

OPERATING CASE / OC02

Industrial Integration

Make the TSA exit executable across Finance, IT and HR

A Luna Sol operating design for an acquisition transition: preserve day-one continuity, sequence shared specialists, validate replacement services and make contract-specific exit decisions.

ACQUISITION INTEGRATION / ILLUSTRATIVE OPERATING SCENARIO

BLUF / BOTTOM LINE UP FRONT

Sequence the exit.
Prove the replacement service.

MODEL-DERIVED DECISION

Without acceleration, the shortest-average-exit plan costs more. The modeled service-specific optimum costs \$24,000; optimized bundled exit costs \$33,000. Rights determine which plan is feasible.

PROPOSED ENGAGEMENT RESPONSIBILITY

Proposed Luna Sol role: integration coordination, dependency planning, evidence gates and functional handoff.

EVIDENCE STATUS

Invented scenario and USD figures. Reproducible analysis; no completed acquisition or realized savings claimed.

IS: illustrative scenario • MR: model result • PD: proposed design • RB: primary research. Historical integration and credentials remain unestablished.

Make the remaining transition an executable decision

Context [IS]. An industrial acquisition needs a coordinated Finance, IT and HR stand-up while the seller continues selected services. The original opportunity describes a six-month transition-services period. This invented model begins later, with six weeks remaining and a maximum two-week extension already approved. It demonstrates a planning decision rather than reconstructing a real acquisition.

Objective [PD]. Select the next executable sequence, the acceleration worth buying and the evidence that permits each exit. Preserve business continuity, the original service obligations and specialist approval. The integration manager coordinates the work; destination owners accept operation; the authorized contract owner confirms notice, extension and cessation rights.

Approach [MR/PD]. Enumerate six migration/test tasks across one shared team, three optional accelerations and two contractual exit structures. Charge acceleration and extension on the same horizon. Then connect the chosen dates to day-one controls, functional transaction acceptance, contingency, workforce handoff and a proportionate evaluation. The schedule assumes successful tests; the operating design specifies how a live program would have to earn that status.

Findings [MR]. Without acceleration, completing the shorter HR stream before Finance minimizes the unweighted sum of acceptance dates but costs \$60,000 in extension. Finance first costs \$24,000. Both finish in week eight. A dedicated preparation acceleration advances a local readiness date but cannot advance any feasible service exit. If every service must cease together, the best plan instead buys two migration accelerations for \$33,000.

Decision value [PD]. Ask the sponsor to confirm the exit structure and permitted extension before approving the resource sequence. Under the declared service-specific rights and prices, use the \$24,000 plan. With no extension, the least-cost feasible fallback is \$33,000. The optimized value difference between the two exit structures is \$9,000, not the \$100,000 difference obtained by leaving the bundled plan unoptimized.

Implications [PD]. An integration leader must connect commercial obligations, dependency logic and service evidence. Speeding a task, accumulating green milestones or sending notice is not equivalent to transferring a supported business service. Validate the inputs, exercise the acceptance controls and retain the strongest feasible alternative before committing.

IS = illustrative scenario; MR = recalculated model result; PD = proposed operating design; RB = primary research. All dollars, task durations and modeled rights are invented. No completed engagement, appointment, credential or realized saving is asserted.

Exhibit 1 | Preserve the business before removing support

[PD] Begin the integration with the transactions the acquired business must still perform: accept an order, receive material, manufacture and ship, invoice, pay a supplier, pay an employee and close its books. A corporate function can appear staffed while one of these paths still depends on the seller. Trace each path from its triggering record to its accountable business owner and final control evidence. Retain the seller dependency until an authorized alternative has passed its acceptance gate.

Business path	Immediate continuity evidence	Accountable destination owner
Order to cash	Open orders, prices, shipment/invoice interfaces and customer remittance route reconcile	Commercial lead and Finance controller
Purchase to pay	Supplier master, purchase commitments, receipt records and payment authority remain usable	Procurement lead and controller
Employee to pay	Employee population, payroll inputs, approved changes and payment reconciliation are retained	HR lead with payroll and Treasury
Access to production	Named identities, necessary applications, support contacts and recovery route are available	IT service owner with plant operations

[PD] The first delivery sprint produces an original service inventory, a contract-obligation register and a dependency graph. Give every service a stable identifier, entity and location scope, provider, destination owner, operating calendar, information owner and acceptance packet. Record whether the TSA supports a system, a person, a transaction or several of these. “Finance ready” is too broad to be a testable milestone.

