

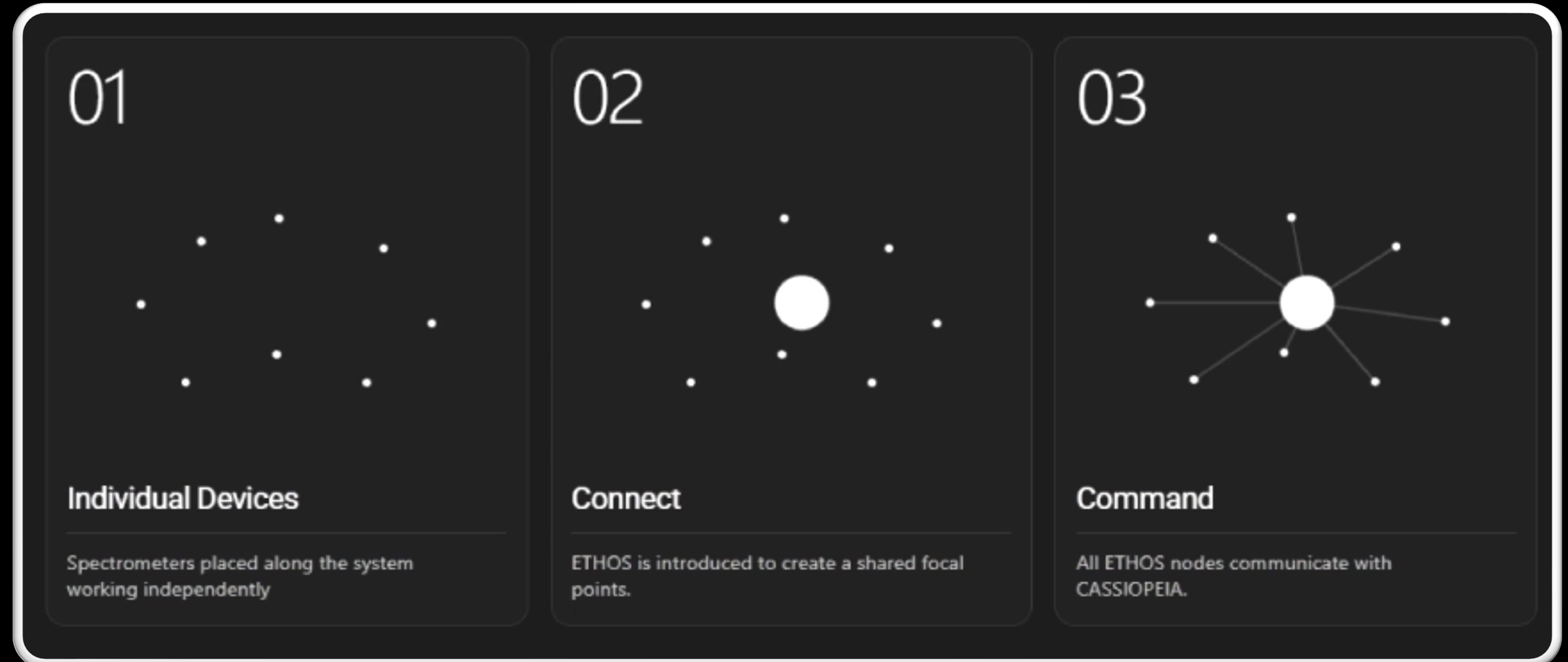


Who are we.

Unknown Labs is a Luxembourg based technology company that builds a universal platform for spectrometry, connecting devices like Raman, FTIR, XRF, and NIR into a single, unified system.

