

OPERATING CASE STUDY / OPERATIONAL EXCELLENCE

Execution Standards & Verification

Make completed work distinguishable from a completed report

An anonymized project case study of an execution-verification matrix: defining what proves a committed operating action occurred, exposing gaps in the available evidence and specifying the mechanism needed to close each gap.

PROJECT CONTEXT / OPERATIONS, ANALYTICS & IMPLEMENTATION

BLUF / BOTTOM LINE UP FRONT

Prove the action.
Then evaluate its effect.

RECALCULATED FINDING

The principal registered audit reports no strict passes. A later readiness classification covers 25% of a changed action list; it does not establish executed work. Timely action records can still verify execution before lagged outcome reporting arrives.

CONTRIBUTION IN THE SOURCE RECORD

Proof-standard and matrix design, source correction and instrumentation asks. Registry-attested; provisional hoop support. Remedy ownership remained elsewhere.

EVIDENCE STATUS

Operating-design and reconciliation case. Originals unrecovered; execution, recurring adoption and causal customer or financial benefit remain unestablished.

BLUF: analytical inference. Source contribution: historical record. Client and internal identities anonymized.

EXECUTIVE ABSTRACT

Make each commitment carry the evidence needed to verify it

[AI] A completed report can describe an action without establishing that the work occurred. The matrix made that distinction explicit and turned missing proof into a specific operating ask.

CONTEXT | The action review lacked an execution test

[HR] A recurring quality forum reviewed commitments against settled input metrics. The registered matrix asked what operators were expected to do, what would prove it during the shift and what record would verify completion at the next review.

OBJECTIVE | Separate availability, execution and effect

[PD] Require proof matched to the action, eligible population and operating clock. Preserve unknown execution as unknown. Use a separate evaluation to determine whether completed work changes mature outcomes.

APPROACH | Turn the proof rule into an inspectable artifact

[HR] The author defined a rubric, refined the row list, corrected unsupported specifics and condensed the reasoning into a matrix with instrumentation asks. [RC] This case reconciles category counts. [PD] It formalizes an Execution Evidence Contract.

FINDINGS | A changed verdict is not a verified action

[RC] One reported header discrepancy disappears after grouped labels are reconciled; another account leaves 5.88% of its stated population unallocated. [AI] A later readiness share of 25% is a different construct, not comparable execution improvement.

DECISION VALUE | Assign the missing proof and its acceptance test

[PD] The COO should assign action and evidence owners, require a matched event record before granting execution credit, and resolve access or capture gaps before inferring nonexecution. Independently test false authorizations and false holds before using the rubric for consequences.

IMPLICATIONS | Credit the standard and matrix within their scope

[AI] Standard design, matrix authoring and diagnostic decisions receive provisional registry-level hoop support. The record does not establish ownership of remedies, recurring use, action effectiveness or financial benefit.

S1: selected project register and protected evidence ledger. HR historical record; RC recalculated; AI analytical inference; PD proposed design. The principal audit reports no strict passes; execution prevalence is not identified.

EXHIBIT 1 / EXECUTION EVIDENCE AND ACTION EFFECTIVENESS

Test action execution before interpreting the outcome dashboard

[HR] The matrix separates a detected defect, an identified target and evidence that an operator performed the committed work. Each answers a different question.

A PROOF LADDER SEPARATES FOUR DIFFERENT QUESTIONS

Conceptual evidence stages • moving to another stage requires new evidence

AVAILABLE	Can the operator access the mechanism?	Existence is not use.
TARGETED	Did an eligible condition create a task?	Routing is not delivery.
EXECUTED	Was the required action completed correctly?	Completion is not effect.
EFFECTIVE	Did delivery change the mature outcome?	A comparator is required.

An outcome dashboard cannot replace the event record that proves the committed work.

[HR] Registered examples include an alert that clears when congestion falls, a report naming whom to coach and a routing record showing that a case reached another team. These can support detection or routing without proving reallocation, coaching or completion.

Evidence stage	What it permits
[AI] Available or triggered	A tool exists or a condition was surfaced. Verify access, eligible population and event identity before drawing a conclusion about action.
[PD] Completed and effective	First establish action delivery against its acceptance criteria. Then estimate its effect with a comparator, mature outcome and relevant guardrails.

[AI] The strict rule requires in-shift and next-review proof. Two views of the same event log do not become independent corroboration. A failed proof test can reflect nonexecution, incomplete capture or inaccessible evidence; the available register cannot distinguish their prevalence.

OPERATING DECISION

[PD] Retain the matrix’s specific action question. Request the missing event record and its provenance before awarding execution credit or declaring that no work occurred.

[HR/AI/PD] S1:E03–E05/E10; M01/M06. Original artifacts are unrecovered. The proof rule is an evidentiary criterion, not an observed causal effect or a measured execution prevalence.

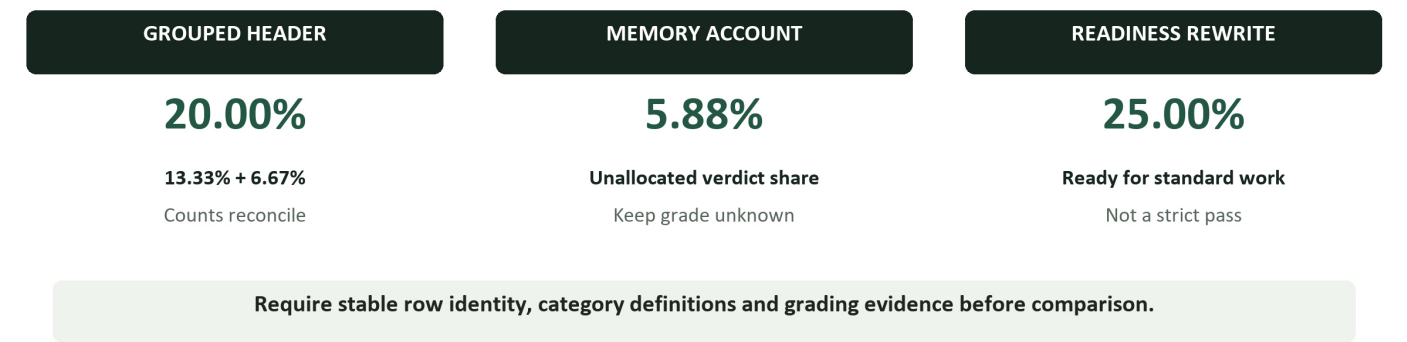
EXHIBIT 2 / VERDICT AND POPULATION RECONCILIATION

Freeze the action list and verdict meanings before comparing versions

[RC] The grouped-category header reconciles to its listed rows. A separate memory account leaves 5.88% of its stated population without an allocated verdict.

A TAXONOMY CHANGE CANNOT BE READ AS EXECUTION IMPROVEMENT

Each percentage uses its own artifact population • versions are not operating time points



[HR] The register describes several audit generations, including a verification ledger, a published table, an incomplete memory account and a later readiness rewrite. [RC] Splitting the published table’s combined category resolves the alleged internal count conflict; a different ledger still has a genuinely different allocation.

Version issue	Required treatment
[RC] Unallocated memory share	Do not fill the missing verdict by assumption. Its strict-pass share is bounded by 0–5.88% only if all allocated categories fail the strict test.
[AI] Readiness rewrite	The 25% readiness share uses a changed row list and taxonomy. It is not an execution-proof trend or a new strict-pass measurement.

[AI] The qualified positive in the memory account does not meet the intended-population requirement. Equal file length also cannot authenticate duplicate content. Version selection requires row identity, rubric, source cut and a reproducible category crosswalk.

