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**BATTERY**  
SUSTAINABILITY  
**SUMMIT**  
2021

# Kachi Lithium & Lilac's Direct Lithium Extraction

## Benchmark – ESG for lithium ion battery supply

**CLEANER LITHIUM**  
**FOR AN ELECTRIC WORLD**

**LAKE**  
RESOURCES



Steve Promnitz - Managing Director, Lake Resources

David Snyder - CEO, Lilac Solutions Inc



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## Competent Person Statement

The information contained in this presentation relating to Exploration Results has been compiled by Mr Andrew Fulton. Mr Fulton is a Hydrogeologist and a Member of the Australian Institute of Geoscientists and the Association of Hydrogeologists. Mr Fulton has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity 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. Andrew Fulton is an employee of Groundwater Exploration Services Pty Ltd and an independent consultant to Lake Resources NL. Mr Fulton consents to the inclusion in this presentation of this information in the form and context in which it appears. The information in this presentation is an accurate representation of the available data to date from initial exploration at the Kachi project and initial exploration at the Cauchari project.

# Lake Resources - Clean Lithium Solution for Cathodes & EV's

99.97%  
High Purity lithium carbonate  
+ Significant ESG benefits.

- **CLEANER LITHIUM** – Lake's 99.97% purity product – high battery quality lithium carbonate = higher battery performance.
- **CLEANER TECHNOLOGY:** Lilac direct lithium extraction – superior to traditional process.  
Supported by tech sector and battery/EV makers.
- **CLEANER ENVIRONMENT:** Lithium with ESG benefits. Small environmental footprint - low CO<sub>2</sub>, less water, low land use.
- **CLEARER PATHWAY:** Path to production; Successful pilot plant; Large, scalable project, high margin.  
Indicative debt funding for 70% of Kachi project
- **INDEPENDENT PRODUCER AT SCALE:** New clean lithium from a scalable independent producer

# Process and ESG Benefits – Cleaner Technology

Process – Lilac's Ion Exchange Direct Lithium Extraction

ESG benefits – Low Carbon, Low Land & Water Use,  
Better Social Outcomes

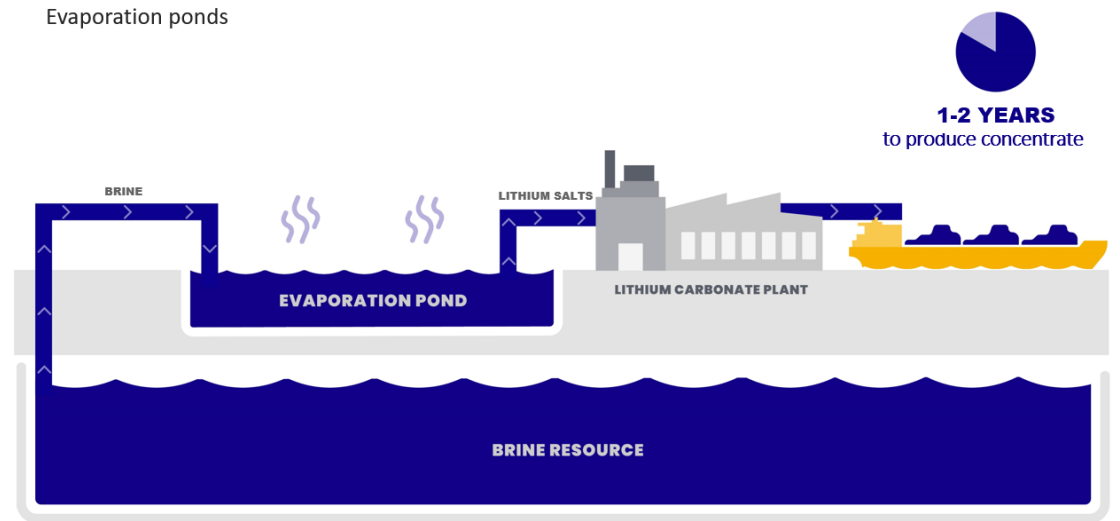
# Direct Lithium Extraction Lilac Solutions - Lilac solutions Cleaner technology

