



Latrobe   
Magnesium  
Smart | Efficient | Green

# IMARC 2023

David Paterson - CEO  
ASX: LMG



# Disclaimer

It is believed that the expectations reflected in these statements are reasonable but they may be affected by a multiple variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to: price fluctuations, actual demand, currency fluctuations, production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.

Investors should undertake their own analysis and obtain independent advice.

All references to dollars, cents or \$ in this presentation are to Australian currency, unless otherwise stated.

## Who Are We?

Latrobe Magnesium is developing a world-first, low-cost, low emission and environmentally sustainable hydromet / thermal reduction process to convert nearly 100% of waste resources into Magnesium metal and other valuable commodities.

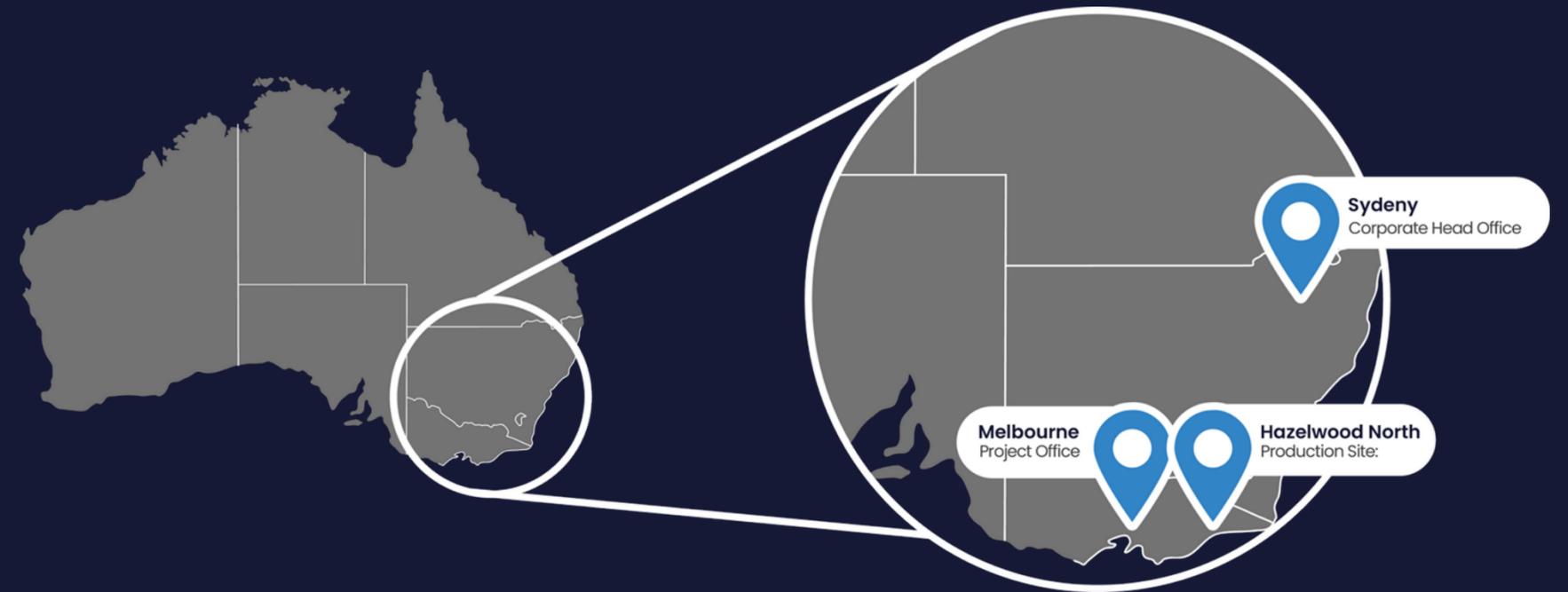
## LMG Project Pathway

- 1,000 tpa  
Demonstration Plant
- 10,000+ tpa  
Australian Commercial Plant
- 100,000 tpa  
International Mega-Plant

# Capital Structure and Location

Latrobe Magnesium is an Australian listed public company under the ASX code LMG.

