

unearthing tomorrow

Talga Resources Ltd Annual General Meeting

Perth, Australia

25 November 2016



ASX:TLG

Forward Looking Statements and Disclaimer:



This presentation has been prepared by Talga Resources Limited (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. The information contained in this presentation has not been verified by the Issuer nor has the Issuer conducted any due diligence in relation to that information. The presentation contains selected information and does not purport to be all inclusive or to contain all information that may be relevant to the Recipient. The Recipient acknowledges that circumstances may change and this presentation may become outdated as a result. The Issuer accepts no obligation to update or correct this 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 CTO Dr Siva Bohm with graphene dispersions at Talga Advanced Materials GmbH, Germany

- ▶ Talga is an **advanced materials** company that owns the **highest grade** graphite mineral resource in the world # and has developed an innovative **process** to make the **mass production** of quality **graphene** possible.
- ▶ Talga is a listed public company on the Australian Stock Exchange (**ASX:TLG**) with operations in Sweden, Germany and UK.
- ▶ Rapidly developing **value-added product** pipeline and IP.
- ▶ Talga is positioning to play a large role in the emerging trend towards low emission **energy** production/storage and a host of technology applications enabled by graphite and graphene.



Talga Resources Ltd
Australia - Corporate HQ

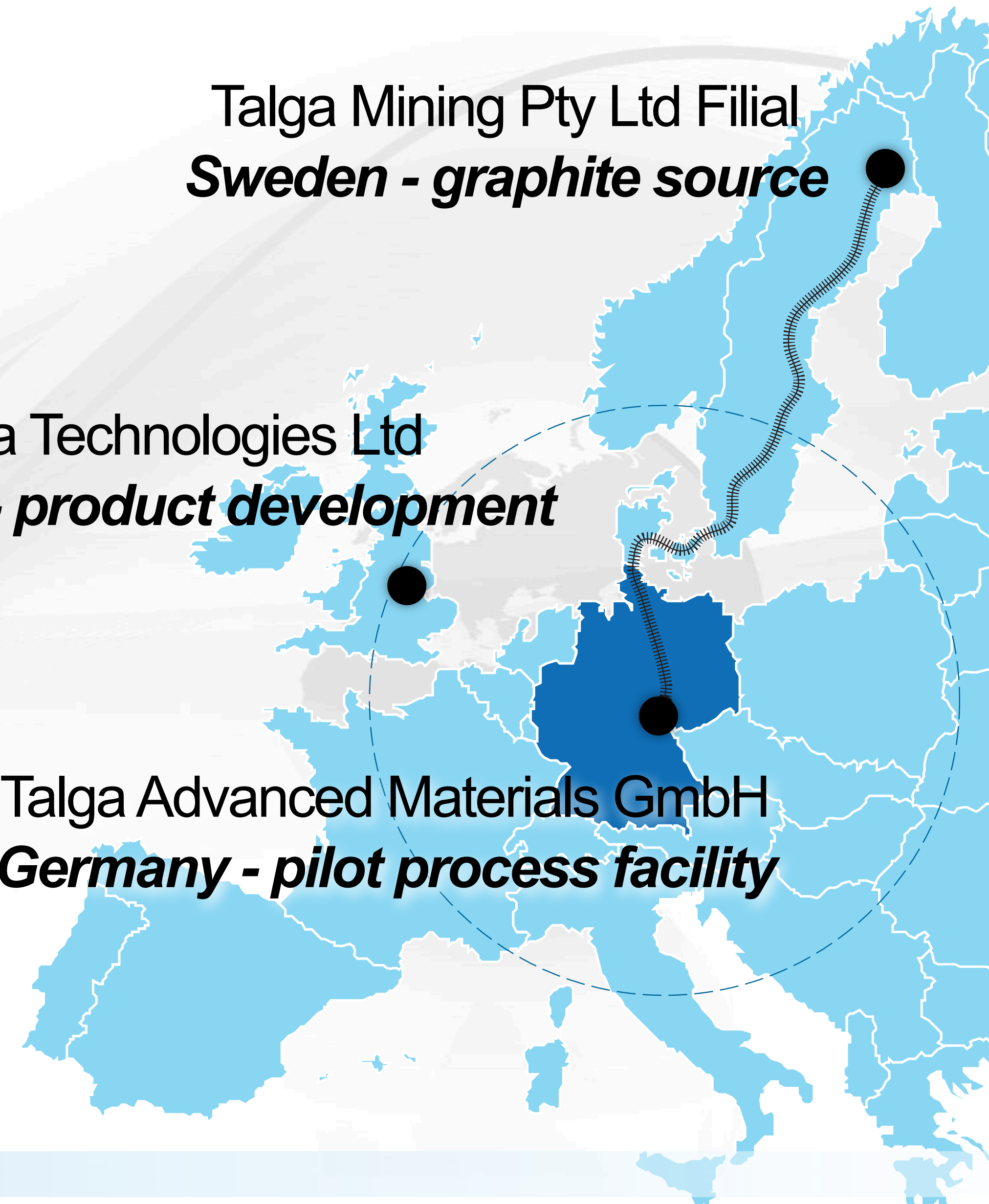


Part of Talga team at Phase 2 pilot plant commissioning in Rudolstadt, Germany

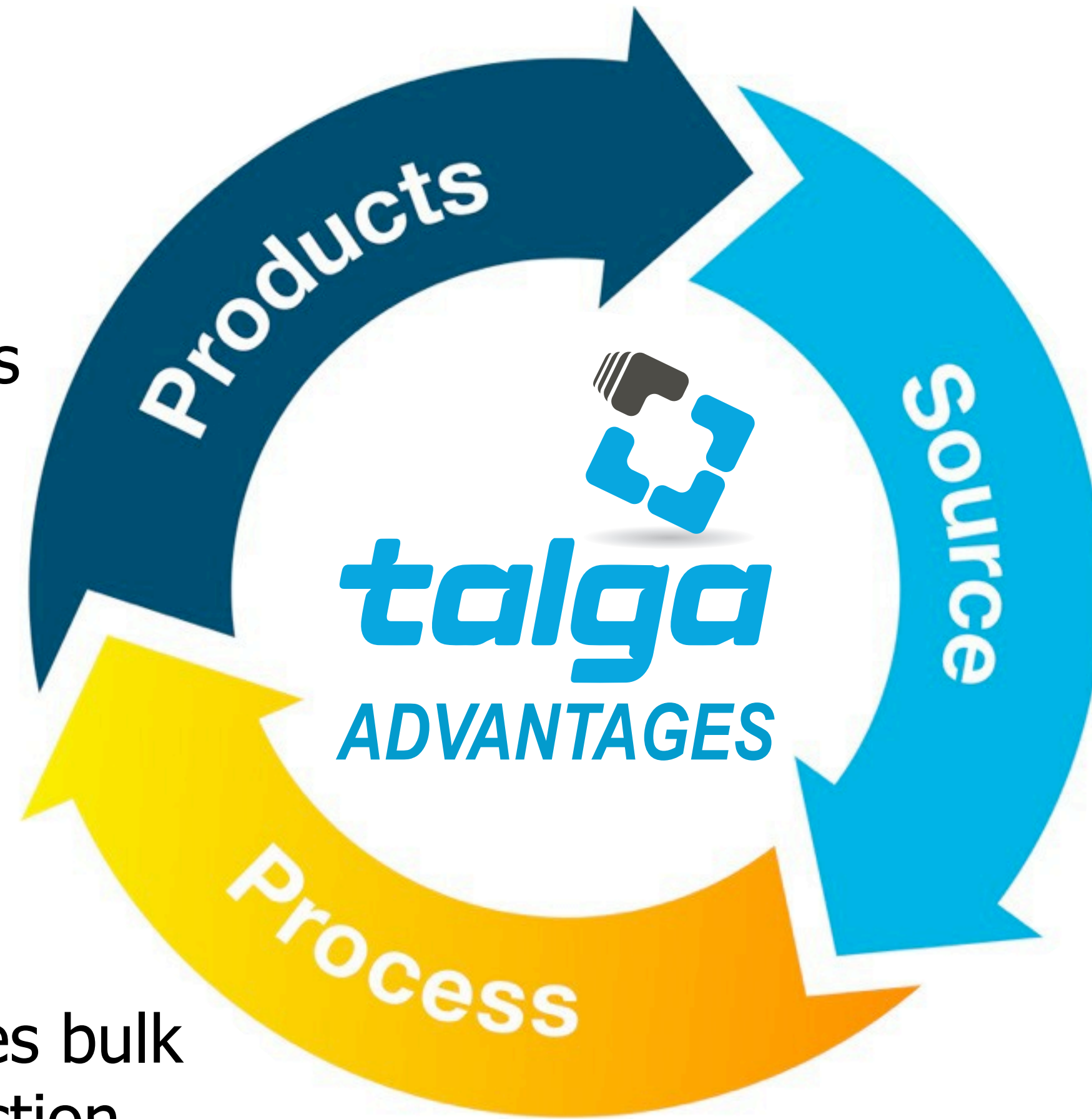
Talga Mining Pty Ltd Filial
Sweden - graphite source

Talga Technologies Ltd
UK - product development

Talga Advanced Materials GmbH
Germany - pilot process facility



- ✓ **Vertically integrated** with in-house product expertise value-adding to raw materials
- ✓ **Pilot plant** operational & successfully scaling up
- ✓ **Product pipeline** across multiple large technology and bulk sectors
- ✓ **Process technology** enables bulk high quality graphene production
- ✓ **Low cost** 'no crush/grind' & low enviro-impact process



- ✓ **Highest grade** graphite resources in the world
- ✓ **Large and unique** 'electrode' style ore deposits
- ✓ Top class **jurisdiction** Sweden

This financial year we have:

Test Mined

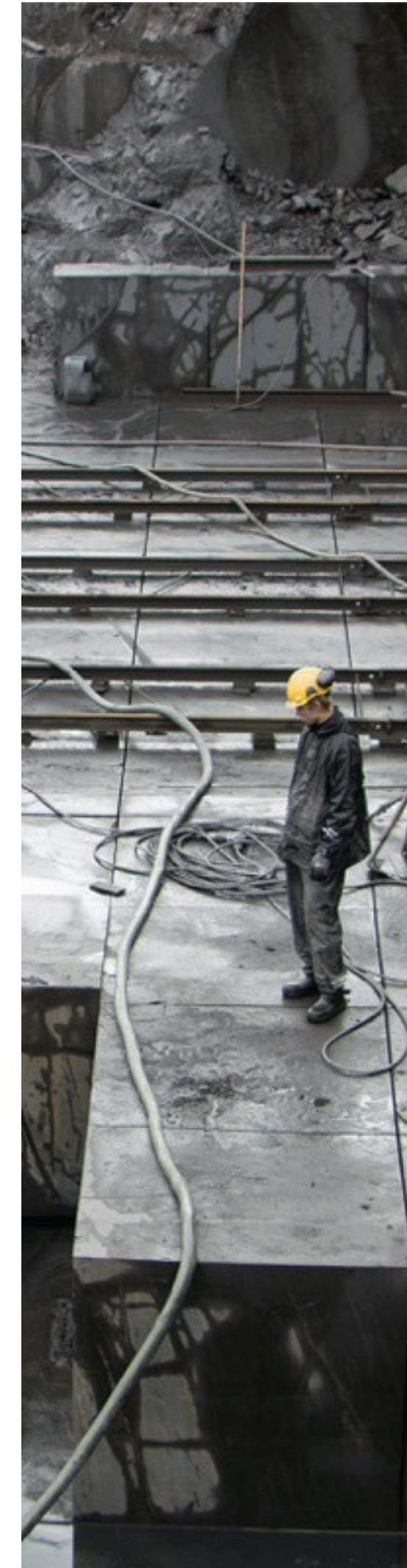
- ▶ Produced ~5,000 tonnes low cost ore 'electrodes'
- ▶ Opened up our ore bodies
- ▶ Expanded resources

Built and Operated a Pilot Plant

- ▶ Provided new source graphene and micrographite to market
- ▶ Demonstrated potential supply scale to customers
- ▶ Developed key insights towards full scale project

Produced graphene and graphite products

- ▶ Validated in-house expertise with peer-reviewed test results
- ▶ Gained market knowledge and customers across target markets



This financial year we have:

- ▶ Raised ~ \$13.2m capital including rights issue and options exercise (ASX: TLGOA now \$0.08)
- ▶ Introduced European cornerstone and strategic investors
- ▶ Opened up access to future funding/support
- ▶ Strengthened board and management with key appointments;
 - Manager Europe Operations Martin Phillips (ex-Commercial Manager Iluka Resources)
 - Chief Technology Officer Dr Siva Bohm (ex-Tata)
 - Manager R&D Dr Sai Shivareddy (ex-Cambridge Graphene Centre)
 - Board addition Steve Lowe (ex-Chairman Sirius Resources)
- ▶ Setup potential sales with value add products & raw materials
- ▶ Maturing commercial relationships (watch this space!)



