



Latrobe 
Magnesium
Smart | Efficient | Green

Investment Webinar
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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

Magnesium

Current and Emerging uses

Magnesium has the best strength to weight ratio of all common structural metals. Long term demand is underpinned by magnesium serving as a critical enabler for several industries.



Magnesium is an essential input in producing the lightweight aluminium alloys used in auto manufacturing and canning. Demand is surging due to the worldwide push to reduce vehicle weight and drive fuel efficiency

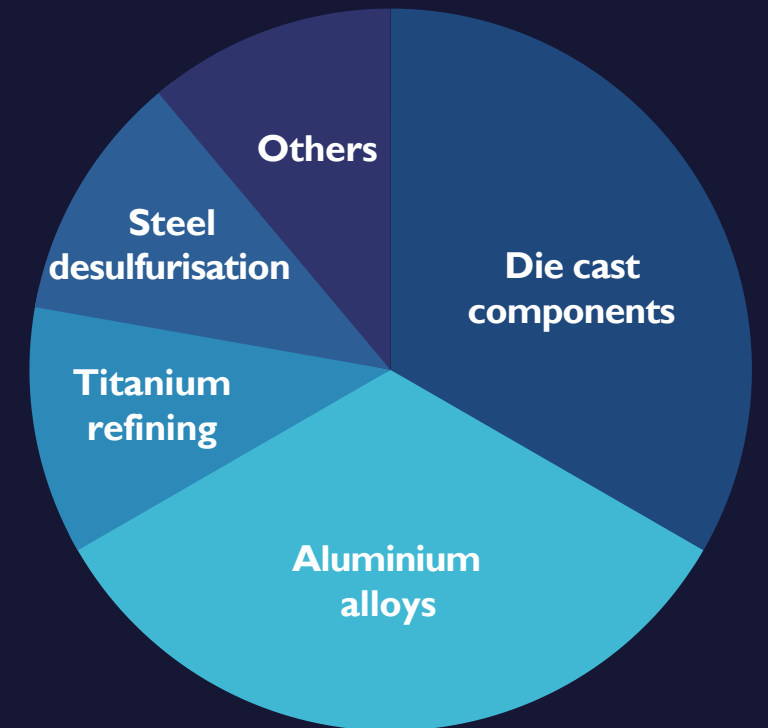


Magnesium die casting is used for automotive components, electronic devices and in aerospace for lightweight parts that can withstand high operational stresses



An emerging medical devices use for magnesium is in the alloy development process for bio-absorbable stents and inserts

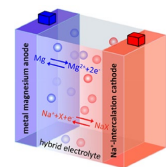
Current uses



LMG's innovative Mg production process promises to significantly de-carbonise all these processes

Magnesium – The Future

Is Magnesium the new Lithium?



