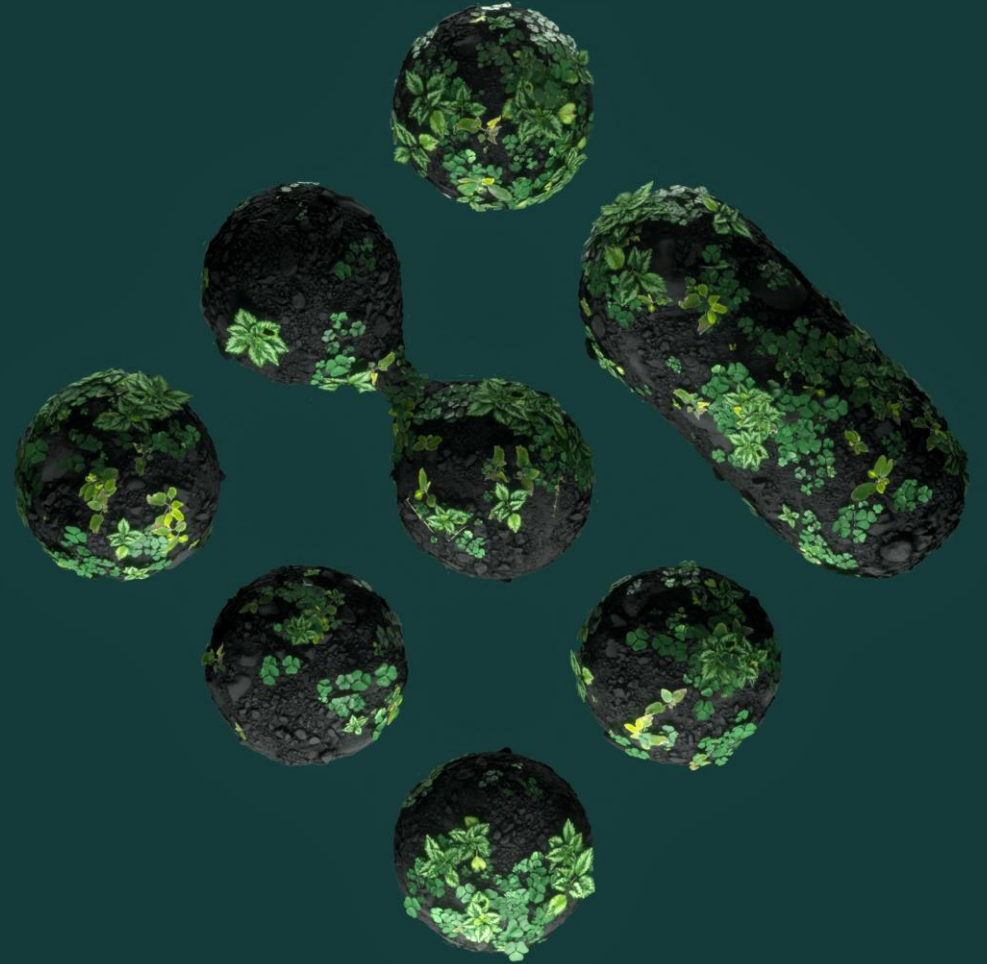


Lithion Technologies

Meet the recyclers presentation

NaatBATT 2024





” We are passionate about finding sustainable solutions for strategic materials to be reused infinitely. We see lithium-ion batteries as a resource to be leveraged to create circularity of materials and lessen the pressure on our precious planet.

– Benoit Couture,
President & CEO

Lithion Brings a Tangible Innovation to Market



- 01 Founded in Montréal in 2018
- 02 Commercialization of patented mechanical extraction and hydrometallurgy solutions
- 03 Processes developed & scaled by engineering sister-company Seneca
- 04 Recuperation of 95% of Lithium-ion battery components
- 05 Received over 90M \$US in investment in Series A financing round
- 06 Licensing business model to deploy rapidly and locally
- 07 Operation of our own plants

We close the loop
of battery
materials





How We Run Our Business



WE OPERATE TO ACHIEVE

Internal Feedstock Service

Driven by Logistics Expertise.

Lithion Saint-Bruno

Commercial critical minerals extraction plant. Unveiled publicly in June 2024.

Lithion Hydrometallurgy

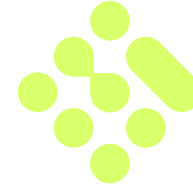
Upcoming commercial plant.



WE INNOVATE & ELEVATE TO DRIVE PROGRESS

Expert support

Offer our licensees & partners expert support to ensure continuous success.



WE PARTNER TO DEPLOY

Growing together

Deploy our solutions globally through partnerships for the construction of mechanical extraction and hydromet plants.



