

Process Sequence & Control Integrity

An anomaly becomes useful when its evidence and response are sound

An operating-project case on scan-integrity detection and process redesign: reconstructing changing rules, separating login attribution from physical handling, and defining a safe replacement workflow before claiming prevention or taking consequential action.

SEQUENCE INTEGRITY & OPERATING REDESIGN

BLUF / BOTTOM LINE UP FRONT

Verify the event chain and the actor before acting on a detector's flag.

RECALCULATED FINDING

Analytical finding: removing events and recalculating their neighbors can create or erase apparent violations. A filtered replay is a lower bound only under a verified lineage contract. Fewer flags alone do not prove better physical service.

CONTRIBUTION IN THE SOURCE RECORD

Recorded contribution: program oversight, preventive-control proposal and commissioned claim review. Attribution remains provisional.

EVIDENCE STATUS

Source-register reconstruction; originals unrecovered. Historical causal effects and realized savings remain unverified.

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

STRUCTURED ABSTRACT / EXECUTIVE DECISION

Make the evidence actionable before making the action consequential

[AI] A scan anomaly is a reason to investigate. It does not establish who handled the package, whether the handling was improper, or which intervention would improve the customer outcome.

Context

[HR] A delivery operation investigated scan sequences that appeared incompatible with physical handling. Its response combined detection, site investigation, recurring notifications and attempted preventive controls. Later review identified differences between documented rules, implemented labels and circulated performance claims.

Objective

[HR/AI] The operating lead oversaw the program, proposed a preventive intervention and commissioned a retrospective fact review. Analysts developed the detector; local teams investigated and remediated. The decision was how to move from suspicious records to a sustainable operating response without attributing another person's actions to a credential owner.

Approach

[RC/AI] Reconcile rule vintages, windows, units and source provenance. Test whether filtered event histories preserve predecessor relationships. Separate diagnostic validity from actor identity and physical outcome. Design an approved replacement workflow and evaluate its complete service and resource effects.

Findings

[AI] Filtering before recalculating adjacency can create as well as remove qualifying scan pairs. A lower-bound claim requires verified full-stream lineage. Different threshold yields do not establish precision; declining flags can reflect changed labels, credentials or observation. A control that removes a tool must also preserve the legitimate work that used it.

Decision value

[PD] Operations should commission a frozen-rule replay and independent physical audit; the data owner must certify predecessor lineage and geometry. The process owner should approve a usable replacement and fallback before migration. Expansion requires economic clearance, better original-promise service and a prespecified limit on harm to legitimate work.

Implications

[AI] The supported contribution is evidence reconciliation and operating design. The proposed Sequence-to-Action Integrity Contract connects valid records, corroborated attribution and an authorized remedy. It does not retrospectively establish detector accuracy, misconduct prevalence, a historical treatment effect or cash savings.

Labels: [HR] historical record; [RC] recalculated; [AI] analytical inference; [PD] proposed design. S1 is the supplied derivative project register. Source claims are not independent authentication of their underlying artifacts.

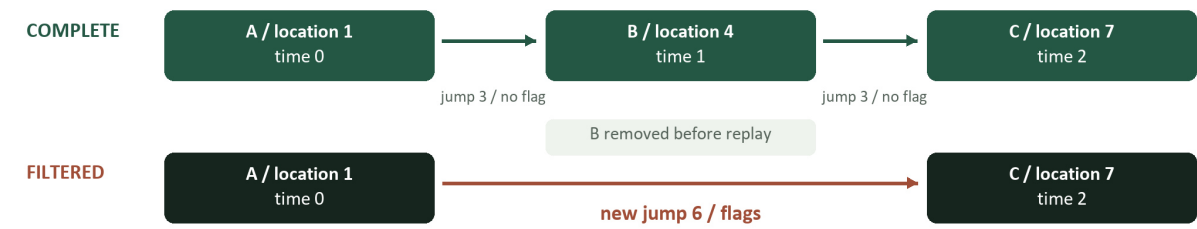
EXHIBIT 1 / THE EVENT-LINEAGE TEST

Filtering can manufacture the transition a detector flags

[AI] A sequence is more than a collection of rows. Removing an intermediate event changes which observations become neighbors if the predecessor is calculated again.

SAME RETAINED EVENTS / DIFFERENT PREDECESSORS

Wholly hypothetical: distance at least 5 units AND elapsed time at most 3 units



Reversing the middle excursion can hide two flags instead. Recover lineage before asserting a lower bound.

[PD/AI] In this wholly hypothetical rule, a pair flags when its location difference is at least five units and elapsed time is at most three units. The complete sequence moves from location 1 to 4 to 7 at times 0, 1 and 2. Neither adjacent move qualifies. Remove the middle event and recalculate the predecessor: the retained pair jumps six units and now flags.

Replay construction	What the count can establish
Preserve original predecessor	With the original pair, clock, geometry and rule unchanged, retained qualifying edges form a subset of full-stream qualifying edges.
Recompute after filtering	New edges can appear and old edges can disappear. Neither an upper nor a lower count bound follows without further restrictions.
Apply a per-login floor	A small pair-count change can move an entire login into or out of the reported cohort; corrections are not additive.

[HR/AI] The record describes an outcome-selected extract and a local rule reconstruction, but it does not authenticate the full transformation order here. The new finding challenges the unconditional lower-bound interpretation; it does not assert that the production pipeline actually recomputed neighbors incorrectly.

EXECUTIVE ACTION

[PD] Require original event and predecessor IDs, their timestamps, the filter order and the effective rule version. Until that lineage is verified, describe the replay as a count under its stated construction, not a proven minimum of real violations.

S1: rule-reproduction and outcome-selected-pull descriptions. The constructed sequence uses arbitrary units and an invented cutoff; it contains no historical event, site or threshold. W3C PROV-DM supports explicit derivation records.

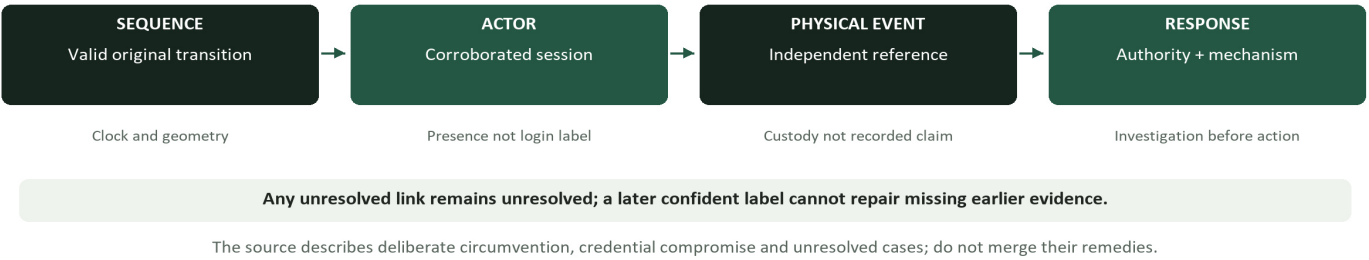
EXHIBIT 2 / DIAGNOSTIC AND ACTOR VALIDITY

Separate an unusual scan from a responsible person

[AI] Evidence can support an implausible transition while leaving the actor or physical event unresolved. The remedy depends on which link has actually been verified.

FOUR DISTINCT CLAIMS / FOUR EVIDENCE REQUIREMENTS

A detector output does not complete the attribution chain



[HR] Site investigations in the register reached different dispositions: confirmed circumvention, credential compromise and an unresolved case. Notifications also produced substantive disputes. These accounts do not support treating all investigated sites or all named logins as confirmed misconduct.

