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REGISTER AND DATA DICTIONARY

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Purpose and application

PDF record architecture, field dictionary, manual review rules and blank capture sheets for Education and Environmental Programme Records. This replaces only the planned delivery format for this issue: it is not an executable spreadsheet, access-control system, database or automatic decision engine.

Source requirements and added implementation detail

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

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

Acceptance boundary

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

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1 Purpose, ownership and state separation

Keep educational and environmental datasets separate despite sharing an administrative register. Learner attainment is not a programme conformity score. Statement verification is not verifier accreditation. Protect personal learner records and confidential transaction data.

Education: proposed, delivered, assessed, attainment reviewed, improvement pending, teach-out/closed. Environment: proposed statement, accepted engagement, evidence review, correction required, independently concluded, amended/withdrawn historical statement.

The named custodian allocates persistent IDs and administers records under actual permission. Technical acceptance, independent decisions and public publication have separate authorities. All tables inherit the common record payload from Annex M. A printed row, a formula specification or a linked identifier alone does not demonstrate an underlying event.

2 Relational field dictionary

Educational programmes

Field	Meaning and control
programme_id	Persistent unique identifier for this entity or record. Resolve every parent link to the correct actual object; do not reuse or infer a missing identity.
provider	Record the actual provider for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.
discipline_level	Record the actual discipline level for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.
curriculum_revision	Exact controlled version or technical state supporting this record. Retain before/after history and verify match to the actual evaluated configuration.
delivery_routes	Precisely bounded activity, location, method, object or subject. Include relevant conditions and exclusions and retain separate responsibility for every claimed outcome.
lawful_award_basis	Record the actual lawful award basis for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.
recognition_decision	Attributable action of a competent authorised function, including independence and conflicts where required. Link the authentic instrument; no prefilled approval is implied.

Attainment

Field	Meaning and control
outcome_id	Persistent unique identifier for this entity or record. Resolve every parent link to the correct actual object; do not reuse or infer a missing identity.
programme_route	Precisely bounded activity, location, method, object or subject. Include relevant conditions and exclusions and retain separate responsibility for every claimed outcome.
rubric_version	Exact controlled version or technical state supporting this record. Retain before/after history and verify match to the actual evaluated configuration.
cohort_population	Defined numerical or categorical value with units, denominator/population, source, assumptions and applicable validation. Unknown, zero and not-applicable are not interchangeable.
sample_selection	Defined numerical or categorical value with units, denominator/population, source, assumptions and applicable validation. Unknown, zero and not-applicable are not interchangeable.
direct_evidence	Usable original source reference and version, responsible origin, permitted access and relevance to the named purpose. A reference existing in the register is not proof of validity.
attainment	Defined numerical or categorical value with units, denominator/population, source, assumptions and applicable validation. Unknown, zero and not-applicable are not interchangeable.
essential_failures	Record the actual essential failures for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.
improvement_followup	Record the actual improvement followup for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.

Environmental engagements

Field	Meaning and control
engagement_id	Persistent unique identifier for this entity or record. Resolve every parent link to the correct actual object; do not reuse or infer a missing identity.
entity_statement	Dataset-specific permitted state with the actual transition reason, authority and date. Do not conflate evidence receipt, case progress, conformity or current holder authority.
version	Exact controlled version or technical state supporting this record. Retain before/after history and verify match to the actual evaluated configuration.
period_boundary	Actual event or controlled period with a declared time basis. Keep creation, occurrence, review, decision and expiry distinct; preserve original deadlines and historical gaps.
claim_type	Record the actual claim type for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.
assurance_form	Record the actual assurance form for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.
materiality	Record the actual materiality for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.
methodology	Precisely bounded activity, location, method, object or subject. Include relevant conditions and exclusions and retain separate responsibility for every claimed outcome.

Environmental evidence and conclusions

Field	Meaning and control
row_or_issue_id	Persistent unique identifier for this entity or record. Resolve every parent link to the correct actual object; do not reuse or infer a missing identity.
activity_factor_sources	Usable original source reference and version, responsible origin, permitted access and relevance to the named purpose. A reference existing in the register is not proof of validity.
units_allocation	Defined numerical or categorical value with units, denominator/population, source, assumptions and applicable validation. Unknown, zero and not-applicable are not interchangeable.
uncertainty_gap	Defined numerical or categorical value with units, denominator/population, source, assumptions and applicable validation. Unknown, zero and not-applicable are not interchangeable.
misstatement	Dataset-specific permitted state with the actual transition reason, authority and date. Do not conflate evidence receipt, case progress, conformity or current holder authority.
corrected_version	Exact controlled version or technical state supporting this record. Retain before/after history and verify match to the actual evaluated configuration.
independent_conclusion	Record the actual independent conclusion for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.
recipient_correction	Record the actual recipient correction for this dataset, with scope, source and limitations. Use the controlling procedure and field relationships; retain corrections and reviewer accountability.

