga**

MORROU

 **FREYR**  
Renewable energy storage

STELLANTIS

ITALVOLT®

CATL

īnoBat

 **VERIKOR**

 **SAMSUNG**

**ACC**  
AUTOMOTIVE CELLS Co

 **Envision**  
AESC

microvast 

 **VARTA®**

 **SK innovation**

BRITISHVOLT

 **FARASIS**

TESLA

**MES**  
MAGNA ENERGY STORAGE

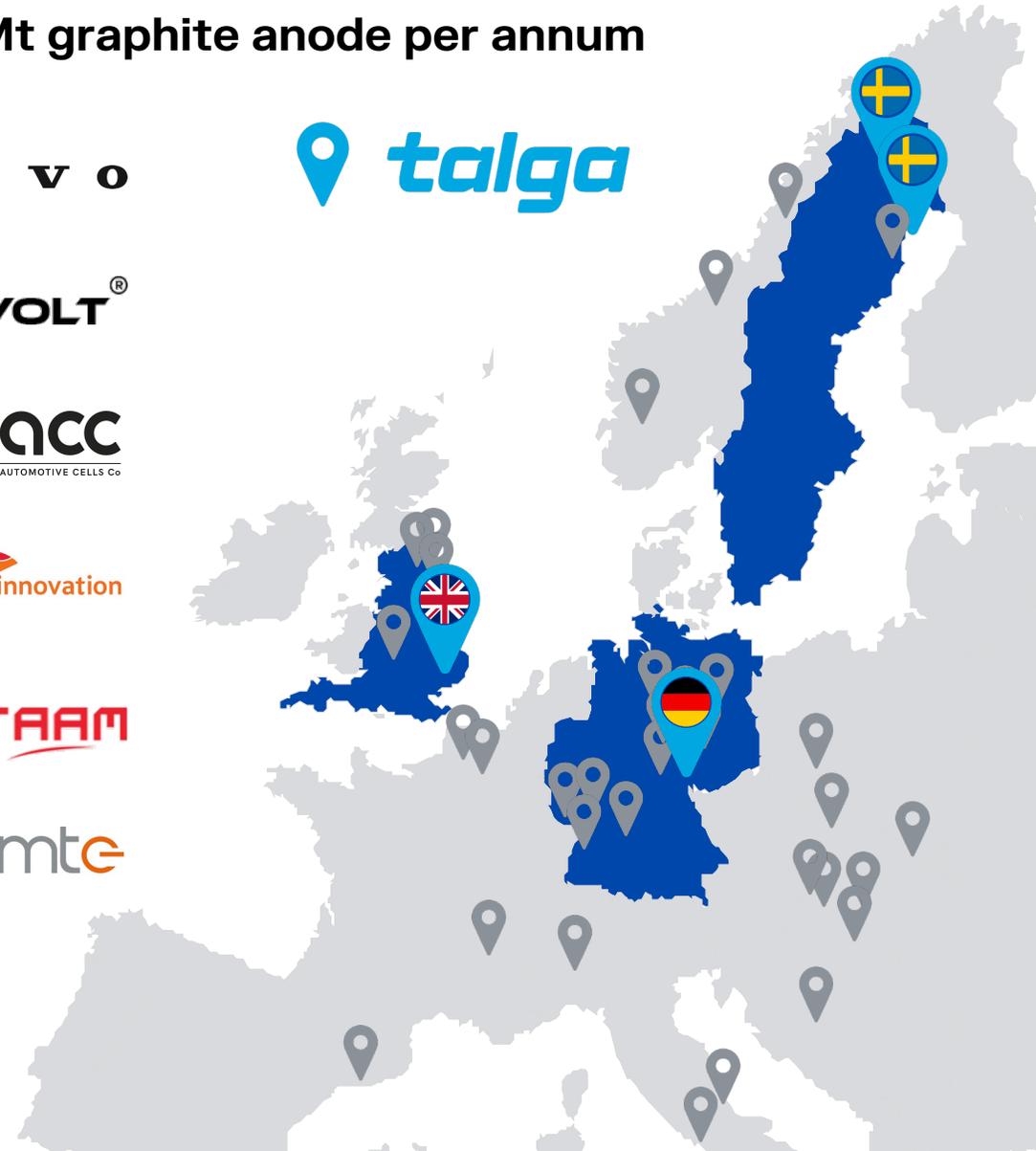
**FAAM**

 **Leclanché**  
Energy Storage Solutions

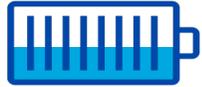
 **LG Chem**

**SVOLT**  
蜂巢能源

amte



# Talnode<sup>®</sup>-C performance characteristics



## Energy Density

High energy density for increased range or lighter weight