MATRIX OWNER ACTION

[PD] Publish a version-specific verdict table. Reconcile grouped labels, retain unallocated status and prohibit performance comparisons until the action population and grading rule are stable.

[HR/RC/AI/PD] S1:M01/M02/E01/E03–E05/E10/E13. Relative shares preserve each source’s denominator. These are artifact versions, not repeated operating observations.

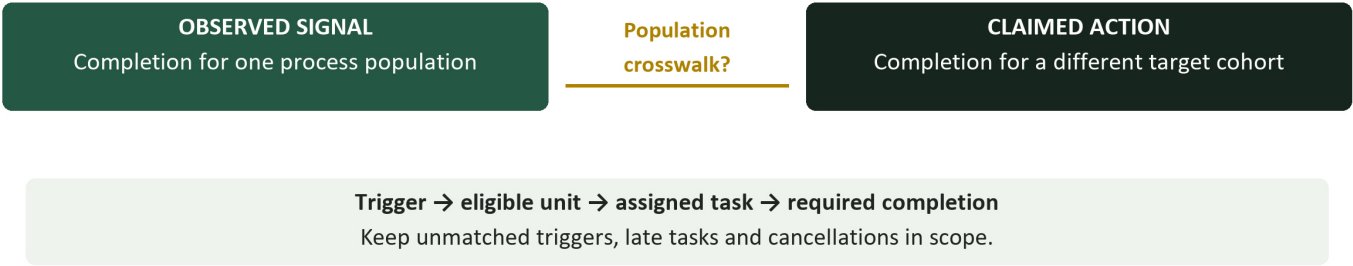
EXHIBIT 3 / TRIGGER-POPULATION VALIDITY

A completion signal must cover the action it is claimed to validate

[HR] A coaching-completion signal was treated as a qualified positive in one account and downgraded in another because its trigger population differed from the intended action population.

REAL COMPLETION CAN STILL BE THE WRONG EVIDENCE

Registered coaching example • trigger eligibility is part of the proof requirement



The register supports a scope mismatch, not an estimate of target-cohort execution.

[AI] A genuine completion record can still be the wrong evidence. The problem is not merely that a dashboard column is absent. Connecting the wrong cohort to the review surface would make the claim easier to see without making it valid.

Crosswalk requirement	Acceptance test
[PD] Trigger to eligible action	Match the triggering condition, eligible person or unit, action type and required completion window. Retain triggers that never generated a task.
[PD] Assigned to completed	Join assignment and completion by stable event identity. Inspect unmatched, duplicated, cancelled and late records rather than conditioning on successful intake.

[HR] The register records the author’s correction of imported terminology and parameters, plus the decision to preserve the population mismatch. [AI] That is a substantive measurement judgment. It does not establish the historical rate at which eligible coaching occurred or the effect of coaching on customer defects.

EVIDENCE OWNER ACTION

[PD] Validate the trigger-to-completion crosswalk before adding a compliance column. Keep correctly recorded work outside the target cohort separate from evidence that the target action was delivered.

[HR/AI/PD] S1:D02/E01/E05/E06. Contribution: provisional registry-level hoop support for the diagnostic correction. Neither the original completion population nor a target-cohort execution panel has been independently recovered.

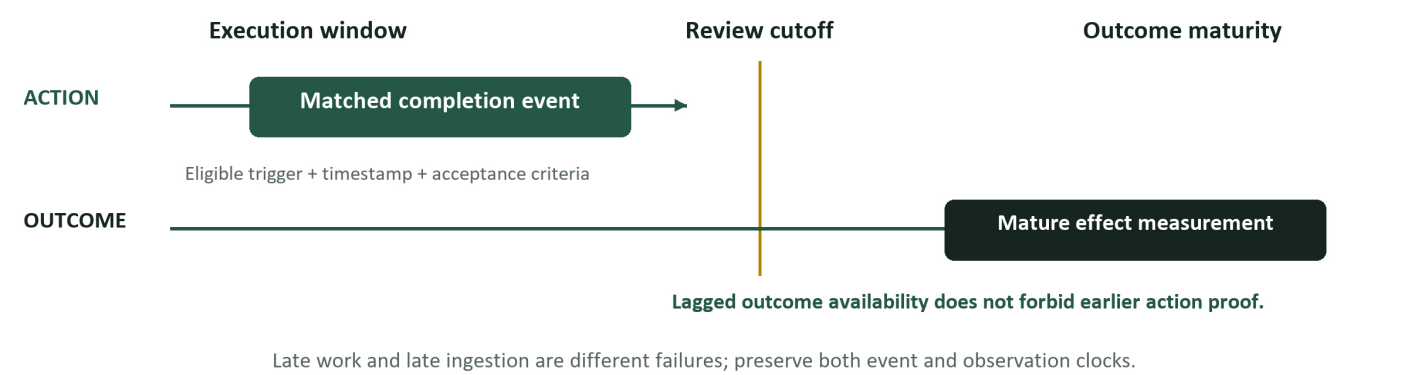
EXHIBIT 4 / ACTION AND OUTCOME CLOCKS

Verify the action on its own clock while the outcome matures

[AI] A delayed effectiveness measure cannot answer an earlier outcome question. It does not make every associated action impossible to verify at the earlier review.

THE ACTION CLOCK AND THE OUTCOME CLOCK NEED DIFFERENT RECORDS

Proposed timing contract • conceptual intervals, not historical timing measurements



[HR] The source identifies an effectiveness-reporting lag and requests an assigned-and-completed task signal. [AI] This is a useful instrumentation distinction. The source overstates it when it implies that the outcome lag prevents any timely verification of a linked action.

Clock	Evidence and decision
[PD] Action event and capture	Record when eligible work was due, performed and ingested. Match completion to the original trigger; distinguish late work from late reporting.
[PD] Outcome and maturity	Define the outcome event, observation window and completeness rule. Revisit effectiveness after follow-up without rewriting the action’s original deadline.

[AI] A task-completion flag can establish documented delivery if its meaning and coverage are validated. It is not a substitute estimate of the effectiveness metric and does not inherit that metric’s causal relevance. More timely data are useful only when they measure the required construct.

REVIEW OWNER ACTION

[PD] Approve separate execution and effectiveness clocks. Use timely action proof for follow-through; retain the mature-outcome test for efficacy and record the conditions under which each decision can be revised.

[HR/AI/PD] S1:E02/E03/E05; M03. Public clock diagram is a proposed conceptual contract. Source-specific reporting intervals and system identities remain private.

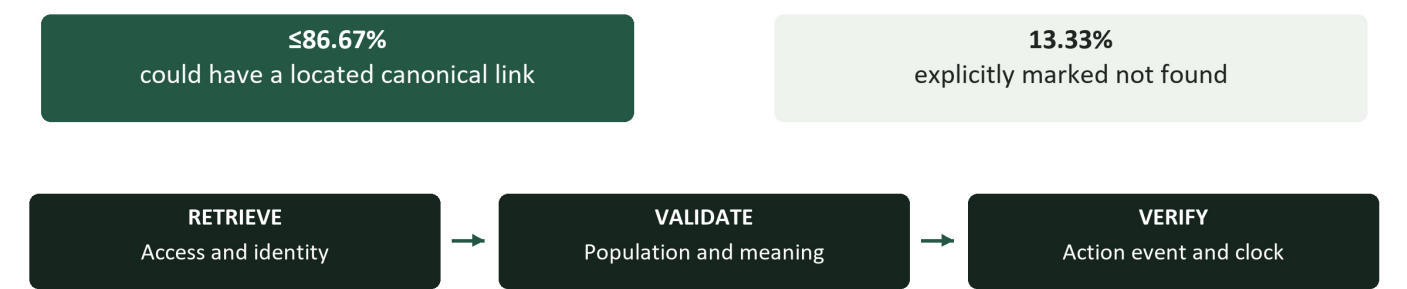
EXHIBIT 5 / EVIDENCE ACCESS AND DISCOVERY

Classify unavailable evidence before declaring an absent mechanism

[HR] The companion reference work records unlocated artifacts and access-scoped links. [AI] A failed search is evidence about the search, not automatic proof that a tool or action does not exist.

