

CONFIDENTIAL

2026



**[REE]**DEFINING THE **FUTURE**

Next-Generation Rare Earths Refining

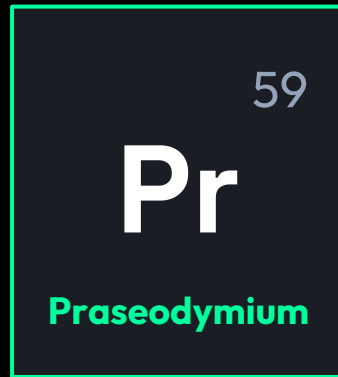
---

CO-FOUNDER & CEO

Angel Centeno

# RARE EARTH ELEMENTS

THE **BUILDING BLOCKS** OF THE FUTURE



## WIND TURBINES



~300 Kg  
per Wind Turbine

## ELECTRIC CARS



~0,5 Kg  
per Electric Vehicle

## DEFENSE TECH



~800 Kg  
per Defense Jet

## ELECTRONICS



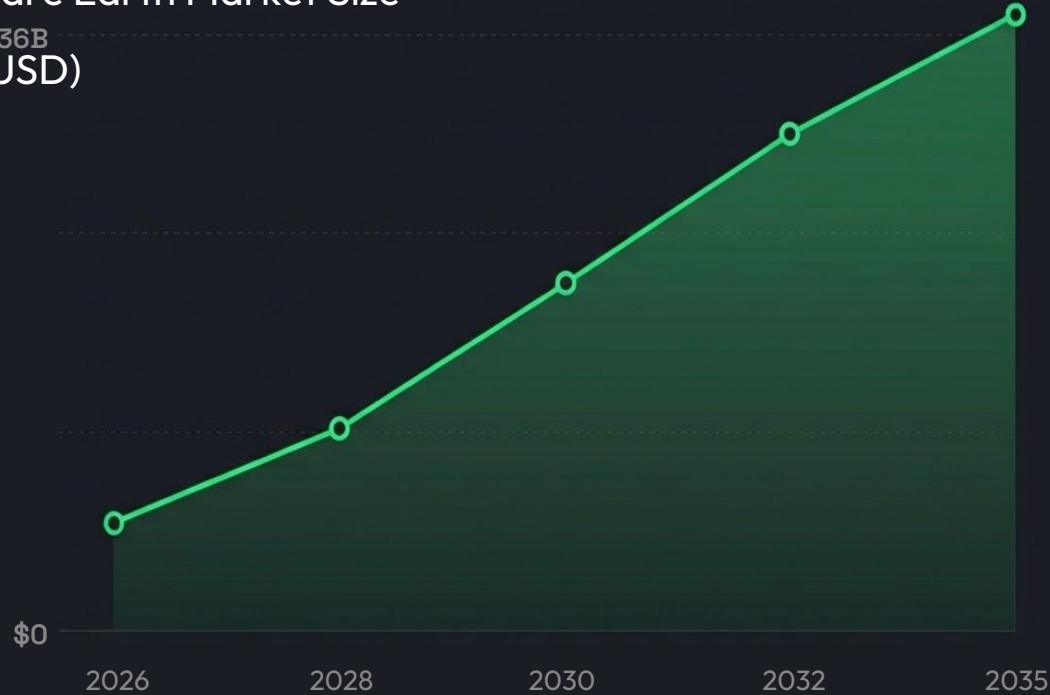
Semiconductors,  
Magnets and more

# THE OPPORTUNITY

## DEMAND OUTPACING SUPPLY

Rare Earth Market Size

\$36B  
(USD)



## EXPLOSIVE MARKET

# 8.3% CAGR

Driven by the energy transition and regulatory tailwinds.

