OPERATIONAL CAPABILITY BRIEF

INTEGRATED GEO-INTELLIGENCE

for Internal Security | Operations • Use Cases • Capabilities

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⚠ CONTEXT • WHY GEOINT, WHY NOW

The Threat Landscape Has Outpaced Legacy Intelligence

Operation Sindoor (May 2025) was the subcontinent's first non-contact war — command-and-control screens, not boots on the ground, drove every precision strike. Hybrid threats now span land borders, maritime approaches, the cyber domain and information space — simultaneously. Internal security can no longer be run on fragmented, agency-siloed intelligence.

VECTOR 01

Cross-Border Terror & Infiltration

ISI-backed networks exploit Bangladesh and Myanmar as alternate launchpads. Tunnels, drone drops and small-team infiltration along the LoC and IB demand continuous, multi-sensor coverage.

VECTOR 02

Drone & UAS Incursions

Weapon and narcotic drops by hostile UAVs along the Punjab and J&K frontier — the Indian Army now monitors drones up to 35 km inside adversary territory with a 30,000-drone surveillance grid.

VECTOR 03

Maritime & Coastal Threats

7,500+ km of coastline, contested IOR sea lanes, dark-target shipping and the post-26/11 mandate for total coastal awareness — solved only by fused MDA across radar, AIS, satellite and HUMINT.

VECTOR 04

Urban & Critical Infrastructure

Power grids, ports, refineries, mass-transit and dense urban centres are the new soft targets. Geo-tagged CCTV, IoT sensors and 3D city models are now first-order operational data.

DEFINITION • THE FOUR PILLARS

What is Integrated Geo-Intelligence?

GEOINT = the fusion of imagery, geospatial information and all-source intelligence on a single, georeferenced common operating picture — answering *where*, *when*, *how often* and *by whom* in a form a commander can act on within minutes.

01

Multi-Sensor Capture

EO/IR satellites, SAR, UAVs, ground radars, AIS, CCTV, IoT, signal & human intelligence — every source feeds the same georeferenced lake.

02

3D Mesh & Terrain Model

High-fidelity reality mesh of border belts, ports and urban centres — the spatial substrate on which every sensor feed, every track and every plan is laid down.

03

AI-Driven Fusion & Analytics

Detection, classification, change-detection and pattern-of-life inference on the fused feed — compressing the kill chain from weeks to seconds.

04

Decision & Dissemination

A single COP for theatre commanders, MAC, IB, state police and forward HQ — encrypted via SAMBHAV-class devices, action delivered to the lowest tactical echelon.

From Sensor to Shooter – One Common Operating Picture

Decision › Model › Data › Sensor Insight

Decision & Action
Theatre HQ COP · Forward TacOps · MAC / IB / State Police · SAMBHAV-encrypted dissemination

AI / ML Insight Layer
Object detection · Change detection · Pattern-of-life · Predictive threat scoring · Geo-fencing alerts

3D Mesh & Geospatial Model
Reality mesh · DEM / DTM · Building footprints · Underground utilities · Cadastral & zoning overlays

Fused Data Lake
NSDI compliant · Multi-INT streams · Time-tagged, georeferenced · Zero-trust access control

Multi-Sensor Ingest
EO/IR & SAR satellites · UAVs · Coastal radar · AIS · CCTV / IoT · SIGINT · HUMINT · OSINT



The kill chain compressed
GeoAI & multi-sensor fusion now reduce sensor-to-shooter from weeks to seconds.

Use Case 01 · Land Borders

Border Surveillance & Counter-Infiltration

Scenario: A 200-km sector along the LoC — Himalayan terrain, low cloud, heavy snow, hostile UAV activity. The integrated GEOINT picture fuses six independent feeds onto one map for the sector commander.

Persistent 24×7 Coverage EO/IR satellites + tethered aerostats + ground radars + 30,000+ surveillance drones across China & Pakistan fronts deliver continuous track of every moving object.

3D Terrain Intelligence Line-of-sight, viewshed, threat-dome and slope analysis on a centimetre-accurate mesh — identifies likely infiltration corridors before they are used.

AI Change-Detection ~140 AI-based surveillance systems already deployed across forward formations flag new tracks, displaced earth, fresh tyre marks and suspicious clusters automatically.

