# METALLIUM

## Revolutionary Metal Recovery Technology

## SHAREHOLDER GENERAL MEETING PRESENTATION

30 June 2025

Metallium Ltd
ASX: MTM / OTCQB: MTMCF

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# From MTM to Metallium – Strategic Evolution

Rebrand marks transition to a **U.S.-led industrial tech company transforming the economics and possibilities of metal recovery**

Key Target Metals: Strategic, Critical & Precious

| | | | |
|---|---|---|---|
| **Nd** Neodymium | **Pr** Praseodymium | **Dy** Dysprosium | **Tb** Terbium |
| **Ga** Gallium | **Ge** Germanium | **In** Indium | **Sn** Tin |
| **Au** Gold | **Sb** Antimony | **Cu** Copper | **Ti** Titanium |

# A name rooted in the periodic table — and our target metals

**Metal (l) + ium**

Target Metals – The 'ium' Thread

Gallium
Germanium
Neodymium
Praseodymium
Dysprosium
Terbium
Indium

**"Metallium" encapsulates our mission: to recover strategic and precious metals faster and more economically from waste and ore vs any other method**

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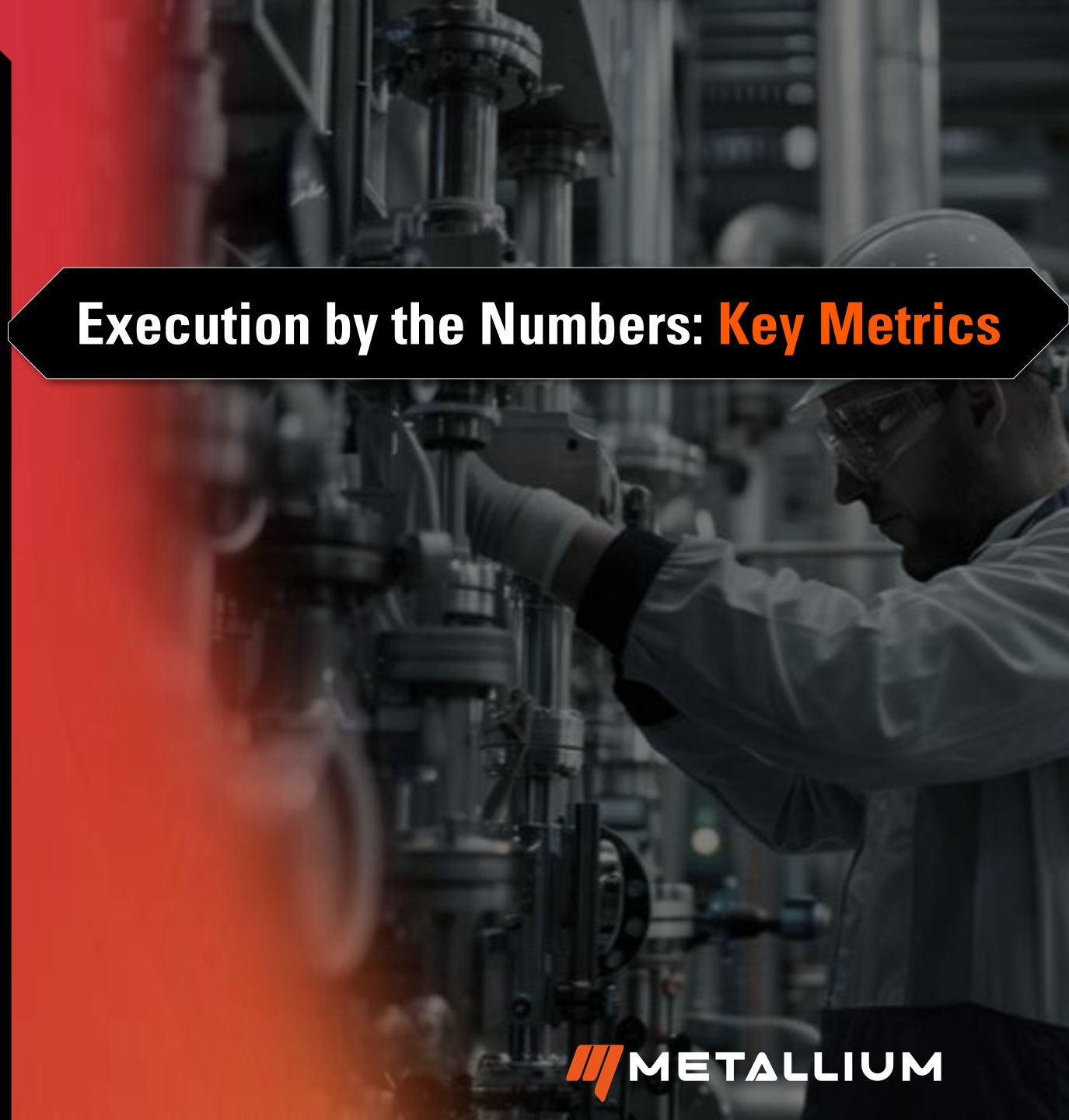
# Forging a U.S. National Platform for Strategic Metals Recovery

**20+** Strategic partnerships across feedstock, technology, and offtake channels under way or under development

**6+** U.S. states in Metallium's national deployment strategy by end-2026

**8+** Core patents and growing = extremely well-protected IP across Flash Joule Heating & chemistry pathways

**A$50M** Institutional capital raised (June 2025) to accelerate U.S. commercial rollout



## Execution by the Numbers: Key Metrics

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# A$50M Institutional Raise - Advances U.S. Technology Execution & Expansion

## Investment Highlights

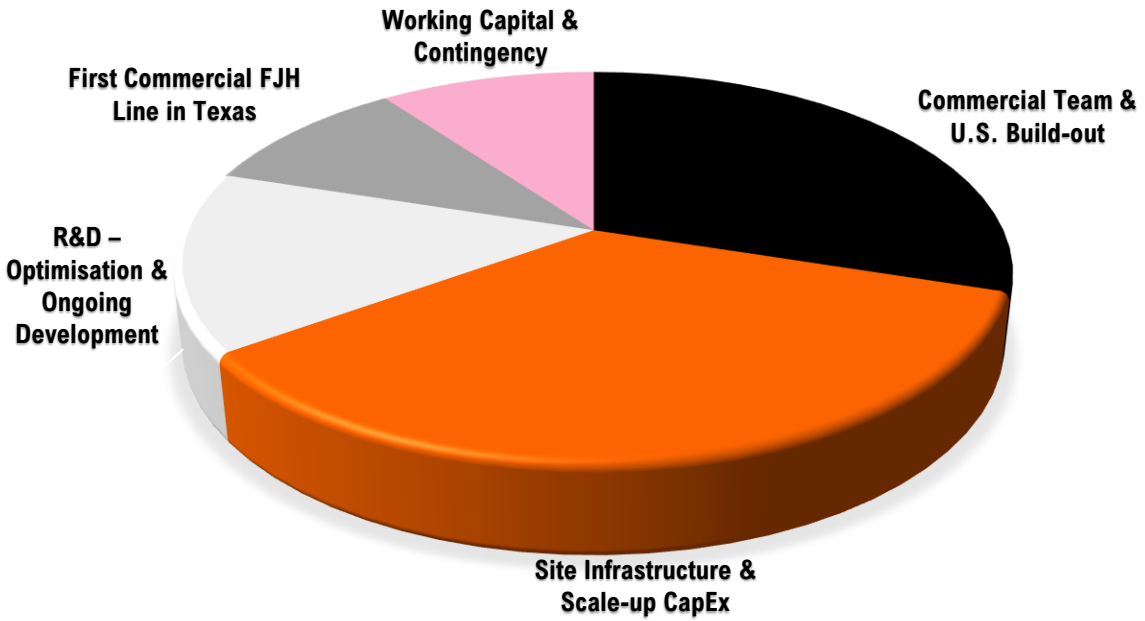
**A$50M raised at A$0.55/share**
- Firm commitments from Tier-1 institutions

