



ASTRA

AEROSPACE STANDARD

IMPLEMENTATION GUIDE

Frequently Asked Questions

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Purpose and application

Source-linked answers to practical questions about all eight families and the expanded technical and lifecycle provisions.

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 Reader, scope and first decisions

For: Applicants, assessors and programme administrators.

Source-linked answers to practical questions about all eight families and the expanded technical and lifecycle provisions.

Start with the actual requested conclusion and the current adopted profile. Identify which information is source evidence, what is only proposed, who performs the activity and which independent function may decide. A guide explains implementation; it does not add a hidden pass threshold or substitute for the full standard.

2 Practical questions and source-grounded answers

Q01. Does membership establish an ASTRA outcome?

This standard establishes requirements for the AF ASTRA scheme owner, accrediting and assessment operators, applicants and holders, according to the responsibilities assigned to each. Its purpose is reproducible, impartial and technically justified evaluation, not the accumulation of certificates. Programme membership, commercial relationships and operational capability shall remain distinguishable. The reader shall establish the applicable family, object, legal entity, site, technical profile and decision type before selecting requirements. A programme-wide rule applies to its responsible function; it shall not automatically impose the whole operating system on an individual candidate or a single test customer.

Source requirement 0.1 — Intended use. Required evidence: Applicability record; responsible-function map; selected family, object and profile.

Q02. Can one certificate cover every object in a package?

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.

Source requirement 1.3 — Object and responsibility tuple. Required evidence: Complete scope tuple; separate requested outcomes; actual-performer map.

Q03. Does a headquarters visit cover every station?

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.

Source requirement 1.4 — Group, site and interface limitations. Required evidence: Entity/site hierarchy; interface agreements; scope-specific coverage and decisions.

Q04. Does outsourcing remove applicability?

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.

Source requirement 1.5 — Activity-based applicability. Required evidence: Approved applicability matrix; technical rationale; review triggers and version history.

Q05. Can a new technology enter an unreleased scope?

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.

Source requirement 1.6 — Out-of-scope and emerging activities. Required evidence: Development request; scope exclusion; dedicated supplement and release decision.

Q06. What does accreditation evaluate?

Accreditation within the current AF framework is an independently decided attestation that a conformity-assessment body is competent, impartial and consistently operated for specified assessment activities. Competence concerns demonstrated ability to perform a defined task and reach valid conclusions, including recognising limitations. A broad sector title, legal registration, quality manual or equipment list does not demonstrate competence. The accredited scope shall identify activity, object or method family, range or conditions, location, resources and limitations sufficient to prevent a misleading interpretation.

Source requirement 2.1 — Accreditation and competence. Required evidence: Technical competence scope; witnessed performance; independent accreditation decision.

Q07. Are recognition and certification interchangeable?

Recognition records that a specified institutional, educational, operational or service capability meets its approved criteria. Qualification records a demonstrated task, process or supply capability under defined conditions. Certification records conformity of a stated product, service, process, system or person to specified requirements. The relevant record shall name the result actually reached. None of these labels is interchangeable with accreditation of the body producing the result, membership, attendance, an award, a professional licence or a public operating permission.

Source requirement 2.2 — Recognition, qualification and certification. Required evidence: Outcome classification; exact criterion set; approved statement and limitations.

Q08. Is plan validation proof of achieved reduction?

Verification of a statement examines whether its historical information and assertions are supported for the declared boundary and period. Validation examines the reasonableness of assumptions, methods and prospective claims for an intended future use; it does not establish that a forecast will occur. Laboratory method validation is a separate technical activity demonstrating method fitness. The engagement shall state which meaning applies. A favourable review of a transition plan shall not be published as an achieved emissions reduction, and an accredited verifier is not automatically the holder of a verified environmental claim.

Source requirement 2.3 — Verification and validation. Required evidence: Engagement objective; statement identity; historical/prospective classification; bounded conclusion.

Q09. What is an evidence status versus a requirement conclusion?

Requirement conclusions shall distinguish conforming, nonconforming, approved non-applicability and not yet demonstrated. Evidence status shall separately distinguish planned, received, reviewed, accepted for a purpose, rejected, superseded and unavailable. An indeterminate measurement or inaccessible essential record shall not be changed to non-applicable merely to close a checklist. Confidence in a model, coverage of an uncertainty interval, probability of detection and percentage of completed checklist rows are different quantities and shall not be reported as interchangeable assurance scores.

Source requirement 2.6 — Requirement status and uncertainty. Required evidence: Controlled status dictionary; recorded transitions; uncertainty and decision interpretation.

Q10. Can an accrediting operator accredit itself?

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.

Source requirement 3.2 — Accrediting and delivery entities. Required evidence: Legal delivery model; related-activity analysis; independent oversight and liability arrangements.

Q11. Can two members act as a three-member accreditation panel?

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.

Source requirement 3.4 — Case separation and decision panels. Required evidence: Assignment matrix; independent review; three-person participation and votes; gate record.

Q12. Can leadership require a favourable technical result?

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.

Source requirement 3.5 — Commercial and leadership boundaries. Required evidence: Financial separation; influence log; independent escalation; outcome-neutral remuneration.

Q13. Can acceptance limits be set after seeing results?

Every released profile shall contain the fields in Annex C: exact scope, prerequisites, measurable or defined attribute criteria, methods, sampling, uncertainty, essential controls, competence, sites, witnessing, decision rules, duration, surveillance, records and permissible claims. Criterion limits shall be derived from the actual technical and obligation basis. They shall be fixed before results are evaluated. There shall be no universal tolerance, environmental test load, staff ratio, curriculum credit total or carbon threshold invented to cover unrelated applications.

Source requirement 4.2 — Profile content and acceptance criteria. Required evidence: Complete approved profile; criterion-to-method map; acceptance rationale.

Q14. What consultation and voting evidence is needed?

Substantive requirements shall receive at least 60 calendar days of public consultation before final technical approval through the applicable AF process. Material comments and dissent shall receive recorded dispositions. Final normative committee approval requires substantive yes-or-no participation by at least two thirds of eligible voting members and affirmative votes from at least two thirds of those substantive votes, rounded upward. Material new requirements introduced after consultation shall undergo further review or consultation proportionate to their effect. Actual records shall be retained; preparation does not retrospectively establish consultation.

Source requirement 4.3 — Consultation and technical approval. Required evidence: Notice; comments and dispositions; eligible roll; substantive vote and approval records.

Q15. Does a pilot letter confer live status?

Before release, the operator shall exercise representative normal and adverse cases, including an undefined scope, inaccessible evidence, a failed critical requirement, a conflict, a rejected result, a status change, an appeal and a recovery failure. Technical pilots shall examine criterion clarity, discrimination, burden, evaluator agreement and evidence sufficiency. Participants shall be told the restricted pilot purpose. Synthetic cases shall be labelled. A pilot participation letter shall not be a live accreditation, certification or recognition result.

Source requirement 4.4 — Pilot evaluation and method challenge. Required evidence: Pilot plan; authentic or clearly synthetic cases; findings; verified correction and limitations.

Q16. Can an interpretation waive a requirement?

A controlled interpretation may explain an existing condition but shall not change a threshold, expand a claim, waive competence or convert missing evidence into a pass. Such changes require formal normative version and prospectively defined transition. Review active rules at least every three years and sooner after serious incidents, method failures or material technological change. Retain earlier criteria and decisions. An urgent factual safety communication may protect users but shall not be disguised as an unconsulted new accreditation requirement.

Source requirement 4.6 — Interpretation and controlled evolution. Required evidence: Interpretation register; change classification; transition assessment; version archive.

Q17. Is a conflict declaration enough?

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.

Source requirement 6.1 — Institutional and personal conflicts. Required evidence: Live conflict register; prior-work screening; independent disposition and assignment restrictions.

Q18. Must every applicant buy the same training?

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.

Source requirement 6.3 — Consultancy, learning and evaluation. Required evidence: Service boundaries; training/evaluation separation; assignment conflict checks.

Q19. Does audit learning establish every technical specialism?

The operator shall define separate competence requirements for application review, audit leadership, specialist evaluation, sampling, laboratory sign-off, independent review, decisions and appeals. Profiles shall state technical fields, methods, criticality, language, professional judgement, evidence interpretation and access permissions. A person may hold several roles only when separately qualified and case independence remains valid. No generic aerospace assessor designation shall imply mastery of all eight families.

Source requirement 7.1 — Function-specific competence. Required evidence: Role profiles; technical authorisation matrix; case coverage check.

Q20. Can a high average compensate for an essential practical failure?

Knowledge and practical criteria shall be fixed before candidate evaluation. Every predesignated essential safety, integrity and independence step shall be passed; component scores shall not be averaged to conceal failure. Equivalent reassessment shall follow evidenced remediation and preserve earlier attempts. Examination questions, scenarios, identity checks and scoring shall be secured and validated. An automated score or AI recommendation shall not be the sole authority for a practical competence decision.

Source requirement 7.3 — Essential steps and assessment security. Required evidence: Assessment blueprint; component/essential-step results; secured attempts; independent authorisation.

Q21. How is an initial assessor population established?

Where no established ASTRA assessor population exists, at least two independent competent professionals shall assess each candidate against the stated role and technical criteria. Their own competence and conflicts shall be documented. Comparable prior work may satisfy specified experience elements only after verification; programme knowledge, witnessed performance and independence shall not be waived. Honorary titles, reciprocal self-approval and attendance at an introductory meeting shall not create assessor authority.

Source requirement 7.4 — Initial assessor population. Required evidence: Initial-panel qualifications; equivalence map; witnessed task; remaining scope restrictions.

Q22. What follows loss of continuing practice?

Maintain relevant development, current practice and observed performance at the intervals in Annex D. Review poor reports, inconsistent decisions, complaints, new technologies and changes in methods as well as activity counts. Failure to meet the applicable role minimum shall suspend independent role use until reviewed supervised reactivation. An individual shall notify limitations and request support rather than accept a task outside the authorised scope. Restoration does not erase earlier affected-work concerns.

Source requirement 7.5 — Maintenance and inactivity. Required evidence: Practice/development logs; witnessed reviews; suspension and reactivation; prior-work assessment.

Q23. Does calibration alone prove instrument fitness?

Equipment, software-controlled instruments, fixtures, tools and reference artefacts shall be uniquely identified and suitable for the required range, resolution, accuracy, uncertainty and duty. Verify acceptance before first use, after repair or configuration change, and when validity is questioned. Records shall include version, location, maintenance, checks, restrictions and status. Calendar calibration alone shall not establish fitness for every method or specimen. Out-of-service equipment shall be prevented from supporting an authorised result.

Source requirement 8.2 — Equipment identity and fitness. Required evidence: Equipment register; acceptance and checks; method suitability; restricted-use controls.

Q24. Does recalibration validate all prior reports?

When equipment is damaged, out of tolerance, misconfigured or otherwise suspect, stop affected use and determine the last demonstrated valid state. Review prior results, associated lots, decisions and recipients, using the likely error mechanism and uncertainty. Recalibration restores equipment evidence only after acceptance; it does not by itself establish the validity of prior work. Amend or withdraw reports and notify affected parties when their conclusions are no longer supported.

Source requirement 8.5 — Adverse equipment findings. Required evidence: Quarantine; look-back interval; impacted results; corrected reports and notifications.

Q25. Can a transferred method be presumed valid?

Verify established methods in the actual implementation. Validate new, non-standard or materially modified methods for the intended use, addressing relevant bias, precision, selectivity, sensitivity, range, robustness and uncertainty. Establish acceptance criteria before validation data are assessed. Retain failed trials and restrictions. Method transfer between sites, instruments, software or personnel requires evidence that material performance remains valid; a shared procedure number does not demonstrate successful transfer.

Source requirement 9.2 — Verification and validation. Required evidence: Validation/verification plan; raw results; acceptance analysis; transfer and limitation records.

Q26. What can a client-selected specimen represent?

When sampling is within scope, establish the population, selection method, sample size, locations, conditions, randomisation where relevant, transport and preparation. Address sampling contributions to uncertainty and limitations of inference. A result from a client-selected item shall identify that boundary. Sample identity and chain of custody shall survive splitting, pooling, consumption and subcontracting. Reject or condition work on unsuitable specimens before interpreting the result as representative.

Source requirement 9.3 — Sampling and specimen integrity. Required evidence: Sampling plan; population and selection; custody; deviations and restricted inference.

Q27. What happens to a borderline measurement?

Agree the decision rule before evaluation and record its treatment of false acceptance, false rejection, uncertainty and criticality. Annex G sets the full-interval rule and alternative-rule controls. Conformity demonstrated, nonconformity demonstrated and indeterminate are separate outcomes under that rule. Indeterminate work remains held from acceptance pending valid disposition. Repeating observations until one passes, rounding a borderline value into compliance or changing the specification after seeing the result is not a valid resolution.

Source requirement 9.5 — Decision rules and boundary results. Required evidence: Pre-agreed rule; unrounded inputs; outcome; hold and authorised disposition.

Q28. Is comparison participation satisfactory performance?

Maintain a planned programme of internal controls and independent or interlaboratory comparison appropriate to each significant technical field. Participation alone is not satisfactory performance. Investigate adverse results, assign causes and assess prior reports. Where a suitable comparison is unavailable or impracticable, approve a technically justified alternative with evidence of challenge and limitations; lack of participation opportunity shall not be described as external proof of competence. Review coverage as methods and volumes change.

Source requirement 9.6 — Continuing validity and comparisons. Required evidence: Validity-monitoring plan; comparison results; justified alternatives; adverse-result actions.

Q29. Can a report omit adverse earlier results?

Reports shall identify issuer, client, actual item, scope, method/version, conditions, dates, results, units, uncertainty where needed, deviations, decision rule, conclusion, limitations and authorised signatory. Identify subcontracted results and opinions separately. A report shall not imply that untested characteristics or future production were examined. Amendments shall preserve the original, state the reason and affected conclusion, and reach recipients who relied on an incorrect result.

Source requirement 9.7 — Technical reporting and amendments. Required evidence: Attributable report; raw-data linkage; subcontracted-result identity; amendment and recipient log.

Q30. Does a digital signature establish technical truth?

Records shall connect each requirement to actual work, configuration, performer, method, data, review and decision. Maintain unique identifiers, units, time basis, versions, status and change history. Corrections shall preserve the earlier information and reasons. Evidence shall remain distinguishable from forecasts, simulations and generated text. An imported record shall be checked for completeness and semantic mapping; a readable file without its essential relationships is not a complete transferred dossier.

Source requirement 10.1 — Records and provenance. Required evidence: Evidence index; version/provenance; change audit trail; migration checks.

Q31. Can secrecy replace essential evidence?

Collect only information needed for the authorised purpose and apply suitable access, transfer, retention and disposal controls. Agree legally sufficient confidential review of proprietary or restricted evidence. Public registry fields shall be separated from protected technical and personal records. A security or secrecy restriction shall not lead to a favourable conclusion based on inaccessible essential evidence. Use authorised reviewers, a bounded scope or refusal when adequate lawful review cannot be achieved.

Source requirement 10.2 — Confidentiality, personal data and controlled technology. Required evidence: Data classification; permissions; secure review; retained evidence and public-field separation.

Q32. Can AI make the final ASTRA decision?

AI may assist search, classification, drafting and anomaly identification only within an approved use, data boundary and human review. Material conclusions shall retain verifiable underlying evidence; generated citations, transcripts, images or observations shall not be passed off as authentic records. Evaluate data rights, bias, failure modes, confidentiality and model changes. An automated system shall not independently grant, renew, suspend or restore an ASTRA outcome. The authorised decision maker remains accountable.

Source requirement 10.4 — Artificial intelligence and generated material. Required evidence: Approved AI use; validated limitations; verified outputs; human decision and audit trail.

Q33. Is a prerecorded video live witnessing?

Before remote assessment, verify identity, connection security, permissions, camera or sensor adequacy, observation continuity and independent selection of evidence. Record interruptions, inaccessible areas and substitutions. Prerecorded material shall be identified and shall not be represented as live observation. Where physical or practical capability cannot be established remotely, arrange on-site or appropriately controlled witnessed work. Remote convenience shall not reduce scope coverage, time, competence or critical observation.

Source requirement 10.5 — Remote access and live evidence. Required evidence: Remote suitability review; consent/access; live-session record; supplementary coverage.

Q34. Does backup recovery prove restored integrity?

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.

Source requirement 10.6 — Recovery, retention and closure. Required evidence: Restore/integrity tests; retention basis; legal holds; secure disposal and closure transfer.

Q35. Must an ordinary applicant sign an operator MoU?

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.

Source requirement 11.5 — Authorisation to act for AF. Required evidence: Competence decision; written approval; executed MoU; controlled delegation and scope.

Q36. What is a productive evaluator-day?

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.

Source requirement 12.4 — Time and productive work. Required evidence: Task/time matrix; separate resources; actual productive time; approved additions.

Q37. Can bundling reduce necessary technical witnessing?

Coordinate visits and common evidence requests when the same applicant uses several families. Preserve each profile, specialist, finding impact, review and outcome. Record which shared control was evaluated, for what scope and by whom. Calculate any efficiency from demonstrably shared work rather than an arbitrary bundled discount on necessary technical observation. A finding in a common control shall trigger review of every dependent outcome, with restrictions limited only where unaffected scope is independently established.

Source requirement 12.5 — Multifamily coordination. Required evidence: Integrated schedule; shared-work allocation; separate conclusions; cross-scope finding impact.

Q38. What does a complete vertical trail show?

Combine document review, interviews, observation and actual results. Trace selected outputs backward through requirements, authorisation, resources, performer, method, materials and configuration, then forward through release, change and feedback. Include failed tests, rework, interruptions, complaints and previous adverse decisions where relevant. Sampling shall be expanded when inconsistencies suggest systemic issues. A signed checklist or assurance statement alone is not evidence that the underlying activity occurred.

Source requirement 13.2 — Implementation and vertical trails. Required evidence: End-to-end trails; selected populations; adverse cases; sample expansion and findings.

Q39. How are critical concerns handled?

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.

Source requirement 14.2 — Immediate protection and notifications. Required evidence: Awareness and action times; containment; notification/acknowledgement; status decision.

Q40. Can a new finding number restart the clock?

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.

Source requirement 14.4 — Plans, closure and effectiveness. Required evidence: Accepted plan; original due dates; implementation and effectiveness evidence; verified closure.

Q41. Can a new grant include an open minor?

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.

Source requirement 14.5 — Existing status and new grants. Required evidence: Independent continuation/restriction rationale; closed findings for grant; current protection.

Q42. Is conformity decided by an average score?

A positive grant, renewal or extension requires valid scope, all applicable criteria fulfilled, adequate evidence, closed in-scope nonconformities, sufficient independent competence and actual authority. Required operating and mark permissions shall be effective before the associated claim is used. This is a conjunction of conditions, not a weighted score. A genuinely bounded unaffected scope may be granted only after independent evaluation; it shall not conceal a systemic deficiency or imply success in the refused scope.

Source requirement 15.2 — Positive-decision gate. Required evidence: Completed gate; exact granted/refused boundary; authority and permission checks.

Q43. Can a conditional certificate postpone mandatory criteria?

Decisions may grant, refuse, maintain, restrict, suspend, restore, renew, extend, correct or withdraw a stated result. Conditions attached to a valid outcome shall define its actual operating boundary and continuing obligations, not postpone unmet mandatory criteria. Pre-assessment, applicant and pilot status are not provisional conformity certificates. A lawful product concession remains an explicitly bounded technical disposition and does not waive the requirements for an ASTRA attestation.

Source requirement 15.4 — Permitted outcomes and conditions. Required evidence: Reasoned outcome; bounded conditions; applicant notice; separated concession record.

Q44. Does the issue date become the decision date?

Record the actual decision date, issue date, effectivity, expiry or instance boundary, criteria version, responsible issuer and signatory. Notify the applicant of reasons, scope, continuing duties and remedy route. Public status shall match the decision and be updated within two calendar days of a status change, while urgent holder notice is immediate. An invoice date, ceremonial date, signature-image insertion or document reprint shall not become a fictitious conformity date.

