

Integrated Portfolio & Funding Decisions

An auditable estimate is not yet an executable portfolio

An evidence-reconciliation case on an annual operating-plan portfolio and its supplementary ideas. It separates line-item sizing, joint benefit, dependencies, funded capacity and review authority without treating a submitted document as delivered value.

ANNUAL PORTFOLIOS & DEPENDENT INVESTMENTS

BLUF / BOTTOM LINE UP FRONT

Reconcile the portfolio. Fund a feasible sequence, not a sum of promises.

ANALYTICAL FINDING

An overlap haircut cannot establish that every layer is indispensable. Complementarity requires a joint response model. A conditional reservation can preserve a valuable option while still being an inferior purchase at the stated price.

CONTRIBUTION IN THE SOURCE RECORD

Provisional registry-level hoop for portfolio authorship, sizing and disclosure. Team execution, programme ownership and review authority remain separate.

EVIDENCE STATUS

Exact originals remain unrecovered. A related planning workbook does not authenticate filing, approval or mature programme benefit.

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

STRUCTURED ABSTRACT

Choose an executable portfolio before defending its headline

[AI] A per-project estimate can be auditable while the portfolio remains unreconciled, unfunded or dependent on an unaccepted enabling action. These are separate decisions.

Element	Decision-relevant conclusion
Context [HR]	A planning lead reportedly assembled an annual portfolio, estimate-basis blocks and supplementary ideas, then challenged the headline in a later self-audit. Team members ran submission work; other groups owned programmes and review gates.
Objective [AI]	Determine what the artifact supports: a reproducible proposal, an accepted investment or a delivered increment. Preserve useful sizing and disclosure without promoting either into approval or realized savings.
Approach [RC/AI]	Recalculate source totals and worked examples privately. Test project membership separately from value closure; distinguish overlap, dependence, adoption and correlation; retain conflicting versions and review statuses.
Findings [AI]	Deleting candidate rows can reconcile value without reconciling the claimed project count. A generic overlap adjustment cannot prove every layer indispensable. Cost avoidance and a full-year trajectory are not verified cash release.
Decision value [PD]	The portfolio sponsor approves the feasible action set; programme owners accept dependencies and capacity; Finance validates benefit and cost bases; the submission owner locks membership and status. Retain an authorized core while unresolved expansion stays conditional.
Implications [PD]	Use the proposed Joint-Portfolio Evidence Contract (JPEC). A synthetic review can substantially improve on indiscriminate commitment yet lose to retaining the core. The paid-information ceiling can rule out purchase before a large test.

[PD] Release requires a reconciled membership ledger, an approved dependency sequence, supported joint value and funded delivery capacity. Unsized proposals remain visible without becoming zero-value projects or funded commitments. A preparation deadline is not permission to omit the conditions that determine whether the package can execute.

[HR] historical record; [RC] recalculated; [AI] analytical inference; [PD] proposed design. Sources S1/S2 are derivative records; all historical numerical coordinates and identities remain private.

EXHIBIT 1 / MEMBERSHIP CONTRACT

A closing dollar bridge does not identify the submitted projects

[AI] A total is a property of a selected set. Finding numbers that close it does not prove which rows belonged to the approved or submitted version.

Independent illustration	Before	After removing three rows
Original project count	8	5
Candidate values removed	2, 3 and 4	9 units removed
Reported value bridge	Closes after removing 9	Does not establish a six-project set
Required evidence	Stable row identifiers	Versioned inclusion and disposition

[PD] The illustration is invented and independent of the source. It shows two simultaneous contracts: membership and value. A project can be split into sub-lines, transferred between lanes, held outside the ask or replaced. Those operations require a row-level mapping. Subtracting three values from a total cannot tell the reviewer which operation occurred.

[HR/RC] The source describes a headline, a larger matrix, alternative appendix totals and candidate rows proposed as the reconciliation. Its own count and value descriptions do not form a unique membership ledger. Later audit categories close a stated amount, but they do not authenticate the original intake version or reconstruct an absent row-disposition decision.

[AI] This finding does not establish that the candidate rows were wrongly funded or deliberately concealed. The correct conclusion is narrower: arithmetic closure alone does not identify the submitted set. Differences in programme, project, line item and supplemental option may explain counts, but only an explicit grain bridge can substantiate that explanation.

LOCK THE SET BEFORE THE TOTAL

[PD] The submission owner should preserve immutable row IDs, programme-to-line mappings, included/excluded status, version, approving authority and the exact total formula. Reconcile counts and values independently. Keep unresolved membership visible instead of selecting whichever subset matches the headline.

[PD] Independent membership example. [HR/RC] Source totals, candidate-row values and conflicting counts are retained only in the private arithmetic ledger.

EXHIBIT 2 / JOINT RESPONSE

An overlap adjustment cannot prove that every layer is essential

[AI] Redundancy, complementarity and statistical correlation have different meanings. One percentage adjustment cannot identify all three.

Independent pure-coverage construction	Implication
Three layers cover 60 unique outcomes together.	The union contains only 60 outcomes.
Removing any layer allegedly leaves at most 30.	Each layer must uniquely cover at least 30.
The three unique portions cannot overlap.	They would require at least 90 outcomes inside a union of 60.
Conclusion under the stated set model	The claims cannot all hold without another mechanism.

[AI] In a pure union of protected outcomes, the sum of leave-one-layer-out losses cannot exceed the full union. Complementarity can break that set representation: an enabling layer may let another work at all. That is a different response model, requiring observed dependencies and a credible joint comparison. It is not proof that the source design lacks complementarity; it is a test of whether its explanation supplies the mechanism its claim requires.