Question	Evidence required before the claim
Is the transition valid?	Stable event order, clock resolution, local geometry, sentinel handling and complete lineage.
Who performed the action?	Authorized session and device investigation, corroborated by independent evidence; a filled identifier is not necessarily informative.
What happened physically?	An independent handling or custody reference connected to the original customer promise.
What response is justified?	Completed investigation, applicable decision authority and a remedy matched to the verified mechanism.

[AI] A dispute rate is not the detector's false-positive rate: response selection, unit, case mix and adjudication differ. Agreement among reviewers cannot replace physical ground truth. Session identifiers may improve investigation, but they do not independently prove presence or intent.

EXECUTIVE ACTION

[PD] Route anomaly, credential and process findings separately. Use flags to prioritize human review; retain an unresolved state. Assign corrective ownership to the demonstrated failure mechanism before considering any individual consequence.

S1: heterogeneous site findings, notification disputes and missing session/device fields. Public wording describes the source account; no individual is identified. Diagnostic, actor and outcome claims have separate validation gates.

EXHIBIT 3 / RULES AND SELECTION

A smaller flagged cohort is not proof of greater accuracy

[AI] Changing time windows, movement cutoffs, frequency floors or outcome filters changes the selected population. Without independent labels, the resulting table is a workload frontier, not an accuracy curve.

RULE REPLAY / HOLD THE EVENT POPULATION FIXED

Different filter settings change the list; independent reference labels determine accuracy



Time, geometry, frequency and outcome selection are separate choices. A yield table alone is not a precision curve.

[HR] The register preserves different threshold configurations, predicates and severity labels. Its threshold-table sites differ from its investigated sites; the latter do not validate the former as a representative sample.

Source contrast	Interpretation and required resolution
Different query settings	Compare yields on the same event population. Multiple changed settings prevent attributing the difference to one cutoff.
Stable label, changed definition	Replay each version on the same frozen events. Separate changed inclusion from severity relabeling.
Numeric location versus geography	Use cluster-specific geometry; sentinel codes and restarted numbering do not represent physical travel distances.
Selected site investigations	Establish sampling and reference labels before estimating sensitivity, specificity or predictive value.

[AI] A stricter frequency floor can suppress both noisy records and true isolated events. A geometric escape rule can reintroduce sentinel artifacts. Neither choice is validated by the magnitude of the retained anomaly. Preserve both error types and legitimate operating exceptions in the audit.

EXECUTIVE ACTION

[PD] Freeze one executable rule contract with boundary tests, exclusions, reference sample and workload capacity. Accept a threshold only against a measured diagnostic and operational objective; do not equate a smaller list with higher confidence.

S1: threshold sensitivity, band drift and sentinel corrections. Historical cutoffs and counts remain private. A comparative query result is not a causal counterfactual, ROC curve or validated precision estimate.

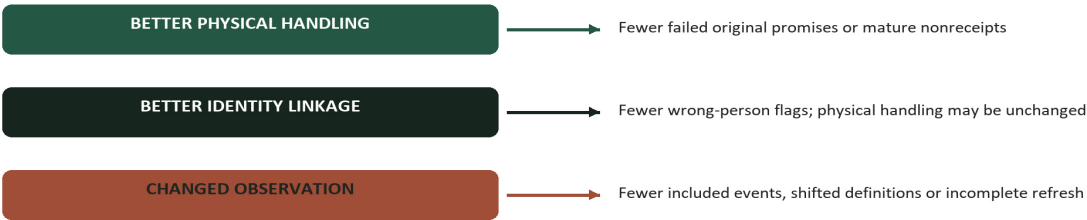
EXHIBIT 4 / OUTCOMES AND SUSTAINED CONTROL

Fewer flags need not mean better service

[AI] A dashboard responds to behavior, observation and attribution. Those pathways must remain separate when the program is judged or funding is reconsidered.

SAME REPORTED DECLINE / DIFFERENT OPERATING MEANING

Conceptual paths; no historical effect sizes are implied



Retain separate service, attribution and observation measures. Only an appropriate comparison identifies intervention effects.

[HR] Early reporting described lower flagged volumes and leadership counts. Later source accounts recorded different normalized patterns, disputed attribution and gaps in archived detector output. These measures concern changing windows, populations and rules; they cannot be assembled into a single validated impact curve.

Evaluation layer	Keep the comparison honest
Fixed instrument	Replay old and new rules on the same events; preserve observed weeks, missing intervals and distinct reporting grains.
Fixed population	Retain original tasks and bookings across credential changes, redirection, cancellation and reporting-status changes.
Independent physical outcome	Measure promise misses and mature receipt separately from whether a login or package appeared in a flagged list.
Mechanism continuity	Verify actual refresh and response logs. An empty archive folder does not establish the duration or scope of a production outage.

[AI] The selected-cohort training comparison also leaves regression to the mean unresolved. Sparse observations and changing definitions constrain process-limit interpretation. A movement within tentative limits is not established improvement, and an uncontrolled movement beyond them would still not identify treatment causality.

EXECUTIVE ACTION

[PD] Keep both the independent service measure and a detector-lineage dashboard. Require evidence of continuing observation and response before declaring the issue resolved. Credential correction is valuable, but its effect on attribution must not be booked as physical prevention.

S1: reported trend variants, training cohort, normalized detector output and archive inventory. Limits and source-version sensitivities are reproduced privately; no stitched historical time series or realized effect is asserted.

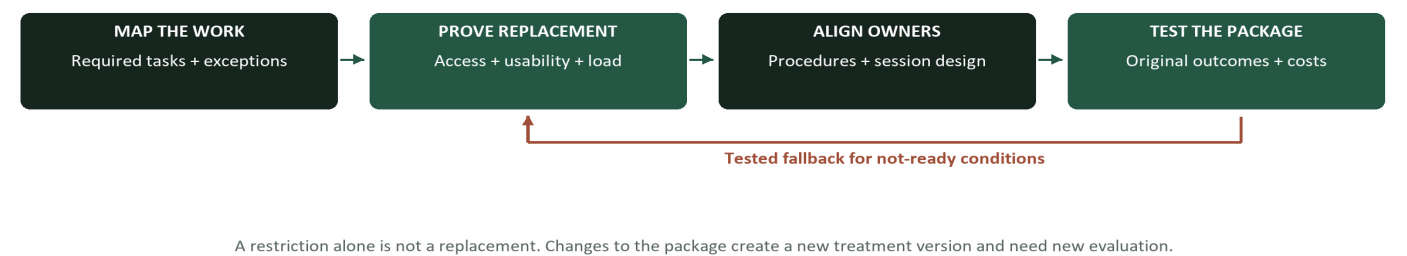
EXHIBIT 5 / INTERVENTION READINESS

Keep legitimate work functioning

[AI] Blocking a tool can fail in two ways: the unwanted behavior may survive through another route, while a valid operating workflow loses the capability it needs.

REPLACEMENT READINESS / PROPOSED OPERATING PACKAGE

Preserve the legitimate task while addressing the verified failure mechanism



[HR] The proposal identified procedures reliant on external generators and an approved alternative. The request was refused. Local tool removal, credential remedies and a separate timing safeguard preclude a blanket claim that no prevention existed.

Readiness condition	Accountable acceptance test
Mechanism coverage	Process and engineering owners reproduce the observed pathway and alternatives, including local or offline operation.
Legitimate replacement	Operations validates required location tasks, access, availability and exception handling under representative load.
Aligned instructions	Standards owners update affected procedures and training before incompatible restrictions take effect.
Fallback and measurement	Service owners approve safe fallback, monitor ordinary work and retain original-customer outcome links.