3 Common fields and integrity checks

Required identity or field	Content and interpretation
Record ID	Unique persistent identifier; do not reuse a withdrawn or superseded identifier for a different record.
Template / schema version	Identify this form version and any controlled continuation or equivalent record mapping.
Case and evaluated object ID	Connect to the actual application, asset, person, programme, method or statement.
Legal entity and actual performer	Distinguish accountable organisation, issuer, applicant and subcontracted performer.
Family / module and outcome class	Use the retained family/module and correct accreditation, recognition, qualification, certification, verification or validation class.
Scope / technical profile ID and version	Identify the exact version; a title alone is insufficient.
Site / station / delivery mode	Record physical, remote, mobile and partner-delivery boundaries that affect this record.
Configuration / method / statement version	Identify the actual technical baseline and conditions evaluated.
Creation date and time basis	Use the actual creation date; state time zone when a clock or sequence depends on time.
Relevant event / awareness / decision dates	Keep distinct dates separate. Use a linked chronology where more than one event exists.
Accountable author and role	Identify who recorded the information and within which task authority.
Reviewer / approver and authority	Identify the responsible review or approval function; blank does not mean approved.
Evidence references and versions	Link accessible original evidence, including adverse, missing or superseded items.
Record status and purpose	Use the relevant allowed states; evidence status and conformity status are separate.
Access / confidentiality class	Record authorised access; do not put protected operational detail in a public field.
Retention basis / custody / hold	Name the controlling retention rule, custodian and any preservation hold.
Correction / supersession history	Link the original, reason, person, actual date and affected downstream records.

Before accepting a record, verify unique identity, valid parent relationships, exact profile and configuration, actual time sequence and authorised origin. Check for duplicate keys, missing essential values, rejected evidence, unresolved findings, expired roles and unsupported public status. A successful key lookup is not proof that the linked source is true or relevant.

4 Manual operation, calculations and test cases

Create

Establish the actual triggering event and correct dataset. Allocate a unique ID, complete common and specific payload, retain the source and record unfilled essential fields as gaps rather than favourable defaults.

Review

A competent reviewer examines meaning, scope, evidence and event chronology. Where an independent decision is needed, route the versioned dossier to the separately authorised function instead of letting the custodian decide.

Update

Append changes with previous value, new value, reason, actual actor/date and decision reference. Retain superseded sources and historical state. Never reset a clock by copying the row into a new sheet.

Reconcile

Compare the expected population to actual records by identity, relationships, field semantics and permissible state. Confirm all exceptions, omissions and duplicates are accounted for before export or cutover.

Retain and recover

Use controlled access, retention, backups and actual recovery tests in the operational repository. This PDF provides the recording design only; test the deployed system and receiving custody independently.

Safe test	Expected result
Duplicate record ID	Detect collision and retain the original; do not silently overwrite or merge unrelated records.
Missing source / wrong configuration	Mark the dependency unavailable or mismatched and hold any affected positive conclusion.
Open finding / expired role	No unsupported grant, renewal, extension or unauthorised action. Preserve event-time assessment.
Old backup / missing later events	Reconcile post-backup history and current status before return to assured use.
Equal counts but substituted records	Fail semantic reconciliation; identify the actual missing and substituted identities.
Synthetic data in a public export	Exclude test records from live recipients and claims.

Manual calculations: count distinct record IDs, not duplicate appearances. Outstanding count = required population minus independently verified completed population only when both sets use the same definition and membership. A percentage is undefined if the denominator is absent or zero; do not display a favourable default. Calendar/month calculations follow Annex H. Any implemented formula requires separate known-answer, boundary and invalid-input tests.

1 Completion workflow and validation contract

PDF record architecture, field dictionary, manual review rules and blank capture sheets for Education and Environmental Programme Records. This replaces only the planned delivery format for this issue: it is not an executable spreadsheet, access-control system, database or automatic decision engine.

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

Input group	Validation before reliance	Invalid / incomplete response
Identity and configuration	Stable IDs; actual object and performer; correct profile, method and loaded configuration.	HOLD dependent use; resolve wrong-object or wrong-version evidence.
Numbers and units	Finite real values; compatible units; ordered limits; non-negative uncertainty; unrounded source retained.	Reject malformed inputs. Blank, NaN or infinity is not zero.
States and evidence	Received/reviewed/accepted evidence states separate from PASS/FAIL/HOLD/N/A.	UNSET is not a fifth favourable state; preserve the gap.
People and time	Current competence, conflict clearance and authority at actual event time; declared time convention.	Later renewal cannot validate an earlier unauthorised action.