A LOCATED REFERENCE IS ONLY THE START OF THE PROOF CHAIN

Registered companion-link inventory • present source recovery remains a separate question



Neither an unlocated title nor a live link establishes whether the work occurred.

[HR] The registered reference inventory distinguishes named objects, policy links, reporting surfaces and explicit gaps. Some findings concern an exact title, a replacement workflow or restricted access. They require different next steps from a verified absence of event capture.

Evidence state	Next verification
[PD] Unlocated or inaccessible	Record query scope, identity, permissions, time and retention. Ask the custodian to retrieve or reproduce the relevant event before grading actual execution.
[PD] Retrieved but insufficient	Inspect grain, population, timing and semantics. A live dashboard, closed alert or accessible policy may not record the required action.

[AI] A reference row with a confidence label supports traceability; it does not authenticate the linked artifact or establish measurement sensitivity. Likewise, the present case cannot upgrade registered original-source claims when those original files have not been recovered.

ASSURANCE DECISION

[PD] Keep unknown evidence status explicit. Resolve access and capture separately, sample against independent action truth, and measure false holds as well as false claims of completion.

[HR/AI/PD] S1:E02/E04/E09/E11/E13; M12. Registered source-discovery findings remain distinct from the present case’s source-recovery status. No search result establishes network-wide nonexecution.

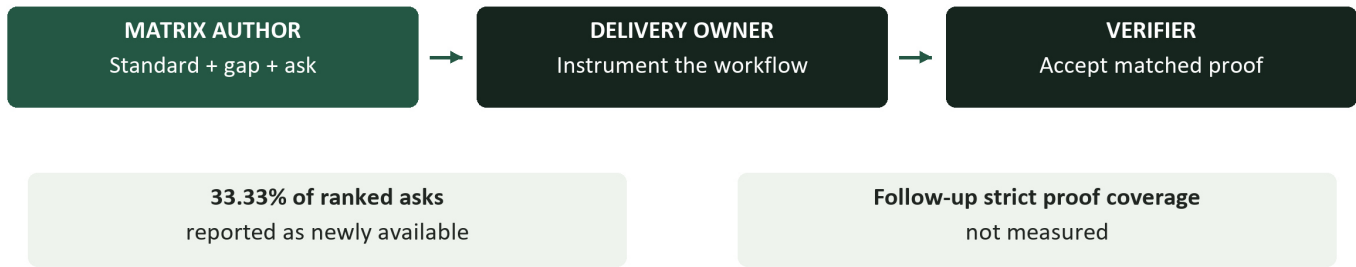
EXHIBIT 6 / CONTRIBUTION AND REMEDY HANDOFF

Turn a proof gap into an owned acceptance test

[HR] The matrix author defined the standard, refined the action rows and specified instrumentation asks. Other teams held the authority and capability to implement the remedies.

DIAGNOSTIC OWNERSHIP DOES NOT TRANSFER REMEDY OWNERSHIP

Registered contribution and proposed acceptance chain • roles anonymized



Availability, accepted scope, recurring adoption and customer effect are separate claims.

Deliverable contribution	Operating handoff
[HR] Standard and matrix	Define the action question, required evidence, verdict and smallest mechanism that would close the gap. Retain the source and unresolved conditions.
[PD] Remedy acceptance	Assign a delivery owner, event-grain specification, coverage test, verification owner and review deadline. Record acceptance separately from an availability announcement.

[HR] A later note reports that a requested task-completion metric became live, while site/task-grain validation remained open and a sibling record described a pilot. [AI] This supports a bounded availability update. It does not prove full closure, adoption, execution or that the matrix caused the release.

[AI] The register supports substantial authorship and diagnostic judgment at provisional hoop level. The originating formal task remained open, and no later recurring matrix is evidenced. Those boundaries keep a completed artifact distinct from a completed operating transition.

COO DECISION

[PD] Preserve the matrix author’s diagnostic contribution. Have remedy owners accept the evidence contract, demonstrate it on eligible events and document closure against the original requirement.

[HR/AI/PD] S1:E01/E02/E05/E10–E12/E15; M03. Registry-level contribution evidence supports the standard and artifact, not remedy ownership, realized impact or recurring mechanism adoption.

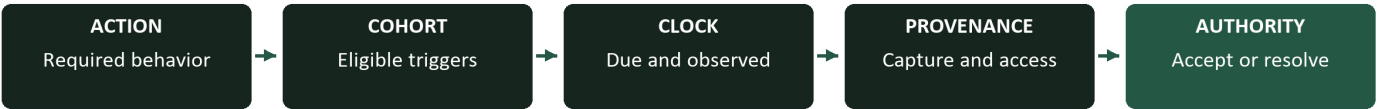
EXHIBIT 7 / EXECUTION EVIDENCE CONTRACT

Authorize the execution claim before evaluating the claimed effect

[PD] The Execution Evidence Contract makes each commitment testable without treating documentation completeness as a customer outcome.

THE EXECUTION EVIDENCE CONTRACT MAKES EACH CLAIM TESTABLE

Proposed control • validate the proof policy before attaching consequences



Test false certification, false accusation and unresolved decisions.
Retain every eligible episode; price the review effort.

Unknown execution remains unknown until matched evidence or independent verification resolves it.

Accountable gate	Required decision evidence
[PD] Action owner	Freeze the intended action, eligible trigger population, due window and observable acceptance criteria before execution.
[PD] Evidence custodian	Demonstrate event identity, capture coverage, access, retention and clock alignment. Identify shared provenance across apparently separate proof channels.
[PD] Independent verifier	Test the record against reference action truth, adjudicate unknowns and authorize only the claim that passes. Evaluate effects through a separate causal design.

[PD] Validate the proof policy against independent action truth. Retain unverified and held cases; measure false authorizations, false holds, delay and incremental cost. An all-hold policy is not automatically successful.

[AI] The proposed contract extends the registered matrix’s central question. Its own decision value and operating effect remain hypotheses to test.

OPERATING STANDARD

[PD] Give every unresolved commitment an evidence owner and next test. Grant execution credit on matched proof; grant outcome credit only after the outcome evaluation.

[AI/PD] Proposed EEC informed by S1:E01–E15. Prospective methods and economics are separately labeled. Passing an evidence test does not certify a field effect.

