



## Vyomchara

# An Integrated **AI Platform** to Modernize India's **Mining** **Sector**

**“**"India's mining sector is the bedrock of our economy, but it's built on a **fractured digital foundation**. We are Vyomchara, and we are building the **unified intelligence layer** for the mine of the future."



**FRACTURED**



**UNIFIED INTELLIGENCE**



IIT KANPUR

**FOUNDING TEAM**



Harsh Raj  
Founder, MD



Somu Prajapati  
Co-Founder, CTO



Sahil Dhull  
Head of AI

**PRESENTED ON**

**January 22, 2026**



# A Trillion-Dollar Industry Running on Disconnected, Obsolete Technology

The core issue is a lack of integrated, end-to-end platforms, creating massive inefficiencies across the mining value chain.

## Data Silos

Geologists, engineers, and operators don't share a single source of truth, leading to misinformed decisions.

## High Costs

Expensive foreign technology is unfeasible for most Indian firms, leaving mid-tier miners behind.

## Safety & Compliance

Manual processes lead to critical safety risks and reporting failures, risking shutdowns.

### CURRENT STATE: FRACTURED WORKFLOW



**Result: 40% Operational Inefficiency & Increased Risk**



# The Vyomchara Platform: Mining 4.0

An integrated hardware-software stack to Acquire, Analyze, and Act





# Tapping into India's Massive Mining Potential

TOTAL AVAILABLE MARKET (TAM) Source: Industry Reports 2025

**\$285 B**

India Metals & Mining Industry 2024

## KEY OPPORTUNITY

**"No dominant Indian leader in integrated mining technology."**

Incumbents like Hexagon and Reactore are too expensive and monolithic for the average Indian firm.

## TARGET STRATEGY



Phase 1

Private Contractors  
Initial Entry



Phase 2

B2G Tenders  
Scale (Coal India, OMC)

## Market Segmentation

Serviceable Addressable Market (SAM)



