

# Powering the European *Energiewende*

*Lithium from Europe for Europe*





# Cautionary Statement

The information contained in this presentation has been prepared by Novo Lítio (NLI). This presentation is not an offer, invitation, solicitation or other recommendation with respect to the subscription for, purchase or sale of any securities in NLI. This presentation has been made available for information purposes only and does not constitute a prospectus, short form prospectus, profile statement or offer information statement. This presentation is not subject to the disclosure requirements affecting disclosure documents under Chapter 6D of the Corporations Act.

This presentation may contain certain forward looking statements and projections regarding estimated, resources and reserves; planned production and operating costs profiles; planned capital requirements; and planned strategies and corporate objectives. Such forward looking statements/projections are estimates for discussion purposes only and should not be relied upon. They are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors many of which are beyond the control of Novo Lítio Ltd. The forward looking statements/projections are inherently uncertain and may therefore differ materially from results ultimately achieved.

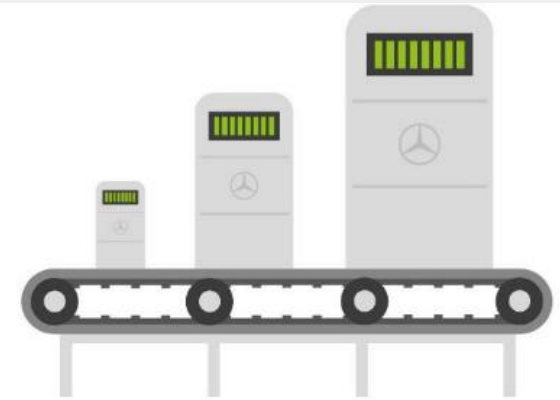
Novo Lítio Ltd does not make any representations and provides no warranties concerning the accuracy of the projections, and disclaims any obligation to update or revise any forward looking statements/projects based on new information, future events or otherwise except to the extent required by applicable laws. While the information contained in this presentation has been prepared in good faith, neither NLI or any of its directors, officers, agents, employees or advisors give any representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this presentation. Accordingly, to the maximum extent permitted by law, none of NLI, its directors, employees or agents, advisers, nor any other person accepts any liability whether direct or indirect, express or limited, contractual, tortious, statutory or otherwise, in respect of, the accuracy or completeness of the information or for any of the opinions contained in this presentation or for any errors, omissions or misstatements or for any loss, howsoever arising, from the use of this presentation.

## Competent Person Statement

The information in this presentation that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr Francis Wedin, who is a member of the Australasian Institute of Mining and Metallurgy. Dr Wedin is a full-time employee of Novo Lítio and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Dr Wedin consents to the inclusion in this presentation of the matters based upon the information in the form and context in which it appears.

# Europe is Leading the Way...

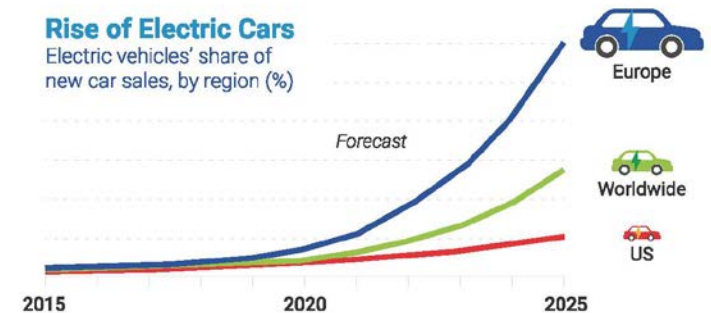
- Renault currently largest seller of EVs in Europe, on track for 40K units for 2017 with 9,220 sold in Q1<sup>1</sup>
- Volkswagen group – targeting 25% of sales to be electric by 2025
- Daimler/Mercedes – 10 new all-electric models, also making batteries for mass home/commercial energy storage
- BMW, Land Rover, Jaguar etc. – multiple all-new, all-electric models
- Parliamentary motions to ban sales of new petrol and diesel cars by 2025 in Norway and Netherlands and by 2030 in Germany
- Germany's largest utility company E.ON has spun out its fossil fuel business, with the new E.ON focused on the “new energy world” of renewables
- 24% of all vehicles sales in Norway were electric in 2016



**3 x expansion** to Daimler-Mercedes lithium-ion battery factory in Germany, to build EV and home **energy storage** lithium-ion batteries

## Rise of Electric Cars

Electric vehicles' share of new car sales, by region (%)



Source : UBS & Financial Times

<sup>1</sup><http://insideevs.com/in-q1-2017-renault-zoe-sales-were-up-57/>

# European Battery Factories & Novo Lítio Projects

NOVO  
LÍTIO



## Operational

- 3 Daimler / Mercedes
- 4 Samsung 1

## Operational and making their own cells

- 5 Nissan
- 6 BMZ

## Planned

- 7 Northvolt
- 8 Audi
- 9 LG Chem
- 10 Volkswagen
- 11 Tesla?

## Under Construction

- 12 Samsung 2



193,000 passenger EVs were sold in the EU in 2015, compared with 188,700 in China, and 115,000 in the US

*The largest market for EVs in the world*

- > Multiple planned battery factories, but no domestic supply of lithium carbonate or cathode plants
- > Novo Lítio's lithium projects can provide secure, low-carbon footprint supply

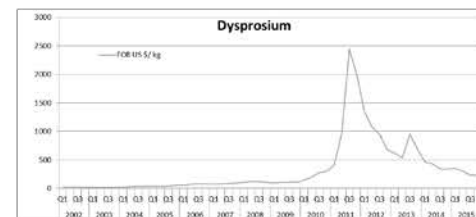
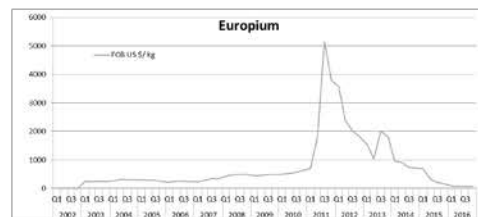
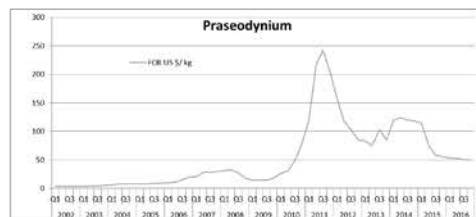
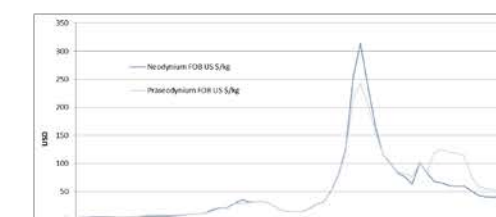
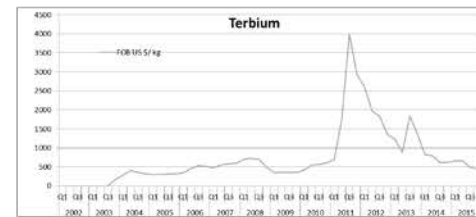
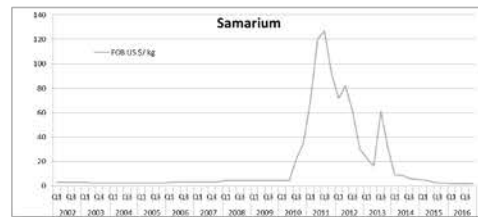
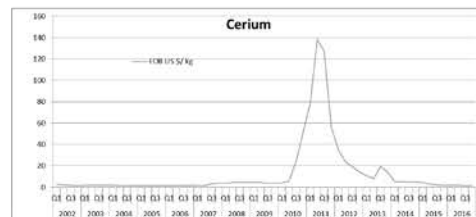
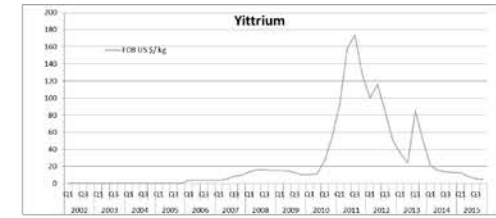
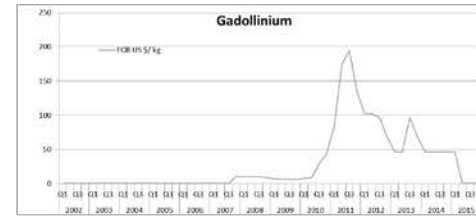
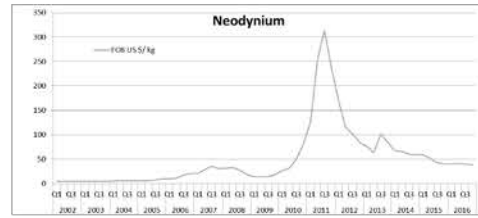
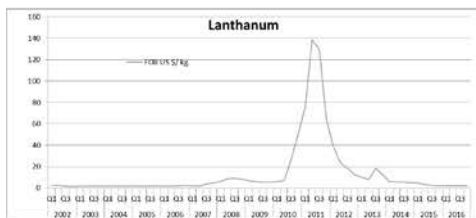


# Safe Reliable Supply for Europe??

The Lithium cartel is like OPEC on steroids:

1. OPEC – 13 countries controlling 40% of world oil production
2. Lithium cartel – **4 companies controlling 90%** of lithium production, with four Asian companies controlling 80% of Li-ion cell production