# \$36B

TAM

# \$21B

SAM (excl-china)

REFINING BOTTLENECK

ALKEMIKO

# GLOBAL DEPENDENCE ON A SINGLE COUNTRY

# 90%

REE REFINING IS  
CENTRALIZED IN CHINA



VERY HIGH GEOPOLITICAL RISK



## SOLVENT EXTRACTION

ALKEMIK

# COSTLY, COMPLEX & HAZARDOUS PROCESS



**300M**

CAPEX & High OPEX



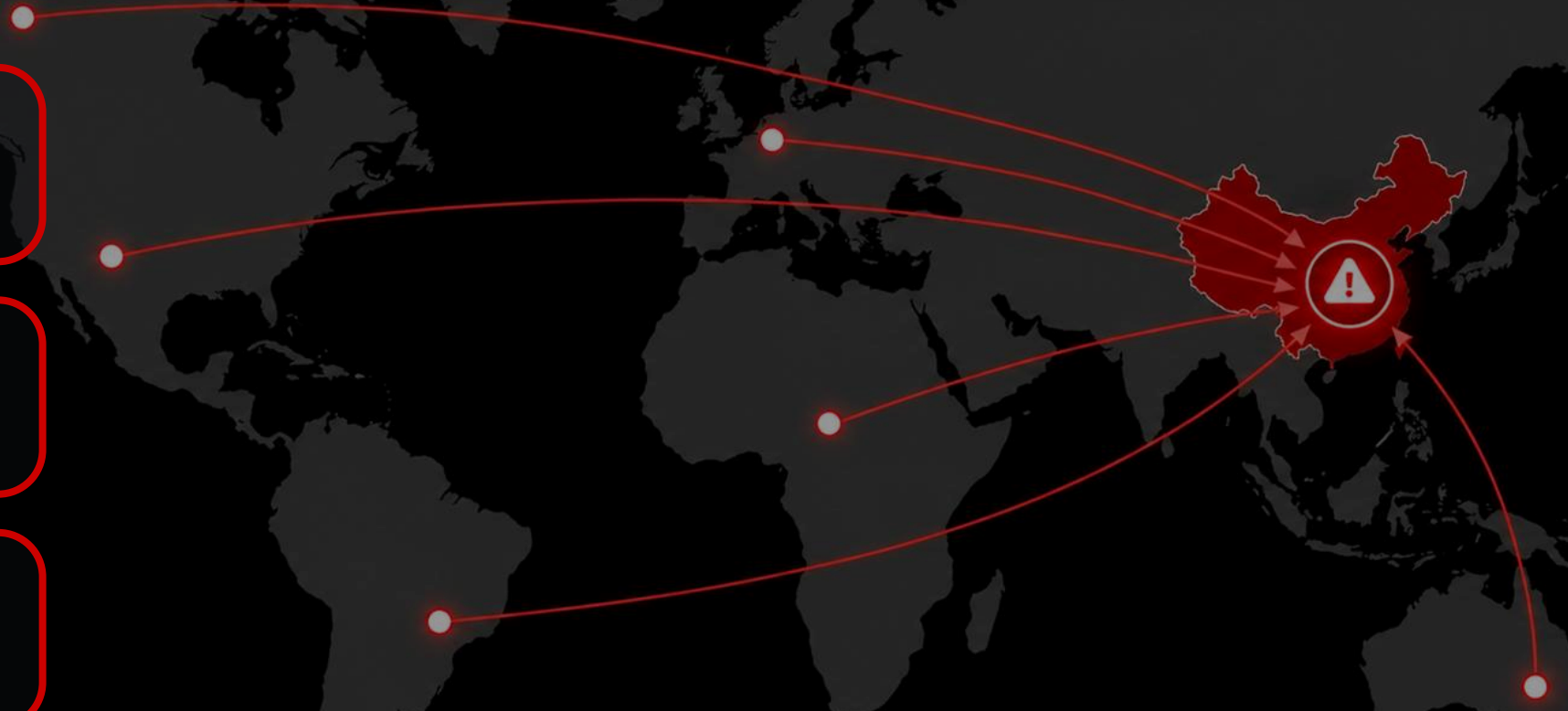
**>80k**

Sq. Feet Facilities