[AI] A blocked request does not establish that every implementation path is unavailable. A separate funded program at another process layer does not repair this layer automatically. The proposed package therefore combines approved replacement, session safeguards and process redesign, with explicit acceptance rather than an assumed benefit from blocking.

EXECUTIVE ACTION

[PD] Name one owner for replacement readiness and dependencies. Test the authorized package against current approved practice. Hold expansion if harm to legitimate work or attribution uncertainty breaches the approved boundary.

S1: preventive proposal, affected procedures, refusal, local remedies and adjacent controls. Proposal authorship is distinct from delivery. The related blocking project and recurring detector product retain their own scopes.

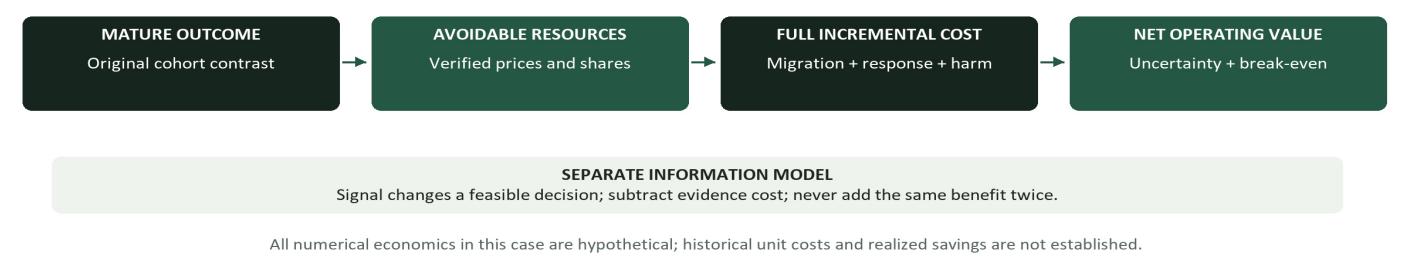
EXHIBIT 6 / BENEFITS AND INFORMATION

Value verified service changes

[AI] The value of investigating an anomaly differs from the value of preventing a mature customer failure. Neither is the merchandise value attached to the affected record.

VALUE BRIDGE / KEEP DISTINCT LEDGERS

A detector count and an order-value field are not avoided operating cost



[HR] The source contains modeled program opportunities, an avoidance estimate and an order-value field. Its cost appendix leaves material unit prices unresolved. Neighboring program entitlements and multiple views of the same defect population may overlap.

Value category	Admissible treatment
Mature operating benefit	Estimate signed physical-outcome changes on original bookings, then apply verified avoidability and non-overlap.
Implementation and response	Charge replacement, validation, support, exception handling and extra work; retain delay costs on legitimate activity.
Decision information	Model how evidence changes a feasible decision, subtract acquisition cost and compare with perfect-information value.
Order value and planning totals	Retain as distinct source fields or unvalidated scenarios. Neither establishes released resources or realized cash.

[AI] A corrected claim can justify a hold without establishing the monetary value of that hold. The proposed information experiment prices a changed decision under explicit assumptions; it does not invent evidence that a historical executive decision changed.

EXECUTIVE ACTION

[PD] Finance should accept one original-population bridge from causal outcomes to avoidable resources and incremental cost. Require a powered test at economic break-even, alongside physical service and legitimate-work protection. Report decision-information value separately.

S1: unfilled cost basis, modeled avoidance, planning opportunities and order-value field. The later trial and EVSI sections are wholly hypothetical prospective designs, not reconstructed achieved benefits.

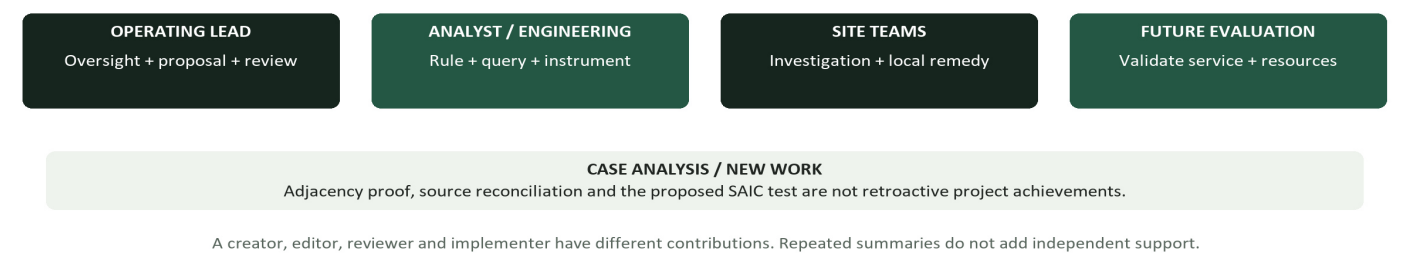
EXHIBIT 7 / CONTRIBUTION AND NEXT DECISION

Credit the operating judgment at the stage the record supports

[HR/AI] The case separates oversight and preventive design from analytical authorship, field execution and verified outcomes. That distinction strengthens the contribution narrative.

CONTRIBUTION / CREDIT EACH ROLE AT ITS EVIDENCED STAGE

Reported provenance requires original authentication; no sole-impact claim follows



Recorded contribution	Process-tracing grade and boundary
Program oversight and escalation	Provisional hoop at register level. Named reporting and cadence commitments support oversight; they do not confer authorship of detector code or investigations.
Preventive-control proposal	Provisional hoop from reported creator metadata and content. The original file must authenticate authorship; the proposal and refused request do not establish deployment.
Commissioned claim review	Provisional hoop from the attributed request and revision account. Whether the corrected chronology was circulated or changed a decision remains unverified.
Analytical and field execution	Attributed to analyst, engineering and site teams. Their work is not converted into sole personal ownership or realized impact.

[AI] A last-modified stamp supports an editing event, not original authorship. A file-save date does not date the field behavior. Repeated summaries of the same artifact are not independent corroboration. No contribution earns a smoking-gun or doubly-decisive grade solely because the register labels its source primary.

NEXT DECISION

[PD] Authorize a lineage and reference audit, resolve the legitimate-work replacement, and calibrate a feasible comparative test. The new adjacency proof and proposed SAIC framework belong to this case analysis; they are not retroactive claims about the original team's achievements.

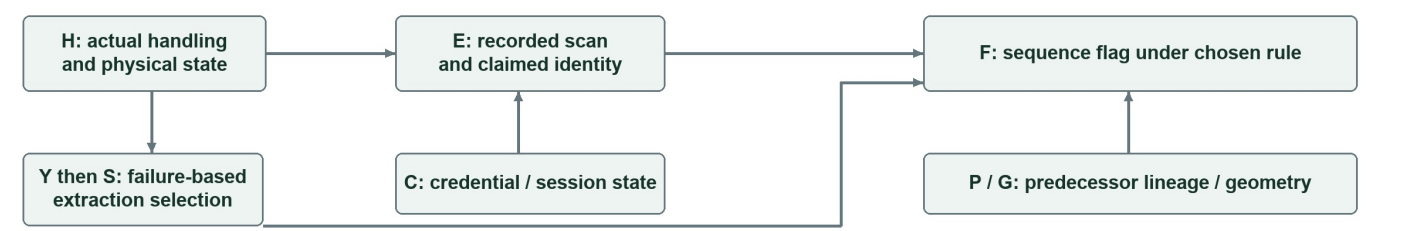
S1: reported document properties, role assignments, source chronology and review history. Original source recovery determines final authentication. The final referee report is internal agent-assisted review, not outside endorsement.