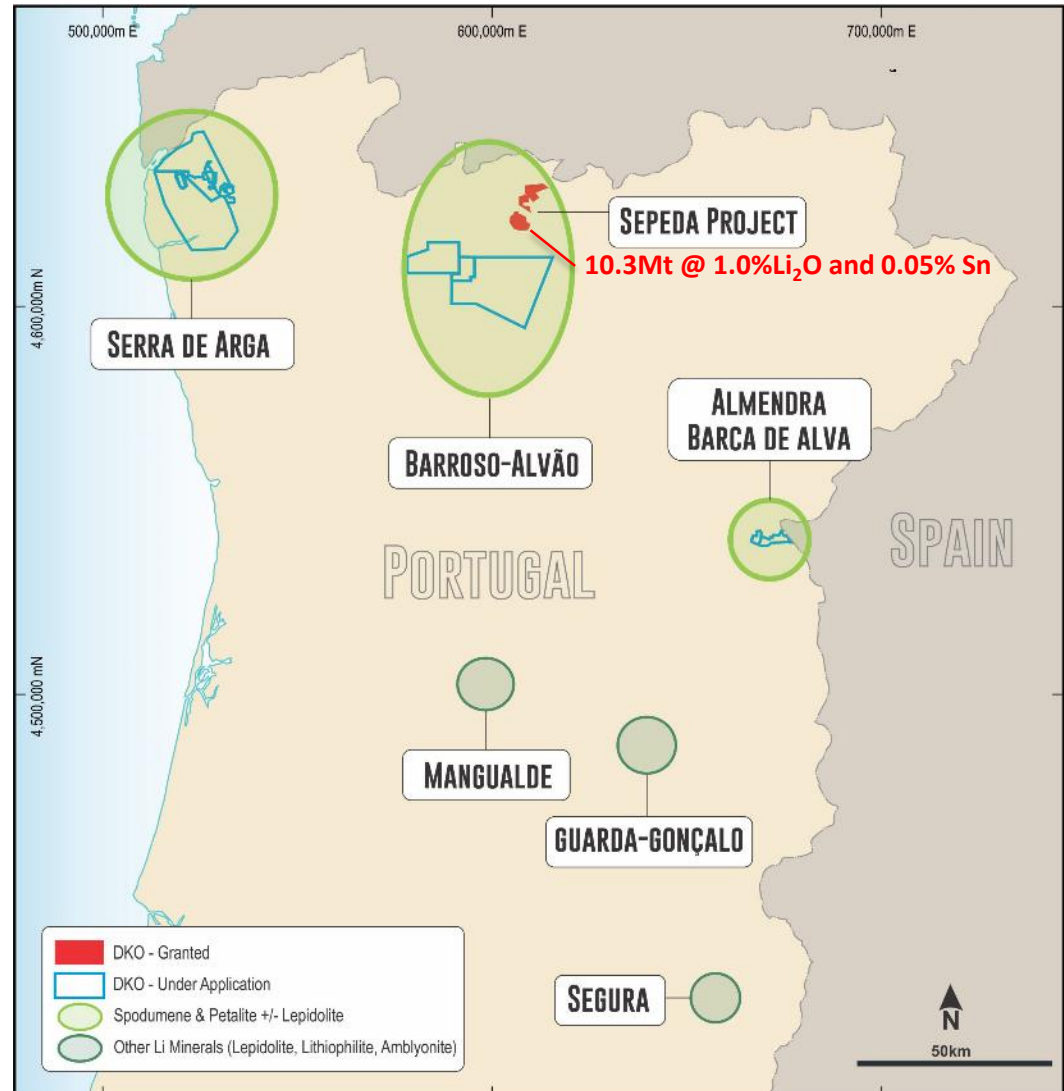
So what happens when China restricts supply of Lithium and or geopolitics/environmental/labour problems effect South American supply??



# Sepeda – Largest JORC Lithium Pegmatite Mineral Resource in Europe

## SEPEDA - PORTUGAL

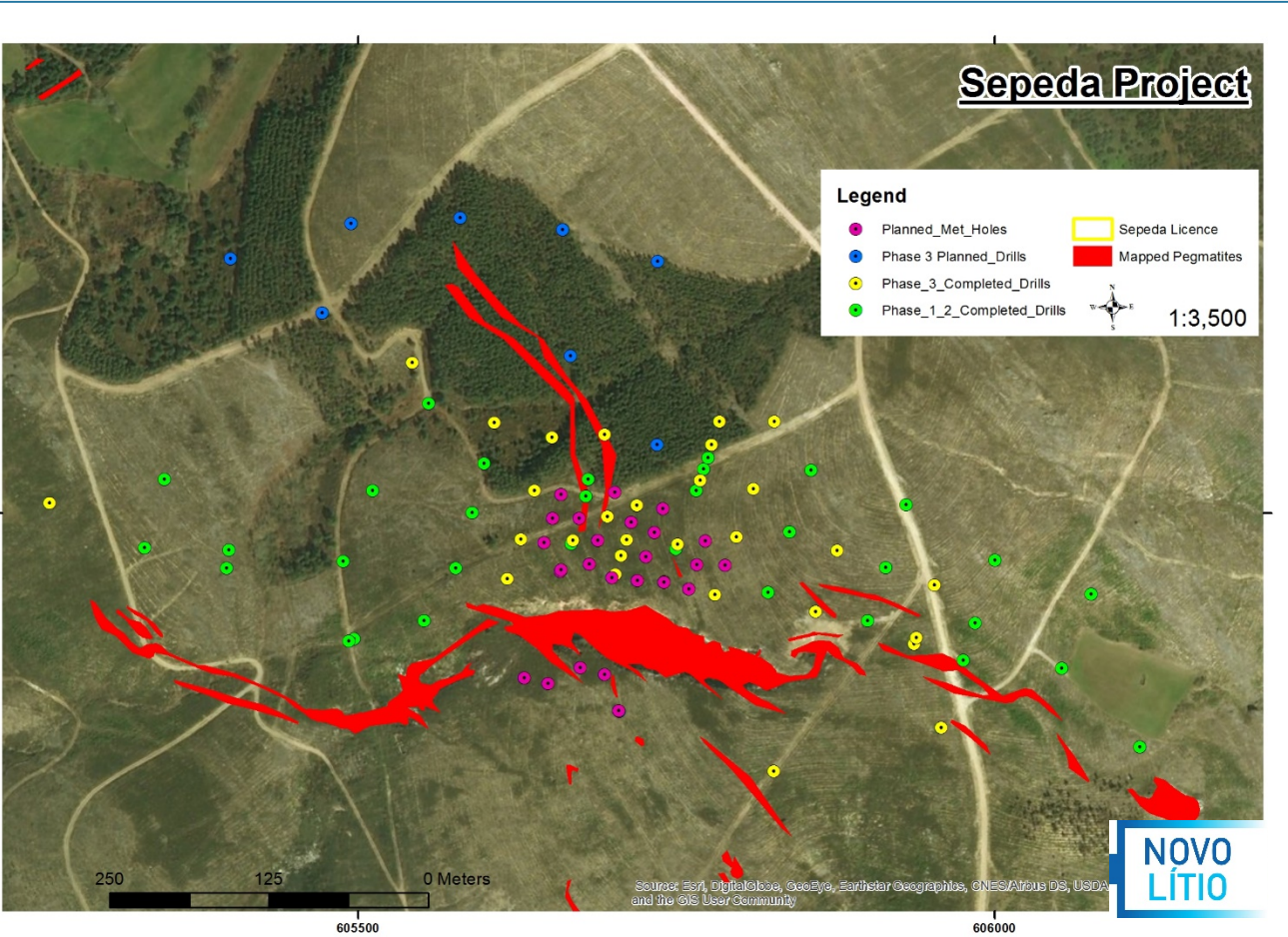
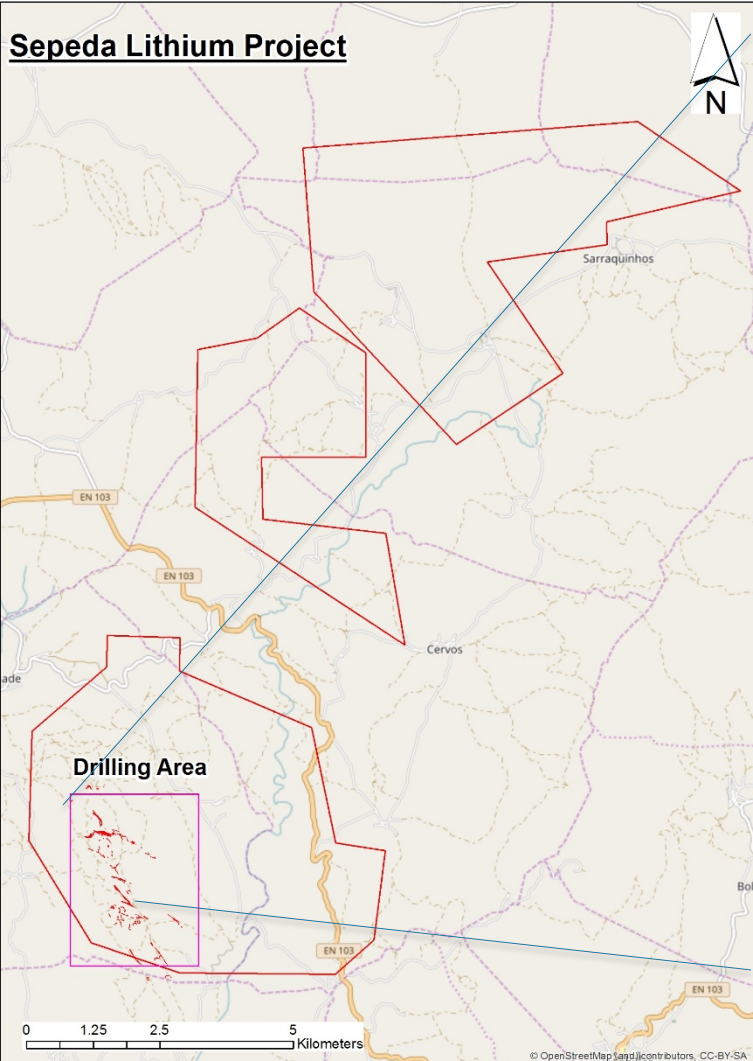
- Sepeda maiden Mineral Resource – 10.3Mt @ 1.0% Li<sub>2</sub>O and 0.05% Sn<sup>1</sup>
- Largest JORC lithium pegmatite Mineral Resource in Europe
- Sepeda Mineral Resource update on schedule for Q3 2017
- Mineral Resource currently only from one pegmatite (Romano) – numerous other pegmatites yet to be tested.