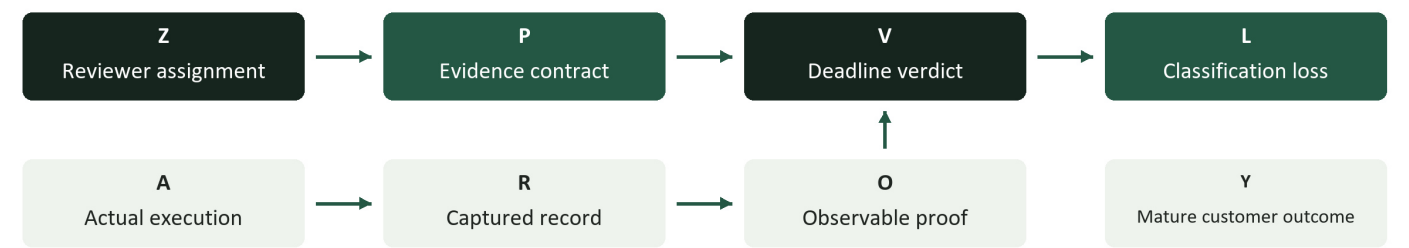
TECHNICAL FOUNDATION • THEORY OF CHANGE

Proof is a measurement path, not the action itself

[PD] The Execution Evidence Contract (EEC) links a specified action, intended population, deadline, admissible evidence and authorized decision. Each link can fail independently.

SEPARATE ACTION TRUTH FROM OBSERVABLE PROOF

Proposed DAG • paired reviewer assignment • no historical causal effect



Other paths: $A \rightarrow L$; $A \rightarrow X$ (operating state) $\rightarrow Y$; C (staffing, demand, case mix) $\rightarrow A, X, Y$.
Capture, access, clock and population $Q \rightarrow R, O$; independent reference sampling $S \rightarrow$ observed L .
Estimate $Z \rightarrow L$ after the action episode; no $Z \rightarrow A$ path or customer effect is tested here.
Review effort $P \rightarrow H$ is costed separately. Shared record ancestry is not independent proof.

[PD] A denotes actual execution; R its captured record; O the evidence observable to the reviewer; V the verdict. Execution can change operating state X and mature customer outcome Y. Capture, access, clock and population alignment Q affect O. Staffing, demand, case mix and concurrent programs C affect A, X and Y.

[PD] Randomized benchmark assignment Z changes the EEC rule P used to interpret O, then V and truth-classification loss L. A and V jointly determine L. Assignment occurs after the action episode, so this benchmark cannot change A or identify $A \rightarrow Y$. Independent reference sampling S determines whether L is observed, not whether the action happened.

[AI] A missing O can arise from absent execution, failed capture, inaccessible records, late maturity or an incompatible population. None is identified from a blank cell alone. Likewise, an alert closing may reflect a changed operating state without identifying which action caused it.

[PD] A subsequent operating trial would need a separate assignment to an actual action package, mature customer outcomes and concurrent controls. Do not adjust for post-assignment proof or execution to estimate its total effect.

Proposed DAG and benchmark estimand. Moore et al. 2015 separate implementation, mechanisms and context; arrows are hypotheses, not identified historical effects.

TECHNICAL FOUNDATION • MEASUREMENT CONTRACT

A valid proof must identify who did what, for whom and when

[AI] Tool availability, standard-work readiness, action occurrence, protocol fidelity and customer effectiveness are different constructs. The matrix primarily evaluates whether execution can be evidenced.

Construct	Required measurement contract
Action occurrence	[PD] Freeze action version, eligible trigger, target unit, accountable role, scheduled window and completion rule. A task assignment is not completion; a routed case is not delivered coaching.
Admissible proof	[PD] Require identity/grain match, timestamp, source provenance, authorized access and a traceable event. Distinguish action capture from an outcome or automatically resolved condition.
Fidelity / reach	[PD] Measure required components delivered and intended units reached. A completion record from another trigger population cannot validate the commitment.
Timely proof coverage	[PD] Numerator: eligible episodes with admissible proof by the frozen decision deadline. Denominator: all upstream eligible episodes, including holds, missing submissions and later withdrawals.
Effectiveness	[PD] Define mature customer outcome, cohort, lag and counterfactual. A proof-complete action can be ineffective; a favorable outcome can occur without the claimed action.

[HR] The register describes a genuine completion signal whose trigger population differed from the action it was asked to validate. It also describes automatically closing alerts that retained no action-taken receipt. These are construct mismatches, not evidence that staff failed to act.

[PD] Test invariance across networks, node types and action families. An aggregate completion percentage cannot replace unit-level eligibility or timing checks. Freeze denominator and codebook versions; recalculate coverage on a common cohort before comparing revisions.

[AI] Standard-work readiness can justify a pilot instrumentation decision. It cannot, by itself, upgrade a historical episode to completed, compliant or effective.

S1: action-versus-dashboard distinction, trigger mismatch and readiness rewrite. Carroll et al. 2007 and Proctor et al. 2011 distinguish fidelity/implementation constructs from service outcomes.

TECHNICAL FOUNDATION · CLOCK & EVIDENCE LINEAGE

A delayed outcome does not make timely action proof impossible

[AI] A customer or process outcome arriving after the review deadline cannot validate that outcome at the deadline. A separate timestamped action record may still establish execution earlier.

Clock or dependency	Decision implication
Action time	[PD] When did the specified actor complete the behavior for the eligible unit? Freeze eligibility and deadline first.
Capture / publication time	[PD] Record capture, ingestion and availability timestamps. Dashboard refresh is not action time.
Review time	[PD] Evaluate only the information available then. Later backfill can resolve truth but must not rewrite the original decision record.
Outcome maturity	[PD] The outcome’s latency defines when effectiveness can be assessed. It need not equal the action-proof latency.
Shared evidence ancestry	[PD] Two displays of one event log are two views, not independent corroboration. Trace dependencies, including common failure and access paths.

[HR] The source pairs next-day review with a later outcome feed. Its proposed binary completion signal is a candidate execution measure; grain validation remains open.

[AI] The stronger statement that no linked action could be proven by the deadline is unsupported. It assumes the delayed outcome is the only admissible proof channel. Separate the outcome clock from independent action evidence before declaring the governance design impossible.

[PD] For a strict conjunction of two proof channels, record their joint capture and false-match rates. Do not multiply marginal sensitivities unless conditional independence is justified. Shared-source failure can make apparent corroboration much less informative than two genuinely independent observations.

[PD] Version the evidence bundle and retain failed-access attempts. Successful search after permissions change is new observability, not newly executed work.

S1: delayed metric and binary-proof proposal. Chesani et al. 2016 motivate reasoning about incomplete event logs; their solver is not implemented here.

TECHNICAL FOUNDATION • VERSIONED CENSUS

A zero strict-pass count does not identify the execution rate

[AI] The selected strict rubric can report no passes while actual execution ranges from none to all. Unknown capture, access, population matching and timeliness prevent recovery of the latent execution share.

[PD] Let $e=P(A=1)$, $s=P(\text{pass} \mid A=1)$ and $f=P(\text{pass} \mid A=0)$. Then $P(\text{pass})=es+(1-e)f$. Without validated s and f , a low observed pass share does not identify e . The source is a version-specific audit census, not a random sample from every future action.

Version issue	Admissible interpretation
Principal strict cut	[HR] No strict passes are represented in this frozen action list. This describes the stated proof rule and available record, not the action-execution population.
Grouped header labels	[RC] One alleged header/table discrepancy disappears after combining the separately listed directive and unproven categories. Arithmetic reconciliation does not authenticate the original artifact.
Incomplete memory tally	[RC] The category tally leaves part of the population unallocated. Whether it could contain a strict pass is unresolved; a universal all-versions-zero claim is not justified.
Readiness rewrite	[HR] The later list replaces some rows and adds a readiness state. It is not a longitudinal panel showing earlier actions improved.

[PD] Preserve the principal selected version and credible alternatives. Reopen the source roster, map persistent action IDs and reconcile definitions before comparing rates. Do not average incompatible rosters or count repeated renderings as independent audits.