**Heavily Oversubscribed book**
- Strong demand from International and Australian long-only funds

**Institutional validation of U.S. growth strategy**
- Endorsement of MTM's transition to a metal recovery industrial company

**Clean capital structure maintained**
- Share-only placement, no additional securities issued as placement fees

## Use of Funds*

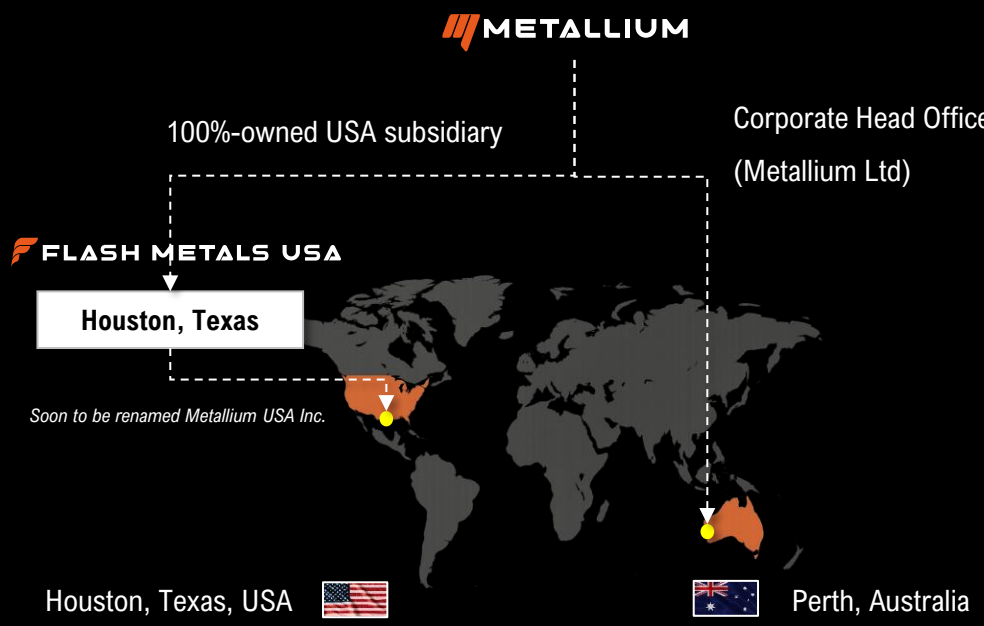



**>80% directly applied to execution & revenue-generating activity**

This raise positions Metallium to accelerate our U.S. commercial rollout

**excluding capital raise fee (6%)*

# Who is Metallium?




| | |
|---|---|
| Stock Ticker: | ASX: MTM; OTCQB: MTMCF |
| Price (A$): | $0.57* |
| Market Cap. (A$): | $315m* |
| Enterprise Value (A$): | $255m |
| Cash (A$): | $60m** |
| Debt (A$): | $Nil |

* As at 27 June 2025

** Proforma - Based on cash balance as reported at 30 March 2025 & post June 2025 Placement

# The Future of Metals Recovery

**A U.S.-focused industrial technology company with a patented process to recover metals from both waste and ore, more efficiently and economically than traditional methods.**

## OUR EDGE

- ✓ **Innovation:** Patented U.S.-invented Flash Joule Heating (FJH) technology selectively recovers metals using rapid, high-efficiency electric pulses with proprietary chemistry — avoiding harsh acids and high-temperature smelting.

- ✓ **Feedstocks: Processing high-value materials including:**
  - Semiconductor & electronics waste (rich in **Ga, Ge, In, Au**)
  - Gold-rich printed circuit boards
  - Rare-earth mineral concentrates (e.g. monazite, bastnaesite) & intermediates (MREC)

## WHAT WE PRODUCE

- ✓ **Gold Chloride ($AuCl_3$)** – Highly saleable; ideal for urban mining of e-waste
- ✓ **Gallium & Germanium Chlorides ($GaCl_3$, $GeCl_4$)** – Essential for semiconductors, photovoltaics, fibre optics
- ✓ **Future capacity for REE chlorides** – critical for magnets, defence & digital tech
- ✓ **Additional royalty revenue potential i.e.** complete reuse of Red mud (alumina refinery waste) as 'green cement' additive with further opportunities to reclaim by-product metals

## COMMERCIALISATION ROADMAP

- ✓ **Validated by major global partners: Vedanta (India), Indium Corporation (USA), Meteoric Resources (Australia, Brazil)**
- ✓ **Offtake Agreements in place: For e-scrap and gallium feedstocks with two leading U.S. recyclers**
- ✓ **1st Commercial Plant under construction in TX: targeting revenue generation by H1 2026**

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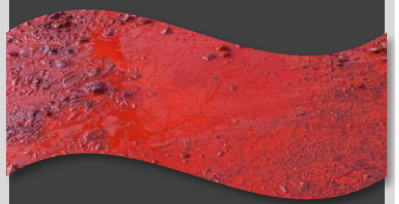
# Business Model

**Metallium is building sustainable, scalable revenue through two core business units**

Strategic partnerships are key to securing feedstock and deployment opportunities – **Metallium has already secured supply**

| | URBAN MINING (WASTE RECYCLING) | | MINERAL PROCESSING (MINING PROJECTS) | |
|---|---|---|---|---|
| | **Technology Metals:** Gallium, Germanium, Indium, Tin | **Electronic Waste:** Gold, Copper, PGE -rich Printed Circuit Boards | **Rare Earth Elements (REEs)** | **Red Mud (Bauxite Residue)** |
| |  |  |  |  |
| **INDUSTRIAL PARTNER(S)** | INDIUM CORPORATION | DYNAMIC LIFECYCLE INNOVATIONS; Plastic Recycling Inc. | METEORIC RESOURCES | vedanta transforming for good |
| **BUSINESS MODEL** | Under a **Build-Own-Operate** model, Metallium will purchase feedstock, own and operate the processing facility, and retain full economic interest in the recovered metals. | | Metallium partners with miners or processing plant owners by supplying **equipment and services**, and monetises its technology via ongoing **licencing fees** and, where applicable, **royalties linked to production**. | |
| **GLOBAL ESTIMATED MARKET SIZE (INCL. DOWNSTREAM PRODUCTS)[1]** | ~US20B | ~US40B | ~US13B | ~US15B |
| **PRODUCTS** | Gallium & Germanium & Indium Chlorides – Essential for semiconductors, photovoltaics, fibre optics | Metal chlorides incl. Gold Chloride – Highly saleable; ideal for urban mining of e-waste | Various optionality for metal chlorides or more refined intermediates | |

Metallium is currently also engaging with other strategic partners on REE, Lithium, Antimony, Red Mud etc opportunities – **watch this space**

1. U.S. Geological Survey (2025) Mineral commodity summaries 2025: Gallium. Reston, USGS;https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-gallium.pdf; Argus Media Group (2025) Argus non-ferrous markets. London: Argus Media; https://www.argusmedia.com/en/metals/argus-non-ferrous-markets; U.S. Census Bureau (2025) Foreign trade statistics. Washington, DC: U.S. Customs Service;https://www.census.gov/foreign-trade/statistics/index.html; China Nonferrous Metals Industry Association (2025) Gallium production estimates. In: Argus Media Group, Argus non-ferrous markets;https://www.argusmedia.com/en/news-and-insights.



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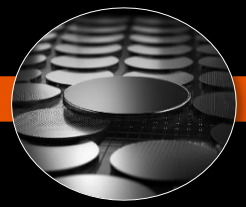
# Primary Focus Feedstocks – High-Value Materials First

1



Gallium / Germanium / Indium
(semiconductor or refinery scrap)

Access to ultra-rich feed: e.g. Ga/Ge scrap very high in metal value.

