

## **KIBARAN RESOURCES INVESTOR PRESENTATION**

**Kibaran Resources Limited** (ASX: KNL), ('Kibaran' or the 'Company') is pleased to advise that Managing Director, Andrew Spinks will be presenting today at the Resources Rising Stars Conference, Gold Coast, Queensland.

The presentation "Development of the Epanko Graphite Project for the high growth Battery Market" has been appended to this announcement.

Further information, please contact:

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PREMIUM QUALITY GRAPHITE IN TANZANIA



# Development of the Epanko Graphite Project for the high growth Battery Market

Resources Rising Stars Conference - May 2016

**ASX: KNL**

*premium quality graphite uniquely tanzanian*



# DISCLAIMER

## Securities Disclaimer

This presentation is for informational purposes only and does not constitute an offer to sell, or solicit to purchase, any securities. Such offer can be made only through proper subscription documentation and only to investors meeting strict suitability requirements. Any failure to comply with these restrictions may constitute a violation of applicable securities laws.

## Forward looking Statements

Various statements in this presentation constitute statements relating to intentions, future acts and events. Such statements are generally classified as “forward looking statements” and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed herein. The company gives no assurances that the anticipated results, performance or achievements expressed or implied in these forward looking statements will be achieved.

## Competent Person

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Andrew Spinks, who is a Member of The Australasian Institute of Mining and Metallurgy included in a list promulgated by the ASX from time to time. Andrew Spinks is a director of Kibaran Resources Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration 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”. Andrew Spinks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on information compiled by Mr David Williams, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. David Williams is employed by CSA Global Pty Ltd, an independent consulting company. Mr Williams has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration 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”. David Williams consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Ore Reserve has been compiled by Mr Steve O'Grady. Mr O'Grady, who is a Member of the Australasian Institute of Mining and Metallurgy, is a full time employee of Interline Engineering and produced the Mining Reserve estimate based on data and geological information supplied by Mr Williams. Mr O'Grady has sufficient experience that is relevant to the estimation, assessment, evaluation and economic extraction of Ore Reserve that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr O'Grady consents to the inclusion in this report of the matters based on his information in the form and context that the information appears.



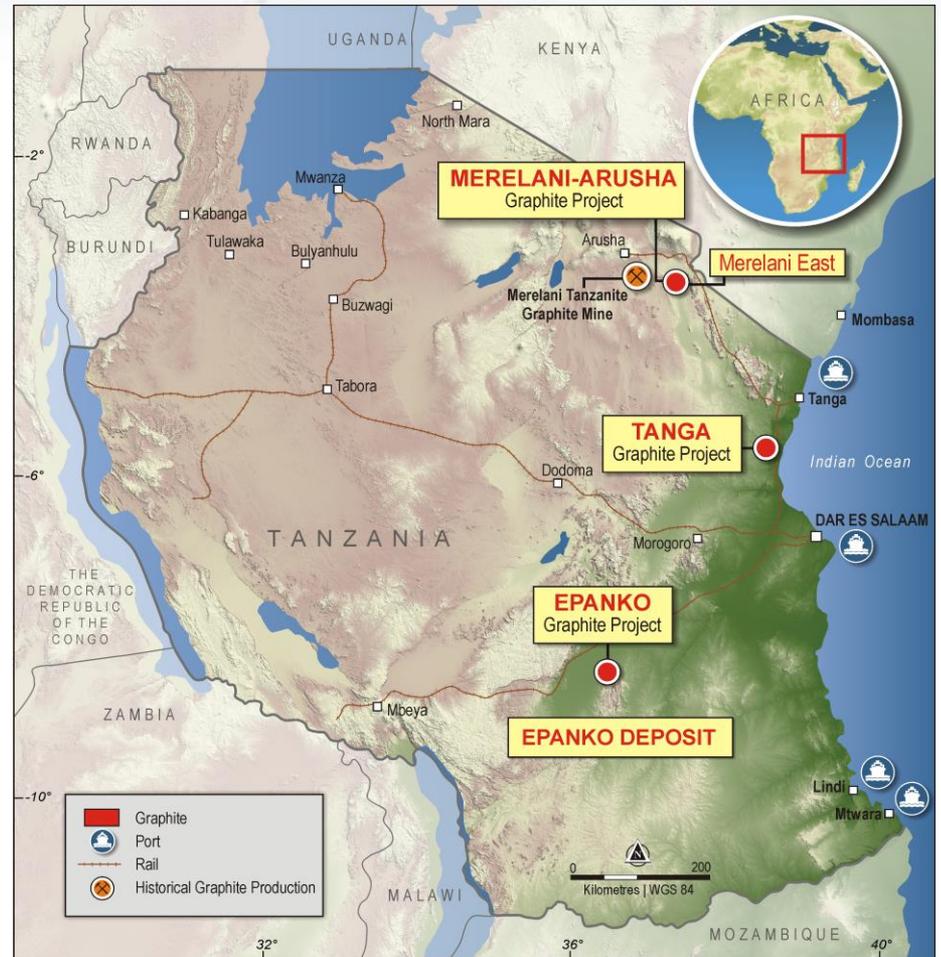
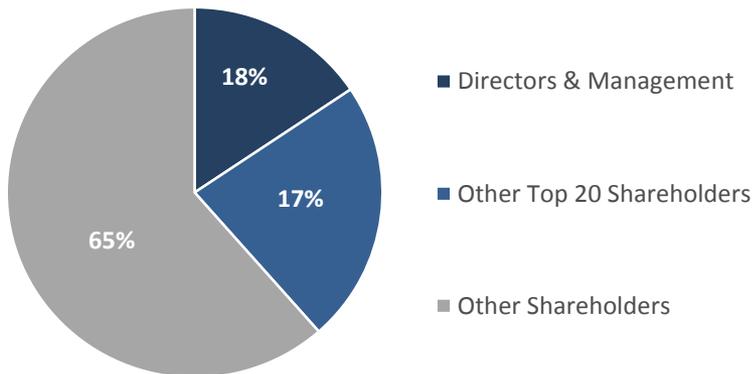
# COMPANY OVERVIEW