Source requirement 15.5 — Decision date and communication. Required evidence: Authenticated decision; notice; issue/expiry fields; timely registry instruction.

Q45. Do test results expire under a universal two-year rule?

Ongoing ASTRA recognition, qualification, certification or CAB accreditation under this common framework shall have a maximum 24-month period from the independent conformity decision, subject to a shorter profile interval and continued fulfilment. AF 9100 cases retain their controlling provisions. An instance result identifies its lot, serial, event, test or historical statement and does not acquire a universal two-year technical validity. Credential duration never extends an equipment life limit, calibration, statutory authorisation or qualified process window.

Source requirement 16.1 — Duration and basis. Required evidence: Ongoing/instance classification; exact dates; linked technical limits.

Q46. Does a surveillance booking satisfy the deadline?

Complete ongoing surveillance at intervals no greater than 12 months, reduced to six months for high-consequence, materially novel or significant competence/integrity exposure. Apply the AF 9100 C0–C3 rules when that standard is used. Mixed scopes follow the shortest triggered interval unless genuinely separated. Reassess actual operation, technical witnessing, changes, adverse results and controls; a document check or booked visit alone is not completed surveillance. Missing required completion triggers affected suspension.

Source requirement 16.2 — Surveillance frequency and coverage. Required evidence: Risk-based timetable; completed technical coverage; changed-scope review; overdue action.

Q47. Does late renewal preserve continuous status?

Plan renewal sufficiently early to complete evaluation, closure, independent review and decision before expiry; initiation at least 90 days beforehand is recommended, not a guarantee. If the renewal decision occurs after expiry, a visible gap remains and the new status starts no earlier than the actual decision. Relevant prior work may inform the review but not substitute for current demonstrated capability. No payment or appeal automatically extends validity.

Source requirement 16.4 — Renewal and interruption. Required evidence: Renewal plan; current evidence; closed findings; actual dates and disclosed gap.

Q48. Does restoration extend the original expiry?

A suspension shall state scope, reason, prohibited claims, required actions and a resolution deadline no later than 90 days from the decision. Restore only after verified correction, affected-output review and a valid current basis; otherwise restrict to independently unaffected scope or withdraw. Repeated administrative resets are prohibited. Restoration without full renewal preserves the original expiry and does not validate the suspended interval. Technical containment and reporting continue independently of certificate administration.

Source requirement 16.5 — Suspension, restoration and withdrawal. Required evidence: Status notices; verified restoration; unaffected-scope rationale; historical continuity.

Q49. Does changing issuer remove a suspension?

A receiving operator shall verify authenticity, scope, criteria, decision history, findings, surveillance, authority and technical evidence before accepting a transfer, and perform additional evaluation where necessary. Suspended or unsupported status cannot be made valid by changing issuer. Operator cessation shall preserve records, pending remedies, current status, holder communication and lawful access. Transfer of files does not itself transfer accreditation, AF operating authority or a wider technical scope.

Source requirement 16.6 — Transfer and cessation. Required evidence: Transfer review; additional work; continuity agreement; accurate issuer/status history.

Q50. Does a system certificate approve every product?

The assessor shall test both vertical product/service trails and systemic governance, including resources, competence, changes, feedback and corrective effectiveness. Use the applicable organisational time and site minima. The independent conclusion shall identify entity, sites, profile and system boundary. It shall not imply approval of every delivered product, laboratory method, maintenance task, employee or service station. Any technical capability claim requires its own relevant family evidence and decision.

Source requirement 17.4 — Independent organisational outcome. Required evidence: System evaluation; time/site evidence; independent ORG result; separate technical scopes.

Q51. Does a qualified process approve every machine output?

The application shall distinguish a qualified process from a conforming product configuration, family, lot or serial. A process scope shall identify site, equipment, material/geometry range, essential variables and outputs. A product scope shall identify technical requirements, intended use, configuration, production basis, acceptance and support. Combined evaluation is permissible only with separate criteria and conclusions. A machine approval shall not become approval of every process run or product made using it.

Source requirement 18.1 — Process or product object. Required evidence: Process/product scope; technical profile; distinct decision boundary.

Q52. Does a first article prove continuing production capability?

Account for all applicable characteristics of a production-representative article using actual results, current data, material evidence, qualified processes and controlled software. A partial first article requires a justified changed/unchanged characteristic analysis. Production readiness shall additionally address resources, measurement capability, operators, suppliers, process stability and unresolved risks. One conforming article shall not replace ongoing controls or establish capability for untested variants.

Source requirement 18.5 — First article and production readiness. Required evidence: Characteristic accountability; actual route; partial/full rationale; readiness decision.

Q53. Can a laboratory claim all aerospace tests?

The laboratory or inspection body shall define method families, materials/items, measured properties, ranges, conditions, sites, mobile activities and limitations. Calibration scopes shall state measurement quantities and demonstrated uncertainty capability. Inspection scopes shall state object, stage, criteria and independence relationship. An unrestricted description such as all aerospace tests is insufficient. Flexible scope shall be bounded prospectively and shall not authorise a new measurement principle, site or technical field without competence review.

Source requirement 19.1 — Detailed technical scope. Required evidence: Method/range/site schedule; relationship declaration; controlled flexibility limits.

Q54. Does one reference check prove all detection ability?

Demonstrate method suitability for relevant defect mechanisms or measurands, specimen preparation, surfaces, geometry, matrix effects, interference, access and environmental conditions. For qualitative inspection, evaluate false-positive and false-negative behaviour where material. Detection capability shall be tied to technique, task, equipment and person. A successful reference check on an easy artefact shall not prove the ability to detect every relevant defect in an installed structure.

Source requirement 19.3 — Method performance and detection. Required evidence: Method validation; challenge specimens; detection limitations; authorised interpretation.

Q55. Can a new education programme invent completion evidence?

A full programme outcome shall be based on authentic completed delivery and assessment evidence, normally at least one complete cohort for the claimed completion route, sufficient to evaluate all applicable outcomes. Where this evidence does not yet exist, the operator may issue only a clearly bounded developmental readiness report, with no live recognition or accreditation claim. The profile shall define suitable evidence for individualised or very low-volume programmes without inventing graduates or records.

Source requirement 20.9 — Initial operating evidence and readiness only. Required evidence: Completed delivery evidence; cohort/route coverage; readiness limitations; honest public status.

Q56. Does airport recognition cover its tenants?

Assign responsibilities with handlers, fuel providers, airlines, maintenance organisations, cargo operators, navigation support and construction contractors. Shared controls shall state ownership, handovers, notification, monitoring and escalation. Track construction handover and temporary restrictions before operational use. Each independently claimed provider capability retains its own assessment and scope. Annex K supports interface records; a common landlord relationship does not merge technical authorisation or liability.

Source requirement 21.7 — Tenants, construction and common interfaces. Required evidence: Interface register; handovers; construction acceptance; independently scoped provider evidence.

Q57. Is maintenance recognition an aircraft release?

Before release, verify completed requirements, approved repairs/deviations, required independent checks, final configuration, restored protections, life status and remaining limitations. The actual authorised person shall issue the appropriate release and customer information within their privileges. ASTRA capability recognition shall not be used as a replacement maintenance release. Receiving parties shall obtain records necessary for safe continued support, with acknowledgement where required.

Source requirement 22.6 — Release and customer handover. Required evidence: Final review; actual release authority; maintenance result; handover and restrictions.

Q58. Can one station certify the entire ground network?

Station variations shall identify customer data, infrastructure, language, equipment, staffing, climate, operating hours and local obligations affecting service. Monitor incident, delay, damage, complaint and control-performance information with defined denominators. Systemic headquarters failures require review across dependent stations; a local failure requires justified extent analysis, not automatic concealment by deleting that station. Additions and material changes require demonstrated capability before claim extension.

Source requirement 23.11 — Local variation and continuing network control. Required evidence: Local-variation file; network indicators; systemic/local extent; new-station decision.

Q59. What makes an environmental statement boundary valid?

Identify the responsible entity, assets/sites, reporting period, intended users, statement, methodology, criteria and required form of assurance. Separate capability evaluation from statement verification and prospective validation. Approve the boundary, exclusions, materiality approach, data access and reporting conditions before evaluation. An airport operator's inventory is not automatically the inventory of every aircraft, tenant or service provider connected to it.

Source requirement 24.1 — Engagement and statement boundary. Required evidence: Engagement record; exact statement; boundary and period; agreed assurance objective.

Q60. Is there a universal five-percent materiality?

Set quantitative and qualitative materiality for the intended users, statement and consequences before substantive work. Plan evidence accordingly and consider aggregation, bias, omissions and fraud indicators. There is no universal five-percent materiality or assurance percentage in this standard. Materiality does not authorise knowingly false reporting, omitted mandatory categories or ignoring a significant qualitative issue. Reasonable and limited assurance engagements shall have separately defined work and appropriately worded conclusions.

Source requirement 24.8 — Materiality and assurance planning. Required evidence: Materiality rationale; assurance level; strategic and evidence plan; aggregated/qualitative issues.

Q61. Does verifier accreditation verify all future statements?

Demonstrate competence for the type of claim, sector, data, methodology, assurance level and intended use. Separate preparation of a client's statement from independent evaluation of it. Verify engagement acceptance, strategic analysis, risk and materiality, evidence plan, execution, misstatement resolution, independent review and conclusion. Preserve actual statement versions and communicate later material errors. Accreditation concerns the body's competence, not the truth of every statement it may issue.

Source requirement 25.5 — Validation and verification bodies. Required evidence: Claim-specific competence; independent engagement trail; statement version; conclusion and correction.

Q62. Can terrestrial evidence automatically qualify space use?

For inaccessible, in-space or delayed-communication work, establish evidence acquisition, identity, configuration, time basis, telemetry validity, data loss, permitted remote actions and safe fallback. Explain what is directly observed, inferred or unknown. Independent review shall use appropriately authorised experts and retained records. No space suitability or completed end-of-life action shall be claimed from an unverified signal or terrestrial analogy alone. Mission-specific technical profiles remain prerequisites.

Source requirement 26.4 — Remote, space and long-duration operation. Required evidence: Remote assurance plan; telemetry provenance; inference limits; mission profile and decisions.

Q63. Does an appeal restore a suspended credential?

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.

Source requirement 27.5 — Systemic effects and non-retaliation. Required evidence: Related-case analysis; corrective action; retaliation review; accurate public/status correction.

Q64. May public claims imply universal acceptance?

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.

Source requirement 28.2 — Truthful public wording. Required evidence: Approved claim; actual acceptance arrangement where claimed; limits clearly communicated.

Q65. Does independent operator review establish external recognition?

Before launch and at intervals no greater than 36 months, obtain an independent review of the accrediting operator's competence, impartiality, technical coverage, governance, decisions and actual implementation, with earlier review after serious concerns. The reviewers shall be competent and free of reciprocal self-approval. Their findings, limits and corrective results shall be recorded. This internal programme requirement does not itself establish membership of an external recognition arrangement or international acceptance.

Source requirement 29.3 — Independent accrediting-operator review. Required evidence: Independent reviewers; operator evaluation; findings/closure; evidenced limits of standing.

Q66. Does transfer of a file transfer authority?

Any agreement to rely on another party's results shall identify parties, exact activities, acceptance conditions, competent evaluation, monitoring, territorial limits, confidentiality and withdrawal. Verify authenticity and fit for each actual use. Do not infer acceptance from an MoU title, shared event, commercial partnership or similar standard number. The party making an acceptance decision retains responsibility for that decision. Mutual familiarity is not independent competence evidence.

Source requirement 30.3 — Reliance and cooperation agreements. Required evidence: Executed bounded agreement; evidence checks; monitoring; truthful acceptance statements.

Q67. Can a form contain assumed approvals?

The records in Annex M shall be created when their triggering activity applies. They may be combined in a database or controlled document if identities, required fields, relationships, signatures, access and history remain intact. Templates are capture tools, not completed evidence. The programme shall not invent applicants, calibration results, witnesses, student attainment, emissions figures, appointments or approvals. Blank fields shall remain visibly incomplete until authentic information is entered.

Source requirement 31.1 — Minimum records and equivalent systems. Required evidence: Record dictionary; equivalent-system mapping; genuine data and approvals.

Q68. Does component acceptance establish integrated mission success?

The organisation shall maintain an argument linking each material safety, performance and mission claim to requirements, assumptions, configuration, evidence and limitations. The case shall expose adverse evidence, competing explanations, common dependencies and unresolved uncertainty. It shall distinguish analysis, simulation, observed demonstration and service experience. Independent review shall challenge whether the evidence supports the actual claim rather than merely whether documents exist. An accepted component or qualified supplier shall not establish the acceptability of every integrated configuration or operational scenario.

Source requirement 32.4 — Integrated assurance case. Required evidence: Claim-evidence map; assumption and uncertainty records; counter-evidence; independent challenge; bounded conclusions.

Q69. Which configuration states need to be distinguished?

The configuration system shall distinguish intended, designed, built, tested, delivered, installed and currently operated states. Each technical result shall identify the state actually evaluated, including relevant software, parameters, materials and modifications. Serial, batch, assembly and parent-child relationships shall survive splitting, replacement and repair. Configuration identity shall not be inferred from a commercial product name alone. Where a legacy baseline is incomplete, the organisation shall establish the uncertainty and necessary verification before extending the assurance claim.

Source requirement 33.3 — Configuration states and genealogy. Required evidence: Configuration register; as-built and as-operated records; genealogy; test-to-configuration links; legacy gap review.

Q70. Does reuse reset accumulated exposure?

Reusable articles shall retain identity, configuration, prior flights or uses, maintenance, refurbishment, repairs and accumulated relevant exposure. The organisation shall define how the reuse decision is supported by inspection capability, life assessment and qualified repair or replacement. A successful prior mission shall not reset life or conceal damage. Unknown history shall remain a controlled uncertainty. New materials, repair methods or changed duties shall undergo technical review before previous qualification is relied upon.

Source requirement 36.4 — Reuse and accumulated exposure. Required evidence: Article history; exposure and condition record; inspection and repair evidence; configuration-specific reuse decision.

Q71. Is loss of contact proof of successful disposal?

End-of-life planning shall address foreseeable failure, remaining resources, support continuity and evidence of actual completion. The organisation shall preserve unresolved obligations and explain whether a final state is observed, inferred or unknown. Loss of contact shall not be labelled successful disposal without adequate evidence. Programme or provider closure shall identify a receiving custodian for necessary records and notifications. Public claims shall describe the bounded achievement rather than guarantee perpetual orbital safety or universal sustainability.

Source requirement 37.6 — Disposal and verifiable closure. Required evidence: Disposal feasibility review; actual completion record; open-duty allocation; retained history and accurate public statement.

Q72. Is a nominal human override effective oversight?

Automation shall have explicit authority limits and an identified accountable organisation. Human oversight shall be evaluated for actual information, time, skill and ability to intervene, not simply the presence of a person in a process diagram. Training shall cover limitations, misleading outputs and degraded modes. Material changes in automation, tasks or user populations shall trigger reassessment. A favourable aggregate task-completion rate shall not compensate for a failed essential protective response.

Source requirement 39.6 — Human authority in automated systems. Required evidence: Authority allocation; intervention validation; representative training and assessment; change review; essential-step results.

Q73. Do separate environmental tests cover every combined effect?

The verification strategy shall evaluate whether environmental stresses interact and whether the order of exposure affects the conclusion. Cumulative damage, preconditioning, repairs, software changes and prior unsuccessful tests shall remain part of the article history. The organisation shall distinguish necessary qualification margin from unrepresentative over-test. Where separate tests cannot demonstrate a coupled effect, an additional integrated method or justified analysis shall be established. A passed individual test shall not automatically bound every combination of operating conditions.

Source requirement 42.3 — Combined environments and test sequence. Required evidence: Sequence and interaction analysis; article exposure history; cumulative-effect review; additional integrated evidence.

Q74. Is nominal battery capacity proof of complete safety?

Battery assurance shall retain cell and module provenance, configuration, manufacturing consistency, protective controls, thermal management and actual operating history. Qualification shall address relevant degradation and credible abnormal conditions under the approved application basis. State estimates and health-monitoring outputs shall identify their model and uncertainty. Reuse or second-life use shall require a new suitability assessment without erasing prior history. An acceptable nominal capacity or successful functional check shall not establish complete safety or fitness for another duty cycle.

Source requirement 43.2 — Batteries and electrical storage. Required evidence: Storage-system baseline; provenance and life history; qualification; monitoring validation; reuse decision.

Q75. Does a software version identify the complete released artefact?

Source, generated code, logic, configuration, tools, dependencies and build instructions shall have controlled identities and attributable changes. The released artefact shall be linked to the reviewed baseline and the actual loaded target. Reproducibility shall be demonstrated where necessary for the intended assurance claim. Unapproved dependencies and embedded secrets shall be controlled. A software version label alone shall not establish which settings, data, model weights or external services influenced the delivered behaviour.

Source requirement 44.2 — Source, build and loaded configuration. Required evidence: Source and review records; build/dependency manifest; artefact identity; loaded-configuration verification.

Q76. Is model confidence a calibrated safety probability?

Acceptance criteria shall be fixed before evaluation and define relevant errors, denominators, exposure, uncertainty and essential protective conditions. Results shall be examined by meaningful operating condition or subgroup rather than only in aggregate. False acceptance, missed detection, unavailable output and indeterminate behaviour shall be distinguishable. A model confidence score is not automatically a calibrated probability of correctness or a probability of safe operation. Material evidence gaps shall prevent the dependent positive conclusion.

Source requirement 45.3 — Performance and uncertainty. Required evidence: Prospective performance criteria; stratified results; uncertainty and calibration review where relevant; essential-failure record.

Q77. Can a digital twin remove physical testing for convenience?

Where modelling replaces or reduces physical testing, inspection or practical observation, the organisation shall provide a prospective equivalence argument. It shall address failure mechanisms, validated domain, uncertainty, independent review and the material properties or behaviours that remain unobserved. The actual technical and legal obligations shall be checked before removal of a required activity. Cost, speed or model convenience alone shall not justify a reduction in necessary evidence.

Source requirement 46.4 — Replacement or reduction of physical work. Required evidence: Test-replacement rationale; validated equivalence; residual physical evidence; approval and restrictions.

Q78. Does availability establish service correctness?

Specialist support shall define data origin, transformation, units, reference systems, timestamps, timeliness, integrity and the user's permitted reliance. Wrong, missing, late and superseded information shall be included in validation. The organisation shall distinguish advice, data provision and actual operational authority. Availability alone shall not demonstrate correctness. Necessary dedicated criteria and permissions shall exist before a communications, navigation, surveillance or meteorological-support claim is admitted to the active scope.

Source requirement 51.4 — Flight and navigation-support data. Required evidence: Specialist profile; source-to-user data trace; timing and error-handling validation; actual permissions.

Q79. Do equal file counts prove successful migration?

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.

Source requirement 56.5 — Export, migration and meaningful recovery. Required evidence: Export manifest; semantic reconciliation; preserved source; recovery integrity; receiving acceptance and custody.

Q80. Is evaluator agreement the same as correctness?

The programme shall use independent first responses to representative anonymised cases, followed by comparison of reasoning, evidence and outcome. Moderation shall distinguish unclear criteria, different facts, missing expertise and legitimate technical disagreement. A majority answer shall not become technical truth by itself. Quantitative agreement measures shall state their design and limitations and shall not be equated with correctness. Lessons affecting requirements shall follow controlled interpretation or version rather than informal instruction to produce uniform results.

Source requirement 57.4 — Consistency without coerced agreement. Required evidence: Exercise design; independent responses; moderated reasoning; disagreement causes; controlled learning actions.

Q81. Does a finished document make the programme operational?