Capitalisation Summary 23 Nov 2016 (AUD\$)

Shares on issue TLG	181.9M
Listed Options TLGOA (\$0.45 : 31 Dec 18)	44.9M
Unlisted Options ¹	34.7M
Market Capitalisation (undiluted @ \$0.26)	\$47M

Top 5 Shareholders ²

Smedvig G P Ltd	11.3%
Lateral Minerals Pty Ltd (M.Thompson)	7.8%
Kamberg Investments Ltd	3.3%
Yandal Investments Pty Ltd (M. Creasy)	3.0%
Pelmer Securities S A	2.5%

Board

Managing Director - **Mark Thompson**

Chairman - **Keith Coughlan**

Non-Executive - **Grant Mooney**

Non-Executive - **Stephen Lowe**

Cash end Sept 2016 ~**\$10.3 million**. Nil Debt.

ASX: TLG year to date share price



¹ Various expiry and strike prices \$0.35-\$0.65

² Holdings rounded to nearest decimal point, as at 23 Nov 2016



Mark Thompson
Managing Director

+25 years international industry experience in minerals-mining management. Member of the Australian Institute of Geoscientists and the Society of Economic Geologists, guest Professor in Mineral Exploration Technology at Chengdu University of Technology and the Southwest University of Science and Technology in China. Mr Thompson currently serves as a Non-Executive Director of Phosphate Australia Ltd.



Keith Coughlan
Non-Executive Chairman

+30 years' experience in stockbroking/funds management. Largely involved in the funding and promoting of resource companies listed on the ASX, AIM and TSX. Advised various companies on the identification/acquisition of resource projects and previously employed by one of Australia's then largest funds management organisations.

Mr Coughlan is currently the managing director of ASX listed European Metals Holdings Limited.



Grant Mooney
Non-Executive Director

Mr Mooney has extensive experience in resources and technology markets. Has served as Director and Company Secretary to several ASX listed companies including Director of renewable energy developer, Carnegie Wave Energy Ltd, Barra Resources Ltd, Phosphate Australia Ltd and Wild Acre Metals Limited. Mr Mooney is a member of the Institute of Chartered Accountants Australia.



Stephen Lowe
Non-Executive Director

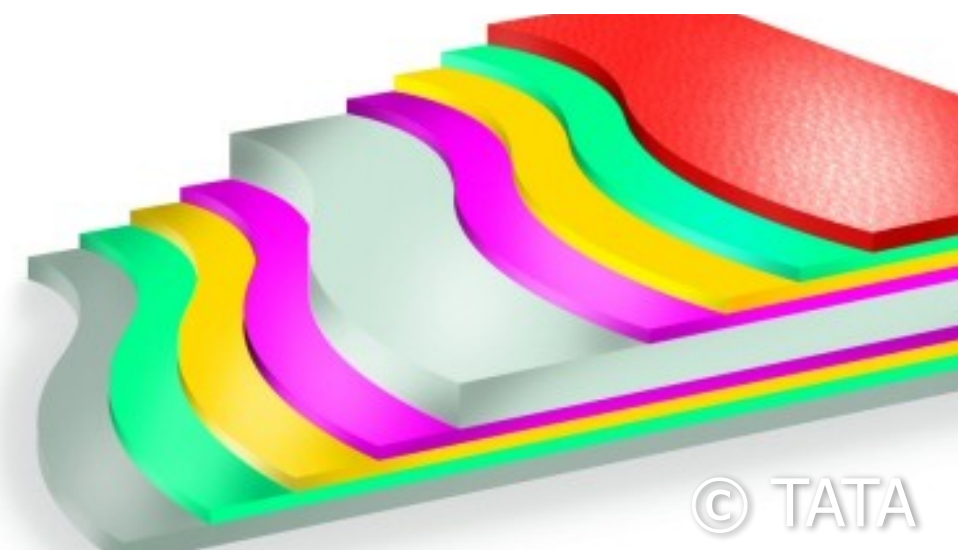
Mr Lowe's background is in business management and taxation and he has over 18 years' experience consulting to a range of corporate and high wealth clients. Mr Lowe is currently a non-executive director of Corizon Resources Ltd and Windward Resources Ltd and a former Chairman and non-executive director of ASX 200 company Sirius Resources NL. Mr Lowe is a Fellow of the Taxation Institute of Australia and a Member of the Australian Institute of Company Directors.

- ▶ Produce value added graphene **products** to complement supply of **raw** graphene & graphite
- ▶ Pursuit of revenue prior to full-scale production through **licensing** and royalties – plus sale of raw materials
- ▶ Initially aim to replace additives in **existing products** with better performing ones ('new products' not required)



Test samples of Talphene™ graphene dispersion product for customer

Coatings



Corrosion Protection

Market Size: \$11B (2013)

- Anti-corrosion & anti-fouling coatings
- Electric and thermally conductive inks
- Battery and fuel cell coatings
- Current market 40Mt/a

Energy

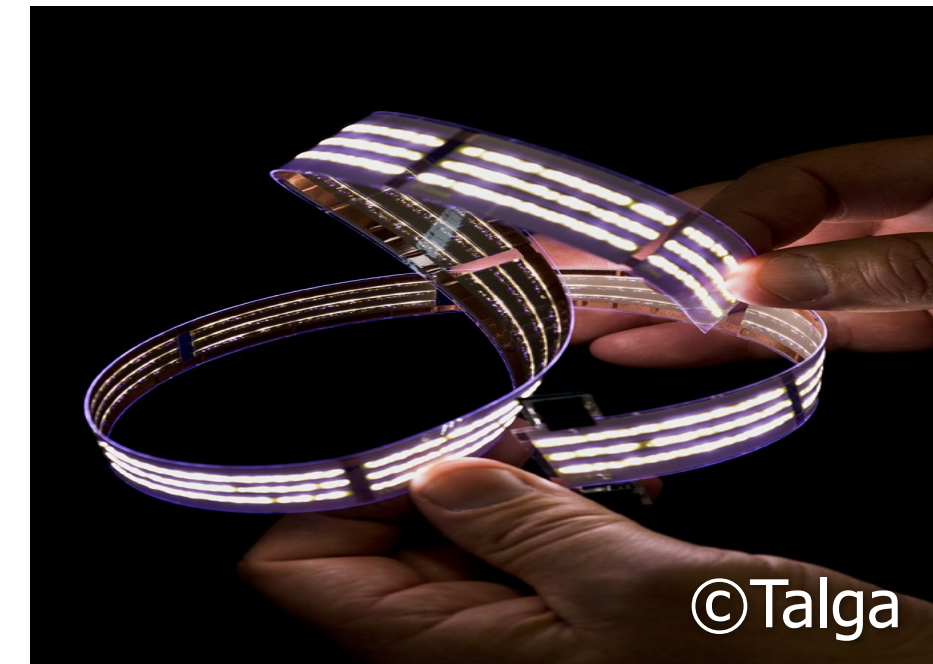


Batteries & Membranes

Market Size: \$24B Batteries, \$17B Membranes

- Li-ion batteries
- Flow batteries
- Fuel cells
- Solar panels
- Printable batteries and circuits

Conductives



Conductive Ink

Market Size: \$18B (2015)

- Flexible conductive plastics
- Stronger, lighter plastics and carbon fibre materials
- 3D printing inks

Construction



Concrete

Market Size: \$450B (2012)

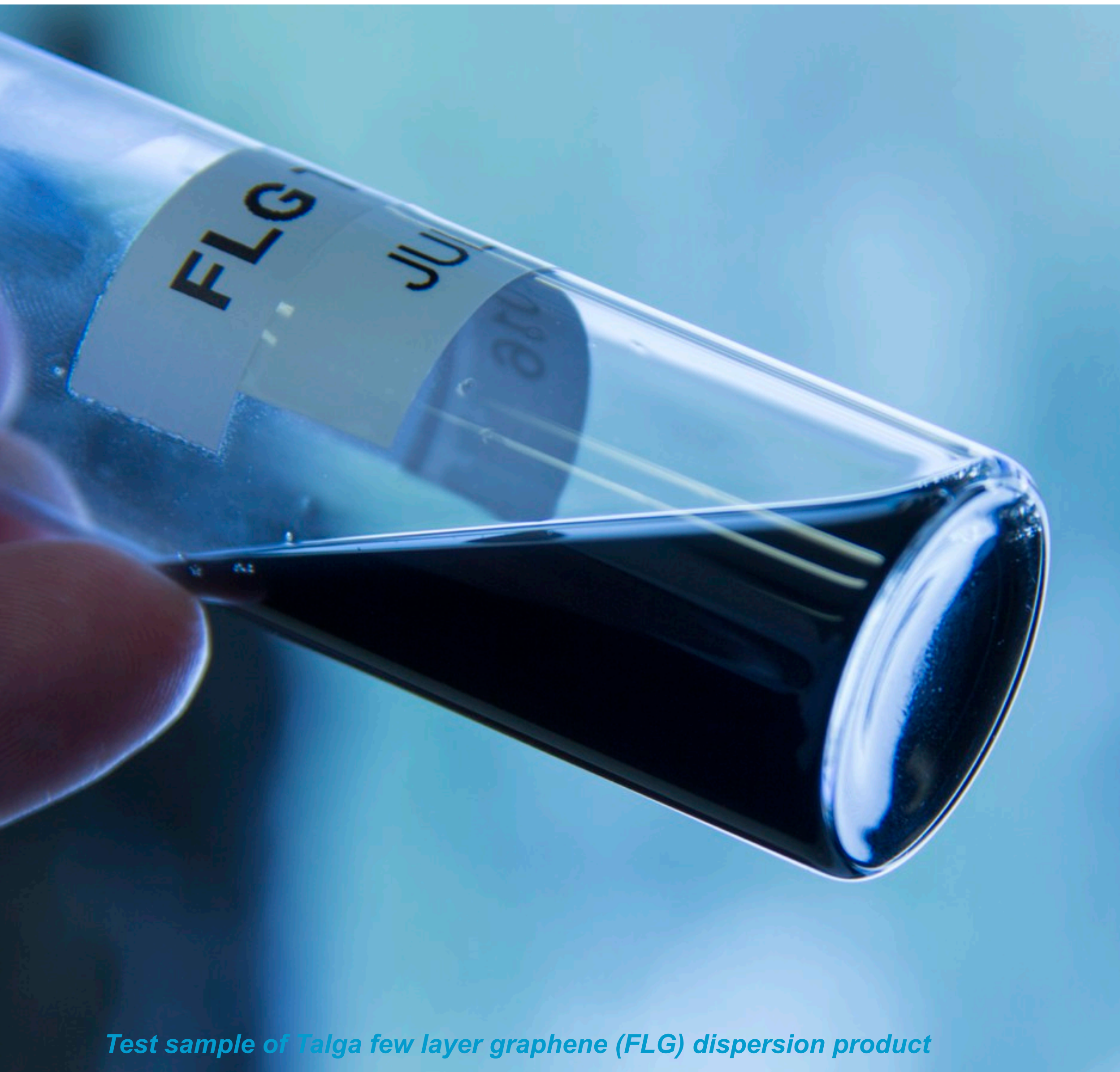
- Lighter, stronger cement
- Higher performance insulation materials
- Functional (electrical or thermally conductive) glass and building materials

