



ASTRA

AEROSPACE STANDARD

FILLABLE RECORD FORM

Airport and operational-interface dossier

AF-AST-FR-022

FIRST EDITION

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Aviation / Space / Defense / Future systems

Publication identity and use

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Publication and operation	Prepared publication. Actual technical approval, consultation, institutional adoption, operational effectivity and individual scope activation require separate authentic records.

Purpose and application

Blank controlled record for Airport and operational-interface dossier. The fields implement the common and module-specific payload in source Annex M and relevant expanded requirements. Complete only when the actual triggering activity occurs.

Source requirements and added implementation detail

The controlling ASTRA source is identified above by content fingerprint. Numbered source clauses and annexes retain their own authority. The retained operating material is restructured and expanded with implementation methods, additional profile controls, worked synthetic examples, decision diagrams and record contracts. Added implementation detail is not presented as an earlier institutional approval or as a change to the supplied core standard. Any additional binding criterion requires the applicable technical adoption process.

The displayed publication date identifies the edition; it is not a fabricated authoring, test, approval or operational date. Actual records retain genuine event times and controlled versions. No named outside organisation or standard is incorporated as a normative reference. AF internal instruments and separate legal or contractual duties remain applicable within their actual scope.

Acceptance boundary

A positive grant requires every applicable mandatory condition to PASS, every N/A to have independent justification, every in-scope nonconformity to be verified closed, and competent independent authority. HOLD, unknown state, missing evidence, a favourable average, a signature image or a completed form cannot substitute for those conditions.

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1 Completion workflow and validation contract

Blank controlled record for Airport and operational-interface dossier. The fields implement the common and module-specific payload in source Annex M and relevant expanded requirements. Complete only when the actual triggering activity occurs.

Open a working copy, retain its code and existing field names, and enter record identity before technical details. Complete common identity, the original module fields, all triggered assurance extensions, independent review and receiving handover. An expression of interest, prepared application, test design or unsigned record is not a live positive outcome. Record blank, missing, invalid and disputed information explicitly rather than replacing it with favourable text.

Input group	Validation before reliance	Invalid / incomplete response
Identity and configuration	Stable IDs; actual object and performer; correct profile, method and loaded configuration.	HOLD dependent use; resolve wrong-object or wrong-version evidence.
Numbers and units	Finite real values; compatible units; ordered limits; non-negative uncertainty; unrounded source retained.	Reject malformed inputs. Blank, NaN or infinity is not zero.
States and evidence	Received/reviewed/accepted evidence states separate from PASS/FAIL/HOLD/N/A.	UNSET is not a fifth favourable state; preserve the gap.
People and time	Current competence, conflict clearance and authority at actual event time; declared time convention.	Later renewal cannot validate an earlier unauthorised action.
Approval and custody	Authentic approval instrument, exact permitted action and actual receiving acceptance.	No approval inferred from a typed name, file presence or sending a message.

The PDF stores entered text but does not enforce access rights, numerical logic, identity verification, automatic deadlines or live registry states. A competent authorised person applies the checks. Local digital systems require their own validation. Printing may omit text that exceeds a visible field: complete the continuation record and reference it from the parent field.

2 Acceptance and original record preservation

Apply the following logic to the exact evaluated object and responsible function. A procedural checkpoint, product characteristic, competence decision and public credential are different objects. Their states shall not be collapsed into one score. Source: ASTRA 62.1–62.7 and Annex AL.

State	Sufficient basis	Required next action
PASS	Applicable; current approved predicate met by valid, purpose-specific evidence.	Retain the original evidence and bounded inference. Other mandatory gates still apply.
FAIL	Applicable; valid evidence demonstrates that the approved predicate is not met.	Contain affected use; retain the failure; assess cause, extent and required corrective verification.
HOLD	Applicability, criterion, method, evidence, uncertainty or authority is unresolved.	Resolve the missing basis. Do not manufacture a value, favourable default or product-defect conclusion.
N/A	Activity trigger and retained responsibility are absent; independent exclusion approval exists.	Retain the scope-specific reason and reassess when activity or responsibility changes.
UNSET	Only an uncompleted field in this PDF; not a conformity state.	No conclusion is recorded. Complete review before the field can support a decision.

For a compound source clause, create a child-condition ledger containing every separately testable condition, location, phase and operating mode. A sentence-level checkpoint is a navigation aid, not permission to merge unrelated predicates. Each child receives an ID, responsible owner, criterion, method, source evidence, uncertainty where relevant, current

state and independent review. The parent cannot PASS while any mandatory child is FAIL, HOLD or UNSET.

An acceptable measurement interval and an acceptable authority chain are independent prerequisites. Use finite, unit-consistent, unrounded values; negative uncertainty, reversed limits, unknown version or wrong-object evidence produce HOLD. For inclusive [L,H] and accepted interval [a,b], PASS requires $a \geq L$ and $b \leq H$; FAIL requires $b < L$ or $a > H$; otherwise HOLD. Approved one-sided or exclusive boundaries retain their own declared predicate.

Positive-decision conjunction

Every applicable mandatory child is PASS AND each N/A is independently justified AND every in-scope nonconformity is verified closed AND scope, competence, independence and actual authority are valid AND required panel participation and voting rules are satisfied. No average, majority preference or payment supplies missing evidence.

3 Source and record relationship crosswalk

The references below use the supplied 248-page FIRST EDITION. Each row retains the original clause identifier and source page. The operating instructions in this document elaborate implementation; they do not replace the full source condition or its applicable annexes. A reference to a whole chapter requires selection of every triggered subclause, not only the examples printed here.

ASTRA ID / page	Source subject	Implementation use
1.3 / 10	Object and responsibility tuple	Requirement, objective evidence and local child predicates
1.5 / 11	Activity-based applicability	Requirement, objective evidence and local child predicates
10.6 / 22	Recovery, retention and closure	Requirement, objective evidence and local child predicates
11.3 / 22	Existing evidence and reuse	Requirement, objective evidence and local child predicates
12.1 / 23	Planning from scope and consequence	Requirement, objective evidence and local child predicates
12.2 / 23	Sites and stations	Requirement, objective evidence and local child predicates
12.3 / 23	Method-family witnessing	Requirement, objective evidence and local child predicates
12.4 / 24	Time and productive work	Requirement, objective evidence and local child predicates
14.1 / 25	Finding formulation and classification	Requirement, objective evidence and local child predicates
14.2 / 25	Immediate protection and notifications	Requirement, objective evidence and local child predicates
14.3 / 26	Occurrence, escape and systemic extent	Requirement, objective evidence and local child predicates
14.4 / 26	Plans, closure and effectiveness	Requirement, objective evidence and local child predicates
14.5 / 26	Existing status and new grants	Requirement, objective evidence and local child predicates

ASTRA ID / page	Source subject	Implementation use
47.6 / 71	Incident recovery and assured return	Requirement, objective evidence and local child predicates
54.4 / 79	Occurrence, escape and affected population	Requirement, objective evidence and local child predicates
56.4 / 81	Validation and prohibited cases	Requirement, objective evidence and local child predicates
56.5 / 81	Export, migration and meaningful recovery	Requirement, objective evidence and local child predicates
58.2 / 82	Coverage and productive resources	Requirement, objective evidence and local child predicates
62.1 / 88	Atomic requirement record	Explicit verification and acceptance predicate
62.3 / 88	Evidence validity before conformity	Explicit verification and acceptance predicate
62.4 / 88	Four requirement states	Explicit verification and acceptance predicate
62.5 / 89	No compensation or favourable default	Explicit verification and acceptance predicate
63.1 / 90	Domain selection without geographic omission	Explicit verification and acceptance predicate
63.3 / 90	Environment, phase and mode matrix	Explicit verification and acceptance predicate
63.6 / 91	Interface and lifecycle closure	Explicit verification and acceptance predicate
64.4 / 92	Resource budgets and coupled margins	Explicit verification and acceptance predicate
64.5 / 92	Heritage and similarity	Explicit verification and acceptance predicate
66.7 / 97	Outage, recovery and service evidence	Explicit verification and acceptance predicate
67.6 / 99	Anomaly response and safe restoration	Explicit verification and acceptance predicate
77.1 / 118	Requirement-to-method completeness	Explicit verification and acceptance predicate
77.2 / 118	Campaign design and article pedigree	Explicit verification and acceptance predicate
77.5 / 118	Original data and invalid tests	Explicit verification and acceptance predicate
77.7 / 119	Retest and corrective verification	Explicit verification and acceptance predicate
78.5 / 121	Security and trusted updates	Explicit verification and acceptance predicate
78.7 / 121	Recovery and semantic portability	Explicit verification and acceptance predicate
79.3 / 122	Loss of contact and uncertain physical state	Explicit verification and acceptance predicate
79.4 / 122	Affected populations and historical decisions	Explicit verification and acceptance predicate
80.1 / 124	One complete application schedule	Explicit verification and acceptance predicate
80.2 / 124	Domain and verification completeness	Explicit verification and acceptance predicate

4 Detailed module implementation

AF-AST-PR-004 – Scope Definition, Applicability and Evidence Reuse

Implementation basis: 1.3 (p. 10); 1.5 (p. 11); 11.3 (p. 22); 62.1 (p. 88); 62.4 (p. 88); 63.1 (p. 90); 63.3 (p. 90); 63.6 (p. 91); 64.5 (p. 92); 80.1 (p. 124); 80.2 (p. 124)

X04.1 Resolve every applicable domain

Compare the mission concept with AK01-AK32 and the actual activity with F01-F08. Record each phase, mode, duration, interface and retained responsibility.