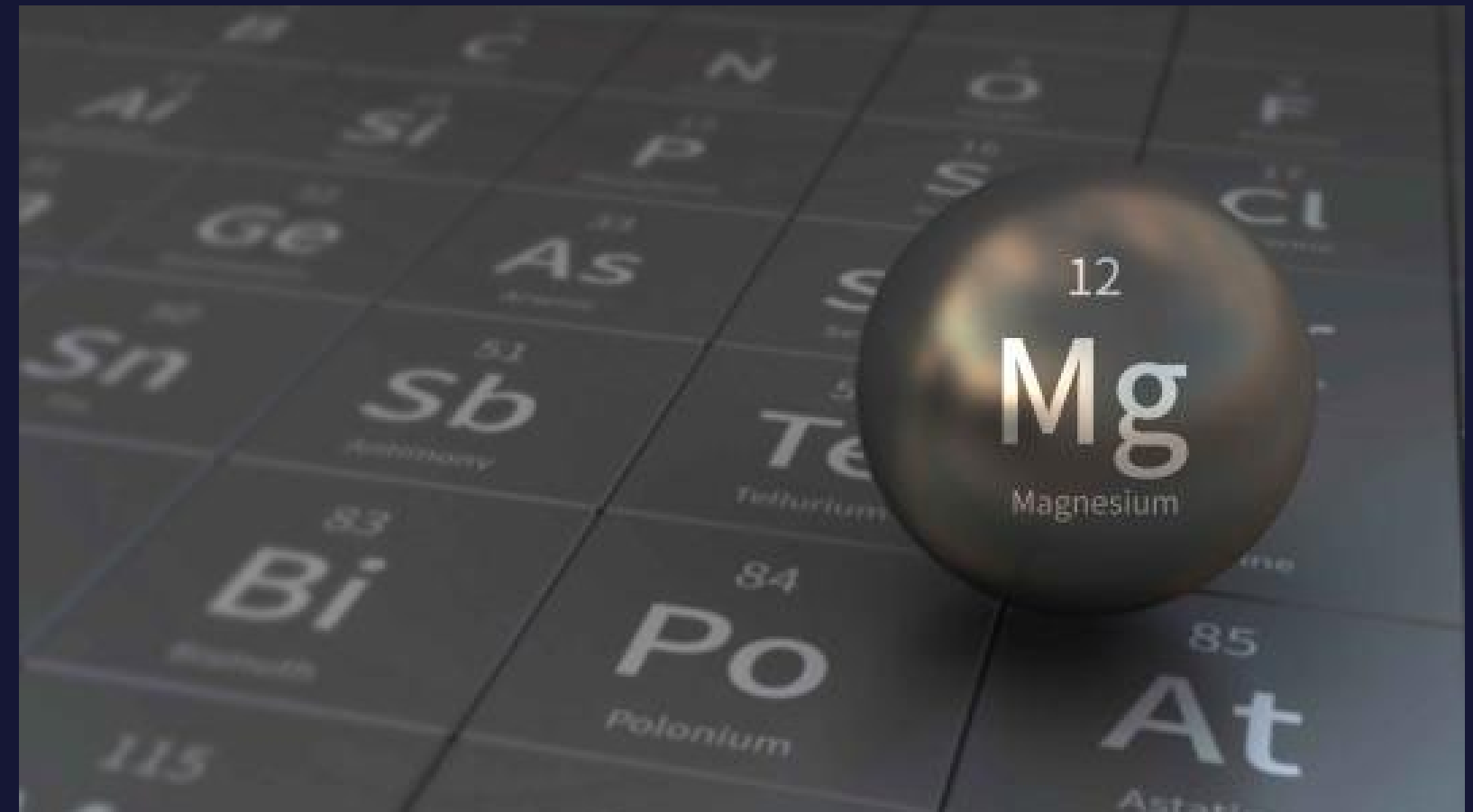
Magnesium solid state batteries potential for Li ion replacement. Extended lifespan, charge in fraction of the time, 6000 cycles vs 1000 cycles – Harvard Research. ⁽¹⁾



Autopart gigacasting – car bodies cast in one piece. Magnesium provides better castability than Aluminium and Copper. Reduce cost of producing car bodies by 20%. ⁽²⁾



Magnesium may offer the best solution for storing Hydrogen – Magnesium Hydride is one of the safest, most efficient and simplest ways of storing Hydrogen. ⁽³⁾



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⁽¹⁾ <https://www.energymonitor.ai/tech/energy-storage/are-solid-state-batteries-finally-ready-to-live-up-to-the-hype/?cf-view>. March 2024.

⁽²⁾ <https://asia.nikkei.com/Business/Automobiles/Japan-s-auto-parts-maker-Ryobi-to-gigacast-EV-body-components><https://www.mining.com/magnesium-may-offer-best-solution-for-storing-hydrogen/>. July 2023.

⁽³⁾ <https://www.mining.com/magnesium-may-offer-best-solution-for-storing-hydrogen/> March 2024.

Magnesium – The Opportunity



Magnesium is a key input for auto manufacturers looking to reduce car weight through alloys, but supply is currently CO₂ intensive⁽¹⁾



Despite magnesium supply being critical to auto manufacturing economies such as Germany, the US and Japan, 90% of current demand is met by suppliers within the PRC, creating supply chain risks⁽¹⁾



Vehicles underpin demand, but there is also potential for prices to increase dramatically if magnesium battery technology can be commercialised and used in growth industries such as EV's



Manufacturers around the globe (including the PRC) are facing growing pressures to de-carbonise their supply chains and find green alternatives to traditional processes

