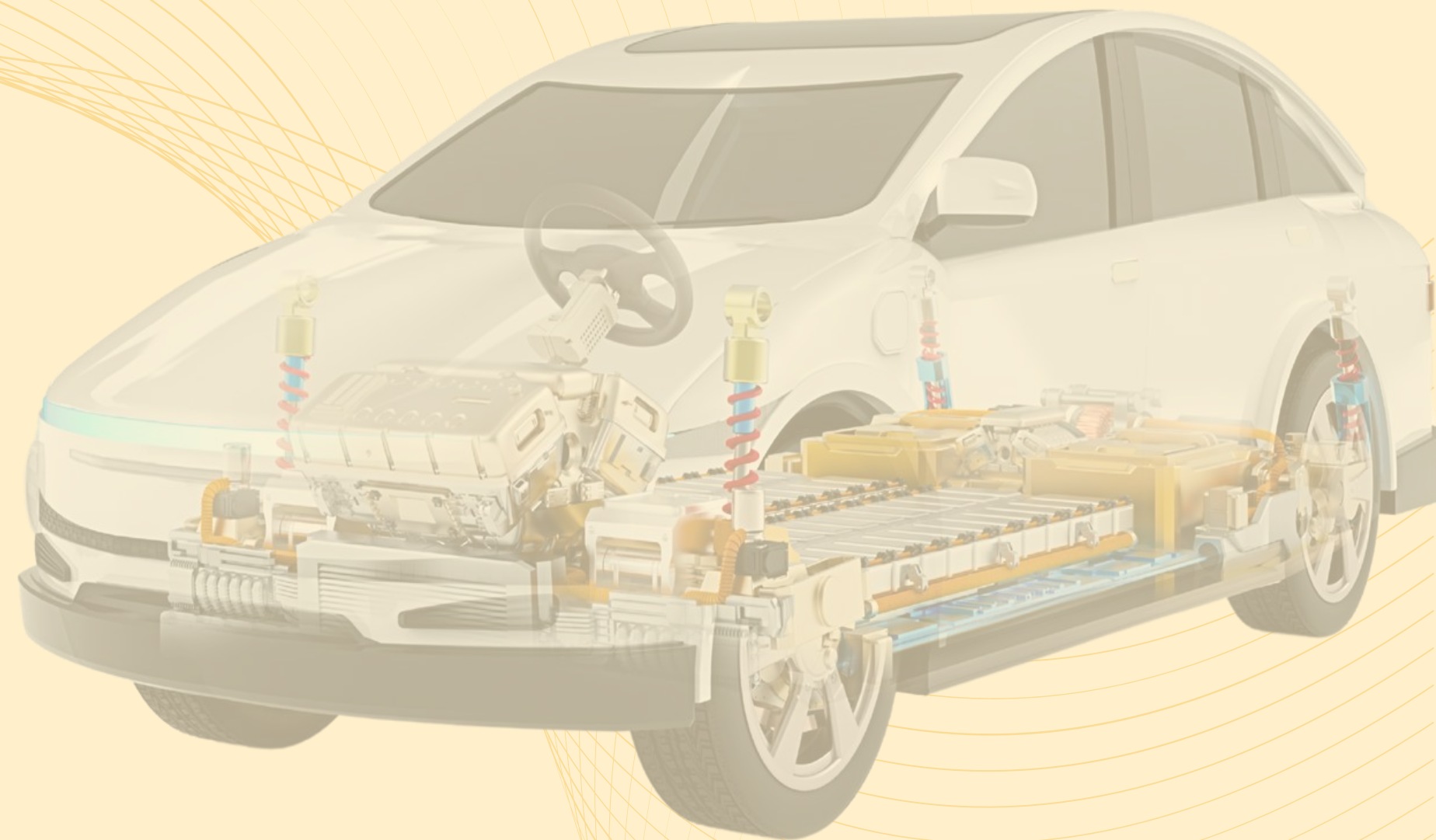


TSXV: BEM

# BATTERY FOCUSED CRITICAL MATERIALS

The Brazil Solution



Corporate Presentation

Q3 2025

[www.brasnovaem.com](http://www.brasnovaem.com)