Completion / hold: Unknown applicability is HOLD; absent equipment or budget never establishes N/A.

X04.2 Establish a defensible similarity argument

Compare object identity, design, sources, environment, software, prior exposure and observability. Assign reused evidence to specific unchanged requirements only.

Completion / hold: Every material difference has accepted new evidence or an explicitly limited conclusion.

X04.3 Maintain separate outcome tuples

A combined case may share provenance and visits but keeps separate methods, criteria, sites, instances, reviewers and independent decisions.

Completion / hold: No shared dossier creates a blanket mission, tenant, supplier or fleet approval.

X04.4 Approve exclusion and re-open triggers

An independent technical reviewer checks the absent trigger and retained duty, names the supported excluded boundary and records conditions that would re-open it.

Completion / hold: Only independently justified exclusions receive N/A; an unexamined consequential interface remains HOLD.

Record contract: the actor records the input baseline, actual work, deviations, result and evidence link; the named receiving function acknowledges access and the permitted next action. A returned or incomplete handover retains the original event history. Use the associated FR modules and RG record links; no document or database field confers actual authority.

AF-AST-PR-007 – Assessment Planning, Resources and Site Coverage

Implementation basis: 12.1 (p. 23); 12.2 (p. 23); 12.3 (p. 23); 12.4 (p. 24); 58.2 (p. 82); 63.3 (p. 90); 64.4 (p. 92); 77.1 (p. 118); 77.2 (p. 118); 80.2 (p. 124)

X07.1 Build a phase-by-mode coverage matrix

Identify every needed site, method family, operator role, configuration, normal/degraded scenario and remote limitation. Assign a required observation or justified alternative to each cell.

Completion / hold: No uncovered essential cell can be marked complete from another site's headquarters evidence.

X07.2 Allocate productive effort

Estimate necessary person-hours by actual task, shared-work contribution, specialism and concurrency. Separate travel, reporting, translation delay, review and panel effort.

Completion / hold: Shared administrative evidence can be counted once; distinct technical observations and independent work cannot be removed.

X07.3 Schedule dependencies and adverse work

Place prerequisites before dependent evaluation and reserve access to failed, changed, interrupted and difficult cases. A planned activity is distinct from actual execution.

Completion / hold: An infeasible schedule or unavailable specialist requires additional work or a bounded deferred scope.

X07.4 Close actual coverage

Reconcile planned and actual performer, duration, configuration, observation and evidence; document omissions, rework and resulting limitations.

Completion / hold: The independent reviewer accepts the actual coverage, not the original commercial duration or completion percentage.

Record contract: the actor records the input baseline, actual work, deviations, result and evidence link; the named receiving function acknowledges access and the permitted next action. A returned or incomplete handover retains the original event history. Use the associated FR modules and RG record links; no document or database field confers actual authority.

AF-AST-PR-013 – Nonconformity, Containment and Corrective Action

Implementation basis: 14.1 (p. 25); 14.2 (p. 25); 14.3 (p. 26); 14.4 (p. 26); 14.5 (p. 26); 54.4 (p. 79); 62.3 (p. 88); 62.5 (p. 89); 77.5 (p. 118); 77.7 (p. 119); 79.4 (p. 122)

X13.1 Separate evidence gap, technical failure and finding

Record whether data are valid before declaring a failed property. State the exact requirement, observed gap, affected scope and independent classification.

Completion / hold: HOLD is not proof of product failure, but a demonstrated control failure still needs an appropriate finding.

X13.2 Protect and trace the shared extent

Stop or restrict affected use under actual authority, preserve evidence and trace common source, equipment, software, method and personnel dependencies.

Completion / hold: Protection and existing notification clocks run without waiting for root-cause wording or a replacement report.

X13.3 Test occurrence and escape causes

Use competing explanations, actual history, control design, workload and interface evidence. Define effectiveness criteria and exposure before retest.

Completion / hold: Issuing training, changing an owner or recalibrating equipment alone does not close a systemic cause.

X13.4 Close with prospective evidence

Re-execute the original failure mechanism and necessary regression, reconcile prior outputs and recipients, and independently approve closure.

Completion / hold: No grant, renewal or extension with an open in-scope finding; later correction does not backdate earlier validity.

Record contract: the actor records the input baseline, actual work, deviations, result and evidence link; the named receiving function acknowledges access and the permitted next action. A returned or incomplete handover retains the original event history. Use the associated FR modules and RG record links; no document or database field confers actual authority.

AF-AST-PR-020 – Cyber Incidents, Evidence Recovery and Service Continuity

Implementation basis: 10.6 (p. 22); 47.6 (p. 71); 56.4 (p. 81); 56.5 (p. 81); 66.7 (p. 97); 67.6 (p. 99); 78.5 (p. 121); 78.7 (p. 121); 79.3 (p. 122); 79.4 (p. 122)

X20.1 Contain the actual evidence dependency

Identify affected configuration, identities, source records, products, commands and decisions. Preserve raw evidence and isolate tests from live assets.

Completion / hold: Service availability alone does not establish trustworthy operation or exclude impact.

X20.2 Select a recoverable trusted baseline

Record recovery point, accepted schema/configuration, permissions, source links and missing or later events. Preserve the source for reconciliation.

Completion / hold: A backup job success is not acceptance of recoverable semantic evidence.

X20.3 Restore and reconcile meaning

Check record identity, source access, units, event time, versions, relationships, adverse states and independent decision instruments after restoration.

Completion / hold: Equal file counts or application startup cannot close missing relationships; dependent conclusions remain HOLD.

X20.4 Authorise return and remaining restrictions

Obtain technical return authority separately from registry/status decisions, inform affected recipients and retest original failure paths plus regression.

Completion / hold: No retrospective validation of outputs issued while essential integrity was unknown.

Record contract: the actor records the input baseline, actual work, deviations, result and evidence link; the named receiving function acknowledges access and the permitted next action. A returned or incomplete handover retains the original event history. Use the associated FR modules and RG record links; no document or database field confers actual authority.

5 Workflow and relationship diagram

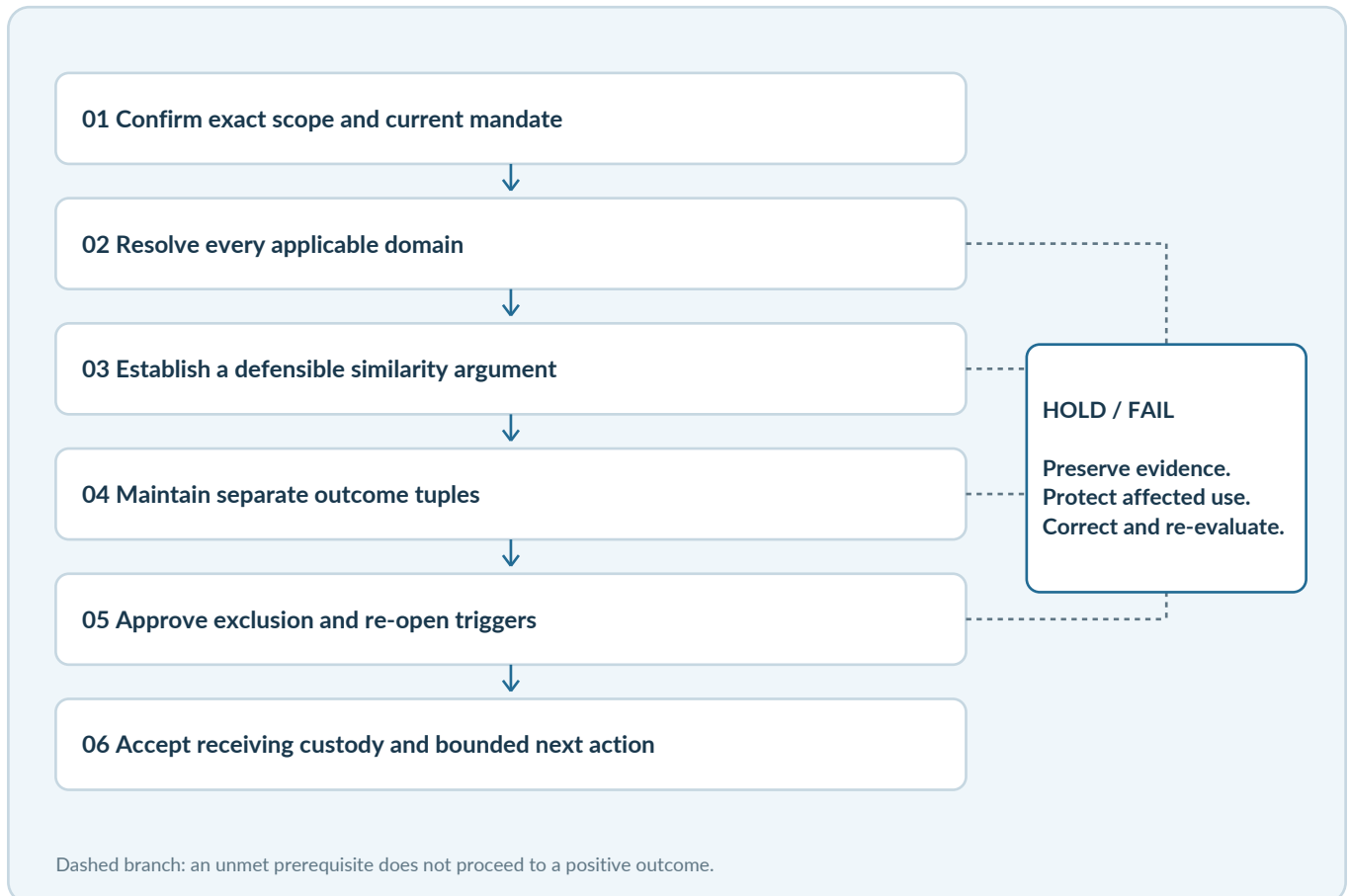
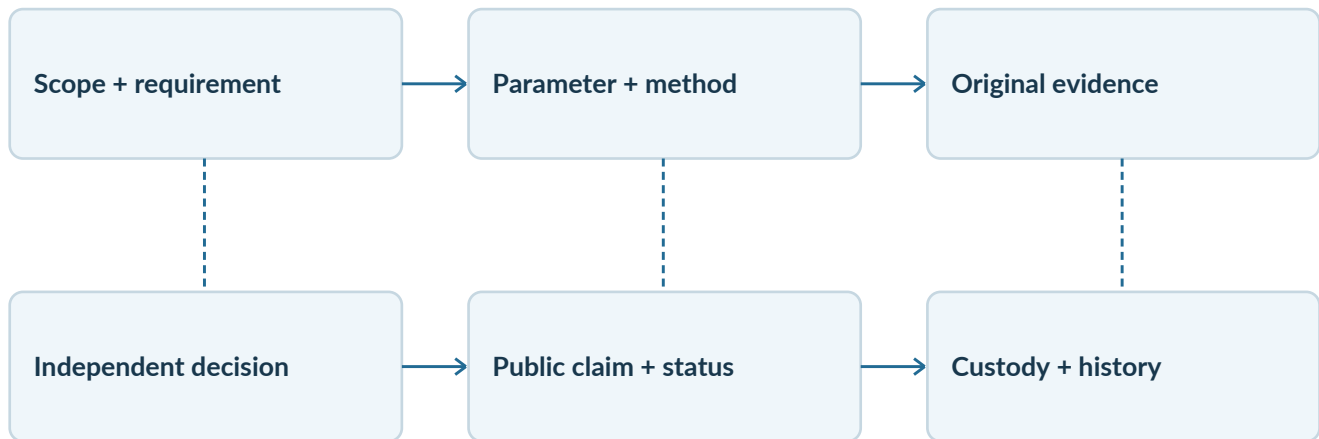