[HR/AI] The source combines layered designs, a gross contribution sum, a generic haircut and strong claims about removing layers. The proposed signal-dependency tables are useful hypotheses. Neither the sum nor the haircut establishes an incremental effect for the bundle, a causal loss from removing one layer, or a universal rule that a single programme cannot help.

PRICE THE ENABLED PACKAGE

[PD] Evaluate feasible bundles against the same continuation. Include enablers with no standalone benefit when they unlock supported value. Retain interactions and shared outcomes explicitly; do not deduct a common defect pool automatically, or assume every layer deserves its own additive credit.

[PD] Independent combinatorial counterexample, not a reconstructed historical reduction plan. Correlation affects uncertainty of a sum; it does not by itself subtract expected value or identify unique prevented outcomes.

EXHIBIT 3 / EVIDENCE AND TRANSPORT

A named precedent is a hypothesis about transfer, not a guarantee

[AI] An estimate-basis block is valuable because it exposes assumptions to challenge. It is not validated merely because each input has a label or a cited example.

Sizing link	Evidence needed before extrapolation
Original eligible population	Compatible numerator, denominator, channel, period and maturity.
Incremental response	Comparison with the actual continuation, including existing programmes.
Portability	Mechanism, eligible exposure, adoption, implementation fidelity and local constraints.
Valued outcome	Conversion to the specific avoidable cost or recognized benefit.
Executable delivery	Accepted owner, prerequisites, timing and funded scarce capacity.

[HR/RC] A worked line in the selected record contains a population, reduction fraction and unit value that do not reproduce the quoted result. A separate intermediate quantity implies a different response fraction. This is a concrete reconciliation failure, not a reason to choose the most favorable product or to label the lower number conservative. Each version must be traced to its original basis.

[AI] Applying a smaller effect than a precedent does not automatically make a transfer conservative. The new channel may lack the precedent's enforcement, participation, customer mix or exposure. Conversely, missing local validation does not prove the programme has no value. It defines what the next study must identify.

RECOVER THE CHAIN, NOT JUST THE CITATION

[PD] Ask whether the precedent had the same action, unit, opportunity and comparison. Verify the calculation independently, then evaluate transfer on an original eligible cohort with mature outcomes. Keep modeled response, actual adoption and accounting recognition in separate columns.

[HR/RC] Historical arithmetic and all source effect sizes remain private. [AI] Source-selected high-defect cohorts and reported associations do not establish causality, preventability or individual fault.

EXHIBIT 4 / CONDITIONAL SEQUENCE

Reserve an option only when its timing value exceeds its full cost

[PD] A dependent supplement can be attractive only after its enabling condition arrives. A conditional commitment can preserve that option without paying every build cost in advance.

Independent high-value example	Increment relative to retaining core
Prerequisite arrives on time with probability p.	Supplement gross value is 8 when it can operate.
Commit immediately; build costs 6.	8p minus 6 minus 2(1-p) disruption = 10p minus 8.
Reserve; monitoring costs 1 in every case.	Build only on timely readiness: 2p minus 1.
Retain the already authorized core.	Increment is zero.
Conditional reservation is best of these three.	When $0.5 < p < 0.875$, under these assumptions.

[PD] This is an invented decision fixture, not a field estimate. The reservation observes timely authorized readiness at execution; it does not observe the future benefit. Monitoring is paid even if no build occurs. If the prerequisite arrives late, the original deadline still applies. The assumed timing loss and build prices must be calibrated before any real commitment.

[AI] Reservation is never the best action with perfect state knowledge in this example: commit immediately when early, retain the core when late. Yet it can be best before uncertainty resolves. A ranking of static project entitlements would miss that option. Conversely, a reservation fee, low benefit or unreliable readiness can make the option inferior to retaining the core.

MAKE THE CONTINGENCY EXECUTABLE

[PD] Name the prerequisite owner, evidence required to release, last permissible start, reserved resources, cancellation cost and fallback. Permission to prepare a proposal is not permission to launch it. A gate without an accepted execution rule is another planning assumption.

[PD] The later benchmark broadens this example to uncertain value and readiness, fallible evidence and known authority blockers. No historical probability, cost or programme outcome calibrates it.

EXHIBIT 5 / ECONOMIC CATEGORIES

Keep cash, avoidance and future run-rate in different ledgers

[AI] A portfolio can reduce expected cost without releasing cash, and a mature annual run-rate can differ substantially from the value achievable during the planning year.

Reported quantity	Release condition
Modeled cost avoidance	Supported counterfactual event reduction and avoidable unit cost.
Recognized operating benefit	Compatible actuals, maturity, accounting treatment and validation.
Cash release	An executable reduction in paid expense or another explicit cash mechanism.
Capacity benefit	A released resource that can be redeployed or removed, with full transition cost.
Annualized future trajectory	Adoption and timing needed to reach that later operating state.

[HR/AI] The source labels the core portfolio as cost avoidance while also quoting broader savings and capacity claims. It carries planning-year amounts, eventual annualized trajectories and several supplementary ranges. These are not interchangeable amounts. A technology that is optional or incompletely adopted cannot inherit full-fleet value merely because a scaled scenario is arithmetically reproducible.

[AI] Supplement separation is a useful document control, but location in another file is not evidence that the opportunities are independent. Nor does parent ownership alone make all local work duplicate: a local deployment or missing enabling step may add value. Identify the incremental activity, shared outcomes, permissions and cost once across the whole portfolio.

DO NOT BANK A DISCLOSURE

[PD] Published absence of Finance validation limits recognition; it does not prove underlying economic value is zero. A candid caveat does not repair an incompatible population or omitted build cost. Preserve conditional ranges and unsized ideas while withholding unsupported cash or delivered-benefit claims.