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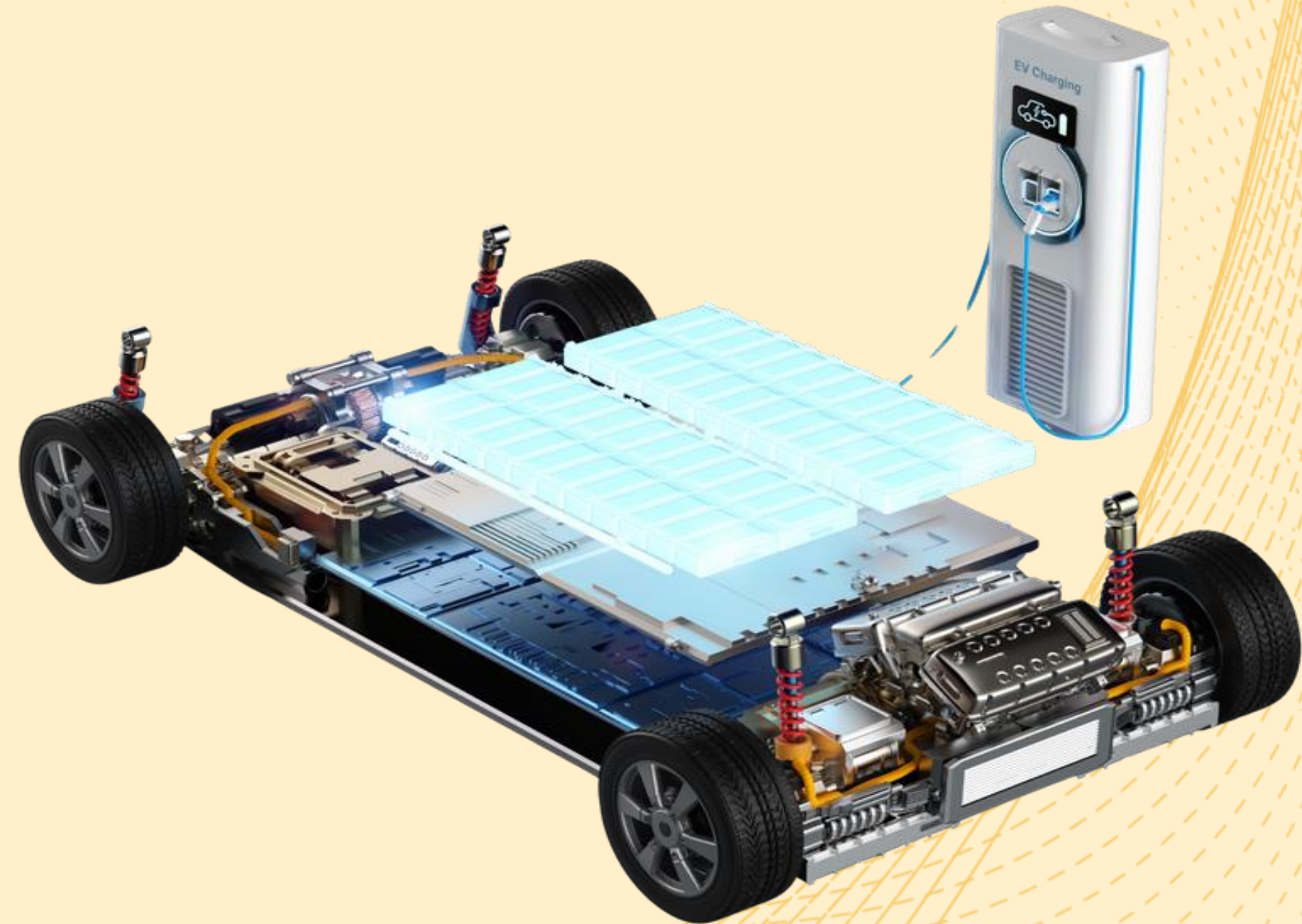


# A SUSTAINABLE FUTURE WITH NEW BATTERY TECHNOLOGIES

Join us as we develop a sustainable Western battery material supply chain to exceed current battery performance. The West urgently needs to secure supply chains to achieve announced critical materials supply chains and accelerate mass EV adoption, grid storage and renewable energy.

Our business plan examines the LFP/LMFP and LMR battery supply chain, its current market dynamics, and Brazil's strategic initiatives to establish itself as a sustainable supplier and vertically integrated processor in this critical materials sector.

Dive In





# WHAT IS THE PROBLEM?



The global shift to renewable energy and electric mobility has placed Lithium Iron Phosphate & Lithium Manganese Iron Phosphate (LFP & LMFP) batteries in the spotlight. With intrinsic safety, affordability, and long life, LFP batteries are increasingly used in electric vehicles and energy storage systems.

In 2024, **LFP batteries accounted for almost half of the global market for electric vehicles, with near-total Chinese dominance in LFP & LMFP battery manufacturing and export.**

China's dominance is based on vertically integrated operations, combining low-cost mineral processing with advanced manufacturing.

However, dependence on Chinese exports revealed supply chain risks during the COVID-19 pandemic and, more recently, in response to increased US tariffs.

This vulnerability has accelerated the push for more regionalized supply chains, particularly in the West.

The rising demand for critical battery materials raises concerns about market scarcity.

**The solution is regionalization, starting with Brazil.**

[LFP & LMFP Report](#)



# THE SOLUTION? ***BRAZIL***



**President Lula** has unveiled a new national policy on strategic minerals, framing it as a matter of national sovereignty:

"We won't allow what happened in the last century to happen again, where Brazil exports raw minerals and then buys products with very high added value. ***We want to add value in Brazil.***"

[Lula Plans New National Sovereignty Policy - Source](#)



## FAVORABLE GOVERNMENT POLICIES

Brazil is investing boldly to become a global powerhouse in critical minerals and renewables, attracting both public and private capital. Being at the heart of Brazil's transition offers access to abundant resources and a favorable regulatory environment for project growth.



## COST EFFICIENCY & PROXIMITY TO MARKETS

Local production is 30% cheaper than in the West. Brazil is transitioning from raw exports to manufacturing cathodes and batteries.



## GEOPOLITICAL NEUTRALITY

Non-aligned status allows Brazil to trade freely with both Western and Eastern markets.



## BRAZIL'S INCREDIBLE ENDOWMENT OF MATERIALS

Among the world's largest reserves of lithium, iron, phosphate, and manganese, available at globally competitive cost.