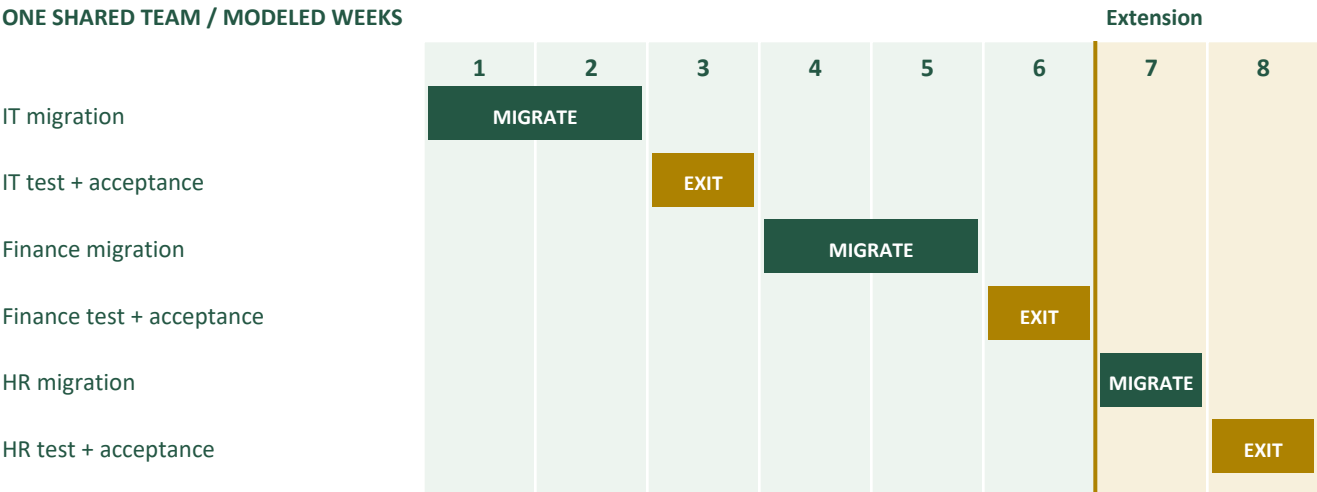
[PD] Establish an exception bridge for the actual operating hours. A missed bank file, missing production access or inconsistent employee population routes to the functional owner, with a named incident commander for cross-functional disruption. Preserve the original transaction and its intended deadline. A manual workaround needs authorization, a reconciliation owner and an expiry; it must not become invisible permanent support.

[PD] The integration manager maintains this common evidence view and escalates blocked decisions. Functional owners remain responsible for acceptance, and delegated specialists retain their authority over accounting, security, employment and contract interpretation. The sponsor approves the priority and resources after seeing the continuity consequences. A polished reporting cadence is useful only if it resolves these decisions.

Source basis: proposed integration operating design. The finite schedule models selected migration/test work, not the complete day-one business inventory.

Exhibit 2 | Sequence the shared team by the exit obligation

[IS] IT needs two migration weeks and one acceptance week before either downstream migration can start. Finance then needs two migration weeks and one acceptance week; HR needs one of each. Every task uses the same team. Finance data readiness is complete at the end of week two, HR at the end of week one. Neither creates a separate migration crew.



Gold: assumed successful test, acceptance and permitted service-specific exit.
Original expiry is after week 6. Only HR incurs the two modeled extension weeks.

[MR] The displayed cost-minimizing sequence accepts IT in week 3, Finance in week 6 and HR in week 8. Only HR continues after the original expiry: two weeks at \$12,000 equals \$24,000. If HR goes first, it is accepted in week 5 and Finance in week 8. Two Finance extension weeks at \$30,000 cost \$60,000. The final completion date is identical, but the commercial consequence differs.

[MR/PD] The HR-first plan has the lower sum of acceptance dates, 16 versus 17, yet the higher cost. A dashboard that rewards early local completions can therefore select the wrong sequence. This is not permission to delay a critical HR obligation: seller continuity and the extension are explicit assumptions. If a payroll or operating calendar creates a harder deadline, add it as a constraint before using the comparison.

Source: frozen synthetic inputs and exact results. IT extension is \$20,000 per week but zero in these two service-specific plans. Successful acceptance, valid notice, seller continuity and immediate service-specific cessation are modeled conditions, not observed tests or general contract rights.

Exhibit 3 | Buy time only where it changes the exit

[IS/MR] Every acceleration is priced once and changes only a named duration or readiness date. The shared-team capacity and one-week acceptance gates remain unchanged. D advances dedicated Finance preparation from the end of week two to week one for \$8,000. I shortens IT migration for \$15,000; F shortens Finance migration for \$18,000. Neither accelerated migration is permitted to bypass testing.

Option	IT / Finance / HR exit	Extension	Acceleration	Total
None	3 / 6 / 8	\$24,000	\$0	\$24,000
D only	3 / 6 / 8	\$24,000	\$8,000	\$32,000
I only	2 / 5 / 7	\$12,000	\$15,000	\$27,000
F only	3 / 5 / 7	\$12,000	\$18,000	\$30,000
I + F	2 / 4 / 6	\$0	\$33,000	\$33,000

[MR] D improves its own readiness date without improving an exit. Even after accelerating IT, its earliest acceptance is the end of week two; Finance cannot start before week three. Finance readiness at the end of week two already satisfies that gate. Removing D from any D-containing schedule therefore preserves task dates and removes \$8,000. This is a proof under the declared dependencies, not a claim that real data preparation has no value.

[MR] Partial exits cost at least \$24,000 in this model. With bundled cessation, the unaccelerated plan costs \$124,000, but I plus F completes every gate by expiry for \$33,000. The fair optimized difference is \$9,000. Comparing \$24,000 with the inferior \$124,000 schedule would overstate the modeled value of the contract structure.

[Deadline fallback] If no extension is permitted, I plus F supplies a feasible \$33,000 plan. One approved extension week permits the \$27,000 I-only plan. Two approved weeks permit the \$24,000 unaccelerated plan. These are discrete feasible fallbacks, not authority to negotiate or exercise any actual extension. Qualified acceleration must be available before relying on the shortened duration.

Model basis: exact enumeration of all eight acceleration subsets. Common costs are excluded consistently. No client payment, legal entitlement, savings or implementation is asserted.

Exhibit 4 | Exit a named service through explicit gates

[PD] Use the proposed Service-to-Exit Acceptance Contract (SEAC) as an operating protocol, not a substitute for the signed TSA. The protocol joins five records: the service obligation, resource-feasible work plan, business acceptance, residual contingency and authorized exit decision. A project milestone alone proves none of the other four. Counsel and the contract owner establish what notice, separation, extension and termination rights actually exist.