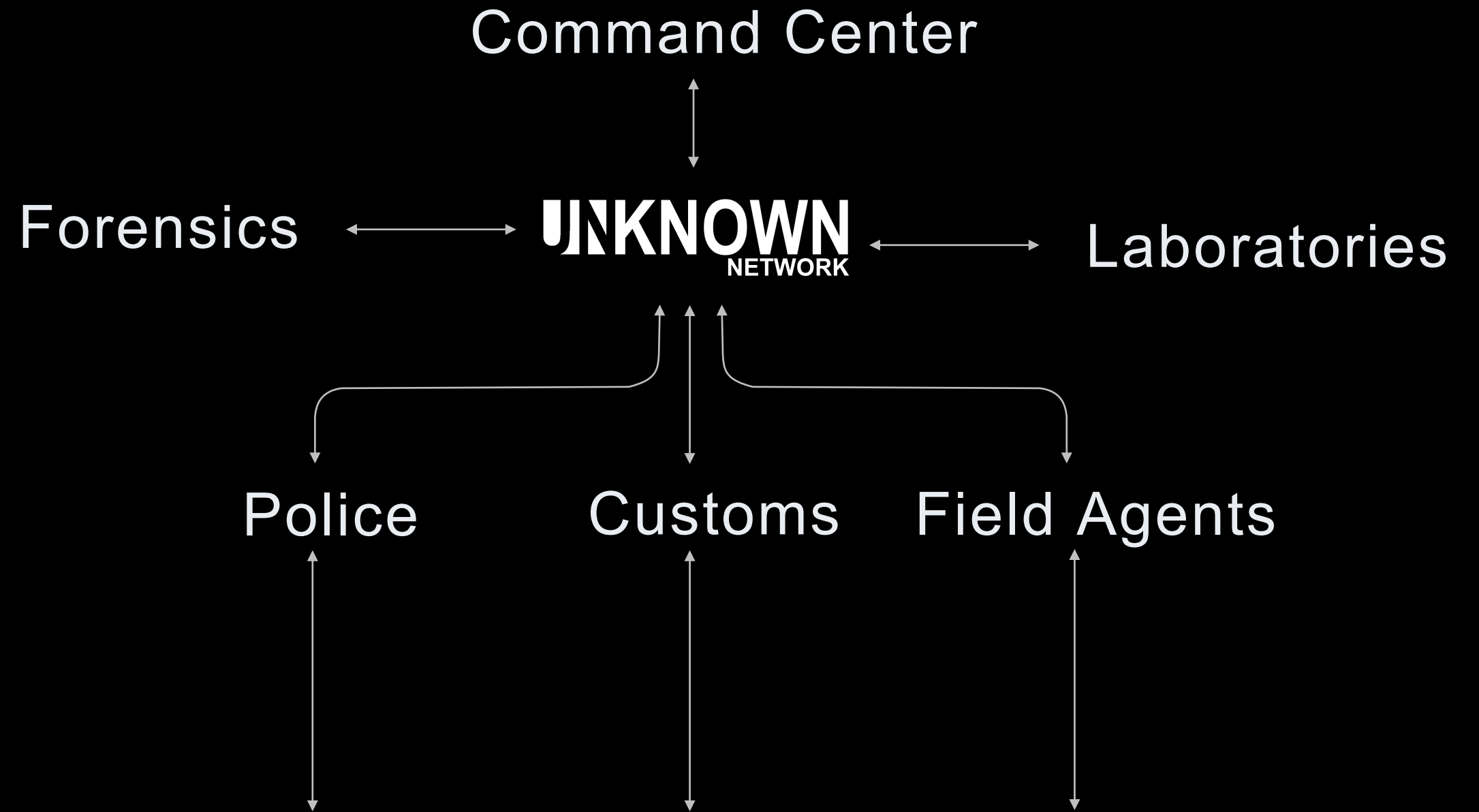
Their goal is to break down the fragmented, closed ecosystems of traditional instrument manufacturers by enabling real time data ingestion, analysis, and sharing through a secure Network infrastructure.

By combining hardware integration, software, and data intelligence, Unknown Labs allows organizations to identify threats faster, make better decisions, and operate across industries such as Narcotics and Defense.



What We Do.

Unknown Labs turns standalone material data and devices into a shared network, in which results from any device can be compared, learned from, and command centers can be informed, and take decisions in real time. from anywhere. Knowing the pulse of the network.





Scenario

ETHOS and CASSIOPEIA operate together as an intelligence layer, connecting handheld Raman, FTIR, NIR, XRF, and mass spectrometry devices from field outposts, mobile units, and inspection teams into one live command center. When a vehicle, package, powder, counterfeit product, or suspicious material is scanned at an outpost, ETHOS ingests and standardizes the spectral data instantly, while CASSIOPEIA gives insights on what's happening.

Instead of each checkpoint working alone, every detection is pushed immediately to the command center with location, device type, confidence level, and case status, allowing commanders to see patterns across multiple border points in real time. If one outpost flags a synthetic drug trace or counterfeit material, nearby units can be warned, mobile teams can be dispatched, and the entire network can shift from routine screening to coordinated interdiction within seconds.