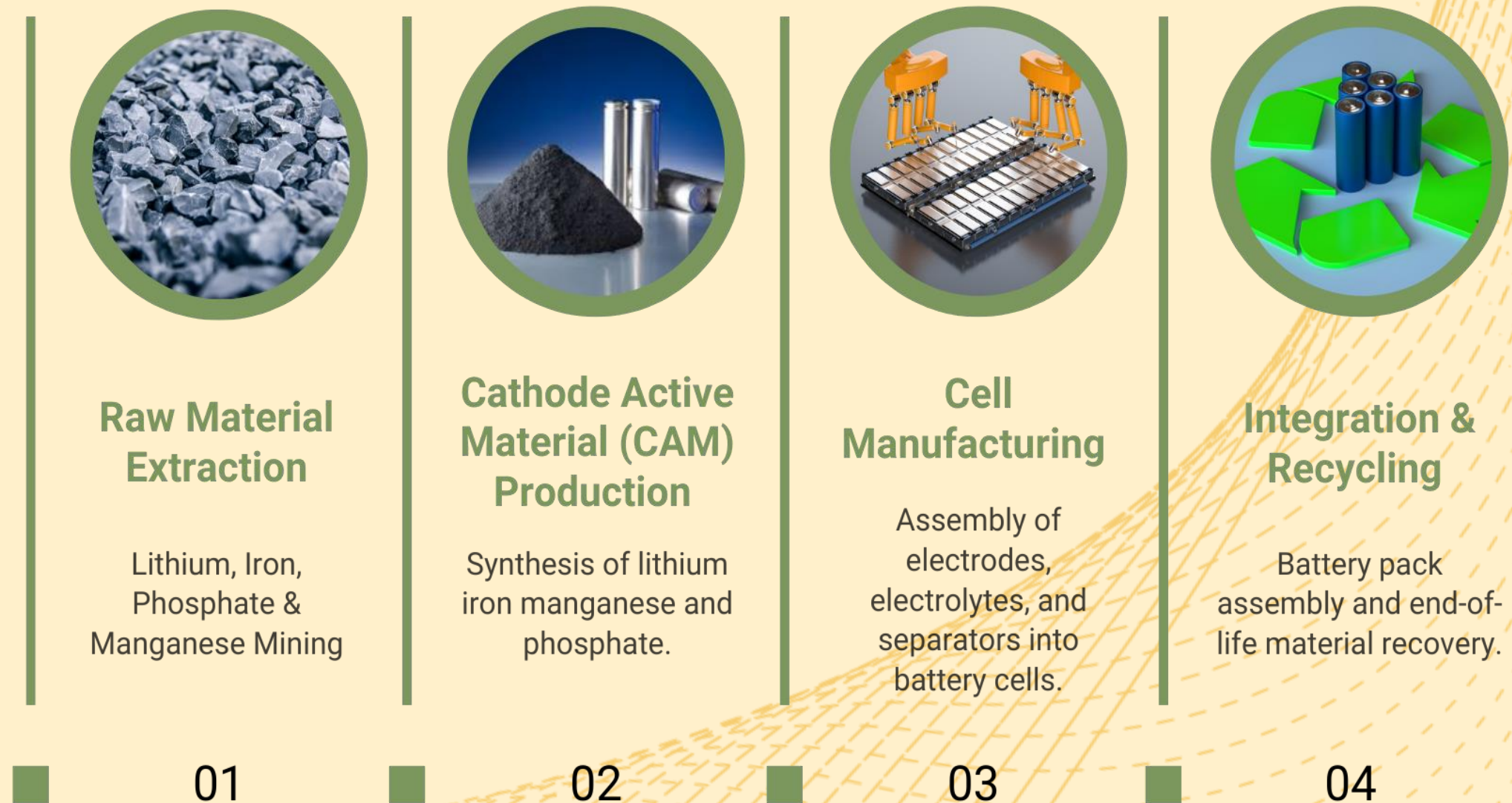
# STRATEGY TO DISRUPT & DEVELOP

## Develop LFP / LMFP / LMR Critical Materials Supply in Brazil

- ❖ **Cathode** – Direct ownership & partners
- ❖ **Anode** – Silica and graphite from partners
- ❖ **Validated** by tech partners and OEM's
- ❖ **Leverage** North American, European & Asian battery tech
- ❖ **Build** Brazil's first critical materials processing infrastructure

## LFP / LMFP / LMR SUPPLY CHAIN

### KEY COMPONENTS & PRODUCTION STAGES



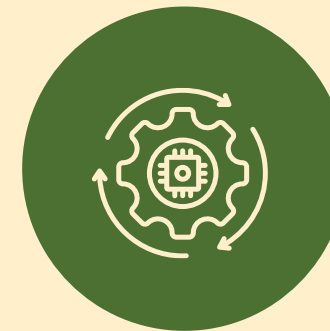


# THE DOMESTIC MARKET OPPORTUNITY



## Vertical Integration for Domestic Value Creation

Brazil is incentivizing battery companies that secure the entire value chain—critical mineral extraction, cell and pack production, system integration—as part of national industrial policy and “Nova Indústria Brasil” initiatives.



## Disrupting the Supply Chain and Reducing Imports

By developing domestic manufacturing and recycling capacity, the Company helps decrease dependence on imported batteries, cuts supply chain risks, and positions Brazil as a self-sufficient powerhouse for premium, sustainable energy storage solutions.



## Brazil's Booming Battery Market Opportunity

Brazil's electric vehicle and energy storage sectors are experiencing explosive growth, with forecasts showing that 30% of the nation's vehicle fleet will be electric or hybrid by 2035—creating massive near-term demand for advanced batteries manufactured locally.