## SERVICEABLE MARKET

**\$42.75 B**

15% tech-modernization segment of total output value  
TAM \$285B



**2.5%**



**#2**

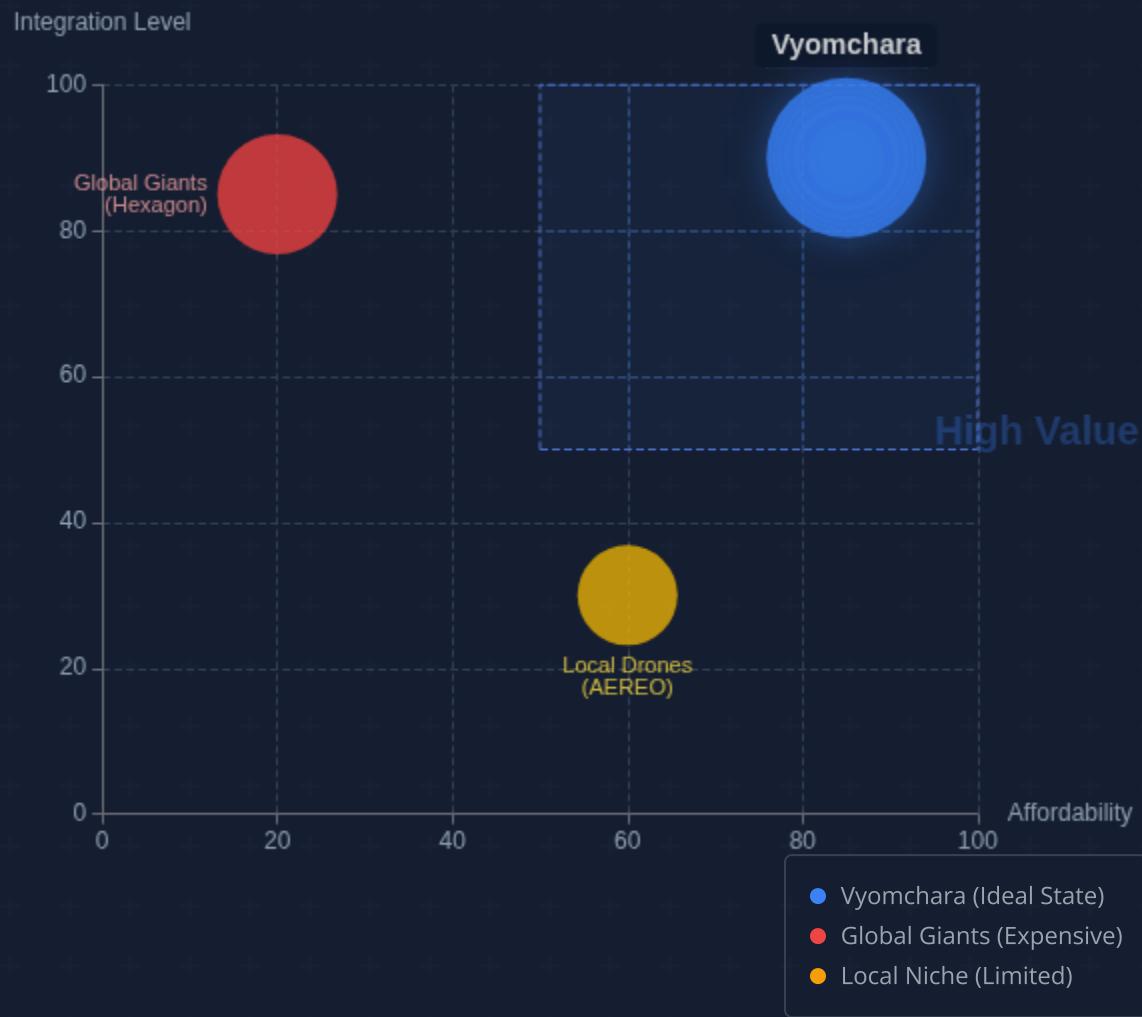


**11.7%**



# Our Unfair Advantage: Integration & Affordability

## Competitive Landscape



## Why We Win



### System Integration

Seamless hardware-software stack. Hard to replicate end-to-end flow.



### Proprietary AI

SAM+CNN models trained specifically on **Indian geological data**.



### Cost Advantage

"Voxel" sensor + affordable drones = **1/5th the cost** of incumbents.

## THE COMPETITION

### Hexagon / Reactore

Powerful but monolithic & expensive. Not tailored for India.

### AEREO

Good drone services, but lacks full-stack AI & analytics platform.



# A Dual-Pronged Strategy for Market Capture

## Revenue Model



### B2B: Private Sector

MID-TIER MINING CONTRACTORS

- ✓ **Project Consultancy:** Initial digitization & hardware setup fees.
- ✓ **Recurring Licensing:** SaaS fees for Platform & AI Analytics access.



### B2G: Government

PSUS (COAL INDIA, OMC)

- ✓ **Large Scale Tenders:** Multi-year contracts for mine modernization.
- ✓ **Enterprise Volume:** High-volume data processing & compliance reporting.

## Go-to-Market Strategy

### 1 Pilot Projects

Validate ROI & Tech

➡ 2-3 Paid Pilots

### 2 Partnerships

Expand Reach & Capabilities

➡ Drone & HW Vendors

### 3 Scale

Market Dominance

➡ B2G Contracts



# The Right Team to Execute this Vision

## Current Traction

### Prototype Dev

"Voxel" sensor prototype in advanced development.

### Expert Validation

Active discussions with professors & ministry experts.

### Client Interest

Initial pilot conversations for Q2 deployment.



INCUBATED AT

**TEXMiN IIT DHANBAD**

## Leadership Team

All Founders from IIT Kanpur



IITK

**Harsh Raj**  
FOUNDER, MD

*Business Operations & Strategy*

⌚ Business research & expansion strategy

📢 Marketing & signal leads management

💼 Overall business operations



IITK

**Somu Prajapati**  
CO-FOUNDER, CTO

*Tech Business & Operations*

⌚ Tech solution pitching & client meetings

⚙️ Manages all Tech, AI & IoT stack

⚙️ Technical operations oversight



IITK

**Sahil Dhull**  
HEAD OF AI DIVISION

*Artificial Intelligence Lead*

⌚ Deep Learning model architecture

⌚ Computer Vision implementation

⌚ AI model optimization & deployment



# Funding & Milestones: Momentum & Scale

TRACTION SECURED

**₹2.4 Cr** Raised

DE-RISKED INVESTMENT

WORK ORDERS FROM:



**OMC**  
Orissa Mining Corp



**Coal India**  
Maharatna PSU

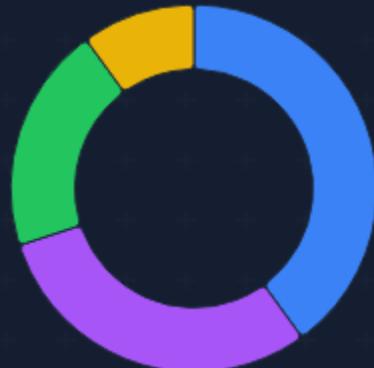
CURRENT ROUND ASK

**₹10 Cr**

₹2.4 CR COMMITTED

₹7.6 CR SEEKING

## Allocation Strategy



- R&D / Product      40%
- Pilot Expansion      30%
- Operations      20%
- BD & Mktg      10%

## Execution Roadmap

FY 2025-26



## Q1-Q2 2025

ACHIEVED

## Foundation &amp; Traction

Secured ₹2.4 Cr seed funding. Onboarded OMC & Coal India. Prototype validation completed.



## Q3 2025 (Current)

IN PROGRESS

## Deployment &amp; Validation

Deploying pilot projects at OMC sites. Rolling out Fleet Management System for Coal India.



## Q4 2025

PLANNED

## Scale &amp; Enterprise Entry

Scale to 5+ enterprise clients. Demonstrate >15% efficiency gain. First major B2G tender bid.



## Q1 2026

PLANNED

## Expansion &amp; Series A Prep

Expand into Metallic Minerals segment. Reach ₹5 Cr ARR run rate.