[AI] A binomial “rule of three” is inappropriate for this fixed, nonrandom, measurement-limited census. A random-model bound would require an explicit sampling frame, independent trials and validated pass classification; it would concern future proof passes, not unobserved execution.

S1/private version ledger: principal cut, grouped-label reconciliation, unallocated tally and changed readiness roster. No raw population counts or inversion anchors are disclosed.

Validate the audit without selecting only easy-to-prove actions

[PD] Reference truth must be established independently of the evidence channel being graded. A complete-case comparison restricted to accessible records can reward the very access failures the audit should detect.

Failure mode	Prospective control
Selective verification	[PD] Sample across certify, nonexecution and defer verdicts, including unavailable proof. Record positive known selection probabilities and retain all episodes in the weighted denominator.
Reference incorporation	[PD] Blind adjudicators to policy output; use independent observation or source records outside the evaluated packet. Agreement with the same defective log is not validation.
Unresolvable selected truth	[PD] Keep both feasible execution states and report bounds. Random selection does not guarantee successful adjudication or make residual missingness random.
Lucky unsupported certification	[PD] Truth accuracy and authorization compliance are separate. Audit whether admissible proof actually existed at the deadline, even when the guessed execution verdict was correct.

[PD] Proposed taxonomy pilot: 240 episodes, stratified across action family, network, deadline and access state, independently coded twice before adjudication. Predeclare eligible strata, oversampling weights and a codebook that separates absent action, absent proof, late proof, wrong population and uncertain truth.

[PD] Report raw agreement, the full confusion matrix, state prevalence and nominal kappa with intervals bootstrapped by team or action-family cluster. This is a precision pilot, not a claim that 240 guarantees adequate power. Increase sampling for sparse disagreement categories. Agreement tests reliability; external reference evidence tests validity.

[PD] Mandatory deployment guardrails include false certification, false accusation, deferral and admissible-proof violations, reported per all eligible episodes and, secondarily, per certification. Preregister noninferiority margins and multiplicity; utility power does not size those tests.

Begg–Greenes 1983 establish the verification-selection problem. NIST SP800-53A assessment methods are a useful examination/interview/test analogy, not a claim of security certification.

Changing verdict lists are not a time series of execution

[RC] The private audit retains three actual/context two-point screens and six mechanical artifact/plan screens. None supplies an invariant action-population history from which to classify operating improvement.

[PD] For suitable ordered values, $MR_t = |x_t - x_{t-1}|$; tentative individual limits are $\text{mean}(x) \pm 2.66 \text{ mean}(MR)$, with MR upper limit $3.268 \text{ mean}(MR)$. Here two-point context, changing scope and versioned taxonomy make computed screens non-diagnostic. There is no eligible repeated binary-count panel for Laney p' .

[AI] Tool availability, links-register growth and outcome context measure different constructs. A later available signal is not a verified rise in action completion. A zero-to-positive reference count cannot be indexed to its zero baseline or described as a percentage improvement.

Assumed untreated reliability	Expected follow-up excess	Mechanical reversion
0.25	25	75
0.50	50	50
0.75	75	25

[PD] The table is selection sensitivity only: normalize initial worst-cohort excess to 100. Under an untreated, equal-variance bivariate-normal model with correlation ρ , expected next-period excess is 100ρ . No untreated follow-up or fixed selected cohort is supplied; none of these shares is estimated.

[AI] The matrix grades network commitments, while the surrounding mechanism targets weak local cohorts. Those populations cannot be substituted. Follow-up on selected sites must freeze membership, compare eligible nonselected units, and separate regression to the mean from action effects.

[PD] Treat action family, node type, network, access permissions and proof latency as moderators. A mechanism that records task completion may work for discrete tasks but fail for continuous staffing behavior or automatic state changes. Predeclare these boundaries rather than ranking small subgroups after results.

S1/private raw screens; NIST XmR conventions; Barnett et al. 2005 regression-to-the-mean framework. Synthetic sensitivity is not a source-based cohort correction.

TECHNICAL FOUNDATION · ATTRIBUTION & FOLLOW-THROUGH

Credit the standard and artifact separately from the remedies

[HR] The register describes authorship of the verification standard, action-list choices, workflow and concise deliverable. It also states that the author did not own the graded actions or requested fixes.

Personal contribution claim	Process-tracing grade and boundary
Defined proof standard / authored matrix	[HR] Provisional hoop: registered task assignment, authoring decisions and metadata are consistent with the role. Originals were not recovered in this case pass.
Set verdicts and revised scope	[HR] Provisional hoop: version descriptions identify row-list and format decisions. Copied metadata and repeated summaries do not independently authenticate authorship.
Specified an instrumentation request	[HR] Provisional hoop for the documented ask; availability was reported later by the same evidence chain. Causal acceleration and build ownership remain unestablished.
Improved execution / customer outcomes	[AI] Unestablished. No invariant completion panel or identified customer-effect comparison attributes improvement to the audit.

[AI] No smoking-gun or doubly decisive grade is assigned from registry metadata alone. The source’s strong ownership description must be restricted to analysis and standard setting, not silently transferred to engineering, field execution or financial impact.

[HR] A later status note reports a requested signal available, while grain validation remains open; a sibling record still describes a pilot. The originating administrative task also remains open. Artifact delivery, technical availability, accepted operational proof and administrative closure can therefore diverge.

[PD] Close a remedy only after its owner accepts the action contract, validates trigger/grain/clock, demonstrates a sample receipt and assigns recurring verification. An available dashboard is an intermediate milestone. Preserve the unresolved status if source access prevents this test.

S1: bounded authorship, later signal status, unresolved grain and open task. Collier process-tracing tests constrain attribution; chronology alone does not identify acceleration.

Test truth classification and proof admissibility as separate outcomes

[PD] Paired independent teams test EEC after action episodes occur. Randomize policy roles within each pair; freeze episode panels and decision deadlines before adjudication.

Estimand / design element	Preregistered specification
Primary policy effect	[PD] Equal-pair mean usual-minus-EEC truth-classification loss across all upstream eligible episodes. False certification, false accusation and deferral have prespecified consequence weights.
Population and clock	[PD] Independent episode panels across pairs; both teams within a pair judge the same episodes. Verdict at original deadline+24h; reference truth by original deadline+7d.
Reference selection	[PD] Common Bernoulli sample for both labels, independent of verdict, proof availability and truth. Known probability weights; denominator remains all original episodes.
Unavailable truth	[PD] Distinguish unselected from selected-unresolved. Bound the latter using each frozen verdict pair and feasible execution states; do not code it as nonexecution.
Authorization safety	[PD] Independently audit admissible-at-deadline proof on certifications. Report rates per eligible episode and per certification; no deployment from utility clearance alone.

[PD] Reviewer nonresponse is a predefined deferral. Prevent answer sharing and learning crossover. Reference adjudicators are blind to rule and verdict; independent evidence must establish the same population, action and deadline.

[PD] Paired t planning uses a fully specified categorical/Dirichlet model with within-pair episode correlation and random truth verification. Validate within-episode cross-policy association as well as episode ICC; these are different dependencies. The model pages disclose power, costs and sensitivity.

[PD] A separate field trial is required for execution or customer effects. Randomized rollout is preferable when feasible; justified staggered adoption can use group-time effects with appropriate controls and event-time diagnostics. Non-significant pre-trends do not establish parallel trends.

Proposed paired verification benchmark, not a deployment trial. Clinical diagnostic methods are adapted as statistical analogies; no clinical equivalence is claimed.