TECHNICAL ANALYSIS

Separate sequence evidence, actor identity and customer outcomes

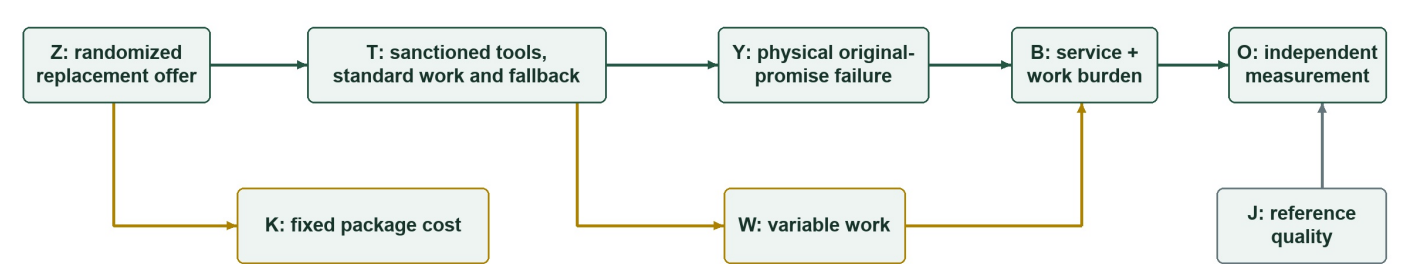
[AI/PD] The Sequence-to-Action Integrity Contract (SAIC) treats a flag as a reproducible claim about a recorded sequence. Physical mismatch, actor attribution, authorized response and customer benefit each require additional evidence.

MEASUREMENT: A SEQUENCE FLAG IS NOT PHYSICAL OR ACTOR TRUTH



H affects Y; Y affects inclusion S. S and E feed F. Preserved versus recomputed edges differ.

PROPOSED POLICY: REPLACEMENT READINESS, SERVICE AND ORDINARY-FLOW HARM



Readiness R and context U affect implementation, service and work; randomization breaks baseline confounding. Z also improves C and recorded identity without requiring a physical outcome change. K is priced separately. No conditioning on successful replacement, flagged output or later diagnosis in the original-manifest ITT.

[AI] Handling state H can affect scan evidence E and customer failure Y. Credential/session state C affects recorded identity. Geometry G and predecessor lineage P affect flag F; selecting outcome-linked records S can change the sequence itself. A login is not a physical actor, and a scan is not proof of custody.

[PD] Randomized replacement offer Z changes sanctioned tools and fallback T, with readiness R moderating service and work. It can also improve session attribution without changing physical outcomes. Independent reference J measures failure and work; it is independent of policy implementation, not unrelated to the truth measured.

[PD] Preserve the original manifest and pretreatment task strata. Estimate the total offer effect without controlling for replacement success, post-treatment flags or completed investigations. Fixed package cost K is separate from variable burden B. The diagram states proposed paths; the register identifies no historical treatment effect.

Basis: proposed SAIC paths [PD]; registry scope and identity limitations [HR/AI]. NIST SP800-92 (2006), SP800-63B-4 (2025). Context and readiness paths are summarized beneath the diagram.

TECHNICAL ANALYSIS

Filtering a sequence can create a jump as well as erase one

[AI] This independent hypothetical proof uses one coordinate system, distance at least 5 location units and elapsed time at most 3 time units. These are arbitrary quantities, not transformed historical thresholds.

Events at times 0, 1, 2	Full adjacent flags	Delete middle; recompute
Locations 1, 4, 7	0: distances 3 and 3	1: distance 6 in 2 units
Locations 1, 8, 1	2: distances 7 and 7	0: distance 0 in 2 units

[AI] The first sequence gains an apparent violation solely because a removed event changes adjacency. The second loses both flagged pairs. Repeating either sequence twice, with blocks separated beyond the time limit, changes eligibility under a hypothetical two-flag floor in opposite directions. Subtracting a false-pair estimate from a nonlinear cohort count cannot repair this.

[AI] Let E be full-stream adjacent edges and E* the retained original predecessor tuples. If E* is a subset of E and the same criteria are applied, flagged edge counts cannot increase. A fixed monotone count floor then preserves subset inclusion. This guarantee does not automatically extend to recomputed predecessors or changes in rule, grouping or time window.

[HR/AI] The register calls a selected recomputation a strict lower bound. That conclusion requires authenticated lineage. Existing predecessor fields could have been computed before extraction; alternatively, local recomputation could have changed them. The unavailable pipeline prevents choosing either branch. The proof challenges an unconditional floor, not the reported arithmetic itself.

[PD] Reproduce both orders against a held-out complete event stream: derive predecessors then filter, and filter then derive predecessors. Record every changed edge, sentinel treatment, grouping key and tie rule. PostgreSQL documents the generic ordering issue; no original database or query is reconstructed here.

Basis: independent executable proof and exhaustive finite enumeration [AI]; PostgreSQL18, section3.5. Suriadi et al. (2017) motivates systematic log-quality preparation; full paper was not accessed.

TECHNICAL ANALYSIS

Define the event graph before calibrating a detector

[PD] Freeze a measurement contract that makes a rule reproducible across vintages. A timestamp and an aisle label do not become a physical trajectory merely because a formula can compare them.

Layer	Contract and falsification check
Population and grain	All eligible scans before outcome filtering; stable event/package/session keys; retain duplicates until their semantics are resolved.
Time and ordering	Event versus posting time, clock offsets, batching, equal-time ties and original predecessor identity.
Geometry and rule	Cluster-local maps, sentinel and staging values, exact inequality edges, exceptions, frequency and outcome floors.
Meaning and action	Separate sequence anomaly, physical mismatch, credential error, legitimate exception and unresolved reference.

[HR/AI] The record describes divergent rule prose, implemented boundaries and severity bands. Moving a band edge may only relabel severity if total flag eligibility stays fixed; changing an eligibility threshold alters the population. A station-count expansion and a row-count expansion are different quantities. Unknown output denominators prevent a general prevalence claim.

[PD] Use synthetic boundary cases, equal timestamps, cross-cluster moves, sentinels and missing predecessors as executable specifications. Preserve the raw event stream, transformed edge table and version hashes. Compare outputs at event and cohort levels; do not authenticate a pipeline merely because its own filtered output satisfies its filter.

[AI] NIST log guidance supports clock normalization and preservation; W3C provenance describes derivation. Neither establishes that a source event is true. A constant device field has no between-device discrimination. A variable session identifier can support linkage but remains distinct from independently corroborated actor presence.

[PD] Report an unresolved category whenever maps, clock lineage or identity are unavailable. Keep diagnostic reference access separate from employment decisions; this case proposes no punitive use of analytics flags.

Basis: source rule/version limitations [HR/AI]; Kent and Souppaya (2006), NIST (2025), W3C PROV-DM (2013). Historical thresholds, login records and operational volumes remain private.

TECHNICAL ANALYSIS

Selected investigations cannot establish operating-point precision

[HR/AI] The threshold-selected locations and the investigated locations do not coincide. The register describes different case resolutions, including disputed identity and unresolved attribution; it does not supply a representative detector confusion matrix.

Claim	What would identify it
Sensitivity and specificity	Probability sample of eligible positive and negative sequences, including nondefect outcomes, with independent physical reference.
Positive predictive value	Weighted verified positives under the deployment prevalence; include unresolved cases and verification selection.
Actor attribution	Independent authorized identity evidence at event time; an authenticated account or later admission does not validate every event.
Customer effect	Original-manifest outcomes under an identified intervention contrast; flag counts are secondary diagnostics.