2m tpa
Global demand by 2030

0.9m tpa
Global Demand 2023

**110k
tpa**
2023 Tonnes
produced
outside PRC

China's Growing Dominance of Commodities

Global Magnesium Trade, 2022



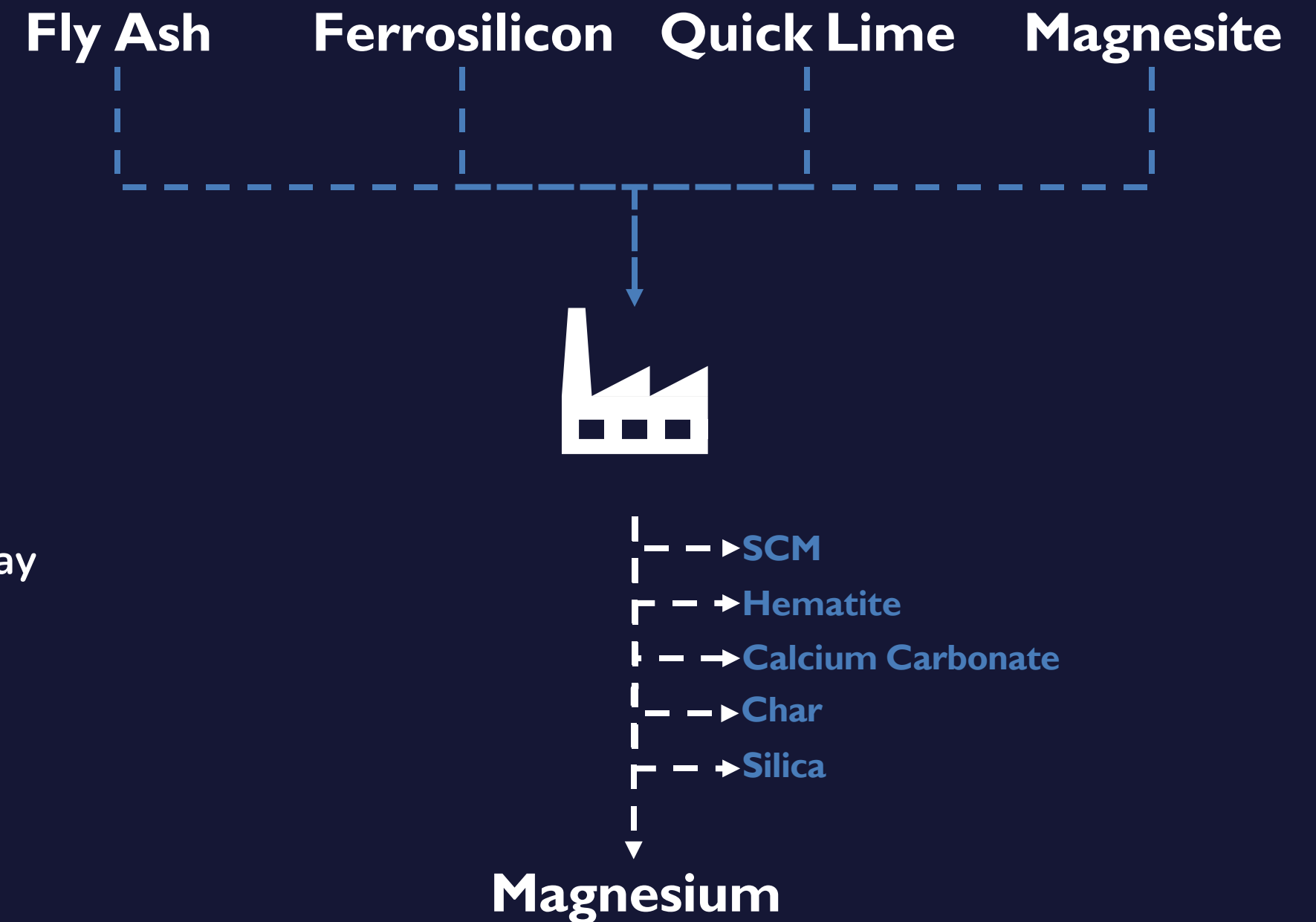
Not only is the PRC currently servicing c. 85% of global magnesium demand, but it is also forecast to continue to be the largest consumer of magnesium, as its auto manufacturing industry continues to expand.

This further increases the supply chain risks faced by other nations with manufacturing industries that depend on magnesium (as China will consume first, and export second).

What are we building?

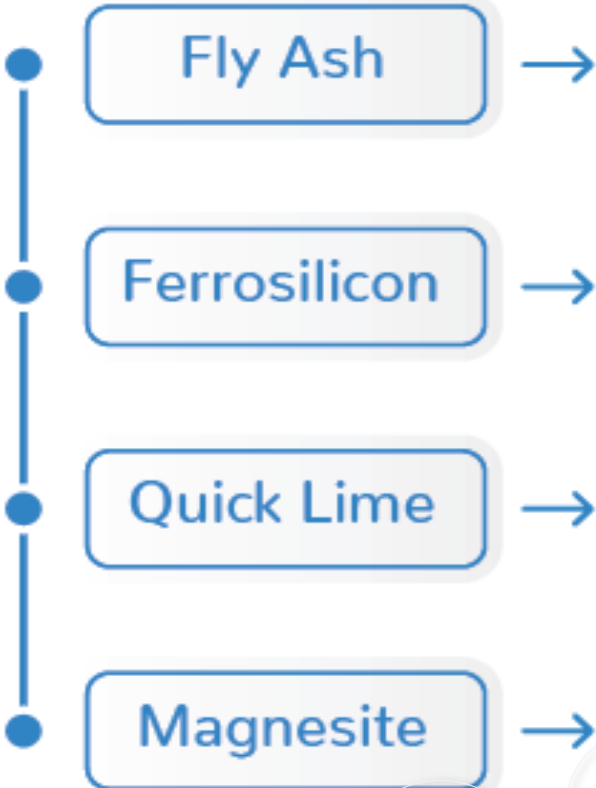
LMG has built a demonstration plant incorporating a patented Hydromet process for producing magnesium with **81 – 90% lower CO₂ emissions** compared to the process used by other operations.