2

Gold-Rich E-Waste (PCBs)

Tested material with up to **550 g/t Au + 40% Cu + 14% Sn**

3

Mineral Concentrates

Engagements with major mining and chemical companies underway

# Initial focus on HIGH VALUE waste feedstocks

### Targeting High-Intrinsic Value

- ✓ Focusing on Ga, Ge, In-rich waste and gold/copper-rich electronic (PCB) waste– materials with very large $/t of contained (in-situ) value.
- ✓ Prioritizing Gold- and Copper-rich e-waste, specifically Printed Circuit Boards (PCBs) – **with rapid, scalable rollout potential**.
  - ➢ **E-Scrap supply secured via agreements with two major U.S. recyclers** ⇒ 1,100 t/year committed
  - ➢ **Metallium is also evaluating co-product recovery from PCB plastics** — incl. fibreglass & syngas — as an additional revenue value drivers at the plant level

### Compelling Commercial Opportunities

- ✓ A **1–10 tonne/day operation** can be highly profitable with such high-grade feed, meaning positive cashflow with modest plant sizes.
- ✓ Addresses growing demand for critical metals in tech and renewable energy sectors.

### Revenue Pathway

- ✓ Metallium is carving out a niche in processing high-value waste streams that others often ignore.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# Technology History

## From the stable of renowned scientist and inventor Dr. James Tour

**Flash Joule Heating (FJH) is a technique that utilises an intense short burst of electrical energy to generate heat and favourable chemical changes within a sample medium.**

- ✓ When combined with proprietary chemical additives, it can be applied to a wide range of feedstocks to extract metals more efficiently than traditional methods.

**2017: FJH invented:** Developed in Dr. James Tour's lab at Rice University, Texas USA (initially to produce graphene from carbon).

- ✓ Universal Matter, a Canadian nanotechnology company, licenses FJH for graphene; today operating at 1 ton/day, proving scalability.

**2020: Metals:** Additional metal recovery applications were developed in conjunction with additional chemical methods (chlorination, carbochlorination etc.)

**2024: Metallium Exclusive Licence:** Metallium secures global exclusive rights to apply FJH on all metal-bearing wastes and ores. Extremely strong intellectual property (IP) position.


Dr. James Tour at his Materials Science & NanoEngineering lab at Rice University, Texas, USA

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| 2017 | 2018 | 2020 | 2024 | 2025+ |
|---|---|---|---|---|
| Dr. Tour's lab develops FJH for Graphene production | FJH licenced to Universal Matter to make graphene commercially | FJH studied for several metal recovery applications | Metallium acquired exclusive global licence for all metal recovery applications | Metallium now advancing FJH from pilot to commercial scale across multiple feedstocks |

# The Industry's Technology Problem

**PYROMETALLURGY**

Energy intensive, fossil-fuel powered

**HYDROMETALLURGY**

Chemical intensive, embedded emissions

**SUB-ECONOMIC OR DO NOT WORK**

Legacy techniques unsuitable for certain ores and wastes

## Legacy Metal Processing Tech is Costly and Unsustainable

- ✓ **Traditional methods:** High-energy smelting (1,000°C+) or kiln-based heating over long time periods, low yields.
- ✓ **Environmental cost:** Legacy processes emit large volumes of $CO_2$ and typically generate hazardous waste.
- ✓ **Economic cost:** Predominantly acid-based / chemical heavy with significant energy and management costs.
- ✓ **Legacy technology:** Many industry-standard equipment (e.g. centuries-old rotary kilns) remain inefficient, underscoring a lack of innovation in the sector.
- ✓ **Permitting and implementation: F**or legacy technologies are often protracted, and modifying outdated infrastructure typically requires significant capital expenditure

The industry is ripe for a cleaner, more efficient solution …

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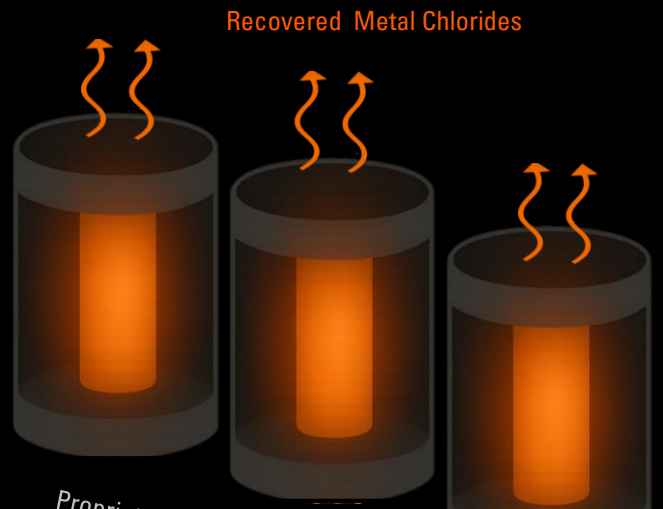
# Metallium's Elegant, Sustainable Solution:
## Flash Joule Heating

Metal Bearing Feedstock → FJH Process → Recovered Metal Products

Metal-rich Feedstock
+
Proprietary Catalyst
+
Reactant




# ULTRAFAST HEATING + PROPRIETARY CHEMISTRY

### Ultrafast Heating

We apply a short burst of electric energy to crushed ore or waste. The feed conducts current and heats in very short timeframes.

### Proprietary Chemistry

A small dose of reactive chemistry helps vaporise target metals as chlorides. This step improves selectivity and recovery across a range of feedstocks.

### One-Step Recovery

Metals are released as vapours and condensed into saleable metal chlorides. No acid leaching. No multi-stage smelting. No harmful tailings.

### What It Enables

FJH can unlock value from difficult materials like spodumene, rare earth concentrates and intermediates, red mud tailings, and e-waste — faster and more economically than traditional methods.

**Designed for rapid deployment and modular scalability** — enabling fast setup across distributed sites, with minimal permitting and infrastructure requirements.

***Net result:*** ***Single-step, low-carbon process to extract metals faster, with higher efficiency and lower reagent use than incumbent technologies.***