## Faster Charging

Fast charge rate and higher regen-braking energy recovery



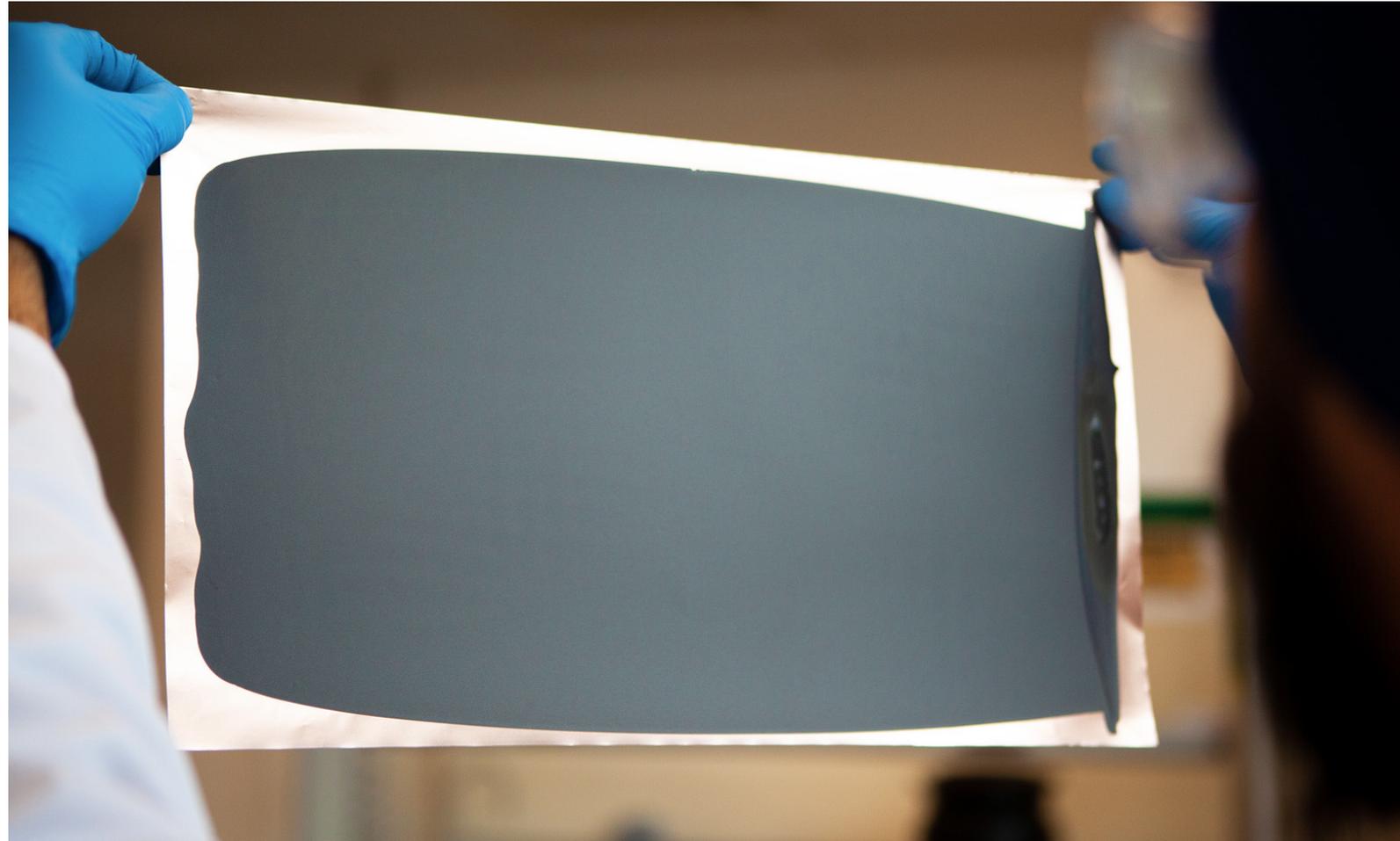
## Lower Cell Resistance

High conductivity decreases thermal build up, improves safety



## Cold Performance

Outstanding capacity retention in cold temperatures

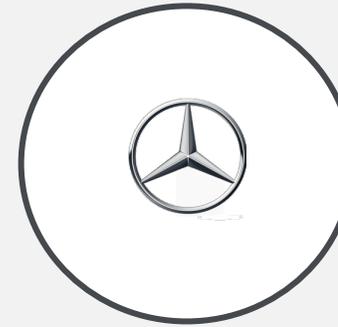


# Progressing anode offtakes

**Talga is actively negotiating agreements with battery and auto OEM customers for anode supply from the Vittangi Anode Project**