## Driving Innovation in LFP, LMFP, and LMR Technologies

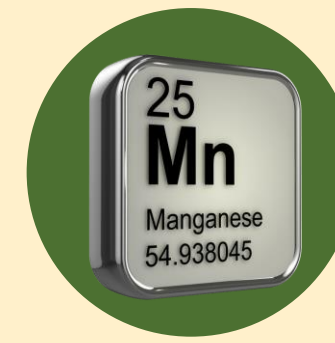
Lithium Iron Phosphate (LFP) and Manganese-rich formulations (LMFP/LMR) offering higher safety, energy density, and cost performance perfectly tailored to Brazil's climate, grid needs, and transportation landscape.



# OUR PORTFOLIO OF CORE ASSETS FOR BATTERY MATERIALS

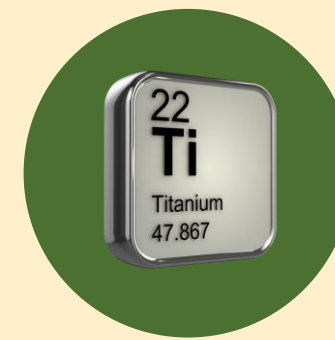
BrasNova Energy Materials has strategically acquired or is in the process of acquiring core assets critical to Brazil's battery supply chain, including copper, iron, titanium, manganese, and phosphate projects. These assets are positioned to supply the growing demand for battery-grade materials required for advanced energy storage and electric vehicle batteries like LFP, LMFP, and LMR. By securing diverse and locally sourced mineral resources, we aim to build a vertically integrated domestic supply chain in Brazil, aligned with national policies encouraging sustainable, premium battery production and reducing import dependence. This asset base forms the foundation for BrasNova's vision to play a pivotal role in Brazil's rapidly expanding battery industry and support the country's energy transition goals.

Lithium will not be a focus for BEM as it is sourced locally for competitive prices.



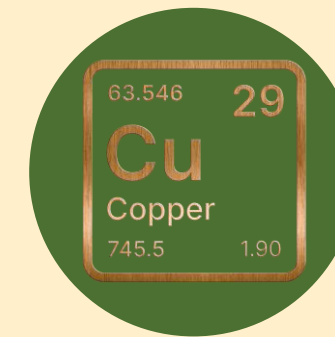
## **MANGANESE – Gloria Manganese Asset**

Manganese is used in battery and energy storage technologies as a stabilizing component in cathodes, especially in lithium-ion chemistries like LMFP and LMR, to increase energy density, enhance thermal stability, and lower production costs while improving overall battery safety and performance.



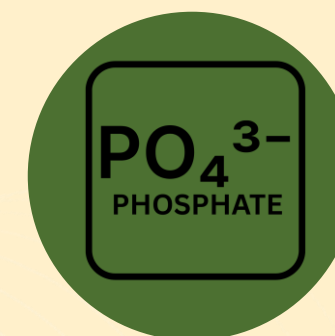
## **TITANIUM-IRON – Rio Claro Asset**

Titanium is used in battery technologies, especially in certain lithium-ion electrodes, to enhance safety and cycling stability, while iron is a key component in LFP and related chemistries, providing cost-effective, durable, and environmentally friendly cathodes for energy storage systems.



## **COPPER – Jucurutu & Pernambuco Assets**

Copper in battery technologies and energy storage systems is primarily used as a highly conductive current collector (especially copper foil in lithium-ion batteries) and in electrical interconnects, enabling efficient electron flow, heat dissipation, and overall improved battery performance and safety in renewable energy and electric vehicle applications.



## **PHOSPHATE – To be determined**

Phosphate in battery technologies is used as a core component of cathode materials, like in lithium iron phosphate (LFP) batteries, where it provides high thermal stability, long cycle life, enhanced safety, and resistance to thermal runaway for energy storage systems.





# GLORIA MANGANESE



Located in the Bahia state of Brazil, the Glória Manganese Project represents an early-stage exploration opportunity with great potential to supply critical battery-grade manganese for the rapidly growing energy storage and electric vehicle markets. Uniquely positioned within the Recôncavo-Tucano-Jatobá Basin, the project features multiple high-grade manganese sandstone outcrops, with mineralized bodies demonstrating manganese content averages near 22%, and peaks reaching over 49%. **The geological setting, characterized by fault-controlled manganese enrichment combined with supergene processes, suggests substantial undiscovered resources along a 6 km mineralized alignment.** Situated just 24 km from Paulo Afonso—a regional hub with hydroelectric infrastructure—the project boasts excellent access and logistics for future development. With low deleterious elements and promising initial sampling results, Glória is primed for accelerated exploration campaigns, aiming to transform Brazil's domestic battery materials supply chain and contribute to the green energy revolution.

## High-Grade Mineralization

Two primary manganese mineralized bodies with results ranging from 7% to 49% Mn, averaging around 22% in the first body and 18% in the second, indicating significant ore potential. Industry typically requires ores above 18% Mn for battery precursor production.

## Low Impurity Levels

Low phosphorus ( $P_2O_5$ ), sulfur (S), and iron ( $Fe_2O_3$ ) content in key samples point to high-quality manganese potentially suitable for battery-grade applications. Due to such low impurities, specialized tests will be performed to test suitability.

## Exploration Potential

The manganese-bearing sandstone trend extends approximately 6 km with multiple targets identified for follow-up exploration, including remote sensing and geophysical studies

## Next Steps

Focus on refining geological models, additional target identification with remote sensing and spectral studies, and planned drilling programs to quantify resource size and grade.