# Sepeda, Portugal - Toward a Self-Sufficient Europe



## Sepeda Tenements

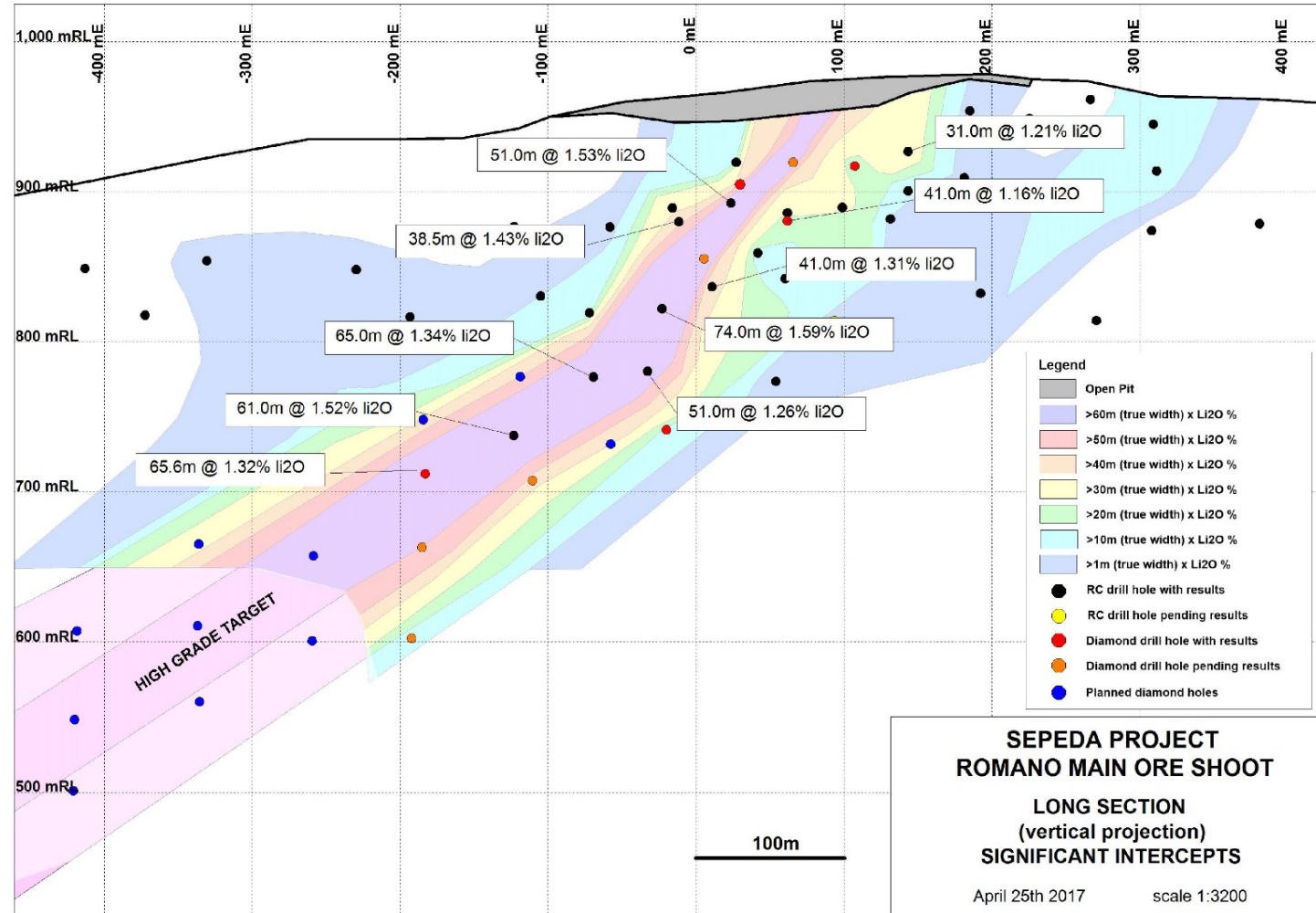




# Sepeda – Romano Pegmatite Long Section



- > Phase 3 and 4 drilling underway, Resource update on schedule for Q3 '17
- > Scoping study results expected shortly
- > Initial metallurgical testwork completed, producing high purity concentrate and battery-grade lithium carbonate, via conventional methods
- > Feasibility studies to commence imminently. Demonstration plant expected to produce petalite concentrate during Q3 2017
- > Aggressive target to commence concentrate production by early to mid 2019, and lithium carbonate/hydroxide production by early-mid 2020
- > Excellent infrastructure and proximity to markets