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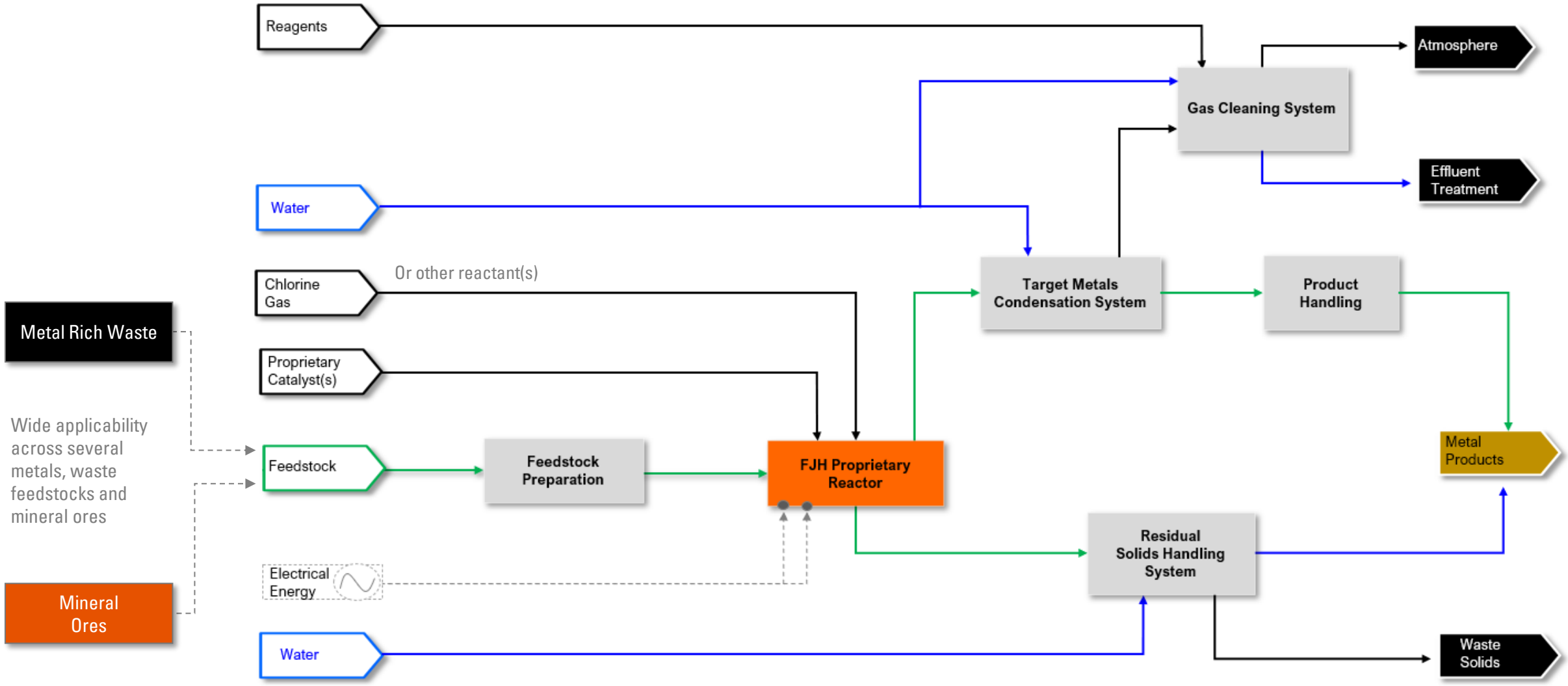
# FJH Proprietary System – Block Flow Diagram

**Process that turns varied raw wastes or ores into valuable metal products with minimal chemicals**



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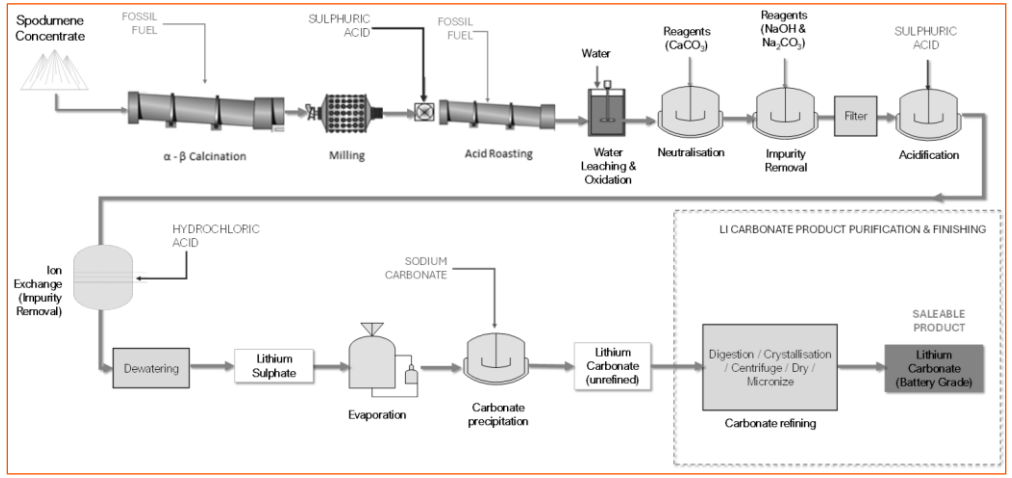
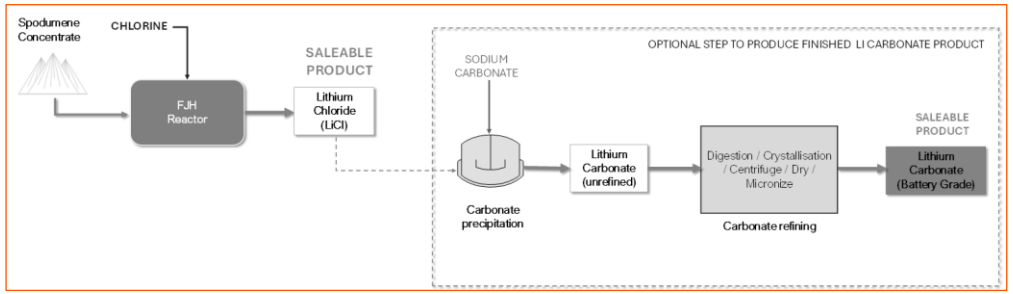
# Example of how the technology is breakthrough

FJH has demonstrated potential to revolutionise mineral processing flowsheets, by reducing acid, energy & overall number of steps.

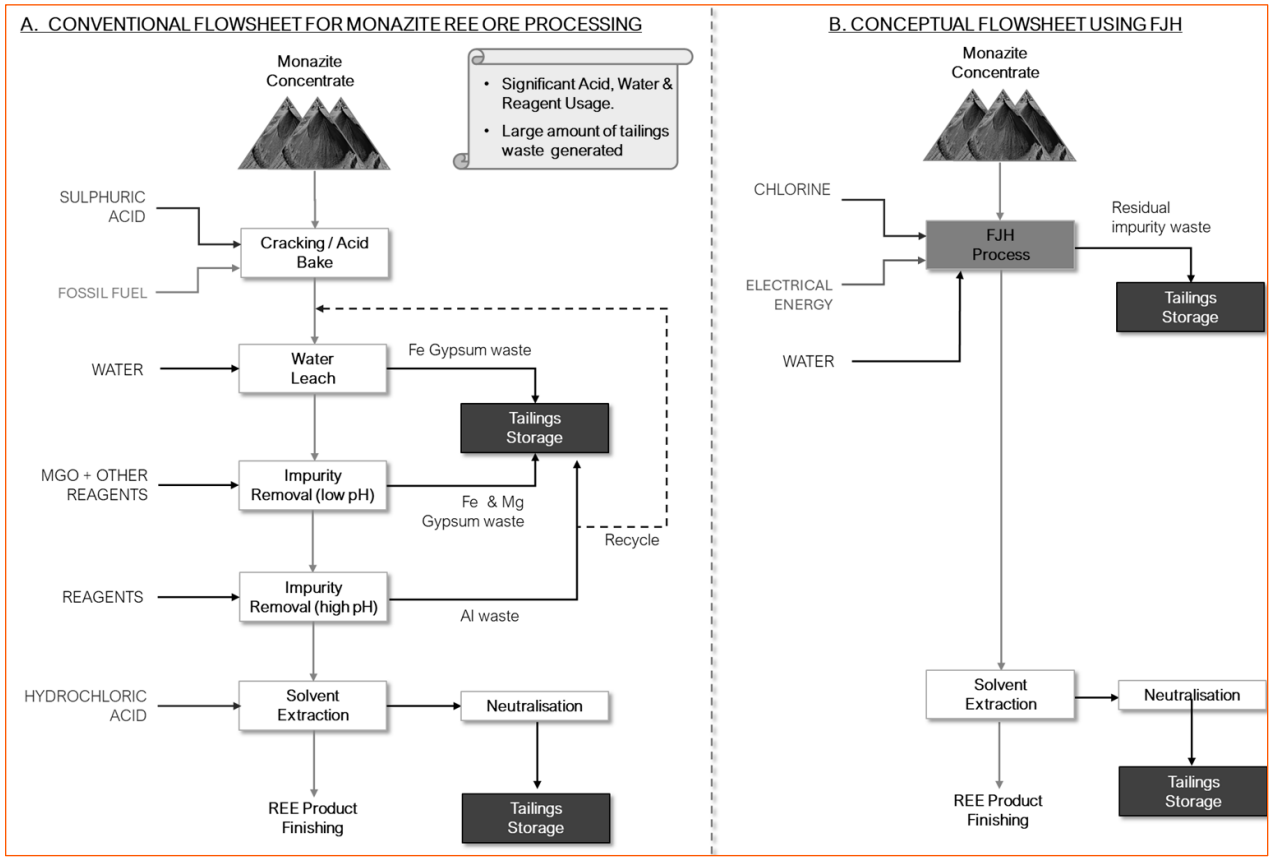
## i.e. Conventional Flowsheet for Lithium Carbonate vs FJH




## FJH Conceptual Flowsheet for LiCl or Li Carbonate




## i.e. Conventional Flowsheet for REE concentrate processing vs FJH




Significantly less steps, no sulphuric acid ($H_2SO_4$) usage and much more efficient impurity removal.