Figure — Implementation sequence for AF-AST-PR-004. Explanatory diagram; the source prerequisites and actual authority remain controlling.



Each relationship carries object identity, controlled version, actual event time and purpose-specific validity.

Figure — Scope-to-custody evidence relationships. A relationship is validated for its decision purpose, not merely because two identifiers exist.

6 Worked recording and calculation examples

The worked calculations below reproduce the supplied standard's Annex AM examples. Charted extensions are newly computed synthetic illustrations of those equations, not measured mission performance or new universal limits. A result is usable only when the actual inputs, model, units, uncertainty and approved application predicate are valid. A successful arithmetic check is not field validation.

AM.Q02 Inclusive limits and four distinct measurement outcomes

Source: ASTRA Annex AM, Q02, page 201. All numerical inputs in this example are synthetic.

PASS: $y - U \geq L$ AND $y + U \leq H$

FAIL: $y + U < L$ OR $y - U > H$

Otherwise: HOLD; invalid evidence also results in HOLD

Variables and units

L and H are inclusive specification limits; y is a corrected result; U is a non-negative expanded uncertainty with stated coverage.

Example inputs

Synthetic specification [49.970, 50.030] mm; U=0.004 mm. Results $y=50.024, 50.028, 50.036$ and 50.026 mm.

Calculation and checks

- $50.024 \pm 0.004 \rightarrow [50.020, 50.028]$ mm: PASS.
- $50.028 \pm 0.004 \rightarrow [50.024, 50.032]$ mm: HOLD, interval overlaps the upper limit.
- $50.036 \pm 0.004 \rightarrow [50.032, 50.040]$ mm: FAIL, interval entirely above the limit.
- $50.026 \pm 0.004 \rightarrow [50.022, 50.030]$ mm: PASS; equality is inside the inclusive upper bound.

Decision interpretation: Neither the overlapping interval nor an invalid run is rounded into acceptance. N/A is an applicability decision, not a measurement outcome.

Validity limits: Use actual endpoints for asymmetric intervals. For an upper-only limit, PASS requires the upper endpoint at or below the limit and FAIL the lower endpoint above it. A coverage interval is not automatically a probability that this particular item conforms.

ASTRA connections: Annex G; 62.3–62.5; 77.6

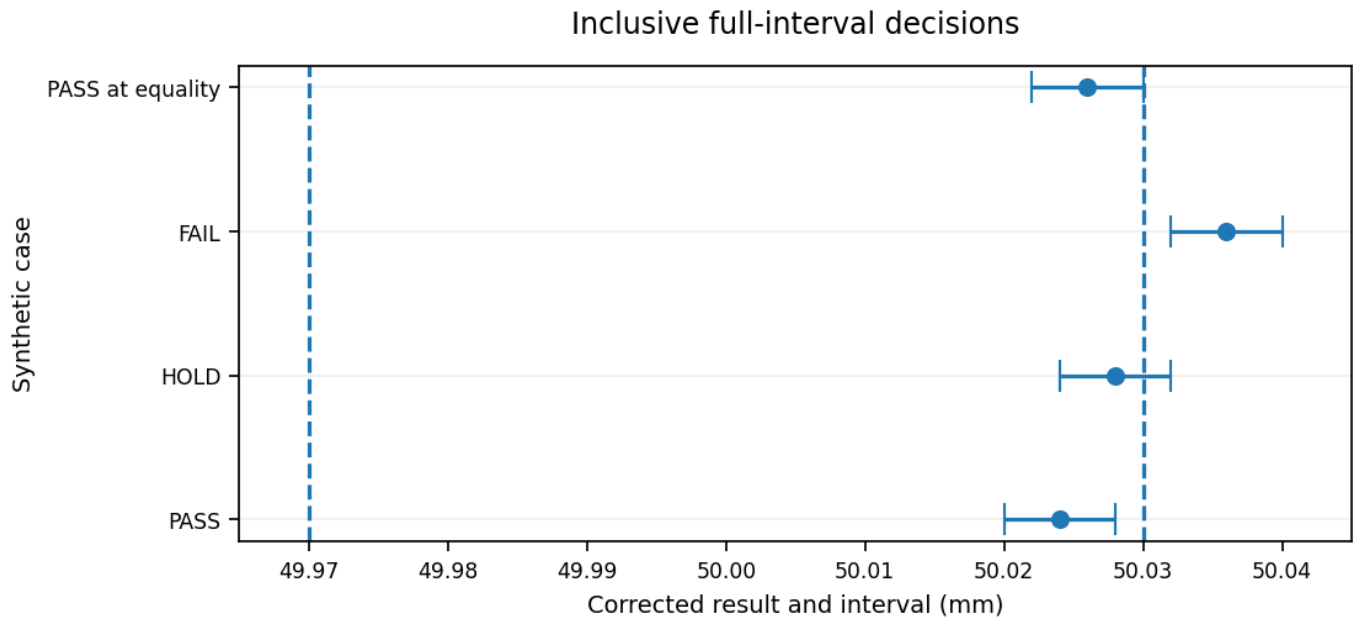


Figure Q02 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

Local replay record: retain the actual input manifest, source versions, calculation version, unit checks, independent recomputation, expected/observed boundary results, limitations and decision authority. Do not overwrite the teaching inputs as though they were operational data.

AM.Q03 Positive-decision conjunction and essential failure

Source: ASTRA Annex AM, Q03, page 202. All numerical inputs in this example are synthetic.

$G = S \wedge P \wedge E \wedge F \wedge C \wedge I \wedge A$

Requirement completion = completed applicable rows / all applicable rows

Variables and units

S=valid scope; P=all predicates passed; E=adequate valid evidence; F=all in-scope findings closed; C=competence; I=independence; A=actual authority.

Example inputs

A synthetic file has 200 applicable rows; 190 are complete. One remaining row concerns an essential protective control. Six other gate groups are true.

Calculation and checks

1. Completion = $190/200 = 0.95 = 95\%$.
2. The unverified essential row makes P false and E false for the requested conclusion.
3. $G = \text{true false false} \dots = \text{false}$.

Decision interpretation: No positive grant. The completion percentage is a planning measure only. A conditional development permission is a separate bounded action, not a conformity certificate.

Validity limits: No averaging, vote or commercial action can change a false mandatory gate. N/A requires independent approval of the absent trigger; it is not a way to remove unfinished work.