Prevention | High security

CASSIOPEIA Central Intelligence

Command Centers | Government | Defense
Broad Overview



Scientific | Data Structuring

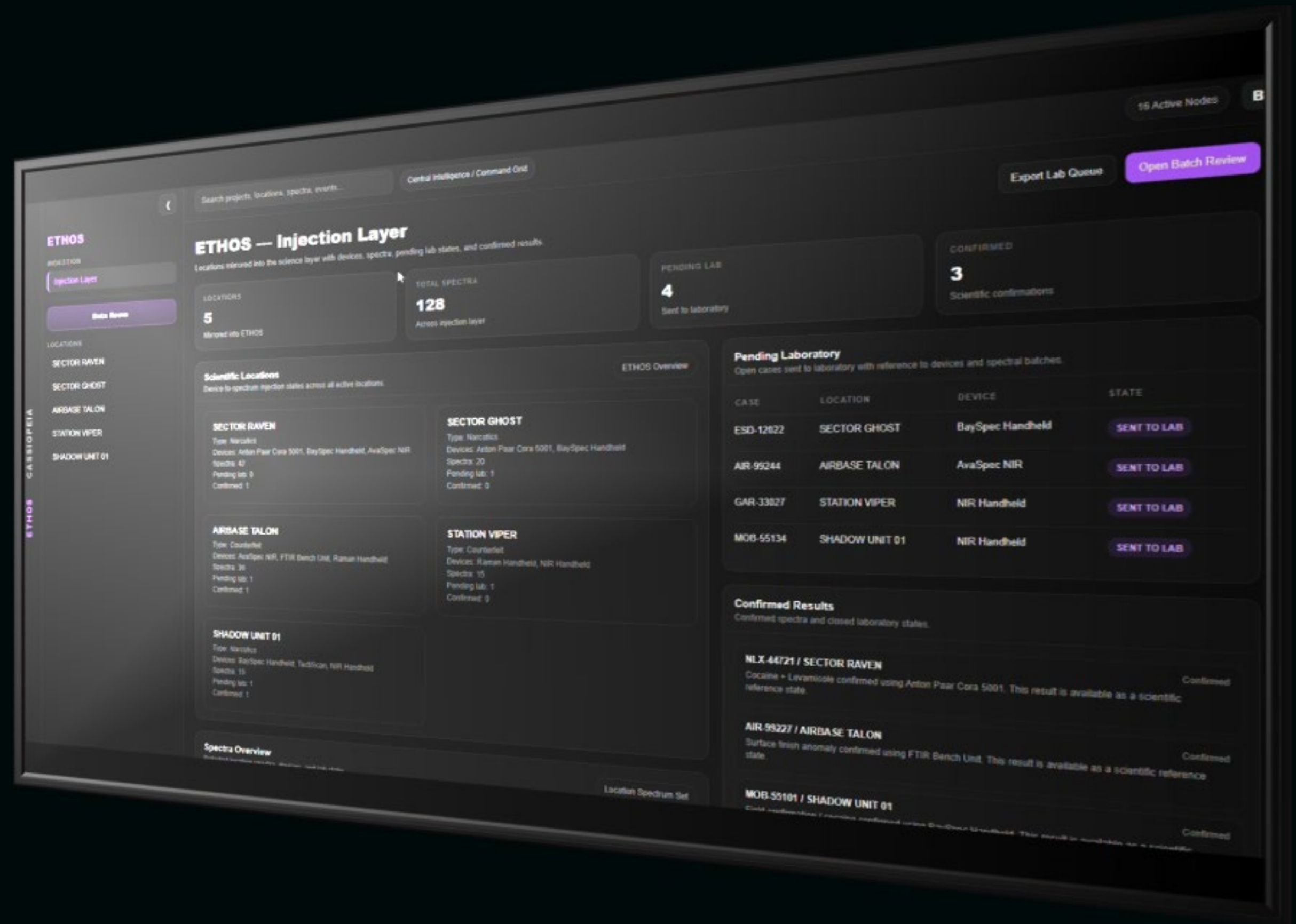
ETHOS Data Analytics

Laboratories | OEMS | Forensics
Scientific Approach

ETHOS

ETHOS is the data ingestion and intelligence backbone that powers the system. It handles the capture, normalization, and structuring of spectral data from any instrument, transforming raw files into standardized, analyzable datasets within the network.