Current Collaborations



MAX-PLANCK-GESELLSCHAFT





Test sample of Talga few layer graphene (FLG) dispersion product

- ▶ Products enhanced with graphene & micrographite are being used **now** (not distant possibility) - **no need to re-tool manufacturing lines in target products**
- ▶ **Real world products** with addressable markets
- ▶ Aim to remove the **supply volume** and **pricing** bottleneck to enable rapid industry uptake
- ▶ **Disrupt** graphene market - even during pilot plant phases



▶ **100% ownership** of **five** graphite projects in Sweden containing **three resources and over 25 deposits**

▶ **Full range** of graphite flake sizes from micro to jumbo flake

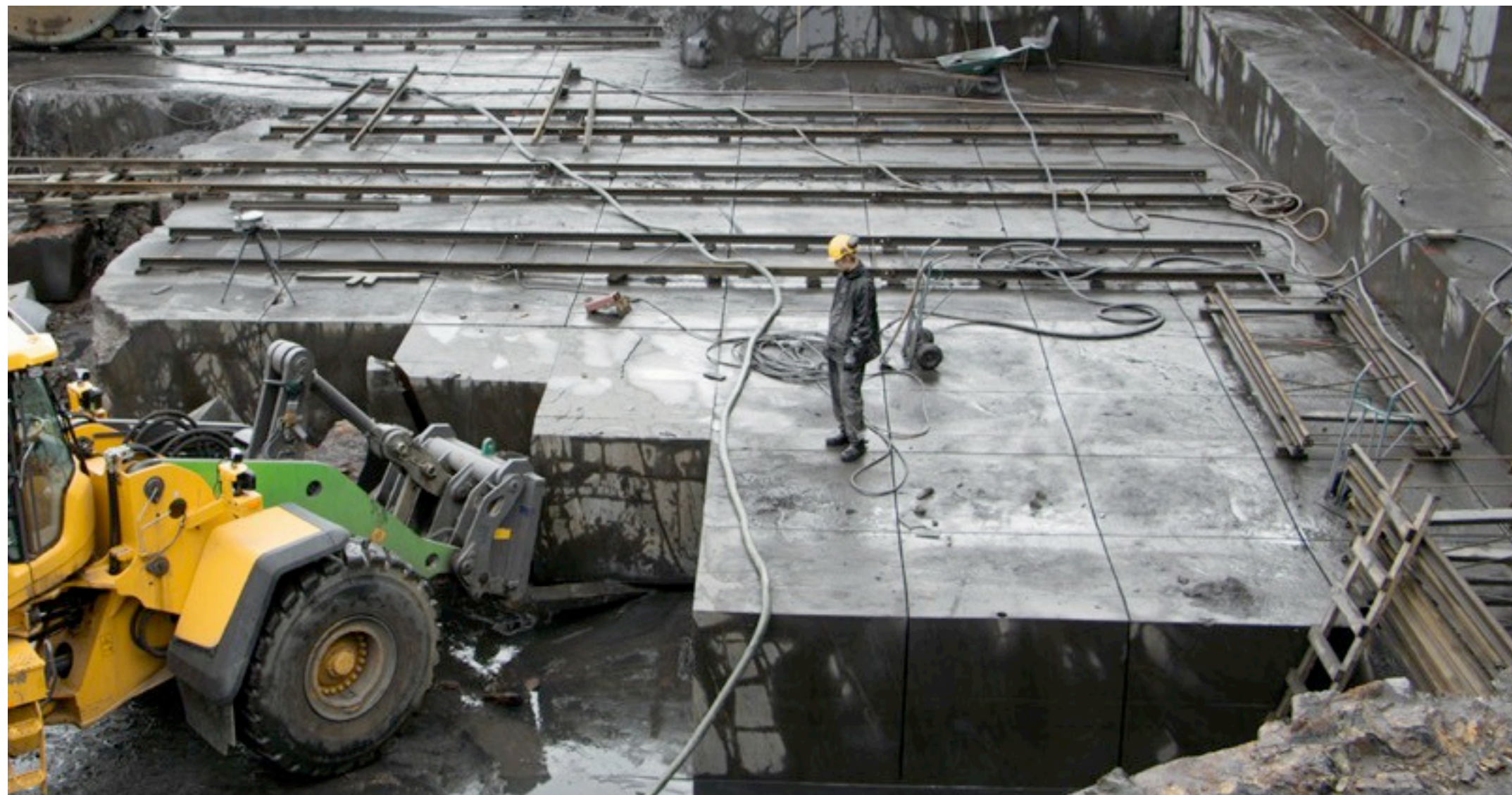
▶ Current JORC compliant Mineral Resources*

Project	Tonnes	Graphite Grade
Vittangi	9,800,000	25.3 %Cg
Jalkunen	31,500,000	14.9 %Cg
Raitajärvi	4,300,000	7.1 %Cg

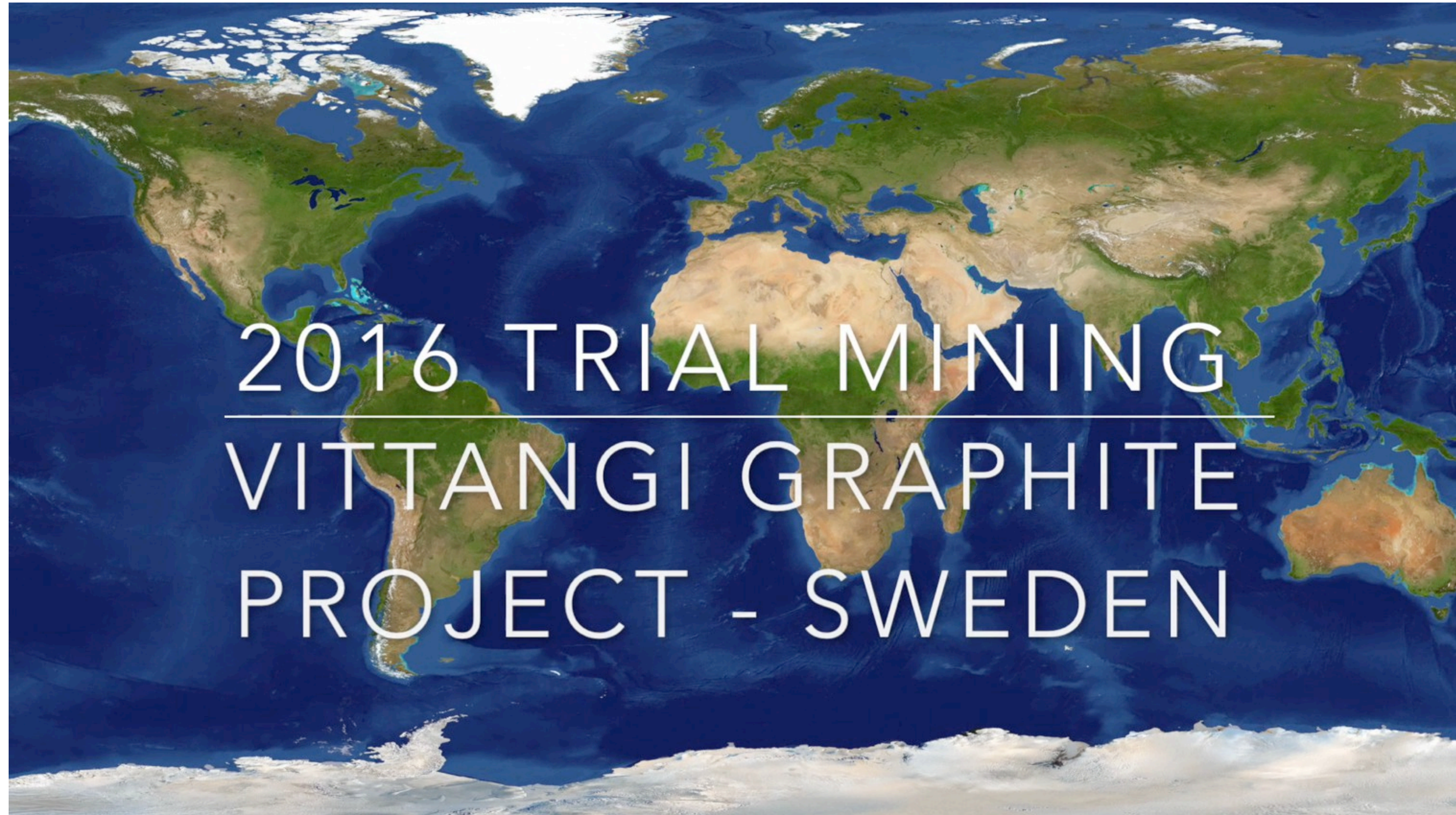
▶ Current JORC compliant Exploration Targets*

0-100m Depth	Tonnes	Graphite (%Cg)
Total	136-250,000,000	18-25

Note: The Exploration Target is based on a number of assumptions and limitations with the potential grade and quantity being conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource Estimate in accordance with the JORC Code and it is uncertain if future exploration will result in the estimation of a Mineral Resource.



