Verification and Validation at Speed and Scale

We conduct mission-aligned verification of commercial data to ensure accuracy, transparency, and operational value.

Riverside Research's Verification and Validation (V&V) team delivers rapid, scalable, and mission-aligned validation of commercial analytics products to support high-confidence decision-making across the NSG.

We specialize in evaluating vendor performance using rigorous statistical methodologies and geospatial analysis. Our cross-functional team of V&V imagery analysts and software engineers ensures analytic outputs meet mission requirements across sensor modalities and operational environments.

By combining structured workflows, human-in-the-loop review, and automated metric reporting, we enable data-driven insights that strengthen mission effectiveness and vendor accountability.
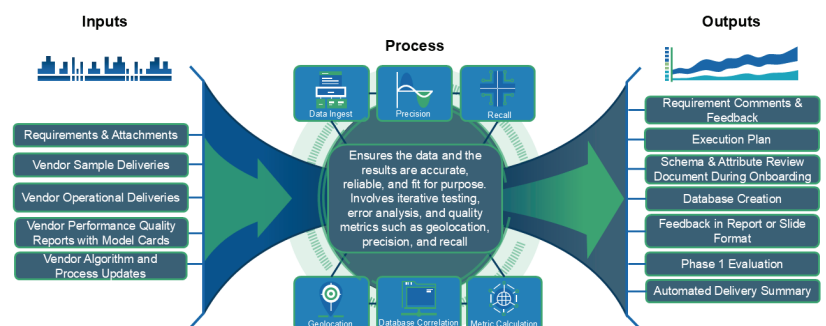
MISSION-ALIGNED V&V AT SCALE

We bring together deep expertise and scalable infrastructure to evaluate vendor products with accuracy and consistency. Our workflows are tailored to support a wide range of sensor types and mission objectives within the NSG.

FLEXIBLE, OPEN FRAMEWORK

Our cloud-based infrastructure supports modular integration of data, tools, and workflows, adapting to diverse vendor inputs and mission needs.

OBJECTIVE METRICS, TRANSPARENT REPORTING

Automated pipelines produce precision, recall, and F1 metrics across detection types. Results are visualized through dashboards that enable filtering by region, detection confidence, and mission-relevant parameters. Evaluation results are stored in a centralized system that supports traceability, comparison, and long-term performance monitoring.

Inputs
- Requirements & Attachments
- Vendor Sample Deliveries
- Vendor Operational Deliveries
- Vendor Performance Quality Reports with Model Cards
- Vendor Algorithm and Process Updates

Process
- Data Ingest
- Precision
- Recall
- Geolocation
- Database Correlation
- Metric Calculation

Ensures the data and the results are accurate, reliable, and fit for purpose. Involves iterative testing, error analysis, and quality metrics such as geolocation, precision, and recall

Outputs
- Requirement Comments & Feedback
- Execution Plan
- Schema & Attribute Review Document During Onboarding
- Database Creation
- Feedback in Report or Slide Format
- Phase 1 Evaluation
- Automated Delivery Summary

Verification and Validation
at Speed and Scale

KEY CAPABILITIES

End-to-End Verification & Validation

» Object detection performance evaluation through annotated reference data

» Geospatial analysis to assess operational relevance and geographic coverage

» Scalable workflows for rapid integration of vendor products

Cloud-Based Infrastructure

» Supports scalable storage, processing, and cross-vendor evaluations

» Centralized data environment for results, metadata, and sensor-specific parameters

Automated Reporting & Dashboards

» Interactive visualizations of vendor performance

» Metrics filterable by confidence, geography, and asset type

» Supports consistent feedback and trend tracking over time

Multi-Source Contextual Analysis

» Leverages publicly available and government-provided datasets

» Enables terrain-aware, multi-temporal, and infrastructure-based evaluations

» Adaptable inputs to support varying mission and vendor requirements