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## Capital Structure

| KNL:ASX                  |                                |         |
|--------------------------|--------------------------------|---------|
| Shares on Issue          |                                | 182.4m  |
| Share Price (5 May 2016) |                                | \$0.22  |
| Market Capitalisation    |                                | \$40.1m |
| Net Cash (31 March 2016) |                                | \$2.3m  |
| Enterprise Value         |                                | \$37.8m |
| Options                  |                                |         |
| Unlisted Options         | Various Exp, Various Ex Prices | 18m     |

## Shareholders





## KEY HIGHLIGHTS

### Epanko Graphite Project - Feasibility Study

- Ore Reserve supporting 25 year mine life with contained resource of 2,194,600 tonnes
- 75% of forecast annual production of 40,000 tonnes supported by binding off-takes
- ThyssenKrupp 20,000tpa to be sold to steel industry and 10,000tpa for other high-end uses
- Completed BFS - Capital cost of US\$77.5m; IRR of 41.2%; Payback 2.7 years; NPV of US\$197.4m and EBITDA of US\$33.6m
- 9 month development timetable from financing, leaving short lead-time to production and cashflow
- Financials exclude lithium-ion battery sales

### Offtake Agreements

- Binding Offtake Agreements with Germany's ThyssenKrupp + EGT
- Sales to Japan-Korea Battery Market via MoU with Sojitz Corporation

### Debt Financing

- German KfW-Bank completing due diligence on US\$40m project debt funding with in-principle German Government Loan Guarantee (UFK)
- Expression of Interest from African banker Nedbank for US\$30m in project debt

### Downstream Processing of Epanko Graphite

- Scoping Study for Battery Grade Graphite (NPV) US\$115m



## Binding Offtake Agreements



- Traditional **Refractory** Market



- High Value **Expanded** Market

## MoU Agreement



- High Growth **Battery** Market



## Debt Financing

**KFW** IPEX-Bank



- World's Safest Bank
- German Gov't Loan Guarantee
- Africa's Largest Investment Bank



## Low Sovereign Risk

- Corporate Tax (30%)
- Royalty (3%)
- Mature mining sector
- Skilled workforce
- Access to grid power
- Well developed infrastructure network