Before live scope release, perform representative technical and workflow pilots and verify correction of blocking findings. Test actual source access, assessment coverage, adverse results, conflicts, independent decisions, public claims and recovery. Local system validation shall test the actual deployment, not only a reference workbook. Synthetic cases support logic checks but shall not be represented as genuine applicants or field validation. Readiness conclusions shall state precisely which capabilities have been demonstrated.

Source requirement 60.4 — Integrated pilots and local system acceptance. Required evidence: Pilot plans and executed evidence; findings/retests; local validation; bounded readiness report.

Q82. Can new requirements be applied retrospectively?

Clauses 32–80 and Annexes S–AJ are additions prepared for this version. Their requirements apply only within the actual adopted scope and after the appropriate normative and institutional process. Informative catalogues, examples and roadmaps shall retain that status. Inclusion of an activity does not establish a complete application-specific technical method, assessor capability or operating permission. No clause in this version shall be applied retrospectively as though it governed an earlier decision before its actual effectivity.

Source requirement 61.2 — New provisions and prospective effect. Required evidence: Change classification; adoption and effective versions; scope applicability; protected historical decision bases.

Appendix A — Use and maintenance of the answers

Check	Evidence required before consequential use
Authority and scope	Actual operator, permissible result class, exact technical profile and responsible owners.
People and independence	Named current specialists, review and decision functions; conflicts screened before assignments.
Criteria and evidence	Prospective actual technical parameters, valid methods, authentic source access and representative observations.
Records and tools	Complete field mapping, unique IDs, history, confidentiality, working retrieval and locally validated systems.
Pilot and correction	Real technical demonstration where required; safe workflow challenges; original defects and verified retests.
Publication and transition	Actual approvals and dates, impact on dependent documents, user notices and retained earlier decision bases.

Use the full Clause 4 and 31 activation conditions and Annex P. These checks do not create an approval merely because the document is complete. Record authentic decisions in FR-001 or an equivalent controlled record.

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
1.5 / 11	Activity-based applicability	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

ASTRA ID / page	Source subject	Implementation use
6.1 / 16	Institutional and personal conflicts	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
7.1 / 17	Function-specific competence	Requirement, objective evidence and local child predicates
7.3 / 17	Essential steps and assessment security	Requirement, objective evidence and local child predicates
7.4 / 17	Initial assessor population	Requirement, objective evidence and local child predicates
7.5 / 18	Maintenance and inactivity	Requirement, objective evidence and local child predicates
8.2 / 18	Equipment identity and fitness	Requirement, objective evidence and local child predicates
8.3 / 18	Traceability and calibration	Requirement, objective evidence and local child predicates
9.4 / 20	Measurement model and uncertainty	Requirement, objective evidence and local child predicates
9.5 / 20	Decision rules and boundary results	Requirement, objective evidence and local child predicates
10.6 / 22	Recovery, retention and closure	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
15.1 / 26	Review dossier	Requirement, objective evidence and local child predicates
15.2 / 27	Positive-decision gate	Requirement, objective evidence and local child predicates
15.3 / 27	Panel and dissent	Requirement, objective evidence and local child predicates
16.1 / 27	Duration and basis	Requirement, objective evidence and local child predicates

ASTRA ID / page	Source subject	Implementation use
16.2 / 28	Surveillance frequency and coverage	Requirement, objective evidence and local child predicates
16.3 / 28	Material change and notification	Requirement, objective evidence and local child predicates
16.4 / 28	Renewal and interruption	Requirement, objective evidence and local child predicates
20.3 / 34	Learning outcomes and curriculum alignment	Requirement, objective evidence and local child predicates
20.4 / 34	Admissions, progression and completion	Requirement, objective evidence and local child predicates
20.5 / 34	Assessment validity and academic integrity	Requirement, objective evidence and local child predicates
20.8 / 35	Attainment, improvement and closure of the loop	Requirement, objective evidence and local child predicates
20.9 / 35	Initial operating evidence and readiness only	Requirement, objective evidence and local child predicates
24.1 / 40	Engagement and statement boundary	Requirement, objective evidence and local child predicates
24.2 / 40	C01 – Inventory and data	Requirement, objective evidence and local child predicates
24.3 / 41	C02 – Reduction and transition	Requirement, objective evidence and local child predicates
24.7 / 41	C06 – Low-carbon energy and supply claims	Requirement, objective evidence and local child predicates
24.8 / 41	Materiality and assurance planning	Requirement, objective evidence and local child predicates
24.9 / 42	Verification execution and independent conclusion	Requirement, objective evidence and local child predicates
28.1 / 45	Mandatory scope content	Requirement, objective evidence and local child predicates
28.2 / 46	Truthful public wording	Requirement, objective evidence and local child predicates
28.3 / 46	AF marks and authorised use	Requirement, objective evidence and local child predicates
28.4 / 46	Registry states and authenticity	Requirement, objective evidence and local child predicates
28.5 / 46	Registry security, correction and availability	Requirement, objective evidence and local child predicates
30.2 / 48	Controlled transition	Requirement, objective evidence and local child predicates

ASTRA ID / page	Source subject	Implementation use
30.4 / 48	Scope withdrawal and learner/customer protection	Requirement, objective evidence and local child predicates
31.3 / 49	Actual adoption record	Requirement, objective evidence and local child predicates
47.6 / 71	Incident recovery and assured return	Requirement, objective evidence and local child predicates
52.3 / 76	Practical learning and assessment integrity	Requirement, objective evidence and local child predicates
52.5 / 77	Attainment, improvement and learner protection	Requirement, objective evidence and local child predicates
53.2 / 77	Inventory and comparable reduction	Requirement, objective evidence and local child predicates
56.3 / 81	Decision and publication safeguards	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
57.1 / 81	Role-specific competence and scope	Requirement, objective evidence and local child predicates
57.3 / 82	Practical assessment and maintained practice	Requirement, objective evidence and local child predicates
58.5 / 83	Continuing status and real chronology	Requirement, objective evidence and local child predicates
61.3 / 86	Dependent documents and compatibility	Explicit verification and acceptance predicate
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
64.2 / 92	Geometry, reference frames and event time	Explicit verification and acceptance predicate

ASTRA ID / page	Source subject	Implementation use
64.5 / 92	Heritage and similarity	Explicit verification and acceptance predicate
64.6 / 93	Baseline maintenance and irreversible decisions	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
68.6 / 101	Mission extension and terminal resources	Explicit verification and acceptance predicate
68.7 / 101	Status and long-term custody	Explicit verification and acceptance predicate
73.1 / 110	Population, mission and human tasks	Explicit verification and acceptance predicate
73.5 / 111	Human factors and effective authority	Explicit verification and acceptance predicate
74.7 / 113	Disposition and residual responsibility	Explicit verification and acceptance predicate
75.4 / 114	Yield, mass balance and circularity	Explicit verification and acceptance predicate
75.7 / 115	Handover, resource claims and closure	Explicit verification and acceptance predicate
76.6 / 117	Degradation, environmental claims and retirement	Explicit verification and acceptance predicate
77.3 / 118	Measurement and uncertainty readiness	Explicit verification and acceptance predicate
77.6 / 119	Numerical and attribute acceptance	Explicit verification and acceptance predicate
77.8 / 119	Independent campaign closure	Explicit verification and acceptance predicate
78.3 / 120	Evaluation data and model credibility	Explicit verification and acceptance predicate
78.4 / 120	Human authority and consequential decisions	Explicit verification and acceptance predicate
78.5 / 121	Security and trusted updates	Explicit verification and acceptance predicate
78.6 / 121	Monitoring, drift and adaptation	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
79.5 / 122	Terminal evidence and responsible transfer	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
80.5 / 124	Continuing conformity and change	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-005 – Personnel Qualification, Authorisation and Monitoring

Implementation basis: 7.1 (p. 17); 7.3 (p. 17); 7.4 (p. 17); 7.5 (p. 18); 57.1 (p. 81); 57.3 (p. 82); 62.5 (p. 89); 73.1 (p. 110); 73.5 (p. 111); 78.4 (p. 120); 80.3 (p. 124)

X05.1 Map competence to an actual task

Separate knowledge, specialist methods, practical evaluation, leadership, review, decision and appeal. Map mission-domain demands and evidence-access limits to each role.

Completion / hold: A general title or training course is not an authorisation for an unfamiliar task.

X05.2 Observe essential performance directly

Define task conditions, representative configuration, rubric, prohibited assistance and essential steps before the demonstration. Preserve failed attempts and material limits of simulation.

Completion / hold: Every essential step passes individually; component scores cannot compensate for essential failure.

X05.3 Test effective human authority

Confirm information, response time, skill and technical access needed for intervention or independent decisions, particularly with delayed mission data and AI support.

Completion / hold: A nominal human approval point fails when timely meaningful intervention is not feasible.

X05.4 Maintain event-time currency

Review actual practice, learning, witnessed work, changing methods, report quality and adverse feedback. Record suspension and supervised reactivation using genuine dates.

Completion / hold: Later authorisation cannot validate prior out-of-scope work; assess affected earlier outputs separately.

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-010 – Measurement Traceability, Uncertainty and Decision Rules

Implementation basis: 8.2 (p. 18); 8.3 (p. 18); 9.4 (p. 20); 9.5 (p. 20); 62.2 (p. 88); 62.3 (p. 88); 62.4 (p. 88); 62.7 (p. 89); 64.2 (p. 92); 77.3 (p. 118); 77.6 (p. 119)

X10.1 Freeze the quantitative contract

Define the measurand, model, corrected result, units, bounds, inclusivity, actual configuration, uncertainty interpretation and prospective predicate.

Completion / hold: Invalid or missing essential inputs remain HOLD; the assessor does not supply an undocumented limit.

X10.2 Propagate actual uncertainty and dependence

Retain source distributions, sensitivity coefficients, covariance and model discrepancy. Distinguish standard uncertainty, expanded coverage and unbounded knowledge gaps.

Completion / hold: A copied instrument capability or assumed independence cannot replace a use-specific uncertainty budget.

X10.3 Apply state logic without rounding bias

Evaluate the full interval or a prospectively approved alternative with unrounded finite inputs. Preserve PASS, FAIL, HOLD and approved N/A as separate states.

Completion / hold: Boundary overlap remains HOLD; invalid evidence is not converted into a proven product defect.

X10.4 Replay and report independently

Recompute a boundary case with the same frozen inputs, identify any different assumptions and record scope-limited reporting and recipient corrections.

Completion / hold: Unresolved replay disagreement blocks the dependent acceptance even where the nominal arithmetic appears plausible.

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-014 – Independent Review and Outcome Decisions

Implementation basis: 3.4 (p. 13); 15.1 (p. 26); 15.2 (p. 27); 15.3 (p. 27); 62.4 (p. 88); 62.5 (p. 89); 62.7 (p. 89); 77.8 (p. 119); 80.1 (p. 124); 80.2 (p. 124); 80.3 (p. 124); 80.4 (p. 124)

X14.1 Freeze the independent decision dossier

Reconcile exact scope, requirement population, all triggered parameters, evidence versions, configuration, observations, open issues and accountable roles.

Completion / hold: A missing essential source, unresolved configuration or unsupported exclusion keeps the dependent decision on HOLD.

X14.2 Apply the conjunction before the vote

Require all applicable mandatory rows PASS, approved N/A reasons, verified closure, competent independent authority and required panel participation.

Completion / hold: A numerical majority or high score cannot supply absent evidence or waive a mandatory condition.

X14.3 Replay a difficult or disputed conclusion

Use the same inputs, rule, uncertainty and current role authority to reconstruct the state. Identify the exact differing assumption before accepting agreement.

Completion / hold: Unresolved essential dissent results in more work, a real bounded scope or HOLD, never coerced consensus.

X14.4 Publish only the supported outcome

Record genuine decision, issue and expiry/instance, exact class and limitations. Send authenticated instructions to the registry and relevant recipients.

Completion / hold: Public wording and digital status cannot extend the decision or imply operational permission.

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-015 – Surveillance, Renewal and Scope Extension

Implementation basis: 16.1 (p. 27); 16.2 (p. 28); 16.3 (p. 28); 16.4 (p. 28); 58.5 (p. 83); 62.5 (p. 89); 64.6 (p. 93); 68.6 (p. 101); 78.6 (p. 121); 80.5 (p. 124)

X15.1 Freeze the actual cycle baseline

Record original decision, maximum duration, selected shorter intervals, criticality and last completed surveillance by independent outcome.

Completion / hold: Bookings and payment do not fulfil surveillance or extend validity.

X15.2 Re-evaluate mission and technical change

Compare environment, duration, fleet, suppliers, task/site, model and monitoring changes. Preserve evidence retained, invalidated and newly required.

Completion / hold: New domain or materially changed duty remains outside the claim until evaluated and independently accepted.

X15.3 Plan and complete meaningful surveillance

Sample actual routine/adverse work, current people, qualified methods, hidden dependencies and necessary local delivery rather than unchanged manuals only.

Completion / hold: All required scope coverage and clocks must be satisfied; missing completion triggers the controlling status action.

X15.4 Renew without manufactured continuity

Complete findings closure, independent review and genuine decision. A late renewal preserves the expired interval and original historical basis.

Completion / hold: Restoration or reprinting is not renewal; operational life and specialist permissions remain separate.

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.

AF-AST-PR-021 – Credential, Registry and Mark Approval

Implementation basis: 28.1 (p. 45); 28.2 (p. 46); 28.3 (p. 46); 28.4 (p. 46); 28.5 (p. 46); 56.3 (p. 81); 62.5 (p. 89); 63.2 (p. 90); 80.4 (p. 124)

X21.1 Reconcile credential instruction to the decision

Verify exact holder, issuer, outcome class, object, configuration, family/module, domain/site, criteria and genuine dates.

Completion / hold: A profile title or cover image does not authorise a wider claim.

X21.2 Maintain independent state domains

Keep application, evidence acceptance, technical requirement state, credential status, operational asset state and mark permission distinct.

Completion / hold: Received or reviewed evidence cannot automatically become PASS or an active credential.

X21.3 Control artwork and public projection

Use approved AF artwork, legible identifiers and precise scope wording; provide sufficient public boundaries without disclosing protected detail.

Completion / hold: Public text must not imply unassessed all-space coverage, governmental permission or unevidenced recognition.

X21.4 Test correction and adverse events

Challenge expired/suspended reprints, stale imports, duplicate identities, missing decisions and pending appeals. Retain history and timely notices.

Completion / hold: Only an authentic authorised decision changes status; a new file date never revives authority.

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-026 – Education Attainment, Cohort Review and Learner Protection

Implementation basis: 20.3 (p. 34); 20.4 (p. 34); 20.5 (p. 34); 20.8 (p. 35); 20.9 (p. 35); 52.3 (p. 76); 52.5 (p. 77); 62.5 (p. 89); 73.1 (p. 110); 78.3 (p. 120); 78.4 (p. 120)

X26.1 Map every completion route

Identify programme, level, mode, campus, partner, prior-learning route and required outcomes. Link each outcome to direct authentic assessment.

Completion / hold: A favourable cohort mean cannot cover an unrepresented completion pathway.

X26.2 Separate learner attainment and programme conformity

Evaluate the individual rubric, essential skills, secure identity and permitted AI assistance; record failures and resits without erasing attempts.

Completion / hold: Every required essential skill passes for the person; institutional process quality is a separate conclusion.

X26.3 Analyse comparable learning evidence

Use explicit populations, denominator, selection and consistent rubric/task difficulty when assessing subgroup or year-to-year differences.

Completion / hold: Attendance or satisfaction alone cannot establish practical attainment or demonstrate causal improvement.

X26.4 Protect learners through change and closure

Verify current instructors/resources, record access, communication and actual teach-out or transfer arrangements.

Completion / hold: A development-readiness report is not full programme recognition; no fictitious graduates or professional privileges are created.

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-027 – Environmental Statement Verification and Validation

Implementation basis: 24.1 (p. 40); 24.2 (p. 40); 24.3 (p. 41); 24.7 (p. 41); 24.8 (p. 41); 24.9 (p. 42); 53.2 (p. 77); 62.2 (p. 88); 62.3 (p. 88); 75.4 (p. 114); 76.6 (p. 117); 80.4 (p. 124)

X27.1 Freeze the statement and assurance objective

Distinguish organisational capability, historical verification, prospective validation and verifier competence. Set boundary, period, intended users, materiality and criteria before substantive work.

Completion / hold: A future plan or partial inventory cannot be relabelled as an achieved complete reduction.

X27.2 Reconstruct source-to-total calculations

Check actual activities, factors, units, data quality, allocation, baseline comparability, corrections and covariance. Preserve omitted material categories separately from numeric uncertainty.

Completion / hold: Correct arithmetic cannot compensate for an unsupported factor, wrong boundary or missing mandatory category.

X27.3 Reconcile physical and exclusive claims

Keep physical delivery, ownership, contractual attributes, cancellation and resource quality distinct. Avoid duplicating exclusive quantities or counting recirculation as new output.

Completion / hold: No favourable public conclusion while relevant allocation, eligibility or technical reuse conditions remain unresolved.

X27.4 Review and communicate the bounded conclusion

Independently evaluate identified and residual misstatement, evidence limitations and permitted wording; retain original and corrected statements and notify recipients.

Completion / hold: Do not issue an unqualified favourable conclusion solely to meet a reporting deadline.

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-028 – Change, Transition, Transfer and Programme Closure

Implementation basis: 30.2 (p. 48); 30.4 (p. 48); 31.3 (p. 49); 56.5 (p. 81); 61.3 (p. 86); 62.7 (p. 89); 68.7 (p. 101); 74.7 (p. 113); 75.7 (p. 115); 78.7 (p. 121); 79.5 (p. 122); 80.5 (p. 124)

X28.1 Map the complete change population

Identify affected requirements, profiles, objects, configurations, sites, people, calculations, fields, interfaces and public claims.

Completion / hold: A cosmetic filename or edition-label change cannot hide a changed technical basis.

X28.2 Establish retained and additional evidence

Record what remains valid, what is invalidated, required new demonstration, compatible tools and actual competence. Keep mandatory protective duties active during transition.

Completion / hold: No automatic grandfathering, retrospectively applied requirement or unsupported transfer of scope.

X28.3 Accept custody and local implementation

Reconcile semantic records, permissions, actual receiving capability, remaining learners/customers, open cases, notices and independent decisions.

Completion / hold: Sending an archive or signing a commercial handover does not establish accepted technical custody.

X28.4 Close without abandoning terminal duties

Preserve unknown final states, original status gaps, hazardous inventories, unresolved remedies and actual receiving owners.

Completion / hold: Only demonstrably complete obligations are closed; remaining duties stay assigned after programme or provider cessation.

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.

P07 — Measurement and uncertainty

Measurand, instrument/range, corrections, sensitivity, covariance, coverage, time/space sampling and calibration.

Derivation and evidence: Complete measurement model; valid raw data.

Completion test: Uncertainty and detection capability are fit for the approved decision rule.

P08 — Structure, life and mechanisms

Loads, allowables, factors, life, geometry, material state, mechanisms, detectability and approved reserve.

Derivation and evidence: Qualified structural/life model and representative evidence.

Completion test: Each prospectively defined margin and essential mechanism predicate passes.

P10 — Thermal and environmental control

Node/location, mode, temperatures/gradients, heat inputs, sink/view factors, properties, uncertainty and transient cases.

Derivation and evidence: Correlated thermal model and applicable environment tests.

Completion test: All required hot, cold and transition conditions meet approved limits.

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.

P13 — Contamination and samples

Relevant substances/particles, pathway, limit, method/detection, custody, cleanliness, containment and receiving.

Derivation and evidence: Mission-specific technical/protection basis.

Completion test: Required integrity and scientific cleanliness are demonstrated for the actual sample/use.

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.

P16 — Reliability and availability

Population, exposure, failure definition, observation, dependencies, confidence model, downtime and maintenance exclusions.

Derivation and evidence: Prospective statistical design plus engineering mechanism evidence.

Completion test: The actual demonstrated bound meets the approved claim; zero failures is not zero risk.