**ACC** (co-owned by Mercedes-Benz, Stellantis, and Saft) non-binding offtake term sheet for:

- ▶ Supply of 60,000 tonnes of Talnode®-C over initial 5-year term starting 2026
- ▶ Expected to include supply of ramp up volumes over 2023 – 2025
- ▶ **Verkor** (supplier to Renault)
  - ▶ LOI sets out non-binding terms to supply Talnode®-C over a 4- to 8-year period
  - ▶ Targeting execution of binding term sheet Q1 2023



# First coated anode plant in Europe

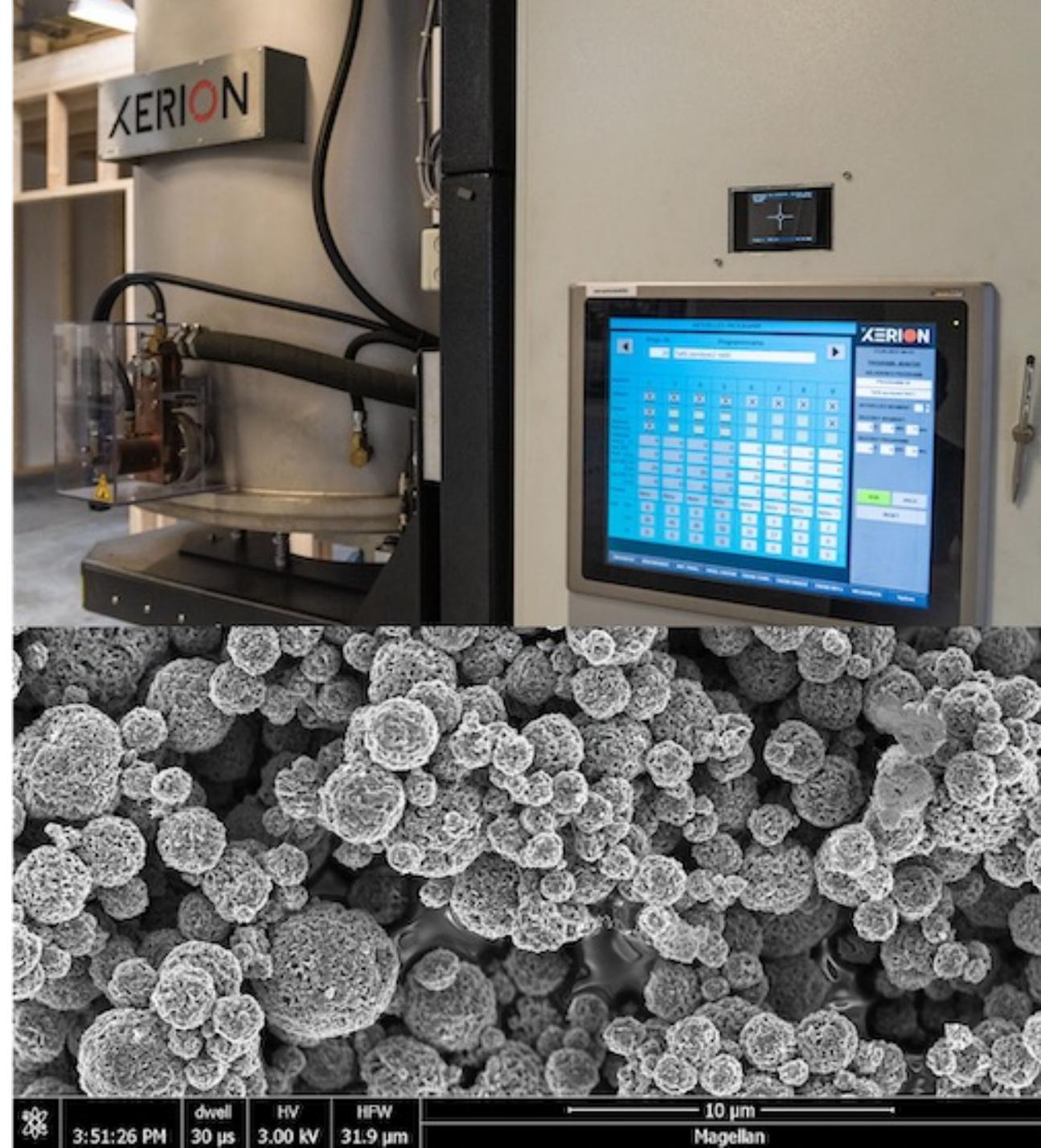
## Electric Vehicle Anode (EVA) Plant, Sweden