Connect Laboratories, Organizations, and Command centers to the network to share secure files, link case numbers to streamline decisions.



←
Search projects, locations, spectra, events...
Central Intelligence / Command Grid
16 Active Nodes
B

ETHOS

INGESTION

Injection Layer

Data Room

LOCATIONS

SECTOR RAVEN

SECTOR GHOST

AIRBASE TALON

STATION VIPER

SHADOW UNIT 01

ETHOS — Injection Layer

Locations mirrored into the science layer with devices, spectra, pending lab states, and confirmed results.

LOCATIONS

5

Mirrored into ETHOS

TOTAL SPECTRA

128

Across injection layer

PENDING LAB

4

Sent to laboratory

CONFIRMED

3

Scientific confirmations

Scientific Locations

Device-to-spectrum injection states across all active locations.

SECTOR RAVEN

Type: Narcotics

Devices: Anton Paar Cora 5001, BaySpec Handheld, AvaSpec NIR

Spectra: 42

Pending lab: 0

Confirmed: 1

SECTOR GHOST

Type: Narcotics

Devices: Anton Paar Cora 5001, BaySpec Handheld

Spectra: 20

Pending lab: 1

Confirmed: 0

AIRBASE TALON

Type: Counterfeit

Devices: AvaSpec NIR, FTIR Bench Unit, Raman Handheld

Spectra: 36

Pending lab: 1

Confirmed: 1

STATION VIPER

Type: Counterfeit

Devices: Raman Handheld, NIR Handheld

Spectra: 15

Pending lab: 1

Confirmed: 0

SHADOW UNIT 01

Type: Narcotics

Devices: BaySpec Handheld, TactiScan, NIR Handheld

Spectra: 15

Pending lab: 1

Confirmed: 1

Pending Laboratory

Open cases sent to laboratory with reference to devices and spectral batches.

CASE	LOCATION	DEVICE	STATE
ESD-12022	SECTOR GHOST	BaySpec Handheld	SENT TO LAB
AIR-99244	AIRBASE TALON	AvaSpec NIR	SENT TO LAB
GAR-33027	STATION VIPER	NIR Handheld	SENT TO LAB
MOB-55134	SHADOW UNIT 01	NIR Handheld	SENT TO LAB

Confirmed Results

Confirmed spectra and closed laboratory states.

NLX-44721 / SECTOR RAVEN Confirmed

Cocaine + Levamisole confirmed using Anton Paar Cora 5001. This result is available as a scientific reference state.

