



ADL
AERO DETERRENCE LAB
probabilistic trajectory intelligence

INVESTOR & CAPABILITY BRIEF

Probabilistic Trajectory Intelligence

See likely missile corridors — then ground the view in actor, system, and intent. A briefing-ready intelligence surface that turns uncertainty into decision advantage.

PREDICT. ASSESS. INFORM. DETER.

Visit ADL Website [↗](#)

PROBABILISTIC TRAJECTORY INTELLIGENCE

PREDICT. ASSESS. INFORM. DETER.



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- ### SOLUTION ADVANTAGE
- ✓ QUANTIFY UNCERTAINTY
 - ✓ COMPARE COURSE OPTIONS
 - ✓ ASSESS RISK & INTENT
 - ✓ ACCELERATE DECISION SUPERIORITY



SCIENCE. ANALYTICS. DETERRENCE. DECISION ADVANTAGE.

THE PROBLEM

Faster, more varied threats. A slower decision cycle.

Adversaries field an expanding spectrum of strike systems — ballistic, cruise, hypersonic glide, and attritable loitering munitions. Each compresses warning time and widens the space of plausible trajectories, while analysts still reason from point estimates and static slides.



Shrinking decision windows

Boost-to-impact timelines leave minutes, not hours, to characterize a threat and weigh a response.



Uncertain, multi-path threats

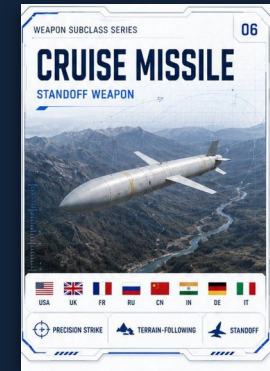
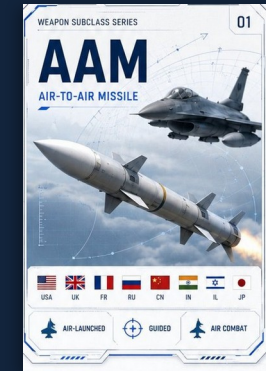
A single launch implies many candidate corridors — rarely one clean answer to brief upward.



Point estimates hide risk

Single-track tools imply false confidence and obscure how much is actually known.

THREAT SPECTRUM



14 weapon subclasses across the modern strike spectrum.

Probabilistic Trajectory Intelligence

ADL reframes a launch as a distribution of likely corridors — weighted, comparable, and explainable — and fuses it with the actor and system context analysts need to assess risk and intent fast.



01

Quantify uncertainty

Replace single tracks with probability-weighted corridors and explicit confidence.



02

Compare course options

Rank candidate routes B-F as conditions, sensors, and latency change.



03

Assess risk & intent

Tie trajectories to actor holdings and system class for faster judgment.



04

Accelerate decision superiority

Move from raw observation to a briefing-ready picture in minutes.


Built as a fast, portable static web experience — every view is briefing-ready and runs anywhere.


One experience. Six linked mission surfaces.





[View Live Product Now](#) 

01  **Trajectory Surface**
Globe.gl probability-weighted corridors

02  **Data Layer**
50 actors · 500 system holdings, exportable

03  **3-D Explorer**
Public-source surrogate families & cards

04  **Model Inventory**
CSIS-informed open-source catalog

05  **Wargame Console**
Training-only Red / Blue / Gray scenarios

06  **M&S Dashboard**
Monte Carlo coverage & physics hooks

Watch probability shift as the battlespace changes.

A live Globe.gl surface renders candidate corridors B-F and re-weights them in real time. Analysts manipulate observed conditions and immediately see how confidence moves.

SCENARIO CONTROLS

Heading 315°

Speed 4.8 km/s

Sensor 78%

Clutter 24%

Latency 42 s

Clock 1.0x

CORRIDOR CONFIDENCE

87%

lead-corridor probability for the active scenario



Lead corridor

Highest-weight route



Alternatives

Ranked B-F paths



Probability ring

Spread & uncertainty

Ground every corridor in actor & system context.