- ✓ Reduce CO₂ emissions from 21t – 40t+ to 4t per ton of magnesium
- ✓ Allow auto manufactures to diversify their supply chains away from PRC (a key competitor nation in vehicles)
- ✓ Remediate mining sites by recycling 100% of potentially hazardous wastes into valuable, saleable products



Flowsheet

Major Inputs



Proprietary Process Demonstration Plant

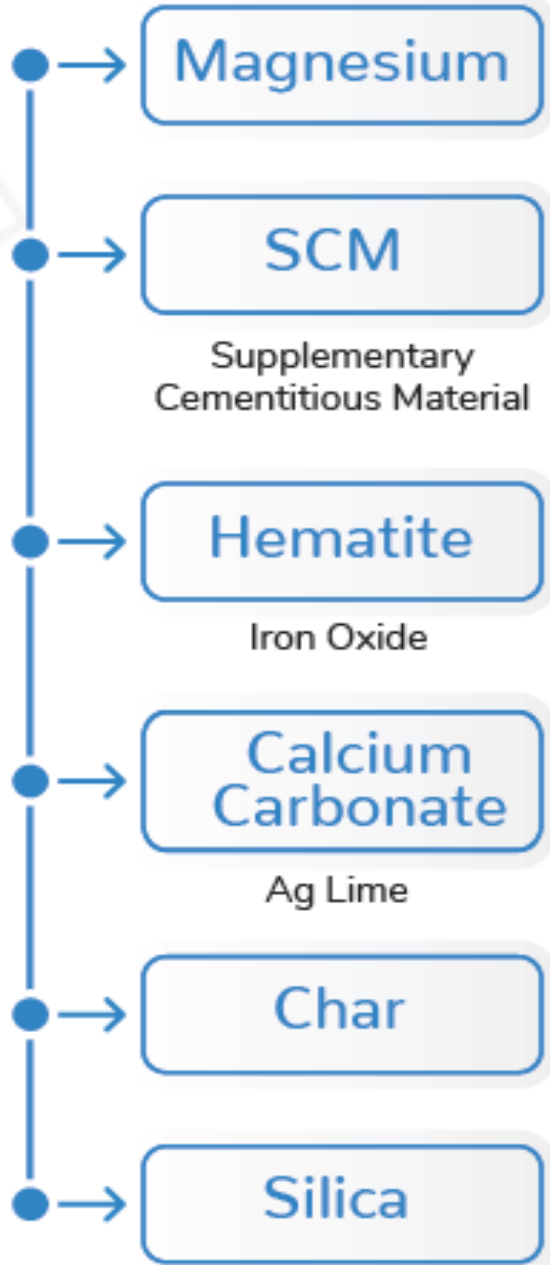


Low Carbon Process

- 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



Demonstration Plant

- Produces 1,000 tones per annum of Magnesium.
- Processing fly ash waste resource from the Energy Australia, Yallourn West Power Station.
- Demonstration plant derisks process, provides strong platform to develop commercial phase.
- Converting 100% of fly ash waste resource into saleable products:
 - Magnesium metal
 - Magnesium Oxide
 - Supplementary Cementitious Material (SCM)
 - Silica
 - Char
 - Agricultural Lime
 - Iron Oxide



Where Are We?

- First half of Demonstration Plant has been commissioned to produce Magnesium Oxide as an interim product.
- Moving towards full operations phase.
- Back end of process plant under construction. Targeted to produce Magnesium metal by August.



LMG's Pathway for Expansion

01 **1,000**
TPA Demonstration Plant

Fly Ash

Commencing production of MgO in May 2024

Financials

- \$52M capex
- \$11M 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 early 2026

Financials

- \$150M capex
- \$135M revenue
- \$47M 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 capex
- \$1.16B revenue
- \$495M EBITDA
- NPV \$3.0B

Emissions

- 4 tons of CO₂ / ton of Mg ⁽¹⁾

(1) Targeting Net Zero once additional renewable capacity comes onstream

Thank You!

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Magnesium 
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Suite 4

Level 5, 80 Clarence Street

Sydney NSW 2000

Phone: +61 (0)2 9279 2033

Email: enquire@latrobemagnesium.com