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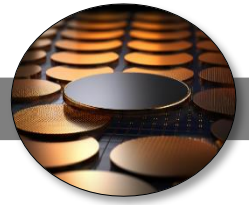
# High-Grade, High-Value Feedstocks = Exceptional In-Situ Value

Even at small scale, potential to unlock significant value per tonne – impossible with most traditional ores

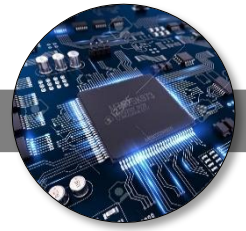
1



Gallium / Germanium/Indium
(semiconductor or refinery scrap)

***Feedstock partner secured*** ✓

2



Gold-Rich E-Waste (PCBs)

***Feedstock partner secured*** ✓

3

Mineral Concentrates

***Engaging with partners*** ⏱

| Feedstock Type | Illustrative Composition | Est. In-Situ Value (USD/t)* | Notes |
|---|---|---|---|
| Ga/Ge Scrap<br>&<br>In/Sn Scrap from refinery process | Ga: 15%, Ge: 18%<br><br>In: 20%, Tin: 12% | $450,000 - $800,000+<br><br>$80,000 - $90,000+ | Ultra-rich tech scrap from Indium Corp;<br>>1000× typical ore grades |
| Gold-rich E-Waste (High) | Au: 551 g/t, Ag: 2,800 g/t, Cu: 42%, Sn: 13%, plus Al, Ni, Zn, Ti | $50,000-$75,000 | Top-tier PCB char; lab tested by Metallium |
| E-Waste<br>(Typical Mixed PCBs) | Au: 10–150 g/t, Ag: 100–600 g/t, Cu: 5–20%, Sn: 1–3% | $8,000–$15,000 | Reflects mass market PCB feed used by recyclers |
| REE Concentrates | ~20–40% TREO (blended basket ~US$25-50/kg) | $4,000-$18,000 | Monazite value depends on Nd/Pr/Dy/Tb content |

NOTE: realised value depends on: recovery efficiency, payability, product purity & form, final offtake terms etc. Above illustrative only for in-situ value. See *Appendix* for supporting info.

* Fastmarkets (2025). *Prices for Ga, Ge, In, Au, Ag, Cu, Sn*. [Online] https://www.fastmarkets.com; USGS (2025). *Mineral Commodity Summaries 2025*.

* Estimated in-situ metal values are based on contained metal content and current spot pricing. Actual realised recovered value will depend on final process recoveries, product purity, and offtake pricing — all of which remain subject to ongoing testwork and commercial negotiations. See: Appendix – Supplementary Information on In-Situ Value Derivation.



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# Metallium's Focus Metals Align with U.S. Strategic Priorities

## Critical Metals

- Ga, Ge, In, Sb, REEs: DOE-designated critical.
- Used in semiconductors, AI, clean energy, defense etc
- All **are 90–100% import-reliant in the U.S.**

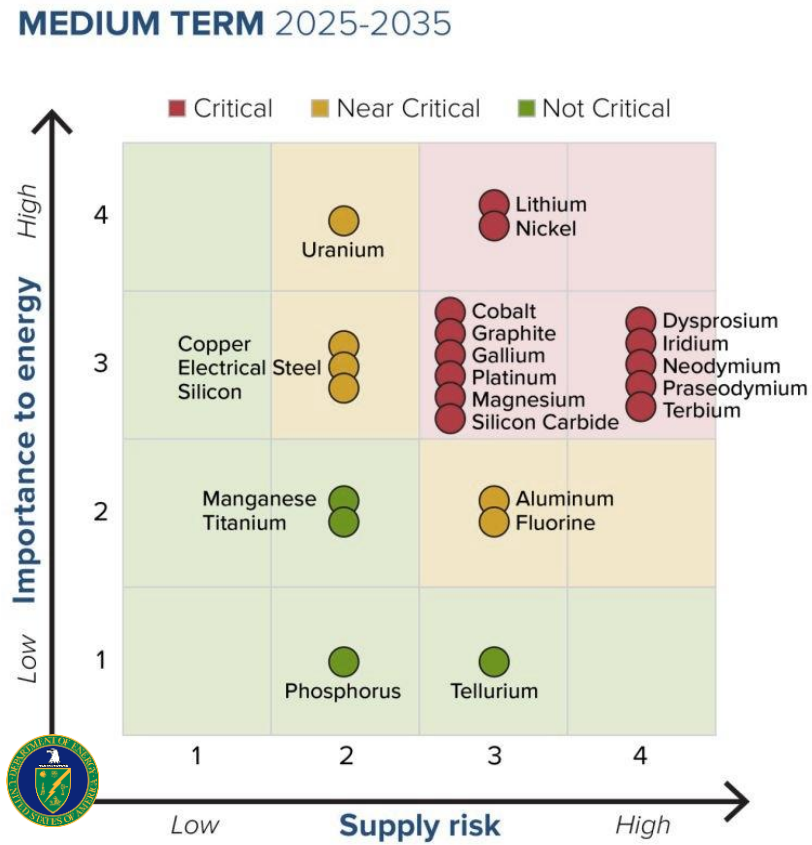
## Our Technology Unlocks Domestic Supply

- Metallium extracts these metals from refinery waste, e-waste, and mineral ore concentrates and intermediates.
- Only known pathway to U.S.-sourced recovery at commercial scale.
- Delivers fast deployment and compelling return-on-capital economics

## Aligned with U.S. Policy and Funding Mandates

- Supports onshoring & de-risking of critical metal supply.
- Potential for DoE/DoD funding, offtake, and strategic procurement.
- Reinforces U.S. industrial resilience & recycling goals.

## U.S. Department of Energy – 2025 Draft Critical Materials Assessment




*Reference: U.S. Department of Energy (2025). Draft Critical Materials Assessment – Public Consultation Graphic. Office of Energy Efficiency & Renewable Energy (EERE). Available at: https://www.energy.gov/eere*

# Scaling Towards Commercial Production



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# Trusted Design Partner – KnightHawk Engineering (KHE)

**30+ years experience in bespoke high-temperature process design (expertise in gasification, fluidized beds, etc.)**

- ✓ KnightHawk is leading the design/engineering of Metallium's Flash Joule Heating industrial-scale plant in Houston.
- ✓ Global specialists in high-temperature engineering with world-class expertise in scaling novel process technologies.
- ✓ Clients have included Fortune 500 industrial and energy companies:

RioTinto, NASA, Chevron, sasol, TEXACO

**Skin in the game:** Notably, KnightHawk is also an investor in Metallium having taken equity in lieu of fees – a strong vote of confidence

Having KHE onboard significantly de-risks scale-up, ensuring the upcoming pilot plant is professionally designed & successful





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# Metallium's Path to First Production: Building the Foundation for Scale

*Rapid advancement of FJH technology from a laboratory breakthrough into a near-term commercial reality.*

Over the past 18 months, we have:

- ✓ Proven the science at lab bench scale with Rice University and refined proprietary process chemistry;
- ✓ Built and tested robust bench-scale reactors and early prototypes, validating scalability and metal recovery efficiency;
- ✓ Executed multiple pilot campaigns on diverse feedstocks including e-waste, red mud, REE conc. and refinery residues;
- ✓ Scaled engineering to industrial design, with our first commercial plant planned to undergo commissioning by year end in Texas;
- ✓ Established a U.S. Tech Campus at a pre-permitted site to serve as the operational launchpad for domestic metals recovery;
- ✓ Assembled a high-calibre U.S. team of engineers, advisors, and operational leaders to deliver execution at speed.