Led by Experienced World-Class Management



Benoit Couture, P. Eng.
President & CEO



Eva Carissimi, P. Eng.
VP & General
Manager



Marc Chabot, CPA
VP & Chief
Financial Officer



Emilie Nadeau, P. Eng.
VP Engineering &
Capital Projects



Yves Noël, P. Eng., MBA
VP & Chief Business
Development Officer



Christian Normand, P. Eng.
VP & Chief
Technology Officer

- ✓ Over 145 years of experience combined
- ✓ Key to launch of over 12 start-ups
- ✓ Publicly traded company executives*
- ✓ Experts in process development, industrial projects, materials purification, and mining
- ✓ Strong experience in financing, and business development

- We close the loop of battery materials



Partner With Experienced Engineering Firm

Seneca : galvanizing force behind Lithion's technology development.

- Lithion's technologies were created in-house at Seneca.
- Lithion is the only known company of the industry born from a process engineering firm.
- Lithion & Seneca collaboration enables perfect customization and rapid response.

Seneca: 25+ years of extensive process engineering experience.

- All expertise, ideas and tests gathered, and due diligence conducted prior to construction.
- Robust experience in metallurgical, chemical, and alternative energy industries, including critical materials.

Seneca's plans are tested and true before implementation.

- Excels in deployment of large and complex projects. Over 1,000 projects in 15 countries worldwide and counting.
- Strong expertise in Process optimization, Technology scale-up, and Plant design, engineering, and construction.
- In-house operational know-how to speed up processes.
- Team of 150+ scientists and engineers.



A FEW OF SENECA'S GLOBAL CLIENTS:





Our Environmental, Social & Governance Plan

Our strategic approach to sustainability includes:

- Management commitment for ESG is integrated into all Lithion's activities
- Director of Sustainability mandated to coordinate all Sustainability efforts and ensure alignment with corporate Policy
- Sustainability Committee in action, ensures continuous implementation of our ESG strategy throughout the business
- Actions include aspects on :
 - Reducing environmental impact, such as greenhouse gas emissions
 - Ensuring efficient use of resources (energy, materials and more)
 - Sustainable supply chain management
 - Health & Safety, including psychological health
 - Maximum efficiency, all while ensuring high quality

Our commitments are aligned with the United Nations Sustainable Development Goals (SDGs).



Planet: Participate in the circular economy and reduce GHG emissions (SDG 12, 13)

People: Take care of our employees and give back to the community (SDG 3, 4, 8)

Partnership: Develop long-term win-win relationships (SDG 17)

Prosperity/Sustainability: Ensure the resilience of our business model (SDG 9, 12)

Performance: Innovation, operational excellence and customer experience. (SDG 9,12)

Our Patented Technologies

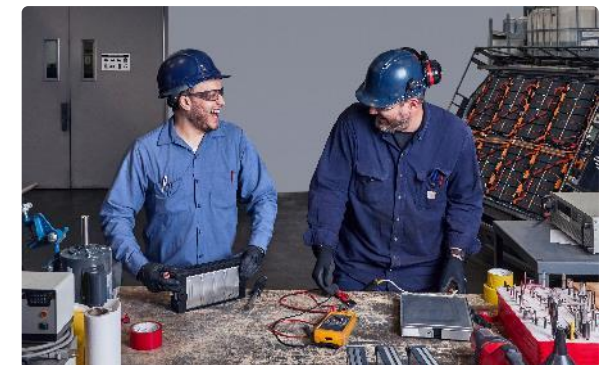
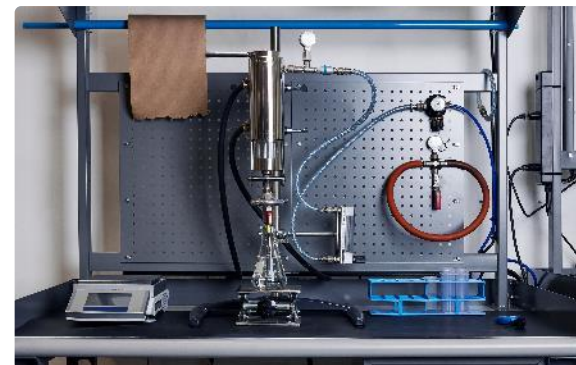


- Our Patented Technologies

Lithion's Technologies: Developed in-house at our **Centre of Excellence** since 2020

Source of technology transfer, training, and technical support.