Input group	Validation before reliance	Invalid / incomplete response
Approval and custody	Authentic approval instrument, exact permitted action and actual receiving acceptance.	No approval inferred from a typed name, file presence or sending a message.

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

2 Acceptance and original record preservation

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

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

For a compound source clause, create a child-condition ledger containing every separately testable condition, location, phase and operating mode. A sentence-level checkpoint is a navigation aid, not permission to merge unrelated predicates. Each child receives an ID, responsible owner, criterion, method, source evidence, uncertainty where relevant, current state and independent review. The parent cannot PASS while any mandatory child is FAIL, HOLD or UNSET.

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

Positive-decision conjunction

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

3 Source and record relationship crosswalk

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

ASTRA ID / page	Source subject	Implementation use
20.1 / 33	Programme identity and lawful standing	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
20.10 / 35	Change, teach-out and continuing learner protection	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
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
53.5 / 78	Statements and independent conclusions	Requirement, objective evidence and local child predicates
62.2 / 88	Mandatory parameter completion	Explicit verification and acceptance predicate
62.3 / 88	Evidence validity before conformity	Explicit verification and acceptance predicate
62.5 / 89	No compensation or favourable default	Explicit verification and acceptance predicate
73.1 / 110	Population, mission and human tasks	Explicit verification and acceptance predicate
75.4 / 114	Yield, mass balance and circularity	Explicit verification and acceptance predicate

ASTRA ID / page	Source subject	Implementation use
76.6 / 117	Degradation, environmental claims and retirement	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
80.4 / 124	Bounded claim and publication	Explicit verification and acceptance predicate

4 Detailed module implementation

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.

5 Workflow and relationship diagram

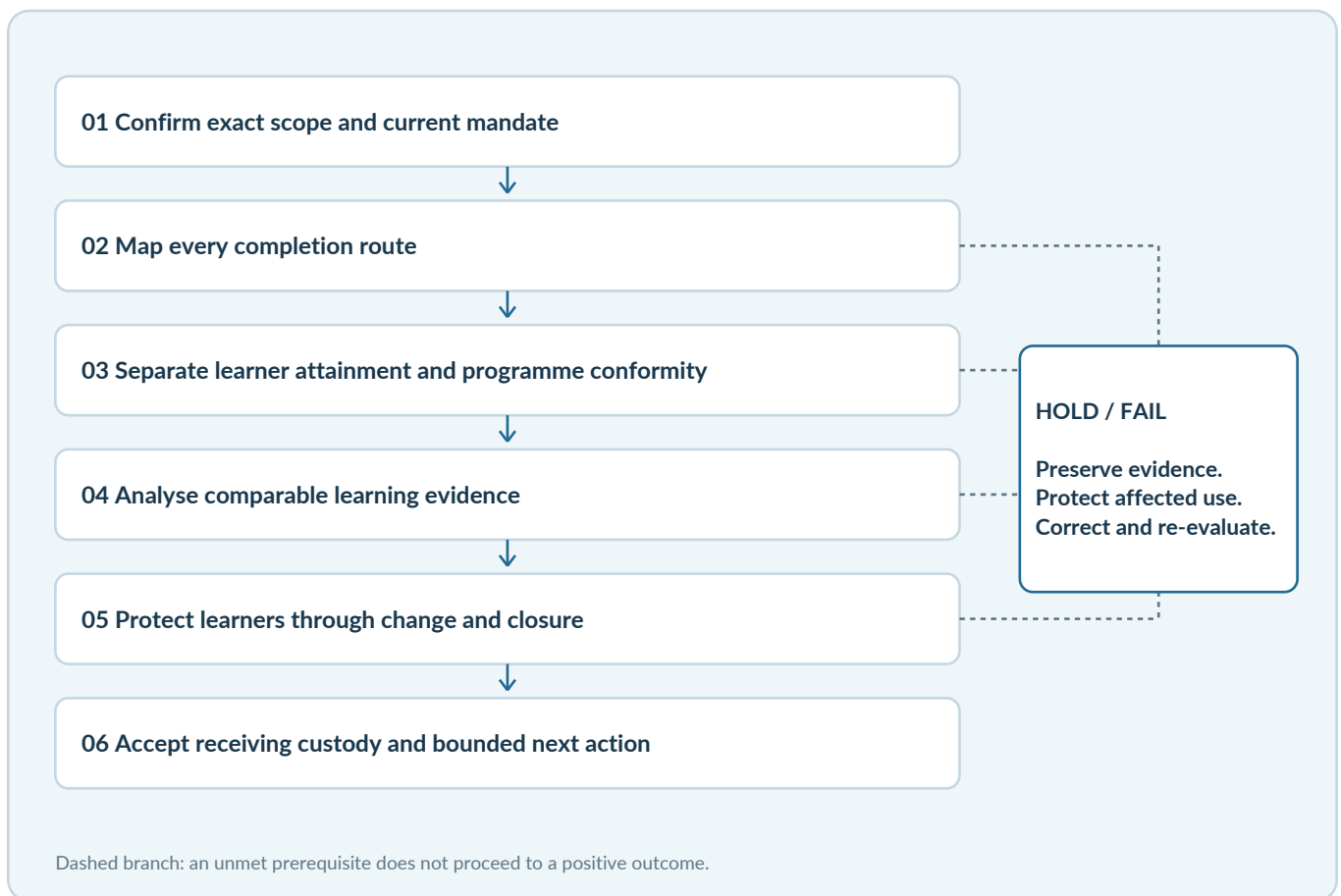
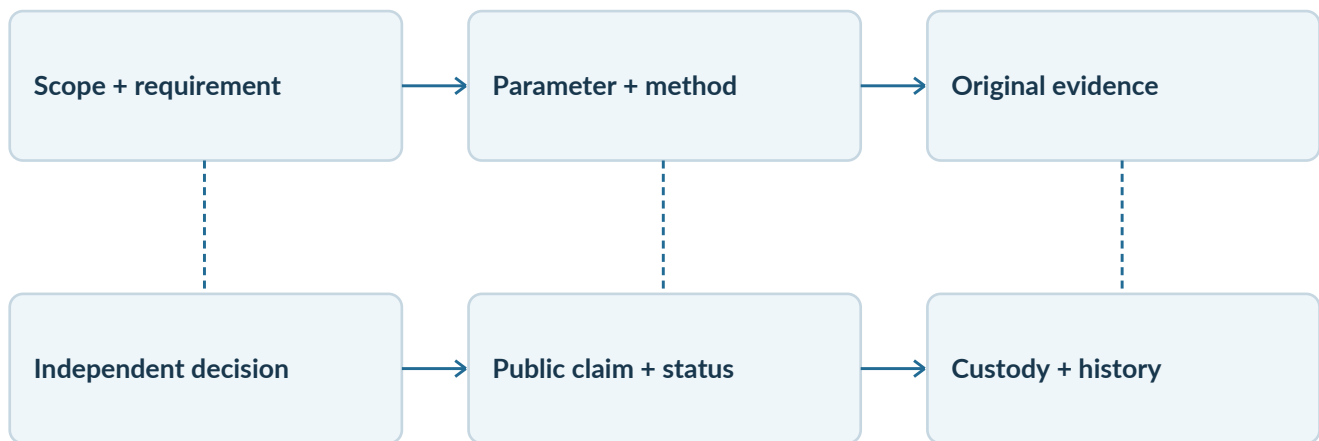


