



ASTRA

AEROSPACE STANDARD

POLICY

Participation, Scope and Service Access Policy

AF-AST-PL-001

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Aviation / Space / Defense / Future systems

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Purpose and application

Provide access based on published eligibility and actual scope capability while keeping membership, commercial relationships and independent conformity decisions separate. Every enquiry, applicant, participant, holder and programme service interface across F01–F08, including small organisations, individuals acting within a defined role, and multi-site or multinational applicants.

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 Purpose, scope and policy authority

Provide access based on published eligibility and actual scope capability while keeping membership, commercial relationships and independent conformity decisions separate.

Every enquiry, applicant, participant, holder and programme service interface across F01-F08, including small organisations, individuals acting within a defined role, and multi-site or multinational applicants.

The Programme Policy Owner maintains this implementation policy. Named management, specialist, independent review and oversight functions execute only their actually delegated responsibilities. Corporate and technical higher instruments remain controlling.

2 Policy commitments

2.1 Eligible access

Apply the same published technical prerequisites and availability checks to comparable requests. Record objective reasons for a refused or deferred scope and distinguish a legal restriction from an administrative capacity limit.

2.2 Membership and finance

Membership, sponsorship, donated equipment, paid training, fee relief and commercial importance do not count as evidence of conformity. Financial staff cannot change technical findings or select a favourable evaluator.

2.3 One precise request

Establish a separate object, entity, site, method/task, configuration, period and outcome class for each requested conclusion. A combined quotation may coordinate work but cannot become unrestricted portfolio approval.

2.4 Accessible participation

Agree language, communication and accessibility arrangements that preserve the actual skill or evidence being assessed. Record why an adjustment preserves the assessment construct; convenience cannot waive an essential practical step.

2.5 Development enquiries

Clearly distinguish unavailable or incomplete profiles from active services. Receive expressions of interest without presenting an unreleased scope as a formal accreditation route or charging undisclosed development costs as an ordinary assessment.

2.6 Transparent terms

Provide service scope, fees, travel, reassessment, cancellation, liability, confidentiality, marks, surveillance, remedies and exit conditions before commitment. Actual jurisdiction and signatories require competent local completion.

2.7 Appropriate authority

An ordinary applicant needs the relevant participation terms, not an operator MoU merely because it is a member. An organisation acting on behalf of AF needs separately evidenced competence, prior written permission and executed scoped authorisation.

2.8 Remedies without retaliation

Provide complaint, appeal and protected-reporting routes independent of commercial influence. A good-faith safety concern does not require membership or payment; appeal identity checks remain appropriate to the personal decision.

3 Prohibited practices and exceptions

No exception may invent evidence, waive an essential criterion, bypass independence, backdate approval, expand a permission or turn an unavailable scope into an active one. Administrative adjustments may be approved only within actual authority, with reasons and unchanged technical conditions. A proposed substantive change follows PR-002; it is not a policy waiver.

Decision and authority boundary

A positive grant, renewal or extension requires valid scope, every applicable criterion fulfilled, sufficient usable evidence, closure of every in-scope nonconformity, current competent independent decision authority and effective required permissions. No score, majority vote, membership status or future corrective promise replaces a missing gate. An operational technical release, a programme outcome and an administrative publication are separate actions.

4 Implementation and reporting

Operating procedure	Purpose
AF-AST-PR-003	Application, Eligibility and Contract Review
AF-AST-PR-004	Scope Definition, Applicability and Evidence Reuse
AF-AST-PR-006	Impartiality Screening and Case Recusal
AF-AST-PR-019	Privacy, Confidentiality and Controlled Access
AF-AST-PR-022	Provider Agreements, Authorisation and Outsourced Work
AF-AST-PR-023	Fees, Resources and Financial Separation

Record compliance concerns through the relevant finding, complaint or protected-reporting route. Protect originals and affected work, identify an unimplicated reviewer and preserve fair response. Management monitors implementation and resources; it cannot replace a technical decision with commercial preference.

5 Review and evidence

Review operation through actual case trails, adverse decisions, exceptions, complaints, confidentiality events and corrective effectiveness. Annual audit and formal management review, quarterly programme performance/risk review and earlier review after material concerns follow the core timetable. Changes to this policy require controlled impact review and actual approval.

Synthetic case: A fictional small supplier requests F02 qualification and receives a fee reduction. The reduced charge changes only the commercial agreement. The same process window, witnessing, independent decision and closure requirements remain. Its membership application and technical case have separate records.

E1 Explicit acceptance and evidence contract

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.

E2 Source-to-implementation 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
1.4 / 10	Group, site and interface limitations	Requirement, objective evidence and local child predicates
1.5 / 11	Activity-based applicability	Requirement, objective evidence and local child predicates
1.6 / 11	Out-of-scope and emerging activities	Requirement, objective evidence and local child predicates

ASTRA ID / page	Source subject	Implementation use
2.4 / 12	Programme name and public designations	Requirement, objective evidence and local child predicates
3.2 / 12	Accrediting and delivery entities	Requirement, objective evidence and local child predicates
3.4 / 13	Case separation and decision panels	Requirement, objective evidence and local child predicates
3.5 / 13	Commercial and leadership boundaries	Requirement, objective evidence and local child predicates
3.6 / 13	Liability, continuity and accountability	Requirement, objective evidence and local child predicates
6.1 / 16	Institutional and personal conflicts	Requirement, objective evidence and local child predicates
6.2 / 16	Participation and equal treatment	Requirement, objective evidence and local child predicates
6.3 / 16	Consultancy, learning and evaluation	Requirement, objective evidence and local child predicates
6.5 / 17	Independent oversight	Requirement, objective evidence and local child predicates
11.1 / 22	Expression of interest and formal application	Requirement, objective evidence and local child predicates
11.2 / 22	Technical and impartiality review	Requirement, objective evidence and local child predicates
11.3 / 22	Existing evidence and reuse	Requirement, objective evidence and local child predicates
11.4 / 22	Binding terms and holder duties	Requirement, objective evidence and local child predicates
11.5 / 23	Authorisation to act for AF	Requirement, objective evidence and local child predicates
11.6 / 23	Fees, corrections and withdrawal	Requirement, objective evidence and local child predicates
12.4 / 24	Time and productive work	Requirement, objective evidence and local child predicates
27.1 / 44	Accessible intake and classification	Requirement, objective evidence and local child predicates
27.2 / 45	Triage and protection	Requirement, objective evidence and local child predicates
27.3 / 45	Appeal admission and independence	Requirement, objective evidence and local child predicates
27.4 / 45	Investigation, timing and remedy	Requirement, objective evidence and local child predicates

ASTRA ID / page	Source subject	Implementation use
27.5 / 45	Systemic effects and non-retaliation	Requirement, objective evidence and local child predicates
28.2 / 46	Truthful public wording	Requirement, objective evidence and local child predicates
29.5 / 47	Financial sustainability and public benefit	Requirement, objective evidence and local child predicates
62.1 / 88	Atomic requirement record	Explicit verification and acceptance predicate
62.2 / 88	Mandatory parameter completion	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
62.7 / 89	Decision replay and consistency	Explicit verification and acceptance predicate
63.1 / 90	Domain selection without geographic omission	Explicit verification and acceptance predicate
63.2 / 90	Object and activity rather than a universal label	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
78.4 / 120	Human authority and consequential decisions	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
80.3 / 124	Competent independent closure	Explicit verification and acceptance predicate
80.4 / 124	Bounded claim and publication	Explicit verification and acceptance predicate

E3 Detailed operating extensions

AF-AST-PR-003 – Application, Eligibility and Contract Review

Implementation basis: 11.1 (p. 22); 11.2 (p. 22); 11.3 (p. 22); 11.4 (p. 22); 62.1 (p. 88); 62.2 (p. 88); 63.2 (p. 90); 63.6 (p. 91); 80.1 (p. 124); 80.4 (p. 124)

X03.1 Classify request and object separately

Distinguish enquiry, development request, formal application and each requested outcome. Collect actual performer, configuration, site, mission domain and period without assuming the applicant controls the whole mission.