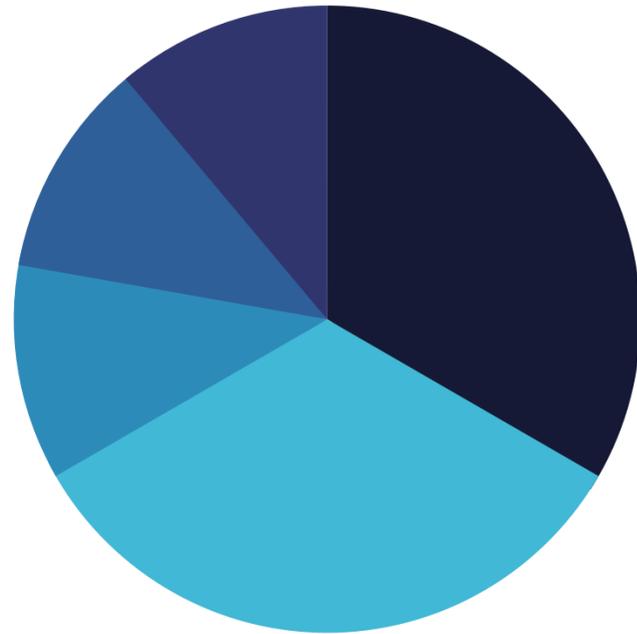
ASX CODE	LMG
Shares on issue	\$1,824 million
Share Price	\$0.045
Market Cap	\$82 million



\*As of October, 2023

# Magnesium: The Critical Green Mineral

## Key Statistics



- Die Cast Parts
- Aluminum Alloys
- Titanium Refining
- Steel Desulfurisation
- Others