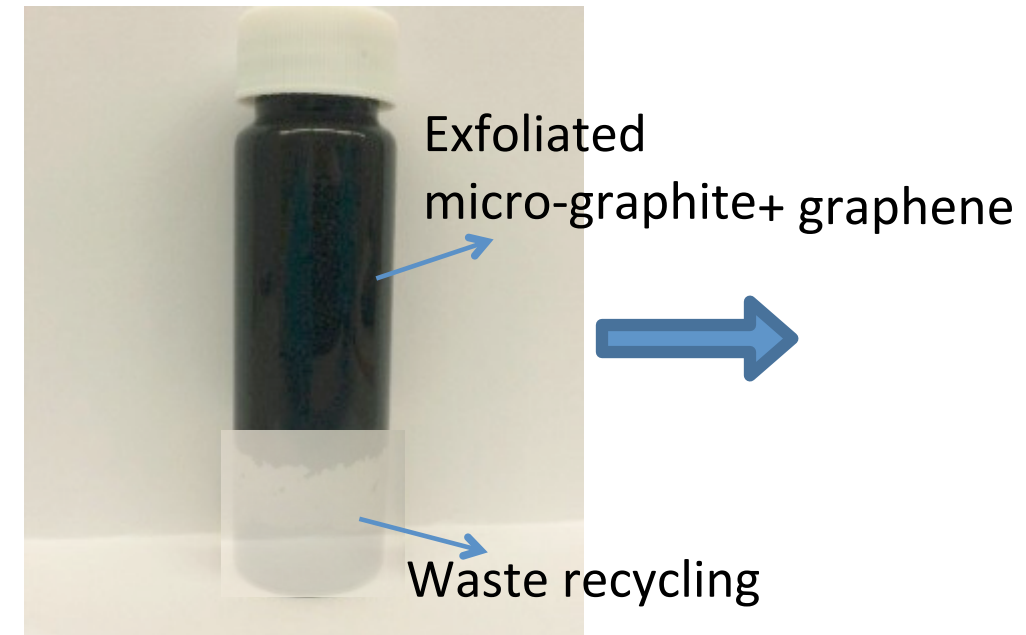
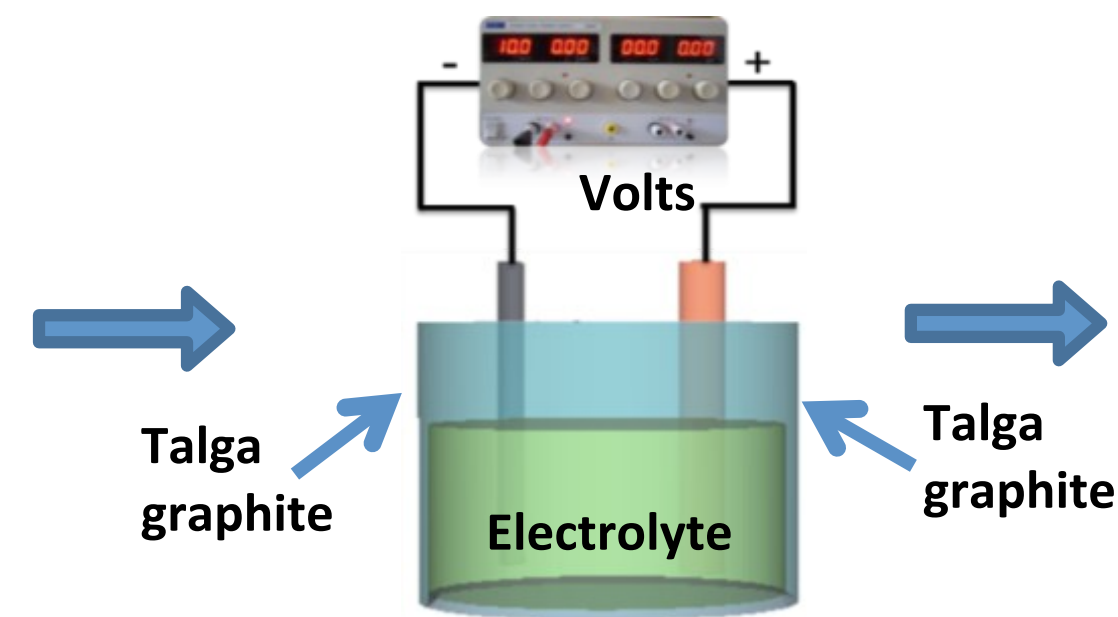
- ▶ **Innovative** graphite ore mining technique
- ▶ Extracts ore as direct use “**electrodes**”
- ▶ No ‘drill and blast’ of ore = less dust and noise/
minimise environmental impact
- ▶ Trial of larger, tailor-made and automated ore block cutting equipment successful
- ▶ ~5,000t extracted to date to feed upscaled pilot test processing and graphene product development



Talga
25.3



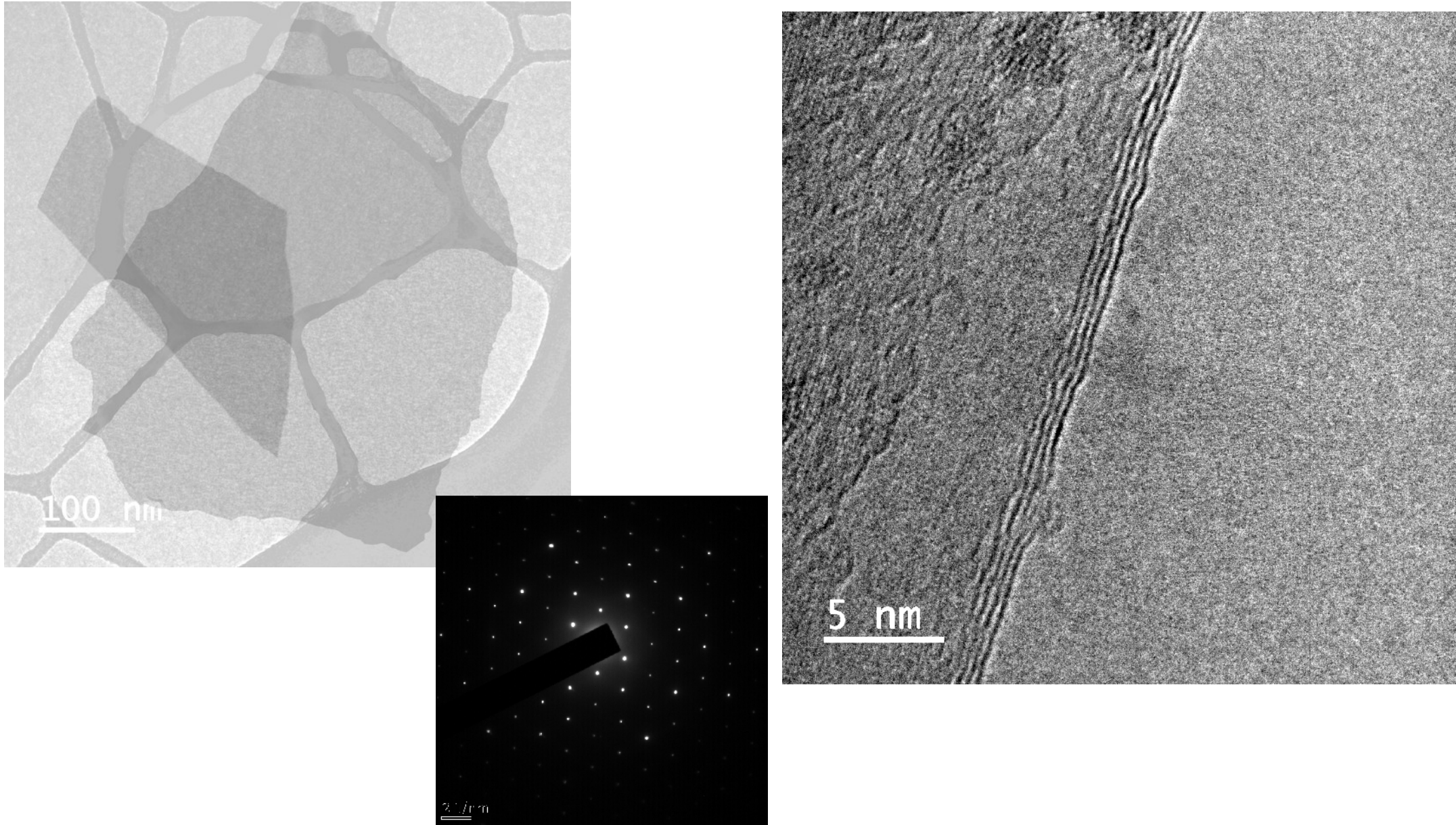
Talga Graphite



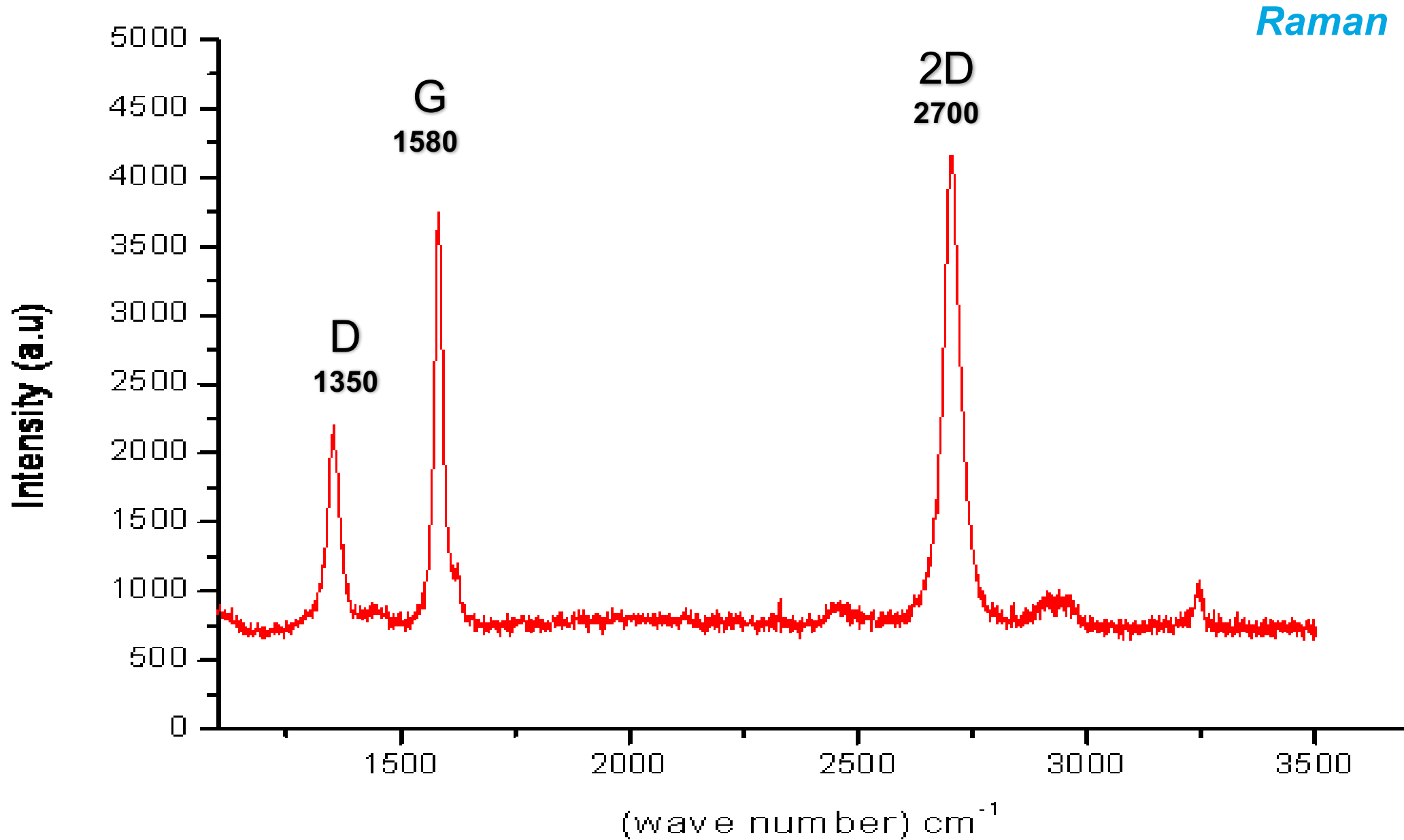
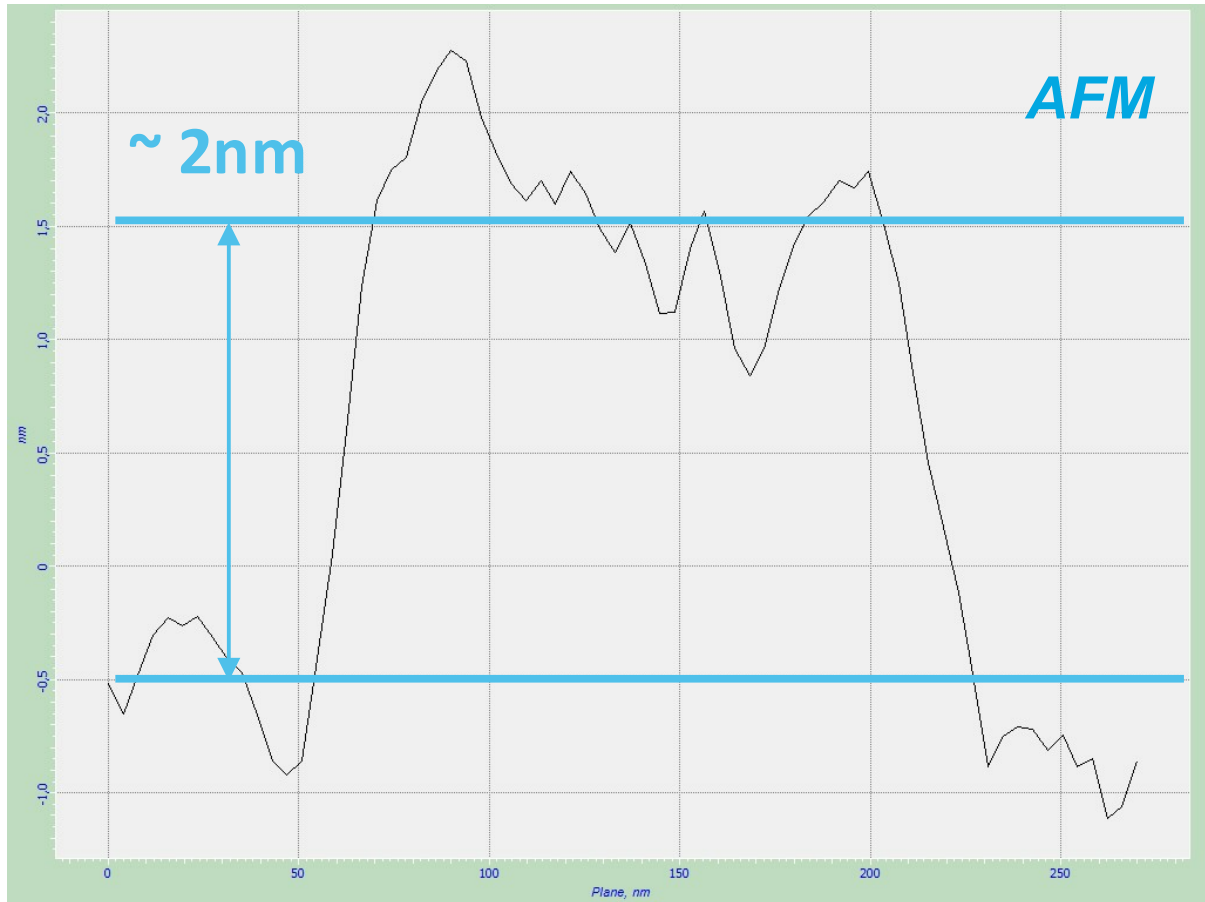
Micrographite
|
Graphene Nanoplatelets (GNP)
|
Few Layer Graphene (FLG)