- ✓ Producing large-scale coated anode for auto OEM battery customer qualifications (A-C sample)
- ✓ Proprietary ore-to-coated shaped purified graphite (CSPG) technology
- ✓ In-house Battery and Powder Laboratory
- ✓ ISO 14001:2015 certified for Environmental & Social Management System
- ✓ Operational and quality control capability readied for commercial plant in 2024



# Talnode®-Si Silicon Anode

- ▶ Talnode®-Si is a Gr-Si composite undergoing qualification and testing with numerous customers
- ▶ Composite contains ~50% Si and can be 'dropped in' to existing commercial anodes
- ▶ German Talnode®-Si pilot plant expanding production (commissioning in Q1 2023)
- ▶ Feasibility studies underway to fast-track commercial options as result of positive negotiations with global customers
- ▶ Commercial production site location selection underway



# Silicon anode market growth

- ▶ Silicon in batteries can boost energy density, but has practical problems limiting large-volume use
- ▶ Graphene-silicon (Gr-Si) composite anode boosts performance while retaining usability
- ▶ Gr-Si anode expected to comprise 5% market share by 2025 (4680 and NCM811 batteries)
- ▶ USA IRA Reduction Act includes USD\$100m subsidies for silicon anode production
- ▶ EU has scope for supporting Gr-Si through Important Projects of Common Economic Interest (IPCEI) and Green Deal grants





# Recycling to produce new Talga products

**Recycling or repurposing graphite anode has sustainability benefits while also diversifying commercial prospects**

- EU has made ambitious legislative proposals on recycling battery metals
- As an organic material, graphite refined into battery anode is difficult to reuse
- RELOAD study: graphene produced from spent lithium-ion battery anodes used as performance-boosting battery materials



# Permits update

**Nunasvaara South environmental permit hearing commenced 31 January 2023 and expected to conclude 23 February 2023**

- ✓ Decision date regarding the granting of the environmental permit is expected to be published at the end of the hearing
- ✓ Announcement of environmental permit decision is followed by appeals period
- ✓ Exploitation concession decision by the state mining inspectorate (“Bergsstaten”) will be made after environmental permit decision

Environmental permit for Luleå anode refinery production site submitted in June 2022 and advancing alongside refinery building permit

Niska mining exploitation applications (additional 85,000tpa) submitted mid-2021

# European Funding

- ▶ European Investment Bank appraising up to EUR300m for Vittangi Anode Project, pending final due diligence, credit approvals and agreements
- ▶ Discussions progressing with multilateral financial institutions, development banks and export credit agencies with due diligence processes commenced
- ▶ Financing strategy targets a mix of equity and project debt
- ▶ Discussions with select parties that have indicated an interest in equity investments and long-term partnerships



# Environment and Community

## **Talga is committed to operating sustainably**

- Team of environmental scientists ensures best practice, monitoring and rehabilitation
- Full time Community Liaison Coordinator engages locally in Vittangi and Luleå
- Ongoing dialogue with stakeholders including local communities, authorities and Reindeer Herding Cooperatives
- Permitting team progressing Nunasvaara South mine hearing and permits across entire business



# EU Policy Momentum

## Green Deal and response to USA Inflation Reduction Act driving new actions to establish local battery supply chains

- ✓ Critical Raw Materials Act proposal to be published 8 March 2023
- ✓ Importance of graphite highlighted in recent statements by Commissioner Breton
- ✓ Net-Zero Industry Act to include sovereign wealth fund for green projects
- ✓ Talga actively interacts with EU and Swedish legislators to raise visibility and benefits of projects



Martin Phillips, Talga Europe CEO; and Ebba Busch, Minister for Energy, Business and Industry and Deputy Prime Minister of Sweden

# Partnerships for a greener future

Customers and development partners under public partnerships and more under non-disclosures



MITSUI & CO.