Global Demand  
2022  
**1.1M tpa**

Magnesium Forecasted  
demand by 2030  
**2MT**

Price USD  
/ TONNE  
**\$3,700**

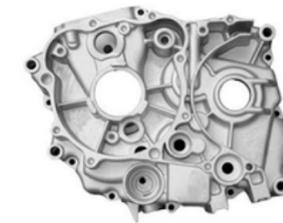
Chinese  
Production  
**~90%**

## Current and Emerging Uses

Aluminum Sheet



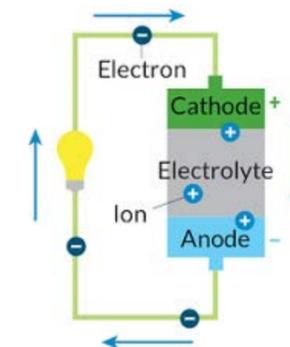
Die Cast Components



Bioabsorbable Stents

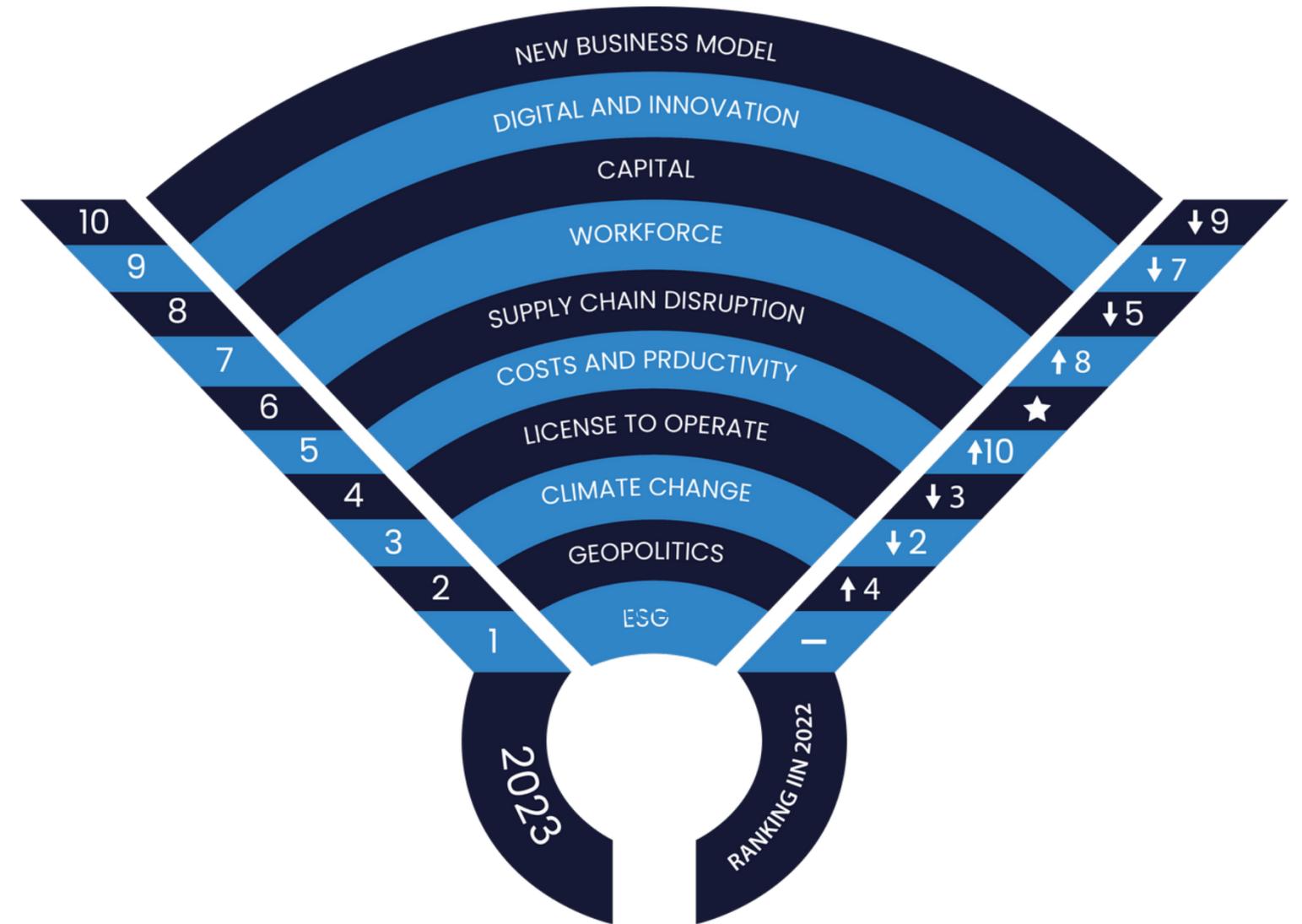


Magnesium Batteries



# EY Top 10 Risks to Mining 2023

Environmental Social and Governance (ESG) remains the top risk and opportunity in 2023 whilst Supply Chain is added as companies feel the pressure to tackle multiple factors creating supply chain disruption.



↑ Up From 2022   ↓ Down From 2022   — Same as 2022   ★ New to the Radar



## Environmental

- Minimise waste
- Reduce CO2 emissions by 60%
- Embrace a circular economy approach with 100% waste conversion into valuable products, eliminating tailings or downstream waste
- Power operations with renewables
- Shift to electric, renewable-powered equipment



## Social

- Prioritise health and safety in daily operations
- Cultivate a value-driven, performance-oriented culture for staff growth and excellence
- Drive long-term community benefits through employment, training, and supplier support
- Award construction tenders to local contractors
- Create up to 100 direct jobs with a 3:1 indirect impact
- Champion local community sports clubs through support and sponsorship



## Governance

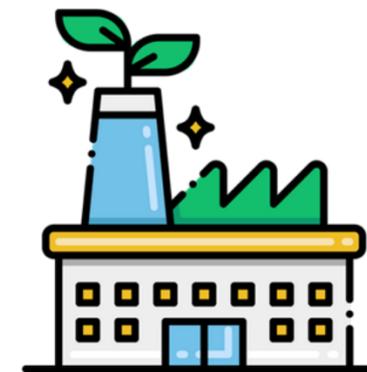
- Committed to corporate transparency
- Led by an experienced and dedicated Board of Directors
- Maintain an effective organizational structure for stakeholder communication
- Implement a science-based emission reporting system for Operations.
- Rigorously identify and manage material risks