# RIO CLARO TITANIUM-IRON



The Rio Claro Project, situated in Israelândia within Brazil's prolific Goiás region, represents a highly prospective early-stage exploration opportunity targeting iron, titanium, and phosphate mineralization within a complex Neoproterozoic geological setting. Covering nearly 900 hectares, the property is strategically located 13 km from Israelândia town, offering good access and infrastructure advantages. Recent reconnaissance work combining detailed geological mapping, extensive surface sampling, and high-resolution ground magnetics has delineated compelling magnetic anomalies aligned with high-grade Ti-Fe mineralized float blocks, interpreted as part of layered mafic-ultramafic intrusions associated with Fe-Ti-V deposits. The project is positioned within the Brasília Fold Belt's Tocantins Structural Province; an area known for significant mineral systems including rare earths and phosphate and promises vast exploration upside to define valuable mineral resources. Rio Claro is poised to become a cornerstone asset for Brazil's growing critical minerals ecosystem.

## Promising Mineralization

Initial grab and soil sampling confirmed  $\text{TiO}_2$  grades above 18% with  $\text{Fe}_2\text{O}_3$  exceeding 70% in some magnetite-rich float samples; magnetic surveys correlate with these high-grade zones highlighting layered mafic-ultramafic rocks and BIF units.

## Strategic Location

Located 13 km northeast of Israelândia, Goiás, Brazil; covers 896.61 hectares fully owned under a research permit; easy access via paved and secondary roads with logistical support from nearby towns.

## Exploration Activity

Fieldwork in 2025 included 17 rock grab samples, 4 soil samples, geological mapping at 1:20,000 scale, and a ground magnetic survey over nearly 900 hectares, identifying three priority magnetic targets for drill follow-up.

## Next Steps

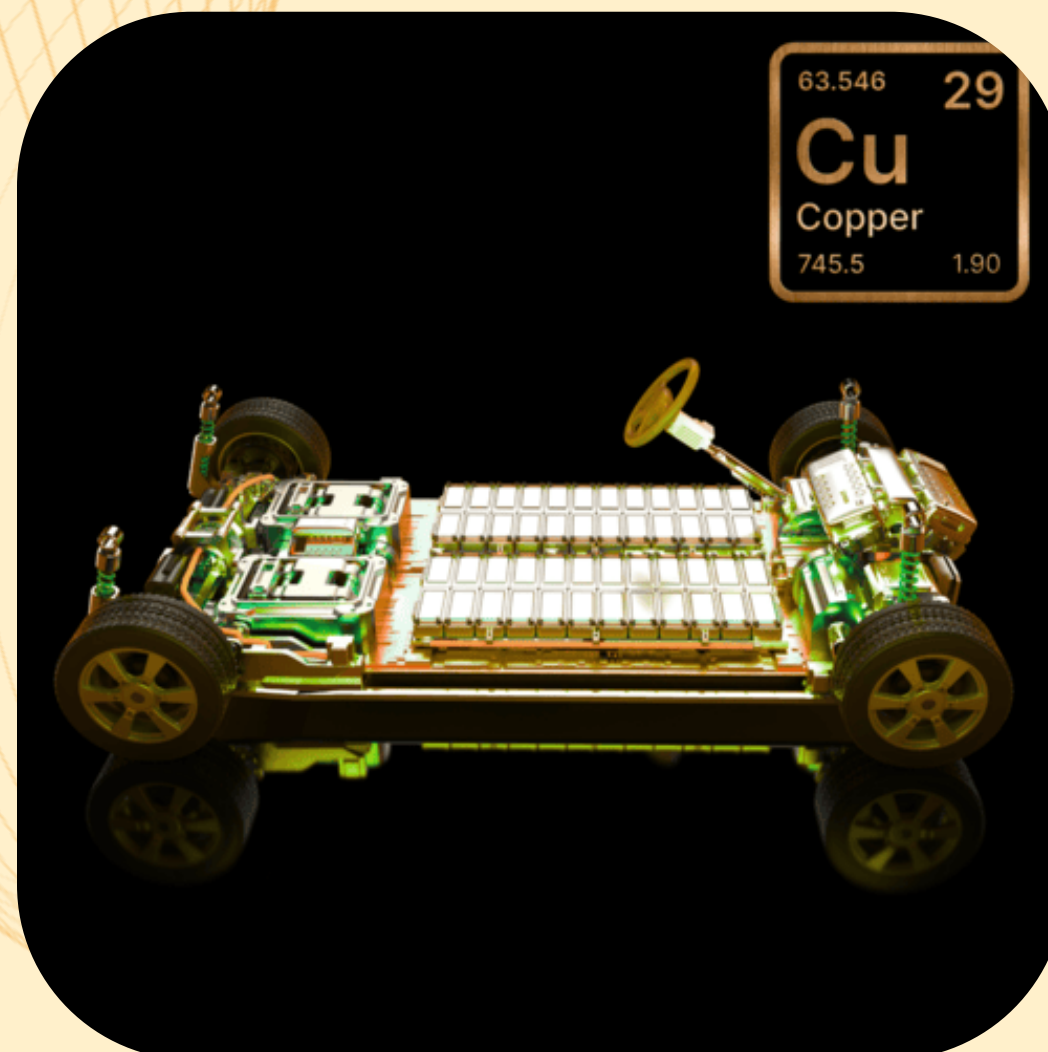
Phase 1 outlines auger drilling (1,000 m) targeting geophysical anomalies, petrographic analysis, and continued mapping; Phase 2 to include diamond drilling, induced polarization geophysics, and metallurgical testing contingent on encouraging initial results.