AUTOMOTIVE CELLS Co



VERKOR



FARASIS



FREYR



BENTLEY



JAGUAR



LAND ROVER



LTI



ADVANCED RECHARGEABLE & LITHIUM BATTERIES ASSOCIATION



ABB



BILLERUDKORSNÄS



BOSCH



Leclanché  
Energy Storage Solutions



BATTERIES  
EUROPE  
European Technology and Innovation Platform



Fossil Free  
Sweden



InnoEnergy



EUROPEAN  
BATTERY  
ALLIANCE  
EBA250



GRAPHENE  
FLAGSHIP



SWERIM

SveMin



UNIVERSITY OF  
CAMBRIDGE



euromines



# Targeted catalysts and milestones

- ✓ Decision on mine environmental permit
- ✓ CY2023 project financing and commencement of construction
- ✓ Commercial agreements: >20 battery and auto customers receiving Talnode®-C for large-scale EV battery qualification and procurement processes
- ✓ Commercial agreements and scale-up of Talnode®-Si, incl. production site selection
- ✓ Further development and commercialisation of next-generation anode technology
- ✓ Development of strategy for expansion beyond 100,000tpa anode production

# *talga*

[www.talgagroup.com](http://www.talgagroup.com)



ASX:TLG

# Path to >100,000tpa anode production

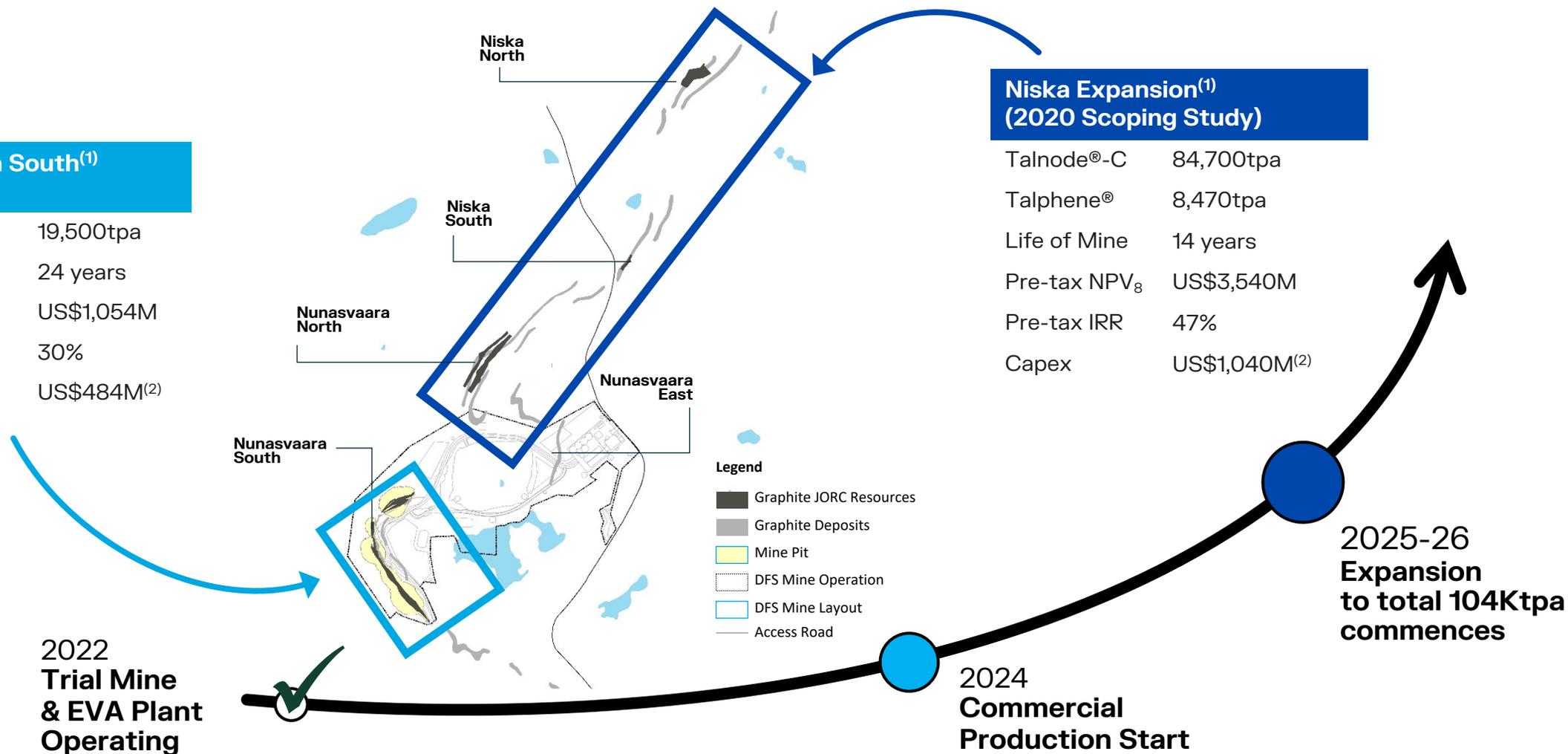
Niska adds to Vittangi to make Talga one of the largest anode producers outside China