Lilac direct extraction displaces evaporation process

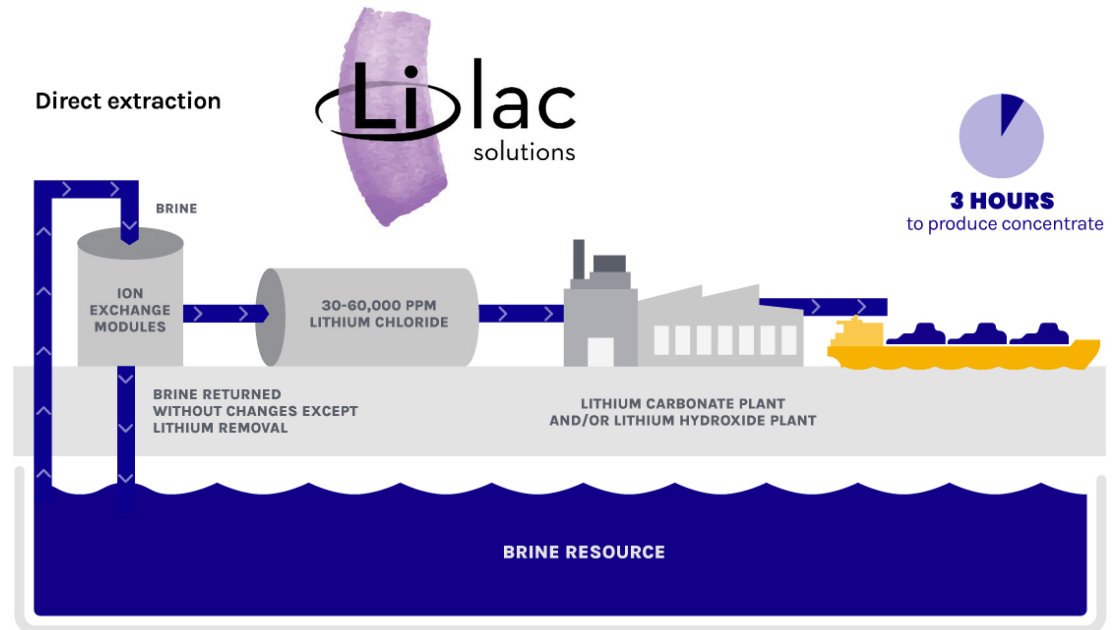
Brine in – Lithium chloride out

- High purity
- Faster process
- High recovery
- Sustainable – No brine heating
- Cost competitive – Durable beads
- Scalable
- Proven in pilot plant – Extensive test work

1<sup>st</sup> Century technology



21<sup>st</sup> Century technology



# Delivers a Cleaner Environment

Smaller environment footprint – Low Land use - Lower water use – No brine depletion

Atacama Projects – Brine evaporation (170km<sup>2</sup>)



Kachi Project – Lake/Lilac DLE (1km<sup>2</sup>)

Brine Returned to  
Source



*Source: SQM / ALB presentations 2020; 170km<sup>2</sup> for c.80,000 tpa LCE. Lake/Lilac/Hatch estimates in PFS (excluding solar hybrid power)*



# Delivers a Cleaner Environment

Smaller carbon footprint – Lower greenhouse gases

Kg CO<sub>2</sub>e/kg product



Li Carbonate LCE  
from Brine

4-5



Li Carbonate LCE  
from Lake/Lilac DLE  
Also expected to be low

*Note: Hard Rock = Spodumene converted to Lithium Hydroxide as LCE in China using coal for energy; Brine evaporation in Sth America  
Source: SQM presentation June 2020; Roskill Nov 2020; Lake/Lilac estimates with solar hybrid power – prelim study being undertaken*