TECHNICAL FOUNDATION • FRAMEWORK & LITERATURE

The Execution Evidence Contract makes four claims falsifiable

[PD] EEC is a proposed contract: action identity, population, deadline, admissible proof, authorized verdict and a separate outcome test. It is not empirically validated.

Proposition	Mechanism, boundary and disconfirmation
P1 • Population alignment	[PD] Requiring trigger and target matches reduces false certification from unrelated completion signals. A precise nonbeneficial result, or an unacceptable exclusion disparity, contradicts the claim.
P2 • Clock separation	[PD] Independent timely action records reduce unnecessary deferrals when outcomes mature later. No gain where records are unavailable; increased premature effectiveness claims breach the guardrail.
P3 • Access-aware verification	[PD] Random reference checks across all verdicts reduce selection bias relative to accessible-record-only scoring. Residual unresolvable truth can defeat point identification even with random sampling.
P4 • Decision sufficiency	[PD] EEC reduces weighted truth-classification loss enough to cover incremental cost while meeting admissibility guardrails. A lower confidence endpoint above break-even supports scale; an upper endpoint below it contradicts economic sufficiency.

[AI] Carroll and MRC guidance separate fidelity, reach and mechanism from outcomes. Record accessibility adds a measurement layer; it is not an implementation result.

[AI] Begg–Greenes explains why verified-only accuracy can mislead. Incomplete-event-log reasoning likewise requires assumptions about missing observations. EEC extends those concerns into a deadline-specific authorization contract; it does not resolve missing truth by attaching confidence labels.

[AI] Campbell’s measurement-reactivity concern predicts attestation and checkbox behavior when proof coverage becomes a target. Tucker–Edmondson motivates learning from operational failures rather than stopping at report completion. The benchmark must track administrative burden, unsupported certificates and suppressed opportunities.

[PD] An inconclusive interval is not refutation. Component propositions need separate tests; primary loss cannot certify every mechanism or customer effect.

Primary literature motivates bounded propositions. The case contributes a proposed measurement-and-decision design, not external validation of the framework.

TECHNICAL FOUNDATION · LIMITATIONS & REPRODUCTION

Publish the evidence boundary with the decision rule

[AI] This is an evidence-reconciliation and operating-design case. It corrects the interpretation of a provability audit without estimating a historical execution rate, intervention effect or cash return.

Boundary	Consequence for use
Source authenticity	[AI] Original artifacts were not recovered. Registry quotations, locators, metadata and file sizes are leads; equal size is not byte identity or verified content.
Version / population	[AI] Rosters, category labels and readiness states differ. The selected zero strict-pass result cannot be generalized across every version or future action.
Measurement / reference	[AI] Capture sensitivity, access completeness, timing and population matches are unvalidated. Reference-panel agreement cannot substitute for independent action truth.
Causality / attribution	[AI] The audit’s role is distinct from requested builds and operating programs. Chronology, availability and favorable context do not identify execution or customer gains.
Economics / transport	[PD] Costs, priors, verdict probabilities, loss weights and dependence are synthetic. Decision utility and released capacity are not production cash.

[PD] Reproduce the source selection, cell ledger, version reconciliation and protected transformations first. Then run raw arithmetic/screens, the independent proof-rule logic and the proposed categorical/verification model. Retain seeds, formulas, sensitivity cases and independent recomputations.

[PD] Public disclosures use relative/indexed or qualitative source quantities; private rosters, names, internal URLs and raw values remain in a separate annex. Avoid companion disclosures that reconstruct confidential baselines or identify the graded owners.

[AI] The new decision-relevant result is an identification boundary: no observed strict passes can coexist with extensive execution, and a later outcome clock need not prevent timely execution evidence. The remedy is a tested measurement contract, not a stronger assertion about whether people acted.

Consolidated limitations apply to every claim. Internal/agent-assisted review validates the stated calculations and boundaries; it does not authenticate unavailable source originals.

PROPOSED DECISION MODEL · PAIRED VERIFICATION

Score the verdict against independently verified action truth

[PD] Two independent reviewer teams judge the same frozen action episodes; randomize which team receives the Execution Evidence Contract. All probabilities, losses and costs are synthetic.

Actual state / policy	Certify	Nonexecution	Defer
Executed / usual	70%	10%	20%
Executed / EEC	78%	7%	15%
Not executed / usual	12%	60%	28%
Not executed / EEC	9%	67%	24%

[PD] Assume execution prevalence 60%. Assign losses: false certification 10, false accusation 8, deferral 4, correct verdict 0. Mean usual loss=1.888; EEC loss=1.440. On usual-loss=100, the assumed benefit is 23.729 points. These are ex ante consequence weights, not measured costs.

[PD] Freeze verdicts 24 hours after each original scheduled action deadline. Verify whether the specified action reached its intended trigger population before that deadline, independently by day 7. Delayed proof cannot rewrite the original verdict. All episodes, including missing submissions, remain eligible.

[PD] Sample reference truth with probability $\pi=0.75$ for every episode, regardless of verdict or evidence availability; use the same verification draw for both teams. For $D=\text{usual loss}-\text{EEC loss}$ and indicator S , average SD/π over all m episodes. Reviewer nonresponse is a preregistered deferral.

[PD] Reference adjudicators are blind to policy and verdict; use independent observation or source evidence outside the evaluated proof channel. Selected but unresolved truth requires bounds. Exclude shared answers and learning crossover; independent pairs receive independent episode panels.

Synthetic paired adjudication design. Begg–Greenes verification-bias principle motivates reference sampling across all verdict states; the experiment does not alter or estimate action execution.

PROPOSED DECISION MODEL · POWER & VERIFICATION

Reference sampling reduces audit cost but also reduces precision

[PD] Joint verdict probabilities assume conditional independence given execution. Pair-specific cell probabilities follow a Dirichlet model with concentration 49, inducing within-pair episode ICC $p=0.02$.

[PD] Let $V=Var(D)=15.735936$ and $E(D^2)=15.936640$ in raw loss units. With $m=80$ and $\pi=0.75$, pair-mean variance is $\rho V+[V+(1/\pi-1)E(D^2)-\rho V]/m$; indexing gives 1,609.986. Independent pair means use a paired t test, $df=pairs-1$.

Pairs / teams	MDE, 80%	P(LCB>12)	Joint gate
32 / 64	20.515	36.0%	Fail
64 / 128	14.270	63.4%	Fail
94 / 188	11.716	80.1%	Pass
120 / 240	10.346	88.8%	Pass

[PD] Two-sided alpha 0.05; require $MDE\leq 12$ and at least 80% probability that the lower two-sided 95% interval endpoint exceeds 12 if the benefit is 23.729. The conditional minimum is 94 pairs. A 120-pair buffer is a candidate, not an available workforce.

[PD] At the minimum, direct Dirichlet-categorical simulation gives null rejection 4.92% and economic clearance 80.02% (20,000 runs each). Gaussian pair-mean power is an approximation; this checks one synthetic distribution, not a field pilot.

[PD] Pilot cross-policy verdict association separately from episode ICC; adverse coupling can defeat the buffer. Independently audit admissible-at-deadline proof: a lucky correct verdict is not authorized proof. Preregister guardrail margins, power and multiplicity before deployment; utility clearance alone is insufficient.

Horvitz–Thompson mean with a common independent reference draw. Finite-pair Student integration and direct categorical simulation are reproducible; no achieved study power is claimed.