Figure — Implementation sequence for AF-AST-PR-026. Explanatory diagram; the source prerequisites and actual authority remain controlling.



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

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

6 Worked recording and calculation examples

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

AM.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

Standard and expanded uncertainty

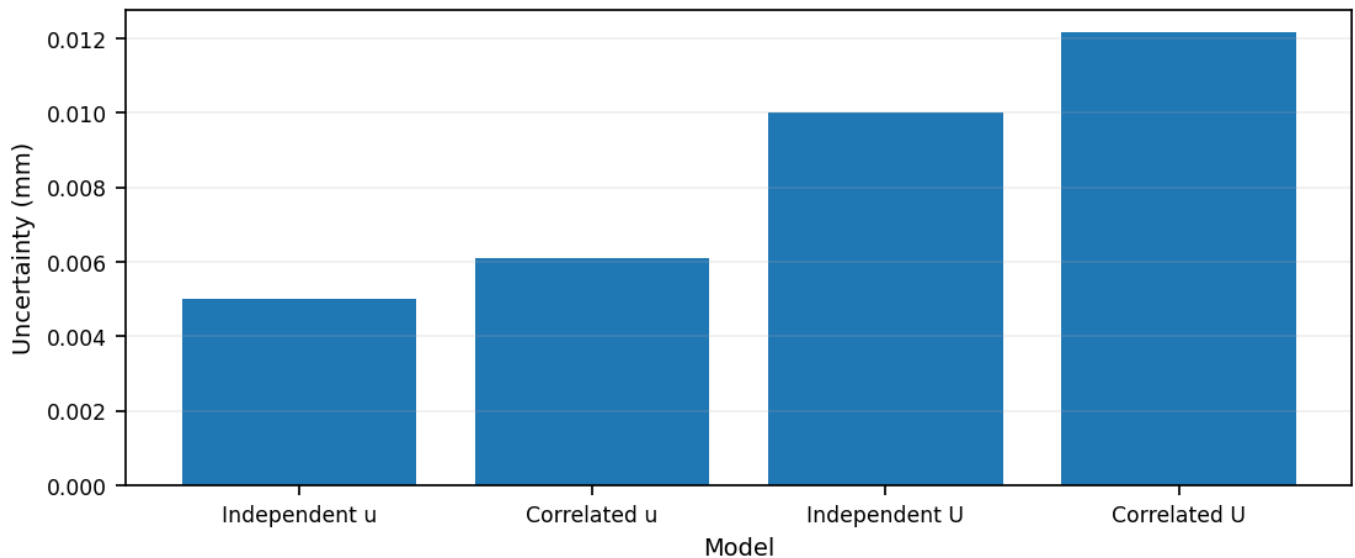


Figure Q01 — Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.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

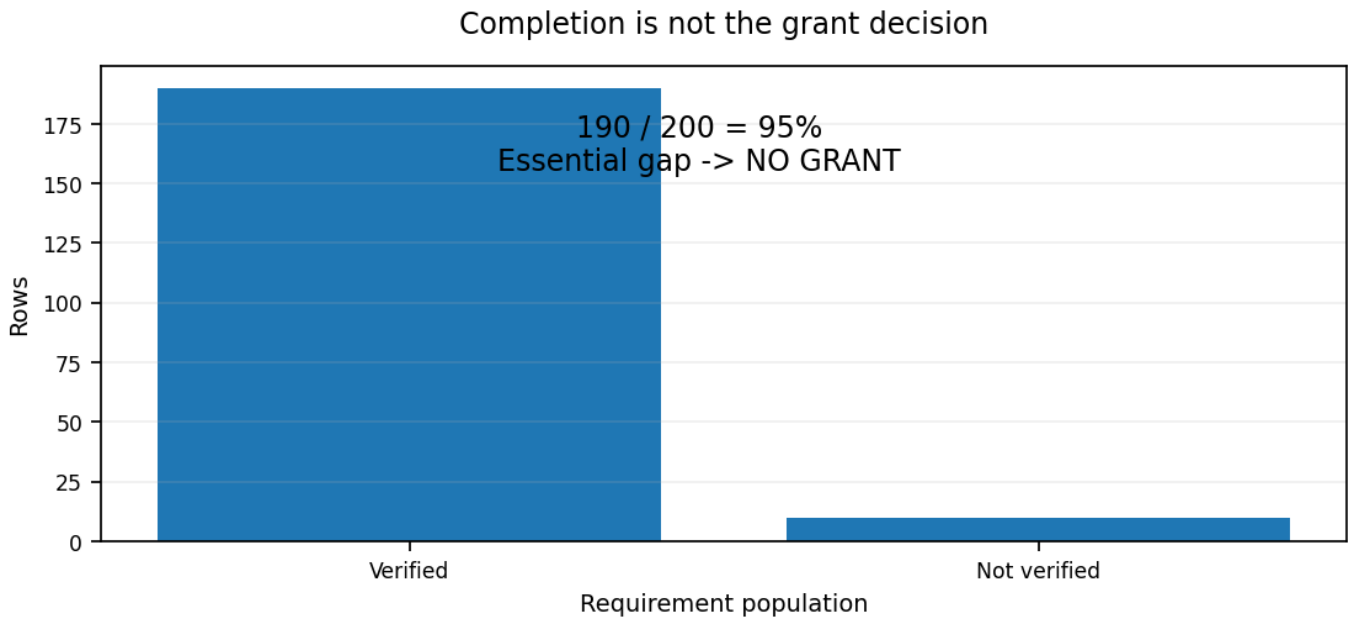


Figure Q03 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.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

- $\ln(0.05)/\ln(0.90) = 28.433158...$; round upward to $n=29$.
- $P(\text{detection at } n=29) = 1 - 0.9^{29} = 0.9528987130$.
- 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