Gate	Required evidence	Disposition if absent
Scope and right	Service/entity mapping, agreed cessation date, notice rule and authorized signatories	Escalate; seek authorized continuity or a revised plan
Readiness	Dependencies complete; destination capacity and named support coverage available	Resequence or fund capacity; no readiness label
Acceptance	Reconciled original transactions and business-owner decision under frozen criteria	Repair and retest the failed control
Contingency	Recovery option, trigger, access, cost and time limit explicitly authorized	Resolve continuity exposure before cutover
Cessation	Accepted notice, final handoff, records retention and charge-end confirmation	Keep contractual and financial status open

[PD] Keep separate timestamps for technical cutover, operational acceptance, notice delivery, contractual cessation and final billing. Technical migration can finish while support charges continue. The model assumes service-specific acceptance and cessation coincide; bundled cessation waits for the last acceptance. Notice is already valid at the snapshot, and billing is not modeled. A real notice clock can be a binding constraint.

[PD] Before a cutover, compare the current evidence with the signed go/no-go criteria. Describe who can stop it, how unresolved items are classified and which exceptions are expressly permitted. A permitted low-severity documentation item is different from a missing payroll reconciliation. Record the decision and its evidence version rather than changing the acceptance threshold to make the deadline.

[PD] Rollback is a prearranged operating capability. A previous system image is not enough if the seller has removed accounts, stopped staff coverage or revoked data access. Where return to seller support is unavailable, the contingency may be a destination recovery, approved manual bridge or later cutover. Retest every critical dependency affected by that choice; a successful rehearsal does not grant an uncontracted right.

RB/PD: R1 supports complete, resource-aware schedules; R2 and R3 inform recovery and transition planning. The service-specific rights, automatic extension and immediate cessation used in the worked model are invented assumptions, not general TSA rules.

Exhibit 5 | Finance must reconcile the transferred obligation

[PD] Finance stand-up starts with what must remain true across the boundary: the acquired entity, legal books, reporting calendar, chart mapping, bank authority and original open items. Copying a trial balance is a data step. The controller must also establish how new transactions will be posted, approved, paid and reconciled after the seller stops processing them. Inventory valuation, tax, purchase accounting and statutory treatments require their responsible specialists; this case does not supply those opinions.

Control packet	Concrete acceptance evidence	Decision owner
Opening and open-item bridge	Control totals plus invoice-level payable/receivable mapping; unresolved differences retained	Controller
Payments and receipts	Approved bank identities, delegated signatories, dual control and posted-to-bank reconciliation	Treasury / controller
Close and reporting	A rehearsed close using the approved mapping, cutoff rules and exception resolution	Controller
TSA charge cessation	Service-specific notice, accepted cessation date and final invoice reconciliation	Contract owner with Finance

[PD] Use a bounded rehearsal with an original transaction population. Include a partial customer receipt, a credit, a blocked supplier payment, an intercompany item and an item spanning the cutover where these exist in the business. The point is to test different control paths, not to select only easy transactions. Match source identity, destination posting, amount, currency, entity and disposition. Totals can reconcile even when two customers or suppliers have been swapped.

[PD] Separate a data exception from a policy decision. A missing vendor identifier needs mapping or correction; an unapproved payment requires the delegated approver. Do not let an integration analyst create authority merely to clear a backlog. The PMO records age, blocked dependency and next decision; Finance owns the accounting resolution and evidence. A closed ticket without a reconciled transaction remains an open acceptance issue.

[PD] At handoff, the controller accepts the outstanding-item register, the next close calendar, retained evidence and the support route. Treasury accepts its payment access and release controls. Record which seller reports cease and which remain necessary under continuing obligations. Review the first destination close against the original scope before releasing temporary reconciliation capacity. The stopping condition is stable ownership of the work, not delivery of a training deck.

Source basis: proposed Finance integration controls. The model’s deterministic test week does not simulate transaction-level reconciliation or supply specialist accounting judgments.

Exhibit 6 | Transfer a supported service, not only the data

[PD] An application migration can pass a file-copy check while users cannot perform the business process. For each destination service, join identity, role authorization, application configuration, interface dependencies, data reconciliation, monitoring and incident coverage. Define the production transaction that the owner needs to complete. A test environment screenshot is evidence of that environment, not evidence that production identities and interfaces are ready.

Dependency	Acceptance question	Retained evidence
Identity and access	Can the right users act, and are inappropriate privileges prevented?	Role matrix, approvals and tested access paths
Data and interfaces	Do original records arrive once, in the correct entity and state?	Control totals, identity reconciliation and retry results
Operation and support	Who detects failure and restores the service during actual operating hours?	Monitoring test, escalation route and support acceptance
Recovery and separation	Can the approved contingency work before seller access disappears?	Recovery rehearsal and authorized access/retention plan

[PD] Test the whole dependent path: an identity authenticates, an authorized action creates a record, the interface moves it, the receiving system acknowledges it and a business owner reconciles the result. Include duplicate delivery, rejected messages and partial failure where the interfaces permit them. Use controlled non-production records or an approved production procedure. A successful retry must not create a duplicate financial or inventory obligation.

[PD] The IT lead maintains the technical dependency graph; the business service owner accepts business usability. Security approval, data retention and access removal follow the organization’s specialist authorities. The program manager can resolve sequencing and resource conflicts but cannot waive a security control to make an exit milestone green. Every accepted deviation has an owner, expiry and compensating control.