- Comprehensive, reliable, evolutive R&D process
- Industrial scale development
- Unparalleled team of over 20 experts
 - ✓ Process development and analytical chemistry
 - ✓ Extensive operational experience
 - ✓ Fast and reliable support during scale up to commercial operations of our partners



- Our Patented Technologies

Our Centre of Excellence: The Foundation Of Our Success

- End-products in battery-grade purity range under evaluation by potential off-takers
- Identify critical operating parameters (COPs)
- Identify process operation limits
- Assist the engineering work
- Perform extensive work at industrial scale for de-risked commercial scale-up
- Evaluation and testing of battery packs from 10+ OEMs
- Thorough technical due diligence done by external parties
- Many R&D collaborations between Lithion and industry members or universities on various products



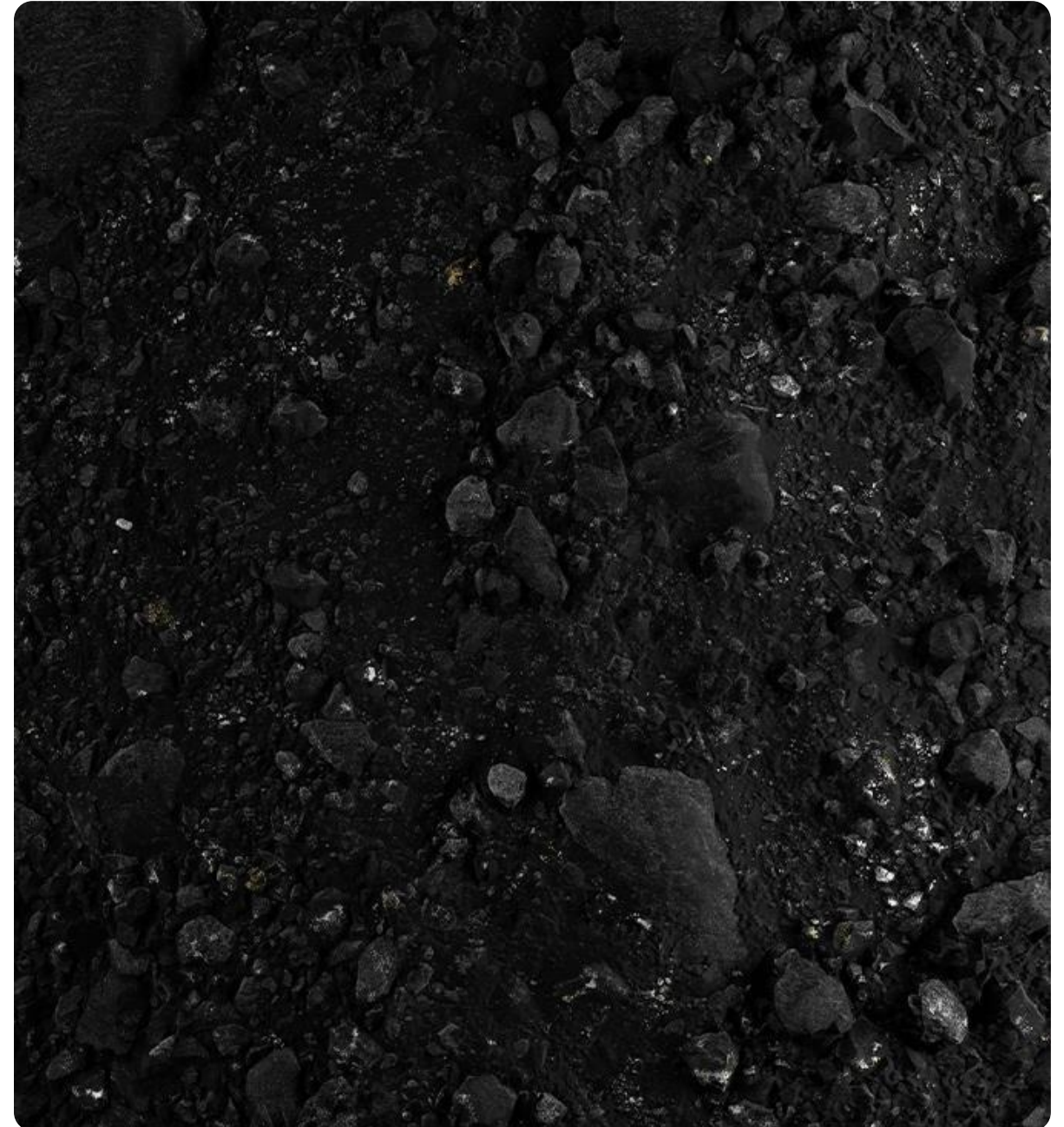


Step 1: Recover 98% of Black Mass

Highest recovery rate of critical minerals concentrate!¹

High-efficiency, robust proprietary mechanical extraction process

- ✓ Agnostic to battery type (car, tools, electronics,...)
 - ✓ Agnostic to state of charge
 - ✓ Agnostic to battery shape (complete and packs)
 - ✓ Agnostic to Lithium-ion battery chemistries
 - ✓ Pre-processing automated
-
- **Building our own** commercial mechanical extraction plant – *Unveiled to the public in June 2024*
 - **Technology offered to partners** as the Lithion Shredding Technology Package (LSTP)





Step 2: Produce Battery-grade Materials from Black Mass

Unique high-performance hydrometallurgy process:

- ✓ **95% to 98% of all valued materials recovered (Li, Ni, Co, Mn, and Graphite)**
- ✓ **Li, Ni, Co of purity in battery-grade range**
- ✓ Includes recirculation of process streams to optimize efficiency and minimize operational costs and environmental impact.