ASTRA connections: 15.2; Annex G.1; 62.5; 80

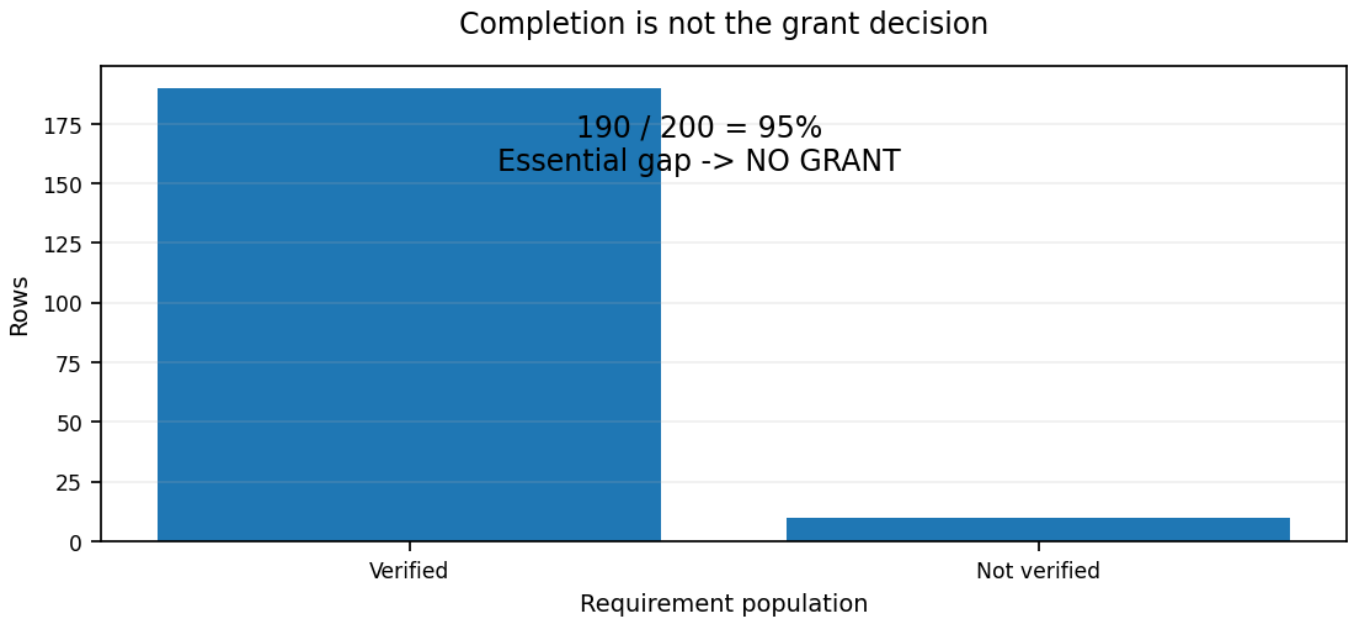


Figure Q03 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

Local replay record: retain the actual input manifest, source versions, calculation version, unit checks, independent recomputation, expected/observed boundary results, limitations and decision authority. Do not overwrite the teaching inputs as though they were operational data.

AM.Q05 Productive evaluation time without double counting

Source: ASTRA Annex AM, Q05, page 204. All numerical inputs in this example are synthetic.

$$T_{eval} = \sum h_i / 8 \text{ evaluator-days}$$

Total resource = evaluation + separate reporting/review/travel resources

Variables and units

h_i are distinct productive technical person-hours. Shared tasks are counted once unless distinct real work is documented.

Example inputs

Synthetic tasks: 12, 12, 12, 8 and 4 productive hours. Report 6 h; independent review 5 h; panel 3 person-hours.

Calculation and checks

1. Evaluation hours = $12+12+12+8+4 = 48$ h.
2. $T_{eval} = 48/8 = 6$ evaluator-days.
3. Separate report/review/panel time = $6+5+3 = 14$ person-hours.
4. Total stated technical resources = 62 person-hours before travel and other separately justified work.

Decision interpretation: Six evaluator-days describes only this synthetic activity breakdown. It is not a universal minimum or quotation.

Validity limits: Do not count a trainee as an independent productive assessor or two passive observers as two completed tasks. Calendar duration, person-hours and evaluator-days are distinct.

ASTRA connections: 12.4; Annex F.1; 58.2

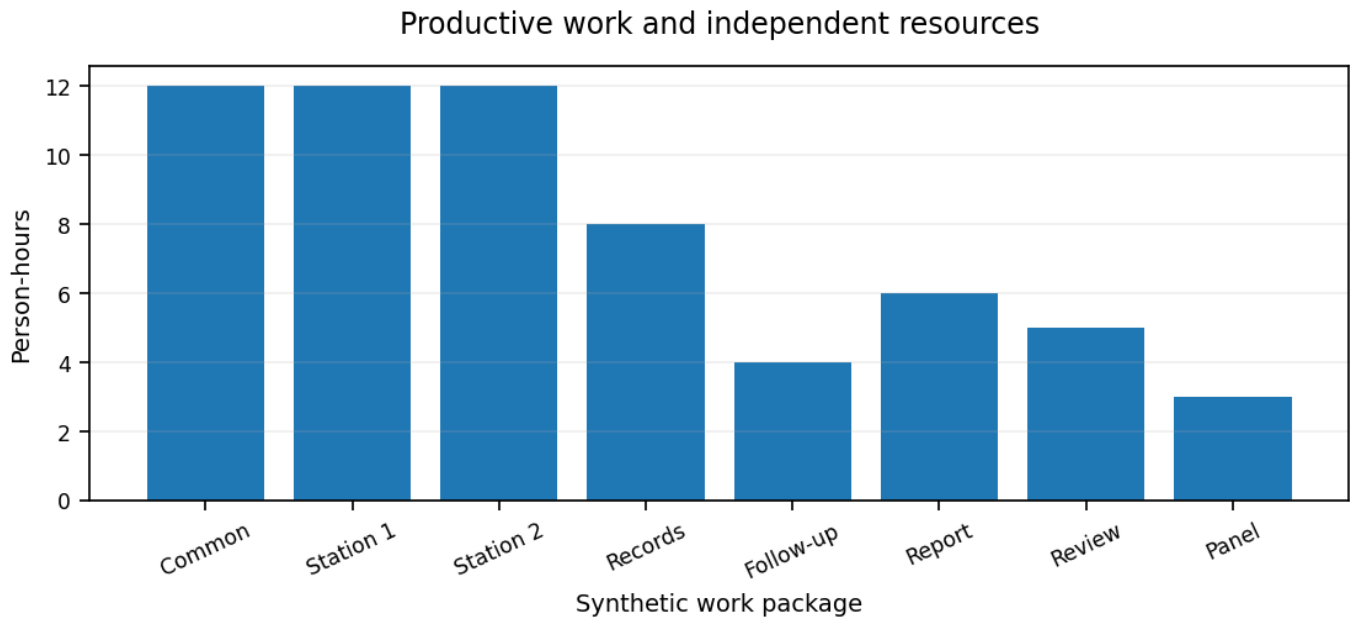


Figure Q05 — Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

Local replay record: retain the actual input manifest, source versions, calculation version, unit checks, independent recomputation, expected/observed boundary results, limitations and decision authority. Do not overwrite the teaching inputs as though they were operational data.

7 Missing, invalid and prohibited input cases

Challenge	Expected handling	Evidence retained
PR-004: Resolve every applicable domain — required basis missing	Unknown applicability is HOLD; absent equipment or budget never establishes N/A.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-004: Approve exclusion and re-open triggers — handover or review incomplete	Only independently justified exclusions receive N/A; an unexamined consequential interface remains HOLD.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-007: Build a phase-by-mode coverage matrix — required basis missing	No uncovered essential cell can be marked complete from another site's headquarters evidence.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-007: Close actual coverage — handover or review incomplete	The independent reviewer accepts the actual coverage, not the original commercial duration or completion percentage.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-013: Separate evidence gap, technical failure and finding — required basis missing	HOLD is not proof of product failure, but a demonstrated control failure still needs an appropriate finding.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-013: Close with prospective evidence — handover or review incomplete	No grant, renewal or extension with an open in-scope finding; later correction does not backdate earlier validity.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-020: Contain the actual evidence dependency — required basis missing	Service availability alone does not establish trustworthy operation or exclude impact.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-020: Authorise return and remaining restrictions — handover or review incomplete	No retrospective validation of outputs issued while essential integrity was unknown.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.

Before local reliance, also select every relevant AP01–AP48 challenge in the core. Keep fictional tests isolated from live credentials, commands and recipients. For each test define the requirement, precondition, expected response, execution steps, actual observations, evidence, defect consequence, correction, retest and acceptance. This publication supplies test designs and examples, not completed local validation records.

F1 Retained record fields

Existing field identifiers and meanings are retained for continuity with the earlier PDF forms and register payloads. The larger response areas below are blank. Enter authentic information, link original evidence and use controlled continuations when the visible area is insufficient. Do not use the edition date as an actual case, observation or decision date.

Retained fields 1 onward

Record ID

Unique persistent identifier; do not reuse a withdrawn or superseded identifier for a different record. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Template / schema version

Identify this form version and any controlled continuation or equivalent record mapping. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Case and evaluated object ID

Connect to the actual application, asset, person, programme, method or statement. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Legal entity and actual performer

Record the real organisation and person performing each task, site, technical capability, current authority, requirement flow-down, access to original evidence and retained acceptance duties. Coordination is not direct technical performance.

Family / module and outcome class

Use the retained family/module and correct accreditation, recognition, qualification, certification, verification or validation class.

Scope / technical profile ID and version

Identify the exact version; a title alone is insufficient. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Site / station / delivery mode

Record physical, remote, mobile and partner-delivery boundaries that affect this record. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Configuration / method / statement version

Record the precise as-designed, built, tested, loaded, delivered or operated state relevant to the decision. Link versioned hardware, software, parameters, material history and interfaces; list differences and retained/new evidence explicitly.

