



AF-DM-9600-001

AI Development and Learning Assurance Manual

Space / Aviation / Defense

FIRST EDITION

AF 9600 SUPPORTING DOCUMENT

Document identity and use

FIRST EDITION MANUSCRIPT - Prepared for Aerospace Federation review

Field	Controlled identity
Document	AF-DM-9600-001 - AI Development and Learning Assurance Manual
Parent standard	AF 9600 - Artificial Intelligence, Autonomous Systems & Interoperability
Edition / language	FIRST EDITION / English master text
Family	Manuals
Primary source anchors	10-18, 27-29; Annexes D-E, I-J
Suggested local owner	Development and release owner
Authority	Publisher approval and effective date are not assigned. Local use requires authorized adoption and completed parameters.

Use with the main standard

This document implements the identified AF 9600 clauses and annexes. Read the complete applicable requirements in the main standard. The source anchors are navigation references; a template does not replace technical judgement, evidence, permission or eligible approval.

AF-ML-9600-001 lists the complete supporting set. AF-CM-9600-001 maps the main clauses and annexes to working documents. AF-TP-9600-001 establishes the common local parameter baseline; add the relevant discipline profiles.

Record control

Identify the object, configuration, record owner and dates. Reference attachments by stable identifier and version. Keep superseded evidence and decisions traceable. Use the approved local retention, access and authentication arrangements. No technical limit, numerical limit, interval or acceptance value is assigned by a blank template.

Implementation model: Translate the stated responsibilities and controls into the actual organization. Informative examples remain explanatory; use approved programme-specific values for operational decisions.

1 Establish the learning and evidence basis

Use AF-PR-9600-001 to define purpose, domain and authority and AF-PR-9600-004 to connect requirements to implementation and evidence. Populate AF-TP-9600-001 before dependent acceptance. Select AF-TP-9600-002 and AF-TP-9600-003 for data and fixed models, adding adaptive or agentic profiles when applicable.

1.1 Lifecycle and roles

Use AF-PR-9600-005 and AF-SC-9600-001 to plan data acceptance, training, independent evaluation, integration and release. Assign competent owners and protect required independence. An increment may continue limited development while release remains blocked; record the precise distinction.

1.2 Data intake and reference quality

Use AF-FR-9600-006 and AF-FR-9600-007 to establish provenance, permitted use, labels and uncertainty. Maintain AF-RG-9600-003. Follow corrections through affected candidates and reports rather than replacing original evidence silently.

2 Protect evaluation and control training

Use AF-PR-9600-008 to separate data roles by meaningful source groups. Examine repeated missions, transformed duplicates, preprocessing and provider pretraining uncertainty. Use AF-WI-9600-003 for the execution record. Protect final tests from candidate-selection feedback.

2.1 Training baseline

Use AF-FR-9600-009 and AF-WI-9600-004 to retain objectives, constraints, data, tools, settings, candidate history and output identity. Update AF-RG-9600-004. Assess conversions and actual runtime rather than relying on the original research model.

2.2 Supplier and tool controls

Use AF-PR-9600-022 for provider obligations, opaque internals, dependency inventory and tool validation. Record which changes the supplier can make without changing the public endpoint. Preserve reconstruction or alternative evidence sufficient for each critical claim.

3 Evaluate the actual claim

Use AF-PR-9600-010 and AF-TR-9600-001 to define population, independent unit, metrics, critical groups and uncertainty. Record complete results in AF-FR-9600-010. Use AF-CL-9600-009 to examine the statistical interpretation, including abstention and repeated comparisons.

3.1 Robustness and application effects

Use AF-PR-9600-011 to examine credible perturbations and unsupported-input behavior. Check whether rejection or abstention creates an unmanageable operational queue. Use AF-PR-9600-024 for the complete integrated function; a model test does not replace that evidence.

3.2 Adaptation and agentic branches

Use AF-PR-9600-012 for controlled candidate promotion and persistent-state reversal. Use AF-PR-9600-013 for generated content and tool actions. Treat retrieved instructions as information within their trust boundary, and verify external effects independently.

4 Release and maintain the argument

Use AF-PR-9600-029 to connect claims, limitations and counterevidence to exact artifacts and target scope. Hand over data-use restrictions, known failures, critical subgroup findings and change triggers. Deployment under AF-PR-9600-026 confirms actual state separately.

4.1 Reopening evidence

A changed data source, threshold, prompt, retrieval corpus, runtime, domain or interface can invalidate prior conclusions even with unchanged model weights. Link changes through AF-RG-9600-010 and rerun only the evidence needed by a justified impact analysis.

Required evidence: An interpretable purpose-data-model-evaluation-integration-release trail with actual limitations and eligible decisions.