Completion / hold: Only a released, evaluable scope enters live assessment; incomplete scope stays deferred or in development.

X03.2 Confirm competent delivery before commitment

Check actual specialists, independent review, panel availability, lawful evidence access and local or remote witnessing feasibility. Identify missing domain expertise before a commercial offer.

Completion / hold: An unsatisfied essential resource or independence condition prevents an unconditional assessment commitment.

X03.3 Define evidence access and dependencies

Agree usable access to original observations, proprietary technical evidence, upstream/downstream interfaces, relevant incident history and remote records.

Completion / hold: A confidentiality promise does not close inaccessible essential evidence; use a lawful bounded route or defer.

X03.4 Freeze accepted terms and amendments

Name the services, criteria, actual obligations, costs, handovers, permissions, record custody, remedies and withdrawal effects. Treat added mission domains as a scope change, not an administrative edit.

Completion / hold: The accepted contract and every technical result must refer to the same exact object and controlled criteria.

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-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-006 – Impartiality Screening and Case Recusal

Implementation basis: 3.2 (p. 12); 3.4 (p. 13); 6.1 (p. 16); 6.3 (p. 16); 6.5 (p. 17); 62.5 (p. 89); 62.7 (p. 89); 78.4 (p. 120); 80.3 (p. 124)

X06.1 Screen institutional and personal influence

Trace ownership, consultancy, employment, finance, close relationships, prior case roles and technical method authorship at assignment time.

Completion / hold: A declared material conflict requires effective exclusion or replacement, not a signature alone.

X06.2 Prevent role-chain self-review

Check who created evidence, advised the applicant, evaluated it, reviewed it and decides the outcome. A technical expert's report remains evaluation evidence where they produced it.

Completion / hold: An evaluator or relevant consultant cannot independently approve the same work.

X06.3 Protect review access and resources

Provide the disinterested reviewer with original adverse evidence, sufficient specialist support and protected reporting. Implicated people shall not select their own investigator.

Completion / hold: HOLD the decision when practical independence or access is compromised.

X06.4 Record challenge and reassignment

Preserve the concern, decision, independent clearance and any affected prior work. Reassign without moving original finding clocks or quietly deleting the contested evidence.

Completion / hold: Only a competent eligible role proceeds; replacement does not automatically validate prior compromised conclusions.

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-017 – Complaints, Appeals and Independent Remedy

Implementation basis: 27.1 (p. 44); 27.2 (p. 45); 27.3 (p. 45); 27.4 (p. 45); 27.5 (p. 45); 62.3 (p. 88); 62.7 (p. 89); 79.4 (p. 122); 80.3 (p. 124)

X17.1 Retain the original issue and chronology

Distinguish complaint, decision appeal and protected concern while preserving first receipt, relevant notices and requested remedy.

Completion / hold: Reclassification does not erase the earlier clock or postpone immediate protection.

X17.2 Secure a genuinely independent review

Exclude original evaluators, reviewers, decision makers and implicated selectors. Provide relevant expertise and lawful access to both favourable and adverse records.

Completion / hold: An appeal panel without genuine independence or technical access cannot issue a supportable remedy.

X17.3 Distinguish later change from original error

Reconstruct what was known at the original event using frozen criteria and authentic evidence; assess genuinely new evidence separately.

Completion / hold: An improved present condition does not make the original decision automatically correct or incorrect.

X17.4 Issue a reasoned bounded remedy

Record evidence, party responses, upheld/corrected/remitted outcome, actual status effect and systemic actions. Preserve ordinary protection and expiry.

Completion / hold: Appeal receipt alone neither restores a suspended credential nor extends its duration.

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-023 – Fees, Resources and Financial Separation

Implementation basis: 3.5 (p. 13); 3.6 (p. 13); 6.2 (p. 16); 11.6 (p. 23); 12.4 (p. 24); 29.5 (p. 47); 62.5 (p. 89); 64.4 (p. 92); 80.3 (p. 124)

X23.1 Cost real work rather than favourable outcomes

Build the resource basis from necessary evaluation, specialists, reporting, independent review, panel, protection and continuity.

Completion / hold: A fee or capacity target cannot delete required technical work or purchase a positive decision.

X23.2 Separate commercial and technical authority

Record who approves fees, discounts, grants, resources and case outcomes. Assess funding concentration and incentives without inventing a universal safe percentage.

Completion / hold: Any unresolved influence on technical judgement requires effective control before case assignment or decision.

X23.3 Disclose the actual service conditions

State currency, taxes where applicable, inclusions, travel/testing, cancellation, withdrawal, refund and local conditions through genuine approved terms.

Completion / hold: No template amount is a published fee until actually authorised; financial disputes are not fabricated competence findings.

X23.4 Verify continuity capacity

Test whether independent review, remedies, records and corrective action remain resourced during delayed income or provider exit.

Completion / hold: Lack of reserves for essential duties is an operational readiness gap, not a reason to weaken the standard.

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.

E4 Application-specific parameter completion

These are required information groups from Annex AO, not pre-approved engineering limits. For every triggered group, populate actual values or observable attributes before evaluation, with unit, inclusivity, phase/mode, technical derivation, uncertainty/dependence, method version, owner, independent review, authentic approval and change trigger. An absent trigger requires an approved exclusion; an unsupported or missing essential value is HOLD.

P01 — Mission and scope

Legal owner, performer, family/module, object, domain, configuration, location, duration and modes.

Derivation and evidence: Scope tuple and mission concept; approved applicability matrix.

Completion test: No undefined essential object, duty, phase or exclusion.

P02 — Environment and exposure

Quantity, spatial/temporal boundary, distribution or bound, source/model, uncertainty and coupled effects.

Derivation and evidence: Mission environment baseline and qualified specialist rationale.

Completion test: Selected conditions bound each claimed use; unknown critical mechanisms remain HOLD.

P03 — Requirements and acceptance

Stable ID, owner, characteristic, units, bound inclusivity, predicate, observation and essential-step marker.

Derivation and evidence: Requirement baseline and Annex AL decision rule.

Completion test: Every condition is evaluable before observations are judged.

P04 — Geometry and reference systems

Frame origin/orientation, epoch, time scale, coordinate units, transformation and covariance.

Derivation and evidence: Validated transformation and independent known-answer checks.

Completion test: Correct frame and time are maintained through every interface.

P06 — Test article and fixtures

Article pedigree, differences from delivered object, mounting, boundary conditions, operating state and exposure history.

Derivation and evidence: Approved representativeness and cumulative-test analysis.

Completion test: No material difference or prior damage invalidates the intended inference.

P11 – Communication and timing

Distance, frequency/wavelength, gain/loss, noise, rate, margin, latency, event time, age, clock error and outage.

Derivation and evidence: Validated end-to-end budget and adverse service tests.

Completion test: Required quality, delay and integrity conditions all pass.

P12 – Human and protective response

User/task, representative conditions, essential steps, feasible intervention, health-support interface and emergency resources.

Derivation and evidence: Specialist criteria and observed performance.

Completion test: Every essential protection is effective; no invented universal physiological limit.

P14 – Software, AI and models

Purpose/domain, source/build/weights/data, dependencies, target, errors, uncertainty, prohibited behaviour and change limits.

Derivation and evidence: Independent verification and model/use validation.

Completion test: Essential scenarios and target conditions pass; experimental outputs remain separate.

P15 – Security and command authority

Identities, roles, privileges, keys/trust, target, validity window, command sequence, integrity and interruption response.