Creation date and time basis

Use the actual creation date; state time zone when a clock or sequence depends on time. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Retained fields 10 onward

Relevant event / awareness / decision dates

Keep distinct dates separate. Use a linked chronology where more than one event exists. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Accountable author and role

Identify who recorded the information and within which task authority. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Reviewer / approver and authority

Identify the responsible review or approval function; blank does not mean approved. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Evidence references and versions

Link accessible original evidence, including adverse, missing or superseded items. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Record status and purpose

Record exact affected scope, current and prior states, original decision/expiry and actual surveillance completions, changes, action owners and notices. Restoration does not validate a suspended interval or extend expiry without the required renewal.

Access / confidentiality class

Identify authorised source location, custodian, access class, rights, necessary personal/protected information, retention and retrieval method. Provide sufficient lawful independent review; unavailable essential evidence remains HOLD.

Retention basis / custody / hold

Name the controlling retention rule, custodian and any preservation hold. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Correction / supersession history

Retain the measurement function, raw and corrected values, units, uncertainty sources, sensitivity and dependence, coverage interpretation and unrounded computation. Independently check the applicable model and boundary predicate; invalid inputs or overlap remain HOLD where required.

Retained fields 18 onward

22.01 Legal operator, aerodrome and permissions

Record the exact legal name, registration identifier and jurisdiction, relevant operating address, ownership/control relationships and supporting identity evidence. Separate the operator, assessment performer, issuer and holder where they are different entities.

22.02 Actual infrastructure, operating basis and limits

Enter actual content and source/approval references. Record a justified limitation or missing information explicitly. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

22.03 Conventional/heliport/vertiport/spaceport supplement

Enter actual content and source/approval references. Record a justified limitation or missing information explicitly. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

22.04 Movement-area, terminal, utility and digital responsibilities

Enter actual content and source/approval references. Record a justified limitation or missing information explicitly. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

22.05 Safety process, change and occurrence evidence

Enter actual content and source/approval references. Record a justified limitation or missing information explicitly. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

22.06 Inspections, defects, restrictions and notices

Enter actual content and source/approval references. Record a justified limitation or missing information explicitly. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

22.07 Actual tenant, handler, fuel and maintenance interfaces

Name sending and receiving parties, exact input/output and configuration, compatible technical conditions, acceptance criteria, evidence and unresolved duties. Record genuine receiving acknowledgement. A sent file, completed invoice or shared premise is not accepted technical handover.

Retained fields 25 onward

22.08 Current compatibility data and authority holders

Name sending and receiving parties, exact input/output and configuration, compatible technical conditions, acceptance criteria, evidence and unresolved duties. Record genuine receiving acknowledgement. A sent file, completed invoice or shared premise is not accepted technical handover.

22.09 Emergency resource availability and exercises

Identify the actual scenario, supporting people, equipment, access, communication and available response time. Record safe representative demonstration and verified data/physical integrity after disruption. Restored availability alone does not authorise assured return.

22.10 Construction, temporary works and handover acceptance

Name sending and receiving parties, exact input/output and configuration, compatible technical conditions, acceptance criteria, evidence and unresolved duties. Record genuine receiving acknowledgement. A sent file, completed invoice or shared premise is not accepted technical handover.

22.11 Passenger, accessibility and disruption records

Enter actual content and source/approval references. Record a justified limitation or missing information explicitly. Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

22.12 Recovery of physical/data integrity and return authority

Identify the actual scenario, supporting people, equipment, access, communication and available response time. Record safe representative demonstration and verified data/physical integrity after disruption. Restored availability alone does not authorise assured return.

22.13 Local environment and separate F08 statement boundary

Define the actual statement boundary, period, categories, activity sources, factor identity and applicability, units, uncertainty, allocation and exclusions. Keep measured achievement, projected transition, physical supply and exclusive contractual attributes distinct; prevent duplicate allocation.

22.14 Exact capability conclusion and ongoing surveillance

Record exact affected scope, current and prior states, original decision/expiry and actual surveillance completions, changes, action owners and notices. Restoration does not validate a suspended interval or extend expiry without the required renewal.

Retained fields 32 onward

Required information completeness and remaining gaps

Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Cross-record scope / configuration / chronology checks

Record the precise as-designed, built, tested, loaded, delivered or operated state relevant to the decision. Link versioned hardware, software, parameters, material history and interfaces; list differences and retained/new evidence explicitly.

Independent review and conflict-clearance reference

Disclose relevant present and prior roles, ownership, finance, consultancy, employment and personal relationships. Apply the actual case-exclusion rules and obtain disinterested clearance or recusal; a signed declaration alone is not effective control.

Actual approval instrument / authenticated workflow event

Record unique equipment and configuration, range, resolution/bandwidth, calibration/verification source and validity at the actual time of use. Evaluate fitness for the intended method. A power-on check or calendar due date alone does not demonstrate measuring capability.

Decision or handover scope, restrictions and recipient

Name sending and receiving parties, exact input/output and configuration, compatible technical conditions, acceptance criteria, evidence and unresolved duties. Record genuine receiving acknowledgement. A sent file, completed invoice or shared premise is not accepted technical handover.

Correction description, original version and reason

Retain the measurement function, raw and corrected values, units, uncertainty sources, sensitivity and dependence, coverage interpretation and unrounded computation. Independently check the applicable model and boundary predicate; invalid inputs or overlap remain HOLD where required.

Author / reviewer / actual dates / custody

Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Retained fields 39 onward**Parent record / continuation ID and page sequence**

Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Field or requirement continued; exact object and version

Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Continued actual narrative, repeated records or source index

Identify the actual source records and responsible reviewer for each element named in this field. Keep unknowns, rejected evidence and incomplete receiving actions visible; a completed narrative is not proof of underlying work.

Original evidence / protected attachment references

Identify contemporaneous raw records, actual performer, object and configuration, conditions, timestamps, transformations and available originals. Distinguish observation, model inference, operator statement and synthetic material; preserve failed and invalid attempts.

Author, reviewer, actual date and correction history

Retain the measurement function, raw and corrected values, units, uncertainty sources, sensitivity and dependence, coverage interpretation and unrounded computation. Independently check the applicable model and boundary predicate; invalid inputs or overlap remain HOLD where required.

F2 All-domain assurance extensions

Complete each triggered extension, or link an independently approved non-applicability record. These fields are added to support Clauses 62–80 and Annexes AK–AR. A field may reference an equivalent controlled dossier; sensitive technical information need not be copied into every form.

Mission/domain applicability

Annex AK domain ID(s), activity and retained duty; record absent triggers with independent exclusion approval. Unknown applicability is HOLD.

Phase and operating-mode matrix

Identify normal, degraded, dormant, transport, test, service, emergency and terminal states relevant to the exact object. Link each required cell to evidence.

Complete atomic requirement population

Source clause and child IDs; all separately testable conditions; accountable owner; source version and exact intended conclusion.

Prospective technical parameters

Annex AO groups; actual values or defined attributes; units, bounds and inclusivity; conditions; derivation and genuine approval before evaluation.

Evidence validity and purpose

Original source IDs, configuration, method, performer authority at event time, accessible originals, uncertainty and limits. Received does not mean accepted.

Accepted predicate and uncertainty rule

Approved numerical or attribute predicate; unrounded inputs; uncertainty/dependence; validity domain; prospective alternative-rule authorisation where used.

Current child states and unresolved conditions

PASS / FAIL / HOLD / independently approved N/A by child. Blank is unrecorded. Identify every open finding, missing parameter and unresolved limitation.

Configuration and environment difference matrix

As-designed/built/tested/delivered/operated states; source or software changes; retained and invalidated evidence; required new demonstration.

Resource and shared-dependency review

Concurrent power/energy/data/time/consumables or staff duties, common causes, reserve ownership and support availability; do not count one reserve twice.

Command, remote evidence or service completion

Actual target, actor, event and receipt times, authority, transmission/receipt/execution/completion distinction, observability and unknown physical state.

Adverse-case and boundary-test record

Relevant AP case IDs plus local challenges; preconditions, expected and observed response, raw evidence, defect, correction, retest and genuine acceptance.

Independent calculation and decision replay

Frozen inputs and versions, independent recalculation, boundary result, differences found, disposition and reviewer's actual authority.

Claim and state projection

Exact object, outcome class, family/module/domain, permitted wording, restrictions, actual dates and public/protected information boundary.

Receiving acceptance and remaining duties

Actual recipient, usable evidence access, accepted custody, incomplete tasks, terminal-state obligations, notifications and continuing owner.

Original-versus-current source distinction

Identify retained original records, transparent corrections, changed assumptions and effect on earlier outputs; do not backdate later good evidence.

Authentic approval instrument

Reference actual signed or authenticated approval and scoped authority. A typed name, PDF timestamp or blank form is not approval.

F3 Process-specific extension entries

PR-004 X1 — Resolve every applicable domain

Compare the mission concept with AK01-AK32 and the actual activity with F01-F08. Record each phase, mode, duration, interface and retained responsibility. Completion: Unknown applicability is HOLD; absent equipment or budget never establishes N/A.

PR-004 X2 — Establish a defensible similarity argument

Compare object identity, design, sources, environment, software, prior exposure and observability. Assign reused evidence to specific unchanged requirements only. Completion: Every material difference has accepted new evidence or an explicitly limited conclusion.