PROPOSED DECISION MODEL · ECONOMICS & SENSITIVITY

A cheaper verification plan can require more independent teams

[PD] Net decision value= $\Delta - K$ in the same usual-loss=100 units. $K=8$ incremental EEC review effort+4 allocated deployment cost per same episode pool and horizon; assumed net value is 11.729.

Benefit Δ	$K=8$	$K=12$	$K=18$
12	4	0	-6
24	16	12	6
36	28	24	18

Episode ICC	$\pi=0.50$	$\pi=0.75$	$\pi=1.00$
0.01	91	69	59
0.02	116	94	84
0.05	190	169	158

[PD] The second grid reports minimum independent team pairs at $m=80$ and $K=12$. At $m=160$, the minimum falls to 74 pairs, but requires 11,840 episodes versus 7,520; more tasks do not remove the clustering floor.

[PD] Classification losses already represent unique avoidable consequences: avoidability and exclusive-credit shares equal 1 by definition. Review/deployment costs are outside these losses and charged once. Research reference adjudication has a separate study budget; any production verification needed by EEC must be added to K . Capacity or decision utility is not cash.

[PD] Randomly unselected truth is handled by design weights. Selected unresolved truth is different: retain both feasible action states. A generic bound has width $20 \times (100/1.888) \times u$, where u is the HT-weighted unresolved fraction of all episodes. Verdict-specific bounds can tighten it. If the economic conclusion changes within bounds, resolve evidence before scale.

Entirely synthetic investment sensitivity. Sample-size minima are conditional on the fixed model; a larger evidence budget trades against team recruitment and unresolved-truth risk.

PROPOSED DECISION MODEL · VALUE OF INFORMATION

Investigate missing proof before choosing an operating remedy

[PD] In a restricted hypothetical triage, an action was executed but evidence access failed with prior probability 0.65; otherwise it was not executed. These states do not exhaust every real missing-proof cause.

Decision	Access failure	Not executed
Restore evidence access	12	-12
Escalate action re-execution	-8	18
Maintain timed verification hold	4	4

[PD] Payoffs are net decision utility after remedy costs. A timed verification hold is prior-optimal, worth 4. An access investigation supplies a binary signal with the stated equal sensitivity and specificity; actions are chosen from posterior expected payoffs.

Signal accuracy	EVSI	Study cost	Net EVSI
55%	0.340	0.400	-0.060
80%	5.400	1.200	4.200
95%	8.925	2.000	6.925

[PD] $EVSI = E[\max_a E(U_a | \text{signal})] - \max_a E(U_a)$. Perfect information is worth 10.100; every displayed EVSI respects that ceiling. Weak information can cost more than the decision improvement it enables.

[PD] Expand the state space for delayed capture, wrong populations and falsified records before operational use. Evidence access does not prove customer impact. Acquisition cost is separate from remedy costs already included in payoffs. Do not add this information value to benchmark gains for the same episode.

Independent synthetic information decision, meaningful without a positive historical intervention effect. Priors, likelihoods and payoffs are assumptions, not extracted from the register.

Read the matrix as an execution-evidence diagnostic

[AI] The matrix asks whether a commitment can be verified. That question is distinct from whether the action occurred, was delivered with fidelity or changed the customer outcome.

Claim class	Meaning in this case
[HR] Historical record	A project-register representation of an artifact, decision, verdict or status. Original underlying files remain unrecovered; repeated summaries are not independent corroboration.
[RC] Recalculated	Arithmetic from registered category counts or an explicitly synthetic planning model. Reconciliation does not authenticate source contents or turn artifact versions into a time series.
[AI] Analytical inference	A constrained interpretation of proof availability, population validity, clocks or contribution. Unknown execution remains unknown; missing evidence does not establish a causal result.
[PD] Proposed design	The Execution Evidence Contract, prospective validation and hypothetical economics. These are testable operating proposals, not measured historical benefits.

[RC] A grouped-category header reconciles to its listed rows. A separate incomplete account leaves 5.88% of its stated population unallocated. [AI] The later 25% readiness classification has a different meaning and row population; it cannot be read as a proof-rate improvement.

[AI] The positive contribution is a concrete standard and matrix with specific evidence requests. The register supports that role at provisional hoop level. Remedy acceptance, technical implementation, recurring use and mature effects require their own evidence.

[PD] Reproduce the case from the frozen register, cell-linked ledger, version crosswalk and calculation code. Preserve source uncertainty beside the claim it constrains. A successful numerical check is not a substitute for an authenticated event record.

DISTRIBUTION

[PD] Share the anonymized public case. Keep raw counts, identities, internal paths, source mappings and the reproducibility annex private. The original sensitive matrix is not reproduced here.

S1: protected source register and case calculations. All historical numerical displays use shares or indexed units. Proposed analyses are labeled separately from recorded project activity.

REFERENCES / PRIMARY METHODS AND SUBSTANTIVE LITERATURE

Define what happened and what the record can establish

These sources inform the evidence standard and proposed tests. They do not authenticate the original project artifacts or establish execution, adoption or customer impact in this case.

Carroll, C., Patterson, M., Wood, S., Booth, A., Rick, J., & Balain, S. (2007). A Conceptual Framework for Implementation Fidelity. *Implementation Science*, 2, 40. Primary full text. Content, frequency, duration and coverage describe delivery fidelity. A record of a completed task does not by itself establish that the intended intervention was delivered fully.

Proctor, E., Silmere, H., Raghavan, R., et al. (2011). Outcomes for Implementation Research: Conceptual Distinctions, Measurement Challenges, and Research Agenda. *Administration and Policy in Mental Health*, 38, 65–76. Primary article. Adoption, feasibility and fidelity differ from service and customer outcomes; the case applies that distinction to readiness and execution claims.

Moore, G. F., Audrey, S., Barker, M., et al. (2015). Process Evaluation of Complex Interventions: Medical Research Council Guidance. *BMJ*, 350, h1258. Author-hosted full text. Implementation, mechanisms and context need separate investigation. Timely action evidence can inform process evaluation while the outcome window remains open.

Wang, R. Y., & Strong, D. M. (1996). Beyond Accuracy: What Data Quality Means to Data Consumers. *Journal of Management Information Systems*, 12(4), 5–33. Author-hosted text. Fitness for a decision includes contextual relevance and accessibility. A real completion record may still have the wrong population or be unavailable at the required time.

Cohen, J. (1960). A Coefficient of Agreement for Nominal Scales. *Educational and Psychological Measurement*, 20, 37–46. Original article. Report chance-corrected agreement alongside prevalence, raw disagreements and adjudication. Agreement between graders does not establish the truth of an action record.

Begg, C. B., & Greenes, R. A. (1983). Assessment of Diagnostic Tests When Disease Verification Is Subject to Selection Bias. *Biometrics*, 39(1), 207–215. Original indexed abstract. Restricting reference verification to selected cases can bias accuracy estimates; the proposed action-proof assessment retains unresolved and negative cases.

NIST Joint Task Force (2022). SP 800-53A Revision 5: Assessing Security and Privacy Controls in Information Systems and Organizations, section 2.4. Official guidance. Specify the assessment object and distinguish examination, interview and test. The case adapts this evidence discipline; it does not claim security-control compliance or certification.

W3C (2013). PROV Model Primer. Official provenance guidance. Trace entities, activities and responsible agents from the event to the reported verdict. Two reporting surfaces can share one source; duplicated provenance does not supply independent corroboration.