[AI] A threshold-yield table is not a ROC curve without truth labels and denominators. Several thresholds and floors change together, so comparisons may not even be nested. No dispute is not proof of correctness; acknowledgement, investigation completion, actor identity and physical error are separate variables.

[PD] Draw a blinded validation sample across flag status, workflow, shift, map configuration and evidence availability with recorded inclusion probabilities. Two reviewers classify the same complete packet before adjudication. Publish the weighted cross-tab, unresolved fraction, agreement, kappa and uncertainty rather than selectively excluding difficult cases.

[AI] Begg and Greenes show why selective verification can bias diagnostic performance. Correction needs assumptions about verification; inverse sampling weights cannot repair an invalid reference. A hypothetical 200 independent cases give only about plus or minus 6.9 percentage points of worst-case approximate 95% proportion precision; clustering and rare severe errors need separate sizing.

[PD] Validate customer truth independently of the disputed scan stream. For N original units, k known failures and u unresolved outcomes imply failure risk between k/N and $(k+u)/N$. Preserve these denominators when comparing arms; do not label unavailable evidence as benign or delete it.

Basis: proposed validation [PD]; Begg and Greenes (1983), Cohen (1960). Literature access for Begg and Greenes was the primary institutional abstract; no source accuracy estimate is imported.

TECHNICAL ANALYSIS

Replace the enabling workaround without breaking legitimate work

[HR/AI] The register describes tools serving both disputed behavior and legitimate tasks, alongside conflicting standard work and credential problems. A single prohibition or a new account setting is not automatically a complete physical remedy.

[AI] Session repair may move events to the correct login while parcels remain unchanged. Conversely, an approved replacement may reduce physical mismatch even if flags rise because capture improves. Use separate measurements for account integrity, authorized workflow use, physical state and customer service; none is a sufficient surrogate for the others.

Control hypothesis	Test before expansion
Standard-work alignment	Confirm which legitimate tasks require the tool; define an approved replacement and tested fallback for each.
Capability restriction	Test actual execution paths and caches; a string or URL reference is not evidence that a network request ran.
Secure sessions	Measure access usability and attribution error independently; token presence does not establish continuing human presence.
Replacement readiness	Measure task completion, delay and displaced work on the entire original manifest, including ordinary tasks.

[AI] A local lookup can coexist with remote image generation, cached content or other dependencies. Static workbook descriptions do not establish offline operation or prove a proposed block would stop a behavior. The separate blocking initiative retains its own scope and authority; this case evaluates the replacement-first mechanism.

[PD] Assign an accountable owner for standard work, tooling, session configuration and fallback acceptance. Keep existing customer remedies and approved operations in force. Record unsuccessful activation, support time, task substitution and spillovers. Treatment failure remains part of the offer effect, rather than grounds to drop a domain.

[AI] Rasmussen places adaptation within system constraints. That framework motivates testing whether local restrictions shift burden elsewhere; it does not establish this case's motives or causes. NIST session guidance similarly supports usable security without converting an authentication record into parcel evidence.

Basis: bounded source mechanisms [HR/AI]; proposed replacement-first control [PD]. Rasmussen (1997), NIST SP800-63B-4 (2025). No restriction, replacement deployment or customer benefit is claimed as achieved here.

TECHNICAL ANALYSIS

Preserve variation, rule changes and selection as different questions

[HR/AI] The record combines sparse operating snapshots, selected output series, changed detector rules and planning claims. A descriptive decline can be real arithmetic without identifying a comparable process improvement or a causal effect.

[RC] The frozen inventory contains 20 source/sensitivity screens, with 17 version audits, five design audits and seven profiles kept separate. Only the main implemented-cohort sequence has candidate individual and moving-range crossings; a retrospective prefix also flags its late endpoints. Missing periods and changed exposure prevent a process diagnosis. No stable phase or eligible Laney panel is established.

[PD] For a commensurate future series, use $MR(t) = \text{absolute}[x(t) - x(t-1)]$, individual limits $\text{mean}(x)$ plus or minus 2.66 $\text{mean}(MR)$, and MR upper limit 3.267 $\text{mean}(MR)$. Preserve calendar gaps and predefine phases. Fitted limits on sparse or changing-definition sequences cannot establish routine variation or stability.

[AI] Pull-normalized flag density controls only that denominator, not shipped exposure, population mix or rule eligibility. A quoted trough must reconcile with all endpoint ratios under the same series. A larger later counter-series does not automatically refute a smaller treated-cohort decline when the populations differ.

[AI] Selecting extreme logins or sites creates regression-to-the-mean risk. Assume untreated conditional mean $m + \rho \cdot (x - m)$, where m is population mean, x selected value and ρ assumed persistence. Values 0.4, 0.7 and 0.9 imply 60%, 30% and 10% reversion of selected excess. These are hypothetical sensitivities, not observed fractions. A plan recorded after the outcome window does not establish preregistration.

[PD] Prespecify moderators: pretreatment task complexity, legitimate-tool dependence, map quality, credential provision, fallback readiness, workload and baseline physical risk. Report interaction uncertainty. Do not define moderators by post-treatment tool success or later flags.

[AI] Repeated activity by different accounts after coaching shows unresolved reported output, not zero individual effect or a uniquely systemic cause. Ordinary workers and neighboring sites may share tools, supervisors and capacity; they are not automatically untreated controls. Laney adjustment requires verified repeated binary counts and exposures.

Basis: frozen source/SPC inventory [RC]; comparability and selection audit [HR/AI]; Barnett et al. (2005). Historical coordinates and arithmetic limits remain private. Retrospective prefix tests were not preregistered.

TECHNICAL ANALYSIS

Keep managerial contribution distinct from analytical and field ownership

[HR/AI] The contribution assessment is a provisional registry-level hoop. Original authentication, decision uptake and customer effects remain unverified. The record supports a bounded management role without transferring direct-report or site work to that role.

Contribution layer	Supported scope and limit
Program framing and cadence	Reported upward framing and recurring review commitment; last modification of a document is not authenticated authorship.
Policy and governance	An authored proposal and standard-work dependencies are described; requests, approval, implementation and sustained operation remain separate.
Detection and field work	Direct-report analytical and investigative authorship, with local remediation ownership; no universal manager-led field execution claim.
Retrospective assurance	Commissioning and steering a later audit are described; generated reviewer consensus is not independent primary corroboration.
Current case analysis	Sequence nonmonotonicity proof, scope corrections and prospective design are new analysis, not retroactive achievements.

[AI] The relevant alternatives are explicit: local tool use, credential compromise, legitimate workflow, map or timestamp errors and unresolved events can coexist. A later discovery demonstrates a reported residual problem; it does not prove unchanged total prevalence, ineffectiveness of every earlier action or continuous use at the same sites.

[HR/AI] Monetary plans are not realized savings. Order value at risk is not avoidable loss, a renamed successor is not automatically a like-for-like funding cut, and overlapping opportunity shares need not sum to a partition. Finance-approved unit values and distinct realized outcomes are missing.

[AI] Consolidated limits: unavailable originals and predecessor lineage; selected verification; changing grains and rules; unknown task exposure, reference error and interference; nonrandom historical actions; ambiguous chronology and outcome maturity. Neither fabricated-event prevalence nor attributable customer harm is identified.

[PD] Close the loop with a dated decision record: evidence accepted, unresolved conditions, responsible owner, authorized next test and expiry/review date. A delivered audit, a received audit and a changed operating decision are separate milestones.

Basis: registry-level process tracing and explicit alternative explanations [HR/AI]; Collier (2011). No employee identity, personal accusation, authenticated transmission or realized economic benefit is inferred.