*New Road and Bridge Construction on route to Epanko*



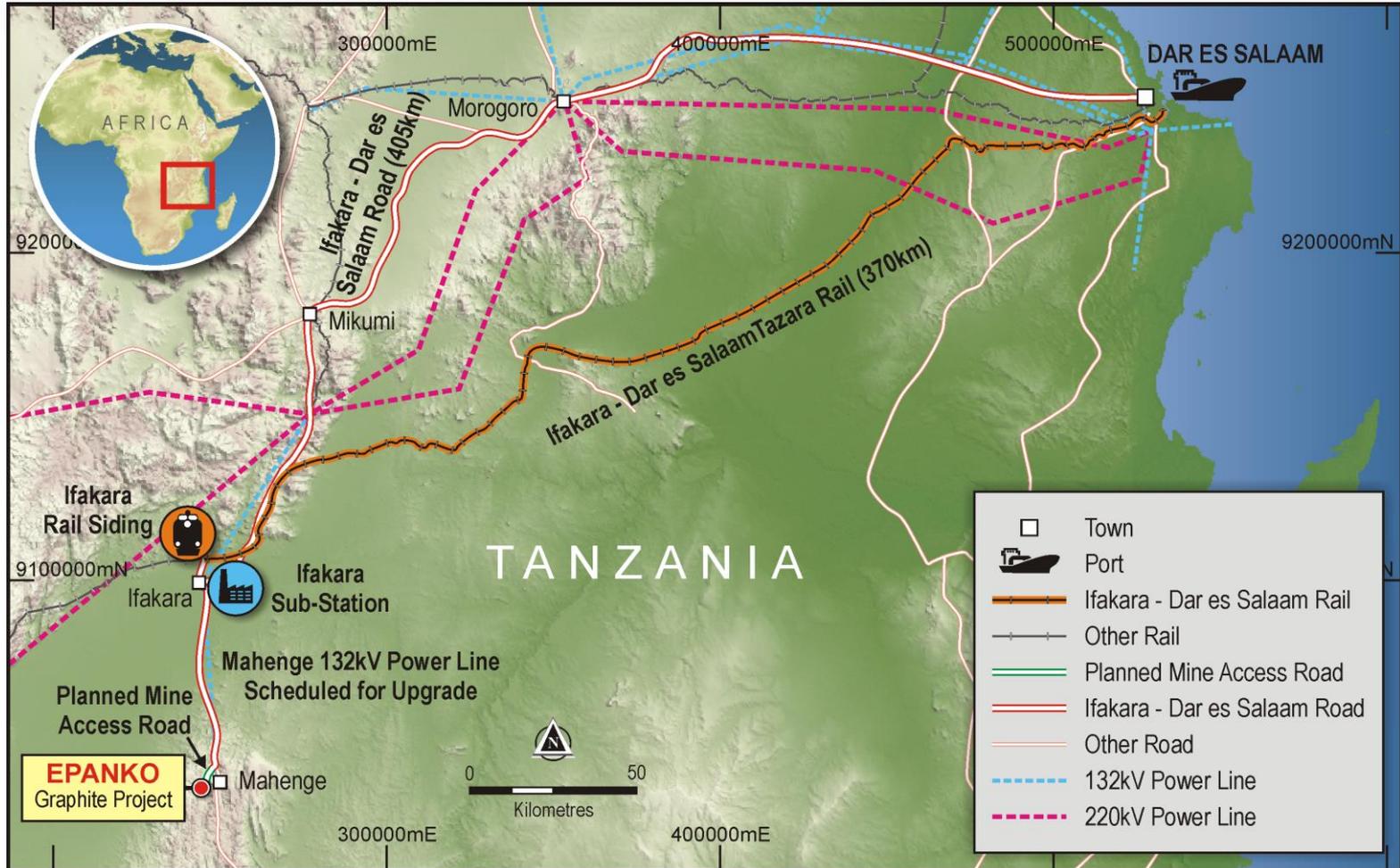
## Completed Bankable Feasibility Study

- Simple open cut mine and conventional flotation processing plant
- Ore Reserve supporting 25 year mine life with contained resource of 2,194,600 tonnes
- Capex of US\$77.5m
- Annual EBITDA of US\$33.6m for 15 years with 40,000tpa
- Pre-tax (NPV) of US\$197.4m
- Payback 2.7 years
- Strip Ratio (W:O) 1:1 LOM
- Revenue Price US\$1,466/t of concentrate
- Opex FOB Dar es Salaam US\$570/t
- Two stage growth strategy to meet increasing demand