Derivation and evidence: Written test authorisation and deployed workflow validation.

Completion test: No prohibited authority or unverified command state is accepted.

P18 – Decision, continuity and terminal duties

Closed findings, reviewer competence, independence, authority, status clocks, final-state criteria, custody and open obligations.

Derivation and evidence: Authenticated decisions and verified terminal/transfer evidence.

Completion test: Every mandatory gate is complete; incomplete or unknown terminal state remains explicit.

E5 All-space applicability and bounded responsibility

The following Annex AK tags are selected because the document can support these responsibilities. Applicability is decided for the actual case. Tags do not expand a family, create an operating permission or place a whole mission inside a supplier's limited scope. Resolve domain, phase, mode, environment and retained duty before accepting a claim.

Domain / source page	Coverage	Required boundary
AK01 / 187 Terrestrial engineering and supply	Design offices, manufacturing, material sources, procurement and integration.	Every delivered characteristic and essential supplier interface is traceable to accepted evidence.
AK02 / 187 Test facilities and technical providers	Environmental, structural, materials, calibration and inspection services, including mobile and remote work.	Actual method competence and valid result evidence are separately demonstrated.
AK03 / 187 Launch sites and spaceports	Site infrastructure, handling, ground services, emergency interfaces and actual permissions.	No site outcome is used as vehicle, launch or mission permission.

Domain / source page	Coverage	Required boundary
AK04 / 187 Launch and deployment interfaces	Vehicle/payload integration, handling, ascent environment, separation and commissioning.	Every required integration and protective condition is met before the actual commitment.
AK05 / 188 Reusable launch and return articles	Cumulative exposure, refurbishment, thermal protection, hidden damage and life decisions.	Reuse is based on actual history and accepted condition, never a reset life.
AK06 / 188 Low Earth orbit systems	Satellites, stations and services in the declared near-Earth operating environment.	Environment-specific qualification and end-of-life capability support the bounded mission.
AK07 / 188 Medium, geosynchronous and high Earth orbits	Navigation, communication, relay and other specified orbit-dependent services.	No lower-orbit or nominal-link evidence automatically covers a different environment.
AK08 / 188 Highly elliptical and transfer regions	Missions crossing materially different exposure, geometry and communication regimes.	Every phase and transition has a supported envelope and verification path.
AK09 / 189 Cislunar and libration-region systems	Lunar vicinity, relays, gateways, transportation interfaces and regional services.	The exact operating domain and service dependencies are technically complete.
AK10 / 189 Constellations and formation services	Distributed functions, inter-satellite links, fleet management and shared ground support.	Distributed performance and independent redundancy assumptions are validated.
AK11 / 189 Orbital traffic and tracking support	Tracking, conjunction information, data services and inter-operator coordination.	A metric is accepted only for its validated data/model scope; missing data are not zero risk.
AK12 / 189 Cooperative docking and servicing	Authorised inspection, connection, transfer, repair and service interventions.	All essential interface and completion states are independently supported.
AK13 / 190 On-orbit assembly and manufacture	Assembly, additive or other production, finishing and output verification in space.	Process execution is not substituted for evidence of required output properties.
AK14 / 190 Stations and inhabited orbital platforms	Habitation, payload integration, visiting vehicles, occupants and support.	Integrated human protection and resources are accepted independently of mission success.
AK15 / 190 Extravehicular and isolated crew work	Individual equipment, user/task, environment, support and rescue dependencies.	Essential individual and integrated protective tasks pass without averaging.
AK16 / 190 Lunar surface systems	Landers, rovers, infrastructure, observation and processing on the Moon.	Destination-specific evidence bounds the actual region, phase and operating mode.
AK17 / 191 Planetary landers and surface vehicles	Surface exploration, scientific instruments, mobility and handling.	Terrestrial analogy is justified; unknown critical surface conditions remain restricted.
AK18 / 191 Atmospheric and buoyant exploration	Planetary atmospheric vehicles, balloons, aircraft and relevant instruments.	All relevant environment-specific structural and functional predicates pass.
AK19 / 191 Small-body and comet operations	Observation, cooperative contact, sampling and resource demonstrations.	Uncertain body/interaction properties are not treated as established terrestrial conditions.
AK20 / 191 Subsurface and ocean-world exploration	Subsurface, liquid, ice and extreme-pressure exploration systems and their interfaces.	Specialist boundary and contamination evidence precedes dependent use.
AK21 / 192 Interplanetary cruise and deep-space missions	Spacecraft, relays, science operations and long-delay mission support.	Human and autonomous actions are feasible within actual timing and resource limits.

Domain / source page	Coverage	Required boundary
AK22 / 192 Solar and heliophysics missions	Solar observations and missions with relevant thermal, plasma and radiation extremes.	Protection and data-quality evidence cover the actual mission envelope, not a screening equation alone.
AK23 / 192 Outer-system and distant observatories	Low-flux, long-life, long-delay science and infrastructure applications.	Required lifetime and survival margins are met with credible continuity and data integrity.
AK24 / 192 Interstellar precursor and future distant systems	Bounded research and demonstrable capabilities for very long-range or novel concepts.	Research promise is not an operational grant; unsupported capability stays in development.
AK25 / 193 Human exploration and surface habitats	Crew transport interfaces, habitation, exploration support and emergency protection.	Every essential human protection and feasibility predicate is supported by specialists.
AK26 / 193 Planetary protection and sample return	Forward/backward contamination, scientific cleanliness, samples and receiving chain.	No dependent commitment precedes complete protection and receiving evidence.
AK27 / 193 Resource utilisation and remote processing	Resource characterisation, processing, quality, storage, use and residues.	Resource yield, product eligibility and permission remain distinct.
AK28 / 193 Space logistics and distributed supply	Warehousing, transfer, spares, custody, condition, receiving and service continuity.	Only physically or otherwise validly confirmed accepted usable inventory supports mission budgets.
AK29 / 194 Specialised energy infrastructure	Generation, storage, conversion, remote delivery and controlled high-hazard power interfaces.	Performance never substitutes for safety, source authority or terminal accountability.
AK30 / 194 Ground, communication and navigation services	Mission control, RF/optical links, timing, data processing, relays and PNT support.	Availability, correctness, authority and completion are separately demonstrated.
AK31 / 194 Digital and autonomous space systems	Software, programmable hardware, AI, models, twins and defensive security.	All essential behaviours and prohibited transitions are verified for the actual deployment.
AK32 / 194 Retirement and long-term stewardship	Disposal, passivation governance, loss-of-contact states, records and residual obligations.	Final-state claims are truthful and every unresolved duty has an accepted owner.