PR-004 X3 — Maintain separate outcome tuples

A combined case may share provenance and visits but keeps separate methods, criteria, sites, instances, reviewers and independent decisions. Completion: No shared dossier creates a blanket mission, tenant, supplier or fleet approval.

PR-004 X4 — Approve exclusion and re-open triggers

An independent technical reviewer checks the absent trigger and retained duty, names the supported excluded boundary and records conditions that would re-open it. Completion: Only independently justified exclusions receive N/A; an unexamined consequential interface remains HOLD.

PR-007 X1 — Build a phase-by-mode coverage matrix

Identify every needed site, method family, operator role, configuration, normal/degraded scenario and remote limitation. Assign a required observation or justified alternative to each cell. Completion: No uncovered essential cell can be marked complete from another site's headquarters evidence.

PR-007 X2 — Allocate productive effort

Estimate necessary person-hours by actual task, shared-work contribution, specialism and concurrency. Separate travel, reporting, translation delay, review and panel effort. Completion: Shared administrative evidence can be counted once; distinct technical observations and independent work cannot be removed.

PR-007 X3 — Schedule dependencies and adverse work

Place prerequisites before dependent evaluation and reserve access to failed, changed, interrupted and difficult cases. A planned activity is distinct from actual execution. Completion: An infeasible schedule or unavailable specialist requires additional work or a bounded deferred scope.

PR-007 X4 — Close actual coverage

Reconcile planned and actual performer, duration, configuration, observation and evidence; document omissions, rework and resulting limitations. Completion: The independent reviewer accepts the actual coverage, not the original commercial duration or completion percentage.

PR-013 X1 — Separate evidence gap, technical failure and finding

Record whether data are valid before declaring a failed property. State the exact requirement, observed gap, affected scope and independent classification. Completion: HOLD is not proof of product failure, but a demonstrated control failure still needs an appropriate finding.

PR-013 X2 — Protect and trace the shared extent

Stop or restrict affected use under actual authority, preserve evidence and trace common source, equipment, software, method and personnel dependencies. Completion: Protection and existing notification clocks run without waiting for root-cause wording or a replacement report.

PR-013 X3 — Test occurrence and escape causes

Use competing explanations, actual history, control design, workload and interface evidence. Define effectiveness criteria and exposure before retest. Completion: Issuing training, changing an owner or recalibrating equipment alone does not close a systemic cause.

PR-013 X4 — Close with prospective evidence

Re-execute the original failure mechanism and necessary regression, reconcile prior outputs and recipients, and independently approve closure. Completion: No grant, renewal or extension with an open in-scope finding; later correction does not backdate earlier validity.

PR-020 X1 — Contain the actual evidence dependency

Identify affected configuration, identities, source records, products, commands and decisions. Preserve raw evidence and isolate tests from live assets. Completion: Service availability alone does not establish trustworthy operation or exclude impact.

PR-020 X2 — Select a recoverable trusted baseline

Record recovery point, accepted schema/configuration, permissions, source links and missing or later events. Preserve the source for reconciliation. Completion: A backup job success is not acceptance of recoverable semantic evidence.

PR-020 X3 — Restore and reconcile meaning

Check record identity, source access, units, event time, versions, relationships, adverse states and independent decision instruments after restoration. Completion: Equal file counts or application startup cannot close missing relationships; dependent conclusions remain HOLD.

PR-020 X4 — Authorise return and remaining restrictions

Obtain technical return authority separately from registry/status decisions, inform affected recipients and retest original failure paths plus regression. Completion: No retrospective validation of outputs issued while essential integrity was unknown.

F4 Controlled continuation and receiving record

Continuation identity and parent link

Unique continuation ID, parent form and field names; actual author, time, version and access class.

Complete visible narrative / data dictionary

Include all text needed to interpret the result. Attach clearly identified tables or source data when a visible field is too small.

Independent response and limitations

Record reviewer, actual findings, disposition, scope limits and open conditions; maintain protected dissent.

Receiving acknowledgement

Actual recipient, accepted responsibilities, evidence access check, approval reference and time.

Appendix A — Controlling source requirements

The following text is reproduced from the supplied ASTRA FIRST EDITION. The clause identifier and page refer to that 248-page source. These excerpts and their evidence fields must be read with all triggered normative annexes. Newly authored implementation steps elsewhere in this document do not amend the core standard.

1.3 — Object and responsibility tuple

Source: AF-AST-STD-001, page 10.

Each application shall identify the responsible legal entity, actual performer, object type, family and module, sites and remote functions, configuration or programme version, lifecycle role, applicable period, criticality, profile and exclusions. Products, services, processes, people, supplier scopes, educational programmes, assessment providers and environmental statements are separate objects. A combined dossier may share evidence but shall provide a separate conclusion and status history for each claimed object. Where a duty is outsourced, the record shall identify both the performer and the organisation retaining accountability.

Required evidence: Complete scope tuple; separate requested outcomes; actual-performer map.

1.5 — Activity-based applicability

Source: AF-AST-STD-001, page 11.

The applicant shall make a reasoned applicability decision for every common and family requirement. Non-applicability requires the actual activity and retained responsibility to be absent, without undermining a claimed outcome. Small size, another certificate, customer nomination or outsourcing alone does not justify exclusion. A provider that changes from distribution to repair, or from laboratory testing to product certification, shall reassess its scope before making the broader claim. Technical reviewers shall approve material exclusions and record the supporting evidence.

Required evidence: Approved applicability matrix; technical rationale; review triggers and version history.

10.6 — Recovery, retention and closure

Source: AF-AST-STD-001, page 22.

Maintain protected backups and test restoration of data, identity, configuration links and current status. Meeting recovery-time objectives does not establish restored evidence integrity. Retain assessment and decision evidence for at least seven years after the last relevant decision, or longer when justified by applicable obligations, service life or a hold; reconcile any legally required alternative handling without concealing the decision basis. Separate unnecessary personal copies and dispose of them under approved controls.

Required evidence: Restore/integrity tests; retention basis; legal holds; secure disposal and closure transfer.

11.3 — Existing evidence and reuse

Source: AF-AST-STD-001, page 22.

Review prior reports, approvals and certificates for authenticity, issuer competence, actual method, site, period, conditions and configuration. Identify precisely which requirement and decision use they support and what remains to be evaluated. Include adverse results and restrictions. Another outcome shall not be declared equivalent solely from a similar title or scope label. Evidence reuse may reduce repeated document requests but cannot remove necessary local implementation, witnessing or independent decision.

Required evidence: Reuse matrix; authenticity/scope checks; residual gaps; controlled access to original evidence.

12.1 — Planning from scope and consequence

Source: AF-AST-STD-001, page 23.

The plan shall begin with the requested object and requirement set, not a fixed commercial duration. Identify legal entities, technical methods, actual performers, sites, shifts, programme delivery modes, configurations, prior findings, changes and critical interfaces. Select representative routine and adverse work and assign specialists for every material domain. Define what evidence can support each conclusion and where sampling cannot establish the full claim.

Required evidence: Approved scope-led plan; coverage matrix; technical assignments; sample rationale.

12.2 – Sites and stations

Source: AF-AST-STD-001, page 23.

For initial and renewal operational-capability or CAB scopes, establish direct evidence at every included operating site, station or delivery location. Common governance evidence can be shared but local capability shall be demonstrated. Use physical visits where necessary work cannot be validly observed remotely. Surveillance sampling of genuinely homogeneous low-consequence activities requires an approved profile, justified eligibility, rotation and expansion triggers; no generic headquarters sample grants all stations. AF 9100 organisational cases retain the specific site rules of that standard.

Required evidence: Site-by-activity coverage; remote/on-site rationale; rotation and ineligible-site controls.

12.3 – Method-family witnessing

Source: AF-AST-STD-001, page 23.

Group methods only when common principles, equipment, competence, ranges and failure mechanisms justify representativeness. Witness each distinct method or capability family, including material extremes and high-consequence tasks. A single demonstration shall not cover unrelated techniques merely because one employee performs them. Include the whole relevant task from preparation and identity through data interpretation and reporting. Map any unobserved part to valid supplementary evidence or exclude it from the granted scope.

Required evidence: Witnessing plan; family grouping rationale; observed limits; supplementary evidence.

12.4 – Time and productive work

Source: AF-AST-STD-001, page 24.

Use an activity-based work breakdown for non-organisational assessments, with necessary preparation, observation, data review, sites, shifts and rework. One evaluator-day is eight productive evaluation hours. Travel, breaks, sales, report preparation, translation delay and independent review/decision are separate resources. Do not count a trainee as a fully productive assessor or double-count two observers performing the same task without distinct technical work. AF 9100 organisational time remains governed by its Annex AC. Annex F provides a planning method and examples, not universal technical durations.

Required evidence: Task/time matrix; separate resources; actual productive time; approved additions.

14.1 – Finding formulation and classification

Source: AF-AST-STD-001, page 25.

A finding shall identify the exact requirement and version, objective evidence, gap, affected object/site/period and classification rationale. Use critical, major, minor and observation categories as defined in Annex G. An observation is not a substitute for a demonstrated failure. Several local failures may together establish systemic breakdown. Determine technical containment separately from administrative grade so that an immediate hazard is not delayed by debate over wording.

Required evidence: Requirement–evidence–gap record; classification; extent and protective decision.

14.2 – Immediate protection and notifications

Source: AF-AST-STD-001, page 25.