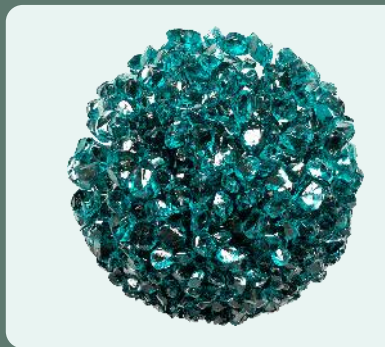
- Follow best industrial safety practices
- Replicable processes

- **Designing our own** commercial hydromet plant. Expected start of operation: 2028
- **Technology offered to partners** as the Lithion Hydrometallurgy Technology Package (LHTP)



Cobalt Co

Cobalt boosts energy density and longevity, enhances stability, and reduces overheating risks, ensuring safer and more efficient performance.




Nickel Ni

Nickel in lithium-ion batteries increases energy capacity and output, enabling longer battery life and more powerful performance.



Graphite C

Graphite is used as an anode material, offers high electrical conductivity and a stable structure, leading to efficient energy storage and long battery life.



Lithium Li

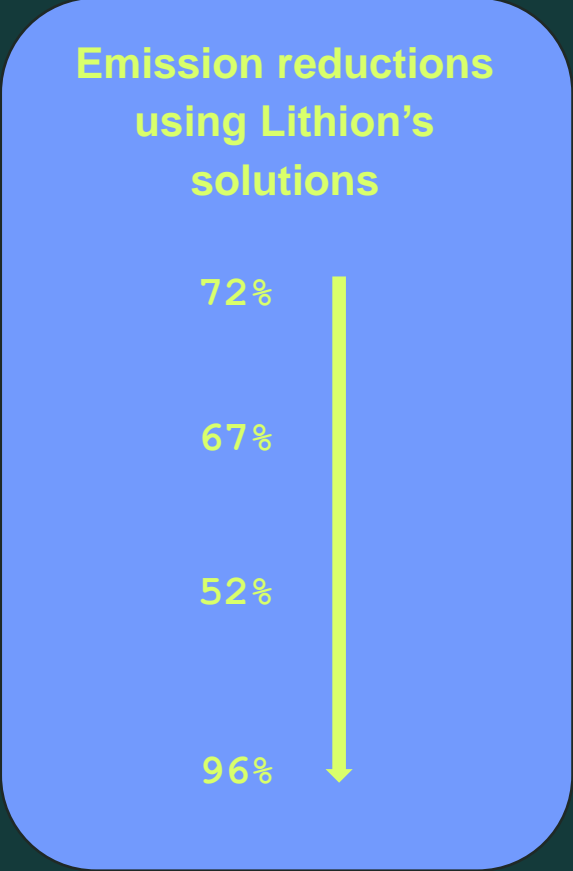
Lithium in lithium-ion batteries provides high energy density and voltage capacity, resulting in lighter batteries with longer-lasting power.



Positive Environmental Impact

Using our technologies rather than mining strategic materials **has a positive and quantifiable impact on the environment.**

| | | Emissions from mining, refining and end-of-life management | Emissions from Lithion's solutions |
|---|---|--|------------------------------------|
|  | GHG kg CO ₂ e / kg LiB | 8.76 | 2,45 |
|  | Particulate Matter kg PM / ton LiB | 0.27 | 0,09 |
|  | SO_x kg SO _x / ton LiB | 0.42 | 0,20 |
|  | Water use m ³ / ton LiB | 85 | 3 |