**3:1**

Hazardous Waste Ratio

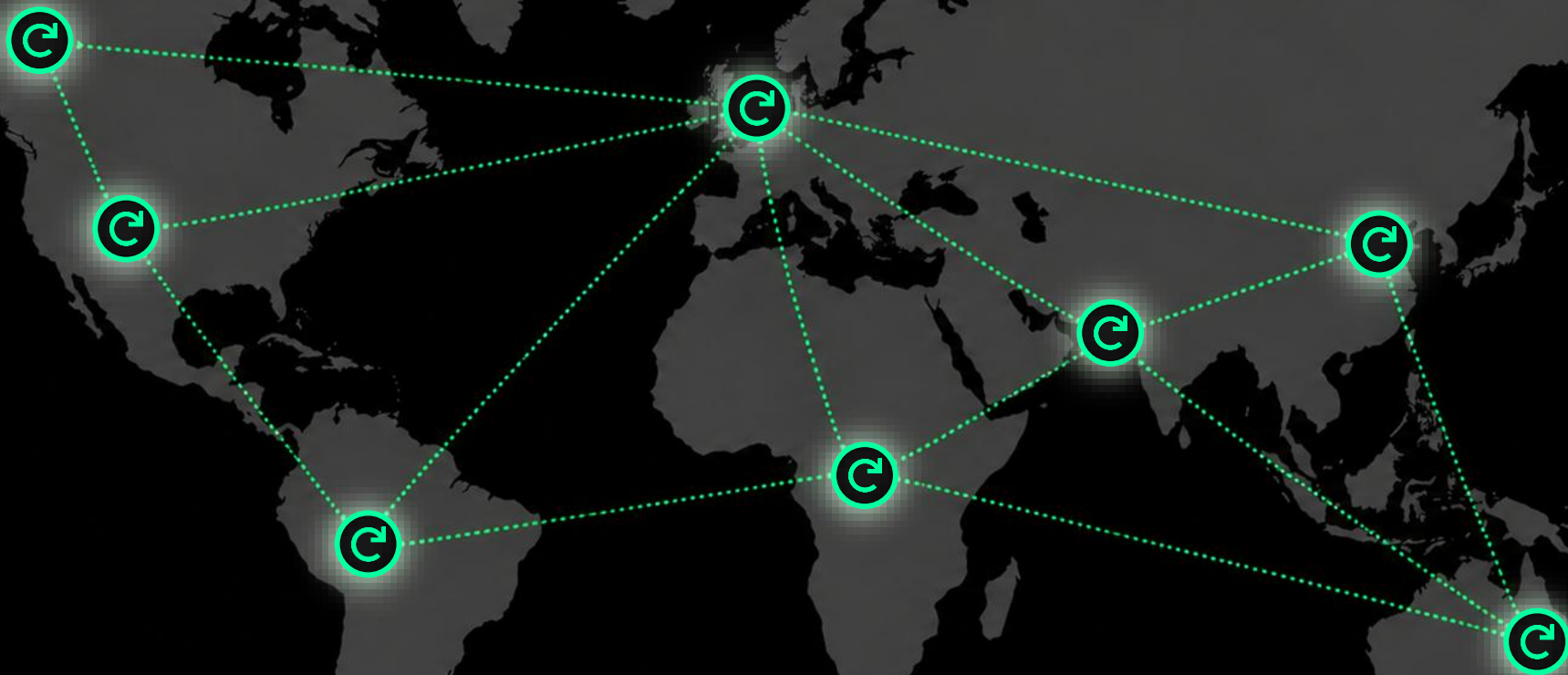


OUR SOLUTION

---

ALKEMIK

# DECENTRALIZED REFINING AT THE SOURCE



# OUR MODULAR REFINERIES

Plug & Play processing directly at the source.



## MODULAR

Fits in standard shipping containers.



## SUSTAINABLE

Closed-loop process. 70% emissions reduction.