50

Actors / countries

500

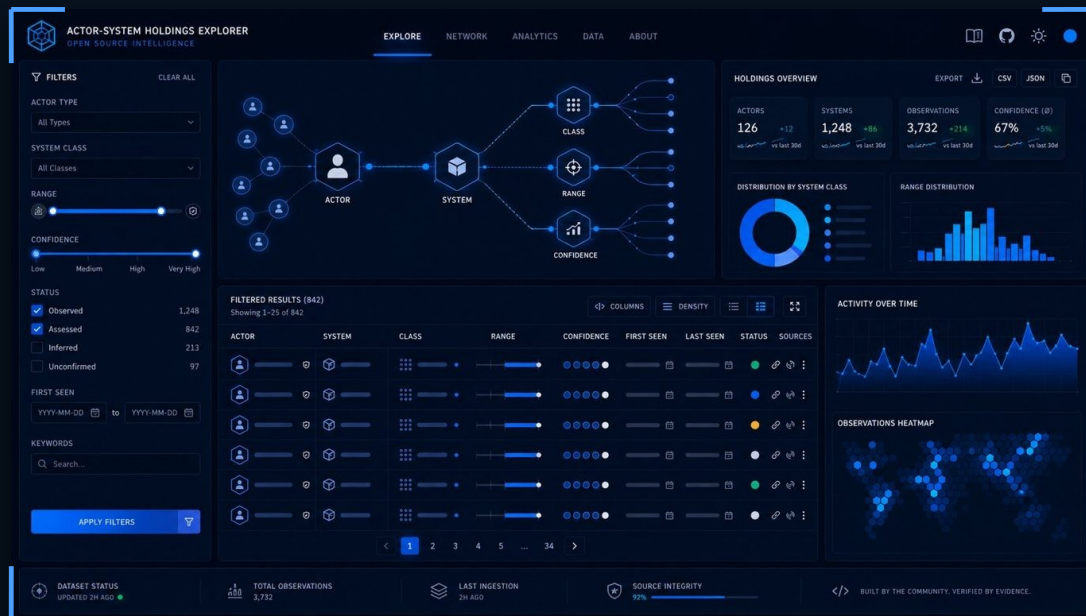
Actor-system holdings

14

Weapon subclasses

3

Export formats · CSV/JSON/XLSX



Filter & pivot

Slice holdings by actor, class, range, guidance, and platform.