E6 Workflow and evidence relationships

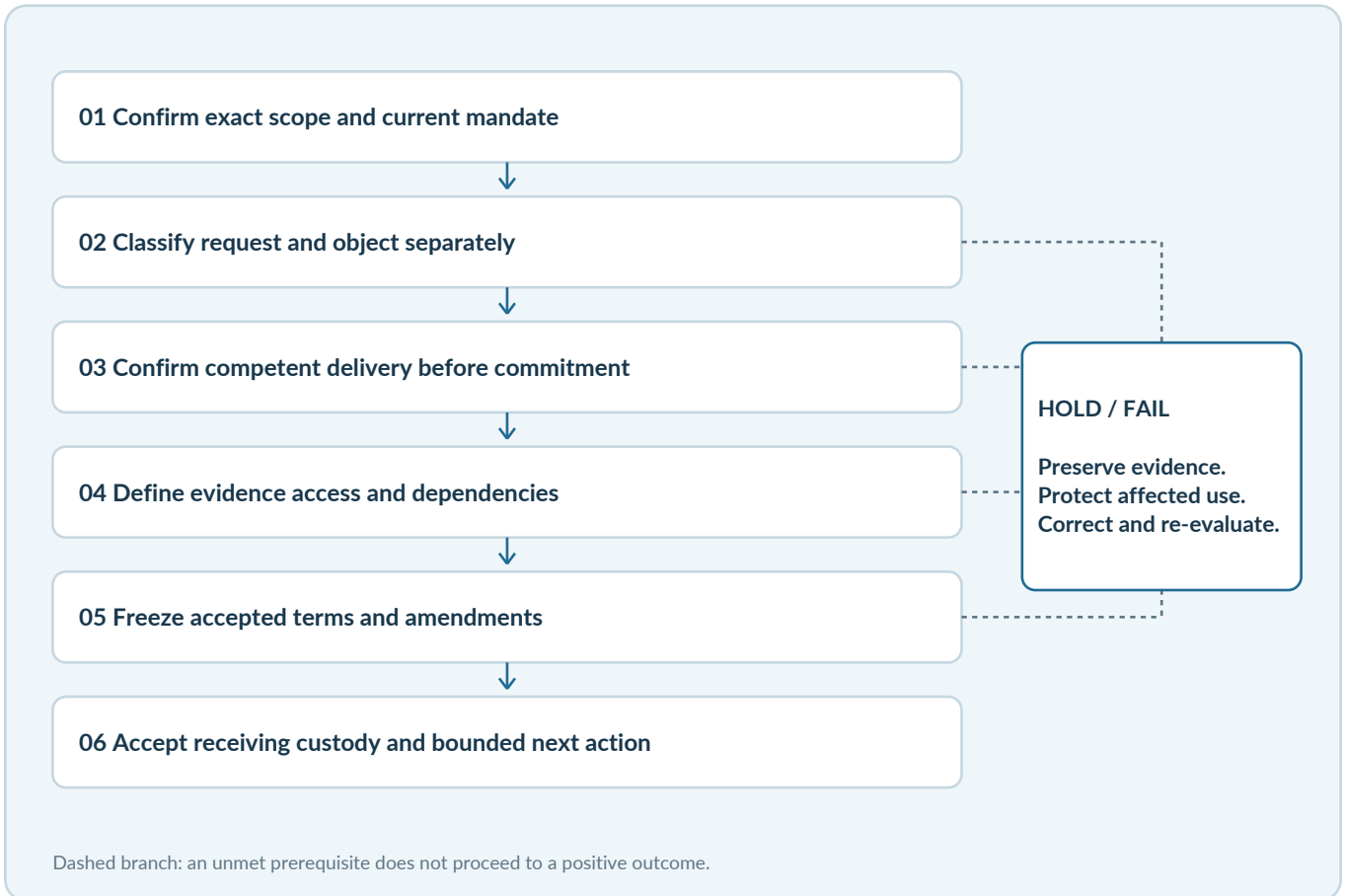
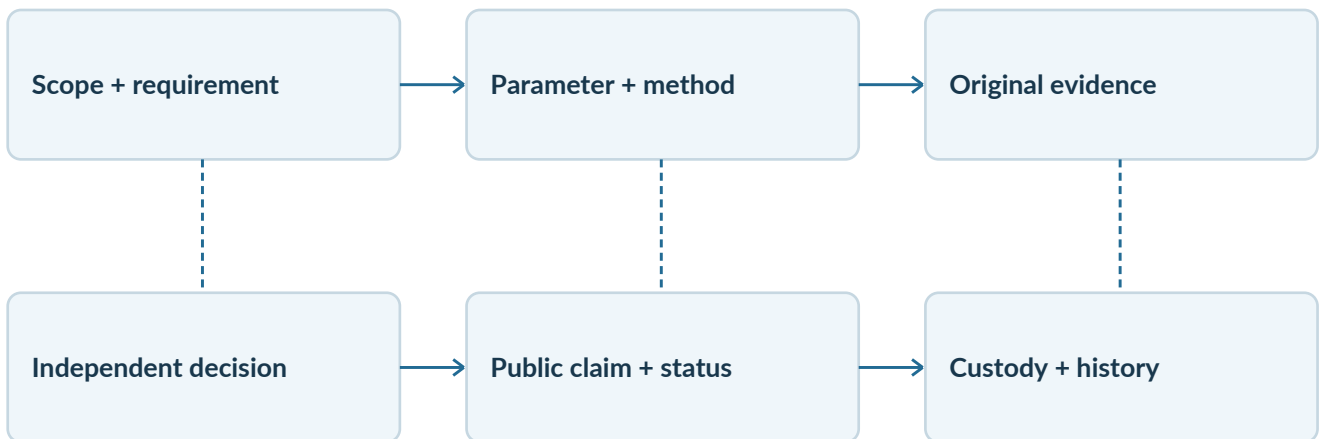


Figure — Implementation sequence for AF-AST-PR-003. Explanatory diagram; the source prerequisites and actual authority remain controlling.



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.

E7 Calculations, assumptions and synthetic charts

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.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

Completion is not the grant decision

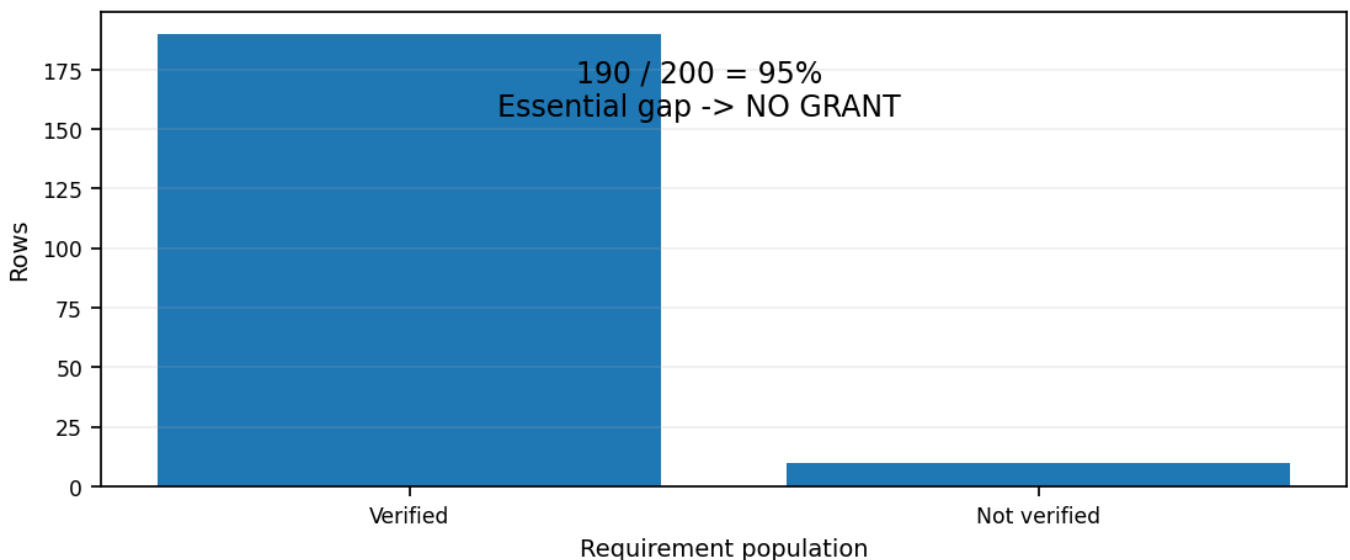


Figure Q03 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q04 Committee arithmetic and accreditation panels

Source: ASTRA Annex AM, Q04, page 203. All numerical inputs in this example are synthetic.

Substantive participation minimum = $\text{ceil}(2N/3)$

Affirmative minimum = $\text{ceil}(2V/3)$

Variables and units

N is the eligible committee population; V is the number of substantive yes/no votes. These equations concern the technical committee, not an applicant panel.