TECHNICAL ANALYSIS

Test the replacement package on the original manifest

[PD] Randomize independent capacity domains before implementation. Freeze externally booked original units and pretreatment task strata; compare the approved replacement-first package with existing approved practice using the same independent ascertainment.

[PD] Let $Y(z)$ indicate a physical original-promise failure under offer z , $W(z)$ variable work and K fixed package cost. Benefit is $E[12Y(0)+W(0)-12Y(1)-W(1)]$ in hypothetical resource units. Require nominal 99% directional bounds: resource-benefit lower bound above K , failure-reduction lower bound above zero, and ordinary-harm upper bound below an approved margin.

[PD] The planning example fixes 480 bookings per domain in five cohorts: complex-location, session-sensitive and ordinary legitimate-tool tasks. Shared readiness induces within-domain dependence. The session stratum has unchanged physical risk in the toy law, allowing an attribution improvement without manufactured customer benefit.

[PD] Ascertain receipt by original promise plus 21 days while reconstructing the original-deadline outcome. Later delivery remains a promise miss; unresolved evidence stays in bounds. Common capacity reservation, variable implementation/support work and fixed package cost are separately counted. Research-only outcome auditing is outside production economics.

[AI/PD] A readiness stress can make the package both uneconomic and harmful to ordinary work. More observations cannot repair negative expected value or an unacceptable true harm level. The proposed fallback redesign changes the intervention and its costs; it is not merely a larger sample of the failed package.

[PD] Exact moments support approximate cluster-studentized normal planning. An initial harm-boundary simulation over-rejected with the usual cutoff; stricter directional gates receive fresh-seed validation. MDE uses 80% correct-direction power at the upper cutoff of a two-sided 5% zero-effect test. Compare MDE with break-even and test actual economic, physical and harm boundaries; no universal coverage is claimed.

[PD] If later rollout is nonrandom, define cohort-time ATT with defensible comparison domains, pretreatment trends, no anticipation and spillover checks. That future extension is distinct from the randomized offer ITT and remains unestimated. Do not apply a scalar financial discount to adverse effects or added work.

Basis: proposed SAIC evaluation and independent synthetic planning [PD]. No historical effect, field feasibility or exact finite-sample Gaussian coverage is claimed; model pages disclose parameters, bounds and sensitivity.

TECHNICAL ANALYSIS

Four falsifiable propositions connect sequence integrity to safe action

[AI/PD] SAIC offers testable claims about measurement and intervention. The reference is independently adjudicated physical work and customer service, not agreement with a detector or satisfaction with a report.

Proposition	Prespecified test and possible failure
P1: Lineage changes classification	Replay full-stream predecessors and outcome-filtered recomputation. The nonmonotonicity mechanism is absent in the tested pipeline if original edges are demonstrably preserved and classifications agree under the fixed rule.
P2: Session repair improves identity	Compare independent actor-link error under common reference sampling. Fails if error does not decline as prespecified; a drop in login flags alone is insufficient.
P3: Replacement improves service	Randomized original-manifest ITT clears economic and physical gates. Fails if benefit is too small, reference bounds erase it or ordinary-flow harm exceeds the approved margin.
P4: Fallback readiness limits harm	Prespecified readiness interaction and redesigned fallback tests reduce ordinary-task disruption. Fails if the predicted interaction or redesign benefit is not supported with adequate precision.

[AI] The literature changes the inquiry: event-log research motivates systematic quality checks; selective-verification theory challenges accuracy inferred from investigated positives; identity guidance separates authentication from physical presence. Systems adaptation explains why a restriction can move work or risk, without proving any historical mechanism.

[AI] Deming cautions against tampering with unestablished variation; Campbell and Goodhart warn that targeted indicators can change meaning. Ittner and Larcker require a defensible measurement-to-value chain. Tucker and Edmondson make workarounds a signal for system learning, not a substitute for causal evaluation. Composite weights must charge ordinary harm and work rather than hide them in a lower flag count.

[PD] Release the reproducibility bundle: immutable source locators, cohort/rule versions, complete edge lineage, exclusions and unresolved cases, independent proof code, primitive model law, separate solver, simulation seeds and Monte Carlo intervals, and final PDF/image hashes. This supports an auditable next decision while leaving unproven historical claims unclaimed.

Basis: four proposed falsifiable claims [PD]; case-specific literature synthesis [AI]. All mathematical examples are independent hypotheticals. Direct source uncertainty and practical authorization requirements remain explicit.

Replace the workflow before removing its support

[PD] Randomize independent work domains to an approved replacement package or current approved practice. The package aligns instructions, provides a sanctioned location tool and secures sessions. No individual sanction or automatic service block is tested.

[PD] Freeze 480 externally booked units per domain across five cohorts: 60 complex-location, 60 session-sensitive and 360 ordinary approved-code tasks. These preassignment workflow strata are observable; no selected anomaly label defines eligibility. Usual promise-failure risks are 40%, 2.5% and 2.5%.

Wholly hypothetical package law	Ready	Not ready
Complex-task failure: base	20%	38%
Ordinary added failure: base	0.2 pp	2.2 pp
Extra work per original unit	0.03	0.09
Fallback version: complex failure	20%	30%
Fallback: ordinary added failure	0.2 pp	0.6 pp

[PD] One common readiness state per domain has probability 85% in the base and 60% under stress. Session-sensitive physical risk stays 2.5%. Failed replacement uses the approved existing fallback; any resulting disruption remains in the outcome. Neither latent readiness nor future failure selects the cohort.

SESSION CORRECTION IS NOT PHYSICAL PREVENTION

[PD] A separate identity-only illustration reduces session flags from 40% to 8% with physical failure unchanged. No benefit is assigned to that reduction. Independently reconstruct receipt at the original promise through promise + 21 days; later delivery remains a miss. All assignments and missing truth remain.

[PD] All probabilities, strata, prices and clocks are synthetic. Authority, readiness, reference accuracy and follow-up maturity require calibration; no source effect is used.

Change an unsafe package; a larger sample cannot repair it

[PD] Exact readiness-mixture moments support approximate cluster-studentized normal planning. A new assisted-fallback version changes the treatment and its cost; it is not a sample-size repair of the original package.

Design	Per arm	MDE (index)	BE detection	Joint floor
Initial base	32	12.82	28.6%	0.0%
Base candidate	256	4.21	97.7%	85.8%
Readiness stress	256	5.93	81.2%	0.0%
New fallback version	256	3.75	>99.9%	99.8%

[PD] Base break-even is 6.03 index points; the new version costs 8.22. Require 80% detection at break-even and 80% joint power for resource benefit above cost, original-promise improvement above zero, and ordinary added risk below 0.8 percentage points. The margin requires approval.

[PD] A calibration run found 3.26% harm-boundary false clearance with the usual 1.96 cutoff. Directional gates now use nominal 99% normal bounds; fresh seeds validate selected laws. Zero-effect testing remains two-sided 5%. Joint floor = $\max(0, P(\text{value}) + P(\text{promise}) + P(\text{ordinary}) - 2)$.

[PD] Independent-seed finite simulations estimate redesigned joint success at 99.80% (95% Monte Carlo interval 99.73-99.86%). Separate zero, economic, promise-null and harm-boundary tests use estimated domain variances. No exact coverage or all-nuisance guarantee is claimed.

CALIBRATE BEFORE RECRUITING

[PD] The redesigned candidate needs 512 independent domains and 245,760 original bookings. Availability and proposed fallback performance are unestablished. Stress has negative mean value and excessive ordinary harm; increasing n cannot make those true effects acceptable.

