Start with the task the records must support.

A digital thread is useful when people can follow reliable information into a building decision and its outcome.

James Dice / Nexus Labs discusses an independent data layer as an architectural distinction between integration/data services and applications, including limits to universal suitability. [L3] This guide applies that distinction to governed information from existing systems while retaining source identity and responsibility. It does not claim Cognitive owns a deployed product or proprietary standard. Start with what a named person must find, check or decide.

Operating task	Minimum information to request	Acceptance demonstration
Prepare maintenance on one asset	Authoritative identity, location, relevant manual/version and current restrictions	Operator retrieves the correct record and identifies unresolved conflicts
Review a recommendation	Input versions, source references, reasoning limits and reviewer	Reviewer traces the material claims or correctly holds
Accept project handover	Agreed asset information, tests, instructions and open exceptions	Representative operator completes the agreed task
Plan a capital decision	Condition evidence, assumptions, options and dependencies	Owner can reproduce the reasoning and explain its limits

Specify the content, format, metadata, exchange point and acceptance rules needed for the task. Public UK BIM Framework guidance provides a useful way to think about information requirements; it is not a substitute for inspecting the applicable contract or licensed standard. [L1]

> Technology connection does not establish record quality, interoperability or authority to act. Identify the source owner and permitted use before making the information available to an AI-supported workflow.

Reconcile identities before joining the records.

Fictional example: similar equipment labels describe conflicting locations.

Source	Identity and location	What the reviewer does
Asset register A-01	AHU-07, East Wing	Confirm its authoritative status and current revision
Work-order export W-01	AHU7, West Wing	Check coverage, export date and owner
Resolution record R-01	Identity not yet reconciled	Hold this asset until the owner approves a map or exclusion
Accepted mapping	To be established using approved site evidence	Retain the identifiers, source references, reviewer and date

DO NOT TURN UNLIKE COUNTS INTO A DENSITY CLAIM

A BAS point, a controller, a physical network endpoint and an asset record describe different things. The same device may appear in several inventories. State the counting unit, scope, date and overlap before comparing totals. Dividing 2,700 points by 1,100 devices yields a number near 2.45, but that ratio does not describe a comparable device population or prove that one team has more work.

MINIMUM MAPPING FIELDS

Record the canonical asset ID, each source identifier, system and version, location, relevant serial or other distinguishing evidence, mapping status, owner, reviewer and change history. Record an exclusion explicitly rather than dropping the troublesome row from the denominator.

> A missing or conflicting identity is an operational issue, not merely a formatting defect. An AI system should reveal the conflict and hold the affected recommendation rather than infer identity from a similar name.

Check completeness without hiding the denominator.

Fictional batch: 40 records, including conflicts and missing information.

Initial result	Count	Decision effect
Identities matched	34	Eligible for the next agreed checks, not automatically accepted
Conflicting identities	4	Resolve with owner-approved evidence
Required identity missing	2	Repair or explicitly exclude
Original population	40	Retain as the starting denominator

If the four conflicts are resolved and the two incomplete records are formally excluded, the final statement is 38 matched records within an accepted scope of 38, with 2 recorded exclusions from the original 40. It is not evidence that every original record was complete or that the whole facility is ready.

OTHER CHECKS THE TASK MAY REQUIRE

Check whether the document actually belongs to the asset, whether its version is current, whether required fields have sensible units and values, whether source references agree across files and whether access remains available to the operator. Define tolerances and the escalation route for this task rather than issue a universal quality score.

CLOSURE EVIDENCE

A gap closes when the assigned reviewer accepts the corrected record, mapping, approved exclusion or retest. Keep issue ID, affected task, owner, due date, evidence reference, acceptance decision and next review trigger. An assignee's completed status alone does not demonstrate usable information.

UK BIM Framework examples discuss conventions, units, types and consistent references. The batch and acceptance method here are fictional author synthesis, not a claim of ISO conformity. [L1]

Make handover a demonstration.

The operator should be able to use the delivered information for the agreed purpose.

Demonstration	Evidence retained	Hold condition
Find the correct equipment and source record	Asset ID, source/version and retrieval path	Ambiguous identity or inaccessible source
Locate relevant instructions and restrictions	Accepted manual and locally approved operating context	Wrong manual or unresolved operating restriction
Understand a recommendation and its limits	Source trace, reviewer record and exception route	Unsupported advice or unclear authority
Escalate a missing or changed record	Named owner and usable issue log	No one accountable for correction
Continue after project close	Accepted pack, training record and first review point	Operator acceptance or support ownership incomplete

Involve facilities and end users early enough to test what will be delivered. DfE's 2026 Soft Landings guide connects handover with training, aftercare and operational review in its own framework context. Those process ideas can inform an agreed engagement without importing DfE contractual periods into another owner's project. [L2]

WHERE THE DATA LAYER ENDS

Information access does not confer permission to change a building system. Keep live execution under approved operational controls. Establish IT/OT responsibilities and access requirements separately. A successful read-only demonstration does not validate live-control protection. [N3]

> If acceptance is incomplete, record what can be used, what remains held and who owns the next action. Handover does not require pretending every gap has disappeared.

Keep information useful as the building changes.

A maintained record connects sources, decisions, work completion and observed outcomes.

Change	Revisit	Responsible decision
Asset replaced or relabeled	Identity map, documents and affected recommendations	Approve the new record and rerun affected checks
Source system or interface changes	Coverage, versions, permissions and exception handling	Confirm the workflow still has usable inputs
New staff or support arrangements	Instructions, training and escalation ownership	Accept operational handover again if needed
Recommendation becomes completed work	Closure evidence and observed outcome	Continue, correct or reprioritize based on evidence

Retain the accepted version and a change log. Review unresolved issues by age and operational effect, rather than report a large record count as evidence of value. Use outcomes from accepted work to inform maintenance and capital priorities; do not infer that an information platform itself created savings.

SOURCES AND SCOPE

[L1] UK BIM Framework, Developing Information Requirements, Part D, Edition 2. February 2021. Explanatory guidance.

[L2] Department for Education, Soft Landings Guide, C01. January 2026. Its contractual requirements concern specified DfE schemes.

[L3] James Dice / Nexus Labs, On the merits of an independent data layer. 27 January 2020. Architectural discussion and limits, not universal suitability.

[N3] NIST SP 800-82 Rev. 3, Guide to OT Security. Final, September 2023; building automation is within scope.

[C2] Cognitive Corp, Building Decision Toolkit v2.0. 31 October 2026. Five-page working form with fictional examples.

Version note: this guide consolidates older digital-thread, IDL, IT/FM and ICT-use material. Unnamed project success percentages, inconsistent IDL definitions, compliance assurances and unsupported endpoint-density claims have been removed from current guidance.