

# AVIMETAL

MINERAL PROCESSING SYSTEMS

INVESTOR PITCH DECK · 2026

## Unlocking the Metals That Legacy Smelters Leave Behind

A U.S.-based mineral processing and precious-metals technology company delivering a complete, modular, end-to-end ore-processing line.

14

PROCESSING STAGES

> 50%

GROSS MARGIN

\$250K

PHASE-1 CAPITAL

Months

PAYBACK

## CORE THESIS

## The Next Century of Metals Will Come From Smarter Recovery

The global mining industry is running out of easy answers. Ore grades are falling, new smelter capital exceeds \$1B per facility, and permitting timelines extend to a decade or more. The next century of metals supply will not come from new mines — it will come from smarter recovery of what's already on the ground. Avimetal exists to make that recovery economically viable, at scale, for any feedstock type.

### WHAT WE DO

- Design, manufacture & operate a 14-stage modular processing line
- Process gold ore, PGMs, rare earths, copper, and e-waste
- Deploy as fixed plant or fully containerized mobile unit
- Operate with as few as 3–5 technicians per shift

### BUILT BY

Scientists, metallurgists, geologists, and process engineers with decades of combined experience. Led by James Gim, founder and CEO, with commercial relationships spanning the United States, Korea, and the Middle East.

"We invite qualified strategic and financial partners to join us in building the recovery infrastructure the next era of metals supply will be built on."

— James Gim, Founder & CEO

## THE PROBLEM

## A Structural Crisis in Global Mining

The global mining industry confronts a convergence of long-term structural forces that conventional capital and conventional technology cannot solve. Ore grades have declined steadily for decades, the capital cost of a new conventional smelter now exceeds one billion dollars per facility, and environmental permitting timelines routinely extend to ten years or more.

### Declining Ore Grades

Primary ore grades have fallen precipitously across gold, copper, and PGM deposits. The ores accessible under conventional methods represent a shrinking fraction of total global resource. The world needs a new approach to sub-grade processing.

### Stranded Legacy Stockpiles

Hundreds of millions of tons of slag, tailings, and historic stockpiles — some accumulating since the late 1800s — contain economically meaningful quantities of gold, silver, platinum, palladium, and rare earths that traditional pyrometallurgy simply cannot reach.

### E-Waste Complexity

Urban mining feeds such as printed circuit boards and IC chips contain higher metal concentrations than virgin ore — but in chemically complex forms requiring multi-stage hydrometallurgical and electrochemical separation no single legacy smelter offers.

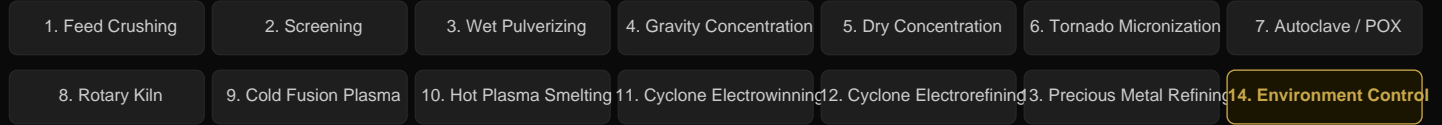
### Systemic Recovery Loss

The industry loses 15–20% of already-low recoveries to inefficiency, cannot respond to surging critical mineral demand for EVs, defense, and the energy transition, and faces existential capital pressure on new greenfield development.

THE SOLUTION

# A Complete 14-Stage Modular Processing Line

Avimetal has engineered a complete, fourteen-stage ore-processing line addressing the full spectrum of challenges — from liberation-grade crushing through final refined ingot — without water-intensive or chemically wasteful approaches. Every stage is a stand-alone module, combinable or operable independently.



CORE TECHNOLOGY

## Proprietary Platforms That Redefine Recovery Economics

<p><b>Cold Fusion Plasma</b></p> <p>Near-ambient pressure precious metal extraction. Processes complex sulfidic and arsenical ores standard furnaces cannot handle economically.</p>	<p><b>Hot Plasma Smelting</b></p> <p>Handles refractory feeds and slags no arc furnace can reach. Built for the world's largest untapped category: historic slag at legacy smelter sites.</p>	<p><b>Cyclone Electrowinning</b></p> <p>Significantly higher current efficiency than flat-plate cells. Cyclone geometry maximizes mass transfer. Up to 147 kg Au/hr per 20-cell module.</p>
<p><b>Rotating Electrowinning</b></p> <p>Enhanced mixing for low-concentration feedstocks from e-waste and low-grade tailings. Delivers up to 99.8% purity. Modular 1–8 cell configurations.</p>	<p><b>Cyclone Electrorefining</b></p> <p>Final-stage purification to commercial specification. London Bullion Market-compatible output directly from the line without secondary refining.</p>	<p><b>Tornado Mill (Micronization)</b></p> <p>Proprietary vortex micronization — consistent micron / sub-micron output. Up to 5,000 kg/hr. Minimal wear and heat vs. conventional ball mills.</p>

Processes ores down to 100 g/t — well below the threshold at which legacy operations shut down.

