PITCH DECK

THETA ORBITAL

AI FOR REAL-TIME EARTH INTELLIGENCE

2025

PRESENTED BY :

Bonga Dumane

PROBLEM

- Tailings dams and industrial waste facilities still fail catastrophically, releasing toxic slurry, killing people, and causing multi-billion-dollar losses and reputational damage.
- Current monitoring: periodic field inspections and point sensors that see only a few locations, miss subtle deformation, are expensive to maintain, and put people in harm’s way.

WHY NOW?

- Regulators, investors, and insurers are tightening expectations on tailings risk, climate-related disclosure, and biodiversity impact; reporting is moving from voluntary to mandatory in many jurisdictions.
- Mining, energy, and infrastructure players need auditable, standardized, and continuous evidence of physical and environmental risk—annual ESG PDFs and ad-hoc site surveys are no longer enough.

OUR SOLUTION

A CONTINUOUS ORBITAL RISK RADAR

- Theta Orbital turns satellites into a wide-area risk radar that continuously watches tailings and industrial assets from space.

- Uses SAR and optical imagery plus InSAR deformation analysis and environmental indicators.
- Detects millimetre-scale ground movement, abnormal water levels, erosion, vegetation stress, and land-use change across entire facilities.
- Delivers a living time series of risk, not sporadic snapshots.

MARKET OPPORTUNITY

- EO / REMOTE-SENSING ANALYTICS MARKET IN THE MULTI-BILLION-DOLLAR RANGE, WITH AN INITIAL SAM IN MINING, ENERGY INFRASTRUCTURE, AND LARGE-SCALE AGRICULTURE.
- BOTTOM-UP: NUMBER OF HIGH-VALUE SITES × TYPICAL ANNUAL MONITORING/ANALYTICS SPEND, SHOWING A PATH TO $100M+ IN REVENUE.

BUSINESS MODEL

REVENUE STREAMS

- SaaS subscriptions per monitored asset / area (tiered plans: monitoring, advanced analytics, enterprise).
- Usage-based pricing for analytics/API calls (detections, alerts, forecasts).
- Over time, additional revenue from AI-powered orbital payload services as missions come online.
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TRACTION & ROADMAP

TODAY: DEVELOPMENT EARLY-STAGE PROTOTYPES ON EXISTING EO/REMOTE-SENSING DATA; INITIAL CUSTOMER DISCOVERY AND PILOT DISCUSSIONS.

12-18 MONTHS: PRODUCTIONIZE THE PLATFORM, LAND 2-3 LIGHTHOUSE PILOTS.

24-36 MONTHS: PARTNER FOR HOSTED PAYLOAD / SATELLITE MISSION AND BEGIN ON-ORBIT INFERENCE EXPERIMENTS.

COMPETITION

Competitor type	Weakness	Theta Orbital advantage
Imagery providers	Sell raw pixels, little analytics	Deliver decisions and alerts, not just images
EO analytics platforms	Ground-only, slower, less multimodal	Designed for multimodal data + edge/orbital path
Vertical point solutions	Single-industry focus	Cross-industry stack for mining/energy/agri

TEAM

CEO & CO-FOUNDER Bonga Dumane

CIO & CO-FOUNDER Lelethu Nongodlwana

Both self-taught AI practitioners; completed Fundamentals, Applications, and Deploying of TinyML, giving hands-on experience with ML on constrained edge devices. Currently studying Space Systems Engineering via OpenCourseWare, building systems-level understanding of spacecraft, payloads, and mission design.

THE ASK

Pre-seed raise: $500k–$1M on a SAFE.

- BUILD AND HARDEN THE THETAORBITAL.SPACE PLATFORM AND CORE MODELS.
- RUN PILOTS WITH 2-3 ANCHOR CUSTOMERS IN MINING/ENERGY /AGRI.
- PREPARE TECHNICAL GROUNDWORK AND PARTNERSHIPS FOR FIRST AI-ENABLED ORBITAL PAYLOAD.

THANK YOU

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THETA ORBITAL

WEBSITE:
www.thetaorbital.space

EMAIL
dumanebonga@thetaorbital.space