Example inputs

Synthetic committee: N=9, V=6, yes=4, no=2. Separate accreditation panel: three eligible members, two affirmative and one adverse.

Calculation and checks

1. Participation: $\text{ceil}(2 \times 9 / 3) = 6$; actual V=6 meets it.
2. Affirmative: $\text{ceil}(2 \times 6 / 3) = 4$; actual yes=4 meets it.
3. Accreditation panel: all three must participate; at least two support and all technical gates must pass.
4. Two participating panel members voting yes do not form a valid three-person panel.

Decision interpretation: The committee arithmetic passes for the stated case. The separate panel can decide positively only if technical gates and eligibility are all established.

Validity limits: Abstentions are not substantive committee yes/no votes. Rounding is upward. A mathematical majority never resolves missing technical evidence or an ineligible member.

ASTRA connections: 3.4; 4.3; 15.3; Annex B

Committee participation threshold

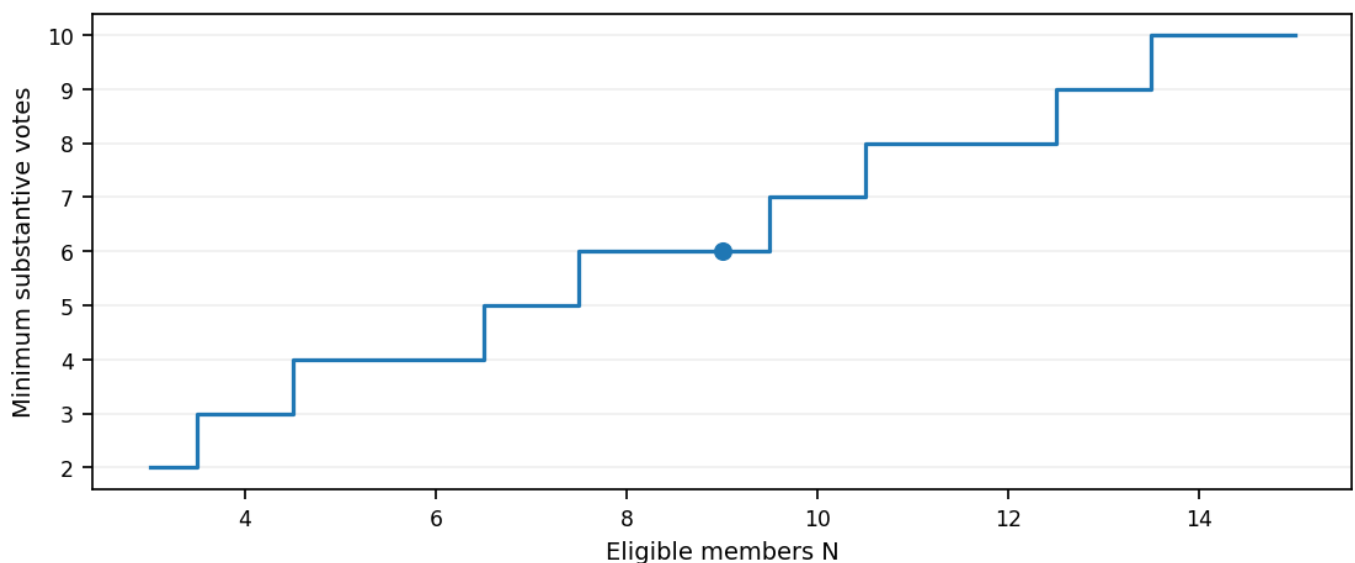


Figure Q04 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.

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

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

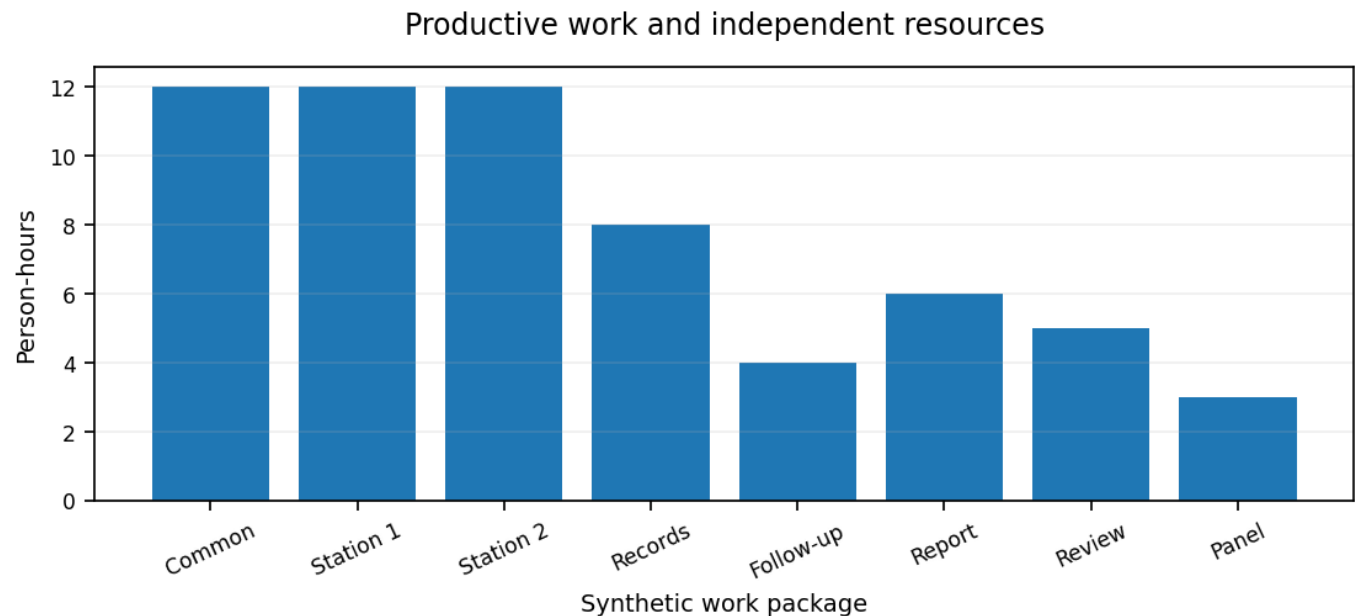


Figure Q05 — Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.

AM.Q06 Random detection sample size

Source: ASTRA Annex AM, Q06, page 205. All numerical inputs in this example are synthetic.

$$P(\text{at least one detection}) = 1 - (1-p)^n$$

$$n_{min} = \text{ceil}[\ln(1-C)/\ln(1-p)]$$

Variables and units

p is a fixed issue probability per independent representative observation; C is the selected target detection probability; n is a positive integer.

Example inputs

Synthetic $p=0.10$ and $C=0.95$.

Calculation and checks

1. $\ln(0.05)/\ln(0.90) = 28.433158\dots$; round upward to $n=29$.

2. $P(\text{detection at } n=29) = 1 - 0.9^{29} = 0.9528987130$.

3. At $n=28$, $P = 0.9476652367$, below the specified target.

Decision interpretation: 29 is the minimum integer sample for the stated independent model; the demonstration does not certify 95% conformity.

Validity limits: This calculation is invalid for unexamined dependence, changing p , biased selection or a judgemental sample represented as random. Detection is also conditional on an effective observation method.