[PD] Before cutover, freeze the release version and recovery decision point. Preserve the last reconciled checkpoint, ownership of in-flight messages and the list of actions that cannot be replayed safely. If a transaction was posted after the checkpoint, restoring a database alone may duplicate or erase business work. Reconcile those actions as part of the recovery plan. Only remove seller dependencies after the agreed cessation and retention obligations have been resolved.

RB/PD: R2 informs contingency planning, testing and maintenance. The numerical schedule does not model cyber incidents, data loss or the results of these proposed service tests.

Exhibit 7 | HR readiness must survive the first live cycle

[PD] Payroll and workforce support require more than a transferred employee list. Preserve the original population, effective dates, work arrangements, payroll inputs, approved deductions and destination support route. Map who provides data, who validates it, who releases payment and who handles a disputed result. The relevant HR, payroll, employment and privacy specialists determine local requirements; a common integration checklist cannot override them.

Operating event	Readiness evidence	Who accepts
Employee record transfer	Identity-level reconciliation and approved effective-date changes; exceptions visible	HR data owner
Payroll rehearsal	Gross-to-net and payment-file checks on the approved population with explained differences	Payroll owner and Treasury
Employee query	Named support route with access to the appropriate record and escalation authority	HR service owner
Change after cutover	Authorized joiner, mover and leaver transactions reach all required destinations	HR and IT owners

[PD] Rehearse a representative operating cycle before taking over the service. Select the test frame before reviewing results and include the difficult cases relevant to the business. Maintain the original effective date when an exception is discovered; changing the date to make the file reconcile hides the obligation. A mismatch must be corrected or explicitly accepted by the responsible specialist, not dismissed because the aggregate payroll amount is close.

[PD] People adoption is an operational dependency. Give the receiving team supervised practice in running the cycle, identifying an exception and escalating it without seller staff doing the work for them. Confirm coverage for leave, shifts and the first unusual case. The PMO records capability evidence and unresolved dependency; the HR owner decides whether the receiving team can safely assume the service.

[PD] Communicate the cutover in terms employees can use: which process changes, when it applies, how to obtain help and how errors are corrected. Avoid implying that every term of employment changes because a system does. Preserve approved message versions and the route for questions. Where consultation or notification is required, the qualified owner determines it under the applicable arrangements. Those steps belong in the actual plan and may constrain the modeled dates.

Source basis: proposed workforce and payroll handoff. HR acceptance in the illustrative schedule is a deterministic task; it does not establish the payroll evidence or specialist approval described here.

Make ownership survive the transition meeting

[PD] One integration view should connect each decision to an accountable destination owner, evidence and a due date. It should not collapse all authority into the program manager. Build workstream plans with the people who will operate the destination, then test the cross-functional dependencies together. Finance may depend on an IT identity; payroll may depend on both HR data and Treasury authority. Three locally green plans can still contain an unowned end-to-end failure.

Decision	Accountable role	Program manager contribution
Operating acceptance	Destination business-service owner	Assemble evidence, expose gaps and record disposition
Technical or specialist approval	Delegated IT, security, Finance, HR or legal owner	Route decisions; do not self-approve specialist judgments
Shared-team priority	Integration sponsor	Show feasible alternatives, contract consequences and resource conflicts
Contract notice / extension	Authorized contract owner	Track obligations, notice evidence and decision lead time
Steady-state handoff	Receiving functional leader	Verify support, capability and remaining issue ownership

[PD] Use a short daily exception discussion while cutover work is active. Review decisions blocking the next executable task, the oldest unresolved acceptance defects and changes to scope or capacity. Keep routine status updates asynchronous. The weekly sponsor forum should resolve resource or commercial choices that functional teams cannot settle, with an explicit record of the options rejected and why.

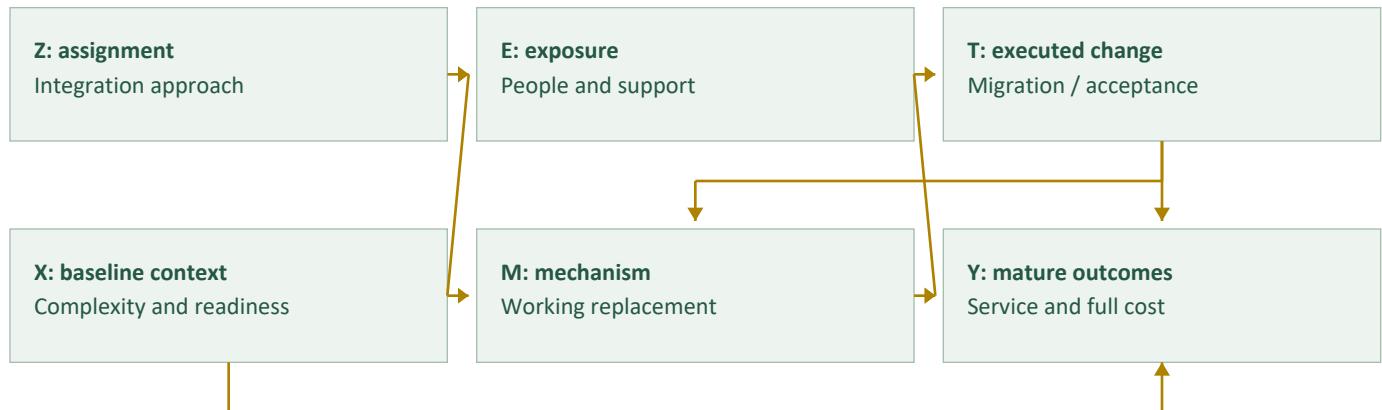
[PD] For an inexperienced integration team, coach through actual artifacts: a reconciled service inventory, a tested milestone, an owner-signed exception and a credible next-week resource plan. Ask owners to explain how they know their milestone is complete. A percentage-complete field can summarize work but cannot substitute for the acceptance evidence or the remaining critical path. Preserve dissent where an owner believes the deadline is unsafe.