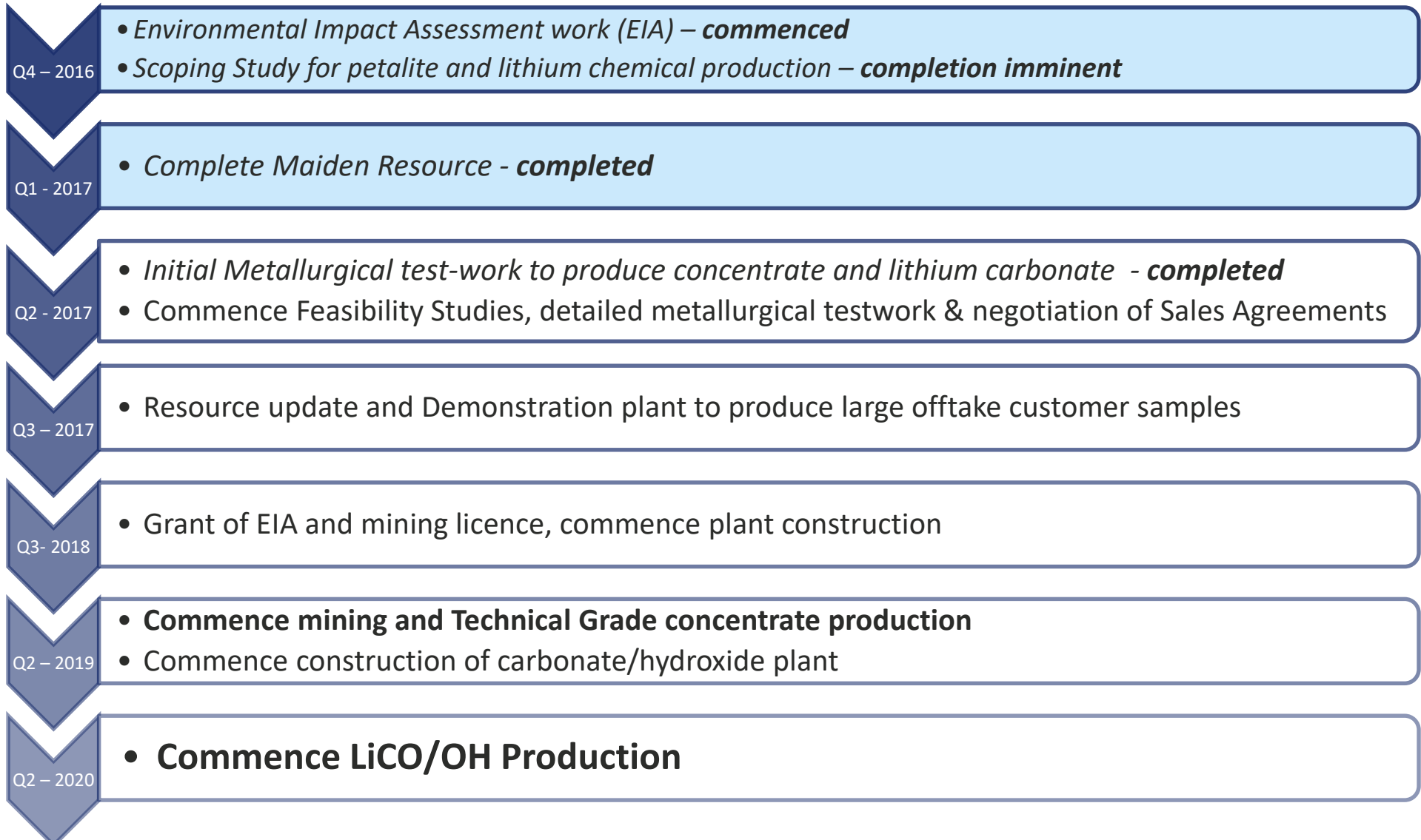


# Sepeda – Ultra-Low Impurity Product, Simple Metallurgy



- Petalite is a lithium aluminium silicate similar to spodumene, which studies have shown can be processed via conventional, commercially-proven methods.
- No difficult or exotic lithium minerals present, such as micas or clays (no hazardous fluorine) – lower development and environmental risk
- Interim metallurgical testwork results indicate an ultra-low impurity petalite concentrate, grading 4.4%  $\text{Li}_2\text{O}$  and 0.01%  $\text{Fe}_2\text{O}_3$ , can be produced from Sepeda material
- This meets Technical Grade lithium concentrate specifications, which command a **premium** over Chemical Grade products due to their **low impurities**
- Technical Grade (TG) lithium mineral concentrates are priced at 70-80% of the 99.5% lithium carbonate (40%  $\text{Li}_2\text{O}$ ) equivalent (LCE) price. At a long term average forecast price of US\$10,000/t LCE this equates to US\$750-800 per tonne of 4.4% $\text{Li}_2\text{O}$  petalite delivered to the customer
- This compares with Chemical Grade (CG), lithium mineral concentrates, with higher iron and other impurities, which are generally sold for further processing and purification to lithium carbonate at a **discount to Technical Grade**
- **Battery-grade, 99.97% lithium carbonate** also recently produced from Sepeda petalite material via same conventional methods used for spodumene, by Anzaplan in Germany
- Potential for flexibility - dual product stream: a) Technical Grade lithium concentrate and b) Battery Grade lithium carbonate. Demonstration plant to produce large samples for potential offtake customers in Q3 2017

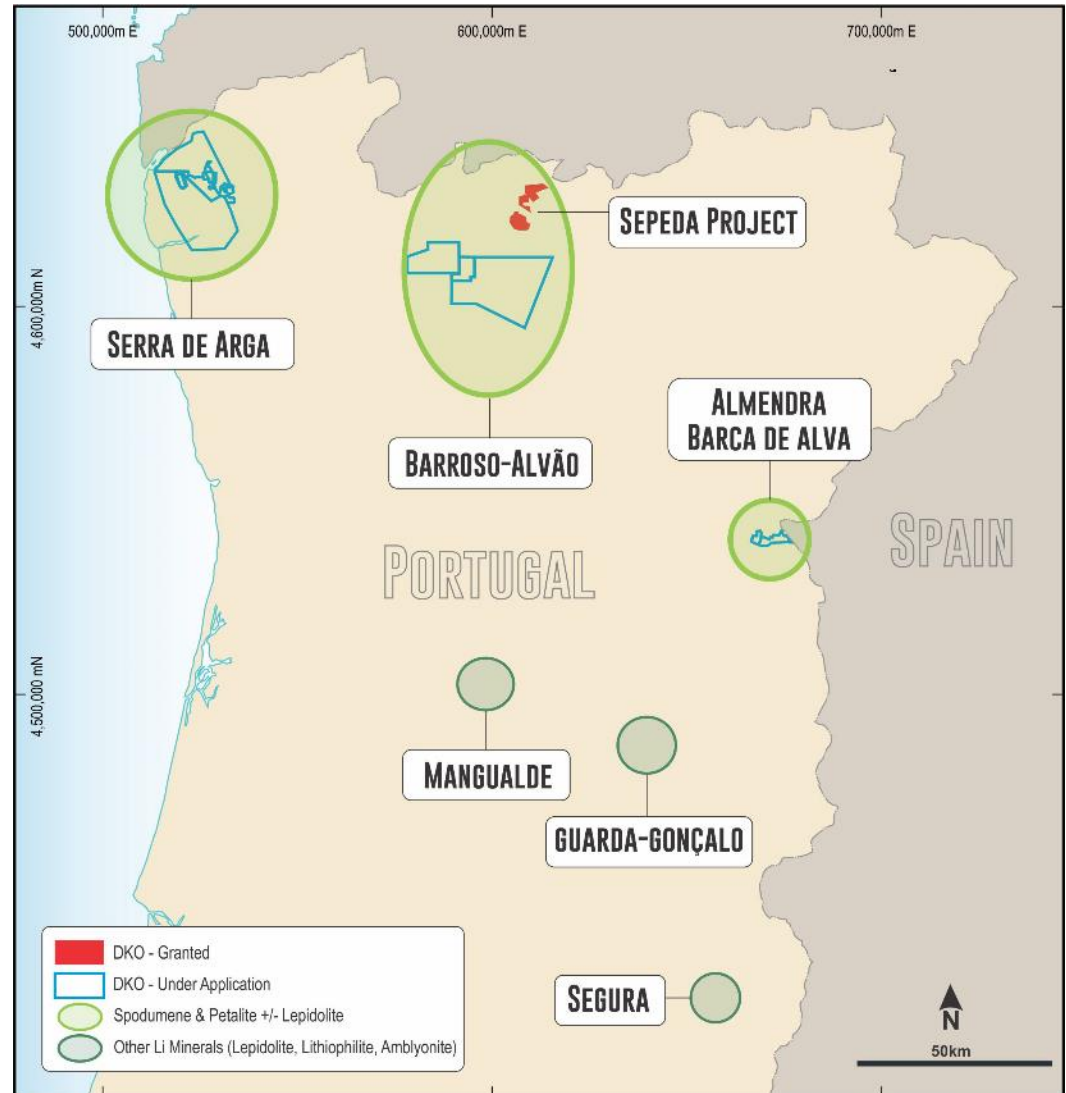
# Sepeda – Aggressive Development Timeline, Strong Cash Position





# Exploration Pipeline 1 – Lusidakota Portugal

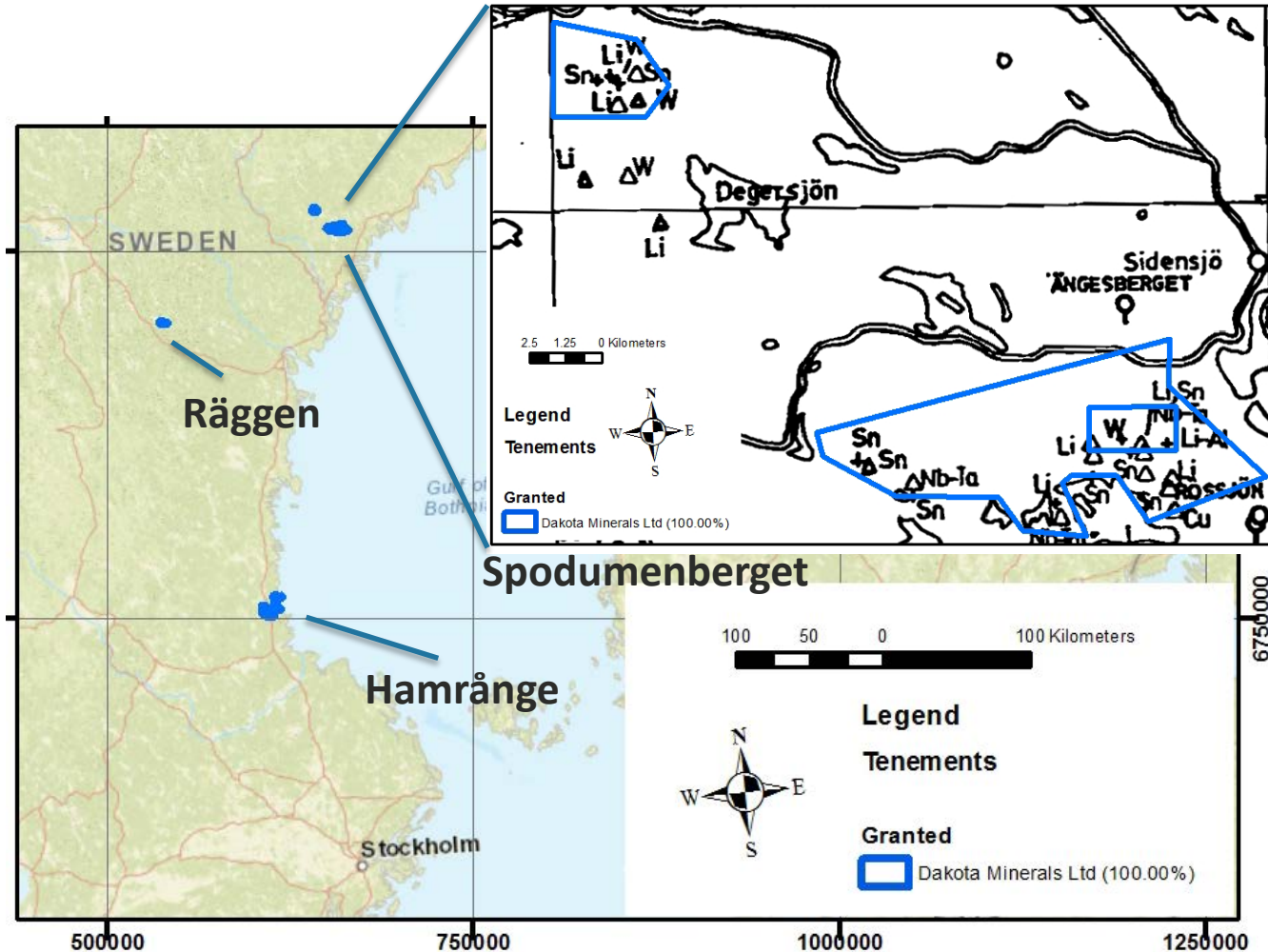
- Very large (1,200km<sup>2</sup>), highly prospective tenement application package covering main lithium pegmatite fields in Northern Portugal - known lithium-bearing (petalite/spodumene) pegmatites already identified:
  - Barroso – Alvão/Carvalhais Pegmatite Fields (including Sepeda project)
  - Serra de Arga Pegmatite Field
  - Barca de Alva Pegmatite Field
- Tenement package consists of thirteen exploration licences (one granted and twelve under application\*)
- Historical small scale lithium mining within tenement package
- Close to excellent power, storage, transport infrastructure, and local workforce



\*Tenement application MNPPP0395 (Barroso-Alvao) is awaiting a decision on a proposed hydroelectric dam development. All tenement applications are subject to overlapping claims to some degree, which the Company understands will be resolved at public tender.