P17 — Logistics and environmental claims

Identity, amount, units, condition, losses, allocation, lifecycle boundary, factor provenance and exclusive attributes.

Derivation and evidence: Reconciled custody/quantity records and separate suitability/statement evaluation.

Completion test: Quantity and claim integrity pass independently of technical eligibility.

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.
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.

Domain / source page	Coverage	Required boundary
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.
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.

Domain / source page	Coverage	Required boundary
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

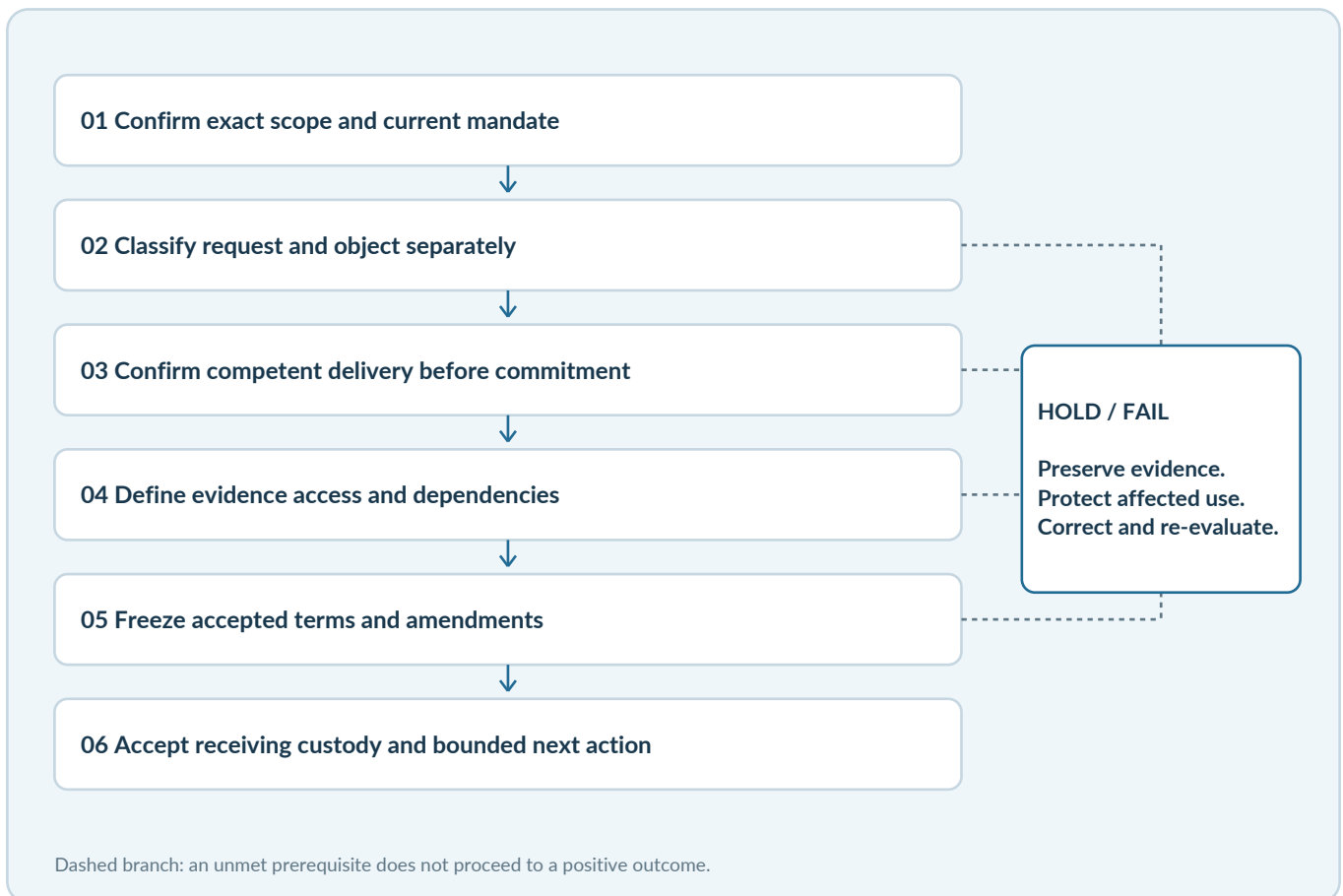
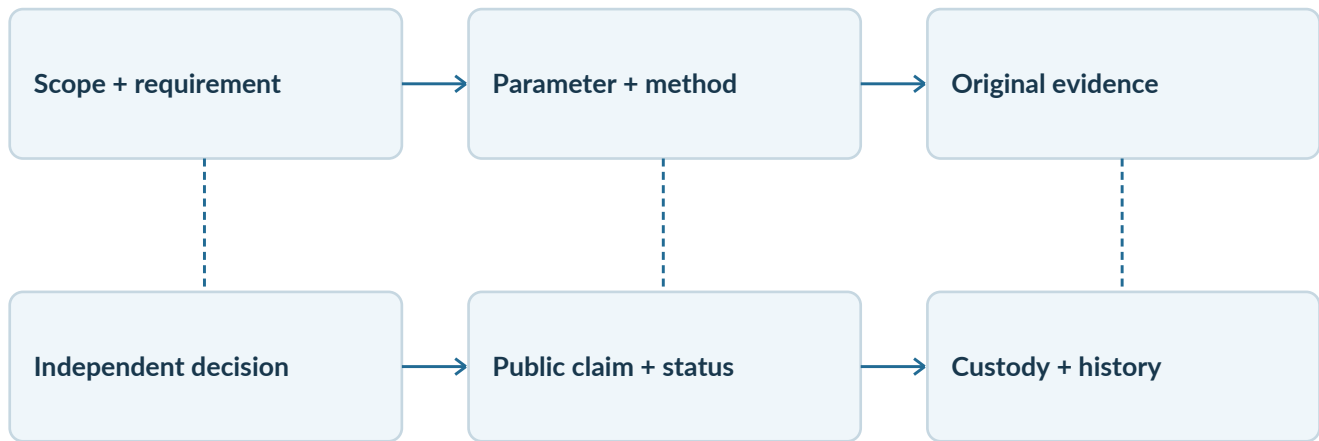


Figure — Implementation sequence for AF-AST-PR-003. Explanatory diagram; the source prerequisites and actual authority remain controlling.



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.Q01 Measurement uncertainty and covariance

Source: ASTRA Annex AM, Q01, page 200. All numerical inputs in this example are synthetic.

$$u_c^2 = \sum(c_i^2 u_i^2) + 2\sum(i < j)(c_i c_j cov_{ij})$$

$$U = k u_c$$

Variables and units

u_i is a standard uncertainty; c_i is a sensitivity coefficient; cov_{ij} is covariance; k is the justified coverage factor. Variance terms carry squared output units.

Example inputs

Synthetic direct sum: $c_1=c_2=1$; $u_1=0.003$ mm; $u_2=0.004$ mm. First assume independence, then correlation $\rho=0.5$. Illustrative $k=2$.

Calculation and checks

1. Independent variance = $0.003^2 + 0.004^2 = 0.000025$ mm².
2. $u_c = 0.005$ mm; $U = 0.010$ mm for the stated k .
3. Correlated covariance = $0.5 \times 0.003 \times 0.004 = 0.000006$ mm².
4. Correlated variance = $0.000025 + 2 \times 0.000006 = 0.000037$ mm².
5. Correlated $u_c = 0.0060827625303$ mm; $U = 0.0121655250606$ mm.

Decision interpretation: The correlated model produces a larger uncertainty. No PASS/FAIL follows until an approved specification and decision rule are applied.

Validity limits: The linear propagation model requires a valid measurement function and adequate approximation. $k=2$ is not a universal guarantee of 95% coverage. Known bias requires correction or explicitly justified treatment; uncertainty does not conceal missing requirements.

ASTRA connections: 9.4–9.5; Annex G; 62; 77

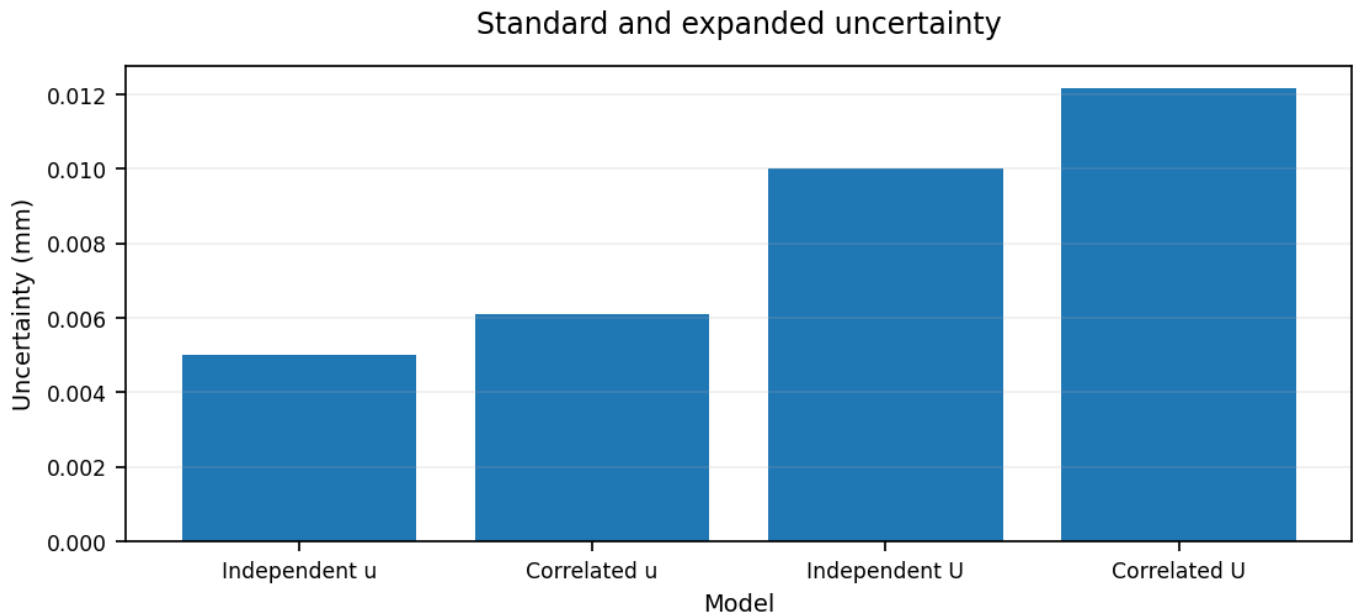


Figure Q01 — Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.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

1. $50.024 \pm 0.004 \rightarrow [50.020, 50.028]$ mm: PASS.
2. $50.028 \pm 0.004 \rightarrow [50.024, 50.032]$ mm: HOLD, interval overlaps the upper limit.
3. $50.036 \pm 0.004 \rightarrow [50.032, 50.040]$ mm: FAIL, interval entirely above the limit.
4. $50.026 \pm 0.004 \rightarrow [50.022, 50.030]$ 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

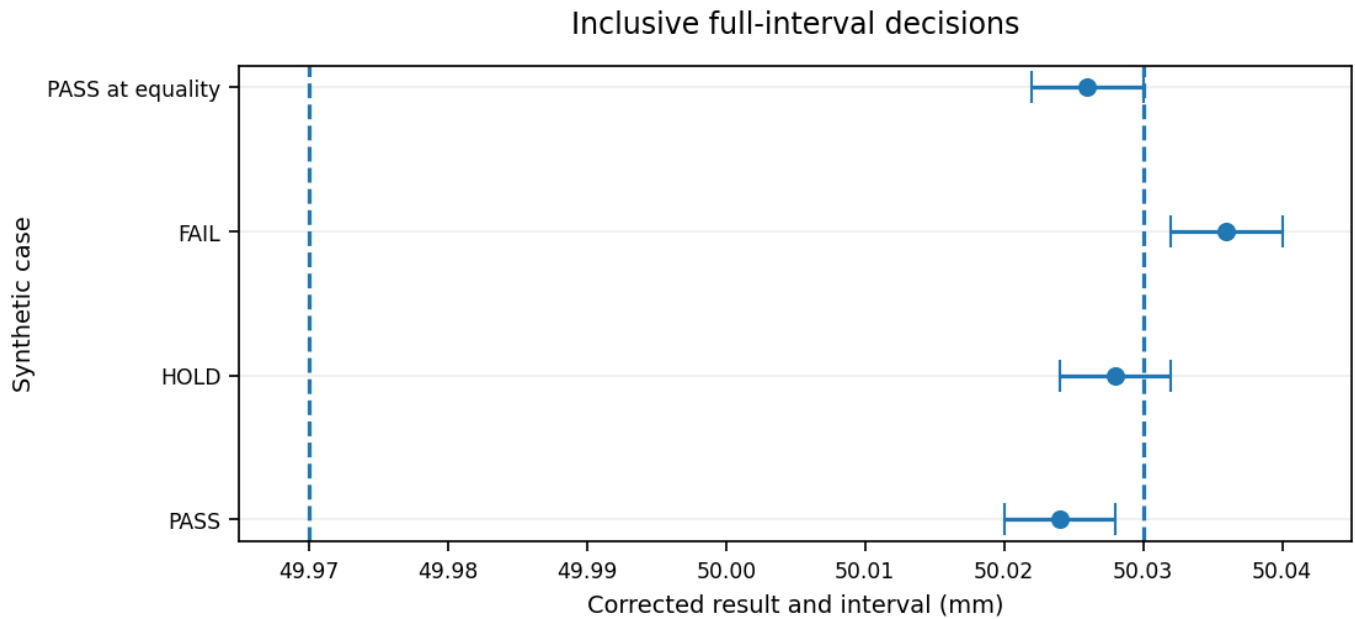


Figure Q02 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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

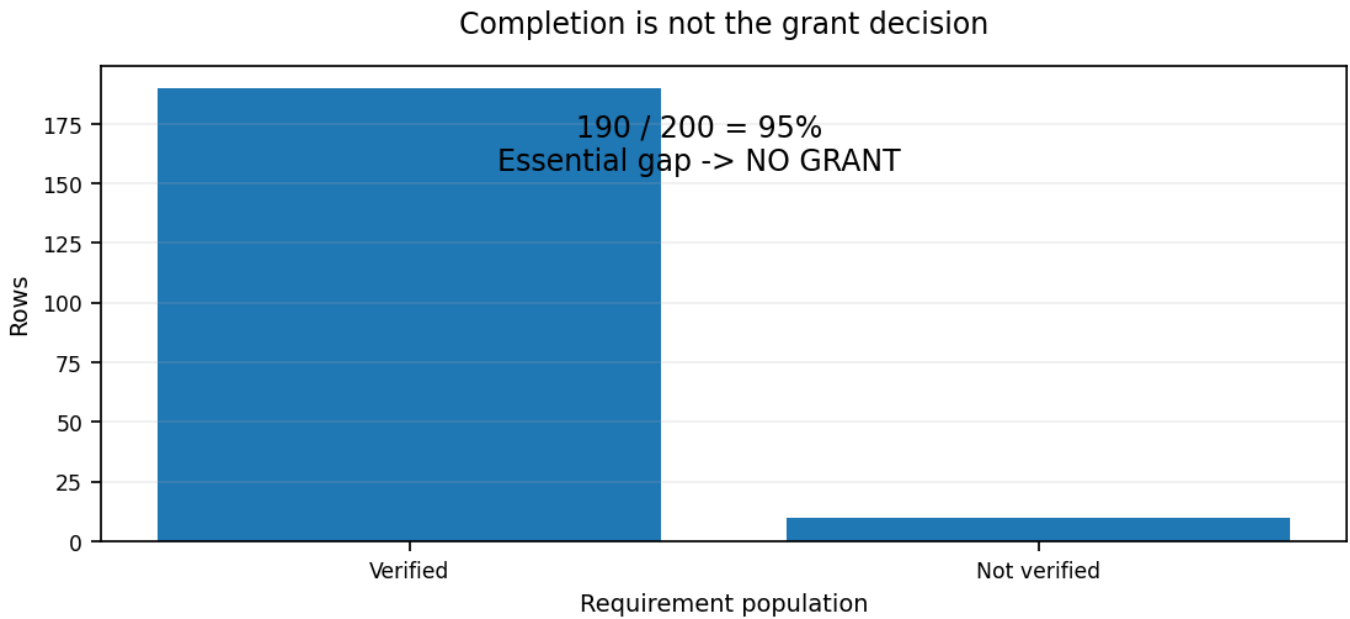


Figure Q03 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.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

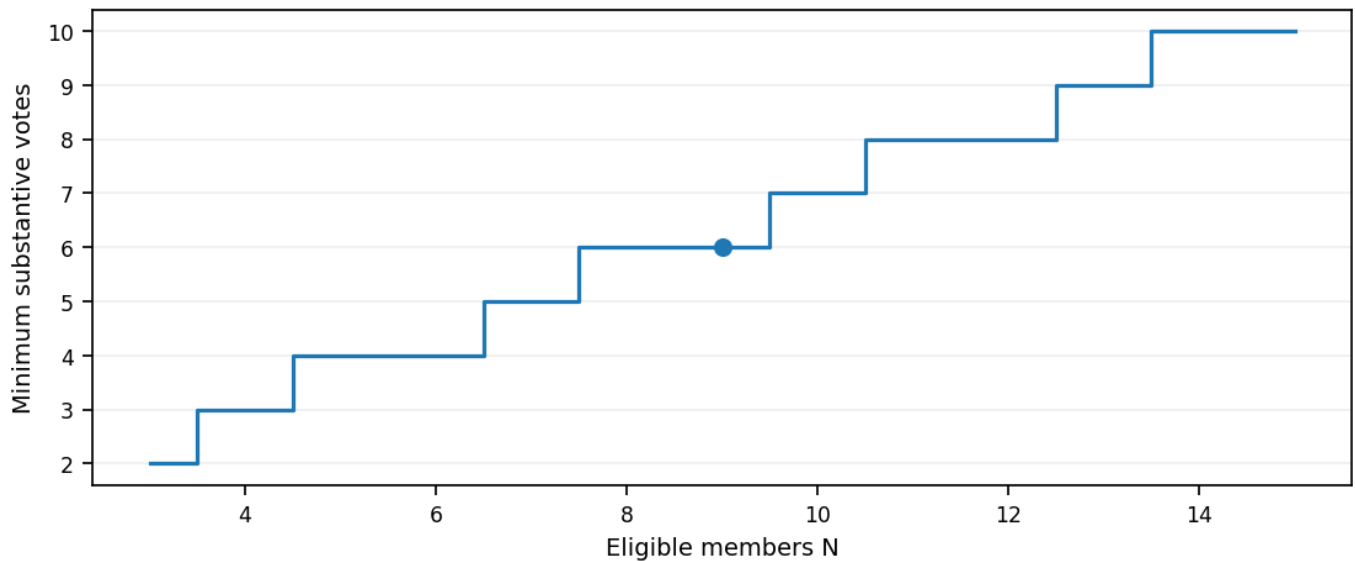


Figure Q04 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.