[PD] The handoff is complete when the receiving leader can operate the control cadence, interpret the measures and resolve an exception without the integration manager taking over. Retain named post-exit support, open issues, change authority and evidence retention. Close temporary integration capacity only after responsibilities are accepted. Record remaining problems as process debt with impact, owner and a funded disposition; relabeling them business-as-usual does not remove their cost.

Proposed delivery responsibility, not historical personal experience. Luna Sol can frame and coordinate this design; specialist approvals and commercial authority remain with the designated client owners. The finite model assumes resource availability rather than proving actual staffing.

Show how the integration could change service

[PD] This diagram is a hypothesis for a future operating evaluation. It distinguishes an offer of integration support from the resource and acceptance actions actually performed. The exact schedule calculation represents selected links under fixed assumptions; it does not establish a treatment effect on continuity or total cost.



Assignment and execution. Record what approach was assigned, support actually supplied, versions used and deviations. Sponsor attention or stronger functional leadership may determine both support and results. Comparing only completed integrations would omit assignments that stalled or changed course. Keep those original obligations and their costs in the analysis.

Mechanism and outcome. A working replacement should reduce dependence on seller services while preserving the original transaction. Track acceptance, actual cessation, later exceptions and full transition cost. Direct $E \rightarrow Y$ and $T \rightarrow Y$ paths retain support, transition and remediation costs outside the service mechanism. Do not control for post-assignment readiness or acceptance to estimate the total effect.

Selection and interference. Acquisition complexity, legacy data, personnel turnover and seller cooperation may affect timing and outcomes. Shared identity platforms and specialist teams create spillovers across streams. One completed Finance test and one completed HR test are not independent acquisition trials. An unexplained residual could reflect omitted pathways; this diagram cannot identify which explanation caused it.

Arrows are proposed mechanisms, not demonstrated causal findings. The parent organization must approve the unit of comparison, original population, observation window and interference boundary before interpreting field differences.

Exhibit 8 | Bound the value of price information

[Separate hypothetical extension] The base model uses known prices and finds a \$24,000 partial-exit plan. A second, explicitly invented decision asks what it could be worth to resolve HR's extension price before committing to acceleration and task dates. HR is either \$8,000 or \$24,000 per service-week, using the existing sensitivity endpoints. All task, capacity, acceptance and continuity rules stay fixed. All 516 schedules are feasible in both price states.

Prior probability of high price	Best expected cost before information	With perfect price information	EVPI ceiling
0.2	\$22,400	\$19,400	\$3,000
0.5	\$31,000	\$24,500	\$6,500
0.8	\$33,000	\$29,600	\$3,400

[Exact action envelope] Let p be the hypothetical probability of the high HR price. The minimum expected relevant cost is $\min(\$16,000 + \$32,000p, \$23,000 + \$16,000p, \$33,000)$. These three lines select no acceleration, IT acceleration, and both migration accelerations. Every other enumerated schedule was checked. The optimal action changes at $p=7/16$ and $p=5/8$, with ties at those boundaries. This is not a fit to observed price data.

[Decision value] Perfect information permits no acceleration in the low-price state and both migrations in the high-price state, giving expected cost $\$16,000 + \$17,000p$. Subtracting this from the best uninformed expected cost yields the displayed EVPI. The maximum across every prior from zero to one is \$6,562.50 at $p=7/16$. The finite action envelope establishes that ceiling; the result is not extrapolated from the three displayed priors.

[Limit] No noisy signal or measurement fee is specified, so this is not EVSI or a recommendation to buy information. The ceiling concerns only this price uncertainty and the declared available actions. Required contract confirmation, permitted cessation and service continuity remain mandatory gates; a favorable expected cost cannot grant permission to exit. A real quote, resource change or failed acceptance may require a different action space.

Source: separate post hoc what-if in `economics.py/json`; all price states and priors invented. The known-price base is unchanged: copying already-known inputs has zero modeled information value, although independent error checking may still matter. The \$9,000 contract comparison is not information value. No imperfect-signal EVSI or paid-test recommendation is made.

Technical analysis | Test the price and deadline frontier

[Reproducible calculation] The primary solver enumerates integer task starts and rejects any overlap on the single shared team. Successors start strictly after predecessor completion; readiness dates also constrain migration starts. An alternative internal construction enumerates precedence-valid task orders and all admissible idle-gap placements. The two methods produce the same 516 schedules across eight acceleration subsets. Each schedule is priced under both exit policies, giving 1032 schedule-policy outcomes.

[Cost equation] Relevant cost equals purchased acceleration charges plus the sum, over services, of extension rate multiplied by $\max(0, \text{cessation week} - 6)$. Service-specific cessation equals that service's accepted exit; bundled cessation equals the latest accepted exit. Whole integer weeks are charged. The solver retains every task interval, acceptance date, cessation date and service-week charge receipt, so a total can be traced to its components.