[HR/AI] All historical financial quantities and relative coordinates remain private. The public economic model uses invented decision units and cannot be added to the source portfolio.

EXHIBIT 6 / CONTRIBUTION AND AUTHORITY

Credit the planning work without inheriting programme results

[AI] Authorship, team submission, review completion, programme approval and operational delivery require different evidence. Their boundaries are part of the case, not a footnote.

Contribution or status	Bounded interpretation
Portfolio and estimate-basis authorship	Provisional registry-level hoop for the described planning work and disclosure.
Team collection and intake work	Attribute to the team members recorded as running those mechanics.
Programme ownership	Retain the operating and partner owners; a portfolio author does not own every included lever.
Reported individual approvals	Preserve as reported claims requiring their own decision records.
Open portfolio review	Does not prove that every separate programme lacked approval; does not certify the portfolio either.

[HR/AI] The selected master and narrative describe a versioned document family and a later self-audit. They also report individual programme confirmations while acknowledging absent decision records and an open higher review. These are different claim types. Resolve them by scope and authority instead of replacing them with either blanket approval or blanket rejection.

[AI] No located owner field is not proof that no owner existed elsewhere. No recorded gate outcome is not proof of nonexecution. Both gaps constrain what this case can authenticate. Generated document metadata, a byline reported by a derivative narrative, or membership on a review board does not independently establish filing, presentation or causal impact.

A SELF-AUDIT IS EVIDENCE OF SCRUTINY

[PD] Recover the exact submitted version, row dispositions, Finance response and review decisions before assigning delivery credit. Preserve candid corrections as bounded analytical work. Internal agent-assisted review of this case tests reproducibility and claims; it is not external peer review or endorsement of the original portfolio.

[HR/AI] Source artifact recovery and authorship grades are bounded by the private evidence audit. No historical implementation, accepted final portfolio or mature attributable savings is established here.

EXHIBIT 7 / JOINT-PORTFOLIO CONTRACT

Compare the paid review with retaining the authorized core

[PD] The proposed Joint-Portfolio Evidence Contract makes a portfolio decision reproducible without treating a high headline or a completed form as evidence of delivery.

JPEC obligation	Decision record
Reconcile membership and basis	Stable IDs, value type, period, source version and approved inclusion.
Model the joint package	Continuation, incremental outcomes, overlap, interactions and indispensable enablers.
Constrain the feasible actions	Authority, shared capacity, deadlines, conditional release and fallback.
Price every response	Build, unused reservation, delay, disruption, verification and adverse outcomes.
Choose the evidence investment	Strong fixed and same-evidence comparators; information ceiling; test precision at break-even.

[PD] In the constructed benchmark, a paid review sharply reduces loss relative to immediate commitment. Retaining the core nevertheless has lower total loss and zero negative-increment risk. The extra benefit available from perfect information is smaller than the larger review fees. More evidence can improve decisions while still being the wrong purchase.

[PD] All original packets remain, including failed authority checks and unknown signals. Review costs are paid on those cases. The hidden reference contains constructed alternative portfolio values, not facts that a future auditor could simply observe. The shadow exercise changes advice only; a separately authorized operating trial would require independent mature customer outcomes and full resource measurement.

THE NEXT BOUNDED ACTION

[PD] Reconcile one actual bundle and its dependency owner before commissioning broad review. Calibrate the option fee, joint benefit and readiness likelihood against a strong maintain-core alternative. If the information ceiling is below the fee, stop the purchase rather than recruit a larger test to make a weak comparison look decisive.

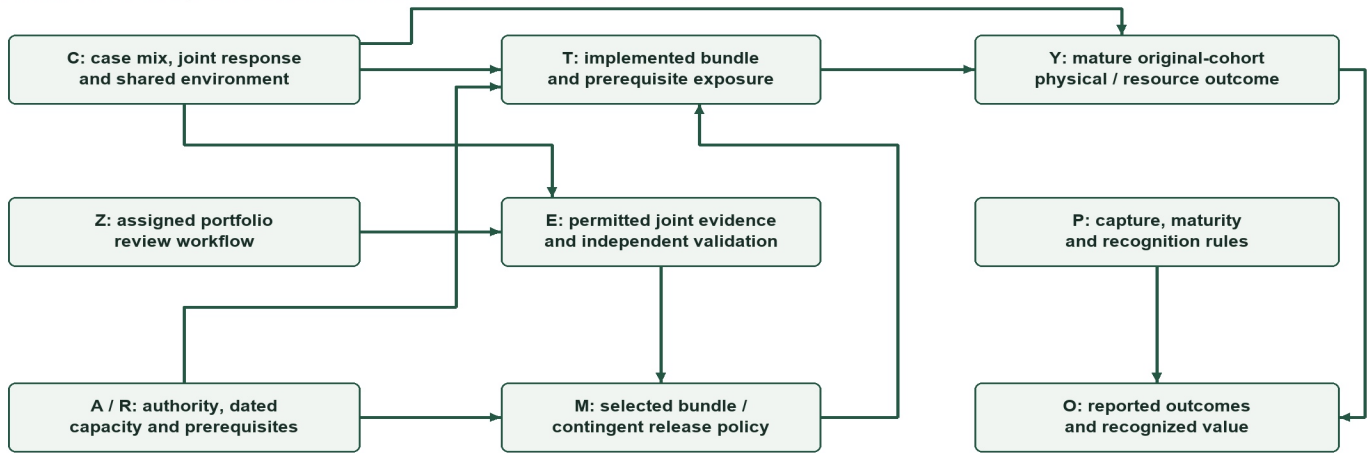
[PD] No source-calibrated probabilities, achieved field power, new permission, adopted policy or operating savings are implied by the proposed benchmark.