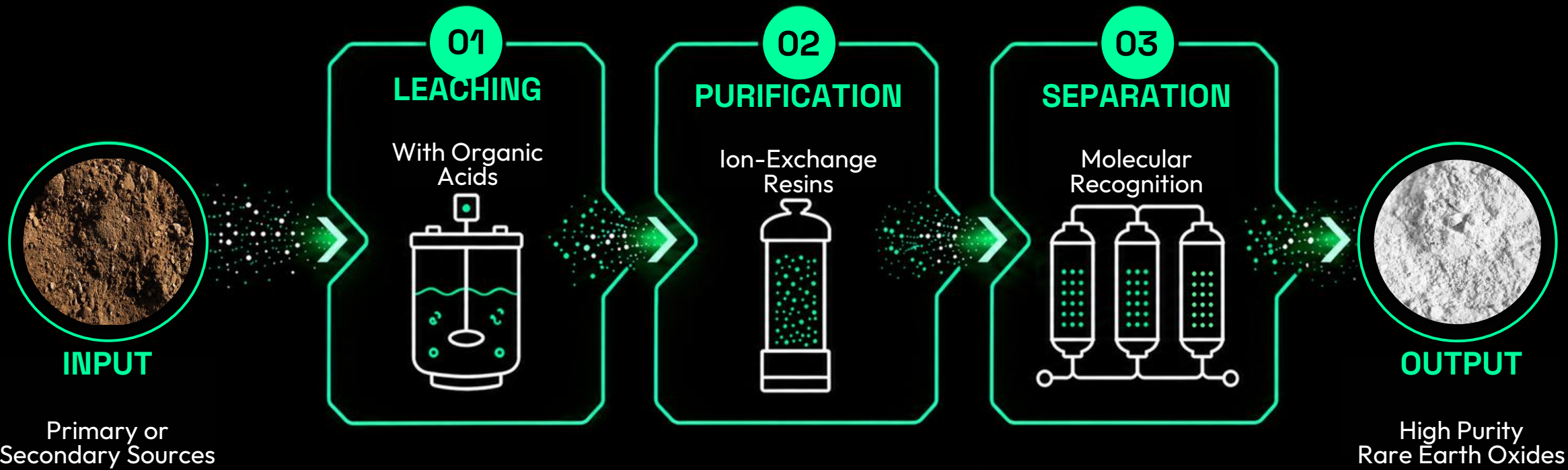
## EFFICIENT

80% CAPEX & 20% OPEX reduction.



