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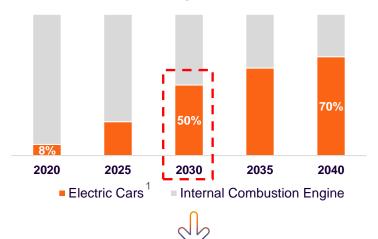
BofA Lithium (DLE) / Battery Materials (virtual) Fieldtrip 14 September 2022

eramet

# A world-class asset in the Group's portfolio in a momentum of mega boost in metals for energy transition



Electric cars (fully or partially) to represent half of global sales in 2030...



## ...with batteries requiring significant amount of lithium



standard Li-ion EV battery

Global demand<sup>2</sup> in 2020 vs. 2030 vs. 2040 (in k-tonnes<sup>3</sup>)

#### **Centenario-Ratones: Tier 1 lithium project**



- Life-of-Mine of 40 years<sup>4</sup>
- Resources estimated at c. 10 Mt LCE (providing further upside potential)
- Framine Sudamerica (50.1% Eramet) owns 100% of the entire salar with perpetual mining rights
- Construction in partnership with Tsingshan

#### Eramet to control and operate the project

- <sup>1</sup> Electric cars = Battery Electric Vehicles + Plug-in Hybrid Electric Vehicles + Hybrid Electric Vehicles
- <sup>2</sup> Battery-grade Lithium demand for all applications
- <sup>3</sup> LCE (Lithium Carbonate Equivalent)
- <sup>4</sup> Based on proven and probable reserves at the Ratones deposit (1.1Mt LCE), and on a project designed for 24ktpa LCE





## Top-notch sustainability standards

1

Building long-lasting and constructive relationships with local stakeholders



- Solid local content:
  employment (c. 95% of
  workforce) and sourcing (49%
  of procurement)
- Contributing to **local**community development
  (Quinoa Project developed by
  Eramet<sup>1</sup>) over the past 4 years

2

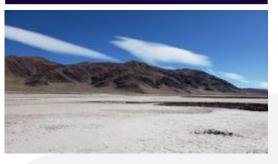
**Operating responsibly** 



- Robust environmental programme
- Significantly lower incidence on hydric balance vs. conventional process

3

Producing metals that the world needs



- Meeting the needs of global economic development
- Participating in the challenges of the ecological and energy transition

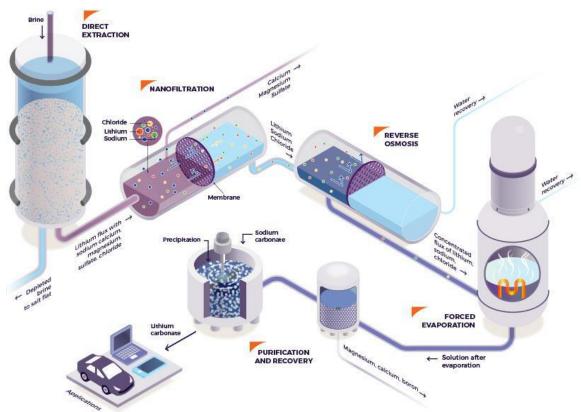
In line with UN Sustainable Development Goals

Continuously consolidating our social license to operate



## Developed in-house, Eramet's Direct Lithium Extraction technology combines strong competitiveness...





#### **Direct Lithium Extraction (DLE)**

- **Proven** industrial process over the past 20-years (aluminum-based lithium sorbent)
- Proprietary lithium sorbent working at **native temperature** of the brine (20°C)
- 90%¹ lithium recovery yield of the DLE unit
  - Industry leading yield much higher than traditional evaporation process (c. 40-50%)
  - Almost twice less brine pumped<sup>2</sup>
  - Thus, optimized management of the deposit's hydric balance

### Much higher performances than conventional process

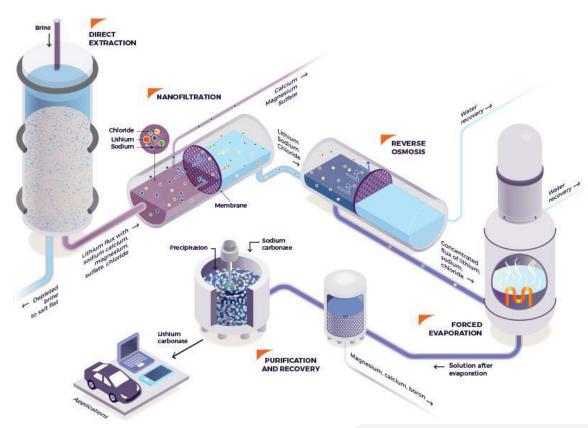


<sup>1 87%</sup> process yield overall

<sup>&</sup>lt;sup>2</sup> Vs conventional process, based on the same brine characteristics (notably Li concentration)



## ... as well as high sustainability standards



#### Water recycling

- Regeneration of the lithium sorbent only by water (DLE based on titanium or manganese sorbents use acid) and at 20°C
- Water recycling by reverse osmosis & forced evaporation
- 60% process water recycling rate

