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VIRTUAL ASSET PRIORITIZATION RESOURCE

WHITE PAPER

Connecting the Engineering Lifecycle



PROJECT HANDOFFS + OPERATIONAL USE

Information that survives the handoff

A practical guide to carrying useful asset information from planning and design through construction, handover, and operation.



Operational learning informs the next planning decision. Original editorial lifecycle diagram.

Three ideas to take into your next review

01 Define the next team's information needs before producing the deliverable.

02 Agree who supplies, receives, and checks each handoff.

03 Carry approved changes into usable operational records and feedback.

For: Engineering project teams, asset owners, information managers, and operations representatives.

October 2026 · Editorial draft for review. Cover image: AI-generated illustration, not documentary evidence.

01 / BEGIN WITH THE NEXT USER

Design the handoff before the deliverable

A project can deliver many files without delivering information the next team can use. A design assumption may disappear from the construction record. An installed component may differ from the earlier drawing. An operator may receive a complete-looking package but not know which revision describes the asset in service.

This guide proposes a practical handoff plan across planning, design, delivery, and operation. The stages are a conversation structure, not a universal procurement process. Real projects may revisit stages or run several work packages at once.

The UK Infrastructure and Projects Authority's 2021 roadmap treats information needs and operational outcomes as concerns across the asset life cycle. It distinguishes organizational, project, asset, and exchange requirements. The useful starting question is what information the next recipient needs for a defined purpose. Its policy context is not assumed to apply to other owners. [3]

Ask first	Reason	Proposed record
Who will use it?	A designer and an operator may need different views of the same asset.	Named receiving role and intended task.
What will they do?	The task determines necessary detail and context.	Information purpose and scope.
When is it needed?	A late complete package may not support an earlier decision.	Exchange milestone and review window.
How will it be checked?	Delivery and acceptance are separate events.	Acceptance questions and responsible reviewer.

> **Working principle:** define a useful exchange, then choose the files and fields that support it. A large model or document set is not, by itself, evidence of a successful handoff.

02 / CONNECT THE STAGES

Use a small handoff matrix

NIST's building-information handover guide describes planning content, formats, metadata, responsibilities, recipients, timing, and storage. It also calls for time to check transfers and handle incomplete or incorrect information. Those coordination principles inform the original matrix below; the guide's historical technologies are not prescribed. [2]

01 Planning — 02 Design — 03 Delivery — 04 Operation

Exchange	Use by next team	Example information	Acceptance question
Planning → design	Develop a response to a defined need.	Service objective, known constraints, existing asset context.	Are assumptions and unresolved requirements identifiable?
Design → delivery	Understand the authorized basis for the work.	Current design information, decisions, interfaces and change process.	Can the team identify the applicable revision and its boundaries?
Delivery → operation	Locate, maintain and manage the installed asset.	Installed configuration, asset IDs, relevant manuals and review status.	Does the package describe what the operator will actually use?
Operation → planning	Inform later intervention choices.	Observed performance, maintenance learning and information gaps.	Is feedback dated, contextualized and distinguishable from assumptions?

For each row in a real project, add a producer, receiver, expected revision, delivery location, review window, and unresolved-item owner. Do not assume that sending a link transfers responsibility. Confirm that the recipient can access and interpret the information for the agreed task.

Original editorial matrix. Deliverables, approvals, and stage boundaries must be adapted to the owner's project and operating procedures.

03 / MAINTAIN THE RECORD

Carry construction changes forward

FHWA's 2024 digital as-built guide describes recording deviations from design, reviewing changes, closing out deliverables, and incorporating information into systems used after construction. It also addresses updates after the project ends. These are distinct steps: capturing a change is not the same as accepting it or making it available to operations. [1]

A proposed path for a changed component

Step	Information to carry	Question to resolve
Identify	Component/asset reference and description of the difference.	Which current design or record is affected?
Review	Supporting evidence and the project's change disposition.	Who has authority to assess and approve the change?
Update	Relevant drawing, asset record, interface or maintenance information.	Which related deliverables must change together?
Transfer	Accepted revision, limitations, receiving role and location.	Can the operator find and use the current information?
Maintain	Responsibility for later operational changes.	How will the record remain current after handover?

Keep the project's approval process separate from this information flow. A field observation that differs from the drawing is not automatically an authorized change. The handoff record should identify the disposition reached under the applicable procedure and any condition that remains open.