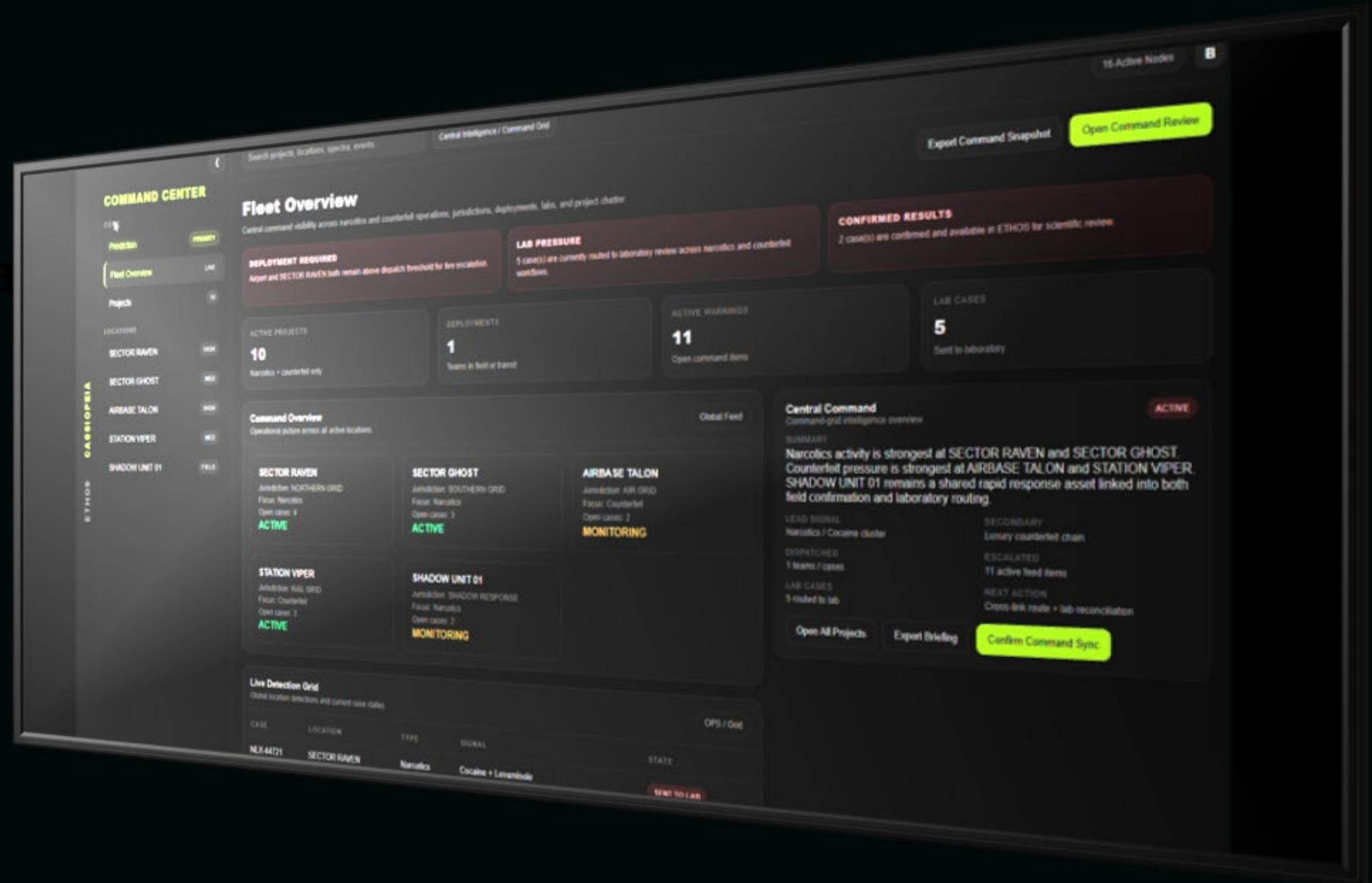
AIR-99227 / AIRBASE TALON Confirmed

Surface finish anomaly confirmed using FTIR Bench Unit. This result is available as a scientific reference state.

CASSIOPEIA

Cassiopeia

Cassiopeia is the operational command layer of the platform, designed to give real-time visibility and control over distributed spectrometry networks.



COMMAND CENTER

CORE

Prediction PRIORITY

Fleet Overview LIVE

Projects 10

LOCATIONS

SECTOR RAVEN HIGH

SECTOR GHOST MED

AIRBASE TALON HIGH

STATION VIPER MED

SHADOW UNIT 01 FIELD

Search projects, locations, spectra, events...

Central Intelligence / Command Grid

16 Active Nodes

B

Prediction Engine

Highway-aware anomaly modeling inside the demo with a smaller operational map, generic command nodes, live route logic, and scrollable intelligence panels.