#### **Efficient purification**

- High selectivity of the DLE unit
- Nanofiltration and ion exchange for solid waste minimization

#### **Swift production**

1 week lead time vs. 12-18 months on evaporation process

## Aligned with the Group's strategy to create sustainable value



## Full production process tested on site in real conditions over the past 2 ½ years











### Eramine Training Center: Pilot Plant at 3,900 meters above sea, on the Andean highlands – startup in December 2019

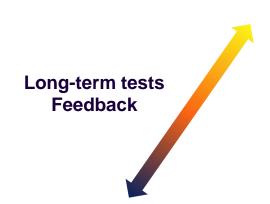
- Full process tested on site, from brine pumping to battery grade Li<sub>2</sub>CO<sub>3</sub> production
- 600 L/h of raw brine feeding the DLE unit
- 2 ½ years of continuous operation 24/7 demonstrated the performance and the robustness of the process

### Highly trained team and solid return of experience



## All conditions are met to achieve a short-term ramp up at full capacity...





#### **Training Center**

- Full process validated
- Equipment testing
- Team training

Expected quick time-to-market Battery Grade quality



#### **Equipment providers**

- Recognized expertise
- Strong industrial experience
- Involved in Training Center



#### **Project Team**

- Expert team with solid trackrecord in Lithium industry
- Robust design
- Experienced in construction





## ...together with robust economics

Yearly production<sup>1</sup>
24,000 kt-LCE<sup>2</sup>
(after ramp-up)

Cash cost (ex-works)
US\$ 3,500 per tonne
(after ramp-up)

1st quartile of the industry
cash-cost curve

EBITDA

at full ramp-up<sup>1,3,4</sup>

c. US\$ 200m

Based on a \$12,700/t LCE<sup>5</sup>
LT consensus CIF price

Very high internal rate of return



Eramet to become the first European company to operate a large-scale and sustainable lithium industrial complex leveraging on its own process



<sup>&</sup>lt;sup>1</sup>On a 100% basis

<sup>&</sup>lt;sup>2</sup> Lithium Carbonate Equivalent

<sup>3</sup> Assuming a cash cost (ex-works) of 3,500 US\$/t

<sup>&</sup>lt;sup>4</sup> EBITDA inclusive of royalties and logistics costs

<sup>&</sup>lt;sup>5</sup> Spot price > \$ 70,000/t LCE



## Not a project anymore... Construction has started















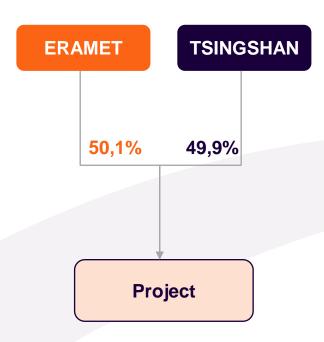


## Project structure and financing

#### TRANSACTION WITH TSINGSHAN

- Scope of the transaction: construction of a 24ktpa LCE battery-grade plant ("Project") leveraging on Eramet's assets in Argentina<sup>1</sup> and in-house developed DLE technology
- US\$ 550m estimated remaining project capex² funding requirement, o/w:
  - Initial US\$ 400m to be contributed by Tsingshan up to US\$ 375m and by Eramet up to US\$ 25m
  - Additional US\$ 150m (due to continuing rise in the price of materials and freight), to be contributed by both shareholders on a prorata basis (50.1%/49.9%)
- Future commercial production to be shared on a prorata basis

#### **POST-FUNDING OWNERSHIP %3**



## Eramet to control and operate the project



<sup>&</sup>lt;sup>2</sup> US\$ 185 million invested by Eramet in the project until April 2020



<sup>&</sup>lt;sup>3</sup> Project fully consolidated in Eramet Group's consolidated accounts

## Continued strong growth momentum for lithium demand, still reflected in current prices

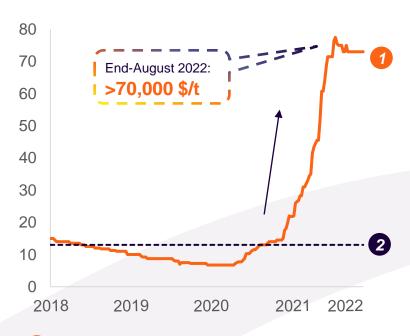


#### Forecasted lithium market demand<sup>1</sup> (in kt LCE)

Li<sub>2</sub>CO<sub>3</sub> CIF Asia (in US\$/kg LCE<sup>3</sup>)



Group's lithium expected market share post full ramp-up<sup>2</sup>: c. 2.5%



- 1 Price increase: x10 since January 2021
- 2 Eramet long-term price assumption: 12,700 US\$ CIF per tone LCE

## Poised to enter the market at the right time



<sup>&</sup>lt;sup>2</sup> On a 100% basis



<sup>&</sup>lt;sup>3</sup> LCE: Lithium Carbonate Equivalent