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

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

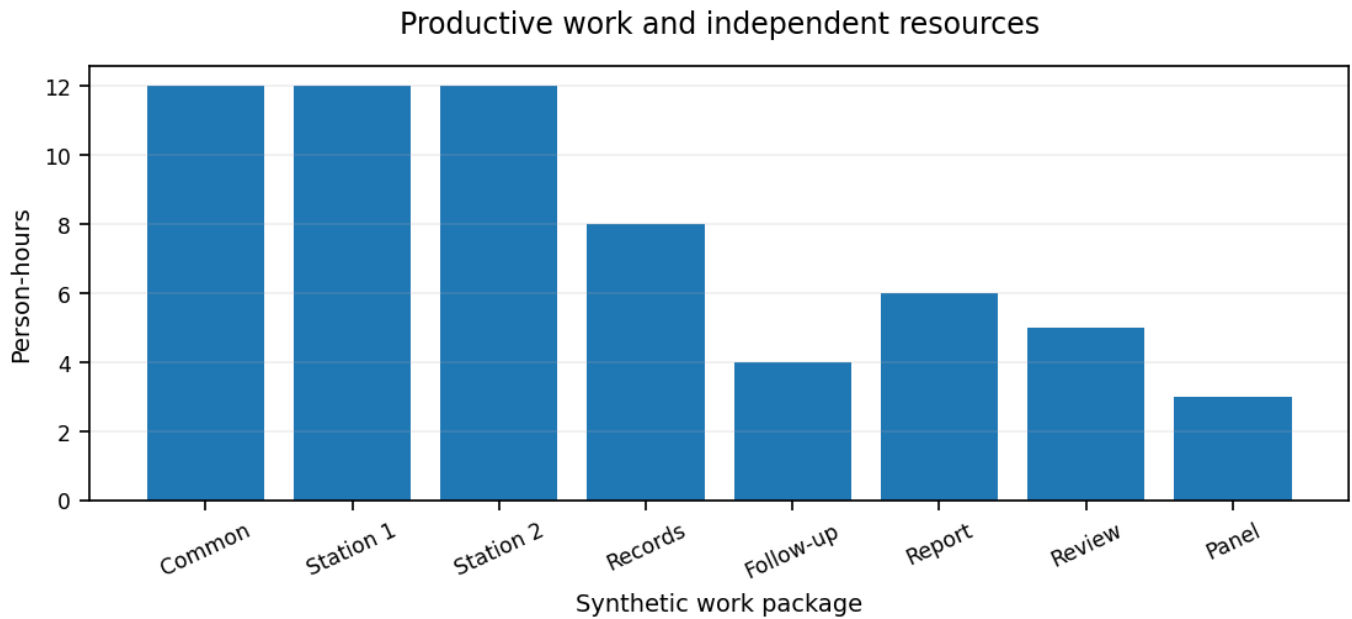


Figure Q05 — Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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. $\ln(0.05)/\ln(0.90) = 28.433158...$; 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

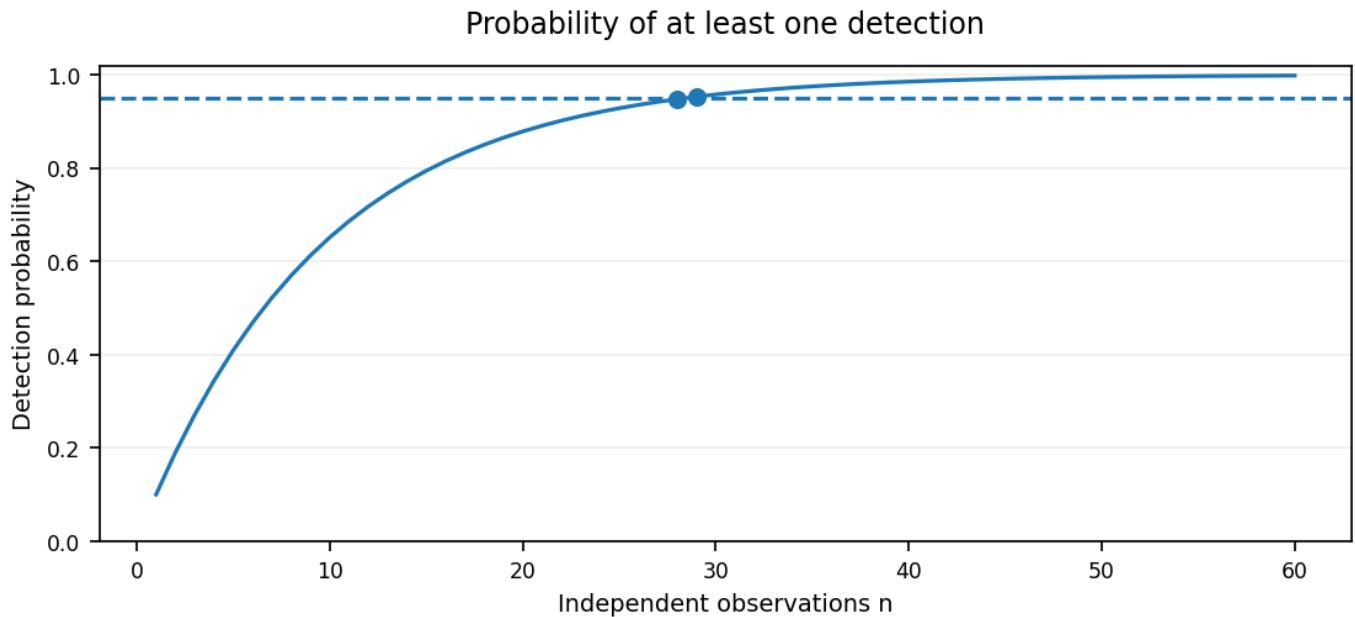


Figure Q06 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q07 Zero observed failures and an exact binomial bound

Source: ASTRA Annex AM, Q07, page 206. All numerical inputs in this example are synthetic.

$$p_{\text{upper}} = 1 - \alpha^{(1/n)}$$

$$n_{\text{min}} = \text{ceil}[\ln(\alpha) / \ln(1 - p_{\text{target}})]$$

Variables and units

α =1-confidence; n is a prospectively fixed number of independent comparable binary trials; all n trials have zero observed failures.

Example inputs

Synthetic one-sided confidence 95%, so $\alpha=0.05$. Examine $n=30$ and a target upper failure probability of 0.01.

Calculation and checks

- For $n=30$: $p_{\text{upper}} = 1 - 0.05^{(1/30)} = 0.095033853 = 9.5033853\%$.
- For $p_{\text{target}}=0.01$: $\text{ceil}[\ln(0.05) / \ln(0.99)] = 299$.
- For $n=299$: $p_{\text{upper}} \approx 0.0099691468$, below 1%.

Decision interpretation: Thirty successful trials do not demonstrate a failure probability below 1%. Under the specified model, 299 all-success trials are needed for that particular bound.

Validity limits: A statistical upper confidence bound is not proof of zero risk or total system safety. Nonrepresentative trials, changing configuration, adaptive stopping or unmodelled common causes invalidate this simple inference.

ASTRA connections: 55.1–55.3; 62; 77

Zero failures: one-sided 95% binomial bound

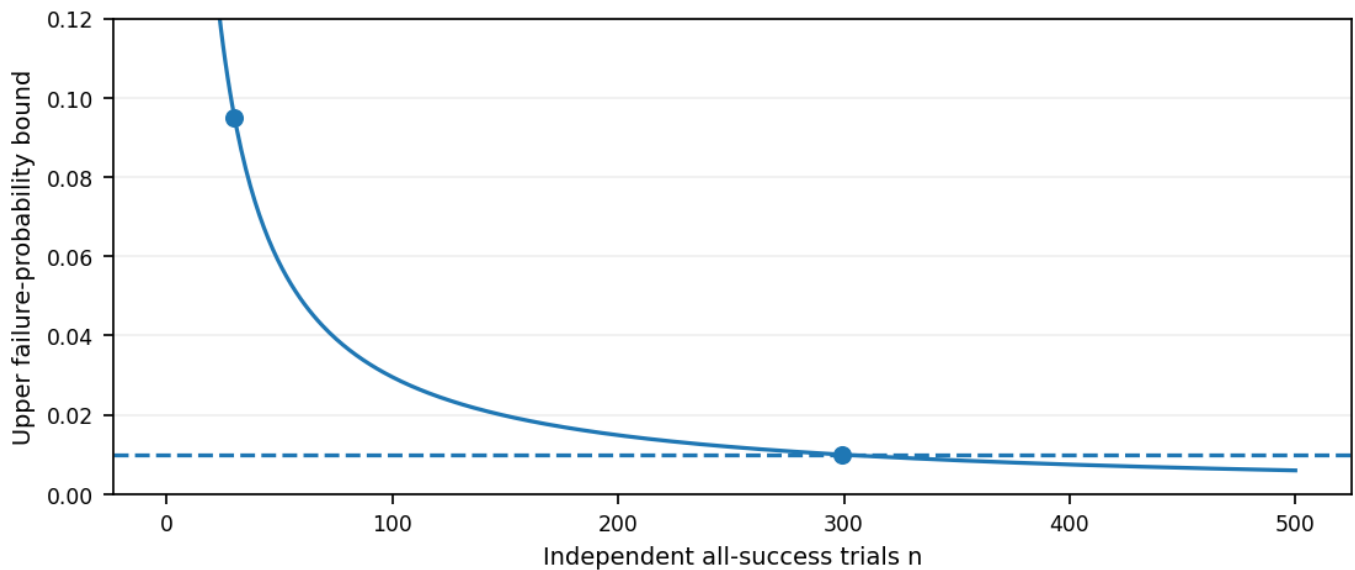


Figure Q07 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q08 No failures during exposure: exponential bound

Source: ASTRA Annex AM, Q08, page 207. All numerical inputs in this example are synthetic.

$$\lambda_{\text{upper}} = -\ln(\alpha)/T$$

$$\text{MTBF}_{\text{lower}} = T/[-\ln(\alpha)]$$

Variables and units

T is total comparable exposure time under a justified constant-rate model; $\alpha=1$ -confidence; no failures occur. λ has reciprocal-time units.

Example inputs

Synthetic T=800 operating hours; one-sided confidence=95%, $\alpha=0.05$.

Calculation and checks

1. $-\ln(0.05) = 2.9957322736$.
2. $\lambda_{\text{upper}} = 2.9957322736/800 = 0.003744665342 \text{ h}^{-1}$.
3. $\text{MTBF}_{\text{lower}} = 800/2.9957322736 = 267.0465606 \text{ h}$.

Decision interpretation: The observed zero-failure record supports only the stated model-based lower bound, not infinite mean life.

Validity limits: Ageing, wear-out, maintenance quality, heterogeneity and common causes may violate the constant-rate assumption. MTBF is not a guaranteed individual life and does not extend a mandatory life limit.

ASTRA connections: 55; 79

Zero failures: constant-rate model bound

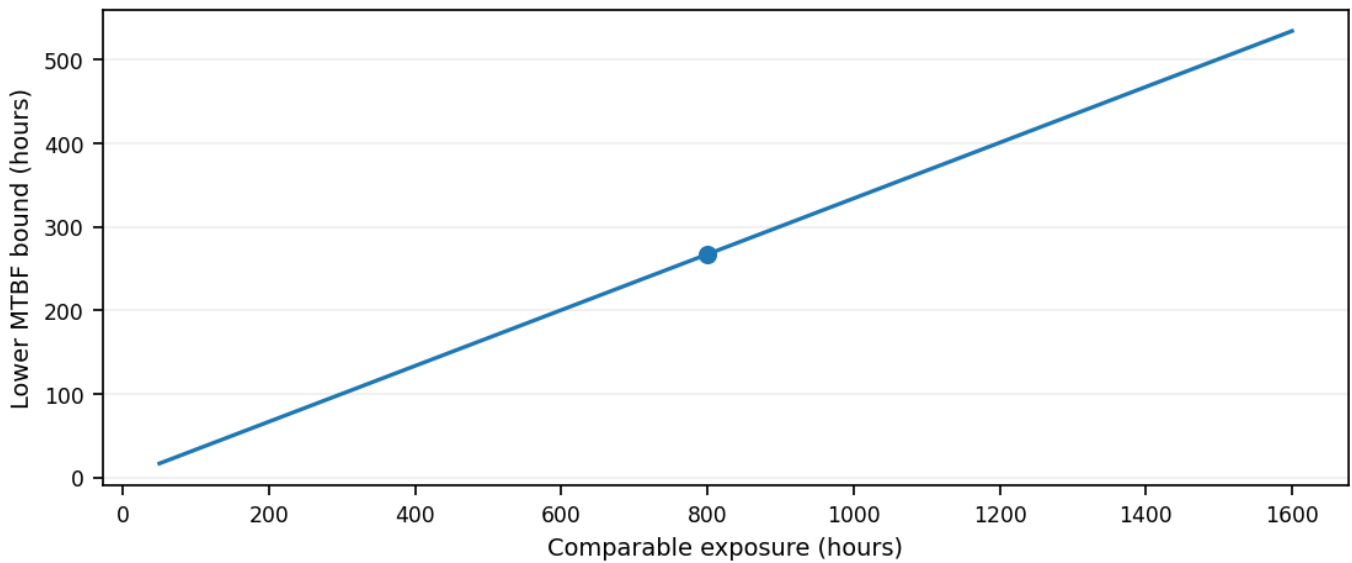


Figure Q08 — Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q09 Availability is not output correctness

Source: ASTRA Annex AM, Q09, page 208. All numerical inputs in this example are synthetic.

$$A_{\text{observed}} = T_{\text{available}} / T_{\text{window}}$$

$$\text{Correct-service fraction} = T_{\text{available_and_correct}} / T_{\text{window}}$$

Variables and units

All categories shall use the same declared window and explicit downtime and integrity definitions. Missing time is separately recorded.

Example inputs

Synthetic window=1,000 h; available=960 h; unavailable=40 h. Of the available time, 20 h produced unacceptable information.

Calculation and checks

1. Availability = $960 / 1,000 = 96\%$.
2. Available-and-correct time = $960 - 20 = 940$ h.
3. Correct-service fraction = $940 / 1,000 = 94\%$.

Decision interpretation: The 96% availability value does not prove correctness during every available hour. The two measures support different requirements.

Validity limits: The service boundary, outages, correctness test, unknown intervals and planned exclusions must be established in advance. A high uptime percentage cannot close an integrity failure.

ASTRA connections: 51.4; 55.1; 66.7; 78.7

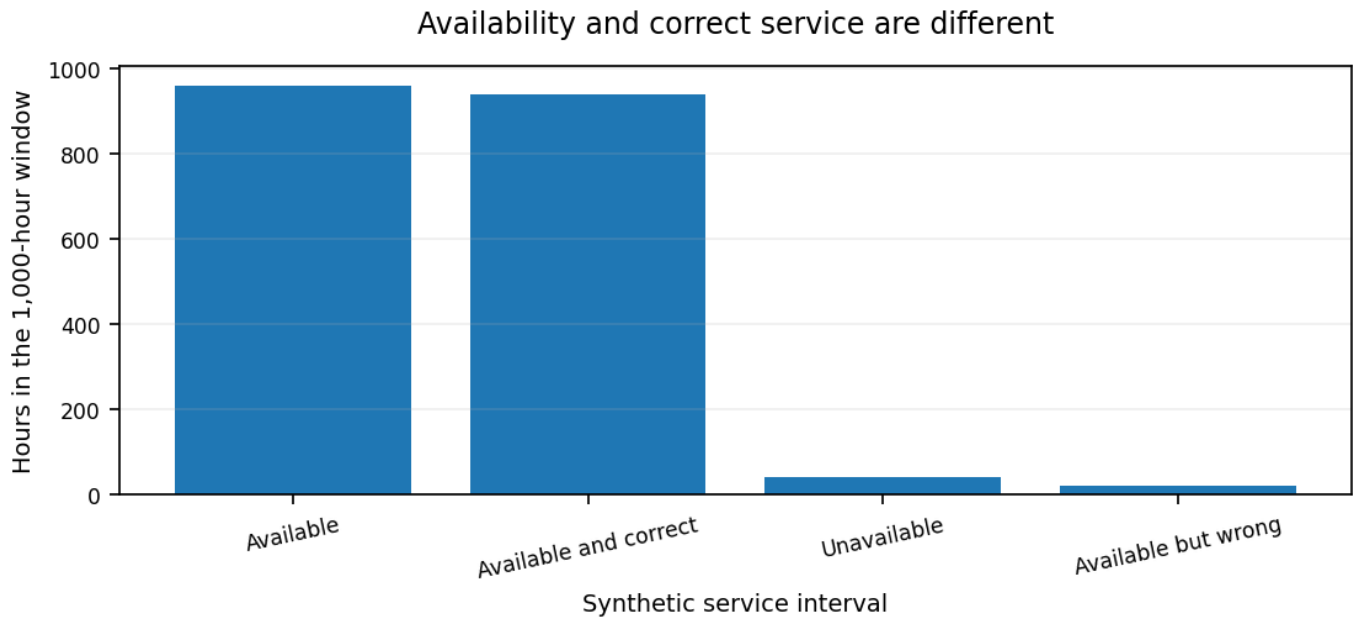


Figure Q09 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q16 Outage data storage with overhead

Source: ASTRA Annex AM, Q16, page 215. All numerical inputs in this example are synthetic.

$$B_{\text{required}} = R_{\text{data}} \times t_{\text{outage}} \times f_{\text{overhead}}$$

$$1 \text{ byte} = 8 \text{ bits}$$

Variables and units

Use a defined payload rate and explicit overhead, reserves and decimal/binary storage conventions. Avoid mixing Mbit/s and MB/s.

Example inputs

Synthetic 2.0×10^6 bit/s, 6 h outage, overhead factor=1.25; usable storage= 64×10^9 bit.

Calculation and checks

1. Outage duration= $6 \times 3,600 = 21,600$ s.
2. Required capacity= $2.0 \times 10^6 \times 21,600 \times 1.25 = 54 \times 10^9$ bit.
3. In decimal bytes this is 6.75×10^9 bytes = 6.75 GB.
4. Headroom= 10×10^9 bit; headroom/required=18.5185185%.

Decision interpretation: The example quantity fits in the stated usable capacity. Data priority, integrity and required extra reserve still need their own criteria.

Validity limits: Do not credit unvalidated compression, unavailable storage blocks or capacity already allocated elsewhere. Tests must include overflow, power interruption, duplicate delivery and recovery.