# Converting Waste Resource to Valuable Products

## Major Inputs



## Proprietary Process Demonstration Plant

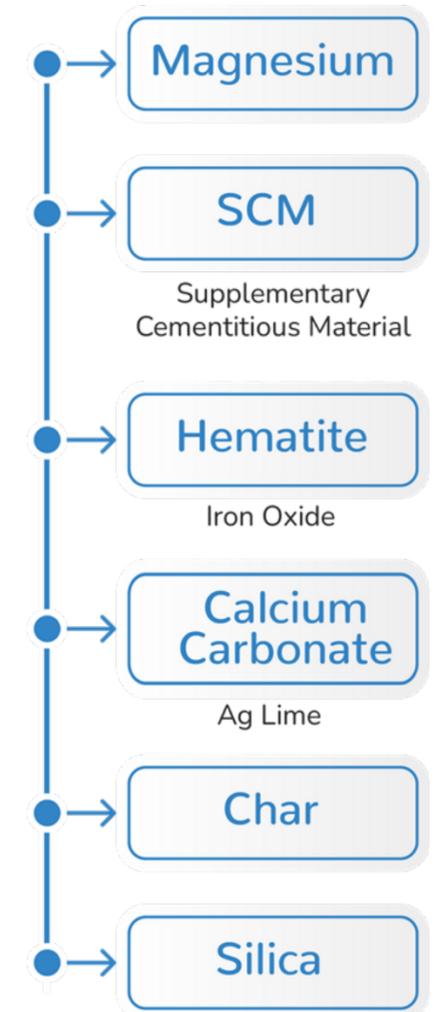


Low Carbon Process

01. Dissolve Mg in Acid Solution
02. Convert Mg Solution to MgO
03. Convert MgO into Mg & SCM using thermal reduction

**No Waste Products / Tailings!**

## Major Outputs



# LMG's Pathway for Expansion

01

1,000

TPA Demonstration Plant

## Fly Ash

Commencing production by Q1 2024

## Financials

- \$42m capex
- \$10m revenue
- EBITDA break even

## Emissions

- 8.2 tons of CO2 / ton of Mg

02

10,000+

TPA Australian Commercial Plant

## Fly Ash

Commencing production in Dec 2025

## Financials

- \$150m capex
- \$110m revenue
- \$40m to \$50m EBITDA

## Emissions

- 6.6 tons of CO2 / ton of Mg

03

100,000

TPA International Mega-Plant

## Ferro Nickel Slag

Commissioning targeted for early 2029

## Financials

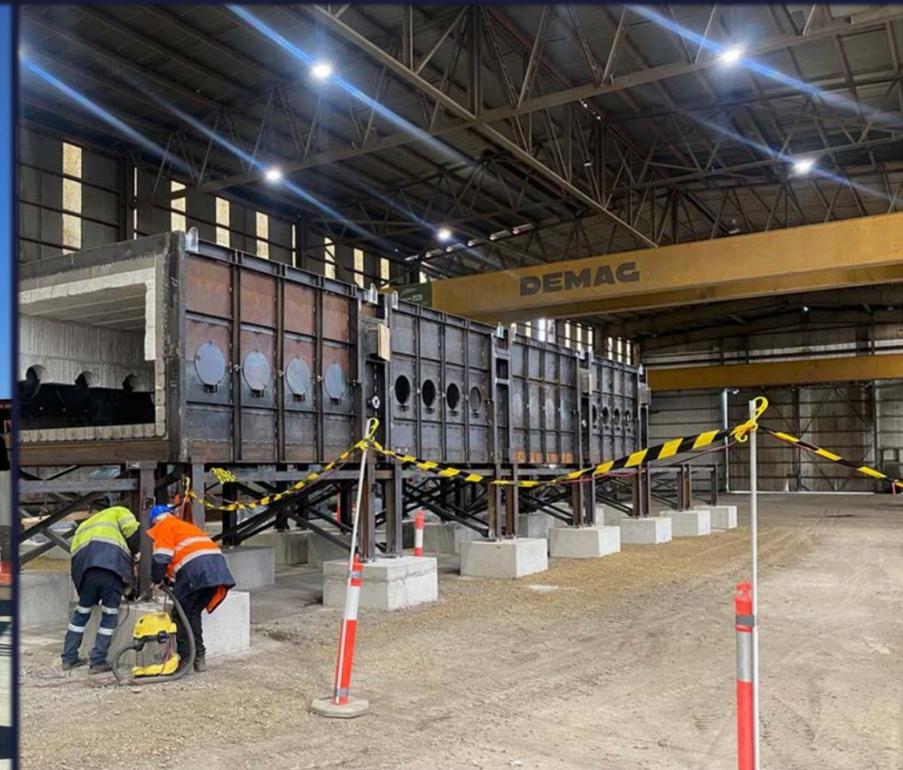
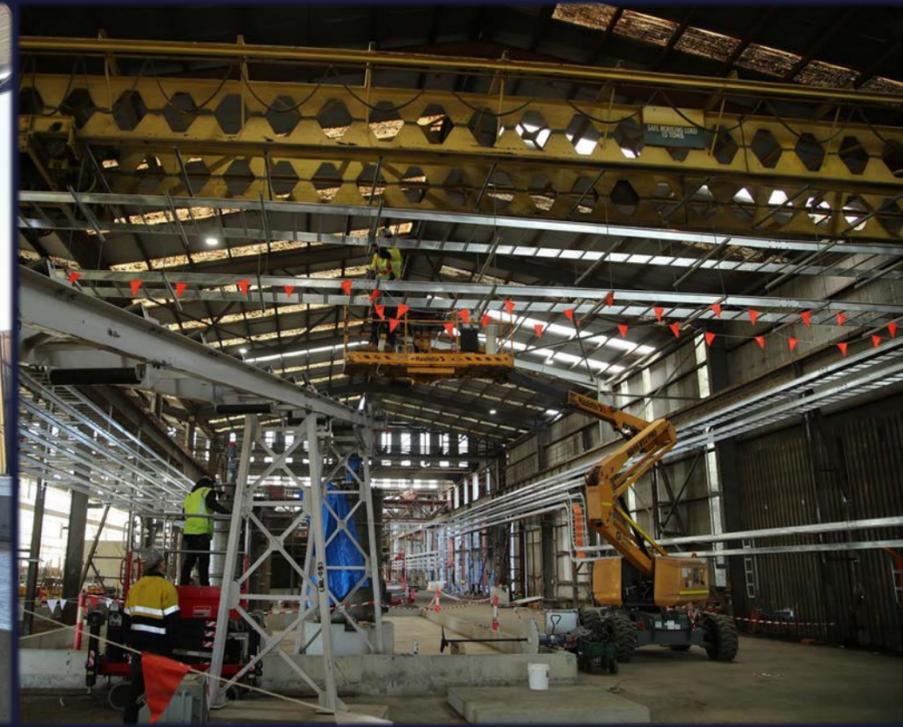
- \$1.1B (USD \$850m) capex
- \$1.1B (USD \$820m) revenue
- \$474m (USD \$355m) EBITDA
- NPV 2.9B (USD \$2.1B)