Commercial Facilities



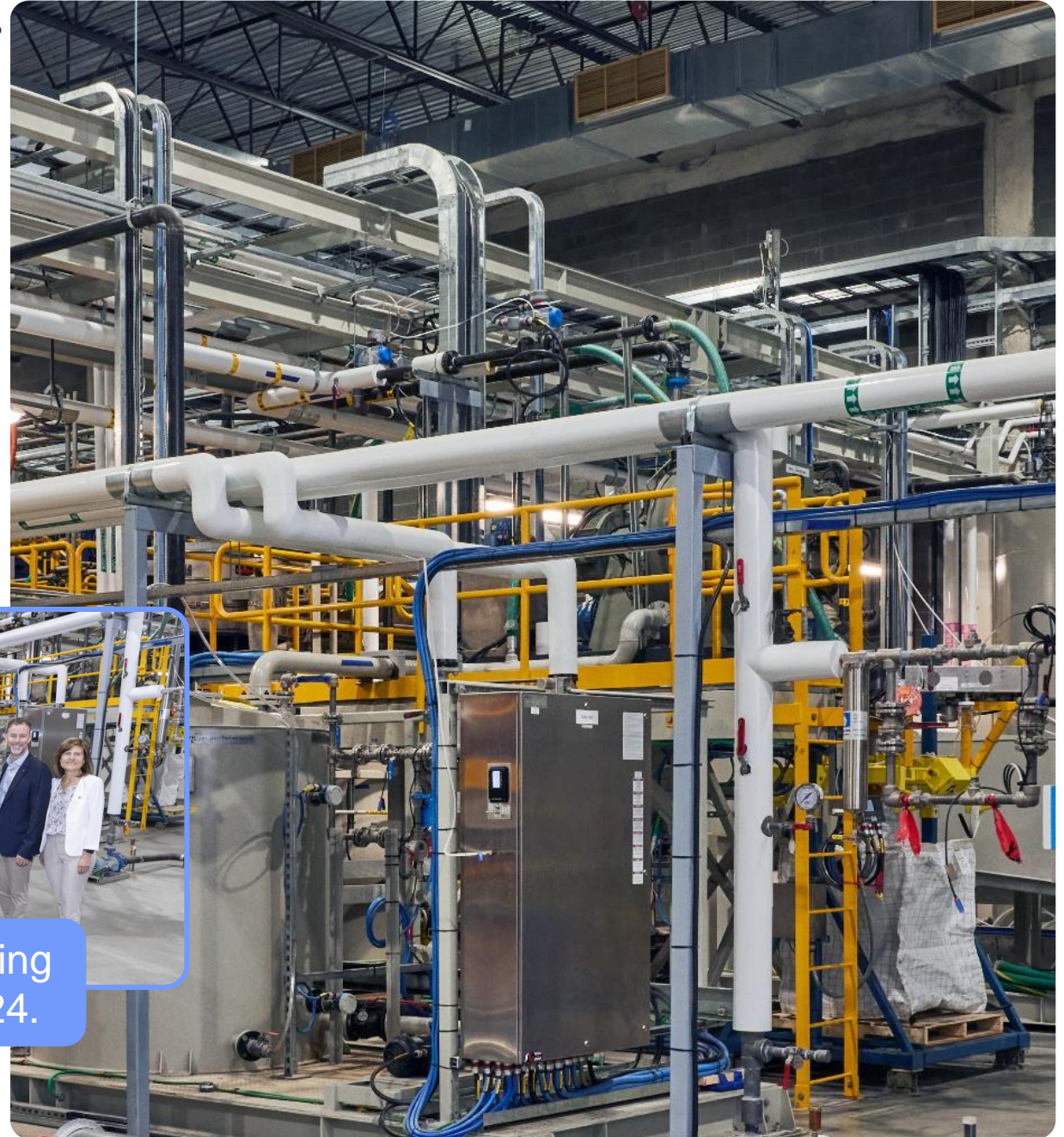
- Commercial Facilities

Lithion Saint-Bruno: First Commercial Mechanical Extraction Facility

- **Start of operations**
2024
- **Capacity**
20,000* mt/y or 2,7 GWh of lithium-ion batteries
- **Inputs**
Lithium-ion batteries + Non-compliant products
- **Output**
Critical Minerals Concentrate
- **Plant Footprint**
5,000 m² (53.8K sq ft)
- **Owner and Operator**
Lithion
- **Location**
Near Montreal, Canada



View here the official unveiling ceremony held in June 2024.