Counter-UAS Geofencing Hostile drone tracks up to 35 km inside adversary territory are correlated with prior drop-points to predict the next weapon / narcotics package.



OPERATIONAL OUTCOME

35 km
UAV monitoring depth across LoC / IB

30,000+
Surveillance drones — China & Pakistan fronts

140
AI surveillance systems on the ground

Use Case 02 · Lessons from Operation Sindoor

Counter-Terror Operations – Non-Contact Warfare

> *"Operation Sindoor was the subcontinent's first non-contact war and was therefore undergirded in every aspect by intricate intelligence architectures. Data points appearing on command-and-control centre screens along the border were mapped and used to execute subsequent missile strikes."*
>
> — Observer Research Foundation, May 2026

HOW INTEGRATED GEO-INTELLIGENCE DELIVERED THE OUTCOME

01 D - 14 → D - 1

Target Pattern-of-Life

Multi-day satellite imagery and SIGINT cross-referenced against the 3D mesh of nine terror infrastructure sites. AI builds movement and occupancy signatures.

02 D - Hour

Strike Geometry on COP

Approach corridors, no-strike zones (mosques, schools, hospitals) and collateral-damage estimates rendered live on the same COP that fed the launch platform.

03 D + Minutes

Air-Defence Fusion

Real-time multi-sensor track of inbound drones and missiles under Operation Bunyanum Marsoos enabled precise interception with minimal civilian damage.

04 D + Hours

BDA & Re-Targeting

Post-strike imagery scored against the pre-strike mesh. Battle-damage assessment fed back to MAC and DIA within hours, not days.

→ **Takeaway:** Without an integrated, georeferenced intelligence architecture, a non-contact campaign of this precision is simply not executable.

Use Case 03 · Urban & Critical Infrastructure

Urban Internal Security & Critical Infrastructure

Scenario: A G-20-class summit in a Tier-1 city — VIP movement, mass gathering, simultaneous threats to power, transit and IT backbone. A city-scale 3D mesh + IoT-fused GIS-HUB becomes the integrated control room for every responder.

PRE-EVENT — PLAN

Reality-mesh of the venue — every rooftop, alley, manhole and high-vantage line-of-sight pre-modelled.

Threat-dome & viewshed analysis for sniper risk, drone corridors, blast radii.

Routing & alternates for VIP cavalcades against live traffic + protest geofences.

Critical asset overlay — power substations, water mains, telecom hubs as protected layers.

LIVE — MONITOR

Geo-tagged CCTV — 1000s of feeds georeferenced; AI tags faces, vehicles, abandoned objects.

Crowd-density heat-map from cell-tower telemetry + IoT footfall sensors.

Live blue-force tracking of QRTs, NSG, fire, ambulance on the same map.

Counter-drone sensors geo-fenced to no-fly volumes over the venue.

INCIDENT — RESPOND

Single-pane COP shared with State Police, NSG, IB, CAPF — no radio relay confusion.

Indoor 3D for hostage / fire response inside high-rise structures.

Dynamic cordoning — geofences pushed to mobile units & traffic signals in real time.