TECHNICAL ANALYSIS

Define the joint portfolio before valuing its total

[PD] The Joint-Portfolio Evidence Contract (JPEC) binds selected membership, continuation, incremental joint benefit, executable dependencies and authorized release.

JPEC: EVIDENCE, FEASIBLE RELEASE AND MATURE OUTCOMES



Proposed paths only. Shadow assignment Z tests decisions; separate authorized operating evidence tests T to Y.

[PD] Z assigns the review workflow; E is permitted evidence and M the selected portfolio or contingent release rule. Authority A and dated resources R constrain implementation T. T can change mature physical/resource outcome Y; capture and recognition P change observed O. Context C influences evidence, delivery and outcomes. These proposed paths distinguish a shadow decision test from a later operating effect study. Review does not confer authority or directly prevent a customer failure.

[HR/AI] Two long registry rows report a portfolio preparation and submission, competing membership totals, estimate versions and unresolved validation. Repetition shares lineage. A monetary subtraction can close while the corresponding initiative count does not; without the original identifier-level matrix, neither the intended subset nor its impossibility is established. A line formula also requires compatible population, reduction, intermediate units and unit value. Disagreement does not authorize selecting a convenient correction.

[AI] Distinguish nonduplicated additive benefits, duplicate outcome coverage, complementary response and common delivery uncertainty. They need different evidence. Confidence buckets are not calibrated probabilities, and a uniform haircut does not estimate all four. Annualized modeled cost avoidance, first-year effect, Finance recognition and released cash are separate quantities. Hold unresolved value as unknown.

Basis: proposed DAG [PD] and bounded registry interpretation [HR/AI]. Markowitz (1952), Milgrom/Roberts (1995), Verma/Sinha (2002).

TECHNICAL ANALYSIS

A collapse claim needs more than an overlap haircut

[AI] Independent mathematical construction. I is the full selected programme set; $f(S)$ counts unique outcomes in the union of coverage sets E_i for programmes in S .

[AI] Removing programme i loses $d_i = f(I) - f(I \text{ without } i)$: outcomes covered only by i . These unique portions are disjoint, so the sum of all d_i cannot exceed $f(I)$. If three layers cover 60 outcomes but removing any layer leaves at most 30, the required unique losses total at least 90. That is impossible under pure coverage. The proof does not exclude complementary mechanisms; it identifies the additional claim that needs testing.

Hypothetical response	One layer	Any two	All three
Additive separate effects	20	40	60
Threshold interaction	20	20	60

[AI] Both functions are monotone and agree on standalone values and the full total, but disagree on removal effects. The threshold function mixes pair substitution with a strong third-layer interaction; it is not globally supermodular. Layer names cannot identify the response. Nemhauser and colleagues formalize diminishing returns; Milgrom/Roberts treats complementary choices under distinct assumptions. Likewise, an illustrative gross 60 with a 20% relative haircut yields 48, below an exact goal of 50.

Two additive components, each 0 or 40	Mean total	P(total at least 60)
Independent, each high with probability 1/2	40	1/4
Both high or both low together	40	1/2
Exactly one high	40	0

[AI] Equal marginal expectations do not fix target attainment. Correlation changes uncertainty here, while expected total stays 40 because components are nonduplicated and additive. A duplicate-benefit correction would change the response function, not merely its covariance. None of these numbers estimates the historical portfolio.

Basis: exact source-independent constructions [AI], enumerated privately. Markowitz (1952), Nemhauser et al. (1978), Milgrom/Roberts (1995).

TECHNICAL ANALYSIS

Verify the selected combination and its measurement

[AI] Independent budget example: eight scarce slots are available. Benefits below are gross units; slots are a separate capacity constraint.

Option	Slots	Standalone benefit
A	5	11
B	4	8
C	4	8

[AI] A has the highest standalone benefit and benefit per slot. Taking it first leaves no feasible addition and yields 11. B+C yields 16 when their effects are separate; if their shared outcomes reduce joint benefit by six, B+C yields 10 and A becomes best. The optimal combination changes with the joint response. An enabler may also have little standalone value while being indispensable to another action. Money, skill-hours, prerequisite dates and authority define feasibility together.

[HR/AI] Flat aggregate headcount is not dated available capacity. Prior pilot reductions on another population do not identify transferred effects, and a smaller borrowed percentage need not be conservative. Disclosed validation paths are not completed validation. A later risk-bucket partition reconciles assignment totals but does not prove duplication or independence of risks. Preserve line-specific evidence and counterfactuals.

[PD] Freeze unique initiative and outcome identities; baseline continuation; exposure, maturity and price basis; gross versus incremental value; shared resources; prerequisite and acceptance records. Sample underlying records across proposed, excluded, missing and revised lines. Duplicate coders blinded to assigned review and later outcomes assess linkage and scope; report weighted confusion, prevalence, raw agreement and cluster-bootstrap kappa, then independent adjudication. Four hundred independent binary checks give worst-case agreement precision near plus/minus 4.9 points, not kappa power or clustered precision.

[PD] Use common original outcome cohorts to estimate joint effects and avoid counting a recovered item twice. Preserve legitimate multiple resource lines rather than applying blanket deduplication. Independently recorded denominators and unit prices must validate a formula; algebraic recycling cannot do so. Reconcile quantity, cost avoidance, ongoing maintenance, customer harm and any actual cash release separately.

Basis: new capacity/overlap construction [AI]; proposed measurement [PD]. Smith/Winkler (2006) cautions about noisy selection; Verma/Sinha (2002) distinguishes resource and technological dependencies.