ASTRA connections: 9.3; Annex F.5; 55.3

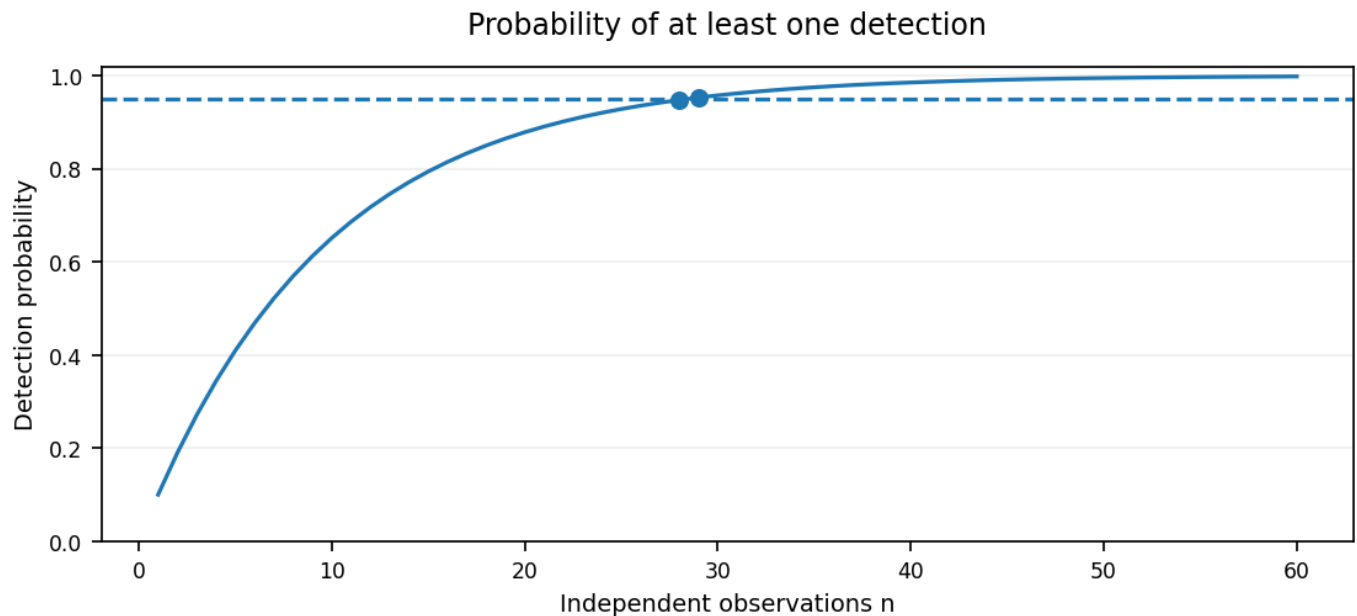


Figure Q06 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q17 Clock uncertainty and maximum data age

Source: ASTRA Annex AM, Q17, page 216. All numerical inputs in this example are synthetic.

$u_t = \sqrt{u_{\text{event}}^2 + u_{\text{sync}}^2}$ for justified independence

$U_t = k u_t$

Upper age endpoint = age_estimate + U_t

Variables and units

Time components refer to the same event and time basis. Correlation and systematic conversion errors require appropriate treatment.

Example inputs

Synthetic standard components 3 ms and 4 ms; illustrative $k=2$; maximum inclusive permitted data age=100 ms.

Calculation and checks

1. $u_t = \sqrt{3^2 + 4^2} = 5$ ms; $U_t = 10$ ms.

2. At age estimate 95 ms, interval=[85,105] ms: HOLD under the full-interval rule.

3. At age estimate 80 ms, interval=[70,90] ms: PASS for this age criterion.

Decision interpretation: A recently received packet can still contain stale event data. The 95 ms estimate is not rounded down into acceptance.

Validity limits: This calculation does not account automatically for unrecorded queueing, an incorrect epoch or an unknown time scale. Such validity defects cause HOLD before the age predicate is evaluated.

ASTRA connections: 66.4; Annex G; 77.6

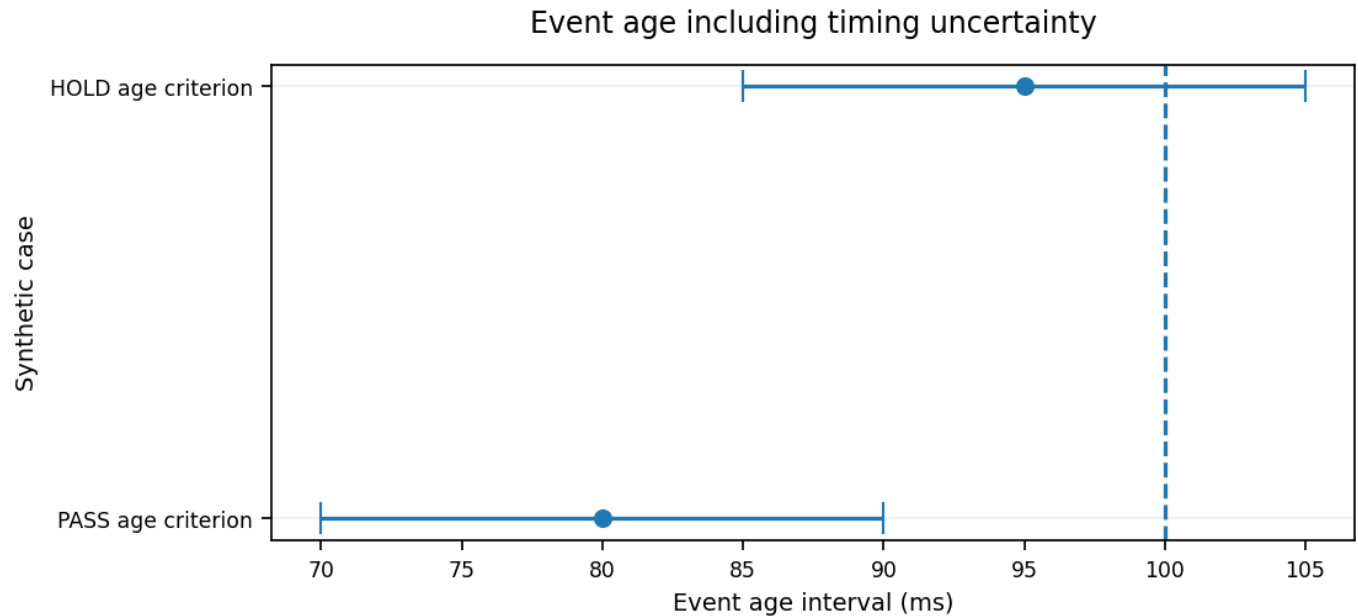


Figure Q17 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.

E8 Adverse cases and independent replay

Challenge	Expected handling	Evidence retained
PR-003: Classify request and object separately — required basis missing	Only a released, evaluable scope enters live assessment; incomplete scope stays deferred or in development.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-003: Freeze accepted terms and amendments — handover or review incomplete	The accepted contract and every technical result must refer to the same exact object and controlled criteria.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
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-006: Screen institutional and personal influence — required basis missing	A declared material conflict requires effective exclusion or replacement, not a signature alone.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-006: Record challenge and reassignment — handover or review incomplete	Only a competent eligible role proceeds; replacement does not automatically validate prior compromised conclusions.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-017: Retain the original issue and chronology — required basis missing	Reclassification does not erase the earlier clock or postpone immediate protection.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-017: Issue a reasoned bounded remedy — handover or review incomplete	Appeal receipt alone neither restores a suspended credential nor extends its duration.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-023: Cost real work rather than favourable outcomes — required basis missing	A fee or capacity target cannot delete required technical work or purchase a positive decision.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-023: Verify continuity capacity — handover or review incomplete	Lack of reserves for essential duties is an operational readiness gap, not a reason to weaken the standard.	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.

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.

1.4 – Group, site and interface limitations

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

Group governance evidence may be reused after its relevance and local implementation are demonstrated. It shall not grant unexamined competence to every subsidiary, airport, station, faculty, workshop or laboratory. Scope schedules shall distinguish a headquarters function from operational delivery. An airport outcome does not include independent tenants by default; an MRO outcome does not include its training centre or all internal test methods automatically. Shared premises, a common owner or one purchasing contract shall not erase those boundaries.