ASTRA connections: 66.3; 67.4; 78.7

Outage storage including the stated overhead

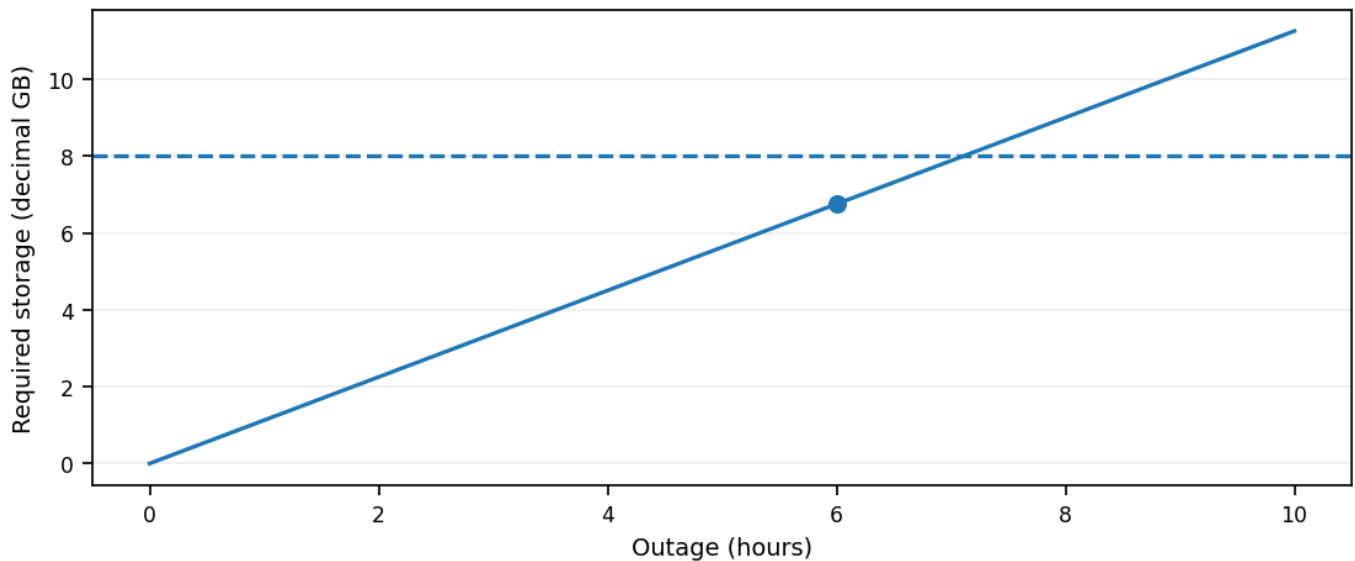


Figure Q16 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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

- $u_t = \sqrt{3^2 + 4^2} = 5$ ms; $U_t = 10$ ms.
- At age estimate 95 ms, interval=[85,105] ms: HOLD under the full-interval rule.
- 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

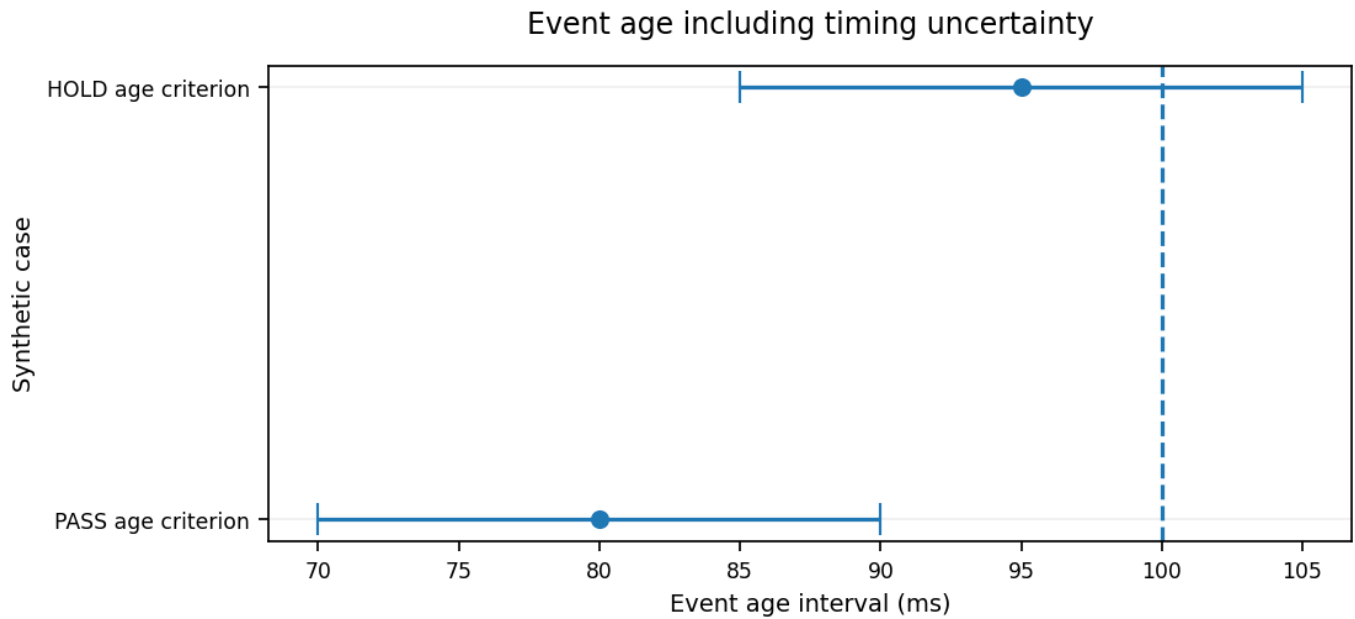


Figure Q17 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.

AM.Q18 Structural margin with explicitly assigned factors

Source: ASTRA Annex AM, Q18, page 217. All numerical inputs in this example are synthetic.

$$MS = \text{allowable_lower_bound} / (\text{factor} \times \text{demand_upper_bound}) - 1$$

Variables and units

Use compatible force, stress or other characteristic units and a consistent definition of applied factors. The chosen lower and upper bounds must not double-count uncertainty.

Example inputs

Synthetic allowable lower bound=150 kN; demand upper bound=100 kN; approved example factor=1.25; required example margin=0.10.

Calculation and checks

1. Factored demand=1.25×100=125 kN.
2. MS=150/125-1=0.20.
3. The result 0.20 is at least the example required 0.10.

Decision interpretation: The stated scalar margin passes its example predicate. Every other required load case and mechanism remains separately evaluated.

Validity limits: No factor or margin here is a universal structural design rule. Buckling, joints, thermal loads, dynamics, damage, fatigue and model validity may require distinct analysis and evidence.

ASTRA connections: 33.5; 65.1; 77

Scalar structural margin: approved factors still required

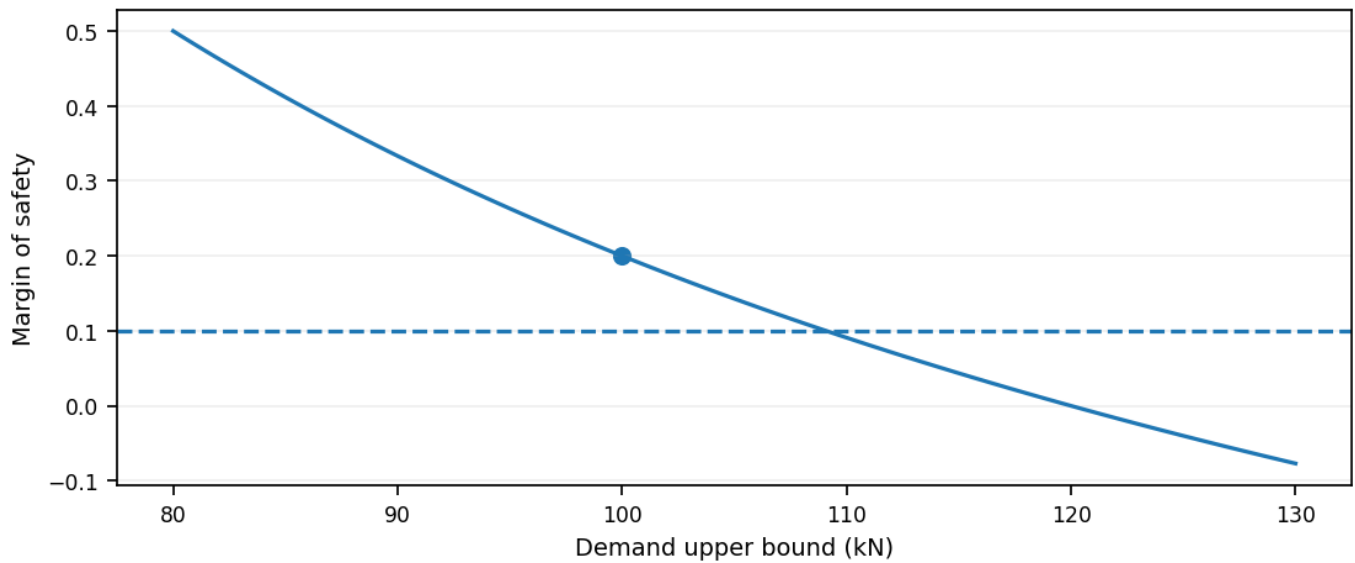


Figure Q18 — Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q19 Vibration spectral integration and units

Source: ASTRA Annex AM, Q19, page 218. All numerical inputs in this example are synthetic.

$$a_{\text{rms}}^2 = \int S_a(f) df$$

$$a_{\text{rms}} = \sqrt{a_{\text{rms}}^2}$$

Variables and units

S_a is acceleration power spectral density. With g^2/Hz and Hz , the integrated variance is g^2 . The specified conventional acceleration conversion is 9.80665 m/s^2 per g .

Example inputs

Synthetic flat PSD= $0.04 \text{ g}^2/\text{Hz}$ from 20 to 120 Hz; no content outside that illustrative band.

Calculation and checks

1. Bandwidth= $120-20=100 \text{ Hz}$.
2. Variance= $0.04 \times 100 = 4 \text{ g}^2$.
3. RMS= $\sqrt{4} = 2 \text{ g} = 19.6133 \text{ m/s}^2$.

Decision interpretation: The integration is correct for the stated flat spectrum. It does not define a test severity or establish qualification.

Validity limits: Real piecewise spectra, control methods, fixture dynamics, cross-axis behaviour, time duration and response limits require an approved profile. Do not integrate a logarithmic amplitude representation as though it were a linear PSD.

ASTRA connections: 42; Annex T; 77

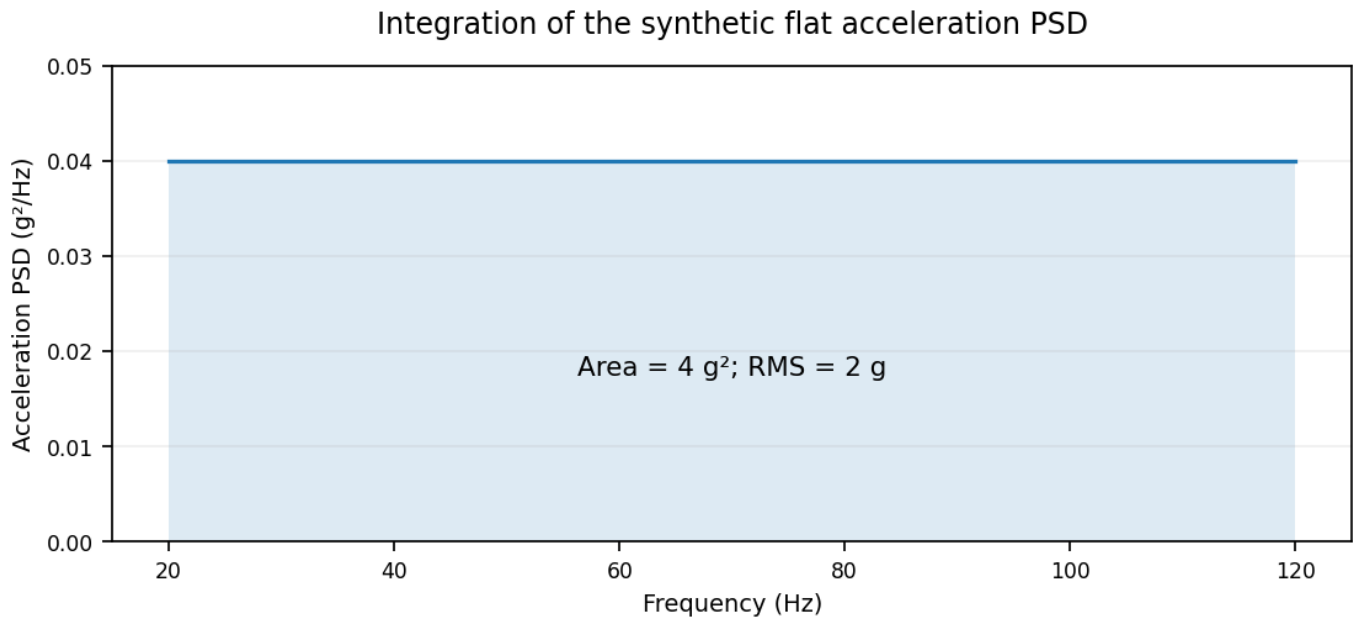


Figure Q19 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q22 Process consumables, recovery and unusable inventory

Source: ASTRA Annex AM, Q22, page 221. All numerical inputs in this example are synthetic.

Gross demand = number_of_units × unit_rate × duration

Usable feed need = gross demand × (1-recovery_fraction)

Stock requirement = feed need + unusable allowance + reserved amount

Variables and units

This is a non-physiological process-resource example. Recovery is credited only when quantity, quality and availability are demonstrated for the same duty.

Example inputs

Synthetic four identical process units; 2 kg/day/unit for 10 days; validated illustrative recovery=60%; unusable allowance=5 kg; reserve=8 kg; stock=50 kg.

Calculation and checks

1. Gross demand=4×2×10=80 kg.
2. Fresh usable feed need=80×(1-0.60)=32 kg.
3. Stock requirement=32+5+8=45 kg.
4. Headroom=50-45=5 kg.

Decision interpretation: The example quantity requirement is met. It supplies no crew-consumption rate or health criterion.

Validity limits: Availability, recovery timing, quality, contamination, storage losses and common-resource failure are separate checks. A calculated recycling benefit cannot substitute for demonstrated usable output.

ASTRA connections: 64.4; 73.3; 75.4–75.5

Usable consumables and retained reserves

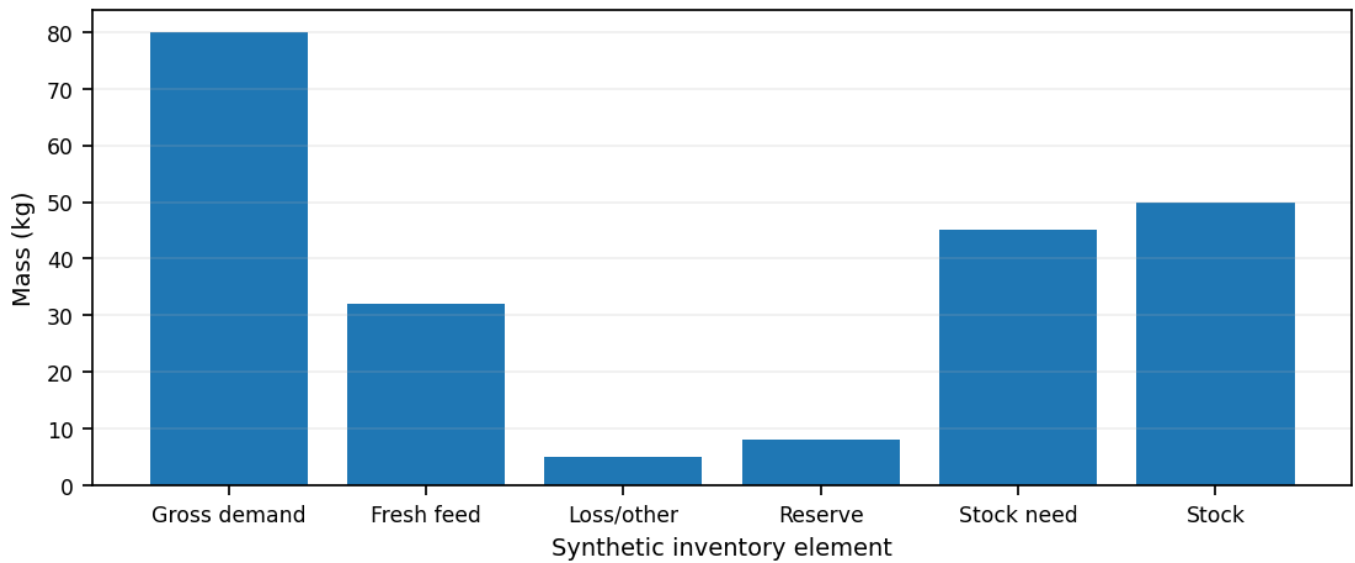


Figure Q22 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q23 Material genealogy, yield and retained work

Source: ASTRA Annex AM, Q23, page 222. All numerical inputs in this example are synthetic.

Input = good + reject + tests + losses + work_in_progress

First-pass yield = accepted_first_pass_output/input

Variables and units

All quantities shall use a consistent lot and period. Recovered material remains linked to its origin and is not counted twice as new production.

Example inputs

Synthetic input=500 units; good first-pass=410; reject=30; destructive tests=10; process losses=20; work in progress=30.

Calculation and checks

1. Reconciliation=410+30+10+20+30=500 units.
2. First-pass yield=410/500=82%.
3. If 20 rejected units are later recovered, the recovery does not increase original input or first-pass output.

Decision interpretation: The quantity balance closes. Technical identity, condition and acceptance evidence still determine whether the 410 outputs are eligible.

Validity limits: A closed balance does not prove authenticity, completeness or material quality. Mixing quantities with different units or unverified scrap/recovery transfers invalidates the reconciliation.

ASTRA connections: 18.4; 48.4; Annex AC; 75.4

Original input reconciliation

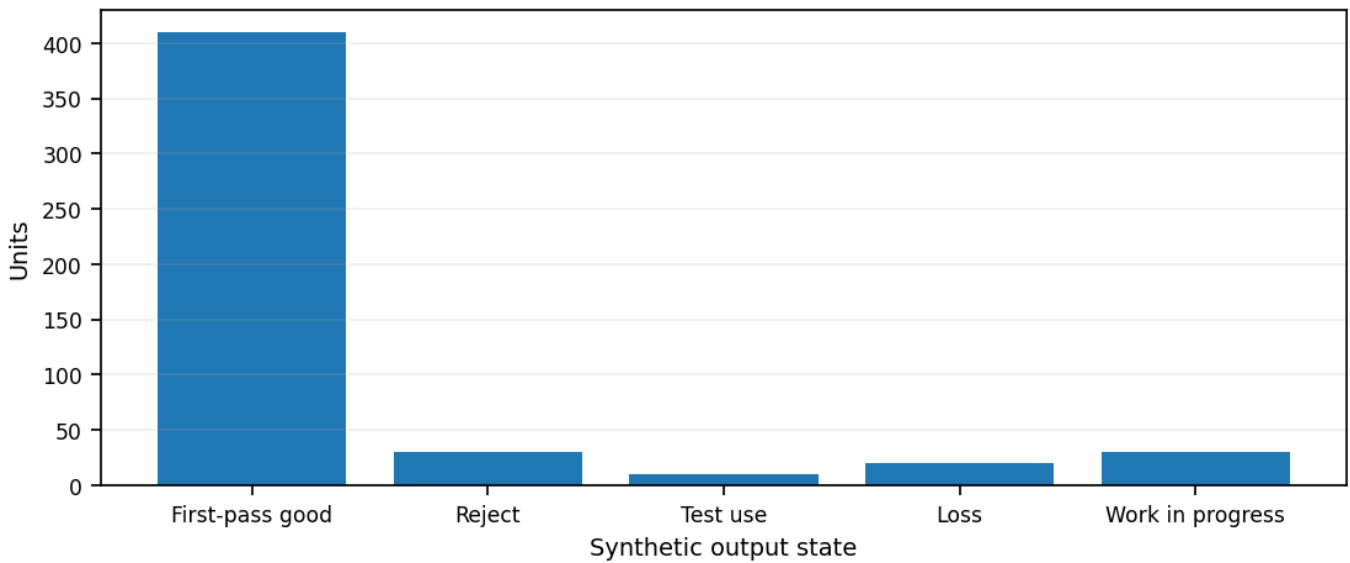


Figure Q23 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q24 Environmental inventory and uncertainty

Source: ASTRA Annex AM, Q24, page 223. All numerical inputs in this example are synthetic.

$$E = \sum(A_i \times EF_i)$$

$$u(E) = \sqrt{\sum u_i^2} \text{ only for independent components}$$

Variables and units

A_i are activities and EF_i compatible factors for the same declared boundary. All factors below are deliberately fictional and shall not be used for actual emissions.

Example inputs

Synthetic 200,000 kWh×0.25 kg CO₂e/kWh; 10,000 L×2.50 kg CO₂e/L; 20,000 tonne-km×0.10 kg CO₂e/tonne-km.
Relative standard uncertainties=5%, 10%, 20%.

Calculation and checks

1. Category totals=50,000; 25,000; 2,000 kg CO₂e. Total=77,000 kg CO₂e.
2. For 10,000 defined service events, intensity=7.7 kg CO₂e/event.
3. Standard components=2,500; 2,500; 400 kg CO₂e.
4. $u(E)=\sqrt{(2,500^2+2,500^2+400^2)}=3,558.089375$ kg CO₂e.

Decision interpretation: The arithmetic is correct for this limited synthetic boundary. No real environmental achievement or full lifecycle footprint is asserted.

Validity limits: Covariance is required where sources are dependent. Quantified uncertainty does not absorb omitted lifecycle stages, unsuitable factors, double allocation or missing mandatory categories.