Chesani, F., De Masellis, R., Di Francescomarino, C., et al. (2016). Abducting Compliance of Incomplete Event Logs. Author preprint. The work distinguishes strong from conditional compliance when event traces are incomplete. The case uses that conceptual boundary; it neither reconstructs missing actions nor deploys the authors' algorithm.

Original research, author materials and official methods guidance. Cross-domain sources support measurement and evaluation logic only. Access limitations are documented privately; no external effect size is transferred.

REFERENCES / PRIMARY METHODS AND SUBSTANTIVE LITERATURE

Keep the control system connected to the work it measures

These sources inform the evidence standard and proposed tests. They do not authenticate the original project artifacts or establish execution, adoption or customer impact in this case.

The W. Edwards Deming Institute. The Funnel Experiment. Institutional explanation of tampering. An unexplained movement does not justify an intervention response. Changes in artifact versions, populations or verdict meanings must be separated from changes in the operating process.

NIST/SEMATECH. e-Handbook of Statistical Methods: Individuals Control Charts. Official formula guidance. Moving-range limits require ordered, commensurate observations. A set of document revisions does not become an operating time series because each revision has a timestamp.

Campbell, D. T. (1976). Assessing the Impact of Planned Social Change. Original occasional-paper record, ERIC. Consequential indicators can alter the behavior being assessed. A proof rule should monitor documentation inflation and excessive holds as design risks, without alleging either occurred historically.

Goodhart, C. A. E. (1984). Problems of Monetary Management: The UK Experience. In *Monetary Theory and Practice*, 91–121. Original chapter record. The control-and-measurement tradition motivates testing how incentives change evidence production. This case proposes that test; it does not infer manipulation from an incomplete record.

Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance Implications of Strategic Performance Measurement in Financial Services Firms. *Accounting, Organizations and Society*. Author institutional summary. Connect a measurement system to its strategic decision. More visible proof can support governance without establishing customer improvement.

Tucker, A. L., & Edmondson, A. C. (2003). Why Hospitals Don't Learn from Failures. *California Management Review*. Author working paper. An immediate workaround differs from learning about a recurring cause. The matrix's evidence requests should retain an accountable remedy and its acceptance test, not merely close the review item.

OECD / European Commission JRC (2008). *Handbook on Constructing Composite Indicators: Methodology and User Guide*. Official guidance. Aggregation requires clear components and decision logic. The proof rule is a conjunction of requirements, not a compensatory score in which a strong dashboard can offset a missing action record.

Barnett, A. G., van der Pols, J. C., & Dobson, A. J. (2005). Regression to the Mean: What It Is and How to Deal with It. *International Journal of Epidemiology*, 34, 215–220. Original methods article. A cohort selected for poor prior performance may recover without treatment. Its movement cannot validate action delivery or the matrix's effect.

Original research, author materials and official methods guidance. Cross-domain sources support measurement and evaluation logic only. Access limitations are documented privately; no external effect size is transferred.

REFERENCES / PRIMARY METHODS AND SUBSTANTIVE LITERATURE

Validate the proof policy against independent action truth

These sources inform the evidence standard and proposed tests. They do not authenticate the original project artifacts or establish execution, adoption or customer impact in this case.

Hernán, M. A., & Robins, J. M. Causal Inference: What If. Author-hosted book and current materials. Define eligibility, assignment, treatment and follow-up before conditioning on successful completion. Protocol exposure, executed action and mature customer response are different estimands.

Prentice, R. L. (1989). Surrogate Endpoints in Clinical Trials: Definition and Operational Criteria. *Statistics in Medicine*, 8, 431–440. Original publisher abstract. A more convenient measure does not automatically substitute for the ultimate outcome. The case does not treat a task-completion flag as a validated surrogate for effectiveness.

Shmueli, G. (2010). To Explain or to Predict? *Statistical Science*, 25(3), 289–310. Author version. Description, prediction and causal explanation require different evidence. A fitted input-to-outcome relationship cannot verify that the committed action occurred.

Collier, D. (2011). Understanding Process Tracing. *PS: Political Science & Politics*, 44, 823–830. Original methodological article. Test the precise contribution claim and its alternatives. A task assignment, generated-file byline and session-associated memory do not establish remedy implementation or causal ownership.

Bossuyt, P. M., Reitsma, J. B., Bruns, D. E., et al. (2015). STARD 2015: An Updated List of Essential Items for Reporting Diagnostic Accuracy Studies. *BMJ*, 351, h5527. Primary guidance. Declare the index test, independent reference, eligibility, missing results and case flow. The proposed proof-policy validation adapts these reporting principles without importing clinical accuracy.

Alonzo, T. A., & Kittelson, J. M. (2006). A Novel Design for Estimating Relative Accuracy of Screening Tests When Complete Disease Verification Is Not Feasible. *Biometrics*, 62, 605–612. Original publisher abstract. Paired comparison and selective reference verification require a declared design. This is a methodological precedent, not the model implemented in this case.

Strong, M., Oakley, J. E., Brennan, A., & Breeze, P. (2015). Estimating the Expected Value of Sample Information Using the Probabilistic Sensitivity Analysis Sample. *Medical Decision Making*. Primary full text. Value additional evidence through explicit states, actions and consequences. Information value is not an additive historical benefit when it represents the same avoided decision loss.

Altman, D. G., & Bland, J. M. (1995). Absence of Evidence Is Not Evidence of Absence. *BMJ*, 311, 485. Primary article. A negative evidentiary finding must be interpreted against observation and test capability. Here, zero strict proof does not establish zero execution or no possible action effect.

Original research, author materials and official methods guidance. Cross-domain sources support measurement and evaluation logic only. Access limitations are documented privately; no external effect size is transferred.

FINAL REFEREE REPORT / INTERNAL, AGENT-ASSISTED REVIEW

The standard makes an execution claim testable without inventing impact

[AI] Author-led review and independent parallel agents challenge the case’s evidence, calculations and operating recommendation. This is internal review, not external academic or client certification.

Major issue	Resolution or remaining gate
Proof versus execution	The strict rule measures admissible evidence. Unknown capture, access and shared provenance prevent reading failed proof as observed nonexecution.
Version reconciliation	The grouped header reconciles; the incomplete memory account retains its missing share and conditional bound. Readiness is not treated as an execution trend.
Population and clock	A genuine completion signal can concern the wrong cohort. Outcome latency is separated from event-record latency; neither the record nor a fitted association certifies effectiveness.
Contribution and remedies	Standard design, matrix authorship and evidence correction receive provisional registry-level hoop support. Remedy ownership, recurring adoption and impact remain separate.
Prospective validation	Independent loss, covariance, power, simulation and information-value checks reproduce the synthetic model. Truth accuracy is separate from required evidence-admissibility guardrails. Dependence and pilot assumptions remain explicit.

Partner critique: would the COO act on page 1?

[AI] Yes: name an action owner and evidence custodian, specify the acceptance test, and resolve the population and clock before granting execution credit. Preserve unknowns while testing the proof rule’s own error costs. The decision does not require an invented customer result.

Positive contribution within the evidence boundary

[AI] The register describes a substantial diagnostic deliverable: a standard, corrected row-level reasoning, a concise matrix and actionable evidence requests. That contribution stands without attributing other teams’ builds or later network performance to its author.

FINAL REVIEW DISPOSITION

[AI] Numerical reproduction, source-boundary review and rendered-page inspection pass for the supported operating-standard case. Historical execution prevalence, customer effect and realized financial benefit remain unestablished.

Internal author-led and independent agent review. Numerical reproduction, source-boundary checks and actual rendered-page inspection are documented privately. This review does not establish historical impact or externally certify the case.