# Exploration Pipeline 2 - Spodumenberget

- > Quality portfolio of newly granted exploration leases in areas highly prospective for lithium (spodumene) in Sweden, covering 126km<sup>2</sup>
- > **Spodumenberget (Spodumene Mountain)** prospect contains multiple historical records of spodumene samples from pegmatite outcrops grading >1% Li<sub>2</sub>O
- > Prospect is in an area with excellent access and infrastructure and close to seaports
- > Field programme to define drill targets commencing in May 2017
- > Novo Lítio team already has a track record of discovering and defining two new lithium resources on two continents within a year





# Capitalisation Overview

## ASX-NLI

### Shares

Shares on Issue	370.4M
Milestone Vendor Shares*	30M

### Directors & Management - Performance Rights:

Tranche 2 & 3**	6.6M
-----------------	------

### Options

Unquoted Options exercisable at \$0.016 expire 31 December 2018 (ASX: NLIAA)	2.7M
---	------

Unquoted Options exercisable between \$0.035, \$0.06 & \$0.09 expire 31 December 2017	28.3M
---	-------

<b>Total Options</b>	<b>31.0M</b>
----------------------	--------------

<b>Market Cap (undiluted) @ \$0.06</b>	<b>\$22.2M</b>
--	----------------

<b>Cash</b>	<b>\$16.0M</b>
-------------	----------------

<b>EV</b>	<b>\$6.2M</b>
-----------	---------------



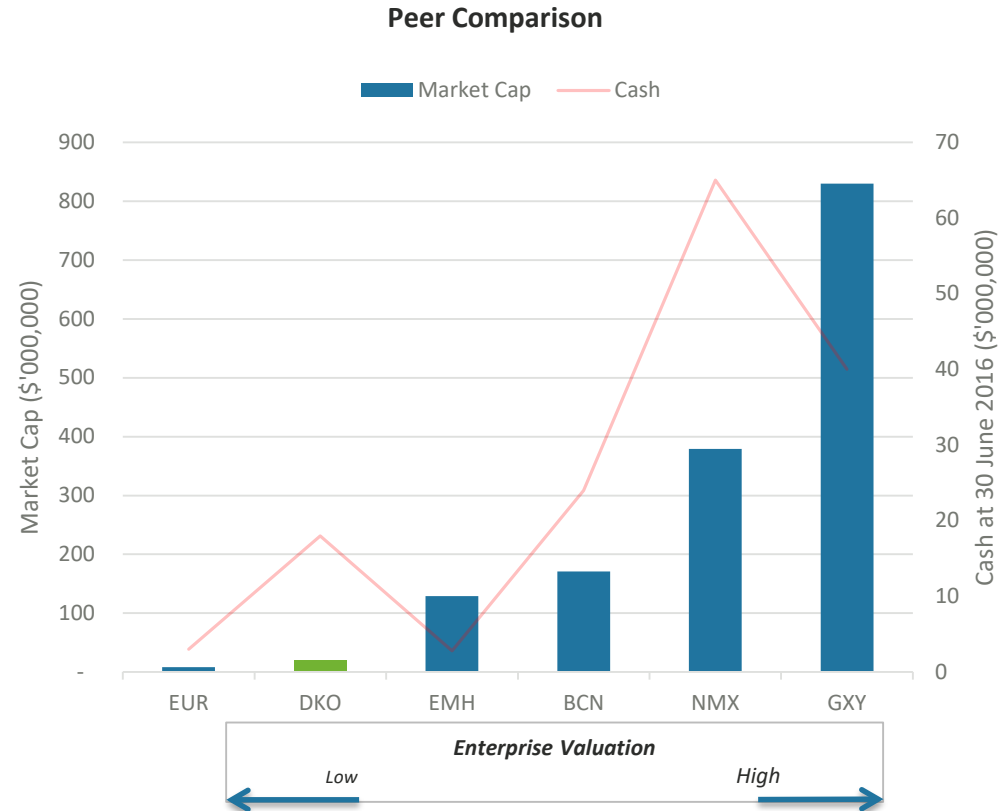
\*Milestone Vendor Shares. Definition of resource over divested Lynas Find tenements:  
- 15mt resource @ 1.2% Li2O

\*\*Directors and Management Performance Rights. Definition of resource over NLI projects: Tranche 2 – 15mt resource @ 1.0% Li2O (3M),  
Tranche 3 – 30mt resource @ 1.0% Li2O (3M)

# The Novo Lítio Opportunity



- Strategically placed to take advantage of the growing surge in European lithium demand
- Quality lithium development project at Sepeda, Portugal
- **Strong cash position allowing rapid advancement of project**
- Dominant land position in well-known petalite/spodumene mineralised regions of Portugal/Sweden – exploration upside, management track record of lithium discoveries and resource definitions
- Highly experienced management team with a track record of delivering successful outcomes



(Source: Bloomberg, ASX, TSX, TSX:V, AIM and Company estimates as at 1st of May, 2017)



- Aim to become a sustainable European supplier of premium, ultra-low impurity **technical grade** petalite concentrate and **battery-grade** lithium carbonate/hydroxide
- Current cash position of AUD\$16.0M, with a further AUD\$3.0M due from sale of WA assets to Pilbara Minerals - **Fully funded to completion of Sepeda DFS**
- **Largest lithium pegmatite JORC Mineral Resource in Europe**, rapidly advancing to development
- **Simple metallurgy, ultra-low impurity** mineral concentrate produced with virtually no iron or fluorine-bearing micas. **Battery grade lithium carbonate** produced via conventional methods.
- Sepeda phase three drilling ongoing, phase four fast-tracked and is running concurrently
- Demonstration petalite concentrate plant product output scheduled for Q3-Q4 2017
- Quality pipeline of lithium exploration projects in Portugal and Sweden. **Exceptional** track record of lithium discoveries and resource delineations to date
- **Aim to be producing petalite concentrate by early to mid 2019 and lithium chemical products by early to mid-2020**



# Board & Management Team

**John Fitzgerald**  
Chairman



Mr Fitzgerald is an experienced Company Director and resource financier. He has worked with the resources sector for 30 years providing corporate advisory, project finance and commodity risk management services to a large number of companies in that sector.

Mr Fitzgerald is a Non-Executive and lead Independent Director of Northern Star Resources Ltd and a Non-Executive Director of Danakali Resources Ltd, and Carbine Resources Ltd. He has previously held positions as Chairman of Integra Mining Ltd and Atherton Resources as well as senior executive roles with a number of Investment Banks with a focus on the provision of services to the mining sector.

Mr Fitzgerald is a Chartered Accountant, a Fellow of FINSIA and a graduate member of the Australian Institute of Company Directors.

**David J Frances**  
President & CEO



International mining executive of 25 years with a track record of developing assets in Africa (Democratic Republic of Congo) with Mawson West (TSX: MWE) from 2006- 2012.

Mr Frances took MWE private in 2009 when it was a \$5M ASX listed company with exploration and development projects in the DRC. After successfully completing a transaction with Anvil Mining and subsequently recommissioning and restarting the Dikulushi copper-silver mine Mr Frances then completed the largest base metals capital raise and IPO in the world for 2010 when MWE was listed on the TSX with a market capitalisation of \$250M.

David has also overseen other successful developments and his experience in successfully exploring, funding, and developing projects, his proven corporate strategic skills, and his knowledge of equity capital and debt markets complement the highly experienced and successful management team of Novo Lítio.



# Board & Management Team Cont.

**Dr. Francis Wedin**  
Technical Director



Francis Wedin is a mining and metals industry executive, with a diverse expatriate working background spanning three continents and multiple commodities, producing a proven track record of mineral exploration and development success.

Whilst MD of Asgard Metals, Francis was involved in the identification and acquisition of the Lynas Find lithium project, which was later vended to Novo Lítio. Since joining Novo Lítio, he has overseen the discovery of new lithium resources at Lynas Find and Sepeda, and has been instrumental in growing Novo Lítio into a globally significant lithium development company focused on Europe.

Francis has a PhD in mineral exploration parameters focused on the Tethyan Metallogenic Belt, is a Fellow of the Geological Society, London, and a member of the Australasian Institute of Mining and Metallurgy. He is bilingual in English and Turkish, with proficiencies in other languages. He is currently studying an MBA with a focus on renewable energy technologies and how this relates to the lithium market.

**Prof. Dudley  
Kingsnorth**  
Non-Executive  
Director



Professor Kingsnorth is a Fellow of the Australian Institute of Company Directors, in addition to being a Fellow and past VP of the Australasian Institute of Mining and Metallurgy (AusIMM), and a Fellow of the Institute of Materials, Minerals, and Mining (UK).