# END-TO-END SOLUTION

ALKEMIK



**80%** CAPEX Reduction | **20%** OPEX Reduction | **70%** Less CO<sub>2</sub> Emissions

# THE **ATOMIC** SECRET

ALKEMIK

Ligand

REE

**Single Pass**

Extraction

**Molecular**

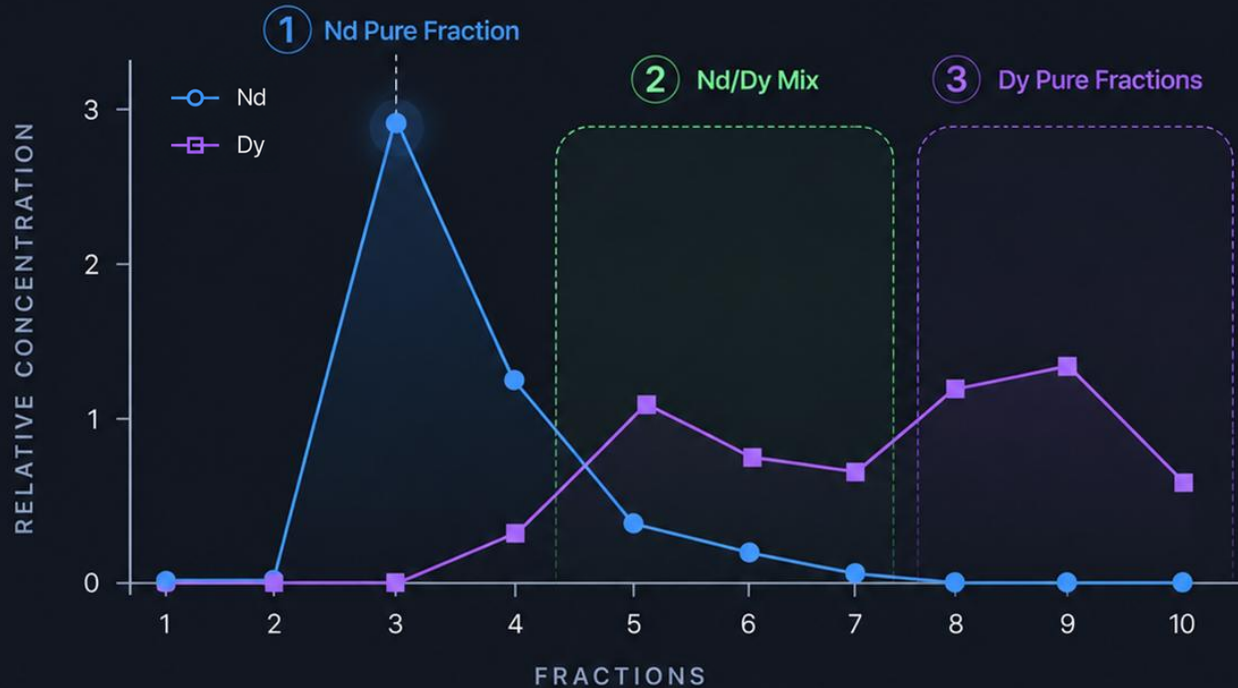
Selectivity

**High**

Recovery Rates

# MOLECULAR RECOGNITION

ALKEMIK



**FIRST-PASS EXTRACTION:**

**87%** RARE EARTH RECOVERY

**99%** RARE EARTH PURITY

# COMPETITIVE LANDSCAPE

ALKEMIKO

## SOLVENT EXTRACTION

### STAGES

Hundreds to Thousands

### CAPEX

>300M USD

### OPEX

30 USD/kg

### ENVIRONMENTAL IMPACT

Very High

## OTHER SOLUTIONS

### STAGES

Dozens

### CAPEX

-30%

### OPEX

15 USD/kg

### ENVIRONMENTAL IMPACT

High to Medium

## OUR TECHNOLOGY

### STAGES

Single-Pass Process

### CAPEX

-80%

### OPEX

9,4 USD/Kg

### ENVIRONMENTAL IMPACT

Low & -70% CO<sub>2</sub> Emissions

# SCALABLE REVENUE

ALKEMIK

01

## ON-SITE REFINING



Technology-as-a-Service (TaaS) for large mining companies.

Licencing + Royalties

02

## REFINING HUBS



Regional processing for juniors, recyclers & tailings via Hub-Spoke operation.

