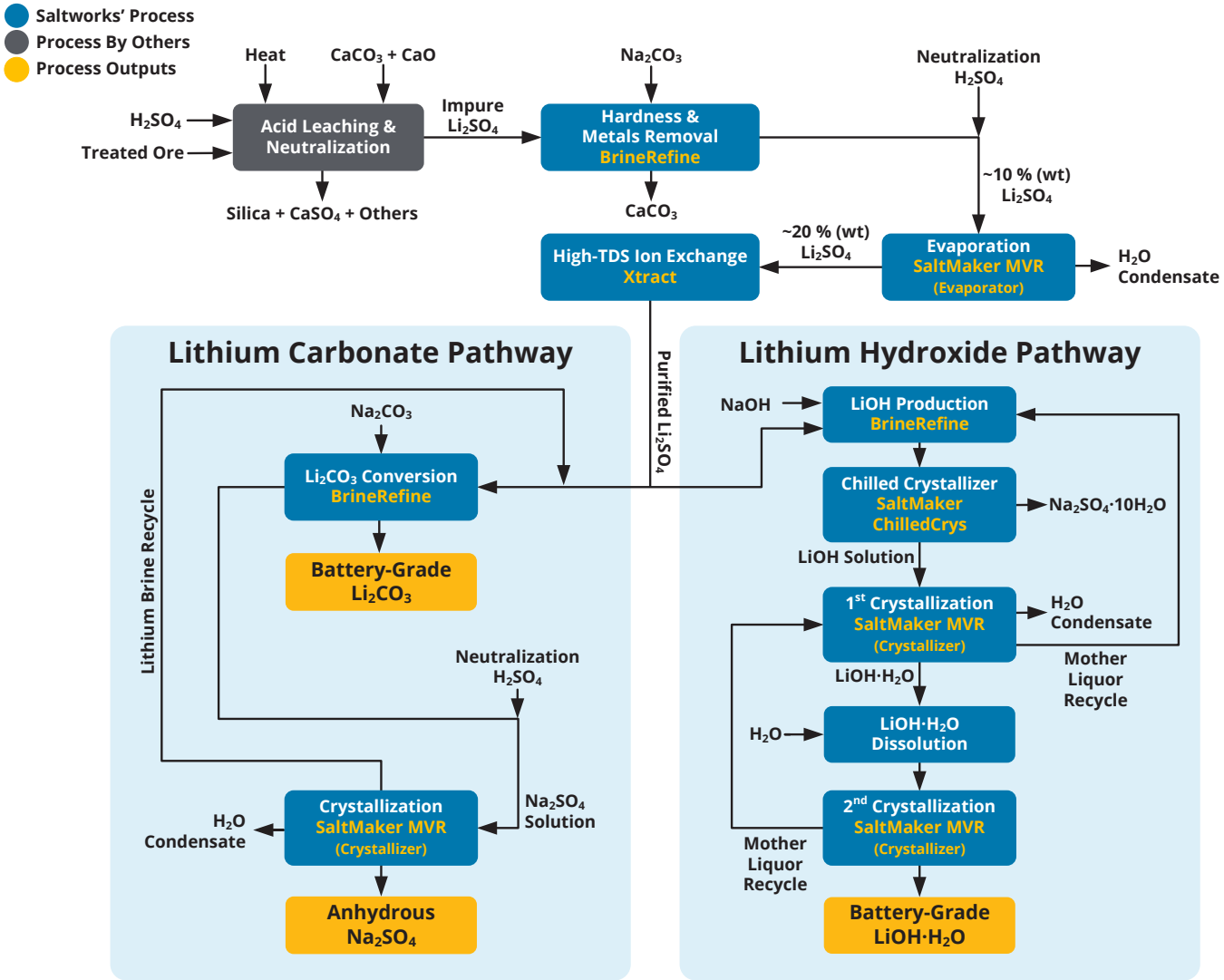
Spodumene Lithium Processing

Expertise, Lithium Test Centre, Full-Scale Plants

Concentrate, Refine, and Convert (CRC) Dissolved Lithium from Spodumene

Process impure lithium sulfate solutions into battery-grade lithium carbonate or lithium hydroxide.



Concentrate, Refine, Convert

Saltworks' lithium processing technology applies to dissolved lithium processing from spodumene. Our concentrate, refine, and convert (CRC) systems refine lithium solution to battery-grade lithium chemicals. Saltworks' CRC technology can also recover lithium from wastewaters and treat hypersaline wastewaters emerging from the plant, including evaporator blowdown streams.

Process, Technologies, and Economics

Progress de-risked optimized processes, pilots, and full-scale plants. We provide flexible options, from engineering services, single-unit operations, or a complete lithium processing system.

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Saltworks

Saltworks and Your Lithium Project

Client confidentiality, deep technical focus, and responsiveness are critical at Saltworks. **Contact us to start today.**

1 Process Optimization

2 Pilot: Lithium Test Centre

3 Full-Scale: Unit Ops, Complete Plants, Digitization

4 Operational Support & Optimization

- Process flow optimization to put your project on the best path
- Lab- and bench-scale pilots to de-risk and prove performance
- Front-end engineering design (FEED) evaluation to refine costs
- Modular unit operations integrate with others processes
- Full-scale complete lithium systems from start to finish

Lithium Concentration & Processing Technologies: Modular & Digitized

BrineRefine, XtremeUF & BRIX: Refine & Convert

Ensure the highest lithium quality and yield by precisely targeting impurities at the beginning of the refining process. Our smart chemical conversion processes (BrineRefine) and robust ceramic ultrafiltration (XtremeUF) consistently produce high-purity outputs.

Our BRIX (high-TDS ion exchange) polishes for hardness and boron. Downstream, a BrineRefine carbonate reactor can produce technical- or battery-grade lithium carbonate.

SaltMaker ChilledCrys

For specific chemistries, chilled cyrstallization offers more cost and energy effective solids production compared to evaporative crystallizers.

We package our closed loop chilled crystallization technology with intelligent controls for continuous separation of water and salt. SaltMaker ChilledCrys recovers and recycles valuable salts generated in mineral processing, including anhydrous sodium sulfate (Na_2SO_4).

SaltMaker MVR: Concentrate and/or Crystallize

Maximize downstream yield by concentrating lithium sulfate with a SaltMaker MVR evaporator, or produce battery-grade lithium hydroxide monohydrate crystals with a SaltMaker MVR crystallizer, then wash and centrifuge.

Configured as evaporators or crystallizers, SaltMaker MVR forced-circulation systems are fully automated, with built-in self-cleaning.

As a crystallizer, integrated solids management systems ensure reliability at optimal capacity.

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