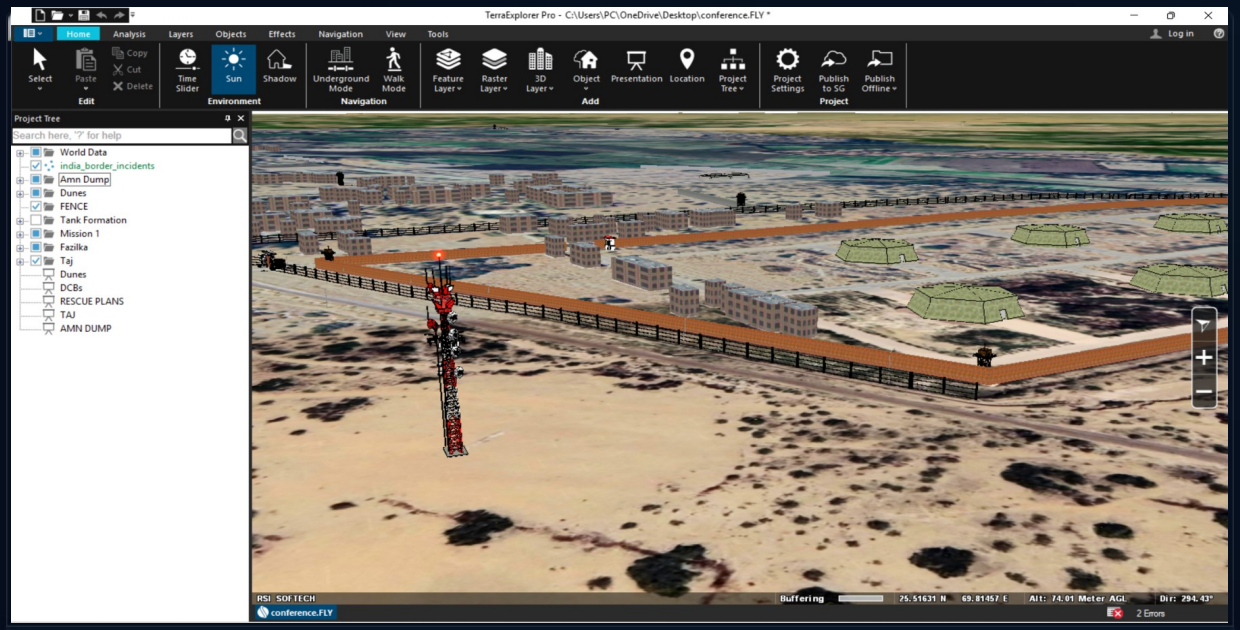
Inter-agency log — every decision & movement timestamped against the map for audit.

→ The same GIS-HUB serves the next G-20, IPL final, communal flashpoint and disaster — built once, used continually.

Platform Spotlight · The Operator's Workbench

Terra Explorer Pro – The Internal-Security GEOINT Workbench

The single 3D GIS environment that brings the integrated GEOINT stack to the desk of a Sector Commander, an MAC analyst or a State Police control room — high-fidelity terrain, fused sensor layers and tactical analytics on one screen.



3D operating picture with military symbology, tactical overlays and live unit tracks — single environment, fused inputs.

KEY PLATFORM CAPABILITIES

High-Resolution 3D Terrain
Multi-LOD elevation rendering — from Himalayan ridge lines to coastal flats with centimetre precision.

3D Urban & Infrastructure Models
Building-level fidelity for urban CT response, VIP planning and critical-asset protection.