TECHNICAL ANALYSIS

Test the decision rule, then the operating combination

[PD] Two studies answer different questions: whether priced evidence improves a feasible decision, and whether the chosen operational combination changes mature outcomes.

[PD] For the shadow test, freeze original packets, core continuation, costs, authority and common evidence. Randomize independent committee domains to usual or JPEC review; retain every blocked and unresolved packet. Lock recommendations at 72 hours for the following 90-day execution window. Reveal the benchmark reference 30 days after that window. A costed reservation may observe authorized prerequisite arrival within the window; it cannot observe unknown benefit or extend the deadline. Other packets' signals are unavailable at lock; shared review conditions still create dependence.

[PD] Primary estimands are mean feasible decision loss and unconditional negative action-net recommendations per original packet. Action risk excludes review fees; economic loss charges them, together with all option and failed-work costs. The synthetic reference defines counterfactual values; a later record does not reveal every unchosen action. Compare strong fixed core, contingent reservation, provisional, same-information optimized and full-review policies. Lower risk than an aggressive comparator is insufficient when a feasible core has zero incremental action downside.

[PD] A separate authorized operating experiment estimates $E[Y(\text{core}) - Y(\text{bundle})]$ per original eligible unit, with Y measuring original-promise failure or full resource burden. A factorial or staged design can estimate joint interaction only where all combinations are safe and authorized. Cluster where prerequisites and scarce staff create interference. Do not condition ITT on implementation success, Finance recognition or matured favorable outcomes.

[PD] Prespecify baseline readiness, skill capacity, overlap evidence, source vintage and customer mix as moderators. Noisy maximization creates selection bias; reserve held-out evaluation. Under an assumed linear conditional-mean model, selected baseline x has expected untreated follow-up $m + \rho(x - m)$, where m is the untreated population mean and ρ the persistence coefficient. Neither is estimated here. Later observational adoption needs pretrend equivalence and sensitivity, not a nonsignificant trend test alone.

[PD] Calibrate cluster covariance, reference error, transport and recruitment before powering the trial. Compare 80% MDE with per-packet break-even cost, and inspect exact tractable finite tails where available. A high assumed full-effect power does not imply power at break-even or value against the best feasible comparator.

Basis: prospective protocol [PD]. Cohen (1960), Barnett et al. (2005), Hudgens/Halloran (2008), Callaway/Sant'Anna (2021), Strong et al. (2015). No field launch is authorized here.

TECHNICAL ANALYSIS

Make the joint claim falsifiable

[PD] JPEC tests membership, response and execution separately. Failure to clear a funding threshold can reflect uncertainty rather than proof that benefit is absent.

Proposition	Rejection or hold rule
P1: the claimed removal losses fit pure coverage	Reject when summed removal losses exceed full coverage; otherwise hold pending the actual outcome mapping.
P2: ranking individual values finds the best feasible bundle	Reject with the budget construction; solve the declared joint objective under dated resource and authority constraints.
P3: the stated benefit is incremental and deliverable	Hold without aligned continuation, unique outcomes, feasible capacity and independent mature outcome evidence.
P4: buying joint evidence improves the decision	Hold unless net value and an accepted absolute-risk criterion clear strong common-evidence alternatives and transport validation.

[AI] Smith/Winkler motivates selection-aware validation; Markowitz separates covariance from mean value; complementary and submodular theories specify competing response assumptions. Ittner/Larcker tests the action-outcome chain. Campbell/Goodhart warns that targets can alter inclusion and credit labels. Deming separates scenario revisions from process signals; Tucker/Edmondson treats recurring reconciliation work as a system issue. These methods do not supply the historical parameters.

[HR/RC] The frozen inventory has 51 XmR diagnostics: two weak contextual pairs, 18 version comparisons, 19 design audits and 12 profiles. All fitted X/MR points lie inside tentative bands, using 2.66 and 3.267. One source pair reports an operating metric with unresolved scope; the other is headcount, not productive capacity. No stable phase or eligible Laney panel exists; Laney was not computed. No monthly or programme panel was invented.

Limitations and contribution

[HR/AI] Two registry rows support a provisional hoop for preparation, sizing and disclosure. Exact OP1 originals remain unrecovered; a related planning workbook was read but cannot authenticate the selected submission. Missing core-properties XML prevents dating it from reader defaults. Bounded search failure is not nonexistence; byline and metadata do not establish exclusive authorship. Funded execution, joint physical gains and Finance realization remain unestablished. Membership, interactions, dated skills, accepted dependencies, spillovers, evidence accuracy and counterfactual reference need validation. Unknown historical value stays unknown.

Basis: agent-assisted methods assessment. [HR] historical record; [RC] recalculation; [AI] analytical inference; [PD] proposed design. Public numbers are independent constructions; historical coordinates remain private.

PROPOSED PORTFOLIO TEST / 1 OF 4

Test a conditional supplement against retaining the core

[PD] This synthetic shadow exercise changes advice, not funding or customer outcomes. The constructed core is already authorized and has net value 3; all increments are relative to it.

Hidden packet state	Prior	Incremental gross V
Early prerequisite / high value	0.30	8
Early / low value	0.20	0
Late / high value	0.20	8, unavailable in window
Late / low value	0.30	0

[PD] Immediate commitment yields $E \cdot V - 6 - 2 \cdot (1 - E)$. Reservation yields $E \cdot (V - 6) - 1$: monitoring is paid regardless, build is paid only after observed authorized readiness. $E=1$ means timely prerequisite. V already excludes overlap with core and remains hidden. Provisional forgoes the core value 3 for this cycle.