**From Concept to Commissioning: U.S. Metal Recovery at Scale**


Commissioning is on track for December 2025, unlocking early revenues and positioning Metallium as a U.S.-centric producer of critical, strategic and precious metals.



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# Texas Technology Campus

Metallium's U.S. Technology Campus will house our first commercial plant and serve as a hub for ongoing R&D and future expansion.

**Pre-Permitted Industrial Site, Chambers County, Texas**

## Prime Location in Houston Industrial Corridor

Strategic location offers direct access to Interstate 10, the Houston Ship Channel (major port), and is within a 40-minute drive of central Houston, ensuring efficient logistics and access to suppliers/customers.

This facility will bring Metallium's breakthrough technology to a commercial-ready stage, generating initial cash flow and proving the model for larger expansion

- ✓ **Pre-permitted.**
- ✓ **Jan 2026 commissioning date. 365 – 1,100 initial capacity with rapid scale-up capability.**
- ✓ **Located within Houston Industrial Corridor with port and rail access.**
- ✓ **Site also includes space for R&D and testing for future feeds (Red Mud, Tailings).**

**Operational Timeline and Capabilities**

- ✓ **Operational by Q1 2026:** Targeting to commissioning by late 2025.
- ✓ **Processes diverse feedstocks:** semiconductor waste, e-waste, red mud, and ore.

**Innovation and Optimisation Hub**

- ✓ **On-site R&D Centre:** We will establish a dedicated FJH innovation lab at the campus to continually improve the process and adapt it to new feedstocks.
- ✓ This ensures Metallium remains on the **cutting edge** and can expand its tech. applications.



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# Metallium TX Site Location – Within Major Industrial Corridor

- Strategic location offers direct access to Interstate 10, the Houston Ship Channel (major port), and is within a 40-minute drive of central Houston, ensuring efficient logistics and access to suppliers/customers

- Existing on-site infrastructure minimises upfront CAPEX and accelerates deployment timeline, while the site's scale provides capacity for future expansion and R&D facilities

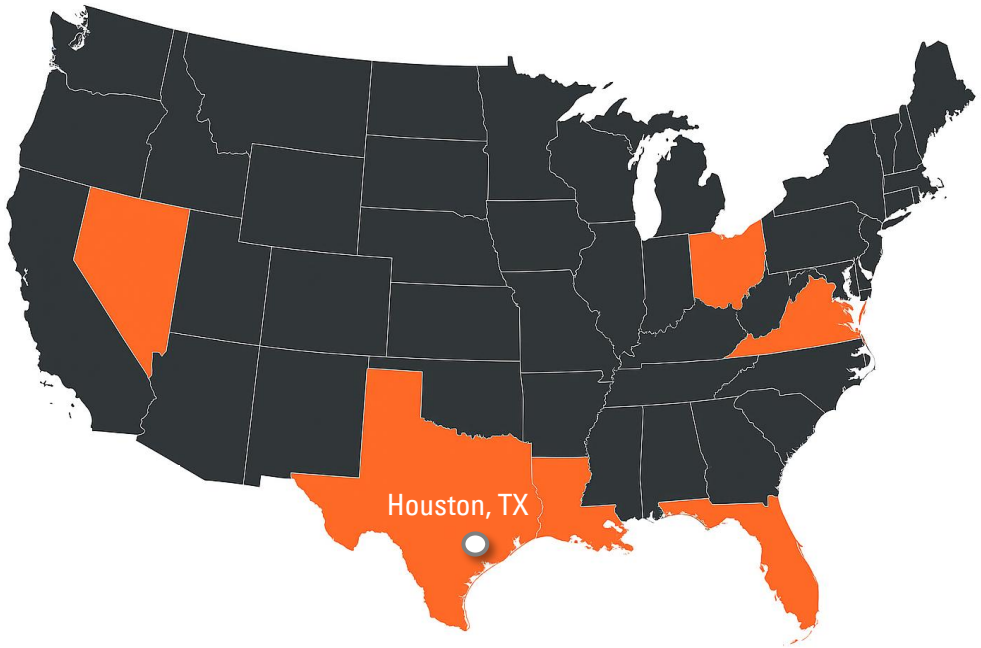
- Strong local support and community engagement in Chambers County, with Metallium committed to creating high-skilled local jobs and already sponsoring a youth baseball team as part of its community investment.

- **Metallium is also evaluating co-product recovery from Printed Circuit Board (PCB) plastics at this site** — incl. fibreglass & syngas — as an additional revenue value drivers at the plant level.

# PROJECT SCALE: U.S. National Footprint – Multisite Rollout Plan

## Strategic Multisite Deployment Plan – Pre-Permitted U.S. Network Anchored in Texas

- **Texas Hub Secured: Pre-permitted anchor site in Houston region, enabling near-term commissioning**
- **Expansion-Ready Pipeline: Additional sites shortlisted (provisional only) in:**
  - → Louisiana,
  - → Florida,
  - → Nevada,
  - → Ohio
  - → Virginia + multiple other regional targets
- **Site Selection Criteria:**
  - → Proximity to major e-waste aggregators and strategic partners
  - → Logistical access to regional industrial corridors
- **Deployment Model:**
  - → Fixed infrastructure at key hubs
  - → Mobile modular units for regional flexibility
- **Strategic Rationale:**
  - → Geographic redundancy ⟶ resilient domestic supply
  - → Alignment with U.S. critical metal reshoring priorities
  - → Fast-track path to significant tonnage recovery capacity across USA
  - → Sites shortlisted for proximity to e-waste aggregators & industrial partners



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# Strategic Partnerships – Validating and Accelerating Our Strategy



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# Industry Leaders Back Metallium

## Success Underpinned by the Company We Keep

**Vedanta:** Vedanta (US$20B market cap) – Partnering with Metallium to deploy FJH on red mud (alumina refinery waste) – aiming to extract residual valuable metals and produce a low-carbon cement additive (a world-first solution).

- ✓ **Goals:** (1) recover Al, Ti, Ga, REEs and (2) remove iron to produce a green cement additive from waste.
- ✓ Vedanta gains a solution for a large waste problem; Metallium gains a pathway to scale its tech at an industrial site.

**Indium Corp:** Collaborating to process Indium Corp's ultra-rich gallium/germanium scrap, which has grades ~1000x higher than typical ores (unlocking significant value)

- ✓ **Goal:** secure ultra-rich feedstock and validation in the semiconductor materials supply chain.
- ✓ Indium provides feedstock and industry know-how; Metallium provides tech to extract value.

Binding Supply & Offtake agreements expected soon

**Dynamic Lifecycle Innovations & Plastic Recyclers Inc. - Major E-Scrap Recycling Firms in the U.S.**

- ✓ Signed LOI with two leading U.S. recyclers to secure E-Scrap supply.
- ✓ Secures >1,100 tonnes/year of PCB-rich high-value E-Scrap under long-term LOIs.
- ✓ Supply penalties ensure reliability; Enables commercial rollout and de-risks operations.

**Meteoric Resources (ASX: MEI)**

- ✓ MOU to Process Mixed Rare Earth Carbonate (MREC) to remove impurities (La/Ce) and enrich magnet rare earths for downstream separation → Validates use of FJH to upgrade MREC and enable cost-effective magnet REE refining.