# JACURUTU COPPER



The Jucurutu Copper Project consists of eleven contiguous permit applications over 20,700 hectares in Rio Grande do Norte, Brazil—a region renowned for its favourable copper geology and proximity to major mining infrastructure. Anchored in the renowned Caicó Complex and Seridó Group, **the project stands out for its abundance of outcropping malachite showings and gossan-style weathering, indicating surface expressions of copper mineralization with significant continuity potential.** Recent airborne geophysical surveys have confirmed compelling targets, while the nearby Suape port and the mining hub of Currais Novos offer unrivaled logistical advantages. Jucurutu is positioned to emerge as a flagship copper opportunity, promising to replicate the successes of Brazil’s productive Curaçá Valley and expand the nation’s critical mineral portfolio.



## Surface Mineralization

Multiple occurrences of malachite (oxide copper) showings and gossan-style weathering observed in the staked tenements; strong indicators for near-surface copper.

## Prime Geological Location

Located within the Caicó Complex (gneisses and migmatites) and Seridó Group (Jucurutu Formation, metasediments, quartzites, mica schists, metavolcanics, and marbles)—classic host lithologies for copper mineralization

## Benchmark Potential

Geological and structural comparisons suggest the deposit style may mirror the renowned producing copper mines of Curaçá Valley, indicating robust upside.

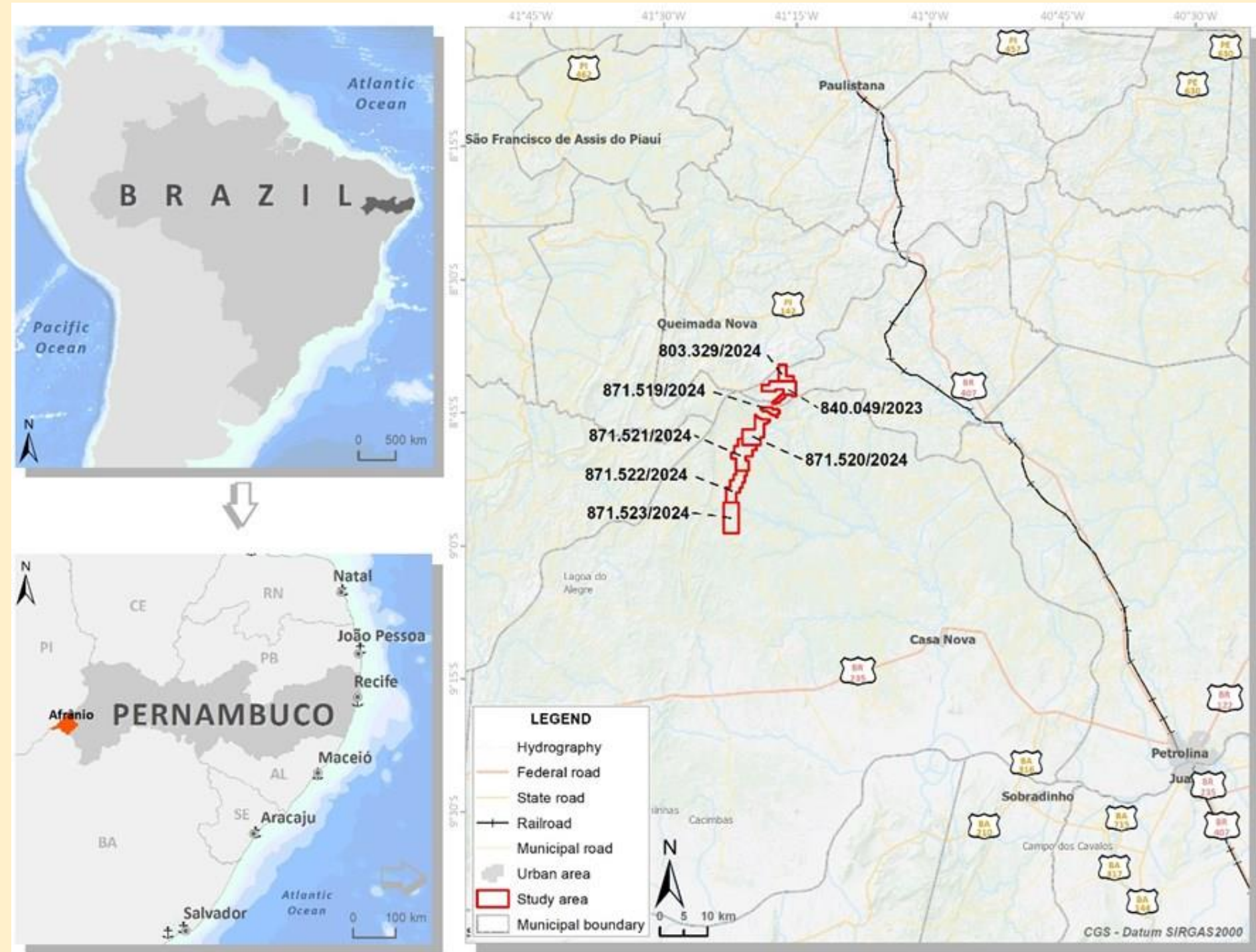
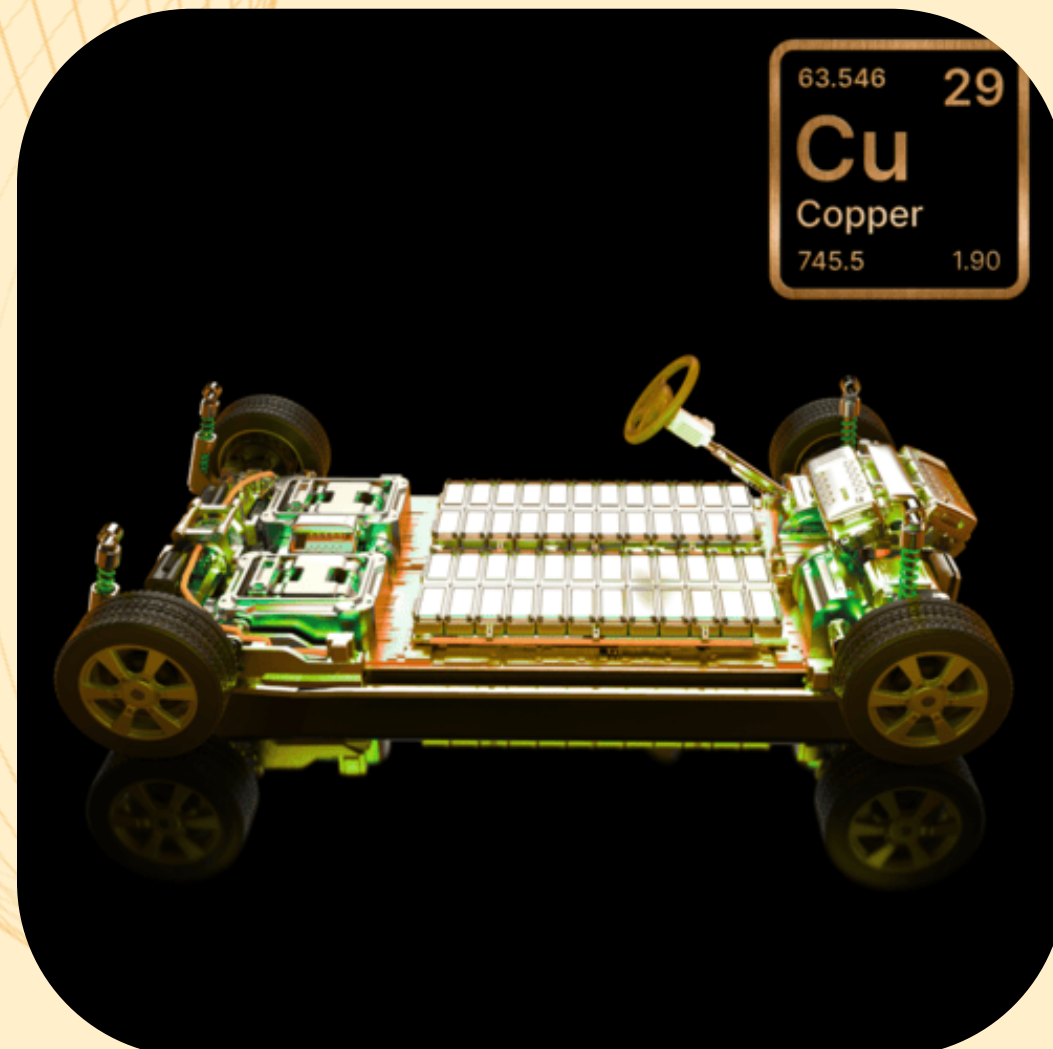
## Next Steps