## Nunasvaara South<sup>(1)</sup> (2021 DFS)

Talnode®-C	19,500tpa
Life of Mine	24 years
Pre-tax NPV <sub>8</sub>	US\$1,054M
Pre-tax IRR	30%
Capex	US\$484M <sup>(2)</sup>

## Niska Expansion<sup>(1)</sup> (2020 Scoping Study)

Talnode®-C	84,700tpa
Talphen®	8,470tpa
Life of Mine	14 years
Pre-tax NPV <sub>8</sub>	US\$3,540M
Pre-tax IRR	47%
Capex	US\$1,040M <sup>(2)</sup>



# Experienced Board and Management Team

Strong technological and operational leadership with on the ground European presence

## Board of Directors



**Terry Stinson**

Non-Executive Chairman

Over 35 years' Executive and Non-Executive Director experience, working for global innovation companies. Formerly the CEO and Managing Director of Orbital Corporation, VP for Global Fuel Systems at Siemens AG and CEO of Synerject. Currently the Non-Executive Chairman of Carnegie Clean Energy Limited and Non-Executive Director of Aurora Labs.



**Mark Thompson**

Managing Director & Founder

Over 30 years' global experience in the mineral industry including resource project development, technology and management. Founded Talga in 2009 and listed the company on the Australia Securities Exchange in mid 2010. A member of the Australian Institute of Geoscientists and the Society of Economic Geologists.



**Grant Mooney**

Non-Executive Director

Strong corporate advisory background with extensive experience in equity capital markets, corporate governance and M&A transactions. A member of the Institute of Chartered Accountants in Australia. Currently a Non-Executive Director of several ASX listed companies.



**Steve Lowe**

Non-Executive Director

Strong business management and taxation background with more than 20 years' experience consulting to corporate and high wealth clients. A Fellow of the Taxation Institute of Australia and a member of the Australian Institute of Company Directors.



**Ola Rinnan**

Non-Executive Director

Extensive commercialisation and leadership experience across the energy, banking and finance sectors. Has held numerous board positions for European listed companies and financial institutions including Non-Executive Directorships in Smedvig group companies and DFCU Bank.

## Key Management Personnel and Technical Leadership



**Per-Erik Lindvall**

Talga AB Chairman

A well-known business leader in northern Sweden with a long standing background in the Swedish mining industry including as former Vice President of LKAB. Per-Erik also holds several board assignments and has for many years been a driving force in creating a new, sustainable industrial cluster in northern Sweden.



**Melissa Roberts**

Chief Financial Officer

Over 20 years' experience in the global resources industry across corporate and commercial roles, most recently with global mineral producer Iluka Resources. Melissa joined Iluka in 2009 and held a range of senior roles within the business in Commercial, Investor Relations, Business Development and Information Technology.



**Martin Phillips**

Chief Operating Officer & European CEO

Experienced commercial and project manager with over 25 years of global metals and mining sector experience. Previous positions include engineering and management roles in battery recycling programs and smelting innovations at MIM's Mt Isa and UK operations. Mr Phillips was former Commercial Manager of Iluka Resources Ltd.



**Dean Scarparolo**

Company Secretary

A wealth of experience in developing and managing finance departments of ASX listed resource companies. A member of CPA Australia with over 25 years in roles spanning exploration, development and operations across Australia, Africa and Europe.