Required evidence: Entity/site hierarchy; interface agreements; scope-specific coverage and decisions.

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.

1.6 – Out-of-scope and emerging activities

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

Heliports, vertiports, spaceports, specialist air-navigation activities, novel fuels, human spaceflight and restricted defense applications require dedicated criteria and verified technical coverage before activation. Their inclusion in the portfolio does not permit operation under a conventional airport or generic service profile. A request outside the released catalogue may enter a development or expression-of-interest register, not an implied live accreditation route. Airline flight operations remain outside F07 unless a separate profile and lawful delivery arrangement are expressly released.

Required evidence: Development request; scope exclusion; dedicated supplement and release decision.

2.4 – Programme name and public designations

Source: AF-AST-STD-001, page 12.

AF ASTRA may be described as an accreditation and assurance programme. An individual outcome shall use its precise class from Annex A. Under the present protected AF instruments, educational and operational applicants use the relevant programme or capability recognition route unless an expressly adopted higher-instrument change permits a different qualified designation. The programme name shall not be abbreviated in a way that implies every participant is accredited. No certificate or registry flag shall apply an expanded accreditation title merely because it appeared in an earlier planning heading.

Required evidence: Permitted-claims register; terminology clearance; applicable authorisation for any changed title.

3.2 – Accrediting and delivery entities

Source: AF-AST-STD-001, page 12.

The legal entity making an accreditation decision shall be identified separately from the applicant body and from the entity providing the assessment services being accredited. It shall not accredit itself or its own assessment operation, including through nominal reciprocal arrangements. It shall not also deliver the conformity-assessment services it accredits or applicant-specific consultancy compromising that accreditation. Related training, sector engagement and shared administration shall be assessed for actual influence, finances, access and ownership, with a genuinely independent arrangement where separation is necessary.

Required evidence: Legal delivery model; related-activity analysis; independent oversight and liability arrangements.

3.4 – Case separation and decision panels

Source: AF-AST-STD-001, page 13.

Evaluation, independent review, decision and appeal shall be assigned through explicit role checks. Final accreditation grants, renewals, extensions and contested adverse decisions shall use three independent authorised panel members: all three participate and at least two support the reasoned outcome, with every mandatory technical gate met. A technical reviewer may serve on that panel only when independent of evaluation and separately authorised. Other outcome classes use the independent authority specified in the released profile. A majority vote cannot resolve missing essential technical evidence by preference.

Required evidence: Assignment matrix; independent review; three-person participation and votes; gate record.

3.5 – Commercial and leadership boundaries

Source: AF-AST-STD-001, page 13.

Leadership may allocate resources, require procedural correction, commission independent investigation and close an unsafe programme within its powers. It shall not order a favourable technical result, remove a justified finding for commercial reasons, substitute an applicant-selected assessor or condition remuneration on grants. Membership, funding, sponsorship, investments and training income shall be excluded from technical decision criteria. Programme managers shall report attempts to influence decisions through the protected integrity route.

Required evidence: Financial separation; influence log; independent escalation; outcome-neutral remuneration.

3.6 – Liability, continuity and accountability

Source: AF-AST-STD-001, page 13.

Each operator shall maintain resources and arrangements for its actual liabilities, including suitable insurance or justified equivalent provision where appropriate. It shall remain responsible for outsourced technical work and its final decisions. Exit or insolvency planning shall protect holders, pending cases, records, status information and lawful transfer. An agreement assigning tasks to a contractor shall not be used to disclaim obligations retained by the issuer or to obscure who is answerable for an incorrect conclusion.

Required evidence: Liability assessment; financial capacity; continuity/closure plan; retained-responsibility clauses.

6.1 – Institutional and personal conflicts

Source: AF-AST-STD-001, page 16.

The operator shall review financial, ownership, employment, advisory, family, close personal and adversarial relationships at institutional and case levels. Declaration is an input to control, not the control itself. Where a material threat cannot be effectively managed, the individual or entity shall decline or be replaced. For independent third-party evaluation, review and decision, relevant employment or consultancy for the applicant within the preceding 24 months excludes assignment; older relationships remain subject to risk review.

Required evidence: Live conflict register; prior-work screening; independent disposition and assignment restrictions.

6.2 – Participation and equal treatment

Source: AF-AST-STD-001, page 16.

Access shall be based on published eligibility and actual technical capability, not membership, sponsor status, nationality or enterprise size alone. Necessary legal restrictions and objective capacity limits shall be applied consistently. Fees and scheduling shall be disclosed before commitment. Reasonable accessibility and language arrangements shall preserve the competence and evidence being assessed. Financial support or fee waivers shall not reduce technical criteria or purchase an outcome.

Required evidence: Eligibility rules; accommodation decisions; fee/capacity terms; equal-treatment checks.

6.3 – Consultancy, learning and evaluation

Source: AF-AST-STD-001, page 16.

General explanation of a requirement and non-client-specific education may be offered through controlled arrangements. A person who designs an applicant's system, corrective solution or technical method shall not independently certify that same work. The operator shall distinguish teaching from examination and independent decision. Training attendance shall not be represented as competence, and purchasing a particular course shall not be required where verified equivalent preparation is acceptable under the profile.

Required evidence: Service boundaries; training/evaluation separation; assignment conflict checks.

6.5 – Independent oversight

Source: AF-AST-STD-001, page 17.

The oversight function shall have protected access to unedited results, conflict information, trends and resources needed to challenge programme management. It shall report material unresolved threats to a disinterested constitutional route. Implicated officers shall not select their own investigator or control the evidence made available. Oversight may recommend restrictions, reassessment or governance correction; it shall not replace competent case findings with a preferred commercial result.

Required evidence: Oversight mandate; access and budget; independent reports; resolved or escalated threats.

11.1 – Expression of interest and formal application

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

The Secretariat may receive expressions of interest for unreleased scopes but shall label them as development enquiries. A formal application shall state the requested outcome, available technical profile, legal applicant, authorised representative, sites, affiliations, object, methods, configurations and prior relevant results. Receipt does not establish eligibility, acceptance of scope, accreditation or authority to use marks. Administrative completeness shall be distinguished from technical readiness.

Required evidence: Enquiry/application classification; representative authority; scope request; dated receipt.

11.2 – Technical and impartiality review

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

Before commitment, verify that the programme is active for the requested scope, the operator is authorised, necessary evaluators and independent decision resources are available, evidence access is feasible and conflicts can be controlled. Resolve unclear methods or outcome terminology before quoting an evaluable scope. Decline or defer work outside real capability; do not accept fees for an assessment whose essential method has not yet been defined without clearly separate development terms.

Required evidence: Admission review; resource/conflict check; accepted, deferred or refused scope with reasons.

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.

11.4 – Binding terms and holder duties

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

The agreement shall identify parties, versions, exact services, evidence and access obligations, fees, limitations, independence, reporting, witnessing, subcontracting, liability, confidentiality, marks, registry publication, surveillance, remedies, termination and records. The holder shall provide materially complete information, maintain conformity, report changes, permit agreed oversight and cease prohibited claims. Governing law and dispute terms require competent selection for the actual relationship; no universal legal jurisdiction is created by this standard.

Required evidence: Executed participation terms; scope schedule; actual authorised signatories.

11.5 – Authorisation to act for AF

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

An external organisation acting for AF in accreditation, certification, delegated recognition or scheme operation shall hold prior written permission and an executed binding Cooperation and Authorization MoU with its actual technical and territorial scope. Competence evaluation, operating permission and the individual applicant outcome are separate decisions. Ordinary applicants and members are not required to enter that operator agreement merely to participate. Onward delegation is prohibited unless expressly authorised and technically controlled.