MODEL STANDBY

4 CORRIDORS

Reset

Simulate

Global Threat Surface

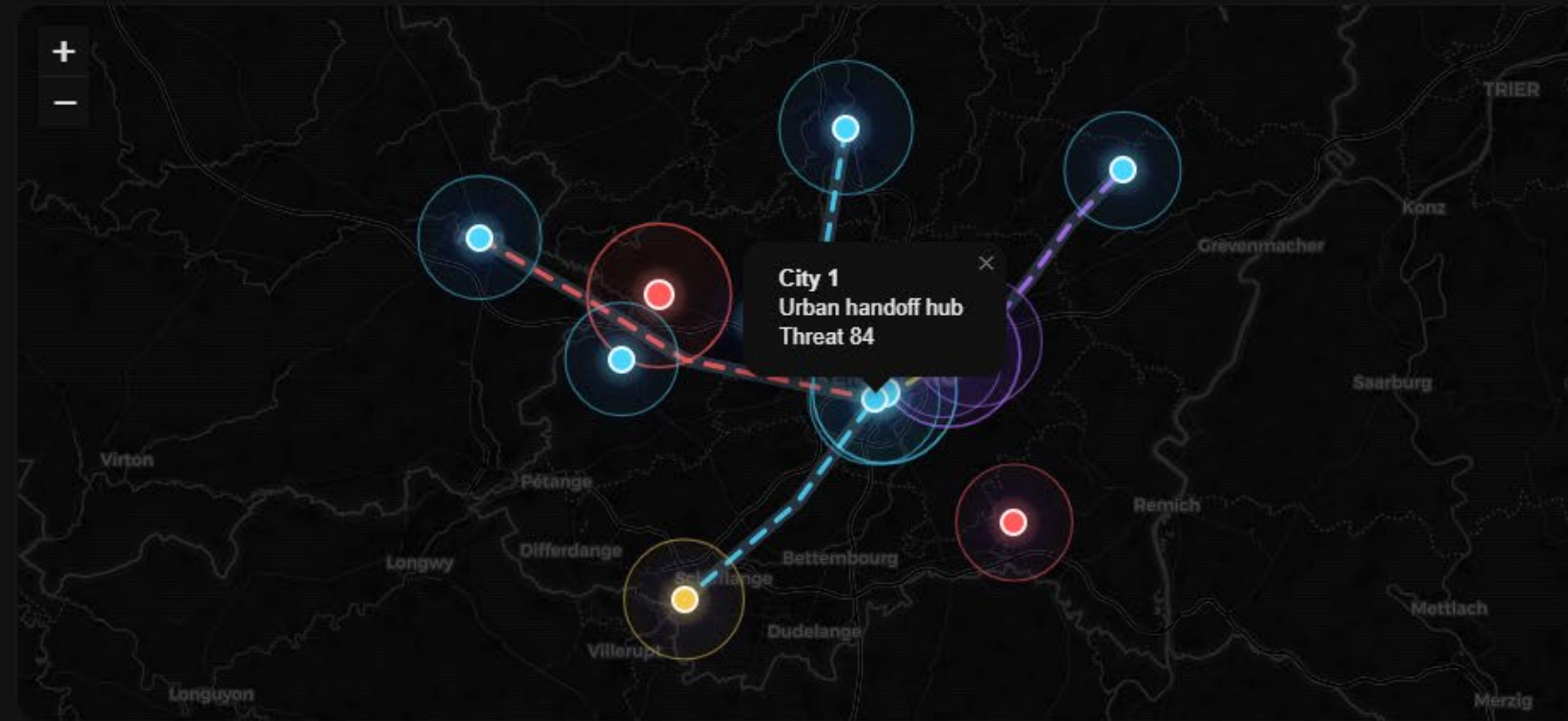
Corridor pressure, handoff logic, cluster density, and predicted intercept points on one normal dashboard map.

Expand Map

Corridors Heat Flows Nodes Prediction

Time 00

Corridor backbone Cocaine flow Heroin pressure Amphetamine spread Counterfeit overlap



Operational Intelligence

The full right-side context is preserved here as native tabs inside the demo.

COMMAND SURFACE

Command Intelligence Threat Statistics Selected Node

Corridor Logic

The model follows corridor continuity instead of random point-to-point links.

LOW ACTIVITY

Corridor A

Border 1 → City 1 → City 2 urban pressure

PRIMARY

Corridor B

Border 2 westbound feeder toward City 1

ACTIVE

Corridor C

Airport / Cargo Node / City 1 logistics overlap

MONITOR

Corridor D

Airport → East Corridor continuation / overlap risk

MONITOR

Layer State

A dashboard view of which map systems are active.