Fallible own-packet evidence	Correct: clear / fragile	Unknown: clear / fragile
Base	0.85 / 0.60	0.10 / 0.25
Stress	0.65 / 0.45	0.20 / 0.40
Corroborated	0.95 / 0.85	0.05 / 0.15

[PD] Three packets share hidden grade, clear with probability 0.70; domains are independent. States are independent per packet. Correctness is conditional on a known signal; errors split equally over other states. Audit reserves only on early/high signal, otherwise retains core. Known 10% authority blockers permit core/provisional only; all fees remain paid.

LOCK BOTH THE REFERENCE AND THE ACTION RIGHTS

[PD] Freeze intake; lock advice at 72 hours; evaluate the following 90-day window with hidden constructed reference 30 days later. Regret compares only feasible actions. Negative action-net risk is measured before review fees; total priced loss includes them. No field auditor can observe every alternative outcome.

[PD] Entirely invented. Review sees no hidden state or other packets' signals. Reservation is a contingent policy with paid later readiness observation, not a costless static action. The original deadline and all assigned packets remain fixed.

Precision against an expensive default does not settle purchase

[PD] Loss is regret versus the best feasible state-specific net action. Separate clearance gates require loss reduction above the paid review fee K and lower negative action-net risk.

Domains / arm	80% MDE	Review K	Zero-test power at BE	Full-law joint floor
Small / 16	2.082	0.25	5.1%	>99.9%
Base / 128	0.745	0.25	15.3%	>99.9%
Stress / 128	0.744	0.25	15.4%	>99.9%
Corroborated / 256	0.527	0.70	96.1%	>99.9%

[PD] Audit is used with probability lambda per original packet, usual immediate commitment otherwise; K is paid in full. Exact domain moments retain shared-grade dependence. Fixed normal radii use mixture-path variance ceilings and nominal directional error 2.5%; these are conditional planning screens, not achieved field power.

[PD] Base 128 has MDE 0.745 above break-even 0.25 and only 15.3% positive detection there. Its large full-law improvement exceeds 99.9% joint planning floor. Corroborated 256 has MDE 0.527 below its higher fee 0.70 and 96.1% break-even detection. Raising information cost changes the question; it does not make purchase worthwhile.

[PD] Exact-law base/corroborated loss-null tails are 2.36715%/2.41712%; risk-null tails 2.37833%/2.37319%. Economic-boundary false clearances are 2.44084%/2.50379%. The slight last excess remains. Eighteen selected marginal tails do not establish uniform coverage or exact joint power.

DO NOT RECRUIT A LARGE TEST TO AVOID A STRONG COMPARATOR

[PD] All four designs lose in expected priced loss to retaining the core; review also adds action-net risk. The largest screen needs 1,536 packets across 512 independent domains, with feasibility unestablished. A core-comparator decision requires its own approved risk criterion; more sample cannot reverse negative expected value.

[PD] Four direct allocations, no minimum search or Monte Carlo. A zero joint lower bound is uninformative, not zero power. Values above 99.9% are not certainty. Conditional screens do not authorize operating expansion.

PROPOSED PORTFOLIO TEST / 3 OF 4

Charge unused options and preserve the cheaper alternative

[PD] Table entries are total regret plus review fee / negative action-net risk before that fee. Hypothetical resource prices are not dollars, cash release or customer-harm rates.

Total loss / action-net risk	Base	Stress	Corroborated
Immediate / usual	4.6800 / 63.00%	4.6800 / 63.00%	4.6800 / 63.00%
Retain core	0.5400 / 0.00%	0.5400 / 0.00%	0.5400 / 0.00%
Always reserve	1.9800 / 63.00%	1.9800 / 63.00%	1.9800 / 63.00%
Provisional only	3.5400 / 100.00%	3.5400 / 100.00%	3.5400 / 100.00%
Proposed audit	0.7141 / 3.87%	0.8380 / 6.19%	1.0517 / 1.50%
Best same-packet rule	0.7141 / 3.87%	0.7900 / 0.00%	0.8934 / 1.50%
Fuller review	0.9520 / 0.41%	0.9520 / 0.41%	0.9520 / 0.41%

[PD] K is 0.25 base/stress or 0.70 corroborated, including blocked and unknown packets. Fuller review costs 0.90 with correctness 0.98 and unknown 0.02. All 1,024 own-signal mappings are checked. Other packets' signals are unavailable; shared-grade pooling requires another comparator.

[PD] Perfect state information removes core regret 0.54, setting a 0.54 information ceiling before fees. Corroborated/full fees exceed it. Base audit costs 0.71413 versus core 0.54 and adds 3.8745% action-net risk. At build cost 4, best base review costs 0.81619 versus core 1.08; at cost 8, core regret is zero. Prices change the decision.

[PD] Versus usual, net = $a \cdot h \cdot 5.14737 - 0.93150 - 0.25$. Only favorable state-by-category changes are discounted; added harms and actual work remain full cost. Here a is realization and h is the share not already captured elsewhere, beyond the within-packet overlap already removed from V.

Net units / packet	h = 0.50	h = 0.75	h = 1.00
a = 0.25	-0.5381	-0.2164	0.1053
a = 0.50	0.1053	0.7488	1.3922
a = 1.00	1.3922	2.6790	3.9659

[PD] Common intake and research-reference costs are separately budgeted. Action build, disruption, monitoring and core deferral already enter payoff and are not charged again. Known-blocker regret uses its restricted feasible set. Avoided work is not automatically cash.

Buy research for a separate, explicit portfolio question

[PD] This separate experiment chooses joint-benefit validation, dependency-path validation or deferral. Its information value is not added to the shadow-policy gain or any operating benefit.