## MARKET OPPORTUNITY

**Four High-Value Markets, One Integrated Platform****Market 01****Precious Metals Recovery**

Gold, silver, and PGMs from ore, tailings, and slag including historic stockpiles since the 1800s. Demand inelastic; prices near all-time highs. Avimetal processes sub-200 g/t feeds no competitor can address.

**Market 02****Rare Earths**

A domestic U.S. alternative to Chinese-controlled supply chains for permanent magnets, defense, and EV motors. Strong price premiums for non-Chinese supply and active government procurement interest.

**Market 03****Base Metals Upgrading**

PGM-enriched copper ingot stacks recovery economics — combining copper throughput with platinum-group recovery in one operation. Premium pricing over standard copper cathode.

**Market 04****Urban Mining / E-Waste**

PCBs and IC chips contain metal concentrations exceeding virgin ore but require multi-stage processing no legacy smelter offers. High-margin feed stream rather than a disposal problem.

## BUSINESS MODEL

**Three Revenue Channels — Equipment · JV · Toll Processing****1 Equipment Sales**

Engineered modules and complete processing lines sold to mining companies, refiners, and government partners. Equipment margin plus engineering, installation, and commissioning fees. Immediate capital recognition.

**2 Joint Ventures**

Technology provided to feedstock owners — stranded slag piles and historic tailings — in exchange for a share of recovered metal revenue. High-margin recurring cash flow. Several million tons already under LOI or MOU.

**3 Toll Processing**

Company-operated plants accept third-party feedstock for a processing fee. Generates revenue from day one of commissioning while building reference data for sales and JV negotiations.

FINANCIAL HIGHLIGHTS

## Phase-One Economics: Compelling Returns at Conservative Assumptions

A single 5 TPD line processing feedstock at 500 g/t gold generates monthly revenue in the millions of dollars at current gold prices, with gross margins above 50% after all variable costs. Higher-grade feedstocks — several million tons already under LOI or MOU — scale these economics by an order of magnitude.

**\$250K**

**Phase-One Capital**

Initial capital to commission a fully operational processing line including equipment, installation, and commissioning

**> 50%**

**Gross Margin**

Achievable at conservative 500 g/t gold feed, after settlement, electricity, labor, flux, and trucking costs

**3x**

**Phase Expansion**

Phase-two and phase-three capital each ~\$250K — three tranches produce a full commercial plant

**Months**

**Payback Period**

At current gold prices and contracted feedstock grades — measured in months, not years

Several million tons of feedstock already under Letter of Intent or MOU with stockpile owners — contracted supply pipeline before pilot plant commissioning

PILOT PLANT & ROADMAP

## From Pilot Validation to Regional Commercial Deployment

**1 Phase 1  
Pilot Plant**

Commission full 14-stage line at commercial-relevant throughput. Generate independent recovery data. Build investor due-diligence reference. Activate toll-processing revenue from day one.

**2 Phase 2  
Commercial Plant**

Deploy first regional commercial plant. Launch containerized mobile units for tailings and government contracts. Execute signed feedstock joint ventures. Scale engineering team.

**3 Phase 3  
Critical Minerals Expansion**

Expand into rare-earth separation and battery-metals processing. Pursue government procurement for domestic critical-mineral supply. Build multi-plant, multi-continent operating footprint.

## THE ASK

# Join Us in Building the Recovery Infrastructure of the Next Era of Metals Supply

Avimetal is raising growth capital to commission the pilot plant, complete containerized-line certification, and execute on signed and pending feedstock joint ventures. Proceeds fund pilot construction and commissioning, initial feedstock working capital, engineering and field-services team expansion, and intellectual-property protection.

- Pilot plant construction & commissioning

- Initial feedstock working capital

- Engineering & field-services team expansion

- Intellectual property protection & certification

- Containerized-line certification & compliance

- JV execution on signed LOIs & MOUs

### James Gim - Founder & CEO

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