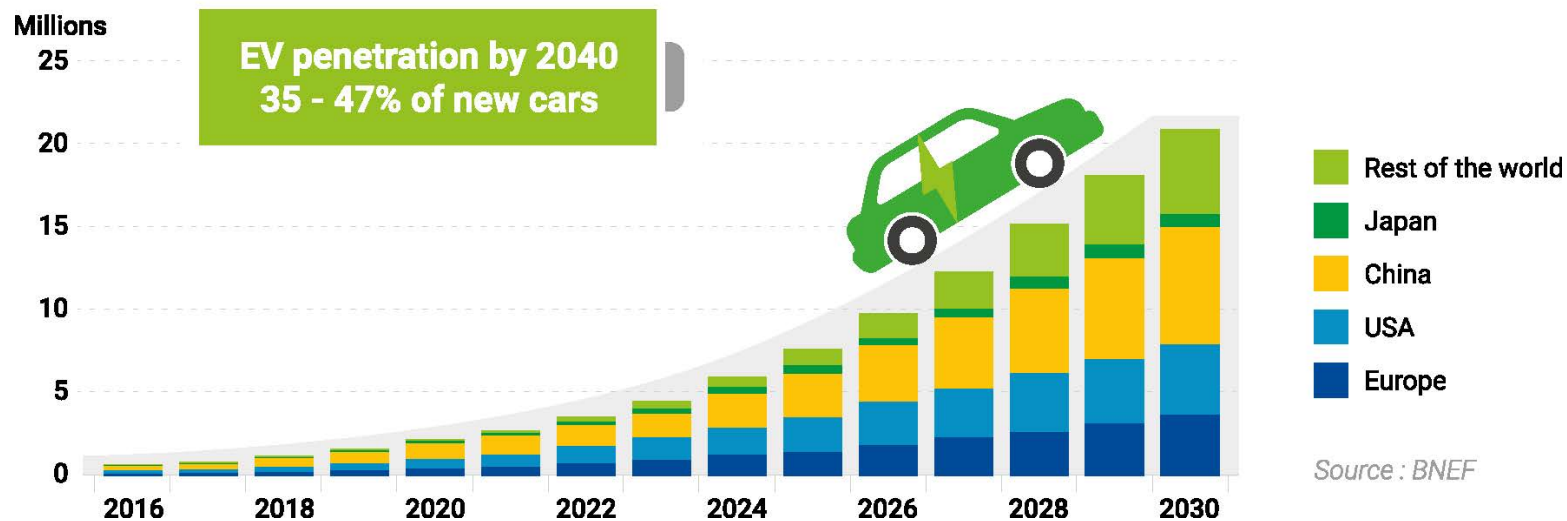
He has more than 45 years' experience in the international mining industry, and is internationally recognised as a world authority on lithium and rare earths markets. Dudley is the current leader of the Curtin Graduate School of Business's Critical Materials Initiative.

He is also an experienced director and has acted as Chairman, Managing Director, CEO, Director, Project Manager, and Marketing Manager, for various listed and unlisted Companies in the, lithium, rare earths, tantalum, gold, iron ore and aluminium sectors.

# The Energy Transition is Upon Us...

Two main themes are defining energy & transportation in this century:

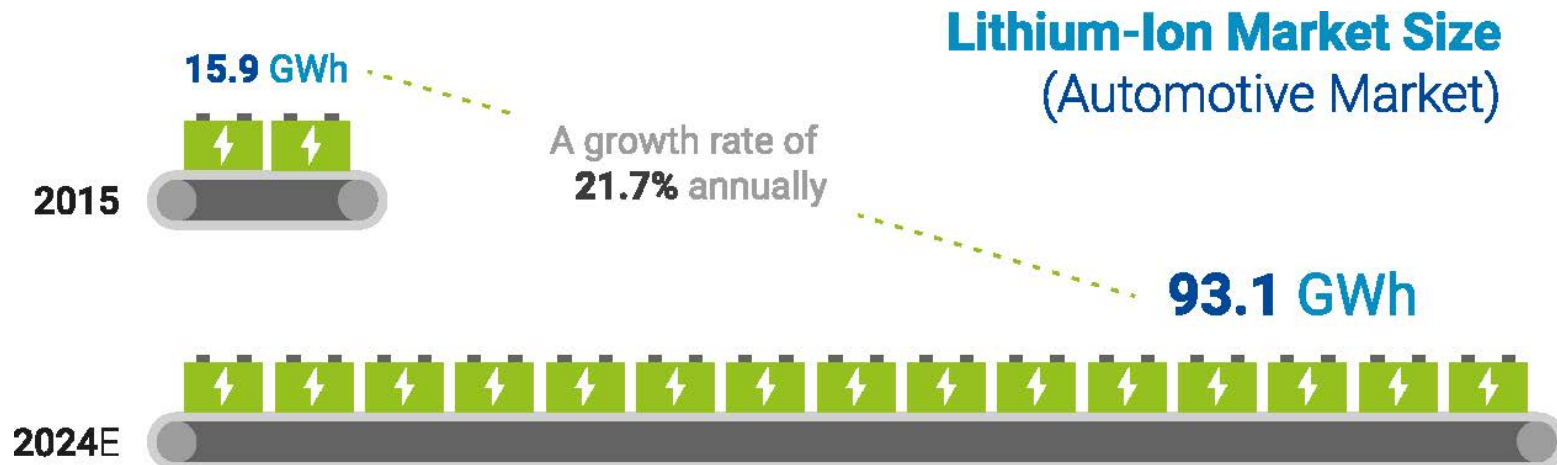
- 1. Decline of the traditional energy production & distribution Company caused by mass uptake of renewables - linked to large-scale lithium-ion battery storage for smooth supply.**
- 2. Mass uptake of electric vehicle (EVs), powered by lithium-ion batteries - approaching parity with fossil fuel engine costs. Lithium battery cells are now selling for under \$140/kWh\*, an unprecedented drop from \$1,000/kwh in 2010. This is now reaching a tipping point where affordable (<US\$30,000) EVs, with a range of >350km, are becoming widely available.**



\*Benchmark Mineral Intelligence

# ...with Lithium the Essential Ingredient...

- > The Tesla Model S, with its 70kWh lithium-ion battery, uses **63kg** of LCE (12kg of Li) - 14% percent by weight, or 10,000 times that of a cell phone
- > For every 1% of electric vehicle penetration of the global passenger car market, add 50-70,000t of LCE demand, or around **30%** of the total current market
- > Total, an oil giant, predicts 30% penetration of car market by EVs by 2030, for **20 million sales**
- > This would require 1-1,200,000t LCE, or **6x current global production**
- > This does not take into account lithium-ion batteries for home or grid stationary storage, and E-Bikes, buses, and other forms of transportation all of which are seeing rapidly increasing rates of growth