**Pipeline:** Metallium is in discussions with **> 10 additional companies** across mining, recycling, and processing sectors – underlining broad industry interest in our technology.

**U.S. Gov't Interest:** Metallium's work has drawn interest from **U.S. Department of Defense** and **Department of Energy** for its potential to bolster strategic metal supply chains. Several significant grant opportunities are currently being pursued.

# Execution Roadmap – Key Milestones Through Early 2026

## Q2 2025

**Capitalised, Organised, and Ready to Build**

- **A$50M Placement Completed** – Backed by Tier-1 domestic & U.S. institutions
- **Texas Site Secured** – 1ST FJH commercial line facility has a home
- **Commercial Team Onboarded** – U.S. team expanded
- **Feedstock Locked In -** agreements for e-waste & refinery scrap
- **Commercial Plant Design Finalised** – Engineering complete for FJH line

## Q3 2025

**Construction & Commercial Anchors**

- **U.S. Advisory Board Established** – U.S. defense and industry veterans
- **DOE/DOD Grants Update** – U.S. government submissions underway
- **Construction Commences** – Texas facility build begins
- **Supply & Offtakes Secured** – Binding agreement or MOU signed
- **Ongoing Test Results** - Multiple feedstocks
- **Strategic JV Announcements** – More Industry partners engaged

## Q4 2025

**From Commissioning to Commercial Output**

- **Construction completion** for line 1
- Field testing starts
- Construction progresses
- More Offtakes Secured
- **Ongoing Test Results** - Multiple feedstocks
- **Dry commissioning** starts
- Further **strategic collaborations**

## Q1 2026

**From 1st Commercial Plant to National rollout & beyond**

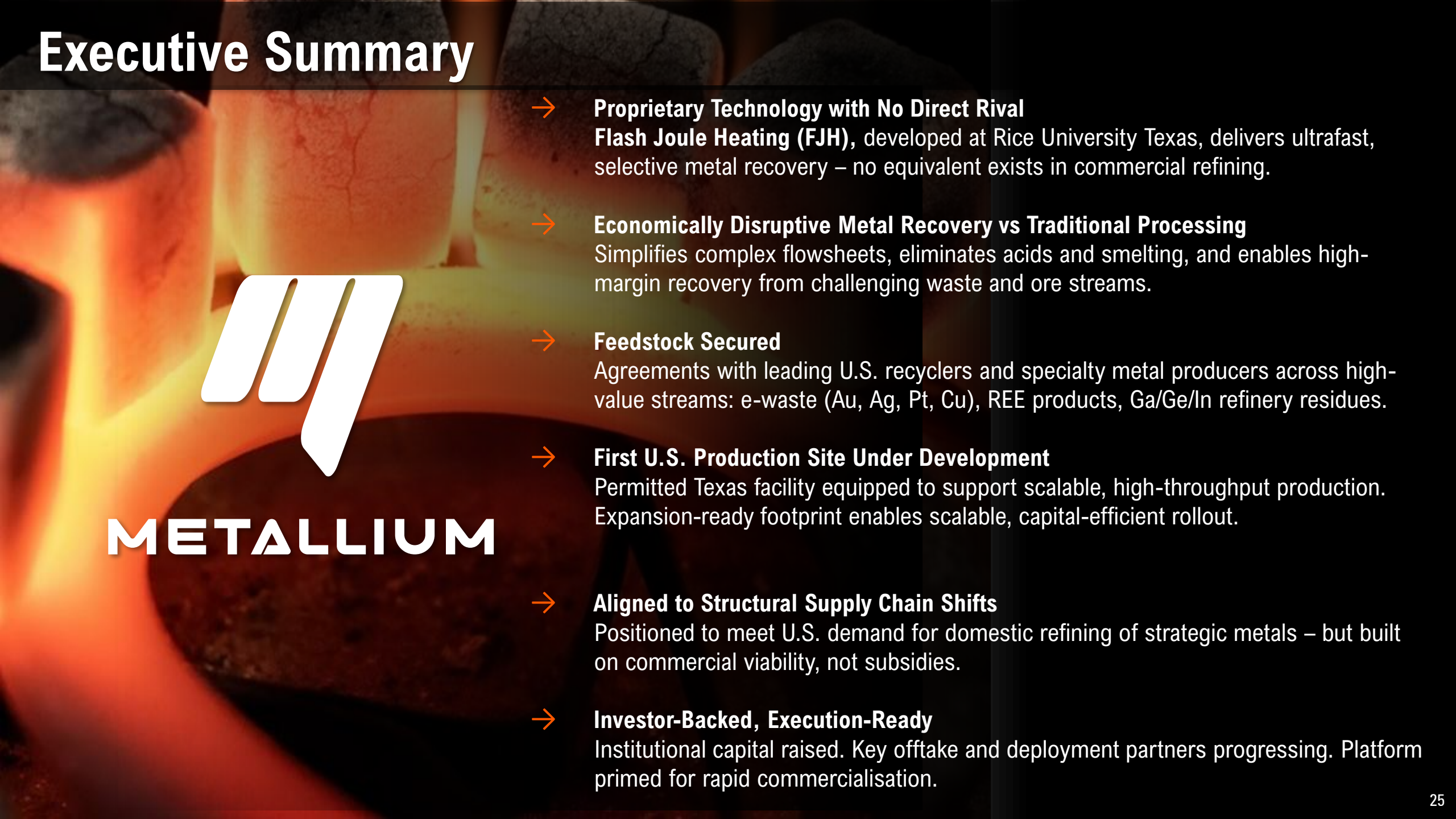
- **Wet commissioning** on feedstock
- **Customer pilots running**
- **Licensing Pathway Initiated** – MOU or agreement for IP royalty model
- Expansion Site Progresses
- **U.S. Listing Review**– OTCQX/NASDAQ strategic review underway
- **Investor Strategy Update** – Review of JV, scale-up & monetisation options

** Above newsflow is provisional only*



METALLIUM

# Executive Summary



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- **Proprietary Technology with No Direct Rival**
  **Flash Joule Heating (FJH),** developed at Rice University Texas, delivers ultrafast, selective metal recovery – no equivalent exists in commercial refining.

- **Economically Disruptive Metal Recovery vs Traditional Processing**
  Simplifies complex flowsheets, eliminates acids and smelting, and enables high-margin recovery from challenging waste and ore streams.

- **Feedstock Secured**
  Agreements with leading U.S. recyclers and specialty metal producers across high-value streams: e-waste (Au, Ag, Pt, Cu), REE products, Ga/Ge/In refinery residues.

- **First U.S. Production Site Under Development**
  Permitted Texas facility equipped to support scalable, high-throughput production. Expansion-ready footprint enables scalable, capital-efficient rollout.

- **Aligned to Structural Supply Chain Shifts**
  Positioned to meet U.S. demand for domestic refining of strategic metals – but built on commercial viability, not subsidies.

- **Investor-Backed, Execution-Ready**
  Institutional capital raised. Key offtake and deployment partners progressing. Platform primed for rapid commercialisation.

# Board & Senior Management

**Michael Walshe**
B.Eng. (Hons) Chemical, MIEAust CPEng, MBA (Finance), MAusIMM

**Managing Director & CEO**

Chemical engineer and MBA with 15+ years' experience in minerals processing (ex-Metso Outotec), scaling industrial technologies across lithium, REEs, gold, and waste-to-value, including as CEO of ASX-listed companies.

**Steve Ragiel**
BCHe, Chemical Engineering

**President – U.S. Operations**

Former global recycling division head at Waste Management Inc. with 30+ years leading industrial recycling businesses, commercialising new technologies and building processing plants across the U.S. and internationally.

**John Hannaford**
BCom, FFin

**Non-Executive Chairman**

Chartered Accountant and seasoned corporate finance executive with extensive experience in ASX-listed mining companies, currently serving as director on multiple public company boards.