Upon a credible critical concern, the responsible organisation shall protect people and affected work immediately, preserve evidence and notify required recipients. A holder shall notify its operator within 24 hours of awareness; earlier applicable duties remain. On a substantiated critical concern, the operator shall suspend the affected status or impose an effective evaluated restriction within 24 hours. An independent duty function with a pre-existing mandate may act urgently, followed by prompt independent review.

Required evidence: Awareness and action times; containment; notification/acknowledgement; status decision.

14.3 – Occurrence, escape and systemic extent

Source: AF-AST-STD-001, page 26.

The organisation shall determine why the problem occurred and why existing controls did not prevent or detect it. Identify affected and potentially affected outputs, sites, learners, reports, suppliers and configurations, including those already

delivered. Test causal explanations with evidence. Training, a revised procedure or blaming an operator alone is not sufficient where workflow, capacity, interface, equipment or management conditions contributed. Preserve rejected hypotheses and material uncertainty.

Required evidence: Population trace; tested causes; occurrence/escape controls; systemic review.

14.4 – Plans, closure and effectiveness

Source: AF-AST-STD-001, page 26.

Submit a corrective-action plan within 30 calendar days of finding notification. Verify major closure within 60 days and minor closure within 90 days, while immediate protection remains separate. Define effectiveness criteria and observation exposure before closing. Review changes for unintended effects. A new finding number, changed owner, amended report or rescheduled plan shall not restart the original clock. Missed deadlines trigger the affected status action in Annex H, not an automatic extension.

Required evidence: Accepted plan; original due dates; implementation and effectiveness evidence; verified closure.

14.5 – Existing status and new grants

Source: AF-AST-STD-001, page 26.

Initial grants, renewals and extensions require closure of every in-scope nonconformity. An existing status may continue with a local minor only after adequate protection, reviewed cause and extent, accepted plan and a reasoned independent conclusion that essential controls remain intact. A major compromising ongoing conformity requires suspension, unless an independently demonstrated unaffected scope can be restricted. A future promise of correction is not present competence.

Required evidence: Independent continuation/restriction rationale; closed findings for grant; current protection.

47.6 – Incident recovery and assured return

Source: AF-AST-STD-001, page 71.

Incident handling shall preserve evidence, contain affected use, identify impacted products and decisions, notify responsible parties and control restoration. Returning a service to availability shall be separated from verifying its data and configuration integrity. Exercises shall test recovery objectives and the meaning of restored records. Missing original evidence shall remain a gap in the dependent conclusion. An incident closure shall include the actual technical return authority and follow-up actions, not only a completed support ticket.

Required evidence: Incident and affected-output record; integrity checks; recovery exercise; authorised return and continuing actions.

54.4 – Occurrence, escape and affected population

Source: AF-AST-STD-001, page 79.

Investigation shall examine both why an event occurred and why existing controls failed to prevent or detect it. The organisation shall preserve original evidence, competing explanations and uncertainty. Population tracing shall include already delivered products, services, reports and decisions that share relevant causes. Replacing a person or issuing training shall not alone close a systemic weakness in work design, resources, interfaces or measurement. Later correction shall not be backdated to legitimise earlier unsupported work.

Required evidence: Occurrence/escape analysis; population and dependency trace; tested causes; historical impact and recipient action.

56.4 – Validation and prohibited cases

Source: AF-AST-STD-001, page 81.

Local validation shall cover normal, boundary, missing, invalid and prohibited inputs in the actual deployment. Tests shall include open findings, expired authority, wrong profiles, broken evidence links, suspended status, duplicate imports and interrupted changes. Expected outcomes shall be defined from the controlling requirements before execution. Synthetic fixtures shall be isolated from live claims. Correction shall be followed by repetition of the original failed test and relevant regression, not merely an assurance that the code was changed.

Required evidence: Local validation baseline; expected/observed cases; defect and retest history; actual acceptance and limitations.

56.5 – Export, migration and meaningful recovery

Source: AF-AST-STD-001, page 81.

Transfer shall preserve readable evidence, identities, versions, field semantics, units, time zones, approvals, relationships and current and historical status. Reconciliation shall examine meaning as well as counts; equal file totals may conceal substitutions or missing links. Recovery shall distinguish availability from integrity and reconcile events after the selected recovery point. A sent archive is not accepted custody. The receiving function shall demonstrate usable access and acknowledge continuing duties before dependent cutover.

Required evidence: Export manifest; semantic reconciliation; preserved source; recovery integrity; receiving acceptance and custody.

58.2 – Coverage and productive resources

Source: AF-AST-STD-001, page 82.

The plan shall provide competent coverage of necessary sites, methods, shifts, delivery modes, configurations and adverse cases. Resources shall follow actual work, not a commercial target. The eight-hour evaluator-day and separate reporting/review resources remain governed by Clause 12.4; AF 9100 organisational rules apply only to their route. A trainee or second passive observer shall not be counted as additional productive technical coverage. Necessary omitted observations shall require more work or a restricted conclusion.

Required evidence: Work breakdown; person/task coverage; site/method witnesses; actual productive time and changes.

62.1 – Atomic requirement record

Source: AF-AST-STD-001, page 88.

Each assessed requirement shall have a stable identifier, one accountable owner, an applicability trigger, defined object and configuration, required behaviour or characteristic, observable conditions, verification method and acceptance predicate. Compound statements shall be separated into individually testable rows without deleting any condition. Terms such as adequate, suitable, promptly or representative shall be resolved through the explicit records in this clause before they support an acceptance decision.

Verification: Inspect each requirement row and its linked method, boundary and predicate.

Acceptance / hold rule: Every applicable row is evaluable without inventing an object, limit, observation or decision role. Unresolved essential terms result in HOLD.

62.3 – Evidence validity before conformity

Source: AF-AST-STD-001, page 88.

The evaluator shall first determine whether evidence belongs to the correct object, configuration, period, method and authorised performer and whether it is usable for the intended inference. Only valid relevant evidence shall enter a conformity predicate. Rejected, corrupted, missing, unobservable or wrong-version evidence shall remain identified. Evidence may be valid and show failure; an invalid test is not a valid pass or a valid proof of product failure.

Verification: Check provenance, configuration, method capability, original data and uncertainty separately from result classification.

Acceptance / hold rule: Validity is established before PASS or FAIL is assigned; otherwise use HOLD with an explicit invalidity or evidence-gap reason.

62.4 – Four requirement states

Source: AF-AST-STD-001, page 88.

A requirement state shall be PASS, FAIL, HOLD or N/A. PASS means the approved predicate is satisfied by valid evidence. FAIL means valid evidence demonstrates that the predicate is not satisfied. HOLD means applicability, method, evidence, uncertainty or authority is not sufficiently resolved. N/A means the trigger and retained responsibility are absent and independent approval of that exclusion is recorded. Missing equipment, budget, access or time shall not justify N/A.

Verification: Execute the truth table in Annex AL using actual scope and evidence.

Acceptance / hold rule: Exactly one current state is assigned with reason and traceable evidence. All earlier states are retained.

62.5 – No compensation or favourable default

Source: AF-AST-STD-001, page 89.

A positive conformity decision shall require PASS for every applicable mandatory requirement, closure of every in-scope nonconformity, valid independent competence and actual authority. N/A rows shall have approved reasons; HOLD and FAIL rows shall not contribute a favourable default. Weighted scores, averages, majority votes, programme membership or good results in another discipline shall not compensate for an unmet condition.

Verification: Reconcile the complete requirement population with the decision dossier; test missing and negative cases.

Acceptance / hold rule: The Boolean conjunction in Annex AL is true. Otherwise no positive grant, renewal or extension is permitted.

63.1 – Domain selection without geographic omission

Source: AF-AST-STD-001, page 90.

The mission owner shall assess every domain in Annex AK and record applicable, not applicable or not yet determined. The scope shall include terrestrial preparation, launch and recovery interfaces as well as the in-space activity. Earth orbit, cislunar and libration-region operations, solar and planetary missions, small bodies, ocean-world exploration and interstellar precursor concepts shall not be excluded solely because they differ from conventional satellite operations.

Verification: Compare the mission concept and responsibility map with all Annex AK domain rows.

Acceptance / hold rule: Every domain has a reasoned disposition. Any unassessed domain that can affect a required outcome remains HOLD.

63.3 – Environment, phase and mode matrix

Source: AF-AST-STD-001, page 90.

For each applicable domain, define mission phase, operating mode, intended duration, exposure, interfaces, repairability, accessible evidence and credible degraded states. Include dormant storage, transport, separation, commissioning, routine service, communication outage, servicing, retirement and loss-of-mission conditions when relevant. A qualification for one phase shall not automatically cover another phase with different loads, resources or observability.

Verification: Review the complete phase-by-mode matrix and its verification links.

Acceptance / hold rule: Every safety-, mission- or claim-relevant cell has accepted evidence or an explicit restriction; no essential unexamined cell is passed by analogy.

63.6 – Interface and lifecycle closure

Source: AF-AST-STD-001, page 91.

The scope shall include relevant upstream and downstream duties, including supplied design data, ground services, communications, receiving facilities, environmental custody and long-term records. Transfers shall identify the sender, receiver, evidence and acceptance. A contractor delivering one subsystem shall not be made responsible for unrelated mission duties, but an integrator shall not exclude duties it retains because they are performed by others.

Verification: Trace each interface to an accountable performer and retained owner.

Acceptance / hold rule: No essential responsibility, evidence handover or terminal obligation is orphaned.