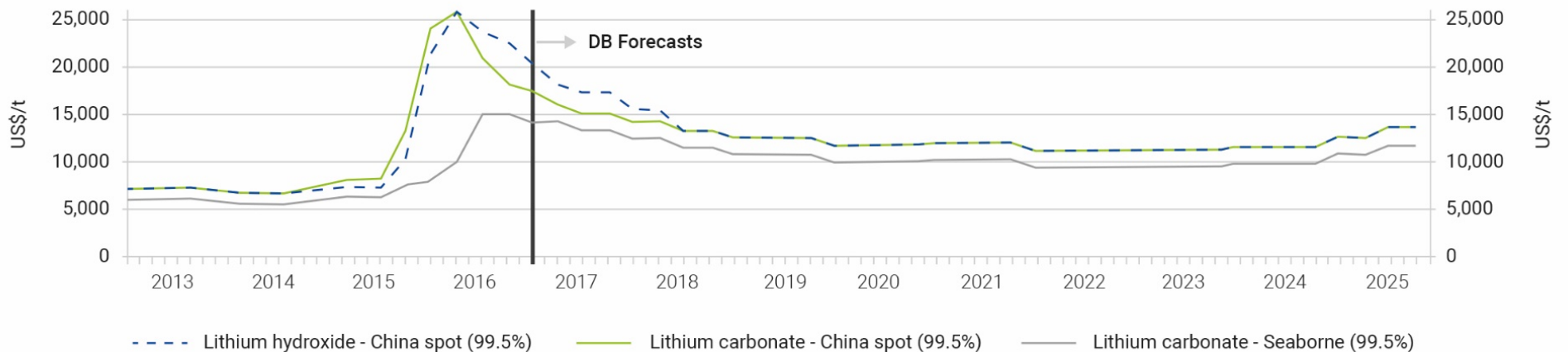




# ...Underpinning Strong Demand & Pricing Forecast for Lithium



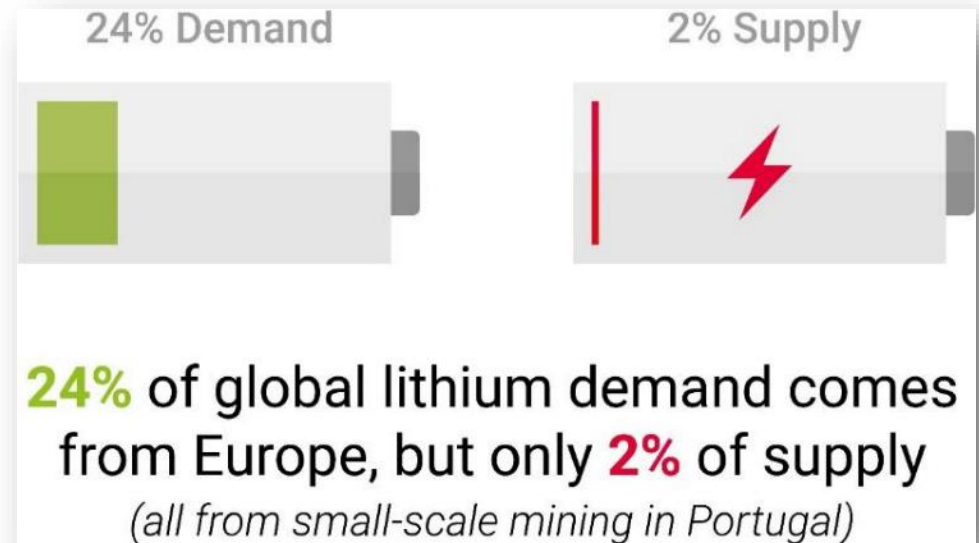
- Surge in uptake of lithium-ion batteries in EVs, home/grid storage has caused strong lithium price gains in the past year
- Current demand forecasts for lithium carbonate equivalent (LCE) range from 550 to 600ktpa in 2025, up from 200ktpa in 2016, mostly driven by increase in lithium-ion battery uptakes for storage and EVs
- Morningstar predict 100kt LCE shortfall in supply by 2025
- Supply/demand tightness underpins strong price support forecasts



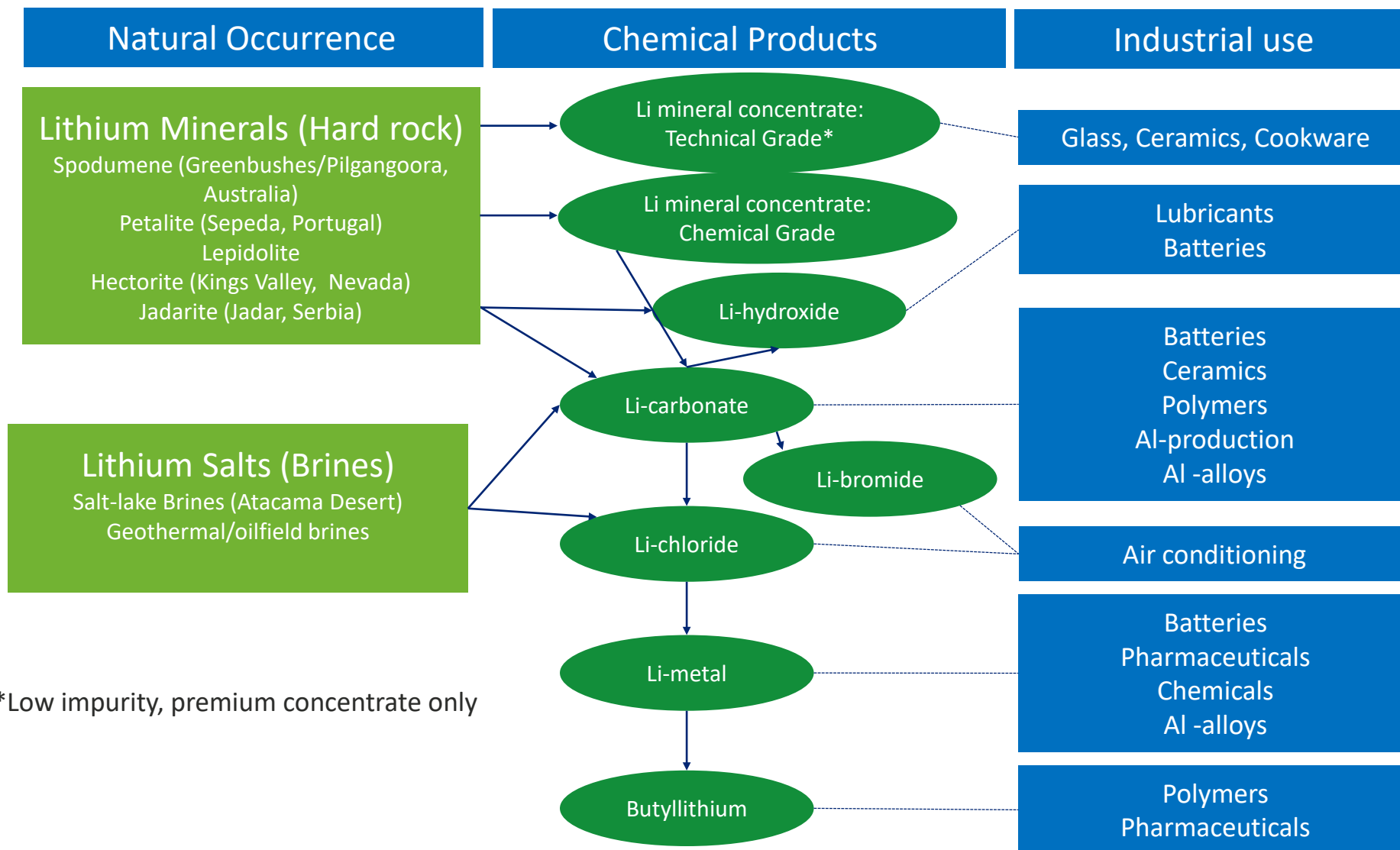
# ...But Supply Security is an Issue



- Europe currently consumes around a **quarter** of the world's lithium, but produces next to **none of it**
- European battery producers need a secure, ethical and low-carbon footprint source of lithium. **Novo Lítio is well placed to supply this surge in demand**
- Portugal – currently the only lithium producer in Europe, is ranked as a top 10 mining investment destination



# Where Does Lithium Come From?

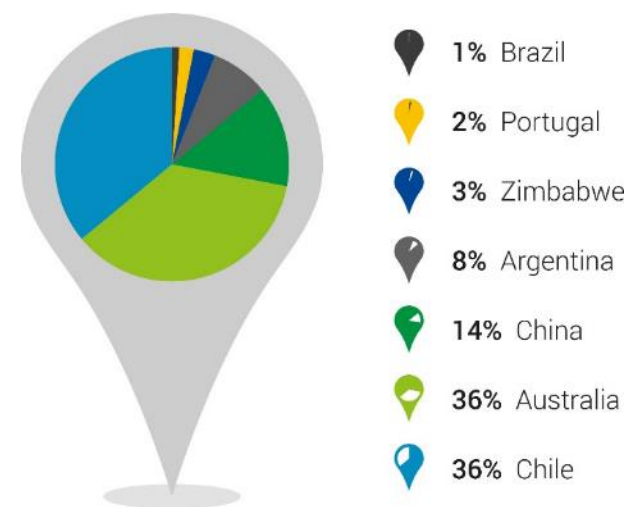


\*Low impurity, premium concentrate only



- > Lithium sources currently very constrained by company and country
- > Major brine resources carry significant geopolitical risk, high CAPEX and long lead time to development of new projects
- > Imperative to define new sources that present alternatives with lower development risk, CAPEX and timeline to production
- > Current planned production expansions, and new resources going into production, are likely to be inadequate to support the forecasted large-scale electrification of vehicles
- > Greater volume and diversification of supply is needed to enable the global “*energiewende*”, or energy transition









## Lithium Supply



# Lithium Market Growth Areas

## Key Points

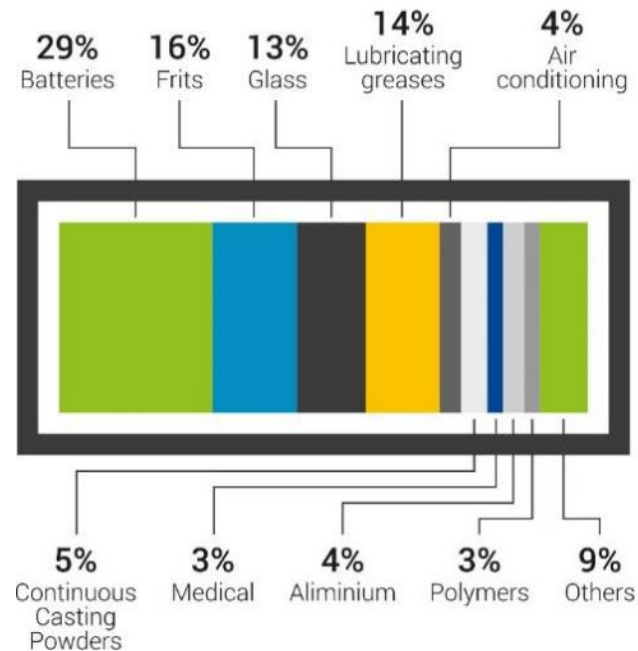
- > Strong existing glass/ceramics market for premium, **technical grade** lithium mineral concentrate, with low impurities such as iron, manganese and chromium
- > **Chemical grade** mineral concentrate generally contains higher impurities and thus sells as a discount to technical grade, to be processed further into lithium carbonate or hydroxide
- > Battery grade lithium carbonate/hydroxide is tipped to be the main growth area in the lithium sector for many years to come

Application	Lithium Products	Demand ktpa LCE 2015	Forecast Demand ktpa LCE 2020	Forecast Demand ktpa LCE 2025	Growth Rate
 <b>Batteries</b>	Lithium hydroxide and lithium carbonate	60-70	150-170	350-400	15-25%
 <b>Glass / Ceramics</b>	Spodumene/ petalite concentrates Lithium carbonate	40-50	45-55	55-65	2-4%
 <b>Greases / Lubricants</b>	Lithium hydroxide	15-20	20-25	30-40	4-8% p.a.
 <b>Metal Alloys</b>	Lithium metal & alloys	10-15	12.5-20	15-25	3-5% p.a.
 <b>Air Conditioning</b>	Various	5-10	7.5-12.5	10-15	3-5% p.a.
 <b>Polymers</b>	Various	4-8	7.5-12.5	10-15	2-4% p.a.
 <b>Medicine</b>	Speciality organo-compounds	4-8	7.5-12.5	10-15	2-4% p.a.
 <b>Others</b>	Various	10-15	12.5-20	15-25	3-6% p.a.
<b>Compound Average Growth Rate</b>	N/A	150-170	265-340	495-600	12-15% p.a.