# PROJECT LOCATION AND INFRASTRUCTURE

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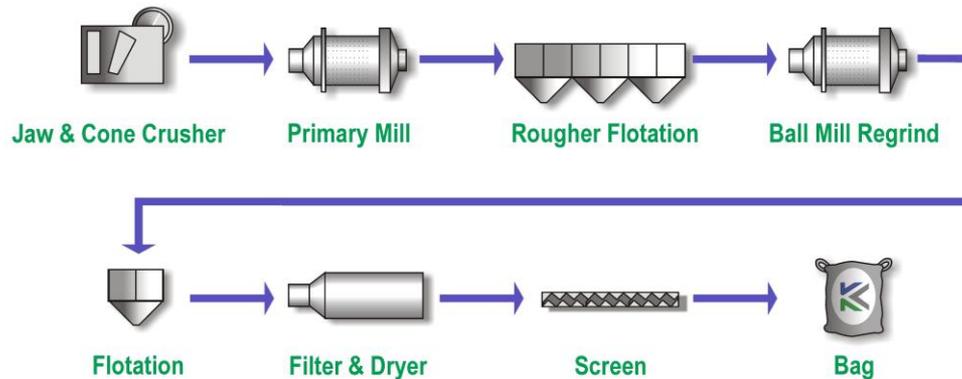




# Production of Natural Flake Graphite

- Simple flowsheet design

Initial  
Production  
40ktpa



Double  
Production  
80ktpa  
+\$30m

| EPANKO FLAKE SIZE DISTRIBUTION |                              |           |                         |                     |
|--------------------------------|------------------------------|-----------|-------------------------|---------------------|
| Name                           | Microns<br>( $\mu\text{m}$ ) | Mesh Size | Portion Retained<br>(%) | Carbon Grade<br>(%) |
| Jumbo                          | >300                         | >48       | 20.0                    | 97.1                |
| Large                          | >180                         | >80       | 35.4                    | 96.7                |
| Medium                         | >106                         | >150      | 30.3                    | 96.2                |
| Small                          | >75                          | >200      | 7.4                     | 95.3                |
| Fine                           | <75                          | <200      | 6.9                     | 92.6                |
|                                |                              |           | <b>100%</b>             | <b>96.3%</b>        |

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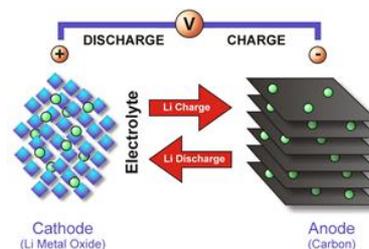
# ABOUT GRAPHITE

## An industrial mineral with unique physical properties:

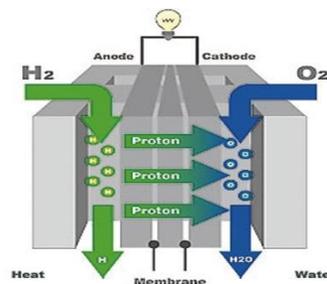
- Superior thermal/electrical conductivity
- Stable wide temperature range
- High melting point
- Excellent lubrication
- Malleable
- Resistant to chemical attack



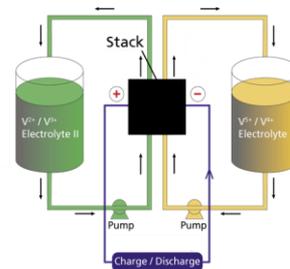
## Battery Grade Graphite



### Lithium-Ion



### Fuel-Cell



### Redox-Flow

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# GLOBAL PRODUCTION AND DEMAND

- China is the largest producer (~600ktpa) of natural graphite
- Half of China's production is consumed by USA, Europe, Japan and Korea



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# KIBARAN'S GRAPHITE SALES

- Europe is the largest refractory market outside China
- Japan and Korea is largest battery grade graphite market



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## GLOBAL DEMAND FOR FLAKE GRAPHITE