HR extension / week	I charge \$10,000	I charge \$15,000	I charge \$25,000
\$8,000	None / \$16,000	None / \$16,000	None / \$16,000
\$16,000	I / \$26,000	I / \$31,000	None / \$32,000
\$24,000	F, I / \$28,000	F, I / \$33,000	F / \$42,000

[Sensitivity interpretation] Every grid cell reoptimizes the full declared schedule set; Finance migration acceleration stays \$18,000 and other extension prices stay fixed. Cheap HR continuation favors waiting. Higher HR prices make acceleration attractive. At the highest HR price and highest I charge, F alone costs \$42,000 and beats I plus F at \$43,000. A rule that always accelerates both migrations would miss this alternative. All dollar values and response assumptions remain hypothetical.

[Verification] The author executes 16,016 internal assertions, including an alternative sequence/gap construction, resource and dependency checks, charge conservation and D dominance. A separately authored root calculation reconstructs the complete feasible set without importing the author solver. These checks support conditional numerical agreement, not actual test success or the existence of modeled contract rights.

[Deadline sensitivity] The same action set is reoptimized under permitted completion through weeks 6, 7 or 8. The least-cost service-specific plans are I+F at \$33,000, I alone at \$27,000, and no acceleration at \$24,000, respectively. The best plan changes with the approved horizon. A cheaper late plan is inadmissible if the corresponding extension is not authorized; a favorable price cannot cure that missing right.

Source: `executed OC02 calculate.py/results.json`, with frozen synthetic `inputs.json`. The grid changes price assumptions; it is not a probability forecast or measured treatment effect.

Define exit as accepted service, not completed activity

[Proposed design] The Service-to-Exit Acceptance Contract (SEAC) links a dependency-feasible integration plan to evidence that the replacement service can operate and to a separately authorized exit decision. Freeze the original service catalogue, required interfaces, accountable recipient and acceptance criteria. Define eligibility for incoming transactions during the test window. Preserve failed, deferred and unreconciled records; transferring them to a new queue must not make them disappear.

[Analytical inference] A milestone percentage averages unlike activities. It cannot establish that every critical dependency is satisfied. Shared Finance, IT and HR specialists must support both current operations and transition work; the same hours cannot be booked twice. GAO's scheduling guidance supports explicit dependency and resource logic [R1]. Separately, the Sourcing Playbook connects outgoing exit with incoming mobilisation and recognises the concurrent workload [R3]. These principles do not make a modeled completion date an accepted service.

Decision object	Measure and evidence
Schedule feasibility	Required activities, valid predecessor links, named capacity by period and completion dates. Preserve both the baseline and authorized revisions.
Replacement service	Correct, timely transactions and reconciled opening/closing records within a defined service population. Failed retries remain linked to their original transaction.
Continuity and recovery	Timed restoration or rollback rehearsal, known dependencies, operating coverage and unresolved critical defects. A document or backup file alone is not a successful restoration.
Exit authorization	Named decision owner, accepted evidence version and applicable contractual conditions. Operational readiness is not authority to terminate or extend an arrangement.

[Proposed design] Define success at the service grain. Payroll accuracy, financial reconciliation and access provisioning have different units, materiality and observation windows. Report their populations separately before any portfolio summary. Preserve the first attempt and eventual recovery: a later correction can restore service without erasing an original deadline failure. Reconcile both counts and amounts where relevant; equal totals can conceal offsetting record errors.

[Boundary] The conditional schedule comparison asks what the declared resources, durations and dependencies permit. Its test-week and sign-off flags are assumptions, not observed transaction tests or actual owner acceptance. The field estimand would instead concern the effect of assigning an integration approach on service continuity and avoidable transition cost. One modeled schedule does not identify that effect. Actual transition rights, data permissions, employment matters and exit conditions depend on the agreement and authorized specialists. No legal interpretation, unrestricted seller information sharing or pre-close operating authority is assumed.

Build transaction assurance without overstating a rehearsal

[Proposed design] Before testing, freeze the service version, random sampling frame, error definition, severity and tolerance. Separate diagnostic challenge scripts from a fresh representative confirmation sample. NIST’s contingency guide supports explicit objectives and data/functionality validation [R2]; a successful IT recovery exercise does not establish payroll, financial or customer-service acceptance. Critical defects remain release blockers under the approved acceptance rules regardless of an average error bound.

[Recalculated] For n independent, identically distributed Bernoulli transactions with zero observed errors, the exact one-sided 95% upper bound is $U = 1 - 0.05^{(1/n)}$. It follows by solving $(1-U)^n = 0.05$ [R4]. For an illustrative noncritical error tolerance of 1%, the minimum n is 299. This is a proposed precision requirement, not an observed result or a recommended tolerance for regulated, safety-critical or financial controls.

Illustrative design	Zero-error implication
60 independent records	Upper bound 4.87%; zero observed errors does not support the illustrative 1% limit.
299 independent records	Upper bound 0.997%; 298 is insufficient. At a true 0.1% error rate, this zero-error rule passes about 74.1% of samples.
Three service strata	With per-stratum $\alpha = 0.05/3$, require 408 independent records per stratum, 1,224 total, for at least 95% simultaneous coverage of all three upper bounds.

[Analytical inference] The strata calculation uses Bonferroni coverage and does not require independence between strata, but each bound must remain valid within its own sampling model. Pooling Finance, IT and HR records can hide a weak service. Hundreds of transactions from one defective interface are not hundreds of independent cutover trials. Repeat runs of the same script do not create new independent records; shared configuration and batch failures require a different design.