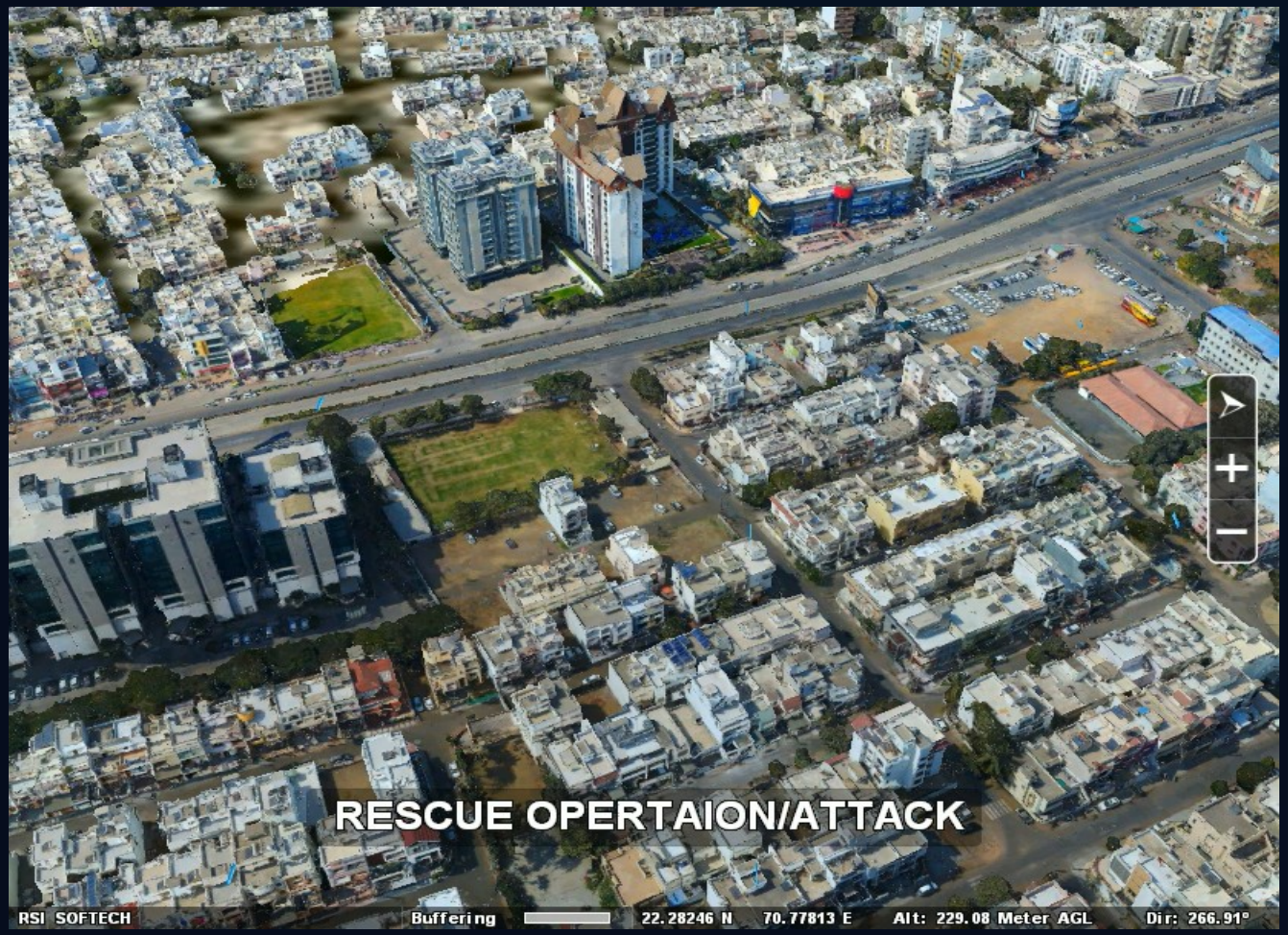
Multi-Layer Fusion
Imagery, vector, 3D mesh, sensor feeds and tactical overlays in one stack — no swivel-chair analysis.

Real-Time Environment Render
Dynamic light, weather, time-of-day — operations rehearsed under the exact conditions of H-Hour.

Open Multi-Format Interop
KML, shapefile, WMS, GeoTIFF and military formats — integrates with existing IAF, IA & IN systems.

Platform in Action · Tactical Analytics

Terra Explorer Pro in Action – From Border Posts to City Control Rooms



Line-of-Sight

Visual connectivity, obstacle ID, multi-point evaluation — observation post and sensor placement along LoC / IB.

Threat Dome

Visible volume from a hostile vantage with scan angle & elevation — sniper, ATGM and UAV threat envelopes.

Slope, Contour & Best-Path

Approach routes, vehicle accessibility, ridge-by-ridge profile — identifies the infiltrator's likely path before he uses it.

Flood & Shadow Simulation

Monsoon contingency planning, HADR routes, safe-zone identification across coastal and riverine internal-security operations.

INDIAN INTERNAL-SECURITY DEPLOYMENT MAP

→ Ladakh & Arunachal — OP placement, sensor coverage along high-altitude LAC

→ Punjab & J&K — Counter-infiltration corridor mapping & counter-UAS geofencing

→ Tier-1 city control rooms — VIP routes, mass gathering, critical-infrastructure threat domes

Sample Target Images



11 JULY 2024



11 JUNE 2025

Sample Target Images



12 DEC2024



19 OCT 2025

Sample Target Images



21 JAN 2025



29JUNE 2025

Sample Target Images



11 JULY 2024



10 JUN 2025

CLOSING REMARKS

Geography is no longer a backdrop. It is the operating system of internal security.

Integrated Geo-Intelligence converts terabytes of multi-INT into the commander's single map — faster than the threat can move. The Indo-Pacific decade will reward the force that owns this stack end-to-end.

JAI HIND

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