Export in-browser

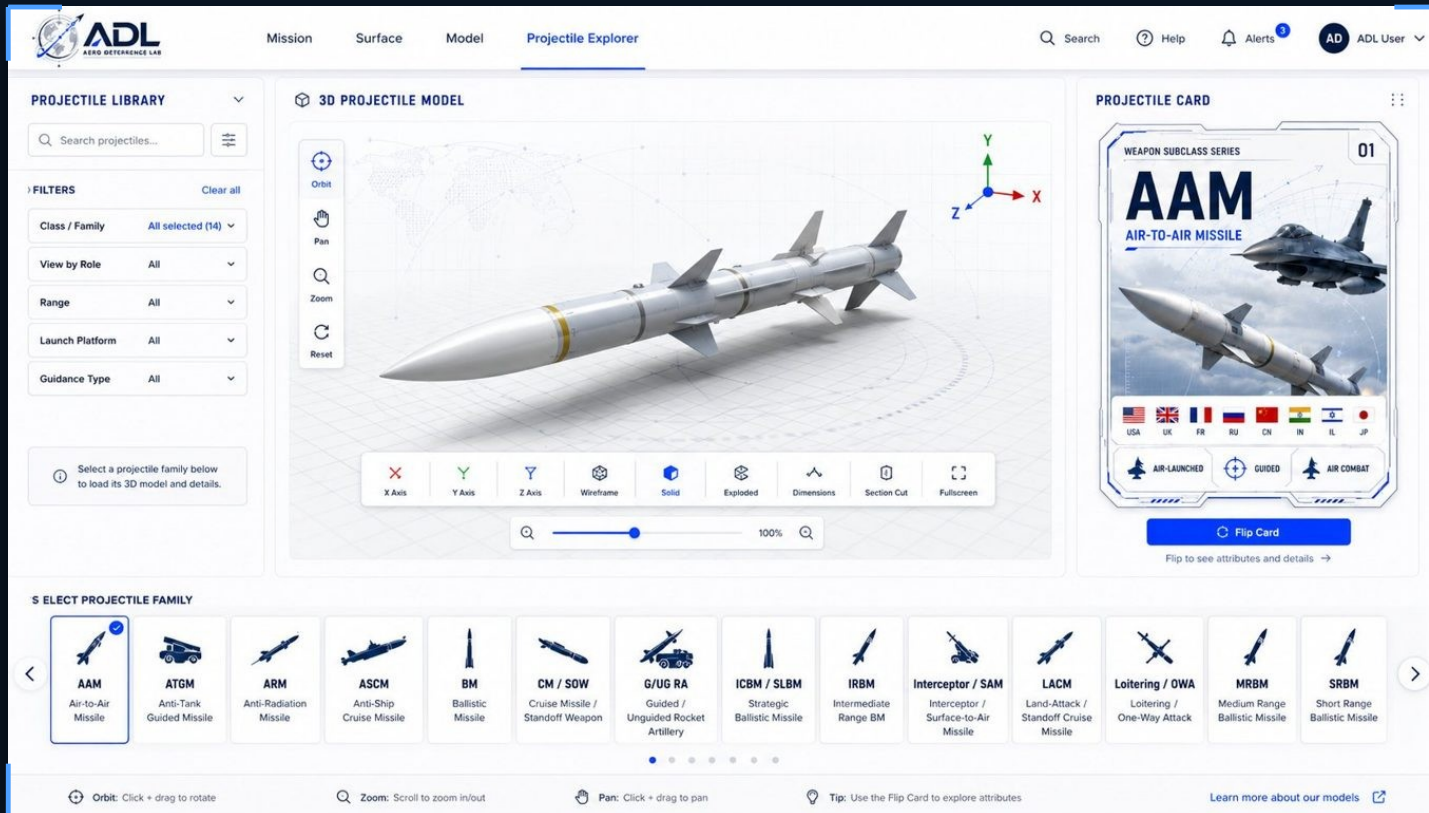
Pull selected records as CSV, JSON, or full XLSX.



Evidence-graded

Observed, assessed, inferred and confidence on every row.

Rotate the model. Flip the card. Brief the class.



SUBCLASS CARD LIBRARY



14 subclasses — each with a front profile and a flip-back attribute sheet.

Public-source visual surrogates

Inspect side, top & oblique views, compare variants, and flip the matching subclass card for role, range, guidance, platform, and typical targets.

An open, transparent catalog of model families.



Projectile family explorer

Slender, blunt, ogive, boattail and specialty families — every model documented from open sources.



CSIS-informed & open-source

Public reference data only — no proprietary or classified inputs.



Structured family taxonomy

Organized by shape class so analysts compare like with like.



Per-model attributes

Role, range, guidance, platform and flight profile on each entry.



Versioned & auditable

Documented assumptions; sources travel with the data.

Rehearse the decision before it's real.

Red-vs-Blue and Blue-vs-Gray scenarios let analysts play engagements, compare courses of action, and pressure-test timing — strictly for training and education on open-source surrogates.

FORCE PAIRING



Scenario play

Configure and run Red / Blue / Gray engagements.



Course-of-action comparison

Weigh options side by side before committing.



Decision-window estimates

See time available to detect, decide, and counter.



Outcome readouts

Counter-success and penetration risk (illustrative).



