



# Talga Group Ltd

Benchmark Mineral Intelligence  
Battery Gigafactories Europe 2023

29 March 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 Scoping Study will be realised. The 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 Scoping Study will be achieved. To achieve the range of outcomes indicated in the 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 Scoping Study.

The Company first reported the Niska Scoping Study production targets and forecast financial information referred to in this presentation in accordance with Listing Rules 5.16 and 5.17 in its announcement titled "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.

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# Talga Group

ASX-listed battery & advanced material supplier with 100% owned graphite resources in Sweden

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

The company 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**



# Global Operations

Perth, Australia

**Group head office**

Luleå & Kiruna, Sweden

**Anode production & integrated graphite mine**

Cambridge, UK

**Battery anode product & technology centre**

Rudolstadt, Germany

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

Osaka, Japan & Hong Kong

**Commercial office and product development**

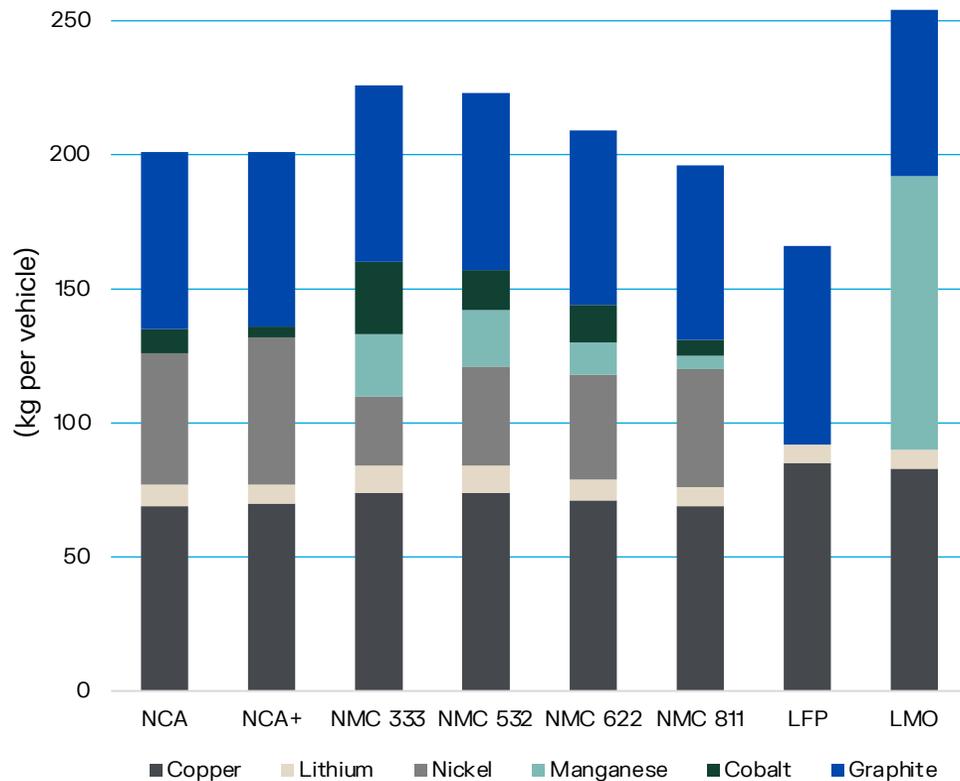


An aerial photograph of a winding asphalt road that curves through a dense forest. A small pink car is driving on the road. The text "Our Mission" is centered at the top of the image.