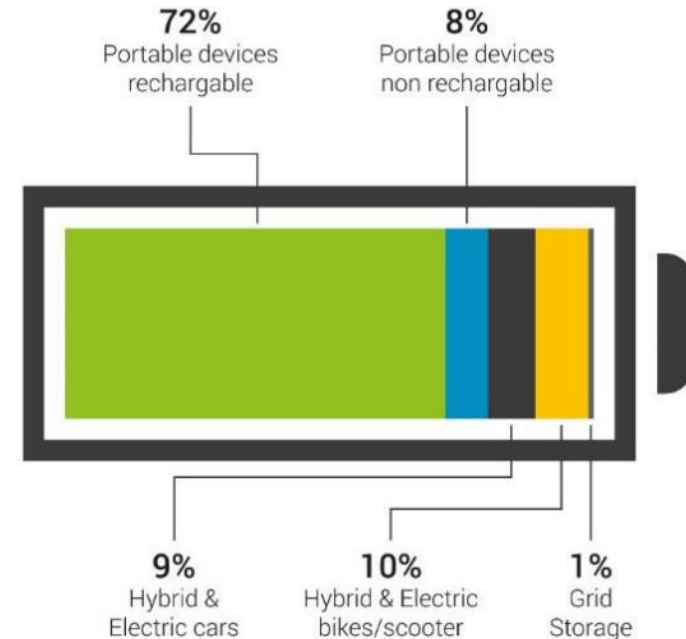
# The Ideal Battery - Why Lithium?

- > High charge density, lightweight, recharges rapidly
- > Ability to hold charge for long period of time, long battery lifespan
- > All major battery manufacturers are investing large sums to build lithium-ion batteries. It will take decades for any other major battery technology to break into this market

Lithium Consumption by Application



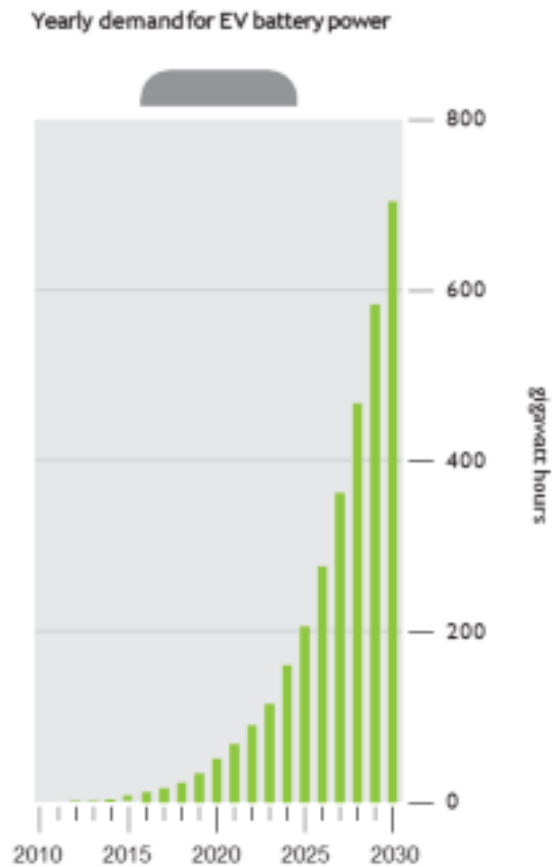
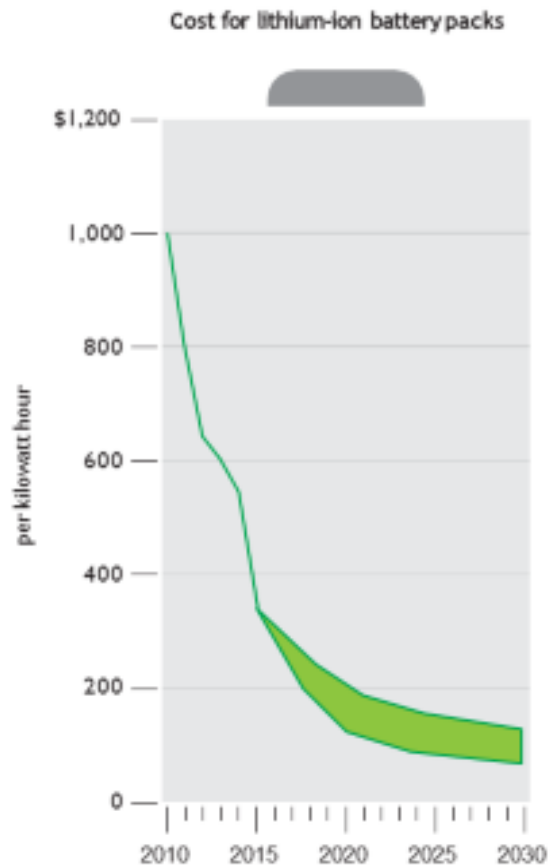
Lithium Consumption in Batteries



# Lithium Ion Battery - Costs

## It's All About the Batteries

Batteries make up a third of the cost of an electric vehicle.  
As battery costs continue to fall, demand for EV's will rise.





# Lusidakota- Portuguese Tenements

Tenement ID	Prospect	Project	Licence Type	Status	Area (Km <sup>2</sup> )
MNPP04612	Barroso Alvão	Sepeda	Prospecting & Research	Granted	37.1
MNPPP0395	Barroso Alvão	Tamega	Prospecting & Research	Under Application	283.3
MNPPP0407	Barroso Alvão	Fafia	Prospecting & Research	Under Application	27.3
MNPPP0274	Serra de Arga	Arga West	Prospecting & Research	Under Application	249.8
MNPPP0275	Serra de Arga	Arga East	Prospecting & Research	Under Application	93.2
MNPPP0396	Serra de Arga	Arga Central	Prospecting & Research	Under Application	42.7
MNPPP0393	Barca de Alva	Boavista	Prospecting & Research	Under Application	14.3
MNPPP0394	Barca de Alva	Picões	Prospecting & Research	Under Application	5.5
MNPPP0427	Trancoso	Massueime	Prospecting & Research	Under Application	120
MNPPP0424	Castelo Branco	Segura	Prospecting & Research	Under Application	130
MNPPP0426	Amarante	Vieiros	Prospecting & Research	Under Application	114
MNPPP0430	Barroso Alvão	Vaqueiro	Prospecting & Research	Under Application	23
MNPPP0431	Barroso Alvão	Malhao	Prospecting & Research	Under Application	100

# Spodumenberget – Swedish Tenements

Tenement Name	Project	Ownership	Licence Type	Status	Area Ha
Dyngselet-1	Spodumenberget	100%	Exploration	Granted	450.07
Hamråde nr 100	Hamråde	100%	Exploration	Granted	1683.65
Hamråde nr 101	Hamråde	100%	Exploration	Granted	2744.59
Hamråde nr 102	Hamråde	100%	Exploration	Granted	131.32
Hamråde nr 103	Hamråde	100%	Exploration	Granted	252.05
Hamråde nr 104	Hamråde	100%	Exploration	Granted	260.91
Dyngselet nr 2	Spodumenberget	100%	Exploration	Granted	4981.06
Skorped nr 1	Spodumenberget	100%	Exploration	Granted	1086.64
Räggen nr 100	Räggen	100%	Exploration	Granted	1035

## Lithium – Li, Li<sub>2</sub>O or Li<sub>2</sub>CO<sub>3</sub> ?

The lithium content of minerals and compounds is referred to in one of three units depending on the source quoted and the end-use referred to:

- lithium (Li) content
- lithium oxide (lithia, Li<sub>2</sub>O) content
- lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>) content or lithium carbonate equivalent (LCE)

Lithium oxide content is widely-used in the glass and ceramics industry, while LCE is commonly used for lithium compounds. The conversion factors are shown below.

### Conversion Factors

To Convert from:	to Li x	to Li <sub>2</sub> O x	to Li <sub>2</sub> CO <sub>3</sub> x
Lithium Li (100% Li)	1.00	2.53	5.32
Lithium Oxide Li <sub>2</sub> O (Lithia)	0.46	1.00	2.47
Lithium Carbonate Li <sub>2</sub> CO <sub>3</sub> (40.3% Li <sub>2</sub> O)	0.19	0.41	1.00
Lithium Hydroxide LiOH	0.29	0.63	1.55
<i>Spodumene</i> LiAlSi <sub>2</sub> O <sub>6</sub> (8.03%Li <sub>2</sub> O)	0.037	0.08	0.20
<i>Petalite</i> LiAlSi <sub>4</sub> O <sub>10</sub> (4.88%Li <sub>2</sub> O)	0.023	0.05	0.12