RED FORCE

Threat / adversary play



BLUE FORCE

Friendly / defender play



GRAY FORCE

Third-party / ambiguous actors



TRAINING & EDUCATION ONLY

Open-source surrogates. No operational targeting data — by design.

Bound the outcomes with Monte Carlo.

A modeling & simulation surface sweeps conditions across many runs to bound the range of likely outcomes — with transparent physics and standards hooks, for training and education only.



Monte Carlo coverage

Many runs sweep conditions to map the outcome space.



Physics & standards hooks

Transparent surrogate layer documents its assumptions.



Sensitivity sweeps

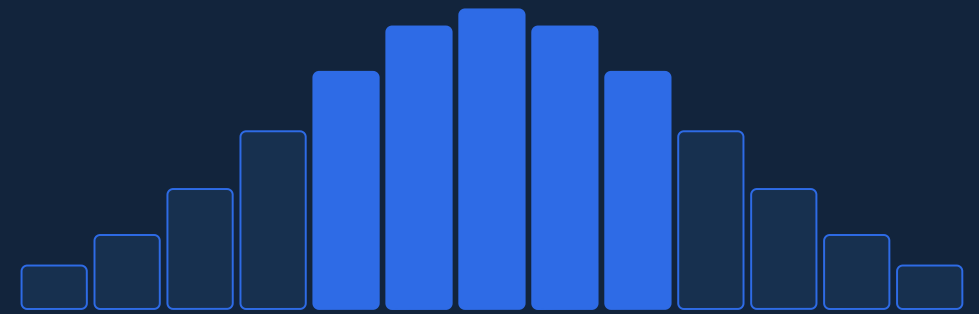
See which inputs move the result the most.



Confidence bounding

Express results as ranges, not single numbers.

OUTCOME DISTRIBUTION — ILLUSTRATIVE



likely outcome band



TRAINING & EDUCATION ONLY

Schematic only. Open-source surrogates; no operational performance data.

Decision advantage, responsibly built.



Probabilities, not point tracks

Corridors and confidence make uncertainty visible and defensible — the core of the product.



Open-source & transparent

CSIS-informed catalog and documented surrogate assumptions; auditable, not a black box.



Training-first & compliant

Scoped for education and analysis — deliberately free of operational targeting content.



Briefing-ready & portable

A fast static web build runs anywhere and exports clean — from laptop to leadership.



Multi-INT context

Designed to sit alongside SIGINT, IMINT, MASINT & OSINT workflows.



Veteran-led delivery

Built by NextGen Advisors LLC — an SDVOSB serving the defense & intelligence community.

Built for the people who have to decide.



Intelligence analysts

Characterize threats and brief leadership with quantified confidence.



Combatant commands & staffs

Compare course-of-action options under time pressure.



Program & acquisition offices

Evaluate, train on, and reason about strike-system portfolios.



Allied & coalition partners

Share a common, open, briefing-ready picture across teams.



T&E and wargaming cells

Run training scenarios against a transparent M&S baseline.

INTELLIGENCE INTEGRATION



SIGINT

Signals



IMINT

Imagery



MASINT

Measurement



OSINT

Open source

From open-source surface to deployed workbench.

NOW

Live & shipping

- Globe.gl trajectory surface
- 50-actor / 500-system data layer
- 3-D explorer + 14 subclass cards
- Wargame & M&S training surfaces

NEXT

In build

- Multi-user analyst workbench
- Expanded CSIS-informed catalog
- Saved scenarios & shareable briefs
- Richer corridor analytics

LATER

Vision

- Live sensor / data-feed API hooks
- Secure-enclave deployment options
- Allied / coalition collaboration
- Continuous open-source ingestion



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Predict. Assess. Inform. Deter.

Turn uncertainty into decision advantage.

Explore the live product

Open the interactive platform [↗](#)

Partner & pilot inquiries

Contact NextGen Advisors LLC

Probabilistic trajectory intelligence · actor-system data · 3-D explorer · model inventory · wargame · M&S