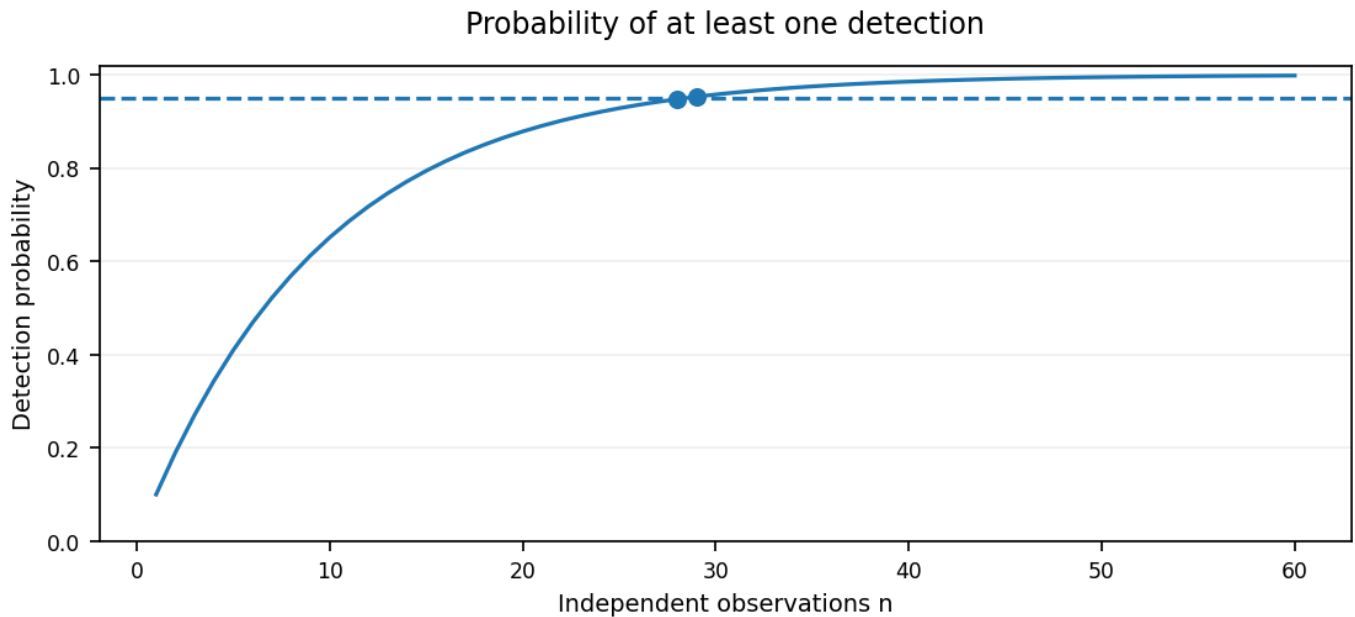


Figure Q06 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.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

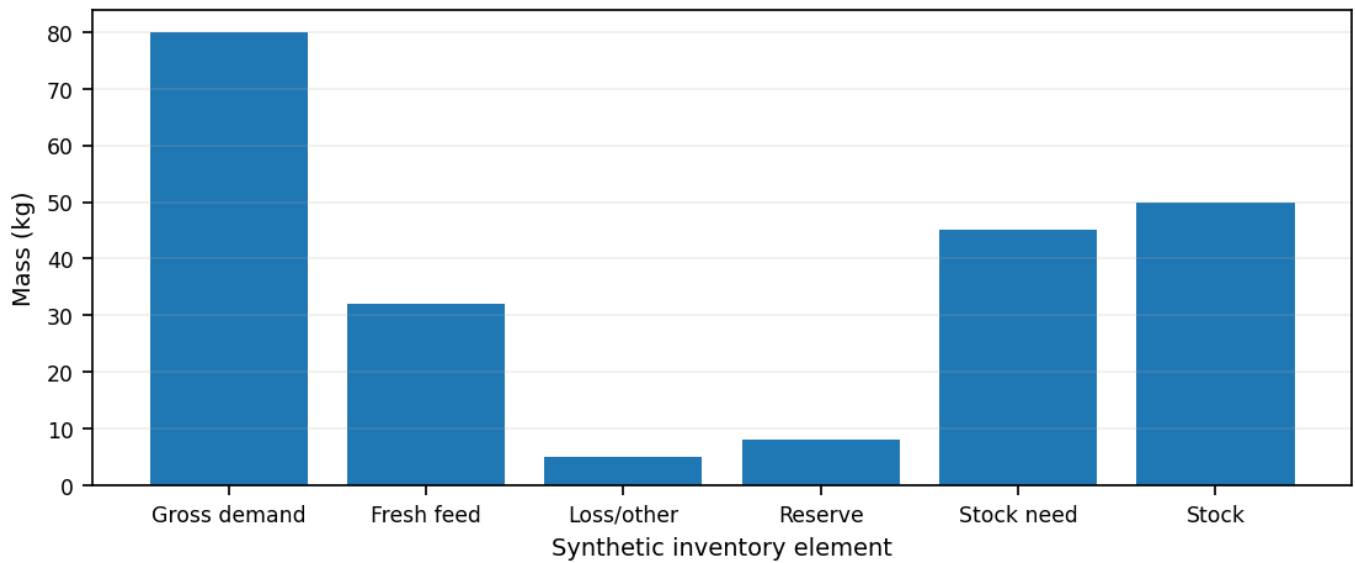


Figure Q22 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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