- ▶ Process liberates **graphene and micrographite** directly from **raw ore**
- ▶ Requires **no crushing, no grinding, no jet milling**
- ▶ Makes **ultrafine** and **ultrathin** size particles, a type of material not previously available **economically** at this **scale**
- ▶ Lowers **energy, costs** and **emissions of graphene production**
- ▶ Higher **performance** in applications

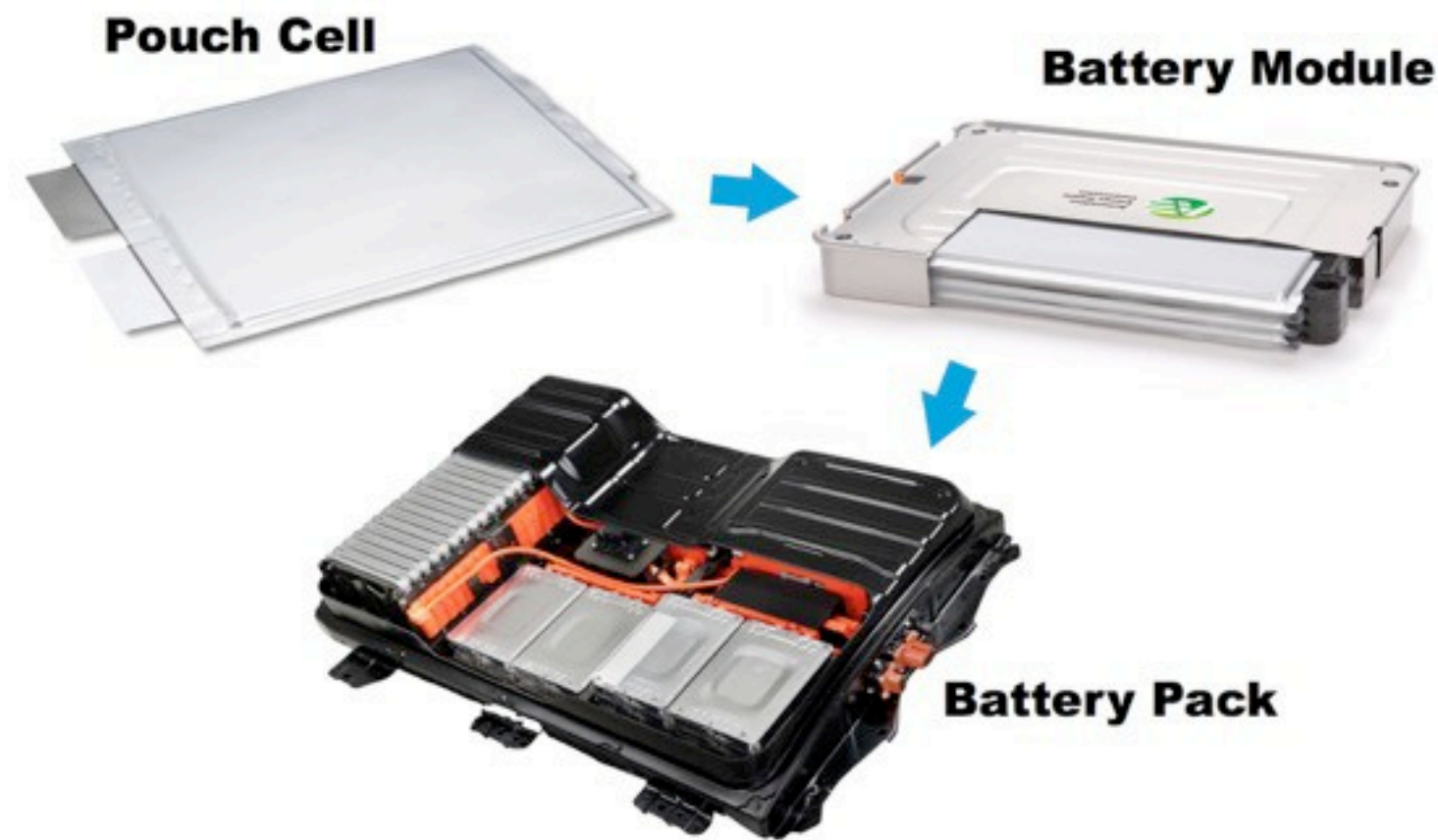
Product - Talphene™ High Quality Graphene



HR-TEM and other tests confirm high quality, 1-4 layer graphene.



Raman spectrum shows a high quality graphene as indicated by the very symmetrical 2D peak with a lorentzian profile centred at 2692 cm⁻¹. Note the higher 2D peak intensity compared to the G peak for LPE graphene.

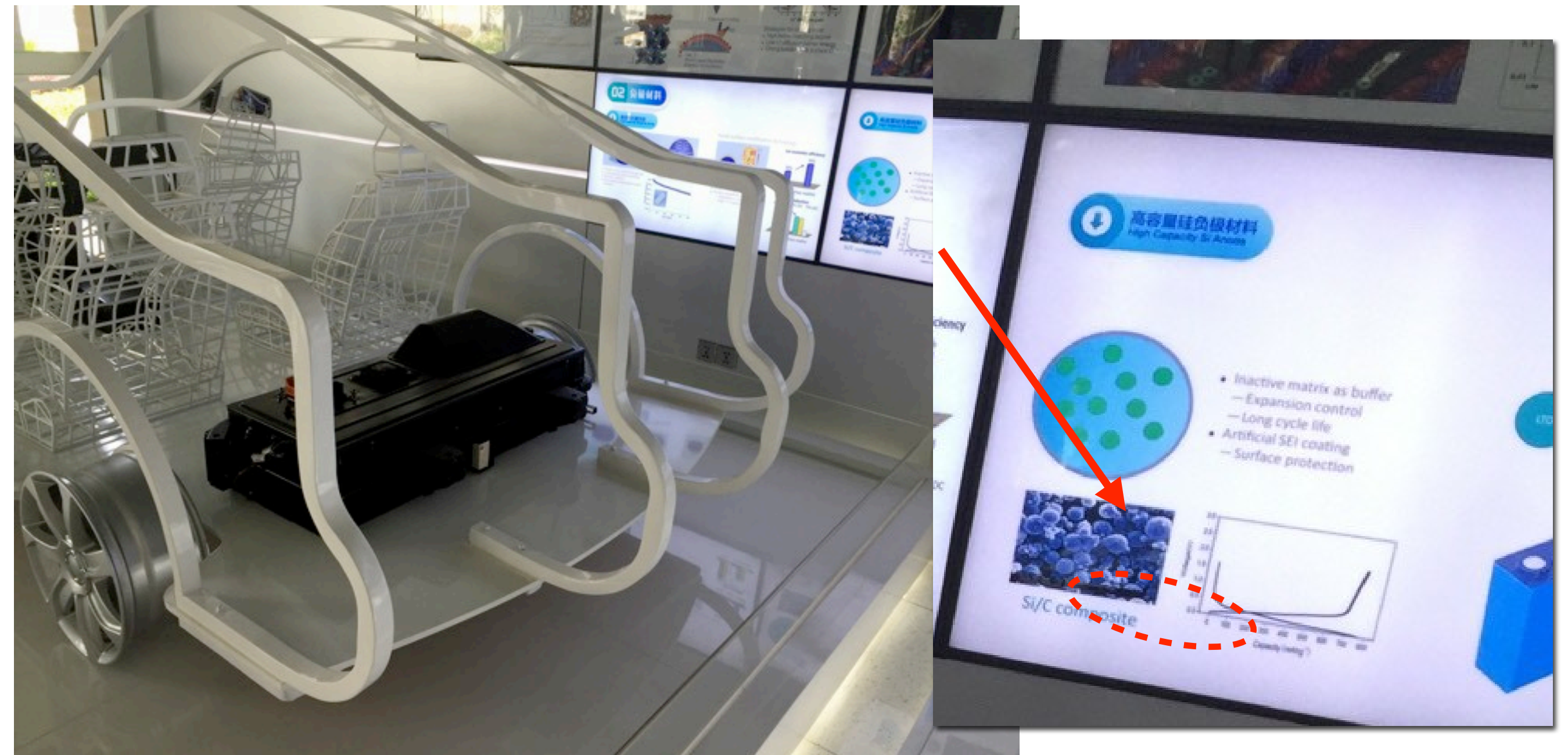


Talga Li-ion anode preparation

- ▶ Talga can produce graphite for Li-ion battery anodes: **No** grinding, micronising and shaping costs
- ▶ Recent tests support previous **breakthrough results** (ASX:TLG 17 Feb 2016)
- ▶ Results show **excellent stability** and greater than 99.7% efficiency without capacity fade
- ▶ Tests underway on **larger scale** programs at EIC Warwick UK and with battery manufacturer in USA
- ▶ Data supports commencing **industrial** Li-ion '**pouch**' cell testwork and commercial-style **roll to roll** anode formulations