## Emissions

- 4 tons of CO2 / ton of Mg

# Demonstration Plant

- Produce 1,000 tones per annum of Magnesium, with a current budget estimate of \$41.7M of which \$35M has already been committed.
- Processing fly ash waste feedstock from the Energy Australia, Yallourn West Power Station.
- Converting 100% of fly ash waste into saleable products:
  - Magnesium metal
  - Supplementary Cementitious Material (SCM)
  - Silica
  - Char
  - Agricultural Lime
  - Iron oxide
- 100% of the site contract works awarded to local contractors.





**International  
Patented**

LMG has patented a unique hydromet processes for the recovery of magnesium from brown coal fly ash or ferro nickel slag.

**Process  
Validated**

The LMG hydromet process has been extensively tested over 20 years through hundreds of laboratory trials and pilot scale work by BV and ALS laboratories and CSIRO.

**Production  
Site**

The company owns an 11-hectare site in Victoria, which will house its 1,000 tpa demonstration plant and subsequent 10,000+ tpa commercial plant.

# Executive Summary



Magnesium is a Critical Raw Material in Australia, USA, EU, and Japan. China currently supply 90% of world demand, creating a risk for global supply chains which experienced difficulties in the last quarter of 2021. The global magnesium market in 2022 was 1.1M tonnes and it is forecast to double by 2030, owing to the light weighting of cars.



Proprietary hydromet technology allows LMG to be an ESG-credentialled clean metals producer. LMG's feedstocks, both fly ash and ferro nickel slag, contains MgO and CaO not carbonates. It also sequesters CO2 in its process. The result is a 60% reduction in CO2 emissions compared to China magnesium producers. LMG is seeking to reduce this further by using renewable energy in its larger plants, achieving net-zero emission targets.



LMG produces not just magnesium but other valuable saleable products from its feedstock. These products generate up to 30% of its revenue. These additional revenues means LMG's operating costs are more than competitive to China operating costs.



LMG will have strong revenue growth, secured by firm offtake agreements. The 10,000 tpa plant is expected to generate in the order of \$110m in revenue and EBITDA of \$40m to \$50m by the end of 2025. The offtake for this production is complete with LMG's distributor in the USA.



LMG has sound but substantial growth strategy. LMG will start by proving its unique hydromet processes by successfully commissioning its 1,000 tpa demonstration plant by 1st Quarter March 2024, followed by its 10,000 tpa by the end of 2025. Subsequently, it is developing a 100,000 tpa plant to commence production in early 2029.



LMG's Experienced Board and Management Team have over a century of combined mining experience and management involving large scale developments in various mineral projects globally.

# Thank You!

Latrobe  
Magnesium   
Smart | Efficient | Green

Suite 4

Level 5, 80 Clarence Street

Sydney NSW 2000

Phone: +61 (0)2 9279 2033

Email: [enquire@latrobemagnesium.com](mailto:enquire@latrobemagnesium.com)