Avoid two competing versions of the asset

If the installed configuration is described in one drawing and the asset register still carries an older description, both files may be readable but the handoff remains incomplete. The receiving team needs a clear current reference, an explanation of material differences, and ownership of any remaining reconciliation.

04 / ILLUSTRATIVE EXAMPLE

A relocated component at handover

Illustrative example. In a hypothetical infrastructure project, the proposed location of Component C-07 changes during construction. The change is reviewed through the project's established procedure. This example assumes an authorized disposition; it does not assess whether the engineering change is acceptable.

Team	Proposed action	Handoff evidence
Delivery team	Record the installed location and link it to the component's agreed identifier.	Dated installed record and reference to the change disposition.
Design/information roles	Identify drawings and related records affected by the relocation.	Coordinated revision references, with unresolved items listed.
Receiving operator	Use the package to locate the component and identify relevant maintenance information.	Acceptance check or a specific discrepancy returned to the producer.
Asset information owner	Retain the current operational reference and assign future update responsibility.	Receiving record, current revision, and owner of any pending reconciliation.

If the operator cannot distinguish the current location from a superseded plan, the response is a targeted correction request. Resending the same document collection does not resolve the ambiguity. Keep the open issue visible until the owner's acceptance criteria are met or a qualified limitation is explicitly accepted.

The UK Department for Education's 2026 Soft Landings guide includes early operator involvement, information handover, user preparation, and support after delivery. Its education-project context illustrates that useful handover includes people as well as records; its contractual duties and timelines are not adopted here. [4]

> **Useful result:** the operator can identify the component, locate the current information, understand any accepted limitation, and know who is responsible for the next update.

05 / HANDOFF CHECKLIST

Test the exchange before closeout

Use this original checklist at an early sample exchange and again at the agreed delivery milestone. An early check gives both teams a chance to discover missing context before it affects many records.

- ☐ **Purpose:** the receiving team and intended use are named.
- ☐ **Content:** required asset identity, context, and supporting records are defined at an appropriate level of detail.
- ☐ **Revision:** the applicable version and the treatment of superseded information are clear.
- ☐ **Coordination:** approved changes are reflected in the relevant dependent records.
- ☐ **Usability:** the recipient can open, locate, and interpret the information using available tools.
- ☐ **Acceptance:** the review outcome, unresolved items, owners, and next actions are recorded.
- ☐ **Continuity:** responsibility for operational updates and feedback is assigned.

Make operational learning usable

When operation reveals an information gap, connect the feedback to the asset and the task it prevented. “The package is incomplete” is hard to act on. “The operator cannot identify which drawing revision describes Component C-07” gives the next team a specific problem to solve.

Limits of this guide

This paper is an information-coordination aid, not a design standard, construction authorization, contract interpretation, or commissioning procedure. Source examples span buildings, transport, and UK public projects. Their obligations are not interchangeable. Use applicable project requirements and qualified review for technical acceptance.

No claim is made that VAPR provides BIM authoring, automatic model reconciliation, regulated approvals, or any other capability not independently verified.

REFERENCES

Sources and editorial notes

[1] **Federal Highway Administration.** Guide for Digital As-Builts Using Simplified Digital Workflows. FHWA-HIF-24-062. July 2024. Requirements, templates, inspection, changes and closeout; printed pp. 6–9 and 13–17.
Open source document · Accessed October 15, 2026.

[2] **Kristine K. Fallon and Mark E. Palmer; NIST.** General Buildings Information Handover Guide: Principles, Methodology and Case Studies. NISTIR 7417. August 2007. Sections 5.4–5.4.2, 5.4.4–5.4.7 and 5.4.10–5.4.13; pp. 58–64.
Open source document · Accessed October 15, 2026.

[3] **Infrastructure and Projects Authority, United Kingdom.** Transforming Infrastructure Performance: Roadmap to 2030. September 13, 2021. Sections 12.3, 12.5 and Annex B (items 3, 6 and 8).
Open source document · Accessed October 15, 2026.

[4] **Department for Education, United Kingdom.** Soft Landings Guide — Shared resources. Revision C01. January 2026; C01 published January 12, 2026. Introduction and sections 2.1–2.3; pp. 5–14.
Open source document · Accessed October 15, 2026.

Editorial approach

The sources support early information requirements, planned handoffs, controlled updates, and preparation of recipients. The matrix, component example, and checklist are original synthesis. Historical principles are distinguished from current project obligations; no ISO standard is interpreted or claimed as verified.

VAPR Resources · Editorial draft for review, October 2026. Original diagrams; no copied source figures, performance claims, or endorsement by the cited organizations.