[PD] State probabilities are 0.30 joint value matters, 0.40 dependency readiness matters, 0.30 neither. Action payoffs across those states are (7,-3,-2), (-1,5,-2) and (0,0,0), including downstream costs. Correct-signal probability is q; each error splits equally between the other states.

Evidence scenario	Correct signal	EVSI	Cost	Net EVSI
Low	50.0%	0.40000	0.60000	-0.20000
Base	75.0%	1.63750	1.20000	0.43750
High	90.0%	2.45500	2.40000	0.05500

[PD] All 27 signal-to-action policies are enumerated per scenario. No-information value is 1.10 and EVPI 3.00. The low-information experiment loses after its fee; the base has more net value than the most accurate scenario. These are hypothetical likelihood-and-price alternatives, not confidence intervals.

[PD] Main-price regret has support 0..8. Unknown reference on epsilon of original packets in each arm permits contrast errors up to 16*epsilon loss and 2*epsilon action-net risk, holding verified costs fixed. Different prices, feasible sets or reference support require a new bound. A constructed counterfactual reference cannot validate real programme effects.

CALIBRATE THE DECISION BEFORE SCALING THE EVIDENCE

[PD] Recover an original bundle, accepted prerequisite and compatible continuation. Agree costs and action rights independently of the test results. Then assess a bounded shadow policy against core retention. Any subsequent field trial needs approved interventions, original eligible customer cohorts, mature outcomes and interference-aware resource measurement.

[PD] Exact finite scenario calculations and conditional normal planning. No source-derived probabilities, realized savings, granted authority or achieved field power. Reference and transport calibration remain separate from computational reproducibility.

REPRODUCIBILITY / READER PROTOCOL

Reproduce the selected bundle and its release rule

[AI] The Joint-Portfolio Evidence Contract distinguishes a coherent estimate from a feasible combination and an authorized commitment.

Reproduction layer	Required record and falsification test
Membership and scope	Freeze initiative identifiers, version, line count, inclusions, exclusions and benefit window. Reconcile monetary and membership totals independently. A balancing subtraction is not a selection record.
Incremental joint benefit	Define the continuation alternative and common mature outcome. Separate duplicate coverage, complementary effects and shared uncertainty; recover event-level or causal evidence for each.
Resources and dependencies	Name prerequisite owners, readiness dates, shared capacity and incremental costs. Include any required enabler even when it has no standalone benefit. Test the joint feasible set.
Decision and option	Preserve the information visible at each lock, the authorized alternatives and any costed reservation. A conditional release must have an observable, enforceable trigger.
Mature effect	Link the accepted decision to funded and implemented actions. Measure original-cohort outcomes and full incremental resources. A document, intake or completed review does not establish delivery.

[PD] Replay each source version without averaging away its population or status. Reproduce the line formula, the joint outcome model and the constrained selection as separate layers. Stress shared prerequisites, marginal benefit assumptions and recruitment. Compare purchasing more evidence with a strong fixed decision and the explicit option to defer.

[AI] The private archive contains selected registry records, bounded recovery results, calculation code, conflict analysis and internal reviews. It cannot authenticate missing originals or supply an unrecorded approval. Public quantities are independent constructions, not historical metrics transformed onto a recoverable scale.

Protected registry and recovery record; proposed JPEC reproduction protocol. Historical identities, raw values and source paths remain private.

REFERENCES / 1

Primary sources and their role in this case

[AI] These sources inform joint valuation, dependency and evaluation. They do not certify the historical estimates or the selected portfolio.

NIST/SEMATECH. Individuals Control Charts, e-Handbook section 6.3.2.2. Use comparable ordered outcomes before estimating process limits. Portfolio versions, alternative totals and target trajectories are not repeated observations of a stable operating process.

Laney, D. B. (2002). Improved Control Charts for Attributes. *Quality Engineering*, 14(4), 531–537. Require authentic defect counts, exposures and rational subgroups before adjusted rate charts. A portfolio matrix does not supply the missing subgroup panel.

Cohen, J. (1960). A Coefficient of Agreement for Nominal Scales. *Educational and Psychological Measurement*, 20, 37–46. Code initiative identity, shared outcome pool, prerequisite, commitment stage and validation status independently. Agreement is distinct from correctness and causal evidence.

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. Worst-unit screening can select temporary extremes. Freeze the selected population and use concurrent comparisons before attributing convergence to a chosen bundle.

Callaway, B., & Sant’Anna, P. H. C. (2021). Difference-in-Differences with Multiple Time Periods. *Journal of Econometrics*, 225, 200–230. For phased implementation, separate review exposure from operating treatment and estimate group-time contrasts. Test anticipation, changing eligibility and shared-capacity interference.

Collier, D. (2011). Understanding Process Tracing. *PS: Political Science & Politics*, 44, 823–830. Attribute drafting, sizing and disclosure separately from submission, funding, gate ownership, implementation and mature results.

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. Price information by the feasible decision it can change. Include the strongest fixed alternative, a conditional option and full review costs on unresolved cases.

Primary author, journal, institutional and official methods sources. Read scope and methodological applications are recorded privately.

REFERENCES / 2

Primary sources and their role in this case

[AI] These sources inform joint valuation, dependency and evaluation. They do not certify the historical estimates or the selected portfolio.

The W. Edwards Deming Institute. The Funnel Experiment. Reacting to every headline revision can create avoidable churn. Establish a stable measurement and decision rule before reallocating resources.

Campbell, D. T. (1976). Assessing the Impact of Planned Social Change. A consequential portfolio score may change reporting or inclusion. Preserve original populations and independently observe mature outcomes outside the scored measure.