Airborne magnetics have successfully delineated promising zones of copper mineralization, supporting focused ground follow-up. Detailed mapping, soil sampling and ground geophysics recommended.



# PERNAMBUCO COPPER

New copper exploration concessions in Pernambuco, Brazil. The application comprises seven new concessions located in the municipality of Afrânio/Pernambuco and Casa Nova/Bahia, and covers an area of 10,084.81 hectares.





# THE CASE FOR ENERGY STORAGE ON BRAZIL'S GRID

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Energy storage in Brazil is entering a phase of explosive growth, with the national battery energy storage system (BESS) market projected to surge from USD 3.1 billion in 2025 to nearly USD 10 billion by 2031, a compound annual growth rate of over 21%—driven primarily by grid modernization, solar and wind capacity expansion, frequent regional outages, and robust government support. As Brazil's grid moves away from hydropower dominance and faces peak demand challenges, high-performance energy storage is becoming essential for balancing intermittent renewables, improving energy flexibility, and ensuring nationwide supply resilience.

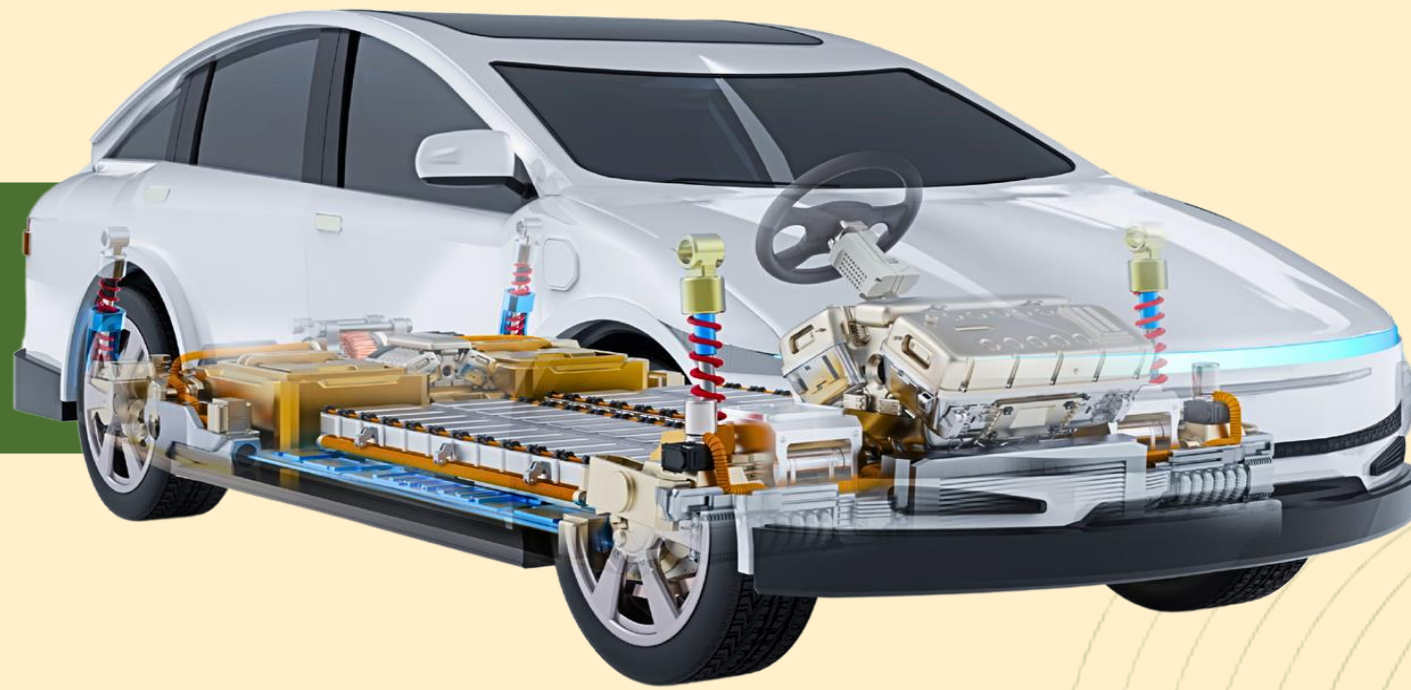
Brazil's pivot toward next-generation BESS and renewable integration will depend on the availability and local production of lithium, manganese, phosphate, iron, titanium and copper.



# ABOUT LFP/LMFP BATTERIES & WHY THEY MATTER

## What are LFP and LMFP Batteries?

- LFP (Lithium Iron Phosphate) Batteries: A proven lithium-ion battery technology using lithium iron phosphate as the cathode, celebrated for long cycle life, high safety, thermal stability, low toxicity, and cost-effectiveness, with widespread use in electric vehicles, stationary storage, and grid solutions
- LMFP (Lithium Manganese Iron Phosphate) Batteries: Advanced lithium-ion batteries that replace some iron atoms in LFP cathodes with manganese; this boosts energy density (up to 20% higher than LFP), increases voltage, and enhances power performance, while retaining excellent safety, cost-effectiveness, and thermal stability



## Why They Matter for Brazil's Industry

- Perfect Fit for Brazil's Climate and Grid - Both LFP and LMFP batteries thrive in high-temperature environments and offer robust cycle life and safety, critical for Brazil's diverse energy landscape and renewable expansion.
- Empower Local Value Chains - Brazil's abundance of iron and manganese enables domestic production of LFP and LMFP batteries, supporting local manufacturing, reducing import dependence, and fueling industrial growth.
- Drive Clean Energy Transformation - LMFP's higher energy density allows greater range and storage capacity for EVs and grid-scale renewables, vital for powering the country's clean energy future, electrification initiatives, and storage market demand.





# OUR EXPERIENCED MANAGEMENT TEAM

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## **BRIAN LEENERS - CEO**

Mr. Brian Leeners received both his B.Comm. and LL.B. degrees from the University of British Columbia in 1992 and since that time has been focused on the management of private and public venture companies in the Materials and Technology Sectors. Since 1997, Brian has been responsible for raising in excess of US\$125 million (not including public market buy-side volumes) into various venture stage companies.

## **STEPHEN BUREGA - PRESIDENT**

For nearly two decades, Stephen has been a key figure in the mining exploration industry, guiding companies through complex regulatory environments and capital markets while advancing exploration initiatives. His executive experience spans both private and publicly traded firms, where he has consistently delivered results through operational discipline and strong stakeholder engagement.

## **ANTONIO VITOR - COUNTRY MANAGER**

Mr. Antonio Vitor has vast experience in project management at large corporations, including Transpetro, PwC. Shell, along with 10 years of experience in mining. He was involved in the mining projects AMA Gold, Hawking Graphite, 3 S Rare Earths and Copper, Palmeres Rare Earths. He graduated in Business Administration and holds an MBA. He is a Member of IBGC.

## **NANCY ZHAO - CFO**

Ms. Zhao has over 9 years of experience serving as the CFO for several publicly traded entities, contributing her financial acumen to multiple organizations including several in the advance materials sectors. Holding the designation of CPA, Ms. Zhao has a comprehensive educational background, including a diploma in Financial Management from British Columbia Institute of Technology, and a bachelor's degree in chemical engineering from Tianjin University of Technology.



SHARE STRUCTURE

Exchange	TSXV	Price
Common Shares	43,692,266	
Stock Options –Amount & Avg Price	6,212,500	\$0.35
Warrants –Amount & Avg Price	29,429,000	\$0.26
Fully Diluted	86,121,266	
FD Insider Ownership %	48%	
Insider Warrants	11,090,000	

THANK YOU  
FOR YOUR  
INTEREST



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