# Sustainable lithium

## Lake / Lilac DLE method

- Low CO<sub>2</sub> footprint
- Low water usage
- Low land use

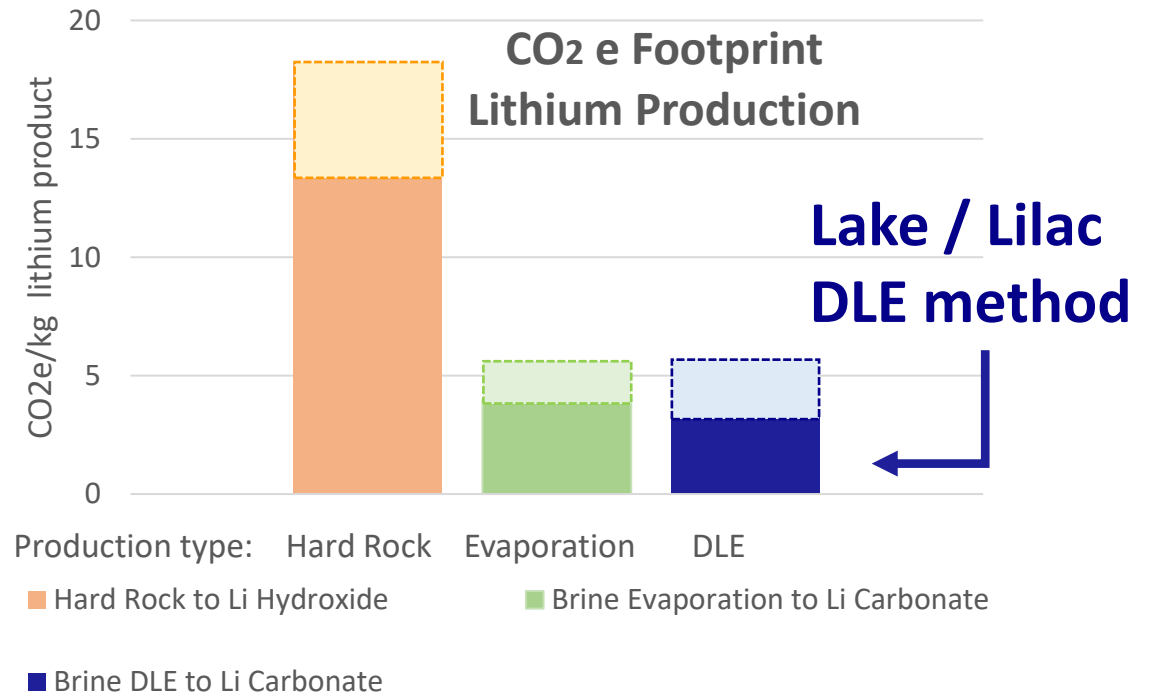
Bloomberg Green

Energy & Science

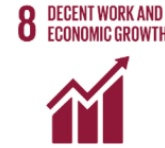
### Bill Gates-Led Fund Invests in Making Lithium Mining More Sustainable

Lilac Solutions has developed a process for extracting lithium that drastically cuts water use.

By Akshat Rathil  
February 20, 2020, 4:00 PM GMT+11



## ESG Sustainable Development Goals





# Project – Large, Scalable - On Path to Production

Lilac Solutions – Earn-in to Project & Tech sector backers

Kachi Project – Top 10 Lithium Brine Resource

- Scalable, as Control Entire Basin – Upside
- Expansion study to 51,000 tpa LCE

# Partnership- Lilac Solutions + Kachi Project Aligns Climate Tech with Upstream Lithium Supply



- **Lilac to Earn in to Kachi Project up to max 25% stake – via performance based milestones**
  - Initial 10% - Lilac funds completion of testing of its technology for the Kachi Project
  - Further 10% - Lilac funds on-site demonstration plant at Kachi and satisfies all agreed testing criteria
  - Final 5% - Kachi lithium product achieves highest agreed qualification standards with certain offtakers
- **Lilac to Contribute c.US\$50 million to Kachi Project , once earn in complete** (pro-rata development funding)
- **Lilac has major tech sector supporters – aligns breakthrough climate tech with upstream ESG lithium**