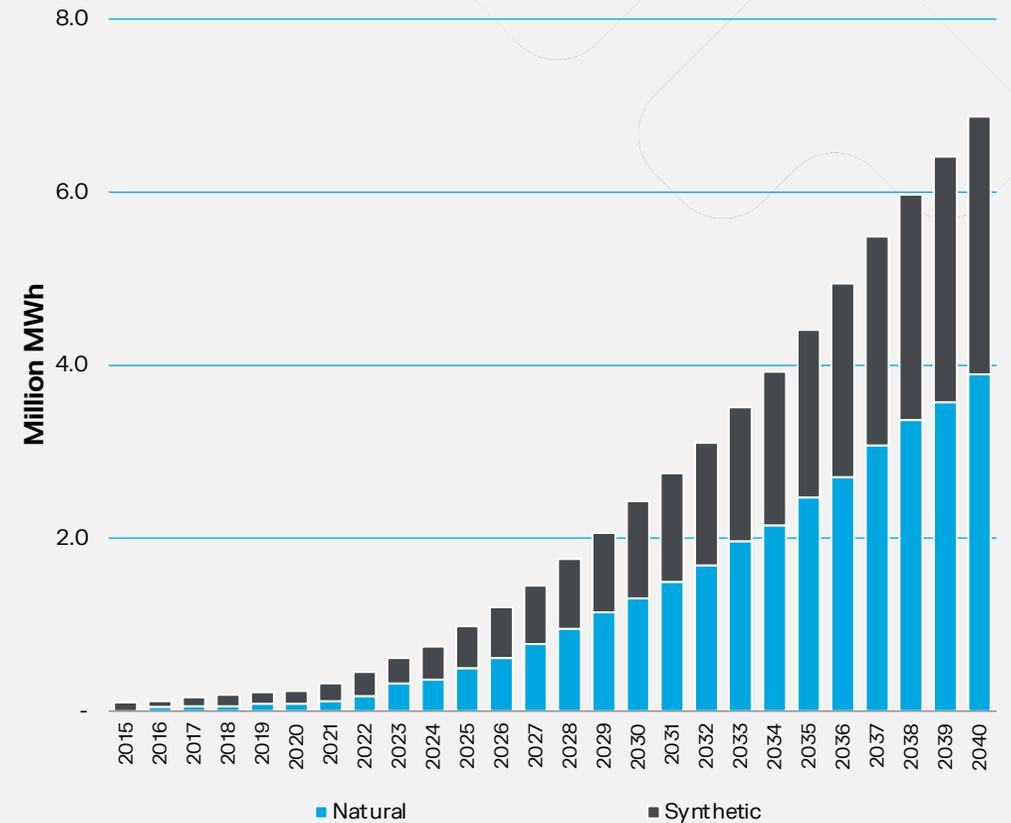
Our Mission

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

# Graphite is major part of all Li-ion Batteries



# Forecast Graphite Anode Demand



# EU Green Deal

## Green Deal Industrial Plan to boost European clean technology across supply chains

- ✓ Battery grade natural graphite listed as strategic raw material
- ✓ Critical Raw Materials Act to establish ambitious targets for extraction, processing
- ✓ Streamlined permitting and better access to finance
- ✓ Net-Zero Industry Act proposal includes targets for 40% EU anode production
- ✓ Active interaction with EU - Swedish legislators and industry bodies to raise visibility and strategic benefits of Talga project