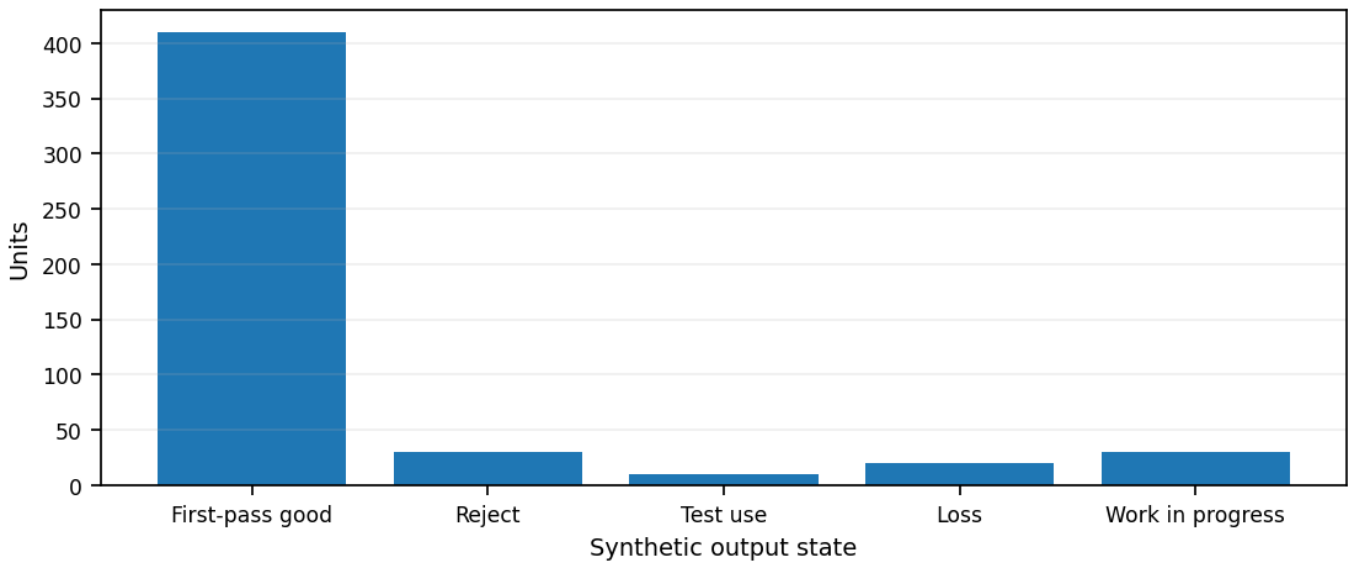


Figure Q23 – Synthetic visualisation. The axes and stated scenario define the quantity; no graph is an accreditation score, approved operating envelope or evidence of a real mission.

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.

7 Missing, invalid and prohibited input cases

Challenge	Expected handling	Evidence retained
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.

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

F1 Retained record fields

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

Retained fields 1 onward

Dataset / entry ID / parent case or object

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

Profile / configuration / site and outcome boundary

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

Field name(s), actual value(s), units and source version

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

Original evidence references and purpose-specific state

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

Relevant actual event dates and declared time basis

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

Required relationship checks and unresolved exceptions

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

Reviewer / authority / actual acceptance reference

Identify the frozen dossier, current scope and source basis, reviewer competence and conflicts, all mandatory child states, finding closure and actual decision authority. Record reasons, dissent, exact limitations and genuine event time; a vote does not create evidence.

Correction history / affected recipients / custody

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

Retained fields 9 onward

Entry ID, parent links and actual event for Educational programmes

Link verified role-specific preparation and direct observed performance to the source criteria. Record attempts, actual contribution, supervised work, individual essential steps, limitations and current authority. Attendance or a favourable average cannot replace failed essential performance.

Actual field values – Educational programmes

Link verified role-specific preparation and direct observed performance to the source criteria. Record attempts, actual contribution, supervised work, individual essential steps, limitations and current authority. Attendance or a favourable average cannot replace failed essential performance.

Review, limitations, correction and custody – Educational programmes

Link verified role-specific preparation and direct observed performance to the source criteria. Record attempts, actual contribution, supervised work, individual essential steps, limitations and current authority. Attendance or a favourable average cannot replace failed essential performance.

Entry ID, parent links and actual event for Attainment

Record the exact programme, discipline, level, version, delivery route and directly assessed outcomes. Link authentic learner evidence, essential practical skills, moderation and authorised academic decisions. Provider recognition does not licence every graduate or unrelated programme.

Actual field values – Attainment

Record the exact programme, discipline, level, version, delivery route and directly assessed outcomes. Link authentic learner evidence, essential practical skills, moderation and authorised academic decisions. Provider recognition does not licence every graduate or unrelated programme.