- Epanko annual production of 40,000 tonnes is 7% of global demand

| END-USE            | REGION     |           |               |               |           | TOTAL      |
|--------------------|------------|-----------|---------------|---------------|-----------|------------|
|                    | Asia       | Europe    | North America | South America | Others    |            |
| Refractories       | 225        | 46        | 15            | 30            | 8         | 324        |
| Foundries          | 28         | 20        | 15            | 12            | 4         | 79         |
| Batteries          | 57         | 4         | 5             | 4             | 1         | 71         |
| Friction           | 10         | 5         | 3             | 1             | 1         | 20         |
| Lubricants         | 10         | 3         | 2             | 1             | 1         | 17         |
| Others             | 36         | 14        | 14            | 20            | 5         | 81         |
| <b>Total (kt)*</b> | <b>366</b> | <b>92</b> | <b>54</b>     | <b>68</b>     | <b>20</b> | <b>600</b> |

Source: ProGraphite

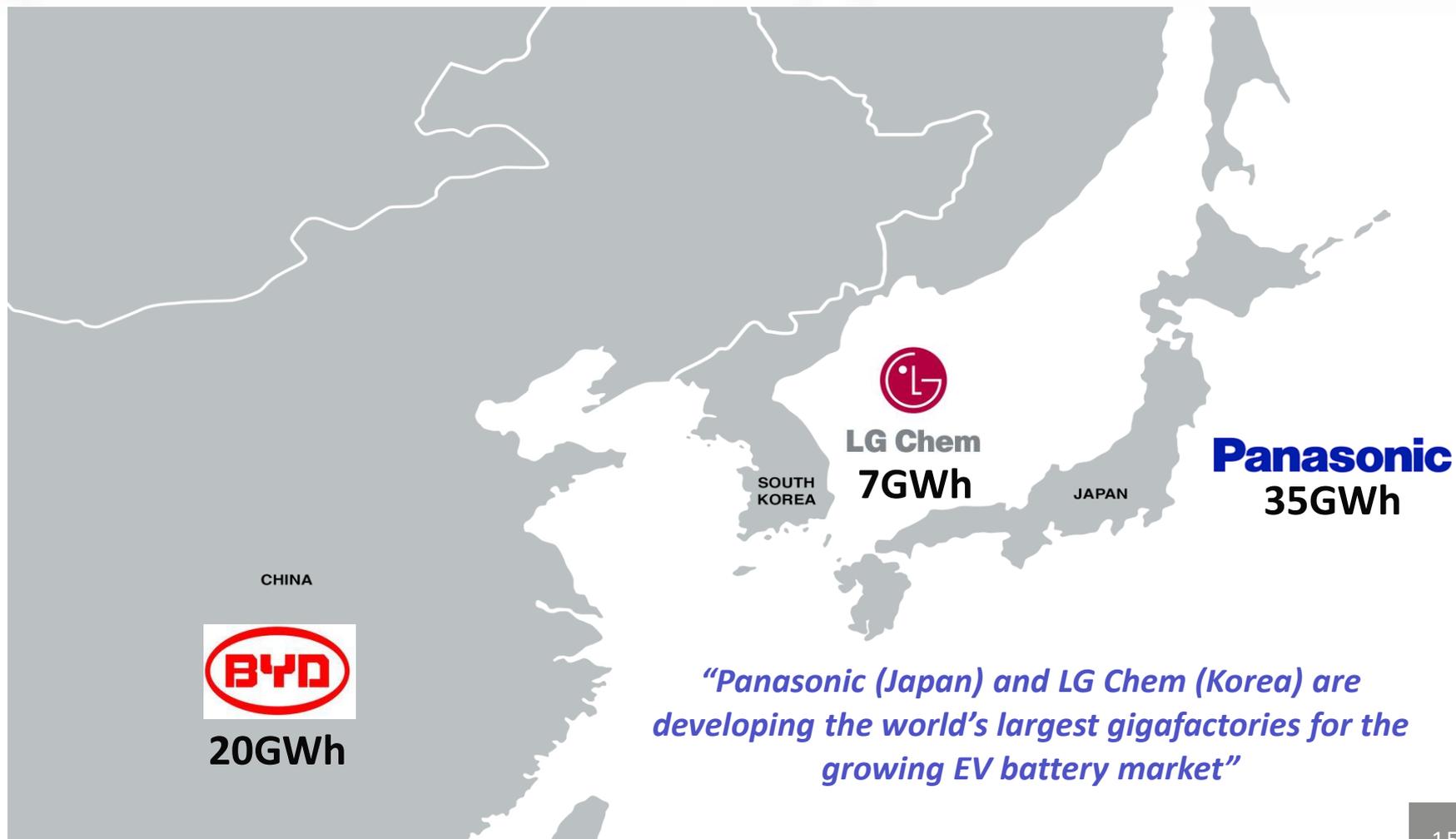
\* kt = 1000 tonnes



# WORLD'S LARGEST GIGAFACTORIES

## Gigafactories will drive future graphite demand

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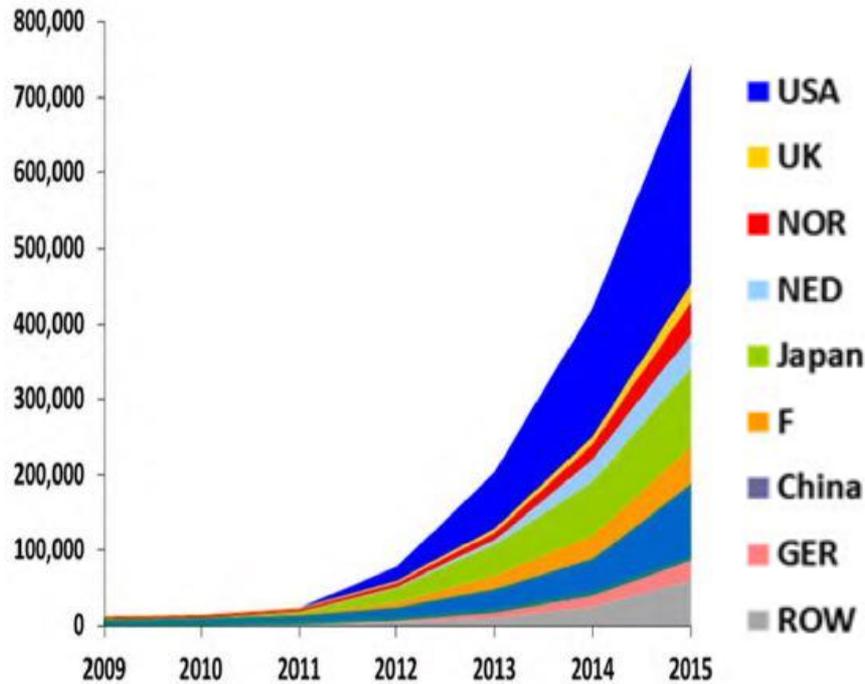
Source: Schematic Interpretation of Benchmark Mineral Intelligence



# CURRENT GLOBAL BATTERY DEMAND

## ELECTRIC VEHICLES ('EV')

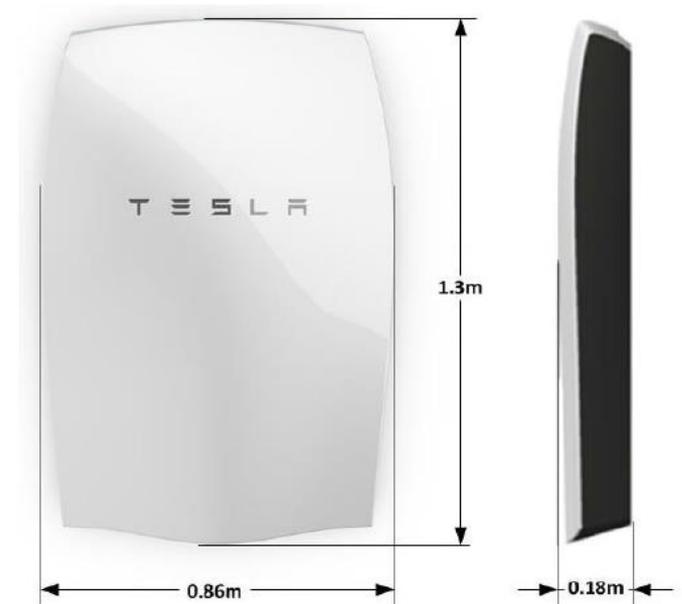
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Number of electric cars worldwide on January 1, 2015