**Tony Hadley**
B.Sc. (Extractive Metallurgy & Chemistry)

**Non-Executive Director**

Metallurgist with 30+ years in mineral processing and plant commissioning, including extensive REE expertise including as General Manager at Lynas Rare Earths.

**Paul Niardone**
MBA, BA

**Non-Executive Director**

Entrepreneur and ASX-listed company founder with a track record in business development and strategy, including founding The Agency Group (ASX: AU1).

PAST EXPERIENCE INCLUDES:

Metso
Outotec
Pfizer
WM Waste Management
greenstar RECYCLING
BRACE INDUSTRIAL GROUP
ARTHUR ANDERSEN
VENTNOR CAPITAL
ROCKFORD PARTNERS
Lynas Rare Earths
METEORIC RESOURCES
NORTHERN MINERALS
THE AGENCY
PPR Professional Public Relations (PPR)

COMING SOON:

**A U.S.-based Advisory Board comprising leading experts in defence, government and major manufacturing to support commercial expansion.**

Metallium is assembling a U.S.-based Advisory Board comprising senior figures from defence, chemical manufacturing, and industrial supply chain sectors to support commercial rollout, government engagement, and strategic partnerships.



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# Corporate Overview

SHARE PRICE

A$0.57

As at 27 June 2025

**(52 Week High $0.73; Low $0.024)**

MARKET CAPITALISATION

A$315m *

As at 27 June 2025 (proforma – see * note below)

SHARES ON ISSUE

553m *

CASH

A$60m *

OPTIONS ON ISSUE **

67m

** Weighted ave. conversion price = A$0.19

ENTERPRISE VALUE

A$255m *

DEBT

Nil

** Proforma - Based on cash balance as reported at 30 March 2025 and post June 2025 Placement (90.9M new shares issued over 2 tranches)*

SHAREHOLDER BREAKDOWN - (post June 2025 placement

**Institutional Ownership**

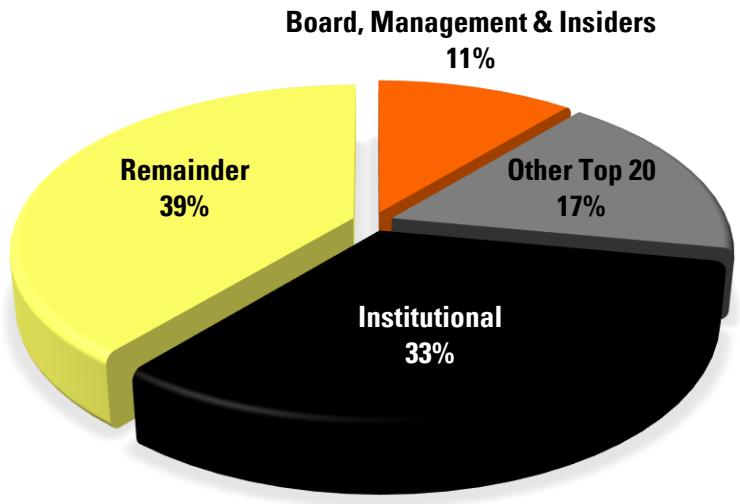
32%

**Top 20 Holders:**

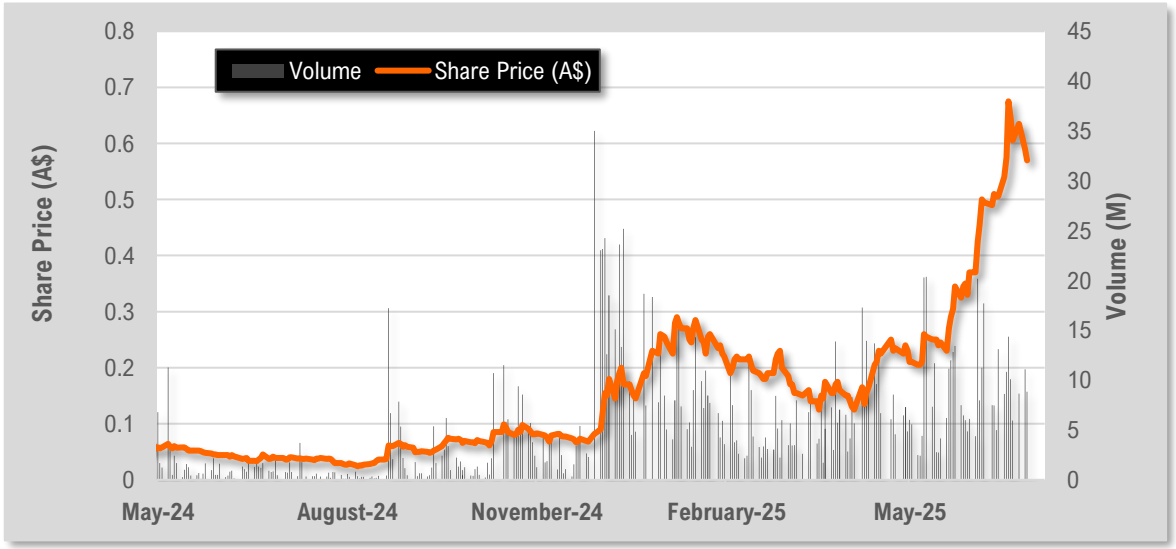
52%

**Total No. of Shareholders:**

2,574




ASX SHARE PRICE & VOLUME

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# The Future of Metals Recovery – Contact us to learn more or for partnership discussions


## Michael Walshe

Managing Director & Chief Executive Officer

Metallium Ltd


### Stock Exchange

ASX: MTM | OTCQB: MTMCF

### Investor and Announcement Engagement

InvestorHub

https://investorhub.mtmcriticalmetals.com.au/


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www.flashmetalsusa.com

# Appendix – Supplementary Information on In-Situ Value Derivation

This appendix provides the assumptions and methodology used to calculate estimated in-situ metal values (USD/t) for key feedstocks referenced herein.

## Calculation Methodology:

In-situ values were calculated as: [Grade] × [Spot Price per unit] × [Unit conversion (if needed)]

For example: 551 g/t Au × $97/g ≈ $54,000/t value for gold in high-grade PCB e-waste

**Metal Price Inputs (April 2025)**

| Metal | Unit | Spot Price (USD) | Source |
|---|---|---|---|
| Gold (Au) | g | $96.45 | Fastmarkets (2025) |
| Silver (Ag) | g | $0.97 | Fastmarkets (2025) |
| Copper (Cu) | kg | $9.92 | Fastmarkets (2025) |
| Tin (Sn) | kg | $35.00 | Fastmarkets (2025) |
| Gallium (Ga) | kg | $700.00 | Fastmarkets (2025, 4N) |
| Germanium (Ge) | kg | $3,300.00 | Fastmarkets (2025, 5N) |
| Indium (In) | kg | $530.00 | Fastmarkets (2025, 4N) |
| Nickel (Ni) | kg | $18.00 | Fastmarkets (2025) |
| Aluminium (Al) | kg | $2.30 | Fastmarkets (2025) |
| Zinc (Zn) | kg | $2.50 | Fastmarkets (2025) |
| Titanium (Ti) | kg | $2.50 (est.) | Industry estimate (2025) |
| REE (TREO basket) | kg | $25 - $40 (blended) | USGS (2025) |

REFERENCES & NOTES


- Fastmarkets (2025) Prices for Gallium, Germanium, Indium, Gold, Silver, Copper, Tin, Nickel, Aluminium and Zinc, https://www.fastmarkets.com.
- USGS (2025) Mineral Commodity Summaries 2025: Rare Earth Elements. United States Geological Survey, https://pubs.usgs.gov/periodicals/mcs2025.
- Industry Estimate (2025) Indicative pricing for Titanium (as $TiO_2$ basis).
- In-situ values do not reflect actual recoveries or net saleable product revenue. Realised values will depend on yield, product purity, and offtake terms.