Direct Rare Earth Oxides Sales

## COMMERCIAL TRACTION

# BUILDING REAL MOMENTUM

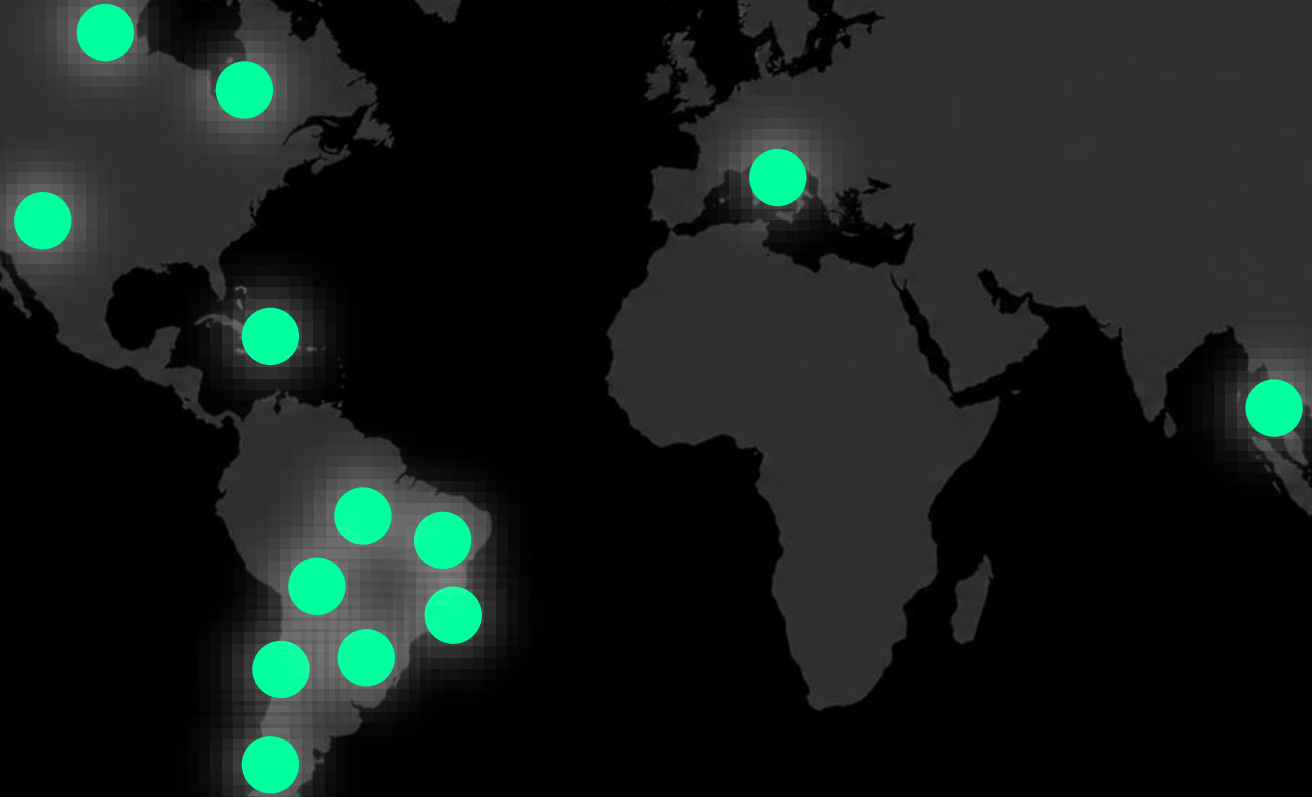
ALKEMIK

**+15** POC WITH  
MINING COMPANIES

**+50 KG** REAL SAMPLES  
PROCESSED

**6** SIGNED  
LETTERS OF INTENT

**1** SIGNED  
COMMERCIAL AGREEMENT



# COMMERCIAL AGREEMENT: IRON DUKE

ALKEMIO

FIRST CLIENT IN NEW MEXICO, US



FRAMEWORK AGREEMENT SIGNED

On-Site **Pilot**

**7%** Royalties

**15y** Exclusivity

**>5M**

Tons of Extracted Material

**\$350M**

USD in REEs

# THE DREAM TEAM

ALKEMIKO



**ANGEL  
CENTENO**  
MBA

**CEO**

Ex-Mercado Libre  
Executive



**LORENA  
MOLINA CALDERÓN**  
PhD

**CSO**

+15 years in Rare  
Earth Separation



**FEDERICO  
PEREYRA BONNET**  
PhD

**CIO**

2nd Time  
Founder (Exit)