# JORC Graphite Reserve and Resources

Ore Reserve <sup>3,5</sup>	Tonnes	Graphite (% Cg)
<b>Nunasvaara (JORC 2012)</b>	<b>2,260,140</b>	<b>24.1</b>
Probable	2,260,140	24.1

Mineral Resources <sup>1,2,4,6,7,8</sup>	Tonnes	Graphite (% Cg)
<b>Vittangi (JORC 2012)</b>	<b>30,100,000</b>	<b>24.1</b>
Indicated	22,600,000	24.9
Inferred	7,500,000	21.8
<b>Jalkunen (JORC 2012)</b>	<b>31,500,000</b>	<b>14.9</b>
Inferred	31,500,000	14.9
<b>Raitajärvi (JORC 2004)</b>	<b>4,300,000</b>	<b>7.1</b>
Indicated	3,400,000	7.3
Inferred	900,000	6.4
<b>Total Mineral Resources</b>	<b>65,900,000</b>	<b>18.6</b>

- Note:
1. Mineral resources are inclusive of ore reserves.
  2. Mineral Resources are reported at various cut off grades: Vittangi 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.

# JORC Exploration Target

2021 Exploration Target Vittangi Graphite Project		
Vittangi (JORC 2012)	Low	High
Tonnage Range	170Mt	200Mt
Grade Range	20% Cg	30% Cg

*Note that the potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*

Talga completed new ground electromagnetic geophysical ("EM") surveys of graphite targets at Vittangi following the 2020 upgrade of the Vittangi graphite resource. The EM survey results have been reviewed in combination with prior Talga geochemical samples collected from the surface within the conductors, which averaged 26.2% graphite ("Cg") (ASX:TLG 15 Nov 2012). Modelling of this data in conjunction with positive outcomes of the Niska underground mining scoping study have enabled a revised JORC-compliant Exploration Target estimate totalling 170-200Mt at 20-30% Cg at Vittangi (ASX:TLG 20 Jul 2021). This is a significant increase from the previous 26-46Mt at 20-30% Cg (ASX:TLG 17 Sep 2020). The majority of this estimate is proximal along strike and down dip from Talga's existing Vittangi JORC (2012) graphite resources of 30.1Mt @ 24.1% Cg. Additional targets are located along the mapped graphite units around the greater Nunasvaara Dome area.

New rounds of diamond core drilling commenced at Vittangi in mid-2021. The staged 69 hole diamond drilling program totalling ~8,000m tested parts of the JORC Exploration Target as down-dip extensions of the current JORC Resources as well as shallow subcrop targets between Nunasvaara North and Niska South. Reviews of JORC Exploration Targets will be undertaken where significant changes are indicated by continued exploration.

See Talga's ASX announcement dated 20 July 2021 for further information.

# Competent Person Statements

The Vittangi Mineral Resource estimate was first reported in the Company's announcement dated 27 May 2022 titled 'Talga's battery anode growth ambitions boosted with 54% graphite resource increase'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The Nunasvaara Ore Reserve statement was first reported in the Company's announcement dated 1 July 2021 titled 'Robust Vittangi Anode Project DFS'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Reserve estimate in the previous market announcement continue to apply and have not materially changed.

The Jalkunen Mineral Resource estimate was first reported in the Company's announcement dated 27 August 2015 titled 'Talga Trebles Total Graphite Resource to Global Scale'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The Raitajärvi Mineral Resource estimate was first reported in the Company's announcement dated 26 August 2013 titled '500% Increase to 307,300 Tonnes Contained Graphite in New Resource Upgrade for Talga's Swedish Project'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The Company first reported the production targets and forecast financial information referred to in this announcement in accordance with Listing Rules 5.16 and 5.17 in its announcements titled 'Robust Vittangi Anode Project DFS' dated 1 July 2021 and 'Positive Niska Scoping Study Outlines Pathway to Globally Significant Battery Anode Production' dated 7 December 2020. The Company confirms that all material assumptions underpinning those production targets and forecast financial information derived from those production targets continue to apply and have not materially changed.

The Information in this presentation that relates to prior exploration results for the Vittangi Graphite Project is extracted from ASX announcements available to view on the Company's website at [www.talgagroup.com](http://www.talgagroup.com), with information on the exploration target first released to ASX on 20 July 2021. The Company confirms that it is not aware of any new information or data that materially affects the exploration results included in the relevant original market announcements. The Company confirms that the form and context in which the Competent Person and Qualified Person's findings are presented have not been materially modified from the relevant original market announcements.