Live-in factory facilities of global leading Li-ion battery manufacturer, China

- ▶ Graphene as an additive can improve charging speed, capacity and other performance criteria.
- ▶ Graphene is more conductive than graphite so suits **current** and **emerging** battery technologies:
 - *Silicon-graphene in Li-ion*
 - *Li-Sulphur*
 - *Li-Aluminium*
 - *Li-Air*
 - *Flow batteries*
 - *Printable batteries*
- ▶ Major battery makers are testing and preparing the next generation materials - no technology trap



Silicon-graphene anode technology advertised as part of development

- ▶ Automotive emission regulations becoming **even tougher**
- ▶ Supply of raw material **crucial** to meeting objectives
- ▶ Driving both 'Electrification' and '**Lightweighting**' focus
- ▶ Sizeable market for graphene applications across automotive material chain including **bodies, wiring, fluids, tires and coatings**






Regulatory Targets

CO₂ STATUS & FUTURE TARGETS

	PREVIOUS	2015	2021	2025
		CONFIRMED		PROPOSED
	123 ₂₀₁₄	130	95	68 – 78
	170 ₂₀₁₄	163	124	101
	169 ₂₀₁₃	161	117 ₂₀₂₀	NOT DEFINED

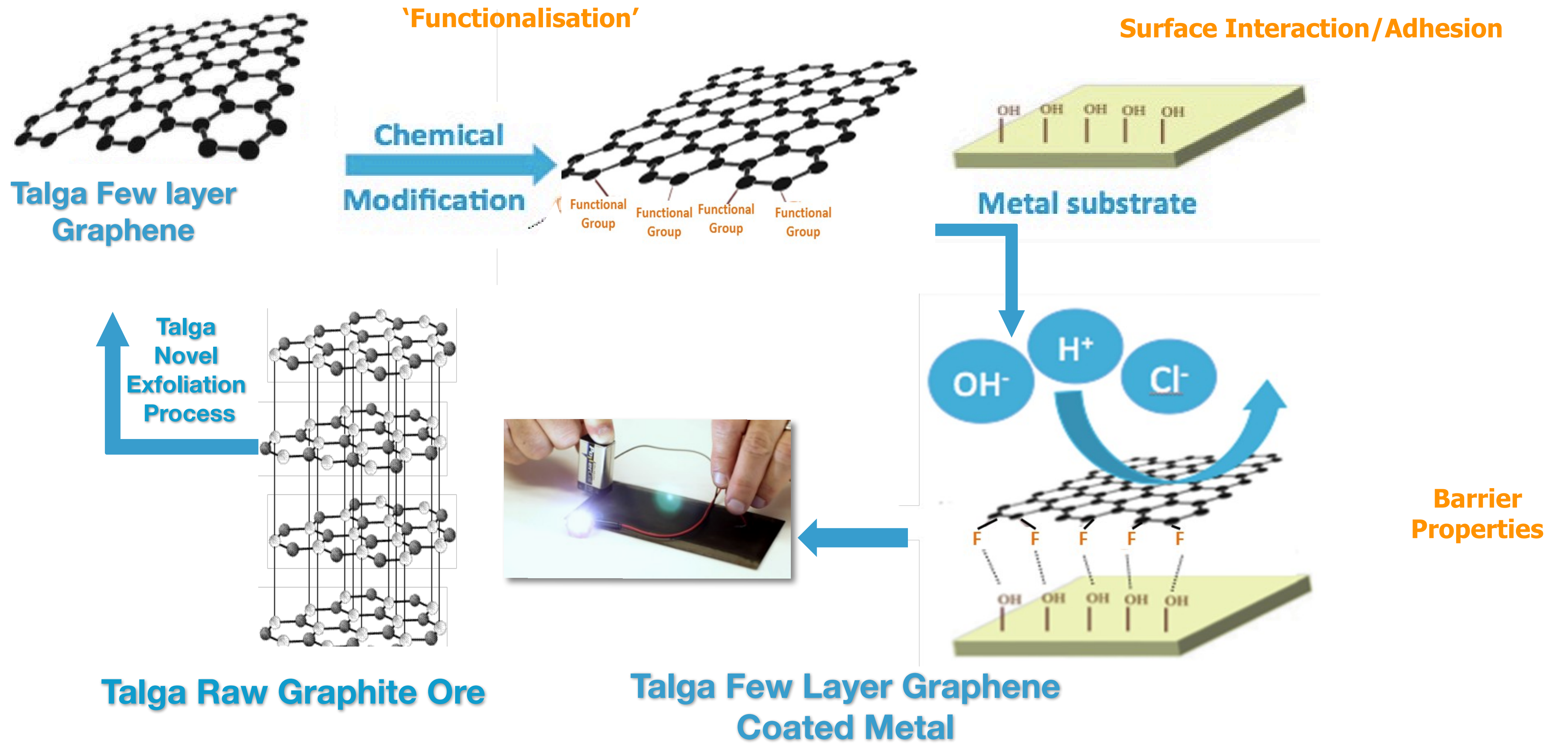
GRAMS CO₂ / KILOMETER

Enacted Targets*

	54 MPG	~24% Improvement By 2021
	48 MPG	~39% Improvement By 2020
	56 MPG	~54% Improvement By 2025
	49 MPG	~17% Improvement By 2022
	41 MPG	~11% Improvement By 2017

- ▶ Graphene produces opportunity to deploy our products more widely





- ▶ Talga functionalised graphene “Talphone” anti corrosion coating **peer-review** Corrosion Evaluation
- ▶ Results show coating steel with Talga’s graphene significantly increases corrosion **protection** by up to **74%**
- ▶ Validates global potential of Talga products for large volume coatings sector