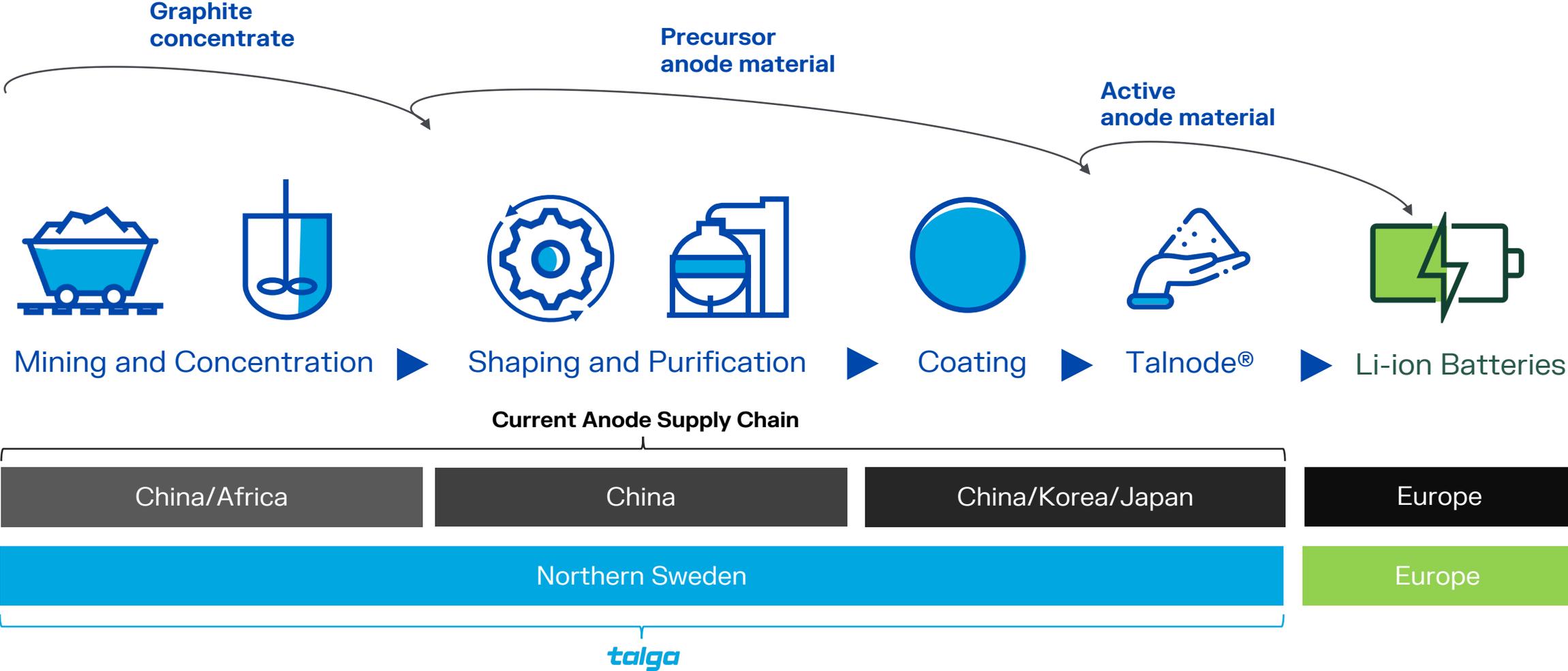


# Vittangi Project

## Stage 1 integrated mine/concentrator and anode production plant

- ✓ 100,000tpa graphite mine and concentrator at Vittangi with 24 year life based on fraction of 30.5Mt @ 24.1%Cg resource base
- ✓ Luleå anode refinery to produce 19,500tpa Talnode®-C (purification, shaping and coating)
- ✓ Mine environmental permit decision due 5 April 2023
- ✓ Anode refinery environmental permit progressing
- ✓ Building permits for refinery granted and in force
- ✓ Niska mining exploitation applications (additional 85,000tpa anode production) submitted mid-2021

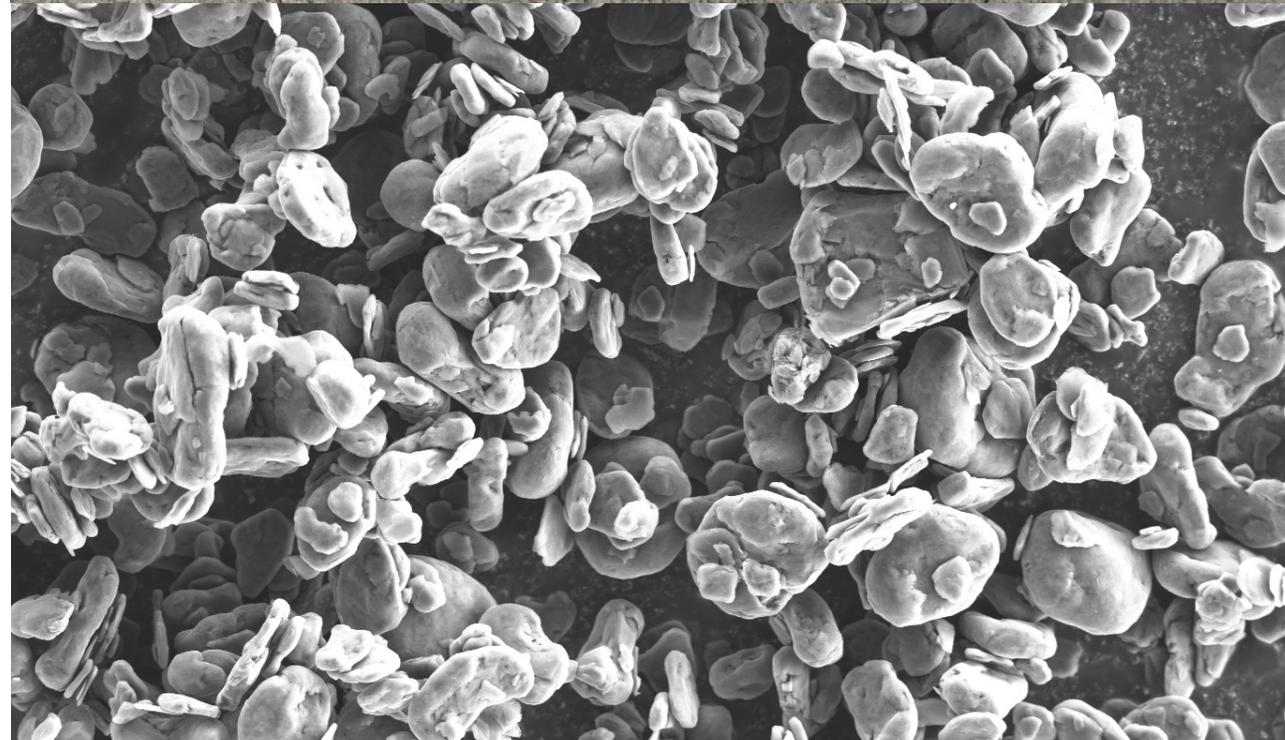
# Swedish anode for the European green transition