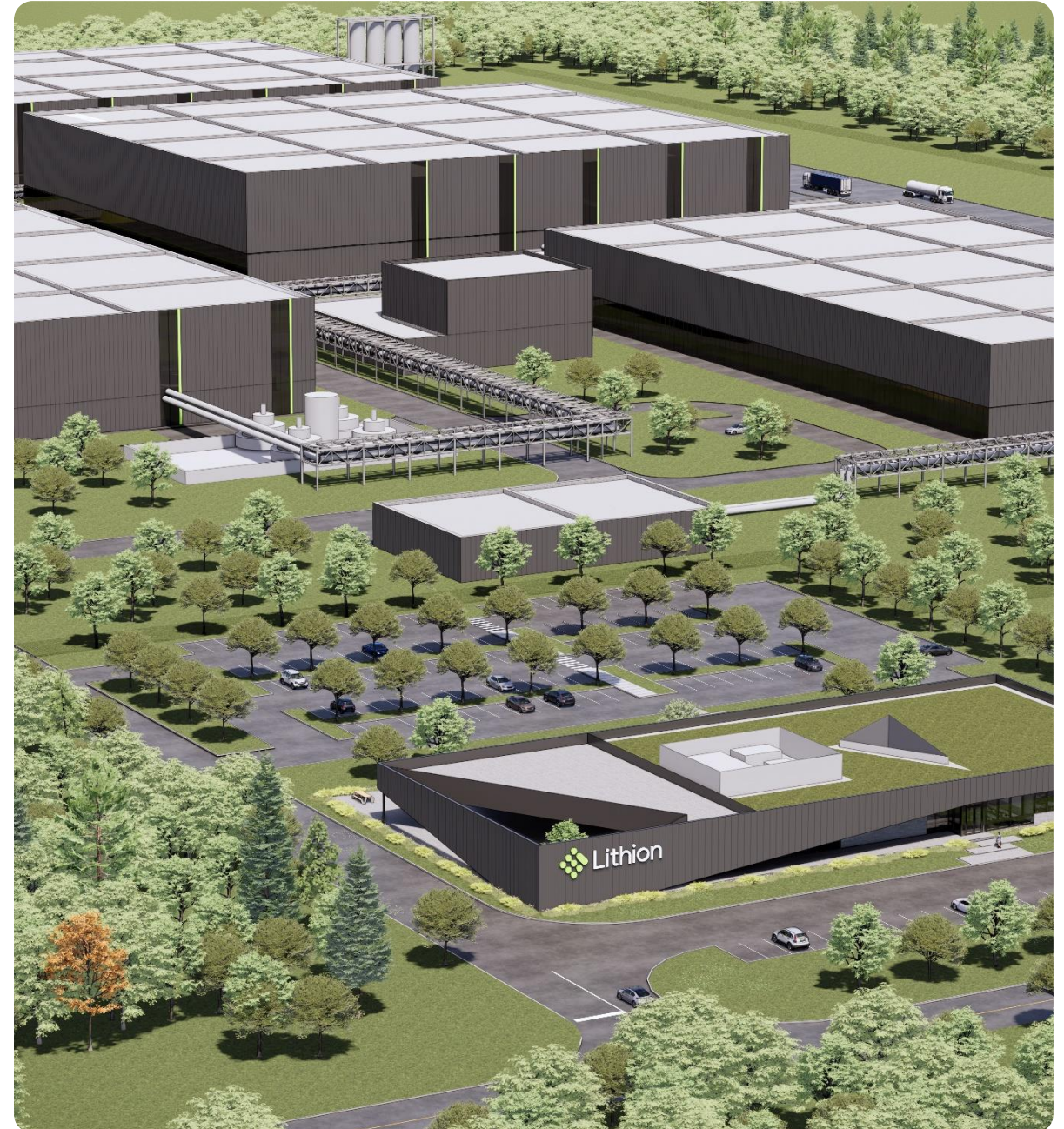


*Expressed in tons of End-of-Life Batteries. Initial capacity installed at 10,000 mt/yr, growing to 20,000 mt/yr at full capacity.

Lithion Hydromet: First Commercial Hydrometallurgy Facility

- **Planned start of operations**
2028
- **Capacity**
30,000 mt/y or 10,2 GWh of Black Mass
- **Inputs**
Critical Minerals Concentrate
- **Battery-grade Outputs**
Lithium, Nickel, Cobalt
- **Industrial-grade Outputs**
Manganese, Graphite
- **Owner and Operator**
Lithion

Lithion selected for a hydroelectricity connection by the Quebec government in June 2024!





Turnkey Service for Feedstock Partners

- Turnkey Service for Feedstock Partners



Lithion's EV battery recovery solution

A safe all-in-one solution

- Expert recovery
- Secure transportation logistics
- Safe processing
- Easy-to-use online platform for partners

Complete logistics and storage support

- ✓ Transportation through 3rd party
- ✓ Crate for EOL, DDR, warranty & damage batteries
- ✓ Training and instructions on how to pack batteries
- ✓ Storage solution

All Lithium-ion batteries accepted

- Electric, hybrid and plug-in hybrid cars
- Single-use or rechargeable electronics (cordless power tools, cellphones, computers, cameras, radios, etc.)
- e-Mobility (electric bikes, electric scooters, etc.)

Lead-acid batteries not accepted.