Required evidence: Competence decision; written approval; executed MoU; controlled delegation and scope.

11.6 – Fees, corrections and withdrawal

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

Disclose charges, travel, testing, surveillance, reassessment, cancellation and refund conditions before commitment. Permit reasonable correction of administrative omissions without inventing earlier technical evidence. Application withdrawal shall preserve material findings, confidentiality and safety duties. A fee dispute shall follow its fair administrative process and shall not be misclassified as technical incompetence. No payment, refund, renewal booking or withdrawal may alter the historical decision or hide an expired status.

Required evidence: Transparent terms; correction/withdrawal history; financial separation; preserved findings.

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.

27.1 – Accessible intake and classification

Source: AF-AST-STD-001, page 44.

Provide clear channels for complaints, appeals and protected integrity concerns, including anonymous concerns assessed on available evidence. A complaint concerns dissatisfaction or service failure; an appeal seeks reconsideration of a specified decision. A case may contain both and shall retain the first receipt date with linked issue records. Good-faith safety or integrity reporting shall not require payment, membership or a prescribed form. Accessible routes shall not weaken necessary identity checks for a personal decision appeal.

Required evidence: Intake record; issue classification; original receipt; accessible and protected channels.

27.2 – Triage and protection

Source: AF-AST-STD-001, page 45.

Acknowledge receipt within five calendar days where a response channel exists. Assess urgent safety, evidence integrity, confidentiality and retaliation concerns immediately without awaiting acknowledgement. Preserve original records and prevent implicated personnel from controlling the investigation. Protect the reporter's identity as lawfully possible while

respecting fair response. An allegation alone is not a finding of misconduct, and inability to substantiate it is not proof of bad faith.

Required evidence: Triage; evidence hold; protection plan; independent assignment and fair response.

27.3 – Appeal admission and independence

Source: AF-AST-STD-001, page 45.

An appeal is normally submitted within 30 calendar days of notice of the contested decision; documented good cause may justify later admission. A three-person independent panel shall exclude the original evaluation, review, decision and materially implicated selectors. Obtain technical expertise relevant to the scope. The original decision maker may explain the record but shall not vote on the appeal. Ordinary programme appeals do not replace statutory remedies or arbitral procedures.

Required evidence: Admissibility; panel conflicts/competence; protected case file; participation boundaries.

27.4 – Investigation, timing and remedy

Source: AF-AST-STD-001, page 45.

Provide an initial substantive complaint response within 30 days and ordinarily determine a complaint or appeal within 60 days of receipt. Necessary exceptional extensions shall state reasons, a revised target and progress at least every 30 days; technical protection and expiry clocks remain active. Examine both original and new evidence and distinguish later changes from errors in the original basis. Uphold, correct, replace, withdraw or return for additional evaluation with reasons and exact status effect.

Required evidence: Investigation trail; party responses; reasoned outcome; communicated timing and remedies.

27.5 – Systemic effects and non-retaliation

Source: AF-AST-STD-001, page 45.

A substantiated concern shall trigger review of related reports, scopes, methods, personnel and previous decisions, not only the individual case. Implement correction and verify effectiveness. Do not retaliate through service denial, fees, assignments or confidentiality threats against good-faith reporting. A pending appeal does not automatically remove protection, restore a credential or extend validity. Public correction shall be proportionate and protect unnecessary personal and confidential information.

Required evidence: Related-case analysis; corrective action; retaliation review; accurate public/status correction.

28.2 – Truthful public wording

Source: AF-AST-STD-001, page 46.

Public wording shall distinguish accredited assessment competence, recognised educational or operational capability, certified conformity and verified historical statements. A label shall not imply statutory approval, all-sector authority, guaranteed safety or recognition by an unevidenced third party. Group logos and commercial package titles shall not conceal excluded sites, tasks or programmes. Every claimed recognition or acceptance arrangement shall be supported by its actual written scope and current terms.

Required evidence: Approved claim; actual acceptance arrangement where claimed; limits clearly communicated.

29.5 – Financial sustainability and public benefit

Source: AF-AST-STD-001, page 47.

Maintain adequate resources for competent work, impartial oversight, remedies, data and continuity. Disclose applicable charges and avoid dependence on favourable decisions for financial survival. Evaluate access for smaller organisations and less-resourced participants while preserving technical minima. Report meaningful benefits and limitations using authentic evidence, not assumed sector-wide adoption. Safeguards for competition, controlled technology and conflicts apply to programme outreach as well as assessment.

Required evidence: Budget and independence review; accessible participation; actual benefit measures; lawful outreach.

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.

62.2 – Mandatory parameter completion

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

An application-dependent value shall be entered in a controlled parameter schedule before the relevant test or evaluation. Each entry shall state symbol, meaning, unit, inclusive or exclusive bounds, uncertainty treatment, operating modes, technical derivation, source evidence, approver and change trigger. A declared value is not adequate merely because the applicant selected it. The independent reviewer shall challenge whether it bounds the claimed environment and consequence.

Verification: Recalculate derivations and check mission, interface and obligation coverage.

Acceptance / hold rule: The complete parameter set is approved prospectively. A blank, TBD, unsupported factor or undefined threshold blocks the dependent release.

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.

62.7 – Decision replay and consistency

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

A decision shall be reproducible from the same frozen requirements, parameter values, original evidence, calculation version, uncertainty model and role assignments. Two competent reviewers reaching different results shall identify the differing input, predicate, assumption or expertise before closure. Interpretation records may clarify a term but shall not change limits after results are known. Equation inputs shall retain unrounded values.

Verification: Independently replay a selected boundary case and reconcile every difference.

Acceptance / hold rule: The replay produces the same supported state, or the case remains HOLD pending a controlled technical resolution.

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.

63.2 – Object and activity rather than a universal label

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

The claimed object shall be identified as a system, subsystem, component, material, process, service, facility, software artefact, person, educational programme, assessment provider or statement. Record what is designed, built, tested, operated, maintained or retired, by whom and where. A phrase such as all space, space-qualified or complete mission assurance shall not replace the exact boundaries and limitations of the evaluated object.

Verification: Compare application, technical schedule, evidence and proposed public wording.

Acceptance / hold rule: The object and activities agree throughout the dossier; unsupported sector-wide or geographically unlimited claims are prohibited.

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.

78.4 – Human authority and consequential decisions

Source: AF-AST-STD-001, page 120.

Human oversight shall be validated against available information, response time, competence, workload and control access. Automated decision support may organise evidence but shall not independently issue an ASTRA grant, renewal, suspension or restoration. Generated observations and citations shall not be presented as authentic source events.

Verification: Challenge automation bias, false-source and delayed-intervention scenarios.

Acceptance / hold rule: Actual authorised people can perform every required role and source evidence remains verifiable; nominal oversight alone is insufficient.

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.

80.3 – Competent independent closure

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

The independent reviewer shall have verified technical coverage, lawful evidence access and no prohibited case relationship. Technical dissent shall be resolved by evidence, corrected scope or further work. Where a three-person panel is required, all three eligible members shall participate and the established vote rule shall apply only after the technical gates are satisfied.

Verification: Check competence, conflict, access, panel and reasoned decision records.

Acceptance / hold rule: Both the technical conjunction and applicable authority/panel rules pass; a vote cannot cure absent evidence.

80.4 – Bounded claim and publication

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

The outcome shall identify legal holder, issuer, object, configuration, family/module, domain, site or remote responsibility, criteria, limitations, actual dates and ongoing or instance basis. Public wording shall not imply unrestricted coverage of all space, universal safety, statutory permission or external recognition without evidence. The approved cover and edition label do not change those boundaries.

Verification: Compare the actual decision with credential, registry and all proposed public representations.

Acceptance / hold rule: Published scope and status exactly match the authorised decision and preserve every material restriction.

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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