Goodhart, C. A. E. (1992). The Objectives for, and Conduct of, Monetary Policy in the 1990s. Reserve Bank of Australia Annual Conference, section 1(b)(i). A target can weaken the original relationship between a measure and the outcome it represents. Monitor scope changes, local incentives and substituted metrics.

Ittner, C. D., & Larcker, D. F. (2003). Coming Up Short on Nonfinancial Performance Measurement. *Harvard Business Review*, 81(11), 88–95, 139. Test the causal chain from a funded, staffed bundle to mature outcomes and avoidable resources. A reconciled financial table does not validate that chain.

Tucker, A. L., & Edmondson, A. C. (2003). Why Hospitals Don't Learn from Failures: Organizational and Psychological Dynamics That Inhibit System Change. *California Management Review*, 45(2), 55–72. Repeated reconciliation workarounds can hide structural gaps in data and ownership. Assign durable responsibility for joint benefit, dependencies and release conditions.

OECD / European Commission JRC (2008). Handbook on Constructing Composite Indicators: Methodology and User Guide. Weights and aggregation rules embody choices. Confidence labels do not supply joint probabilities, and a composite score does not establish feasible portfolio value.

Markowitz, H. (1952). Portfolio Selection. *The Journal of Finance*, 7(1), 77-91. doi:10.1111/j.1540-6261.1952.tb01525.x. Separate additive expected benefits from covariance and target-attainment risk; covariance does not identify duplicate outcomes.

Primary author, journal, institutional and official methods sources. Read scope and methodological applications are recorded privately.

REFERENCES / 3

Primary sources and their role in this case

[AI] These sources inform joint valuation, dependency and evaluation. They do not certify the historical estimates or the selected portfolio.

Milgrom, P., and Roberts, J. (1995). Complementarities and fit: Strategy, structure, and organizational change in manufacturing. *Journal of Accounting and Economics*, 19(2-3), 179-208. doi:10.1016/0165-4101(94)00382-F. Make complementary responses and prerequisite constraints explicit before claiming that removal of one layer collapses the whole result.

Nemhauser, G. L., Wolsey, L. A., and Fisher, M. L. (1978). An analysis of approximations for maximizing submodular set functions-I. *Mathematical Programming*, 14, 265-294. doi:10.1007/BF01588971. Distinguish diminishing-return coverage from complementary effects; greedy guarantees depend on the stated objective and constraints.

Smith, J. E., and Winkler, R. L. (2006). The Optimizer's Curse: Skepticism and Postdecision Surprise in Decision Analysis. *Management Science*, 52(3), 311-322. doi:10.1287/mnsc.1050.0451. Evaluate selection using held-out joint outcomes; selecting the highest noisy estimate can bias apparent portfolio value.

Verma, D., and Sinha, K. K. (2002). Toward a theory of project interdependencies in high tech R&D environments. *Journal of Operations Management*, 20(5), 451-468. doi:10.1016/S0272-6963(02)00024-4. Separate shared-resource interference from technological dependencies and validate both on the selected portfolio.

U.S. Government Accountability Office (2020). *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*. GAO-20-195G, chapters 11–12. Application: test assumptions and ranking sensitivity; represent shared risk jointly, document the estimate and update with aligned actuals. Applied as a cost-estimation analogy, not a validation of historical benefits or a government-compliance claim.

Hudgens, M. G., & Halloran, M. E. (2008). Toward Causal Inference with Interference. *Journal of the American Statistical Association*, 103, 832-842. Original manuscript. Assign evaluation domains that contain common prerequisites, scarce staff and outcome spillovers.

Primary author, journal, institutional and official methods sources. Read scope and methodological applications are recorded privately.

FINAL REFEREE REPORT / INTERNAL REVIEW

Fund an executable combination with a testable benefit

[AI] Author-led, agent-assisted review; not external peer review. The case tests what a portfolio total can establish and what requires a joint mechanism.

Major issue	Resolution and decision boundary
A balancing total treated as a portfolio	Reconcile initiative membership separately from money. Preserve version and inclusion forks; do not infer the unobserved selection that would make the headline work.
A transparent formula treated as verified	Recalculate population, reduction and unit value independently. Identify incompatible inputs without choosing an unsupported correction. Validation paths are not validation outcomes.
Overlap treated as complementarity	A pure coverage model cannot support arbitrary collapse under every layer removal. State the interaction or indispensable prerequisite and test it with joint evidence.
Confidence treated as probability	Separate evidence quality from calibrated likelihood. Shared risk changes the distribution; duplicate outcomes change the benefit function. One haircut does not estimate both.
Authorship treated as delivery	Bound preparation and disclosure to the available record. Submission, acceptance, staffing, release and realized outcomes each require separate evidence.
Review accuracy treated as a purchase case	Compare priced review with strong feasible alternatives and the information-value ceiling. Include option costs, false release, lost opportunity and unresolved packets.

Partner critique: can a COO act on page one?

[AI] Yes. Reconcile the selected membership, specify joint incremental value and reserve scarce capacity only against named dependencies. Release a commitment through an authorized trigger. Preserve a useful conditional option when its cost is justified; do not buy precision that cannot change the best feasible decision.

Remaining limits and minor issues

[AI] The technical section consolidates source authentication, status, measurement, transport, joint effects and capacity limits. The public constructions do not estimate historical complementarity or establish a realized financial result. Closed internal publication issues do not close those empirical questions.

REVIEW DISPOSITION / PASS WITHIN STATED SCOPE

[AI] Publish the bounded portfolio analysis, constructive counterexamples and proposed evaluation. A reproducible decision benchmark supports further testing; it does not authorize funding or establish customer impact.

Final source, independent numerical, methods, partner and actual-page reviews are required. Internal publication review is separate from external assurance.