- Turnkey Service for Feedstock Partners



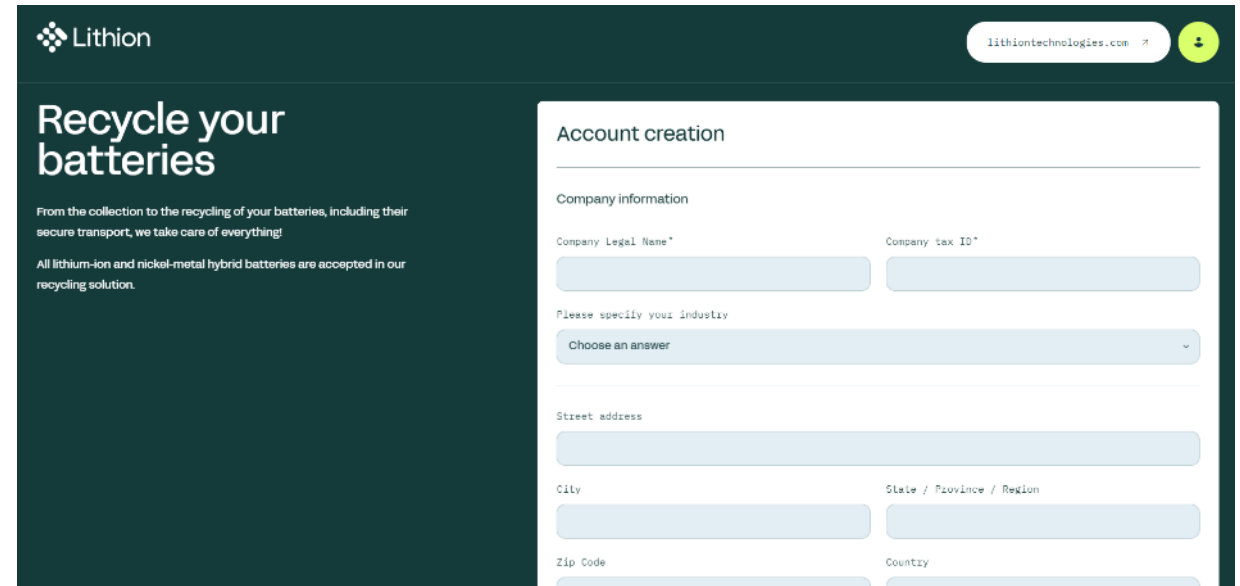
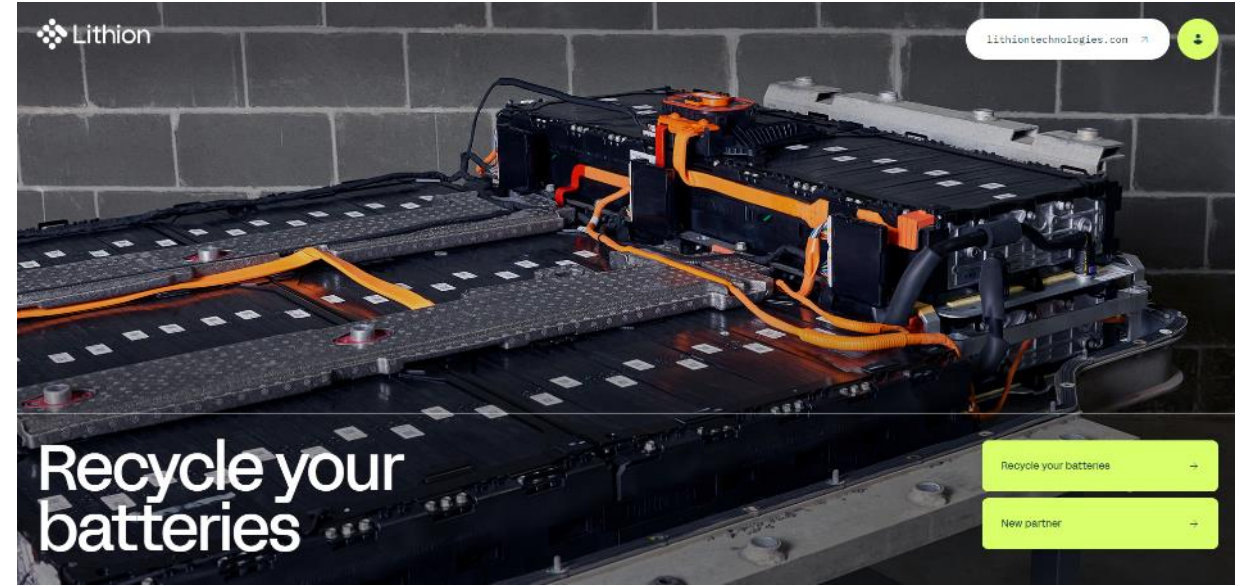
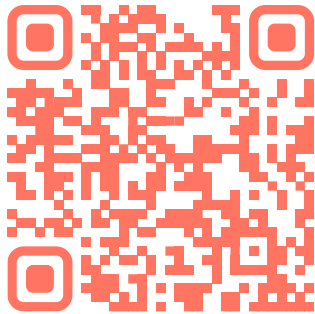
Our Online Recovery Portal for Partners

Easy-to-use direct access to all our services :

- ✓ Individual login for each retailers
- ✓ Transactions summary
- ✓ Tracking information
- ✓ Dedicated phone line

Transaction processed and handled by our dedicated team as soon as submitted.

Visit our portal here!