[Proposed design] Independent review must determine errors against original source records, including missing and duplicate transactions. Keep repair findings and fresh confirmation results separate after version changes. Collecting and adjudicating 408 fresh records per service, with any retesting, may exceed the modeled one-week acceptance task: validate actual workloads and resources, then reschedule if necessary. If the representative frame, independence or error ascertainment cannot be defended, do not use this sample calculation as clearance: retain the readiness hold and redesign the evidence. No finite zero-error sample covers unknown critical failure modes or guarantees customer-level cutover success. Rehearsal acceptance and contractual exit remain distinct decisions.

Validate one acquisition proportionately and preserve causal limits

[Proposed design] For one acquisition, prioritize reproducible schedule checks, linked transaction reconciliation, realistic rehearsal and a versioned acceptance record. Re-run the feasible schedule when a dependency, specialist calendar or approved scope changes. In the operating trial, retain the original service obligations and predeclared maturity windows. Separate immediate cutover errors from later close, payroll or customer exceptions so that an early green dashboard cannot censor slower failures.

[Analytical inference] Before/after differences do not isolate integration management from demand, staffing, configuration changes or acquisition selection. Choosing the easiest service for the first wave can overstate transferability; choosing the most troubled can invite regression to the mean. A causal portfolio study would require comparable acquisitions or separable service clusters, prespecified assignment and interference controls. A shared identity platform or specialist team can prevent within-acquisition independence. Without such replication, report descriptive outcomes and mechanism evidence rather than a treatment-effect estimate.

Falsifiable proposition	Prespecified challenge or failure
P1: The exit date is resource-feasible	Independent reconstruction cannot complete all required activities by that date using declared predecessors and available specialist calendars. A percentage-complete score cannot override this counterexample.
P2: The replacement service meets its acceptance standard	Original-ID reconciliation or representative confirmation fails the declared severity, correctness or timing criterion. A wide statistical interval is a hold, not evidence that the service is defective.
P3: The proposed contingency is executable	A scoped rehearsal cannot restore the required data and functionality within the authorized recovery window using available people and permissions. A successful document review cannot substitute.

[Proposed design] Classify schedule, acceptance and operating evidence separately. The opportunity supplies no observed chronological integration panel. Activities, workstreams, percentage-complete updates and deterministic schedule alternatives must not be repackaged as a stable process series. Future chronological service data need consistent populations, maturation and measurement versions before tentative XmR diagnostics are useful. Rate charts need authentic eligible counts and a defensible count model; no Laney correction can repair missing transactions or a changing error definition.

[Boundary] Economic comparisons must retain authorized service floors and include transition effort, overlap, rework and continuing support. Avoided TSA charges are not automatically net savings, and an extension is not an available choice unless authorized. SEAC is a proposed operating framework: the role brief establishes a buyer need, not Ryan's appointment, credentials, completed acquisition, tested capability or realized financial effect.

Keep the exit dashboard tied to original obligations

[PD] Freeze the original service population before tracking progress. A service removed from the dashboard because it was merged, renamed or escalated still needs a traceable disposition. Record entity, supported business process, critical periods, contract scope and acceptance version. Report added scope separately from performance on the original frame. This prevents a shrinking denominator from looking like successful exit delivery.

Measure	Definition and retained basis	Decision use
Accepted service exit	Original services with required owner evidence and authorized cessation / original in-scope services	Contract progress, not causal benefit
Continuity failures	Original critical transactions missing their obligation; report failures and exposure together	Protect business operation
Extension cost	Actual incremental contracted charges by service and covered period	Commercial decision and invoice reconciliation
Destination burden	Internal support, remediation and temporary work in a fixed maturity window	Prevent cost transfer from appearing as savings
Capability transfer	Receiving roles completing agreed work and exception handling independently	Remove temporary support deliberately

[PD] Distinguish an evidence defect from a service failure. Missing acceptance evidence may justify holding an exit even when no customer problem has occurred; the absence of a reported incident does not establish complete transaction capture. Audit both the work and the record. Where outcome records mature later, preserve an unknown category and a scheduled reconciliation rather than treating unresolved records as successes.

[PD] For a finite assurance review, choose original transactions across service, entity, cycle and exception type. Have qualified reviewers classify results against a frozen codebook without seeing the PMO’s completion label. Report disagreements before adjudication. Over-sampling payroll exceptions or failed interface messages is useful diagnostically but does not estimate overall prevalence without the corresponding selection weights.

[PD] There is no observed time series in this case. The schedule alternatives are decisions, not sequential process observations, so plotting them inside control limits would create a false stability claim. A future daily incident series needs consistent exposure, operating phase, recording and maturity before SPC. An apparent decline after selecting the worst incident week also needs a comparison with expected recovery and changing workload.

Source basis: proposed measurement contract. The exact planning model measures its own task dates and costs. It does not measure field continuity, employee outcomes, transaction-error prevalence or avoided incident cost.

Know which assumptions can reverse the decision

[IS/MR] The numerical model is deliberately narrow: one shared migration/test team, fixed task durations, deterministic acceptance and declared exit rights. It demonstrates a resource and contract interaction. It does not estimate acquisition complexity, seller cooperation, actual workload or the probability of a failed test. The proposed operating controls elsewhere in the case describe the evidence needed to replace these assumptions.

Boundary	What must change before a live decision
Contract rights	Confirm scope, notice periods, partial termination, extension approval, minimum charges and surviving duties
Resource and calendar	Validate named people, non-project duties, availability, blackout windows and specialist bottlenecks
Acceptance and rework	Measure defects, retest time, data-quality exposure and feasible recovery; add them to the plan
Economics	Include destination support, one-time work, seller charges, taxes and contingent exposure on comparable horizons
Attribution	Use a credible comparator before calling a schedule or cost change an integration effect

[PD] A live sponsor may choose a more expensive feasible plan to protect a critical payment or production cycle. That is not necessarily inefficiency: the model may omit a hard constraint that the business must honor. Make the requirement explicit and re-optimize within it. Do not bury it in an unexplained risk premium or use a modeled cost advantage to waive the control.