## ENERGY STORAGE SYSTEMS ('ESS')

### The Tesla Powerwall



Source: Tesla

*“Tesla’s 2016 production of its lithium-based Powerwall sold out in August 2015”*



# KIBARAN – VERTICALLY INTEGRATED

## EPANKO GRAPHITE MINE

Production of Natural Flake Graphite  
40,000 tpa of Graphite  
**NPV - US\$197.4m**



**ThyssenKrupp**

**EGT**

European  
Trader

## PRODUCTION OF BATTERY GRAPHITE

Mechanical Shaping and Purification  
5,000 tpa of Spherical Graphite  
**NPV - US\$115m**



## PRODUCTION OF LIB ANODE

Coating of Spherical Graphite  
Mixing with Binder and Additives  
Coating slurry on copper foil

## PRODUCTION OF LITHIUM-ION BATTERY



**Panasonic**

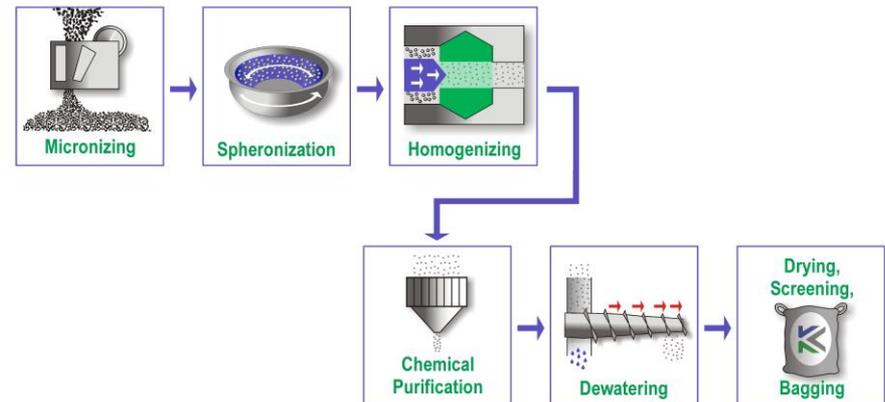
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*“Securing the lucrative supply chain of the worlds gigafactories”*



## Scoping Study Completed

- Superior quality confirmed by end users
- Initial production 15,000tpa
- NPV US\$115m
- Capital Expenditure US\$30m



## Next Step - Feasibility Study

- Production scale test on bulk sample commenced
- Finalising binding agreement with Sojitz Corporation
- Discussion with further strategic partnerships well advanced



## BOARD & MANAGEMENT TEAM

### **Robert Pett – *Non-Executive Chairman***

- Minerals Economist with over 30 years experience in developing resources and mines in Australia and Africa. Founding Chairman of Resolute Mining.

### **Andrew Spinks - *Managing Director***

- Geologist with over 25 years experience. Expertise in exploration, mining and management across a range of commodities.

### **Grant Pierce OAM - *Executive Director Projects***

- Mining engineer with over 25 years experience, including the development of Edikan (Perseus), Tulawaka (Barrick) and Golden Pride (Resolute). Awarded the Order of Australia Medal in 2003 for his personal contribution to social development in rural Tanzania.

### **John Conidi - *Non-Executive Director***

- Bachelor of Commerce Degree from the Royal Melbourne Institute of Technology. 14 years of experience in developing, acquiring and managing publicly listed businesses.

### **Robert Hodby - *CFO/Company Secretary***

- Bachelor of Commerce, Member of CPA Australia and Governance Institute of Australia with over 20 years industry experience in financing and administration of public and listed companies

### **Christoph Frey - *Technical Graphite Specialist***

- German based graphite industry professional with over 20 years graphite experience in Russia, Europe, Africa and China. Direct experience in production of battery grade graphite.





# OUR STUDY TEAM



*“All study consultants are considered leading experts with a proven history of developing projects in Tanzania”*



## Well Positioned to be a Producer

- Bluechip strategic partners – ThyssenKrupp AG + Sojitz + EGT
- Debt finance – KfW-IPEX Bank + German Gov't + Nedbank
- Access Japanese and Korean battery market
- Value add strategies to create further value
- Strong on-market support from Germany (Frankfurt listing)
- Kibaran – Vertically integrated from mine to battery plant



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