**AILÍN  
SVAGZDYS**  
BSc

**CRO**

Ex-Amazon  
Scientist



**JAVIER  
PÉREZ**  
Mg

**CBO**

Business  
Development

## EXPERT TEAM

**MARINA HORNUS, MSc**  
Chemical Engineer

**AGUSTÍN GALILEA, PhD**  
Organic Chemistry Lead

**ARIÁN AVATO, Eng**  
Process Lead

## ADVISORY BOARD

**MARÍA TERESA GAMBA, PhD**  
+30y in Mining Operations

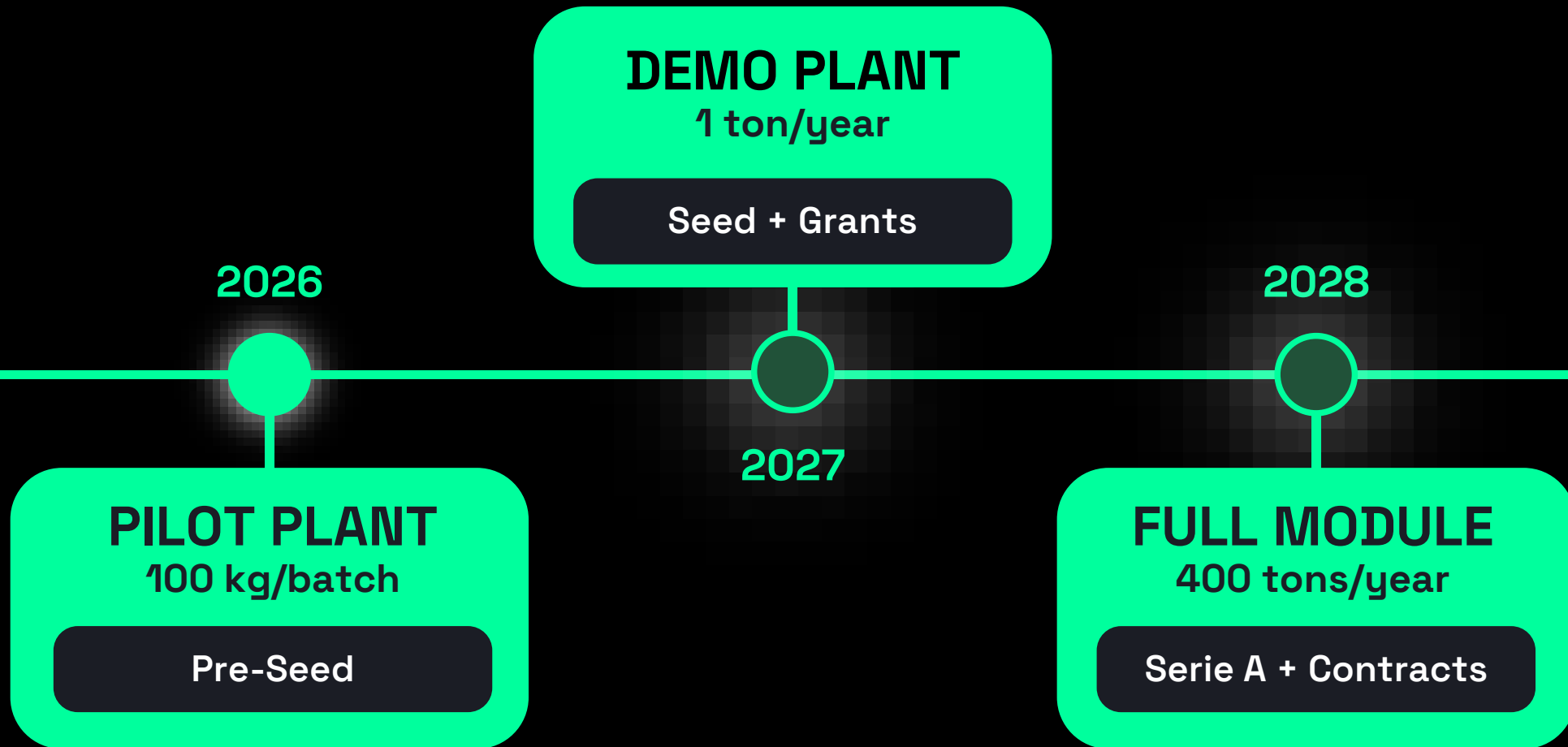
**CARL DELFELD**  
+25y in REE Industry  
Ec. Security Council

**JOHN ELDER**  
+20y in REE Industry



HATCH Outotec ILLUKA

# ROADMAP TO DEPLOYMENT



# JOIN THE [REE]VOLUTION

HELLO@ALKEMIO.TECH

GRIDX

Berkeley  
SKYDECK



DALUS  
CAPITAL

VX VENTURES

DRAGONES  
Venture Partners



CATAL5T



MC MASSCHALLENGE

amplifica  
CAPITAL

EPIC  
ANGELS

# | FUNDING TO DATE

ALKEMIK

# \$2.4M

\$2M

Pre-Seed Round

\$400k

Accelerators

# THE ASK

# \$4M