TLG Graphene significantly reduces corrosion over longer time span

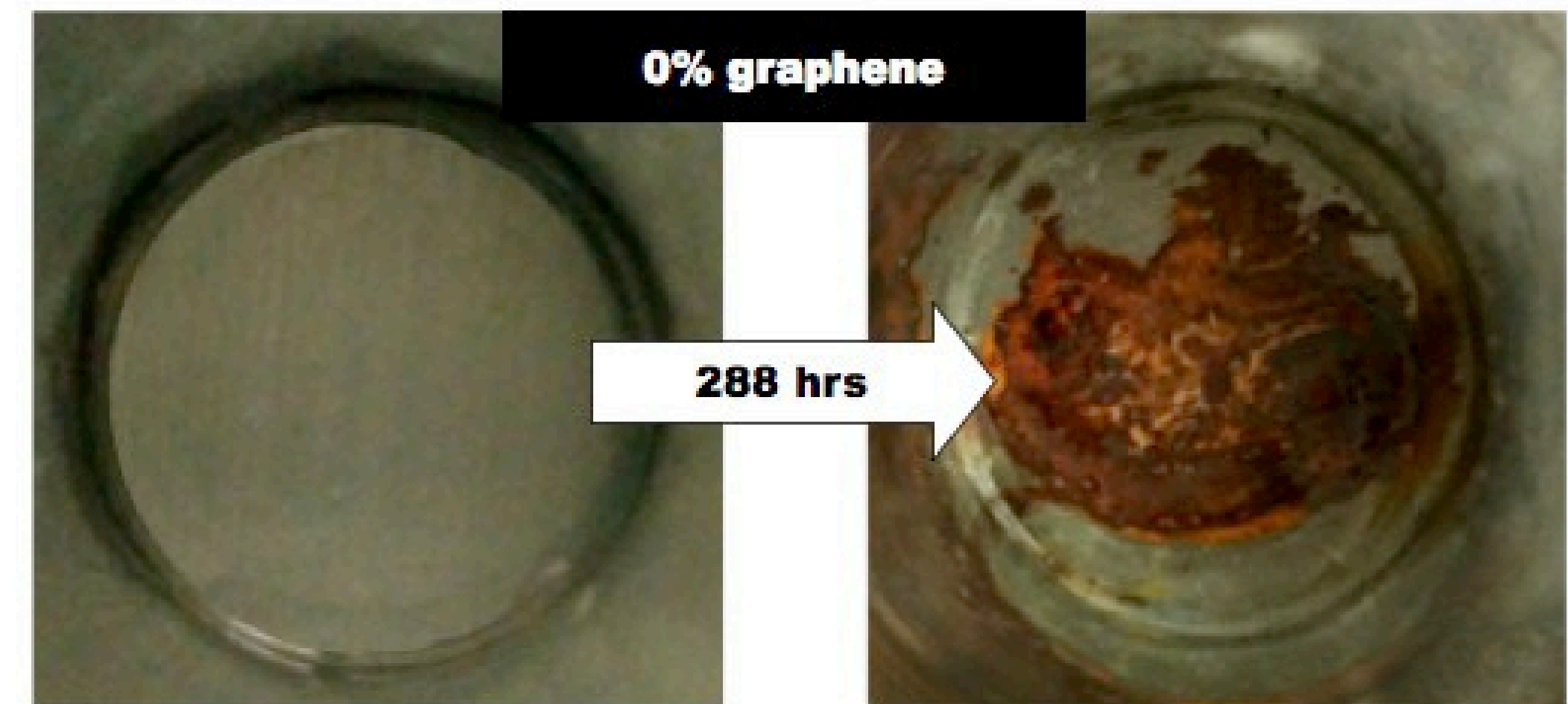
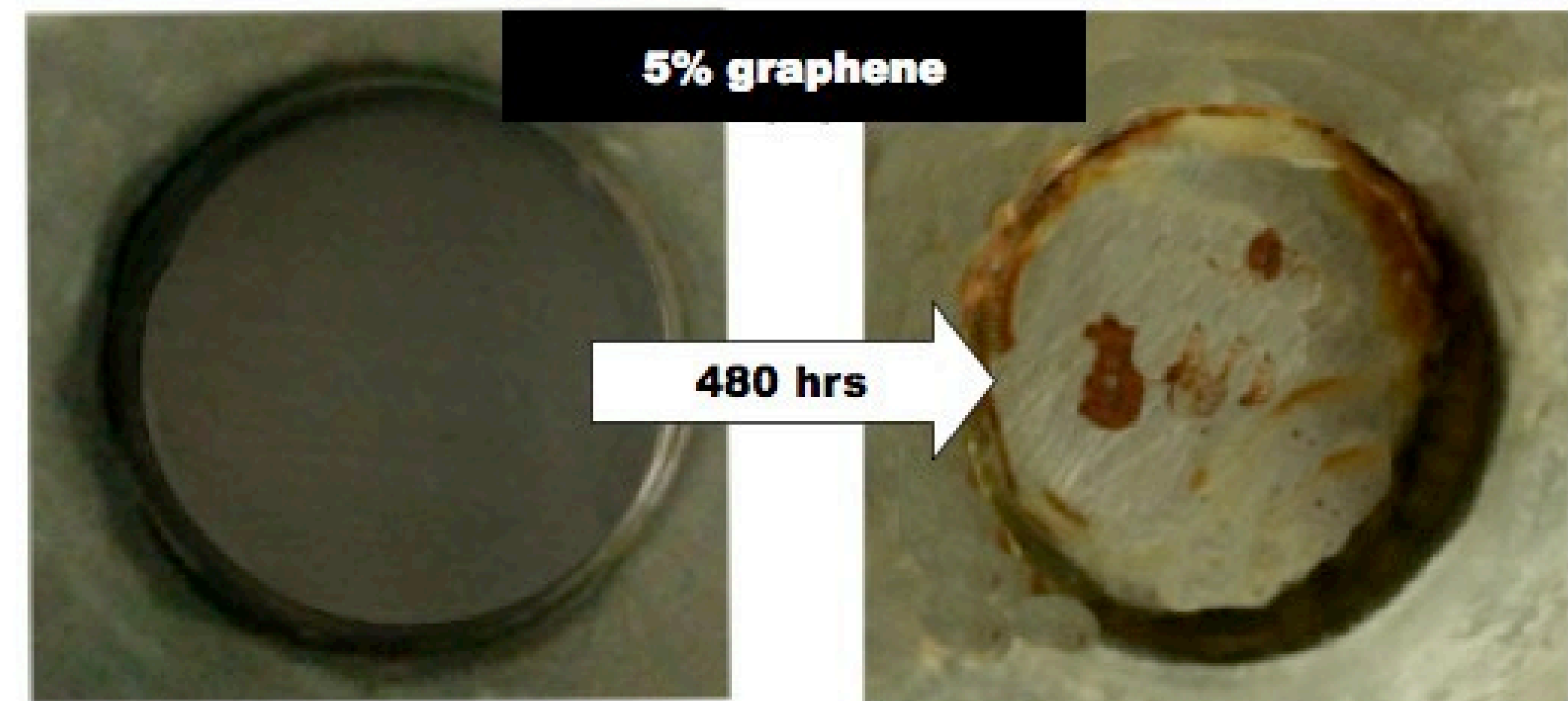
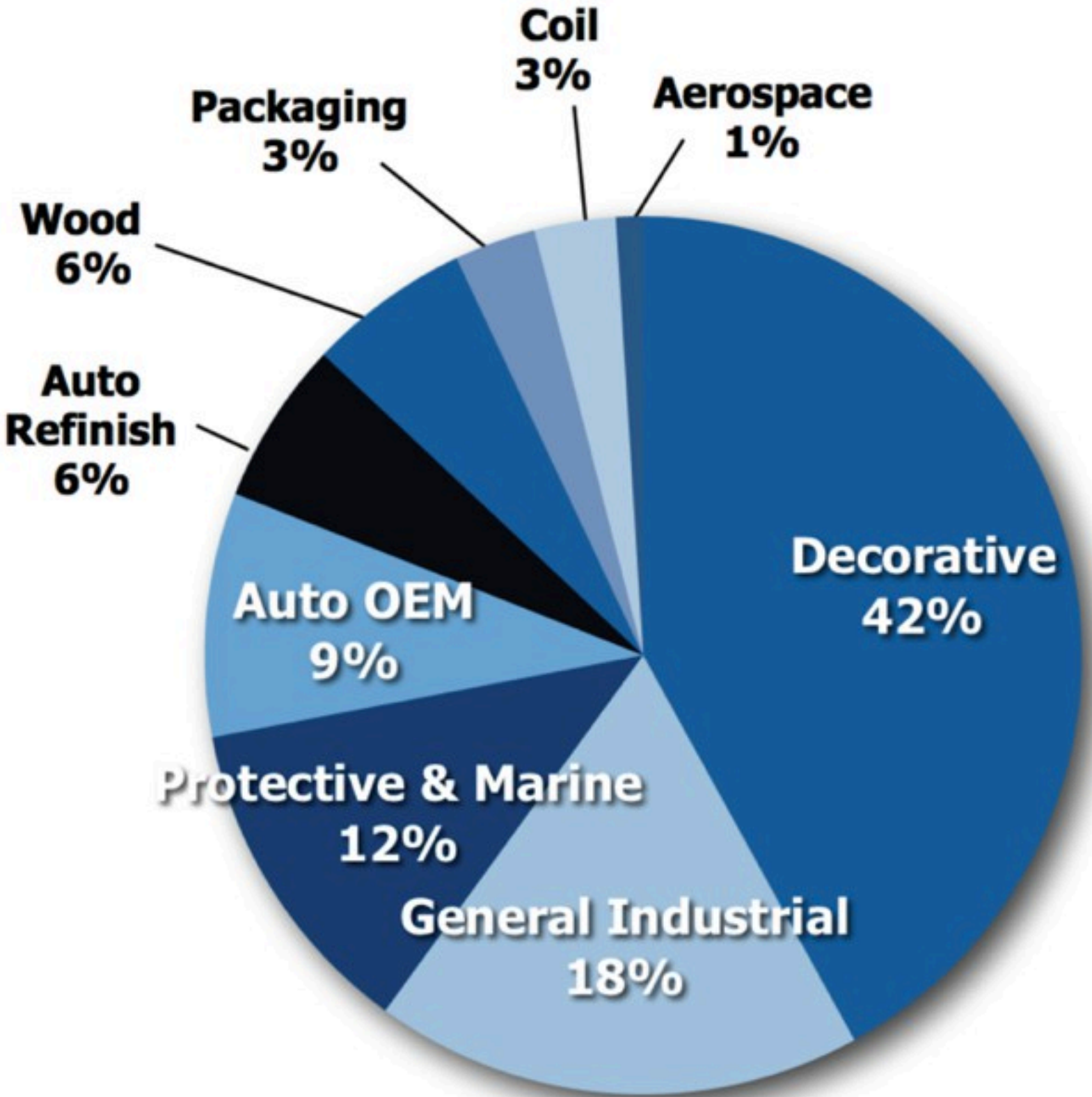


Fig 1. Paints and Coatings Global Market US\$/annum.

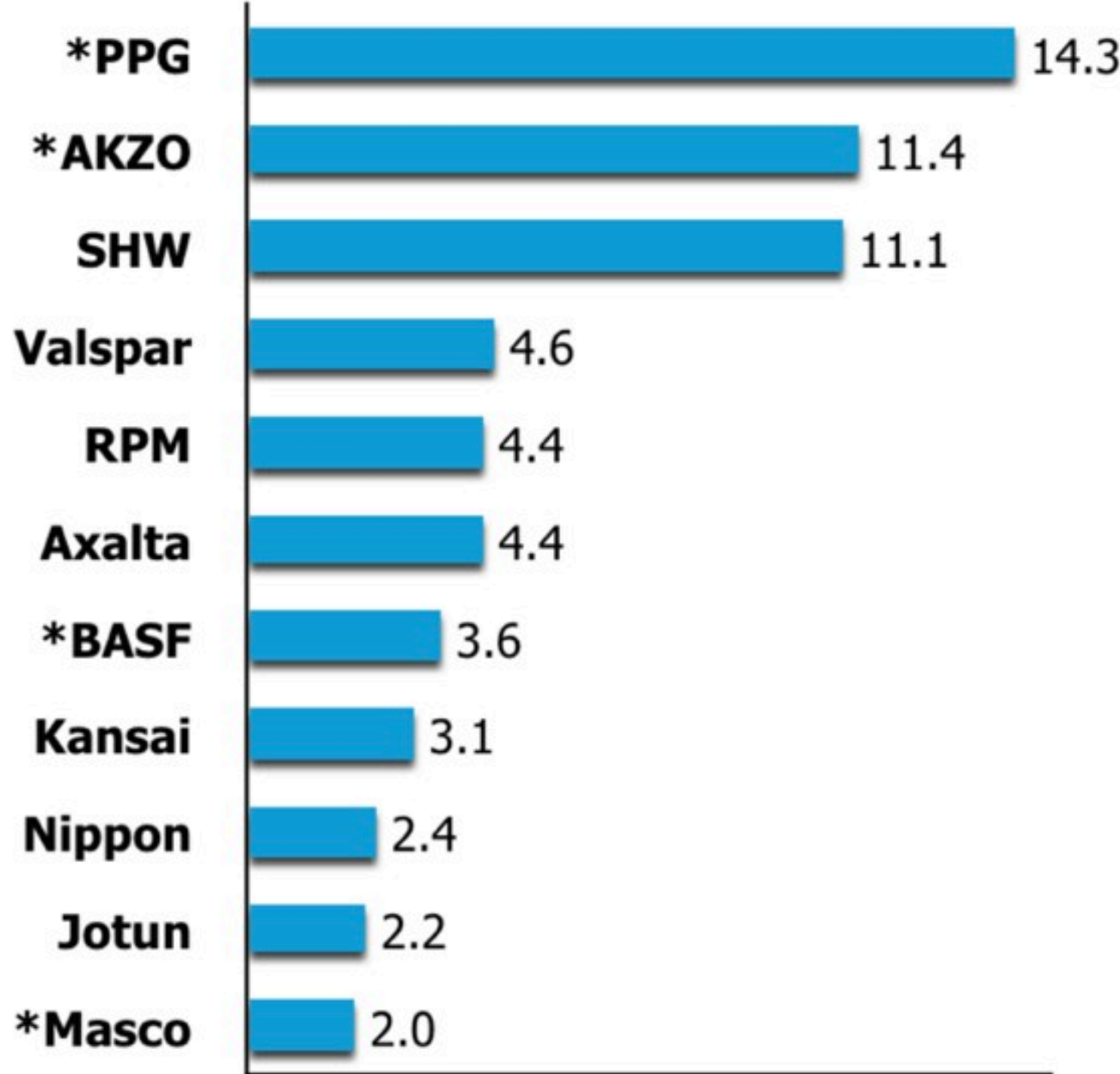
Total Paints and Coatings Market : \$120 Billion



Source: Jan 2016 Valspar Investor Presentation after 2013 Orr & Boss, Kusumgar, Nerlifi & Growney

Fig 2. Paints and Coatings Market Leaders US\$/annum.

Global Leaders by Sales (\$Billion)



Source: Jan 2016 Valspar Investor Presentation & Company reports. * Excludes non-coating sales

Printed conductive ink - PV Panels



- ▶ **Current** conductive ink market relies on nano-silver and carbon black which are high cost
- ▶ Demand for silver in solar industry **78 million ounces** in 2015, **up 23%** over 2014*
- ▶ Graphene conductive ink can be lower cost and higher performing in some applications

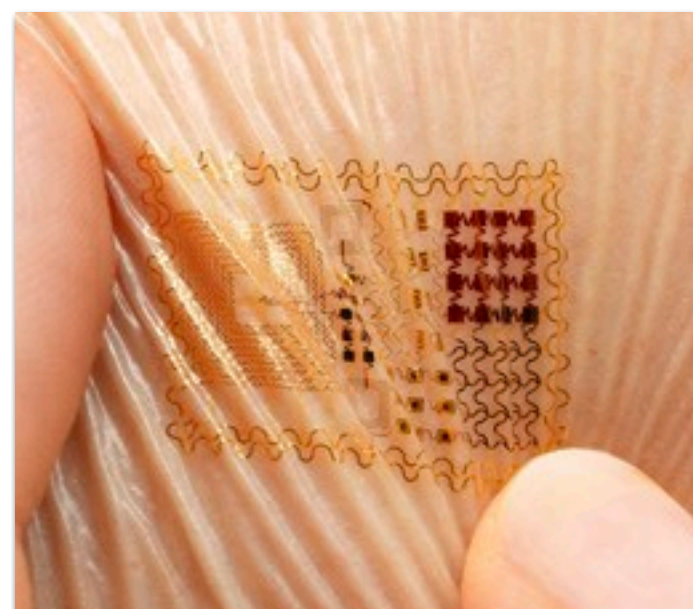
- ▶ Talga is developing a conductive ink targeting these markets in addition to making hybrid conductive polymers (plastic) to replace metal wiring in EV's, increasing **range** and **performance**

- ▶ Preliminary tests with industry **promising**, expanded programs being scoped.