Review, limitations, correction and custody — Attainment

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

Retained fields 15 onward

Entry ID, parent links and actual event for Environmental engagements

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

Actual field values — Environmental engagements

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

Review, limitations, correction and custody — Environmental engagements

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

Entry ID, parent links and actual event for Environmental evidence and conclusions

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

Actual field values — Environmental evidence and conclusions

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

Review, limitations, correction and custody — Environmental evidence and conclusions

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

F2 All-domain assurance extensions

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

Mission/domain applicability

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

Phase and operating-mode matrix

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

Complete atomic requirement population

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

Prospective technical parameters

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

Evidence validity and purpose

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

Accepted predicate and uncertainty rule

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

Current child states and unresolved conditions

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

Configuration and environment difference matrix

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

Resource and shared-dependency review

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

Command, remote evidence or service completion

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

Adverse-case and boundary-test record

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

Independent calculation and decision replay

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

Claim and state projection

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

Receiving acceptance and remaining duties

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

Original-versus-current source distinction

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

Authentic approval instrument

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

F3 Process-specific extension entries

PR-026 X1 — Map every completion route

Identify programme, level, mode, campus, partner, prior-learning route and required outcomes. Link each outcome to direct authentic assessment. Completion: A favourable cohort mean cannot cover an unrepresented completion pathway.

PR-026 X2 — 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: Every required essential skill passes for the person; institutional process quality is a separate conclusion.

PR-026 X3 — Analyse comparable learning evidence

Use explicit populations, denominator, selection and consistent rubric/task difficulty when assessing subgroup or year-to-year differences. Completion: Attendance or satisfaction alone cannot establish practical attainment or demonstrate causal improvement.

PR-026 X4 — Protect learners through change and closure

Verify current instructors/resources, record access, communication and actual teach-out or transfer arrangements. Completion: A development-readiness report is not full programme recognition; no fictitious graduates or professional privileges are created.

PR-027 X1 — 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: A future plan or partial inventory cannot be relabelled as an achieved complete reduction.

PR-027 X2 — 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: Correct arithmetic cannot compensate for an unsupported factor, wrong boundary or missing mandatory category.

PR-027 X3 — 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: No favourable public conclusion while relevant allocation, eligibility or technical reuse conditions remain unresolved.

PR-027 X4 — 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: Do not issue an unqualified favourable conclusion solely to meet a reporting deadline.

F4 Controlled continuation and receiving record

Continuation identity and parent link

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

Complete visible narrative / data dictionary

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

Independent response and limitations

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

Receiving acknowledgement

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

Appendix A – Controlling source requirements

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

20.1 – Programme identity and lawful standing

Source: AF-AST-STD-001, page 33.

Record the provider, programme and award names, discipline, entry route, qualification level, language, mode, campuses, partner delivery and authority to offer the stated award. The programme name shall match learner records and public information. A recognised programme does not make every programme of the institution recognised and does not licence its graduates. Short courses, vocational pathways, degrees and professional development shall not use the same undisclosed evaluation boundary.

Required evidence: Programme/award identity; delivery map; legal standing; consistent public information.

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.

20.10 – Change, teach-out and continuing learner protection

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

Review changes to curriculum, award level, campuses, online platforms, partners and major staff/resources before extending the recognised scope. Continuing oversight shall address actual outcomes and learners, not only unchanged syllabi. Closure or loss of programme status requires clear communication, record preservation, transfer or teach-out arrangements and accurate historical status. Do not retroactively remove a learner's authentic academic work or imply a professional licence from the programme result.

Required evidence: Change approval; continuing outcome review; teach-out/transfer; historical records.

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.

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.

53.5 – Statements and independent conclusions

Source: AF-AST-STD-001, page 78.

Capability recognition, historical verification, prospective validation and verifier accreditation shall remain distinct. Each engagement shall define the statement, criteria, intended users, assurance form, materiality and reporting boundary before substantive work. Errors, omissions, bias and residual uncertainty shall be evaluated independently. A favourable transition-plan review is not an achieved reduction. Later evidence invalidating a historical statement shall lead to

appropriate correction and recipient communication without rewriting the original decision history.

Required evidence: Engagement terms; statement versions; misstatement and limitation record; independent conclusion; correction and notices.

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.

62.5 – 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.

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.

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.

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.

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.

80.4 – Bounded claim and publication

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

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

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

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

Appendix B — Local adoption, validation and receiving acceptance

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

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

PDF recording limits: text fields may scroll beyond their visible area. A printed or flattened copy shall include controlled continuations whenever the full response is not visible. A typed name is not a certificate-based authenticated signature. An actual signed instrument or authenticated workflow shall establish approval. Record custody and privacy are implemented by the receiving organisation, not by this PDF alone.