ASTRA connections: 24; 53; Annex L

Partial environmental inventory with standard uncertainty

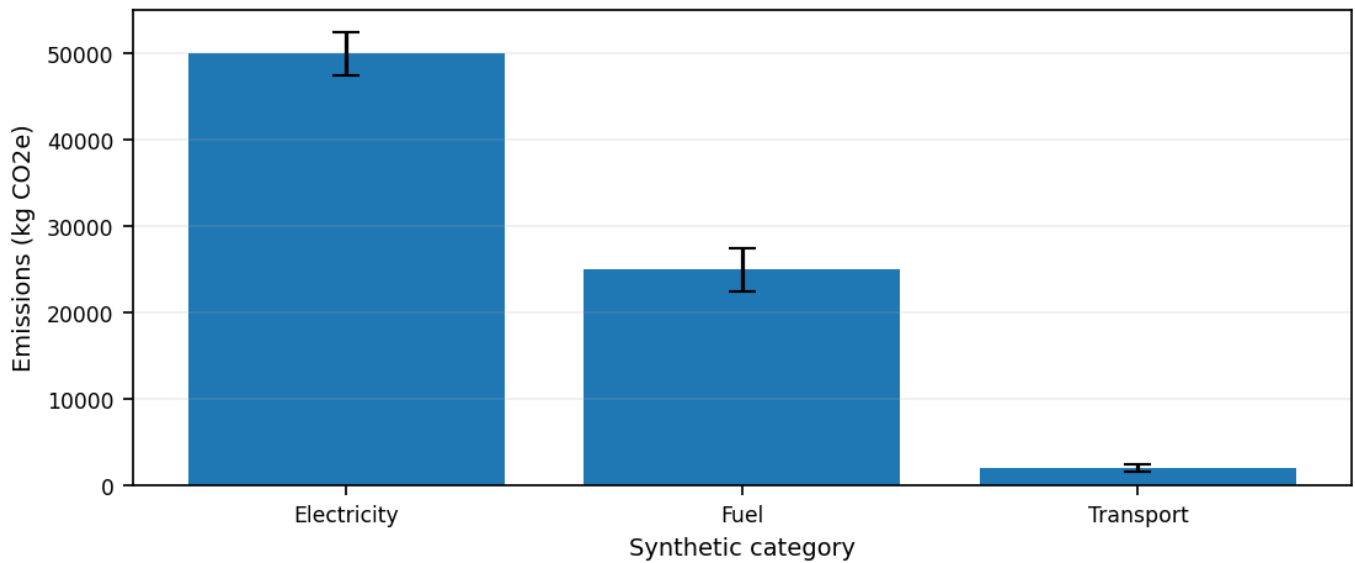


Figure Q24 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.Q25 Reliability architecture and common-cause sensitivity

Source: ASTRA Annex AM, Q25, page 224. All numerical inputs in this example are synthetic.

$R_{\text{series}} = R_1 R_2$ for independent required elements

$R_{\text{parallel}} = 1 - (1 - R_1)(1 - R_2)$ for independent full-capability alternatives

$R_{\text{with_common_event}} = (1 - q) R_{\text{parallel}}$

Variables and units

R_1 and R_2 refer to the same mission duration and domain. q is an illustrative independent probability of a common event defeating both alternatives. Perfect switching is assumed only for this example.

Example inputs

Synthetic $R_1=0.98$, $R_2=0.99$; illustrative common-event probability $q=0.01$.

Calculation and checks

1. Series result= $0.98 \times 0.99 = 0.9702$.
2. Ideal independent parallel result= $1 - (0.02 \times 0.01) = 0.9998$.
3. With the stated common event: $0.99 \times 0.9998 = 0.989802$.

Decision interpretation: The architecture and common-dependency assumptions materially change the result. Component figures alone cannot establish system reliability.

Validity limits: Unequal functions, imperfect switching, dormant failures, shared software, maintenance or external resources require a different model. The example probabilities are not actual mission data or prescribed targets.

ASTRA connections: 55.2; 68.1–68.2; 76.5

Architecture assumptions determine reliability

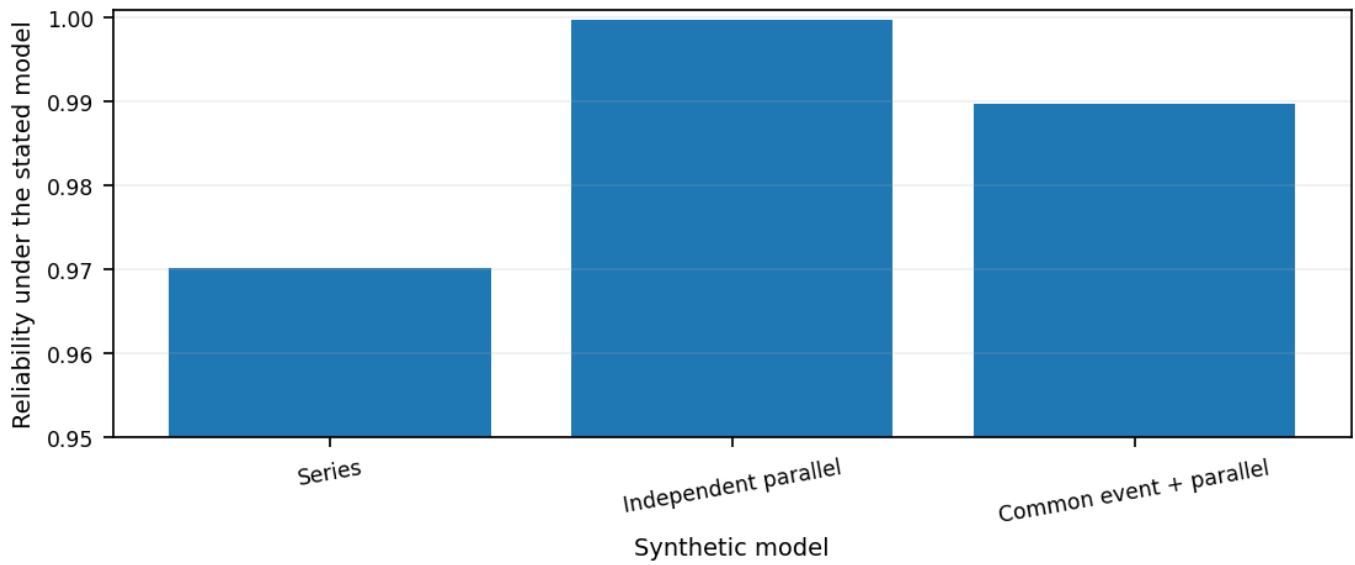


Figure Q25 — Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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-005: Map competence to an actual task — required basis missing	A general title or training course is not an authorisation for an unfamiliar task.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-005: Maintain event-time currency — handover or review incomplete	Later authorisation cannot validate prior out-of-scope work; assess affected earlier outputs separately.	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-010: Freeze the quantitative contract — required basis missing	Invalid or missing essential inputs remain HOLD; the assessor does not supply an undocumented limit.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-010: Replay and report independently — handover or review incomplete	Unresolved replay disagreement blocks the dependent acceptance even where the nominal arithmetic appears plausible.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-014: Freeze the independent decision dossier — required basis missing	A missing essential source, unresolved configuration or unsupported exclusion keeps the dependent decision on HOLD.	Original input, unresolved value, affected requirement and scope; named action owner.

Challenge	Expected handling	Evidence retained
PR-014: Publish only the supported outcome — handover or review incomplete	Public wording and digital status cannot extend the decision or imply operational permission.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-015: Freeze the actual cycle baseline — required basis missing	Bookings and payment do not fulfil surveillance or extend validity.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-015: Renew without manufactured continuity — handover or review incomplete	Restoration or reprinting is not renewal; operational life and specialist permissions remain separate.	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.
PR-021: Reconcile credential instruction to the decision — required basis missing	A profile title or cover image does not authorise a wider claim.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-021: Test correction and adverse events — handover or review incomplete	Only an authentic authorised decision changes status; a new file date never revives authority.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-026: Map every completion route — required basis missing	A favourable cohort mean cannot cover an unrepresented completion pathway.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-026: Protect learners through change and closure — handover or review incomplete	A development-readiness report is not full programme recognition; no fictitious graduates or professional privileges are created.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-027: Freeze the statement and assurance objective — required basis missing	A future plan or partial inventory cannot be relabelled as an achieved complete reduction.	Original input, unresolved value, affected requirement and scope; named action owner.
PR-027: Review and communicate the bounded conclusion — handover or review incomplete	Do not issue an unqualified favourable conclusion solely to meet a reporting deadline.	Expected and observed state; independent replay; correction/retest; receiving acknowledgement.
PR-028: Map the complete change population — required basis missing	A cosmetic filename or edition-label change cannot hide a changed technical basis.	Original input, unresolved value, affected requirement and scope; named action owner.

Challenge	Expected handling	Evidence retained
PR-028: Close without abandoning terminal duties — handover or review incomplete	Only demonstrably complete obligations are closed; remaining duties stay assigned after programme or provider cessation.	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.

1.5 – 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.

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.

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.

6.3 – 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.

7.1 – Function-specific competence

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

The operator shall define separate competence requirements for application review, audit leadership, specialist evaluation, sampling, laboratory sign-off, independent review, decisions and appeals. Profiles shall state technical fields, methods, criticality, language, professional judgement, evidence interpretation and access permissions. A person may hold several roles only when separately qualified and case independence remains valid. No generic aerospace assessor designation shall imply mastery of all eight families.

Required evidence: Role profiles; technical authorisation matrix; case coverage check.

7.3 – Essential steps and assessment security

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

Knowledge and practical criteria shall be fixed before candidate evaluation. Every predesignated essential safety, integrity and independence step shall be passed; component scores shall not be averaged to conceal failure. Equivalent reassessment shall follow evidenced remediation and preserve earlier attempts. Examination questions, scenarios, identity checks and scoring shall be secured and validated. An automated score or AI recommendation shall not be the sole authority for a practical competence decision.

Required evidence: Assessment blueprint; component/essential-step results; secured attempts; independent authorisation.

7.4 – Initial assessor population

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

Where no established ASTRA assessor population exists, at least two independent competent professionals shall assess each candidate against the stated role and technical criteria. Their own competence and conflicts shall be documented. Comparable prior work may satisfy specified experience elements only after verification; programme knowledge, witnessed performance and independence shall not be waived. Honorary titles, reciprocal self-approval and attendance at an introductory meeting shall not create assessor authority.

Required evidence: Initial-panel qualifications; equivalence map; witnessed task; remaining scope restrictions.

7.5 – Maintenance and inactivity

Source: AF-AST-STD-001, page 18.

Maintain relevant development, current practice and observed performance at the intervals in Annex D. Review poor reports, inconsistent decisions, complaints, new technologies and changes in methods as well as activity counts. Failure to meet the applicable role minimum shall suspend independent role use until reviewed supervised reactivation. An

individual shall notify limitations and request support rather than accept a task outside the authorised scope. Restoration does not erase earlier affected-work concerns.

Required evidence: Practice/development logs; witnessed reviews; suspension and reactivation; prior-work assessment.

8.2 – Equipment identity and fitness

Source: AF-AST-STD-001, page 18.

Equipment, software-controlled instruments, fixtures, tools and reference artefacts shall be uniquely identified and suitable for the required range, resolution, accuracy, uncertainty and duty. Verify acceptance before first use, after repair or configuration change, and when validity is questioned. Records shall include version, location, maintenance, checks, restrictions and status. Calendar calibration alone shall not establish fitness for every method or specimen. Out-of-service equipment shall be prevented from supporting an authorised result.

Required evidence: Equipment register; acceptance and checks; method suitability; restricted-use controls.

8.3 – Traceability and calibration

Source: AF-AST-STD-001, page 18.

Measurement results shall have a technically appropriate documented connection to accepted reference quantities or justified reference bases, with uncertainty contributions and competent calibration evidence. Verify the actual service range and result, not only the provider's logo. Where direct reference traceability is not technically possible, document the alternative reference, method validation and limitations. Do not claim metrological traceability from an unverified manufacturer declaration or a broken chain of comparisons.

Required evidence: Calibration chain; certificates/results; uncertainty contributions; justified alternative basis.

9.4 – Measurement model and uncertainty

Source: AF-AST-STD-001, page 20.

Evaluate uncertainty appropriate to the reported result and decision. Identify measurand, significant corrections, input distributions, sensitivity coefficients, dependence, sample preparation and environmental effects. The calculation shall distinguish standard and expanded uncertainty, coverage factor, units and coverage interpretation. Known material bias shall be corrected or explicitly handled through an approved model, not hidden in a convenient uncertainty allowance. A result shall not inherit an uncertainty copied from an unrelated calibration capability.

Required evidence: Uncertainty budget; corrections; covariance; units; coverage and applicability justification.

9.5 – Decision rules and boundary results

Source: AF-AST-STD-001, page 20.

Agree the decision rule before evaluation and record its treatment of false acceptance, false rejection, uncertainty and criticality. Annex G sets the full-interval rule and alternative-rule controls. Conformity demonstrated, nonconformity demonstrated and indeterminate are separate outcomes under that rule. Indeterminate work remains held from acceptance pending valid disposition. Repeating observations until one passes, rounding a borderline value into compliance or changing the specification after seeing the result is not a valid resolution.

Required evidence: Pre-agreed rule; unrounded inputs; outcome; hold and authorised disposition.

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.

11.1 – 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.

15.1 – Review dossier

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

The independent reviewer shall examine the exact scope and profile, lawful authority, assessor competence, conflicts, coverage, method validity, evidence, uncertainty, findings, corrections, limitations and proposed claim. All essential records shall be accessible through authorised means. Return incomplete or inconsistent files for correction rather than infer missing results. Evidence reuse shall remain traceable to its original scope and limitations. The reviewed dossier shall be versioned so that the decision can later be reconstructed.

Required evidence: Independent review checklist; versioned dossier; unresolved issues and returned files.

15.2 – Positive-decision gate

Source: AF-AST-STD-001, page 27.

A positive grant, renewal or extension requires valid scope, all applicable criteria fulfilled, adequate evidence, closed in-scope nonconformities, sufficient independent competence and actual authority. Required operating and mark permissions shall be effective before the associated claim is used. This is a conjunction of conditions, not a weighted score. A genuinely bounded unaffected scope may be granted only after independent evaluation; it shall not conceal a systemic deficiency or imply success in the refused scope.

Required evidence: Completed gate; exact granted/refused boundary; authority and permission checks.

15.3 – Panel and dissent

Source: AF-AST-STD-001, page 27.

Apply the three-member accreditation panel rule in Clause 3.4. Members shall receive adequate records and competent technical support and shall not delegate votes. Record attendance, conflicts, affirmative/adverse votes, abstentions, reasons and technical dissent. A two-to-one outcome is possible only when every mandatory gate is substantiated; unresolved essential technical uncertainty requires hold or further work. The chair has no casting vote that can replace absent technical evidence or an ineligible member.

Required evidence: Panel record; all-member participation; technical dissent resolution; actual decision.

16.1 – Duration and basis

Source: AF-AST-STD-001, page 27.

Ongoing ASTRA recognition, qualification, certification or CAB accreditation under this common framework shall have a maximum 24-month period from the independent conformity decision, subject to a shorter profile interval and continued fulfilment. AF 9100 cases retain their controlling provisions. An instance result identifies its lot, serial, event, test or historical statement and does not acquire a universal two-year technical validity. Credential duration never extends an equipment life limit, calibration, statutory authorisation or qualified process window.

Required evidence: Ongoing/instance classification; exact dates; linked technical limits.

16.2 – Surveillance frequency and coverage

Source: AF-AST-STD-001, page 28.

Complete ongoing surveillance at intervals no greater than 12 months, reduced to six months for high-consequence, materially novel or significant competence/integrity exposure. Apply the AF 9100 C0–C3 rules when that standard is used. Mixed scopes follow the shortest triggered interval unless genuinely separated. Reassess actual operation, technical witnessing, changes, adverse results and controls; a document check or booked visit alone is not completed surveillance. Missing required completion triggers affected suspension.

Required evidence: Risk-based timetable; completed technical coverage; changed-scope review; overdue action.

16.3 – Material change and notification

Source: AF-AST-STD-001, page 28.

Planned changes shall be notified early enough for required prior review and before using an expanded claim. Unplanned non-critical material changes shall be notified within five calendar days after awareness; critical concerns follow the 24-hour rule. Evaluate ownership, responsible entity, location, methods, key personnel, digital platforms, aircraft/task capability, educational delivery and environmental boundaries. An unchanged commercial name shall not conceal a different technical basis.

Required evidence: Change notification; impact; prior approval; updated scope and evidence.

16.4 – Renewal and interruption

Source: AF-AST-STD-001, page 28.

Plan renewal sufficiently early to complete evaluation, closure, independent review and decision before expiry; initiation at least 90 days beforehand is recommended, not a guarantee. If the renewal decision occurs after expiry, a visible gap remains and the new status starts no earlier than the actual decision. Relevant prior work may inform the review but not substitute for current demonstrated capability. No payment or appeal automatically extends validity.

Required evidence: Renewal plan; current evidence; closed findings; actual dates and disclosed gap.

20.3 – Learning outcomes and curriculum alignment

Source: AF-AST-STD-001, page 34.

Map each required learning outcome to learning activities, prerequisites, assessment opportunities, direct evidence and an accountable academic owner. Annex J provides adaptable evidence dimensions rather than a universal prescribed curriculum. The approved discipline profile shall define the actual knowledge, design, analysis, experimentation, digital, ethical and practical depth and its workload basis. Credits, contact hours or attendance alone shall not establish outcome attainment.

Required evidence: Outcome–curriculum–assessment map; level/workload rationale; direct assessment evidence.

20.4 – Admissions, progression and completion

Source: AF-AST-STD-001, page 34.

Use transparent entry requirements, recognition of prior learning, transfer-credit review, academic advice and progression decisions. Demonstrate that every completion route meets the programme's published outcomes and award requirements, including partner and distance routes. Record exceptions and their academically authorised basis. Sample authentic learner work and completion records across relevant routes; do not infer all graduates' attainment from one showcase project or selected top-performing learner.

Required evidence: Admission/credit decisions; progression; completion checks; representative learner sample.

20.5 – Assessment validity and academic integrity

Source: AF-AST-STD-001, page 34.

Assessment methods shall test the intended knowledge and practical skills at the required level. Set rubrics, essential steps, identity and authenticity checks, moderation and resit rules before use. Preserve failed attempts and due process. AI-assisted and remote assessments shall demonstrate that the learner, rather than an unverified tool or substitute person, possesses the competence. Reasonable adjustments shall preserve the construct being assessed and protect personal information.

Required evidence: Assessment design; moderation; authentic work; essential-step results; integrity/remedy records.

20.8 – Attainment, improvement and closure of the loop

Source: AF-AST-STD-001, page 35.

Evaluate attainment using relevant direct and indirect evidence, defined populations, rubrics and denominators. Examine weak outcomes, completion barriers, subgroup or delivery-mode differences and feedback. Assign improvement actions, implement them and demonstrate their effect on subsequent representative work. A meeting, survey or action list alone is not a completed improvement loop. Do not average a failed essential practical outcome into an overall pass.

Required evidence: Attainment analysis; improvement decision; implemented action; follow-up evidence.

20.9 – Initial operating evidence and readiness only

Source: AF-AST-STD-001, page 35.

A full programme outcome shall be based on authentic completed delivery and assessment evidence, normally at least one complete cohort for the claimed completion route, sufficient to evaluate all applicable outcomes. Where this evidence does not yet exist, the operator may issue only a clearly bounded developmental readiness report, with no live recognition or accreditation claim. The profile shall define suitable evidence for individualised or very low-volume programmes without inventing graduates or records.

Required evidence: Completed delivery evidence; cohort/route coverage; readiness limitations; honest public status.

24.1 – Engagement and statement boundary

Source: AF-AST-STD-001, page 40.

Identify the responsible entity, assets/sites, reporting period, intended users, statement, methodology, criteria and required form of assurance. Separate capability evaluation from statement verification and prospective validation. Approve the boundary, exclusions, materiality approach, data access and reporting conditions before evaluation. An airport operator's inventory is not automatically the inventory of every aircraft, tenant or service provider connected to it.

Required evidence: Engagement record; exact statement; boundary and period; agreed assurance objective.