Packaging



Medical



Automotive





Municipal level road heating installation



Domestic driveway heating installation

- ▶ Graphene additives can make concrete more electrically and thermally **conductive**
- ▶ Low voltage electric current can then **warm** the material without the need for high cost installation and high maintenance water-tubes and wired systems
- ▶ **Large volume** markets exist for **ice and snow-free** roads/ rail crossings, bridges, footpaths, outdoor stairs and airport aprons as well as underfloor heating and driveways
- ▶ Alternate markets exist for high performance concrete with increased **strength** similar to carbon nanotubes (eg, Edconcrete) but using graphene oxide

- ▶ Pilot process test-work **well advanced**
- ▶ 3 phases to upscaling process
– **Phase 2 just commissioned**
- ▶ **High quality** graphene output confirmed
- ▶ **~76%** of input carbon converted to graphene
- ▶ Capacity **scale up continues** towards Phase 3
- ▶ Product outputs used to supply product feed, prototypes and **customer samples**

Phase 2 pilot test platform



Portion of graphene coating product for customer test program, Talga Advanced Materials GmbH



Underway! Upcoming Catalysts



References

#) see <http://www.techmetalsresearch.com/metrics-indices/tmr-advanced-graphite-projects-index/>

* see Industrial Minerals Natural Graphite report 2012, unpublished internal reports for Talga, and Scoping Study released to ASX 9 October 2014.

NB) any data not specifically referenced is based on personal communications with industry participants where appropriate and/or unpublished technical research.

Cautionary Statement

The scoping study referred to in this report is based on low level technical and economic assessments, and is insufficient to support estimation and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusion of the scoping study will be realised. The Company confirms that all material assumptions and technical parameters underpinning the scoping study results and projections in this release continue to apply and have not materially changed. The use of the word "ore" in the context of this report does not support the definition of 'Ore Reserves' as defined by the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The word 'ore' is used in this report to give an indication of quality and quantity of mineralised material that would be fed to the processing plant and is not to assumed that 'ore' will provide assurance of an economic development case at this stage, or to provide certainty that the conclusion of the scoping study will be realised.

Competent Person's Statement

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled and reviewed by Mr Simon Coxhell, a consultant to the Company and a member of the Australian Institute of Mining and Metallurgy and Mr Mark Thompson, who is an employee of the Company and a member of the Australian Institute of Geoscientists. Mr Thompson and Mr Coxhell have sufficient experience which is relevant to the activity which is being 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 Thompson and Mr Coxhell consent to the inclusion in the 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 Resource Estimation 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.

Graphene to Graphite Market on a Slide

PRODUCTS AND APPLICATIONS

GRAPHENE

vFLG = Very Few Layer Graphene (1-3 sheets)
Flexible electronics, Water membranes, Bio-tech

FLG = Few Layer Graphene (2-5 sheets)
Sensors, Conductive ink, Li-Air batteries

MLG = Multilayer Graphene (3-10 sheets)
Functional coatings, Composites, Plastics

GNP = Graphene Nano Platelets (10-150 sheets)
Functional coatings, Fuel cells, Cement and road additives

GRAPHITE

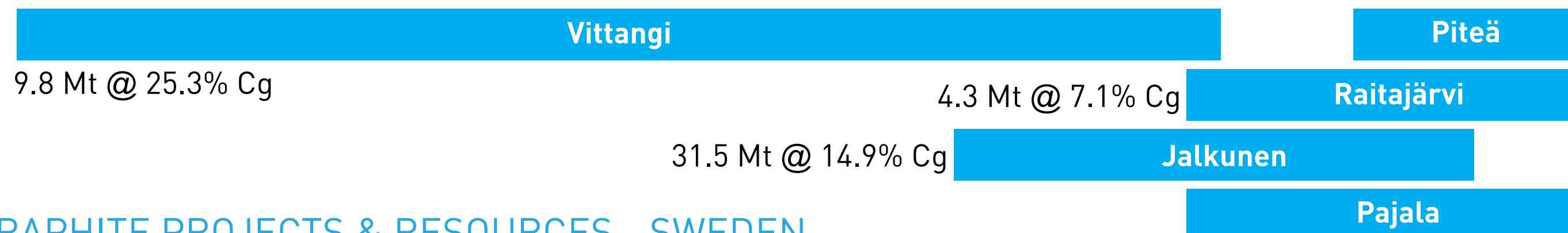
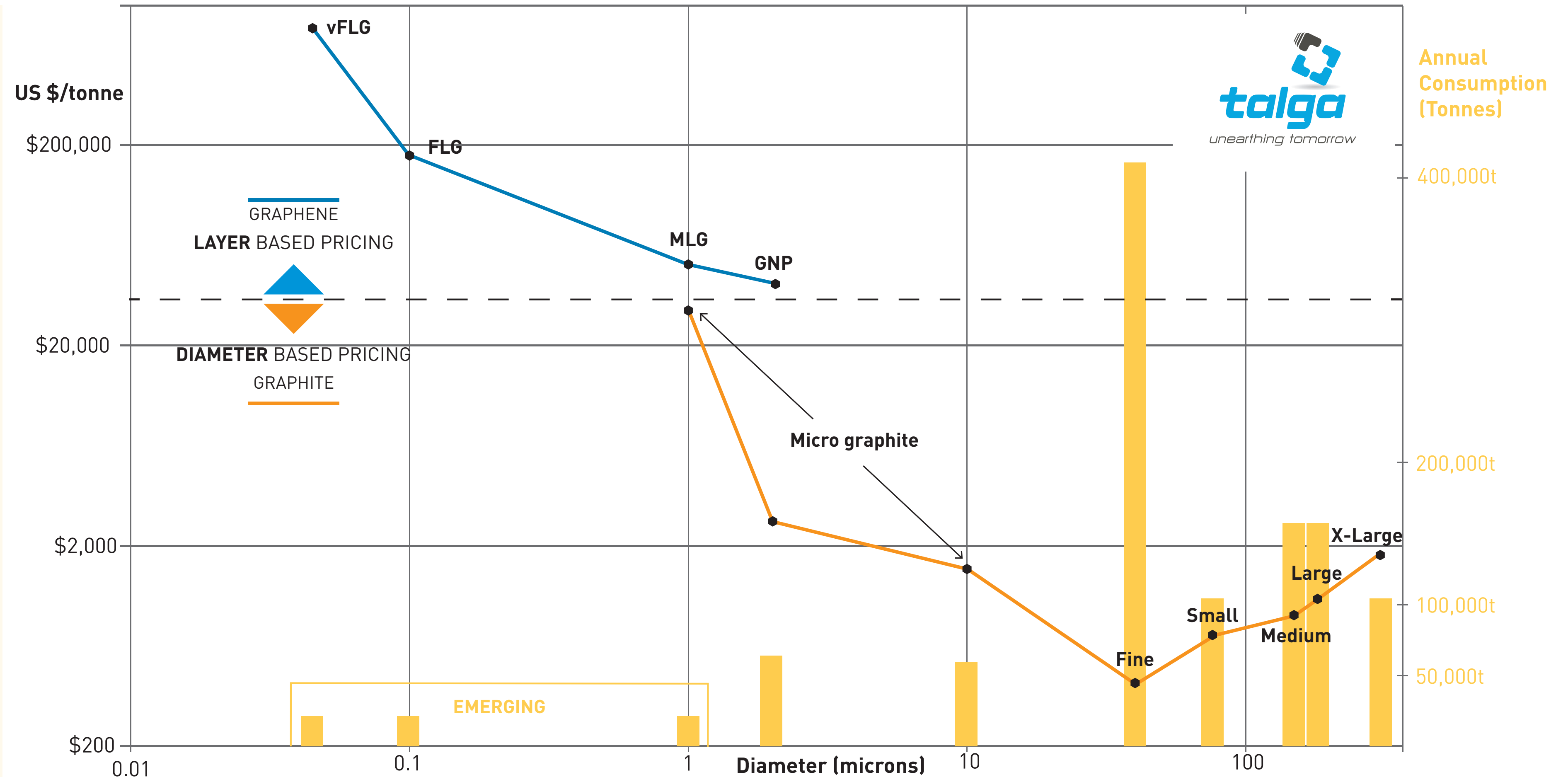
Micro to X-Large = Flake graphite (>3,000 sheets)

Micro - Insulation and construction products, Lubricants, Pencils, Flame retardants, Additives, Li-Ion batteries

Fine - Refractories

Small-Large - Recarburisers, Li-Ion batteries

X-Large - Various industrial uses



TALGA GRAPHITE PROJECTS & RESOURCES - SWEDEN

Graphite JORC Resources and Exploration Targets



Nunasvaara JORC (2012) Mineral Resource (10% Cg cut-off)

JORC 2012 Classification	Tonnes	Graphite (%Cg)
Indicated	6,900,000	24.2
Inferred	2,900,000	28.1
Total	9,800,000	25.3

Jalkunen JORC (2012) Mineral Resource (5% Cg cut-off)

JORC 2012 Classification	Tonnes	Graphite (%Cg)
Inferred	31,500,000	14.9

Raitajärvi JORC (2004) Mineral Resource¹ (5% Cg cut-off)

JORC 2004 Classification	Tonnes	Graphite (%Cg)
Indicated	3,400,000	7.3
Inferred	900,000	6.4
Total	4,300,000	7.1

Talga Graphite Exploration Targets² 0-100m Depth

Project	Exploration Target	Tonnes (0-100m Vertical Depth)		Graphite (% Cg)	
		Min.	Max.	Min.	Max.
Vittangi	Nunasvaara	62,400,000	93,600,000	20	30
	Kotajärvi	16,640,000	30,160,000	20	25
	Maltosrova	20,800,000	52,000,000	20	25
Jalkunen	Tiankijokki	2,600,000	5,200,000	15	25
	Nybrännan	5,200,000	10,400,000	20	30
	Suinavaara	2,600,000	5,720,000	15	25
	Lautakoski	26,000,000	52,000,000	15	25
Subtotal		136,240,000	249,080,000	19	27
Rounded Total		136,000,000	250,000,000	18	25

1 Note: This information was prepared and first disclosed under the JORC code 2004. It has not been updated since to comply with the JORC code 2012 on the basis that the information has not materially changed since it was last reported. The Company is not aware of any new information or data that materially affects the information included in the previous announcement and that all of the previous assumptions and technical parameters underpinning the estimates in the previous announcement have not materially changed.

2 Note: The Exploration Target is based on a number of assumptions and limitations with the potential grade and quantity being conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource Estimate in accordance with the JORC Code and it is uncertain if future exploration will result in the estimation of a Mineral Resource.