# Coated Graphite Active Anode: Talnode<sup>®</sup>-C

**Suitable as stand-alone battery anode or blend due to its high energy density**

- ✓ Innovative coated graphite active anode with ultra-low CO<sub>2</sub> emission profile
- ✓ Excellent charging performance at high load and low temperature
- ✓ High rate and excellent capacity retention (>90%) during fast charging
- ✓ Effective for applications that require a higher rate (>10C) such as for PHEVs and HEV
- ✓ Hitachi Life Cycle Assessment shows production of 1kg Talnode<sup>®</sup>-C emits 1.47kg CO<sub>2</sub>-eq (~20x lower than incumbents)



# First coated graphite anode plant in Europe

## Electric Vehicle Anode (EVA) Plant, Sweden

- ✓ Producing large-scale coated anode samples for auto customer qualifications
- ✓ Proprietary ore to coated shaped purified graphite (CSPG) process tech proven at scale
- ✓ In-house Battery and Powder Laboratory, and process technology development
- ✓ Operational and quality control capabilities readied for commercial start nearby in 2024



# Anode offtakes

**Talga is actively negotiating agreements with multiple cell and auto customers for Talnode®-C supply from 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

**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

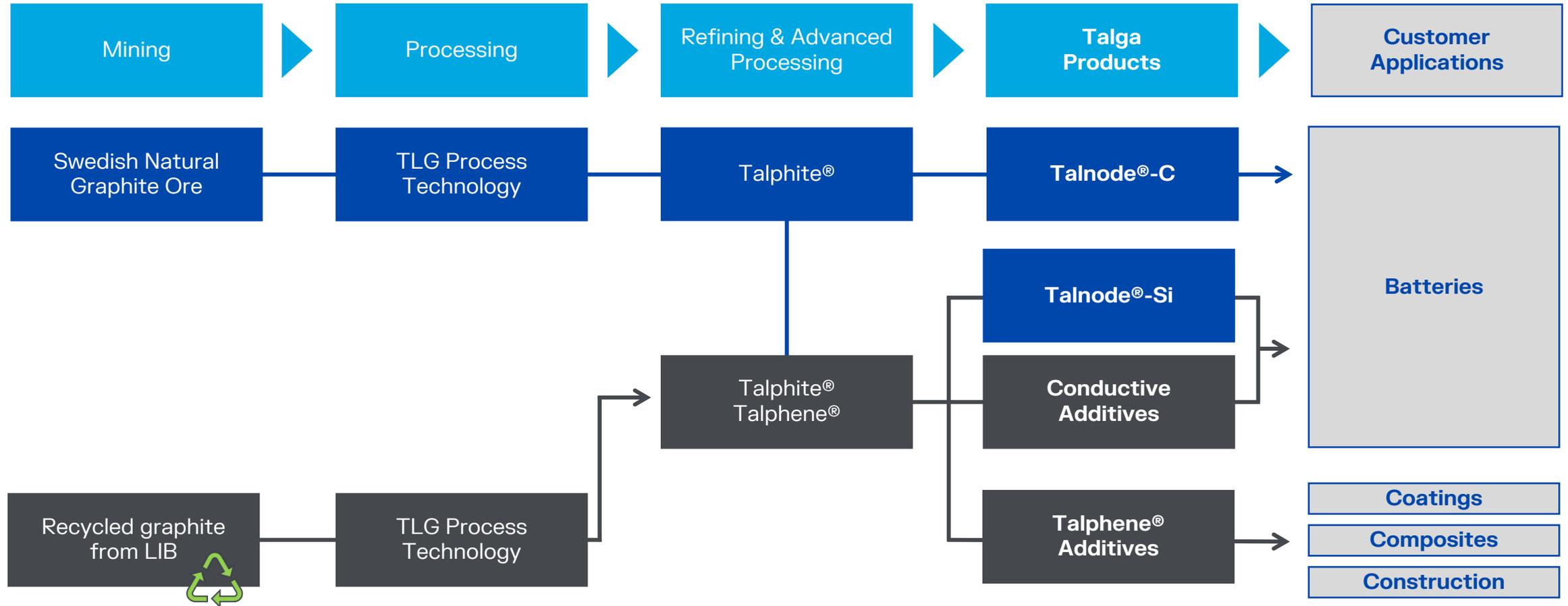
**ACC**  
AUTOMOTIVE CELLS Co



**VERKOR**

# Talga Technology and Products Map

Diverse range of battery and advanced materials produced from graphite sources



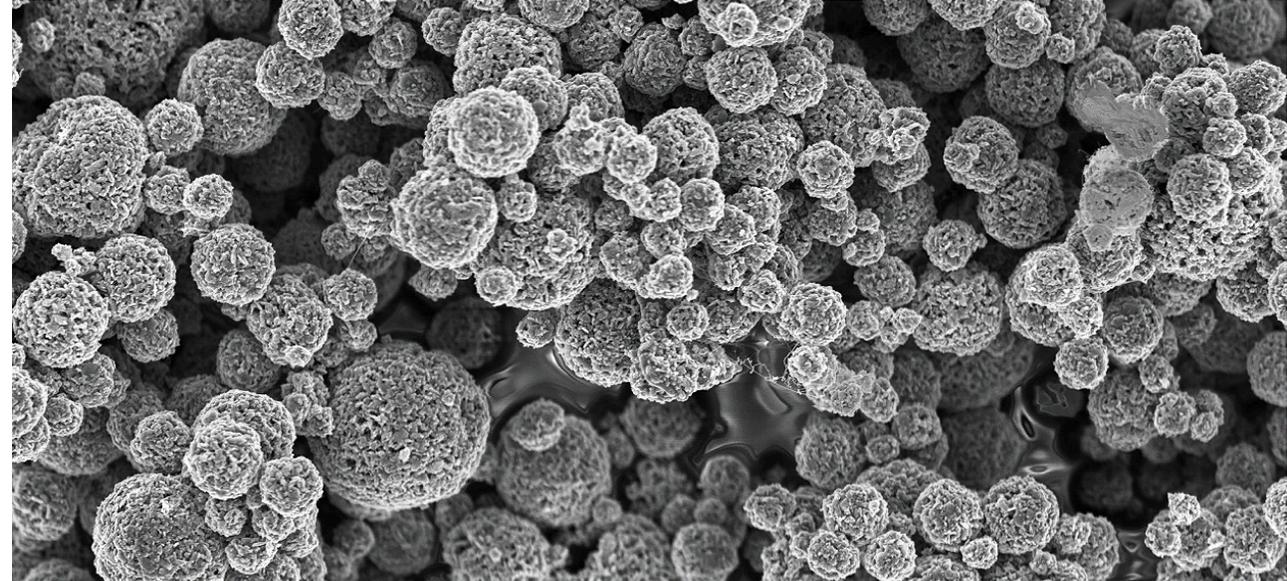
# Silicon anode: Talnode®-Si

**Talga's Silicon-Graphene composite product with up to 50 wt% silicon leading to:**

- ▶ Increased energy density that can be adjusted to meet customer roadmaps
- ▶ Drop-in solution compatible with current anode manufacturing methods
- ▶ Low swelling
- ▶ Mass producible/industrial scalability

German pilot plant expanding Q1 2023

Feasibility underway to fast-track commercial options alongside negotiations with global customers