[PD] MDE and fixed cost are index points; usual total modeled resource burden = 100. No minimum claimed. Severe harm, workforce and authority gates remain separately assessed.

Charge disruption even when a replacement lowers flags

[PD] A promise failure costs 12 hypothetical resource units; common reservation costs 0.05 per original booking. These are planning weights, not historical cash, order value or a price on employee attribution.

[PD] Base fixed K = 0.055 per booking allocates 0.025 to instruction/readiness, 0.020 to configuration and 0.010 to owner/evidence support. The fallback version adds 0.020 and charges variable work 0.04 when ready or 0.10 otherwise. Research-only outcome adjudication is separate from recurring verification.

[PD] $Net_raw = a \times h \times S - A - W - K$. S is avoided complex-task harm, A is added ordinary harm, W is extra work. Avoidability a and non-overlap h discount only favorable benefit; added harm, work and fixed cost are fully charged. Table values are fallback-version net index points.

Avoidability a	h = 0.50	h = 0.75	h = 1.00
0.50	-12.21	-8.92	-5.63
0.75	-8.92	-3.99	0.94
1.00	-5.63	0.94	7.52

[PD] Full-realization net is 13.21 for base, -0.77 under stress and 7.52 for the new version. Its realization product must exceed 0.714. At fixed K = 0.055 / 0.075 / 0.095, redesigned net is 9.71 / 7.52 / 5.33. Repricing requires new power.

VERIFY THE CUSTOMER CLOCK AND THE ACTOR SEPARATELY

[PD] With verified work records, epsilon unknown or incorrect outcome labels per arm can move risk contrast by 2 epsilon and resource contrast by 24 epsilon. Ordinary risk uses its own denominator. Retain unknown truth, test later ascertainment and calibrate identity errors separately; no employee conclusion follows from a scan flag.

[PD] $Net_index = 100 \times Net_raw / 0.9125$. Same original booking pool and cost allocation across designs. Field value requires mature randomized ITT and full signed component costs.

PROPOSED INFORMATION VALUE / 4 OF 4

Buy evidence that distinguishes replacement from fallback

[PD] A separate three-state decision model chooses a bounded base-package trial, fallback preparation then trial, or evidence reconciliation. Information can favor restraint even when a hypothetical operating mean is positive.

Action / state	Ready	Fallback	Unresolved
Bounded base trial	13	-7	-15
Fallback then trial	6	10	-8
Reconcile evidence	2	3	6

[PD] Unknown identity, mandatory evidence or authority takes precedence as the unresolved state. Otherwise distinguish replacement-ready from fallback-required. Priors are 0.45 / 0.35 / 0.20. A signal is correct with probability q; each wrong state has probability (1 - q)/2. No state authorizes sanctions.

Signal q	Gross EVSI	Acquisition	Net EVSI
0.50	0.3375	0.50	-0.1625
0.75	3.0125	1.50	1.5125
0.95	5.3625	3.00	2.3625

[PD] All 27 contingent policies are enumerated. Prior-optimal fallback preparation is worth 4.6000; EVPI is 5.9500. Utilities include subsequent preparation or testing; evidence-acquisition costs are additional. Decision units are not historical dollars and are not added to operating benefit.

THE NEXT STEP IS A BOUNDED CALIBRATION

[PD] Establish replacement coverage, legitimate workflow continuity, independent physical truth and the original customer clock before a live test. Validate the new fallback version separately. Better session attribution may justify a correction while leaving the prevention case entirely unproved.

[PD] Hypothetical priors, signals and payoffs. Testing is not deployment approval; evidence value cannot override approved service, customer remedies or required authority.

REPRODUCIBILITY / READER PROTOCOL

Reproduce the inference boundary as well as the number

[AI] A reproducible calculation may still answer the wrong question. This case preserves source, transformation, interpretation and decision boundaries together.

Review layer	Reproduction requirement
Source record	Freeze the supplied register and verify selected cells, records and source pointers. Preserve unrecovered originals and conflicting accounts; do not promote summaries into primary evidence.
Analytical construction	Replay both full-stream and filtered-neighbor sequences under the same invented rule. Verify creation, erasure, retained-edge conditions and nonlinear cohort selection.
Historical calculations	Reconstruct every displayed source relationship by unit, version and window. Retain different populations and tentative-limit suitability judgments.
Prospective model	Rebuild domain moments, costs, assignment, sampling error and all decision gates. Distinguish stress on a fixed package from a separately priced redesigned package.
Information value	Enumerate feasible action policies under the stated signal and payoff law; compare net EVSI with evidence cost and EVPI. Never add it to operating value.

Public and private artifacts serve different purposes

[AI] The public case contains protected conclusions and explicitly hypothetical numerical constructions. The separate private package contains source identities, raw arithmetic, code, parameter provenance, conflicts and review bindings. Its raw figures and local paths are not intended for external portfolio use.

Acceptance does not turn a proposal into an achievement

[AI] The source documents a reported program and a retrospective review. Historical causal effects, authenticated personal authorship and validated savings require original evidence. The proposed SAIC mechanism, adjacency proof and evaluation are new analytical work. Their acceptance supports a next decision, not a retrospective impact claim.

PRACTICAL HANDOFF

[PD] Begin with source and lineage recovery, then a reference audit and replacement-readiness rehearsal. Assign data, process, service and Finance owners. Register the approved package and decision gates before the comparative evaluation begins.

Reproducibility package is private and separately labeled. All calculations, source-semantic checks and actual-page reviews bind to the released artifact. A later substantive change requires renewed review.

RESEARCH REFERENCES / EVENT INTEGRITY AND RESPONSIBLE ACTION

Validate the record before interpreting the behavior

Primary sources support methods and interpretation. They do not authenticate missing project artifacts, establish individual responsibility or provide transferable project effect sizes.

Suriadi, S., Andrews, R., ter Hofstede, A. H. M., & Wynn, M. T. (2017). Event Log Imperfection Patterns for Process Mining: Towards a Systematic Approach to Cleaning Event Logs. *Information Systems*, 64, 132–150. Author-institution abstract and metadata. Event-log imperfections require explicit diagnosis before process inference. This case applies that principle to predecessor lineage, clock resolution, geometry and missing events; it does not claim the paper proves this case's adjacency construction.

Begg, C. B., & Greenes, R. A. (1983). Assessment of Diagnostic Tests When Disease Verification Is Subject to Selection Bias. *Biometrics*, 39, 207–215. Author-institution abstract. Selective reference verification can bias diagnostic assessment. Investigations chosen from flagged sites cannot supply population-wide predictive value or sensitivity without a defensible sampling and verification design.

Rasmussen, J. (1997). Risk Management in a Dynamic Society: A Modelling Problem. *Safety Science*, 27, 183–213. Author-institution manuscript, selected sections. Operating behavior adapts to constraints across organizational levels. The proposed intervention addresses legitimate workflow needs, procedural dependencies and management ownership as well as individual records; no safety effect size transfers.

Kent, K., & Souppaya, M. (2006). Guide to Computer Security Log Management. NIST SP 800-92. Official guide, selected log-quality sections. Preserve log provenance, timestamps, processing and management responsibilities. Here those controls support an auditable event chain; logging completeness or a populated field does not itself authenticate a physical actor.

Temoshok, D., et al. (2025). Digital Identity Guidelines: Authentication and Authenticator Management. NIST SP 800-63B-4, section 5. Official guideline. Session continuity and a credential event are distinct from continued person presence; unusable authentication can incentivize workarounds. The operational application calls for proportionate session controls and corroboration, not an inference that a login proves a physical act.