Aligns breakthrough Climate Tech investment with upstream environmentally friendly battery materials supply.  
Lilac completed US\$150m Series B funding round from successful tech investors and battery/EV makers
- **Lake with Lilac – New independent clean lithium producer with scale**

# Lilac Solutions – Investors


Successful Tech Investor Backing with EV supply chain participants –  
Recent US\$150m investment



T.RowePrice 

LOWERCARBON  
CAPITAL

 Breakthrough  
Energy

 **THE  
ENGINE**  
Built by MIT

 **Sumitomo**



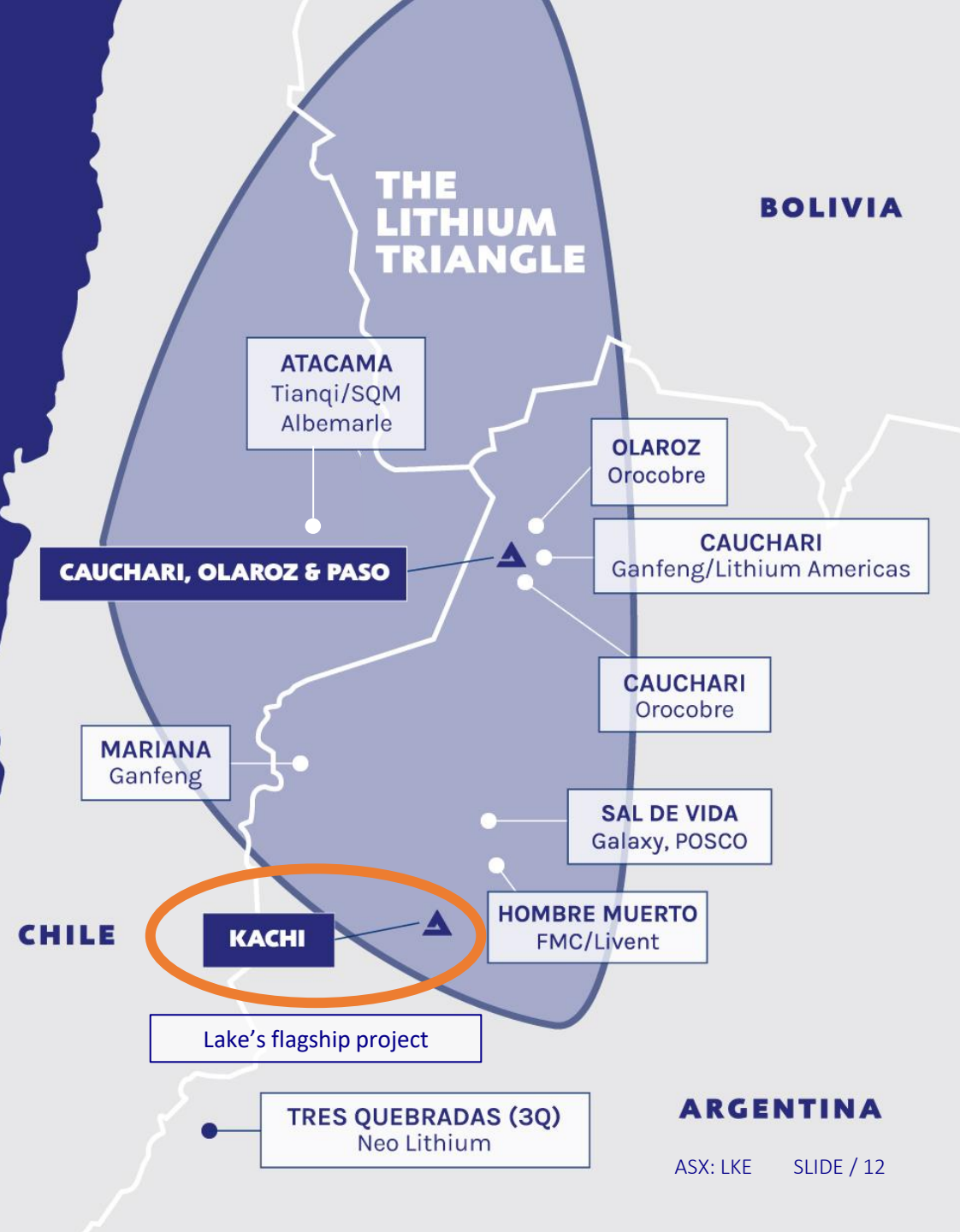
 **SK** materials

# World's cleanest lithium.

Four lithium projects in heart of the Lithium Triangle.