## Lean Canvas: Vyomchara

**⚠ PROBLEM**

⚠ Data Silos: Geology, Ops, and Reporting lack single source.

⚠ High Costs: Incumbents too expensive for mid-tier firms.

⚠ Safety Gaps: Manual surveying leads to risks.

⚠ Compliance: Slow, error-prone manual reporting.

**PAIN POINTS****💡 SOLUTION**

- ✓ Voxel Sensor: Hyperspectral imaging.
- ✓ Drone Integration: Auto data.
- ✓ SAM+CNN AI: Mineral ID.
- ✓ Unified Dashboard: Insights.

**↳ KEY METRICS**

- ↳ Mineral ID Accuracy (%)
- ↳ Op. Efficiency Gain (%)
- ↳ Deployment Time
- ↳ Annual Recurring Revenue

**EXISTING ALTERNATIVES**

Manual surveying, Excel sheets, Legacy ERPs.

**⌚ COST STRUCTURE**

⌚ R&D (HW & AI)

⌚ Field Ops

⌚ Cloud/Data

⌚ Sales/BD

**🔑 UNIQUE VALUE PROPOSITION**

*"The first unified, affordable Mining 4.0 platform optimized specifically for Indian geology and workflows."*

⌚ End-to-End Integration

🏷️ 1/5th Cost of Incumbents

☑ Zero-Touch Compliance

HIGH-LEVEL CONCEPT

"Android for the Indian Mine"

**🛡 UNFAIR ADVANTAGE**

- 🛡 INTEGRATED STACK  
Seamless sensor-to-dashboard.
- 🛡 PROPRIETARY AI  
Trained on Indian geological data.

**👥 SEGMENTS****TARGET****PRIVATE CONTRACTORS**

Mid-tier firms needing efficiency.

**PSUS / GOVERNMENT**

Coal India, OMC, NMDC.

**EPC FIRMS**

Infrastructure verticals.

**EARLY ADOPTERS**

Contractors in Odisha/Jharkhand.

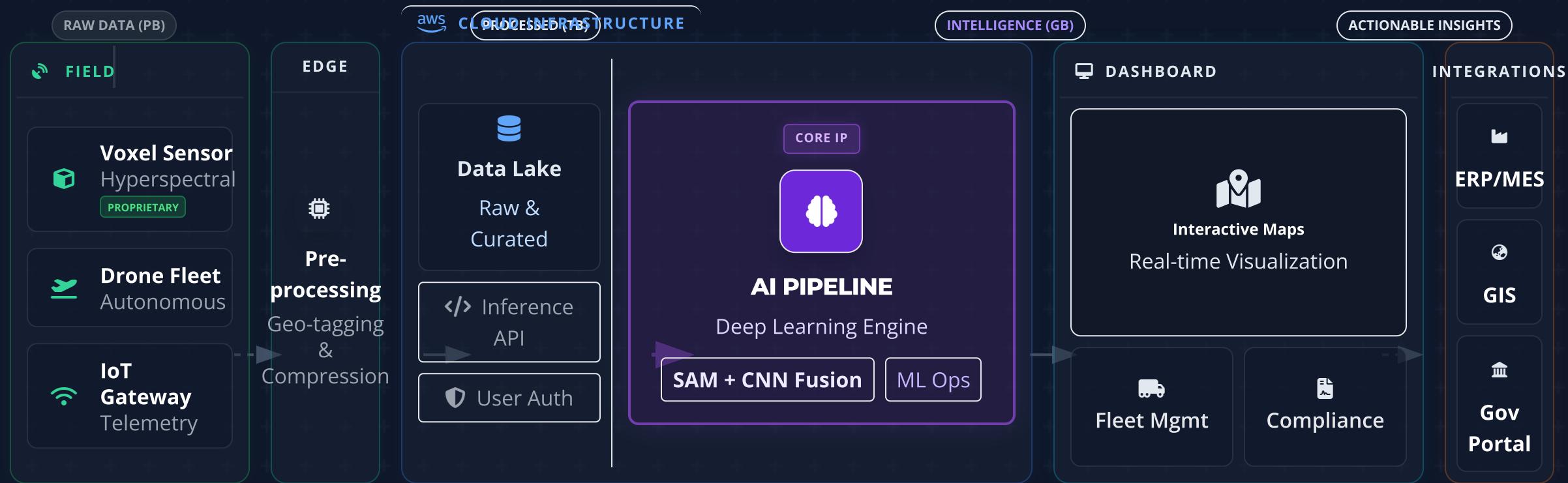
**💰 REVENUE STREAMS**

📄 CONSULTANCY  
Pilot Fees

⟳ RECURRING  
SaaS Licensing

👓 HARDWARE  
Sensor Sales

# Technical Architecture: End-to-End Logic Flow



## SECURITY & GOVERNANCE LAYER

Foundation

End-to-End Encryption • Role-Based Access Control (RBAC) • Immutable Audit Logs



## INDIAN DATA

RESIDENCY COMPLIANT



ISO 27001 Ready