PostgreSQL Global Development Group. PostgreSQL 18 Documentation, section 3.5: Window Functions. Official tutorial, accessed October 2026. Window functions operate on the rows remaining after the query's filtering; a subquery can change that order. This supports the generic lineage question, not an assertion about the unavailable production SQL or its database platform.

Moreau, L., & Missier, P. (eds.) (2013). PROV-DM: The PROV Data Model. W3C Recommendation, section 5.2.1. Official specification. Derivation can record the input entity, transformation activity and generated output. SAIC uses that structure to require reproducible predecessor and rule lineage; a provenance record remains a claim whose underlying evidence must be authenticated.

Access scopes distinguish full or selected text from abstracts and bibliographic records. Applications are methodological or conceptual; all project impact claims require project evidence.

RESEARCH REFERENCES / EVALUATION AND UNCERTAINTY

Test the complete operating package

Primary sources support methods and interpretation. They do not authenticate missing project artifacts, establish individual responsibility or provide transferable project effect sizes.

NIST/SEMATECH. e-Handbook of Statistical Methods, section 6.3.2.2: Individuals Control Charts. Official method. Compute tentative $\bar{X}$ limits for actual ordered observations, retaining missing weeks and definition changes. Short, selected or mixed-version series do not establish stable operating phases; within-limit movement is not verified improvement.

Laney, D. B. (2002). Improved Control Charts for Attributes. *Quality Engineering*, 14(4), 531–537. Primary publisher abstract. Extra-binomial adjustment needs actual rational-subgroup counts and denominators. Do not infer weekly exposures from a normalized percentage, or apply a large-sample chart to incompatible detector vintages.

Cohen, J. (1960). A Coefficient of Agreement for Nominal Scales. *Educational and Psychological Measurement*, 20, 37–46. Primary publisher record. Use blinded dual coding and stratified verification, reporting confusion, prevalence, agreement and kappa with uncertainty. Coder agreement does not establish actor identity or physical handling when both coders rely on the same faulty 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. Primary abstract. Selecting the worst observed cohort creates expected reversion without treatment. The training comparison therefore requires an untreated selection-matched group or explicit reliability sensitivity; a chosen follow-up window alone does not identify causation.

Hudgens, M. G., & Halloran, M. E. (2008). Toward Causal Inference with Interference. *Journal of the American Statistical Association*, 103, 832–842. Original manuscript. Shared tools, sessions, supervision and fallback resources can transmit effects across individuals. The proposed trial assigns whole operational domains and retains legitimate-work outcomes; domain independence and cross-domain leakage require empirical checks.

Callaway, B., & Sant'Anna, P. H. C. (2021). Difference-in-Differences with Multiple Time Periods. *Journal of Econometrics*, 225, 200–230. Author manuscript. A nonrandom staggered extension requires group-time effects, suitable comparison groups and a defensible parallel-trends argument. It is a distinct estimand and design from the proposed randomized package comparison; it needs its own power analysis.

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*, 35, 570–583. Author repository. Value sample information through the feasible decision it changes under stated priors, signal likelihoods and payoffs. Subtract acquisition cost, check the perfect-information bound and keep this calculation separate from operating benefit.

Access scopes distinguish full or selected text from abstracts and bibliographic records. Applications are methodological or conceptual; all project impact claims require project evidence.

RESEARCH REFERENCES / CONTRIBUTION AND GOVERNANCE

Connect evidence, ownership and physical service

Primary sources support methods and interpretation. They do not authenticate missing project artifacts, establish individual responsibility or provide transferable project effect sizes.

Collier, D. (2011). Understanding Process Tracing. *PS: Political Science & Politics*, 44, 823–830. Primary publication. Test each contribution against competing explanations and source reliability. Creator, last editor, program owner, analyst and implementer are different roles; derivative metadata supports a provisional claim until the original artifact is authenticated.

Tucker, A. L., & Edmondson, A. C. (2003). Why Hospitals Don't Learn from Failures. *California Management Review*, 45(2), 55–72. Author manuscript. Workarounds can keep immediate tasks moving while obscuring recurring system failures. The replacement-first design preserves legitimate work and assigns procedural and technical dependencies to owners; it does not transfer a healthcare result.

The W. Edwards Deming Institute. The Funnel Experiment. Official exposition. Adjusting a process in response to routine noise can worsen it. Use stable definitions, tentative process limits and recurrence evidence before repeatedly changing frontline instructions or detector thresholds.

Campbell, D. T. (1976). Assessing the Impact of Planned Social Change. Original institutional record. Accountability measures can change recorded behavior as well as the underlying task. Preserve an independent physical outcome and distinguish corrected credential attribution from prevented customer failure.

Goodhart, C. A. E. (1992). The Objectives for, and Conduct of, Monetary Policy in the 1990s. Reserve Bank of Australia Annual Conference. Original author paper, section 1(b)(i). Adaptation can change relationships between intermediate targets and ultimate objectives. A changing flag rate therefore requires evidence connecting the instrument, response and physical service; no monetary-policy effect is transferred.

Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance Implications of Strategic Performance Measurement in Financial Services Firms. *Accounting, Organizations and Society*, 28, 715–741. Author manuscript. Performance measures need a defensible connection to operating strategy. SAIC tests the transition from event quality through authorized response to mature customer outcomes instead of assuming a suspicious-record count measures business impact.

OECD / European Commission JRC (2008). Handbook on Constructing Composite Indicators. Official handbook. Composite scores require explicit definitions, denominators, weighting and compensation assumptions. Diagnostic validity, attribution and physical service remain distinct gates; strong performance on one cannot compensate for an unverified required condition.

Access scopes distinguish full or selected text from abstracts and bibliographic records. Applications are methodological or conceptual; all project impact claims require project evidence.

Accept the integrity analysis; test the replacement

[AI] This author-led, agent-assisted review is not external peer review or client approval. It evaluates the source-bounded case, exact analytical constructions and proposed operating-policy comparison.

Major issue	Disposition in the revised case
Filtered replay called a lower bound	Proved that rebuilding neighbors can create or erase flags. A valid retained-edge bound requires verified full-stream predecessor lineage and fixed rules.
Anomaly treated as actor or intent	Separated sequence validity, corroborated identity, physical handling and authorized response. Investigation dispositions and disputes do not become a population accuracy estimate.
Changing output treated as impact	Preserved rule, scope, grain and time alternatives. Source-series movements do not establish a stable process, absence of observation or causal service improvement.
Restriction treated as complete remedy	Required legitimate-work replacement, aligned instructions and tested fallback. Stress can make the existing package unacceptable regardless of sample size.
Planning figures treated as value	Separated order value, opportunity, modeled avoidance and signed incremental resources. EVSI is independently specified and never added to the same operating benefit.

Partner critique: can a COO act on page one?

[AI] Yes: validate the event chain and actor before consequential action, assign the replacement workflow to an accountable owner, and withhold benefit recognition pending an independent service-and-resource comparison. The cover identifies the artifact, original analytical finding, bounded contribution and evidence status.

Remaining conditions

[AI] Authenticate originals; establish predecessor lineage and physical reference; approve the replacement and fallback; calibrate readiness, costs, outcome maturity and independent-domain recruitment. Proposed power and error behavior remain conditional on the disclosed hypothetical law.

REVIEW DISPOSITION / PASS WITHIN STATED SCOPE

[AI] The case supports the diagnostic corrections and proposed test within their stated assumptions. It does not establish historical misconduct prevalence, mature causal benefit, source authenticity or a universal operating guarantee.

Internal evidence, numerical, methodological, executive and actual-page review. The final verdict applies to the released document and its disclosed boundaries; it is not outside endorsement or a consulting-firm ranking.