24.2 – C01 – Inventory and data

Source: AF-AST-STD-001, page 40.

Identify direct emissions, purchased-energy emissions and relevant value-chain categories with consistent CO₂-equivalent treatment where applicable. Retain activity data, factors, units, versions, allocation, estimates, gaps and uncertainty. Explain excluded categories and shared sources. Trace material figures to actual meters, transactions or justified estimation models. A factor supplied for another geography, fuel, year or lifecycle boundary shall not be adopted without a suitability review.

Required evidence: Inventory model; activity/factor evidence; category and boundary rationale; data-quality assessment.

24.3 – C02 – Reduction and transition

Source: AF-AST-STD-001, page 41.

Verify historical reductions against a controlled comparable baseline and disclose structural changes, method changes, output mix and recalculation. Separate absolute and intensity changes and distinguish operational reduction from removal, compensation and avoided emissions. A future transition plan shall state assumptions, milestones, finance/resource dependencies, uncertainties and monitoring. Validation of that plan is not verification of achieved reduction and shall not be labelled as a net-zero achievement.

Required evidence: Baseline/recalculation; comparable actual results; transition assumptions; separate conclusion types.

24.7 – C06 – Low-carbon energy and supply claims

Source: AF-AST-STD-001, page 41.

Trace fuel or energy provenance, chain of custody, transfers, conversion, allocation and contractual attributes. Distinguish physically delivered material from a separated contractual attribute. Check ownership, eligibility, retirement or cancellation where relevant and prevent duplicate allocation of an exclusive claim. A purchased credit or fuel invoice alone does not prove that the complete service is zero-emission. Publish the actual mechanism and limits of the claim.

Required evidence: Custody/attribute ledger; eligibility and allocation; exclusive-claim checks; transparent statement.

24.8 – Materiality and assurance planning

Source: AF-AST-STD-001, page 41.

Set quantitative and qualitative materiality for the intended users, statement and consequences before substantive work. Plan evidence accordingly and consider aggregation, bias, omissions and fraud indicators. There is no universal five-percent materiality or assurance percentage in this standard. Materiality does not authorise knowingly false reporting, omitted mandatory categories or ignoring a significant qualitative issue. Reasonable and limited assurance engagements shall have separately defined work and appropriately worded conclusions.

Required evidence: Materiality rationale; assurance level; strategic and evidence plan; aggregated/qualitative issues.

24.9 – Verification execution and independent conclusion

Source: AF-AST-STD-001, page 42.

Evaluate data controls and substantive evidence, challenge estimates, reconcile interfaces and sample material categories. Preserve identified misstatements and corrections with the original statement. The independent reviewer shall confirm sufficiency for the agreed assurance form. If residual misstatement or missing evidence prevents a supportable conclusion, require correction, qualify the conclusion within permitted rules, or decline it; do not issue an unqualified favourable statement to meet a reporting deadline.

Required evidence: Verification trail; misstatement register; revised statement; independent conclusion and limitations.

28.1 – Mandatory scope content

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

Each outcome shall state holder and responsible issuer, unique identifier, exact class, family/module, criteria and version, evaluated object, site, technical activity, conditions/ranges, configuration or delivery version, period, decision/issue dates, status and restrictions. Identify ongoing expiry or instance boundary appropriately. The scope schedule forms part of the outcome and shall be available for verification without disclosing protected technical detail. Annex I supplies the minimum schema.

Required evidence: Decision-linked scope schedule; claim class; criteria/version; public/private split.

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.

28.3 – AF marks and authorised use

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

Use only authorised AF artwork and approved scope-specific wording. Preserve shape, proportions, legibility and the required identifier; do not create an apparent new certification symbol or apply an organisational mark to imply product approval. Permission shall identify holder, purpose, media, period and restrictions. Suspension or withdrawal shall end affected current claims promptly. Historical factual statements shall state the actual period and status without presenting withdrawn authority as current.

Required evidence: Mark licence; approved artwork/use; monitoring; correction of misuse.

28.4 – Registry states and authenticity

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

Maintain separate entity, application, profile, technical scope, decision, credential, authorisation and statement records. Public states shall distinguish active, restricted, suspended, expired, withdrawn and historical instance results. Applicant or pilot records shall not appear in a list of accredited holders. Validate signatures or other authentication, current status and permitted scope rather than treating a scanned certificate image as conclusive. Preserve corrections and prior states.

Required evidence: Validated registry; authenticated decision linkage; separate application/live status; history.

28.5 – Registry security, correction and availability

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

Protect registry integrity through least-privilege access, attributable updates, version history and tested recovery. Update status within two calendar days of a decision and communicate urgent restrictions without waiting for a routine update. Correct misleading duplicates, stolen identities and altered certificates through controlled investigation. Provide an alternative verified status channel during outage without extending expiry. The existence of a digital record demonstrates a recorded decision, not universal technical truth.

Required evidence: Access/update logs; two-day control; recovery; corrected misuse and alternative verification.

30.2 – Controlled transition

Source: AF-AST-STD-001, page 48.

For a new profile or substantive version, identify affected holders, evidence gaps, changed methods, competence, system updates, communications and effectivity. Set a technically justified transition that does not waive immediate safety duties. Preserve the basis of previous decisions and state when additional assessment is needed. Neither indefinite grandfathering nor automatic retrospective invalidation is presumed. A future requirement is not applied as though it had governed an earlier decision.

Required evidence: Transition plan; holder impact; competence/tool updates; actual effective versions.

30.4 – Scope withdrawal and learner/customer protection

Source: AF-AST-STD-001, page 48.

Before closing a profile or provider operation, identify active holders, open cases, pending appeals, unresolved findings, learners, records, status, contracts and financial duties. Notify affected parties and arrange lawful transfer or teach-out as relevant. A closure shall not erase adverse evidence or imply continued authority. Preserve access to historical decisions and correction channels. If urgent cessation is required, prioritise protection and accurate communication while completing residual obligations.

Required evidence: Closure plan; affected-party notices; transfer/teach-out; retained records and remedies.

31.3 – Actual adoption record

Source: AF-AST-STD-001, page 49.

Record the authenticated legal operator, technical approval, consultation completion, competent institutional adoption, signatories, effective date, applicable instruments and any necessary compatibility amendments. Keep edition date distinct

from legal or operational effectivity. Uncompleted approval fields shall not be filled with assumed names or dates. Programme-wide adoption alone shall not activate every listed technical scope; each profile requires the independent readiness and scope decision in Annex P.

Required evidence: Authentic adoption; completed compatibility conditions; individual scope activation.

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.

52.3 – Practical learning and assessment integrity

Source: AF-AST-STD-001, page 76.

Practical work shall use suitable equipment, current methods, safe supervision and representative tasks. Simulation or remote laboratories shall have a justified educational role and shall not replace essential hands-on competence without a valid basis. Assessment shall establish learner identity and authorship, including when AI tools are permitted. Rubrics, essential steps, moderation and resit rules shall be fixed in advance. Failed essential skills shall not be averaged into a completion decision.

Required evidence: Practical-task and safety plan; assessment blueprint; authenticity checks; observed essential steps; preserved attempts.

52.5 – Attainment, improvement and learner protection

Source: AF-AST-STD-001, page 77.

Programme conclusions shall rely on authentic delivery and assessment evidence for every claimed completion route. Where sufficient completed evidence is absent, only the permitted developmental readiness result shall be used. Improvement shall connect identified weakness, educational cause, action and subsequent comparable outcomes. Changes, closure or loss of status shall protect learner records, communication and teach-out or transfer. Survey satisfaction and a favourable cohort average shall not replace direct evidence of essential attainment.

Required evidence: Route/cohort attainment; improvement follow-up; readiness limitations; teach-out and historical-record protection.

53.2 – Inventory and comparable reduction

Source: AF-AST-STD-001, page 77.

Quantification shall retain actual activity data, suitable factors, units, versions, source quality, corrections and relevant uncertainty. Comparisons shall use a coherent baseline and address structural, methodological and output-mix changes. Absolute and intensity changes shall be reported separately where material. Gross emissions, direct reductions, removals, compensation and avoided emissions shall not be merged into an unexplained net result. Numerical examples in this standard are synthetic and are not real-world factors.

Required evidence: Inventory model; data and factor provenance; baseline/recalculation; separated quantities; uncertainty and claim review.

56.3 – Decision and publication safeguards

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

The workflow shall test valid scope, complete evidence, fulfilled criteria, closed findings, current competence, case independence and actual authority before publishing a positive outcome. Where a three-person panel is required, all eligible participation and votes shall be recorded. An automated check may flag or block a proposed instruction but shall not create the independent technical decision. Public information shall match the authorised decision and preserve restrictions, expiry and historical gaps.

Required evidence: Decision preflight; authentic decision instrument; panel record where required; public/private reconciliation.

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.

57.1 – Role-specific competence and scope

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

The operator shall map actual assessment tasks to verified discipline, method, language, consequence and judgement requirements. Audit leadership, technical evaluation, independent review, decisions and appeals shall remain separate authorisations. Learning attendance and numerical experience minima shall not replace observed ability. A person competent in one method or programme shall not be assigned unrestricted aerospace authority. The case plan shall identify necessary specialists and limits before accepting the work.

Required evidence: Task-to-role and person matrix; verified entry evidence; observed performance; bounded authorisation.

57.3 – Practical assessment and maintained practice

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

Knowledge and practical criteria shall be defined before evaluation. Essential safety, integrity and independence steps shall be separately passed. Mentored work shall identify what the candidate actually performed and what remained supervised. Continuing development, recent practice, observed performance and review feedback shall maintain the authorisation. Unmet minima or loss of currency shall suspend independent role use until the required supervised reactivation. Later renewal shall not validate prior work performed outside authority.

Required evidence: Blueprint and attempts; mentored-work records; continuing practice; suspension/reactivation; historical impact review.

58.5 – Continuing status and real chronology

Source: AF-AST-STD-001, page 83.

Surveillance, change, renewal, suspension, restoration and withdrawal shall preserve the controlling clocks in Clause 16 and Annex H. Booking an assessment is not its completion. Restoration does not extend original expiry without the required renewal or validate a suspended interval. Historical instance results shall retain their object and period rather than acquire a fictitious ongoing validity. Public status, urgent notices and protected case history shall remain consistent after every material event.

Required evidence: Authoritative cycle baseline; actual completions; status events; preserved gaps; notifications and public reconciliation.

61.3 – Dependent documents and compatibility

Source: AF-AST-STD-001, page 86.

The responsible custodian shall identify every affected profile, manual, procedure, checklist, form and register before use of this text. Existing 108-title architecture and F01–F08 codes shall remain stable. Newly added requirements shall be mapped to the actual dependent documents; a previous checklist shall not be assumed to cover them. Actual constitutional and legal obligations remain separately applicable.

Verification: Reconcile the dependency register against selected requirements and operating versions.

Acceptance / hold rule: Every required operating document is available, consistent and authorised for the intended use. Unresolved conflicts place dependent use on HOLD.

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.

64.2 – Geometry, reference frames and event time

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

Trajectory- and geometry-dependent information shall identify frame origin, orientation, epoch, time scale, units, state covariance and transformation version. An exchanged position or orientation shall not be accepted without enough metadata to transform it consistently. Surface-relative, body-fixed, inertial and local engineering coordinates shall remain distinct. Event time, receipt time and ground processing time shall not be merged.

Verification: Recompute selected transformations and challenge wrong-frame and stale-epoch inputs.

Acceptance / hold rule: Transformations meet the approved error and time bounds; incompatible or ambiguous metadata produces HOLD.

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.

64.6 – Baseline maintenance and irreversible decisions

Source: AF-AST-STD-001, page 93.

Changes to mission duration, geometry, environment, operating mode, supplier or external service shall trigger a documented impact review. Before an irreversible commitment, the decision maker shall reconcile the current environmental baseline, actual configuration, evidence, reserves, unresolved issues and protective options. Commercial schedules shall not be used as substitute evidence.

Verification: Compare the frozen readiness dossier with the actually delivered configuration and latest accepted mission assumptions.

Acceptance / hold rule: Every essential gate is complete and all permitted actions are stated; otherwise the irreversible commitment remains blocked.

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.

68.6 – Mission extension and terminal resources

Source: AF-AST-STD-001, page 101.

Before extending service, reassess remaining energy, support, communications, attitude capability, life, uncertainty, monitoring and resources required for terminal duties. The extension shall not consume a reserve already committed to a required protective or end-of-life function without authorised technical resolution. The decision shall preserve original life history.

Verification: Reconcile updated budgets, remaining-life evidence and terminal feasibility.

Acceptance / hold rule: Required continued-service and terminal predicates both pass; a commercially useful asset is not automatically eligible for extension.

68.7 – Status and long-term custody

Source: AF-AST-STD-001, page 101.

Closure shall record whether an asset is operating, restricted, dormant, disposed, lost or unknown using verified evidence and defined meanings. Loss of communication shall not be labelled successful disposal. Assign remaining notices, monitoring and records to an actual custodian. A closed commercial contract does not close an unresolved technical or environmental obligation.

Verification: Trace final-state evidence and accepted transfer of residual duties.

Acceptance / hold rule: Terminal claims match observed or explicitly bounded inferred states, and every continuing duty has a receiving owner.

73.1 – Population, mission and human tasks

Source: AF-AST-STD-001, page 110.

Define intended occupants, roles, mission duration, environmental conditions, physical access, workload, communication and reasonable variation in users. Identify essential tasks and protective actions. Validation shall state participant representativeness, assistance, training and limitations; one expert demonstration shall not establish capability for all users.

Verification: Review the user/task matrix and representative normal and degraded validation.

Acceptance / hold rule: Each essential task is demonstrated under its approved conditions; unsupported populations and tasks are excluded from the claim.

73.5 – Human factors and effective authority

Source: AF-AST-STD-001, page 111.

Displays, alerts and procedures shall identify state, urgency, limitations and required actions without ambiguous mode or priority. Workload, fatigue, interruptions, language, delayed feedback and automation bias shall be evaluated. A manual override is an effective control only when a person has the information, time, training and physical or technical ability to use it.

Verification: Observe representative task and intervention performance, including misleading and degraded information.

Acceptance / hold rule: Every essential response passes independently; aggregate usability scores do not offset a failed protective task.

74.7 – Disposition and residual responsibility

Source: AF-AST-STD-001, page 113.

Final disposition shall identify sample, container, residue, facility, record and long-term custody obligations. Transfer shall include receiving acceptance and usable evidence. Mission completion shall not terminate a continuing protection or scientific-record duty. The custodian shall preserve genuine access conditions and correction channels after organisational closure.

Verification: Trace final-state evidence and accepted residual duties.

Acceptance / hold rule: No required custody or protection obligation is abandoned and no unverified disposal is claimed complete.

75.4 – Yield, mass balance and circularity

Source: AF-AST-STD-001, page 114.

Material accounting shall separate input, good output, reject, sample consumption, process loss, recovered material, work in progress and unknown difference. Internal recirculation shall not be counted repeatedly as new resource production. Mass closure and yield are different measures; neither proves safety or material performance. Units and measurement

uncertainty shall be explicit.

Verification: Independently reconcile the material ledger and separately review quality acceptance.

Acceptance / hold rule: Balances meet the approved uncertainty-based criterion and all claimed good output is technically accepted; unexplained losses or duplicate recovery remain open.

75.7 – Handover, resource claims and closure

Source: AF-AST-STD-001, page 115.

The final claim shall state actual production, quality, quantity, conditions, uncertainty, exclusions and accepted receiving responsibility. Demonstration of a resource process creates no ownership, extraction right or operating permission. Waste, residues, hazardous inventories and long-term custody shall have accepted disposition.

Verification: Reconcile reported outputs, accepted products, rights/permissions and final-state evidence.

Acceptance / hold rule: The claim is bounded to measured and accepted achievement; undeveloped scale-up and unknown disposition remain separate.

76.6 – Degradation, environmental claims and retirement

Source: AF-AST-STD-001, page 117.

Capacity, conversion and loss models shall reflect ageing and relevant exposure. Environmental claims shall use a separately defined lifecycle boundary and shall not imply technical interchangeability or complete safety. Retirement shall preserve hazardous inventory, terminal protection, custody and monitoring duties.

Verification: Reconcile actual condition, model validity, separate environmental statements and final disposition.

Acceptance / hold rule: Technical life and terminal conditions are met independently of environmental metrics; unknown inventories remain open obligations.

77.3 – Measurement and uncertainty readiness

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

Before execution, verify instrument identity, calibration, range, bandwidth, synchronisation, environment, software, raw-data retention and uncertainty suitability. Sensor placement and spatial coverage shall represent the characteristic being accepted. Protect the article and personnel through separately specified stop conditions.

Verification: Inspect the full measurement chain and execute relevant readiness checks.

Acceptance / hold rule: All required channels are valid for the intended inference; a missing, saturated or misconfigured critical channel prevents that acceptance.

77.6 – Numerical and attribute acceptance

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

Quantitative decisions shall use the prospectively selected predicate and uncertainty rule. Attribute decisions shall name observable states and essential steps rather than unstructured judgement. Equality at an inclusive limit is handled as specified; empty acceptance regions, invalid units and non-finite values produce HOLD. Rounding shall not change an outcome.

Verification: Replay boundary, negative and missing-input cases using Annex AL and Annex AM.

Acceptance / hold rule: The correct state follows deterministically from valid unrounded inputs and the approved predicate.

77.8 – Independent campaign closure

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

The final dossier shall reconcile configuration, criteria, valid results, adverse evidence, untested characteristics, uncertainty, concessions and open duties. Qualification, article acceptance, laboratory competence and ASTRA conformity shall retain separate decisions. A technical concession shall not be relabelled as fulfilment of the original criterion.

Verification: Perform independent requirement-by-requirement closure with actual decision authority.

Acceptance / hold rule: Every applicable gate for the exact claimed object passes; counts, percentages or programme completion dates alone cannot release the object.

78.3 – Evaluation data and model credibility

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

Evaluation shall retain data provenance, rights, labelling, representative populations, partitions, leakage checks, synthetic contribution and adverse cases. Model verification, calibration and independent validation shall be distinguished. A high aggregate score, large dataset or visual twin is not evidence of every rare or safety-critical condition.

Verification: Inspect data partitions and independently reproduce selected performance and model-validation results.

Acceptance / hold rule: Prospective scenario-specific criteria are met with disclosed uncertainty and limitations; unsupported extrapolation remains HOLD.

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.

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.

78.6 – Monitoring, drift and adaptation

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

Define detectable drift, changed exposure, failure signals, missing-data response, authority and reassessment triggers. Monitor what the method can actually observe, not every property inferred from a live dashboard. Adaptation outside the released envelope shall require renewed assurance before reliance. A monitoring gap shall not be treated as evidence of unchanged performance.

Verification: Review monitoring coverage, alert-to-action records and controlled changes.

Acceptance / hold rule: Essential performance and protection remain supported; otherwise restrict the affected use and assess earlier outputs.

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.

79.5 – Terminal evidence and responsible transfer

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

Terminal-state claims shall specify the exact intended condition, permitted inference, observation method, resources and residual duties. Transfer shall preserve custody and receiving acceptance of records, hazardous inventory, notices, monitoring and unresolved remedies. A file sent or contract ended is not accepted closure.

Verification: Reconcile final-state evidence, inventory and recipient acknowledgement.

Acceptance / hold rule: Every required terminal criterion is demonstrated or openly limited, and every remaining duty has an actual receiving owner.

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.

80.5 – Continuing conformity and change

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

Maintain surveillance, technical validity, people, resources, configuration, monitoring and actual state history under the controlling clocks. Mission, environment, population or technology changes shall trigger impact review before expanded reliance. Restoration shall preserve expiry unless a full renewal has occurred and shall not validate the suspended interval.

Verification: Audit actual completion, change and status records rather than scheduled dates alone.

Acceptance / hold rule: The current claim remains fully supported; overdue or invalidated conditions trigger the applicable restriction, suspension or withdrawal.

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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