

Vyoman Earth Intelligence

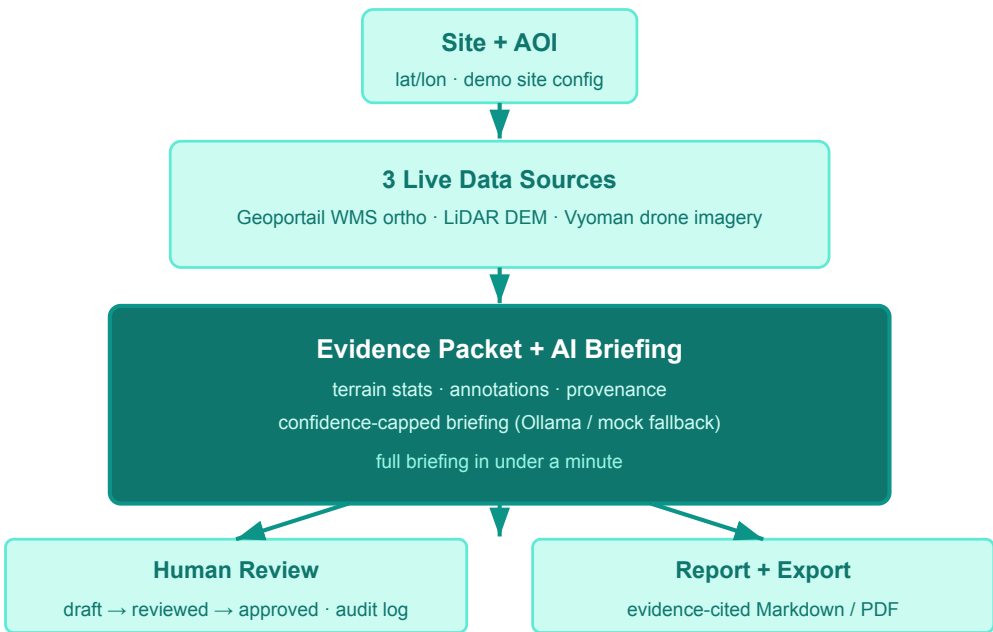
Turns Luxembourg's public geospatial data and drone imagery into an evidence-backed, human-reviewed site briefing — in minutes, not a GIS analyst's week.

Local MVP 0 prototype · extends the Vyoman Aerials drone operation

THE PROBLEM

Luxembourg's public geospatial data — 10cm orthophotos, LiDAR DEM via the Geoportail — is excellent and almost entirely unused outside government workflows. Drone operators already fly the sites, but turning imagery into a client-ready report still means a manual write-up with no structured evidence trail behind the conclusions.

ARCHITECTURE & DATA FLOW



WHAT I BUILT

- › Coordinates and datasets in. Evidence-cited AI briefing out — Executive Summary, Findings, Review Checklist, Limitations — in under a minute.
- › Live-fetches Luxembourg's public Geoportail WMS orthophotos on demand — no manual downloads, correctly georeferenced GeoTIFF output.
- › Evidence-packet architecture from three prior products — every AI claim traces to a cited dataset, never invented.
- › 2D map and 3D terrain view, human annotation workflow with draft → reviewed → approved states, and a full DuckDB audit trail.
- › Local-first: Ollama with no cloud dependency — deterministic mock-report fallback so the demo always works.

WHAT THIS DEMONSTRATES

The Amazon BI instinct applied to geospatial data: take raw public data, structure it into evidence, and deliver a decision-ready briefing. Three prior products converged independently on the same evidence-review-audit pattern — built on the Vyoman Aerials drone operation, flying in Luxembourg since April 2026.

KEY NUMBERS

3

live data
sources

7

workflow
tabs

10cm

Geoportail
source
resolution

0

cloud
API keys
required

TECH STACK

Streamlit

Python 3.13

DuckDB

GeoPandas

Rasterio

PyDeck

Ollama

ReportLab

Geoportail WMS

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Senior Analytics & AI
Leader · Luxembourg
11+ years · 9 years at
Amazon (L6)
Built end-to-end, solo

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