# 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

# Conductive additive for cathodes

**Proprietary processing methods to produce new class of ultra-fine graphite and graphene additives for cathode market:**

- ▶ Replacement of existing commercial conductive additives (carbon black or CNTs) to allow increased active materials
- ▶ Converting anode manufacturing 'byproducts' to premium products thereby improving resource efficiency
- ▶ Enhanced electrode conductivity leading to improved rate performance

Currently in performance evaluation with automotive OEMs with commercial options study underway



# Corporate Overview

## ASX:TLG (12 months)



**Entered ASX 300 Index on March 20, 2023**

## STOCKMARKET CODES/TICKERS

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

## CAPITAL STRUCTURE

Market Capitalisation:	\$548.2M
Listed Shares:	360.6M
Unlisted Options:	11.6M <sup>(1)</sup>
Cash as at 31 December 2022:	\$23.3M
Capital raised in February 2023:	\$40.0M

## 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 12,006**

# *talga*

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



ASX:TLG

# JORC Graphite Reserve and Resources

Ore Reserve	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	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 'Robus 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 the exploration results and exploration target is based on information compiled by Albert Thamm and was first released on ASX on 20 July 2021. Mr Thamm is a consultant to the Company and a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy (Membership No.203217). Mr Thamm has sufficient experience, which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been undertaken 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 Thamm consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears. Mr Thamm does not hold securities (directly or indirectly) in the Company.