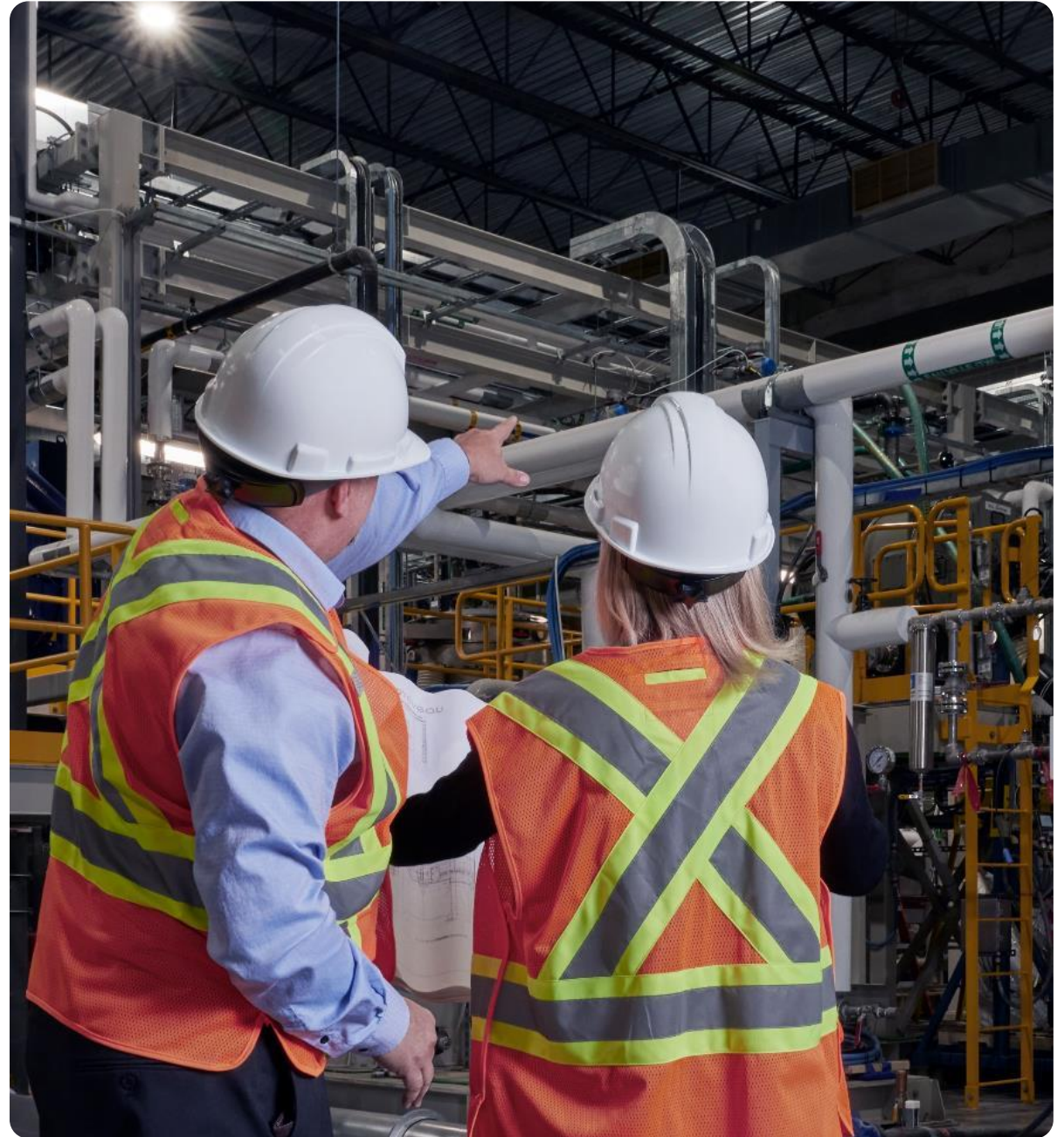


Business Approach

A Different Business Model

- **Our partnerships are unique.**
 - ✓ Maximizes success for all parties
 - ✓ Enables easier integration to the battery supply chain
 - ✓ Leverages strengths of all involved – including knowledge and experience
 - ✓ Eases geographical expansion
 - ✓ Accelerates deployment

The most flexible commercial offering currently available in the marketplace.





Partnerships Through Licensing

- Allows for a rapid and locally-adapted implementation of our solutions.
- Lithion provides all engineering, equipment, installation, training and maintenance.

Advantages of partnering with Lithion:



Contractually guaranteed performance



Association of regional forces and partner resources



Access to Lithion's expertise and technology upgrades



Technical support



Predictability of operations and results



De-risked investments from proven results



Commercial support for relations



Various revenue sources for licensees



Well Positioned for Success

Patented Solutions

Most advanced mechanical extraction and hydrometallurgy technologies

Reliable Engineering

Experienced partner in process engineering

Most efficient technologies

Highest recovery and purity of strategic materials on the market

Strategic commercial plan

Unique licensing model, leveraging partners strengths and knowledge, and speeding up deployment

We care about tomorrow

Impressively small environmental impact vs mining extraction and pyrometallurgy

Contact us



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04




Learn More

lithiontechnologies.com



Infinite energy.
Sustainable technology.

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