LIVE LAYERS

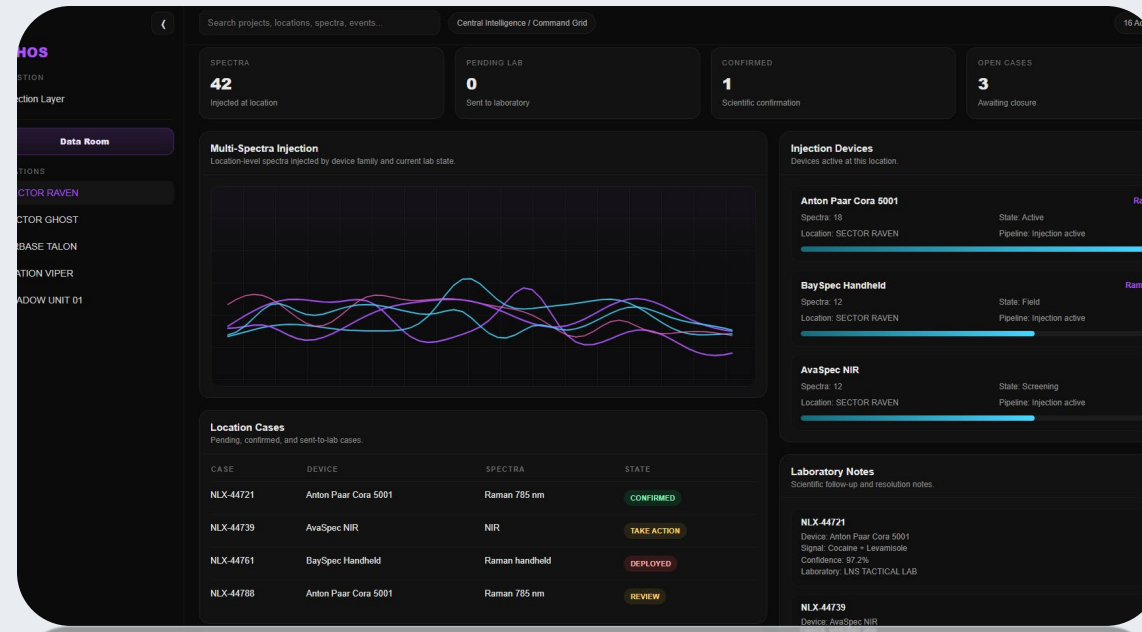
LAYER	STATE	NOTES
Corridors	ON	Infrastructure backbone visible
Heat	ON	Threat density by continuity
Flows	ON	Moving pressure along corridors
Nodes	ON	Regional node visibility
Prediction	ON	Future intercept overlays

UNKNOWN LABS



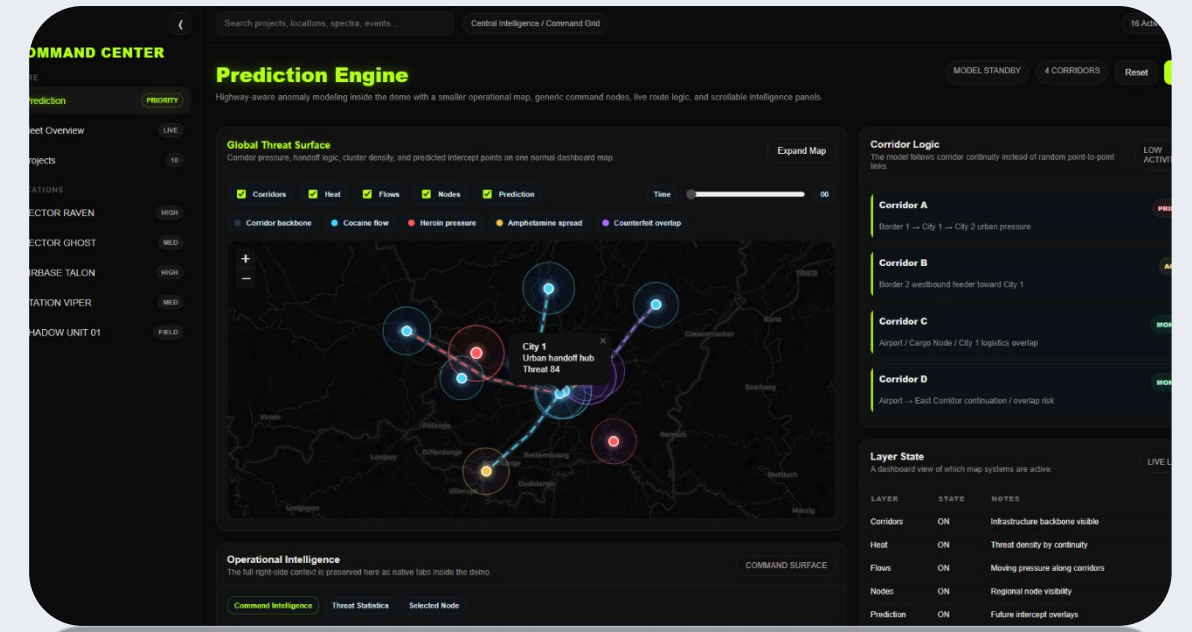
INTEGRATION | DEVICES

Field Agents | Customs



SCIENTIFIC | DATA STRUCTURING

Laboratories | OEMS | Forensics



INTEL | COMMAND CENTER

GOVERNMENT | DEFENSE

UNKNOWN LABS

UNKNOWN
LABS

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