Large leaseholding 2,200km<sup>2</sup> (550,000 acres)

World's five largest producers all have equity in operations in the Lithium Triangle.



# Kachi project.

Large, scalable resource



25 years production uses 20% of resource.

- Drilling to upgrade resource for expansion; resource open laterally and at depth
- Kachi lease – 740 sq km (185,000 acres)
- One of 10 largest brine resources globally – total JORC resource 4.4Mt LCE
- Production 25,500tpa – 2024
- Export Credit Agencies – indicative 10 year 70% debt funding of Kachi development



# Clearer pathway

Simple production scale-up - Modular

**Lilac Pilot /  
Demo Plant**  
(1-2 Modules)

~10tpa LCE  
1000 hours

**Production  
Scale (PFS)**  
(50+ Modules)

25,500tpa  
LCE

**Expansion Study\***

(to Double Production to 51,000tpa)

51,000tpa LCE

*\* Note: Expansion Study requires drilling (underway) to upgrade more Inferred Resources to Measured and Indicated Resources.*

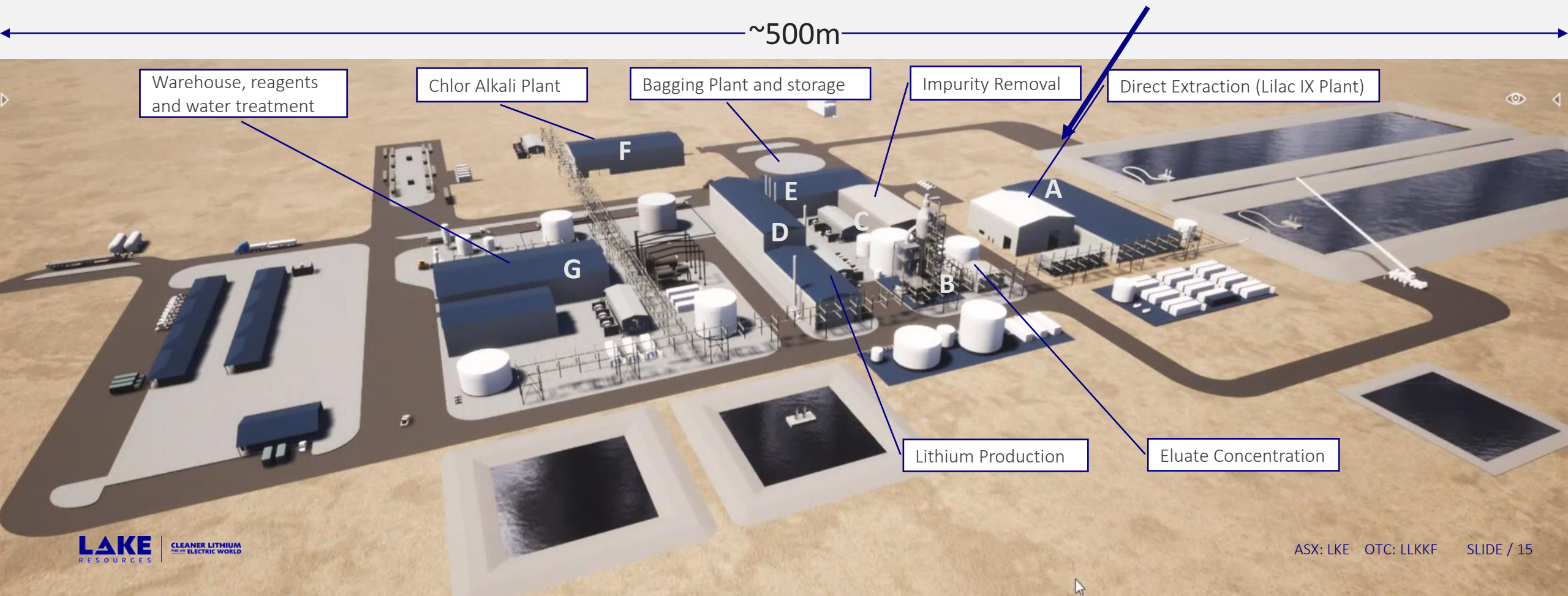


# Kachi project

Proposed plant design



One building with Ion Exchange Modules  
Replaces 20-30km<sup>2</sup> of Evaporation Ponds



Warehouse, reagents  
and water treatment

Chlor Alkali Plant

Bagging Plant and storage

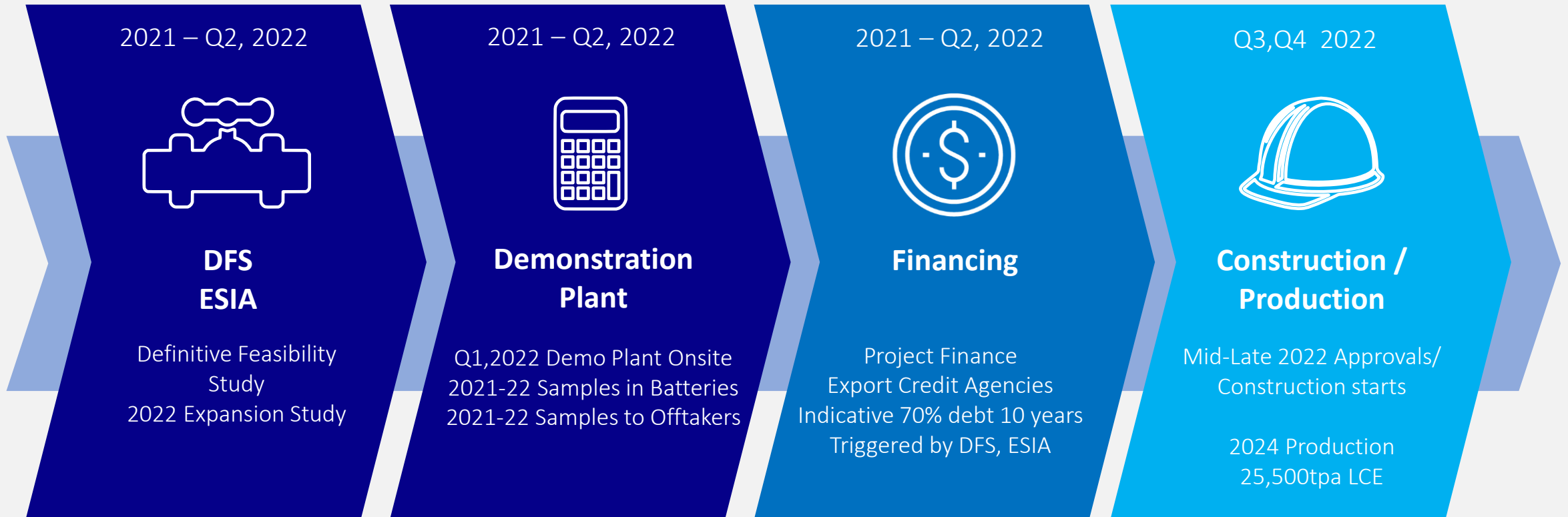
Impurity Removal

Direct Extraction (Lilac IX Plant)

Lithium Production

Eluate Concentration

# Project Production Timeline



# Lake Resources & Lilac Solutions - Clean Lithium Solution for Cathodes & EV's

- World's highest purity lithium
- Technology-led direct extraction
- Major ESG benefits
- New independent clean producer – at scale, with de-risked finance

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