[PD] Test alternative facts separately. A longer notice period changes contractual cost timing; lower team availability changes task completion; a failed migration test creates rework; bundled termination changes when support charges cease. These are different mechanisms and should not be combined into one opaque confidence percentage. Show the decision under each credible case and what observation would resolve it.

[PD] The opportunity brief describes a role, not an executed engagement. No acquisition client, delivered TSA exit, historical savings or employer pedigree is established. The actual artifact is a locally constructed and reviewed decision model plus a proposed delivery method. An internal arithmetic and publication pass validates that limited artifact; it cannot certify legal rights, cyber resilience, payroll correctness or real-world integration capability.

Interpretation boundary: modeled USD values are invented scenario amounts. No annualization, probability of success, realized cash saving or external assurance is inferred from a favorable deterministic schedule.

Primary research and the case contribution

[Research basis] Primary sources inform the methods and operating design. They do not establish the synthetic findings, certify the local implementation or supply client outcomes.

R1 | Schedule Assessment Guide: Best Practices for Project Schedules [Schedule Assessment Guide: Best Practices for Project Schedules](#)

Verify shared specialist calendars and dependency-driven exit dates; distinguish an independently reproducible finite schedule from a credible field forecast. Government project-scheduling guidance is used as an analytical method, not a GAO-compliant review or proof of contractual readiness.

R2 | Contingency Planning Guide for Federal Information Systems, SP800-34 Rev.1 [Contingency Planning Guide for Federal Information Systems, SP800-34 Rev.1](#)

Separate IT recovery rehearsal, transaction/data reconciliation, documented defects, retest and authorized release. The publication concerns federal information systems. It does not certify industrial integration, Finance/HR service transfer, production-control safety, contract rights or future customer outcomes.

R3 | The Sourcing Playbook (HTML), chapter13: Expiry, extension, transition and termination [The Sourcing Playbook \(HTML\), chapter13: Expiry, extension, transition and termination](#)

An exit register should connect replacement acceptance, knowledge transfer and operational resourcing; day-to-day service must remain staffed during integration work. Public-sector outsourcing guidance supplies an operational analogy. It does not establish any private TSA termination, extension, data-access, employment or other legal right; actual agreement and authorized advice govern.

R4 | e-Handbook section7.2.4.1, Confidence intervals; Dataplot Exact Binomial Confidence Limits [e-Handbook section7.2.4.1, Confidence intervals; Dataplot Exact Binomial Confidence Limits](#)

Derive the prospective zero-error upper bound and integer sample requirements from the binomial law. Simultaneous strata control is an explicitly stated analytical Bonferroni extension. Mathematical coverage presumes the sampling and Bernoulli model. It is not a guarantee for curated scripts, correlated cutover records, undefined errors or unknown failure modes.

[Case contribution] SEAC connects four distinct objects: a feasible schedule, a working replacement service, an authorized commercial exit and retained mature outcomes. The exact counterexample shows why local completion speed and fixed-schedule savings can mislead. The sources support analytical and operating principles; they do not validate the invented prices, confer contractual rights or establish Luna Sol client history.

Internal referee and the decision to take forward

Case type and contribution. This is an illustrative integration operating design with a finite, reproducible schedule. Its distinctive contribution is to connect work sequencing, shared specialist capacity and the form of contractual cessation. A task completed sooner does not necessarily reduce the portfolio cost, and a short exit target does not create a right to end seller support.

Issue examined	Resolution and surviving limitation
Schedule mistaken for a forecast	Publish the exact tasks, readiness dates and shared-team rule. Durations and deterministic successful tests remain assumptions.
Weak commercial comparator	Optimize both service-specific and bundled cessation across all declared accelerations; show the actual contract sensitivity.
Readiness treated as exit authority	Separate technical completion, business acceptance, notice and charge cessation in the operating protocol.
Rehearsal presented as assurance	State the original transaction frame, critical-error gates and assumptions of any statistical bound.
Role brief converted to a credential	Keep the work proposed. No appointment, acquisition history, specialist qualification or realized outcome is claimed.

Review basis. The case uses a separately reconstructed calculation and primary-source methods review, alongside author-led editorial review. These are internal agent-assisted checks, not external peer review or a client’s acceptance. The private records bind the input version, code, results, claim ledger and final page reviews. A numerical match cannot establish that a hypothetical contractual right or staffing plan exists in a real transaction.

Partner judgment. A COO can use the case to ask for a service-level inventory, a resource-feasible plan and evidence-based exit authority. The next approval should name the service obligation, the acceptable extension option, the resource owner and the acceptance packet. Do not authorize an acceleration solely because it advances one local milestone; compare its effect on the complete feasible schedule and total incremental charges.

Disposition. The artifact supports a bounded planning conversation and an executable proposed delivery method. Live use requires replacement of the invented inputs, confirmation of rights and specialist approval. Actual implementation, safe operational transfer and causal financial impact remain unestablished. Final publication is conditional on completed independent calculation, source/claim, privacy and actual-page review records.

This report describes the review scope, not a professional certification or a guarantee of integration success. The public PDF is the portfolio artifact; the private evidence annex and original opportunity text remain separate.