64.4 – Resource budgets and coupled margins

Source: AF-AST-STD-001, page 92.

Mass, power, energy, thermal rejection, timing, data, attitude-control resources and consumables shall have explicit allocation and reserve ownership. Account for concurrent loads, common reserves, environmental degradation, ageing, unavailable recharge and terminal obligations. The same reserve shall not be credited to two simultaneous needs. Positive scalar totals shall not replace transient, local or coupled analysis.

Verification: Reconcile subsystem and system budgets by phase and condition; independently check Annex AM calculations used.

Acceptance / hold rule: Each required margin meets its prospectively approved value under all selected bounding conditions; no reserve is double allocated.

64.5 – Heritage and similarity

Source: AF-AST-STD-001, page 92.

A heritage argument shall compare actual design, materials, manufacturing source, mission exposure, software, interfaces and life history. Identify unchanged evidence, invalidated evidence and new demonstration. Successful service of a related design shall be accepted only for characteristics and mechanisms it actually supports. Lack of a recorded failure shall not

prove performance of an unmonitored critical characteristic.

Verification: Review a difference matrix and trace each retained conclusion to applicable original evidence.

Acceptance / hold rule: Every material difference has a technical disposition and sufficient evidence before the new claim is accepted.

66.7 – Outage, recovery and service evidence

Source: AF-AST-STD-001, page 97.

The operator shall reconcile lost data, delayed messages, incomplete transfers and state changes after an outage. Recovery shall restore meaning, configuration, authority and history as well as network availability. Report actual service measures with time windows, excluded outages and missing data. A service restoration shall not retrospectively validate dependent decisions made with unavailable or corrupted information.

Verification: Review outage timelines, replay/reconciliation logs and receiving acceptance.

Acceptance / hold rule: All necessary state and data integrity checks are complete before assured use resumes; remaining gaps are carried into the affected claims.

67.6 – Anomaly response and safe restoration

Source: AF-AST-STD-001, page 99.

The operations team shall classify anomalies, preserve raw evidence, control affected commands and follow authorised mission-specific protective procedures. Restoration shall establish current physical and digital state, cause disposition, remaining restrictions and separate technical return authority. A restarted computer or renewed communication link does not prove that the spacecraft or remote process is safe to resume.

Verification: Examine adverse rehearsals and actual restoration records where available.

Acceptance / hold rule: Required state, integrity and protection checks pass before resumed dependent action; unresolved essential uncertainty retains a restriction.

77.1 – Requirement-to-method completeness

Source: AF-AST-STD-001, page 118.

The verification matrix shall include every applicable requirement, object/configuration, method, test or analysis purpose, criterion, uncertainty, evidence and authorised conclusion. Inspection, analysis, demonstration and testing shall be selected for the actual failure mechanism. Annex T domains guide coverage but are not ready-made methods. A complete test list shall not replace requirement-level closure.

Verification: Reconcile the requirement population, test matrix and actual evidence using stable identifiers.

Acceptance / hold rule: Every applicable requirement has a valid completed evidence path; any essential uncovered row remains HOLD.

77.2 – Campaign design and article pedigree

Source: AF-AST-STD-001, page 118.

Define qualification articles, flight or service articles, specimens, representative differences, prior exposure, fixtures, operating modes and cumulative test sequence. Identify which conclusions may be transferred between articles and why. Failed tests, repairs and substitutions shall remain in the same historical chain.

Verification: Review specimen-to-product and test-to-configuration equivalence records.

Acceptance / hold rule: All material differences and accumulated effects are evaluated before evidence reuse; unrepresentative essential evidence is not accepted.

77.5 – Original data and invalid tests

Source: AF-AST-STD-001, page 118.

Retain actual setup, input and response histories, environmental conditions, interruptions, alarms, raw files, corrections, uncertainty and validity classification. An invalid run shall state what evidence remains usable and which requirement is not demonstrated. A repaired or changed article shall not silently replace the originally failed configuration.

Verification: Reconstruct a selected run from raw data and contemporaneous records.

Acceptance / hold rule: The run is independently interpretable and no failed, invalid or missing evidence is concealed.

77.7 – Retest and corrective verification

Source: AF-AST-STD-001, page 119.

Retest shall follow an approved rationale, defined scope and representative configuration. It shall preserve the original failure and address causal, exposure and selection effects. Repeated trials until a pass occurs are not an acceptance strategy. Corrective verification shall include the original failure mode and relevant regression, not merely a new favourable measurement.

Verification: Review the retest authorisation, all attempts and failure-to-correction trace.

Acceptance / hold rule: The original deficiency and affected requirements are demonstrably resolved; otherwise the claim remains failed or held.

78.5 – Security and trusted updates

Source: AF-AST-STD-001, page 121.

Protect source, build, machine instructions, operational data, identities and updates according to the actual threat and safety model. Update acceptance shall verify origin, integrity, authority, target, compatibility and interruption behaviour. Reversion to an earlier load shall not reintroduce an unacceptable defect without explicit technical disposition. Security testing requires written safe authorisation.

Verification: Review trust dependencies and execute isolated permitted and prohibited update tests.

Acceptance / hold rule: All required integrity and protective gates pass; a valid signature alone does not establish functional safety or compatibility.

78.7 – Recovery and semantic portability

Source: AF-AST-STD-001, page 121.

Export and recovery shall preserve identities, scope, configuration, evidence states, decisions, history, units, time basis, permissions and relationships. Equal file counts do not establish equal meaning. Reconcile events after the recovery point and obtain receiving acceptance before cutover. Service availability and evidence-integrity acceptance are separate.

Verification: Execute missing-link, wrong-version, interrupted-write, expired-authority and restore tests.

Acceptance / hold rule: All essential records and relationships are usable and correct; unresolved evidence loss keeps dependent decisions on HOLD.

79.3 – Loss of contact and uncertain physical state

Source: AF-AST-STD-001, page 122.

The operator shall define the distinction between missing data, confirmed failure, safe dormant state, lost asset and completed disposition. Preserve last valid observations, their age and uncertainty. The absence of an alarm or signal shall not establish safe state. An inference shall identify its model and limits and shall not be presented as direct observation.

Verification: Review the state-classification record against raw evidence and observability limits.

Acceptance / hold rule: Only a supported state is assigned; uncertain essential conditions retain UNKNOWN in operational records and HOLD in dependent acceptance.

79.4 – Affected populations and historical decisions

Source: AF-AST-STD-001, page 122.

An event shall be traced to affected configurations, fleet members, materials, methods, software, personnel, reports and prior decisions. Determine both occurrence and escape causes and test competing explanations. Changing a supplier, restarting a service or training one person shall not by itself close a shared systemic cause.

Verification: Inspect end-to-end dependency and look-back analysis with actual notifications.

Acceptance / hold rule: All materially dependent outputs are addressed; no valid adverse history is erased by later correction.

80.1 – One complete application schedule

Source: AF-AST-STD-001, page 124.

The schedule shall join the object tuple, F01–F08 selection, Annex AK domains, phase/mode matrix, required methods, parameter records, competence, evidence, independent decisions and continuing controls. All triggers in Annex AO shall

be resolved. Shared records may be reused after relevance review, but shall not merge distinct objects, outcome classes or actual authority.

Verification: Reconcile the full schedule with Clauses 1, 4, 62 and 63 and Annex C.

Acceptance / hold rule: No essential scope, parameter, responsibility or evidence field remains undefined before a positive decision.

80.2 – Domain and verification completeness

Source: AF-AST-STD-001, page 124.

Map every applicable domain and requirement to valid verification and to an accountable conclusion. Treat domain counts, test counts and completed checklist percentages as planning measures only. Annex T is not exhaustive of all future methods; a newly discovered material mechanism shall create a controlled additional requirement and evidence task before the affected claim proceeds.

Verification: Perform forward and reverse traceability and inspect omitted-domain reasons.

Acceptance / hold rule: Every applicable condition passes or has a justified approved N/A; no HOLD or FAIL is hidden by a coverage percentage.

Appendix B — Local adoption, validation and receiving acceptance

Gate	Required evidence	Outcome when incomplete
Authority and identity	Actual operator, scoped mandate, permissible result class, named owner, independent decision and remedy functions.	No live scope release.
Requirement population	All applicable clauses and annexes mapped to child conditions, with reasons and independent approval for exclusions.	HOLD the affected conclusion.
Parameters and methods	Prospective values/attributes; technical basis; valid methods; representativeness; calibration, uncertainty and approved predicates.	No dependent acceptance.
People and evidence	Current demonstrated competence; conflict clearance; original usable source evidence; actual configuration and event times.	Reassign or obtain sufficient evidence.
Local tools and tests	Actual deployment tested with positive, boundary, missing, invalid and prohibited inputs; original failed cases retested.	No consequential reliance on unaccepted tools.
Independent closure	Every mandatory requirement PASS, approved N/A, all in-scope nonconformities verified closed, panel rules where required.	No grant, renewal or extension.
Claims and continuity	Decision-linked scope/status; source history; genuine custody, receiving access, retention, urgent notices and terminal duties.	Restrict publication or transfer until resolved.

Record authentic approval and activation in AF-AST-FR-001 and AF-AST-SC-004 or an equivalent controlled record. The edition label is not an effective date for a particular case. Preserve historical decisions under their actual controlling basis; a newer document does not retroactively create missing competence or evidence. Source: Clauses 4, 31, 61, 62 and 80; Annexes P and AR.

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