

Waterfront inspection pilot

One quay section. Two visits. A reviewed maintenance register.

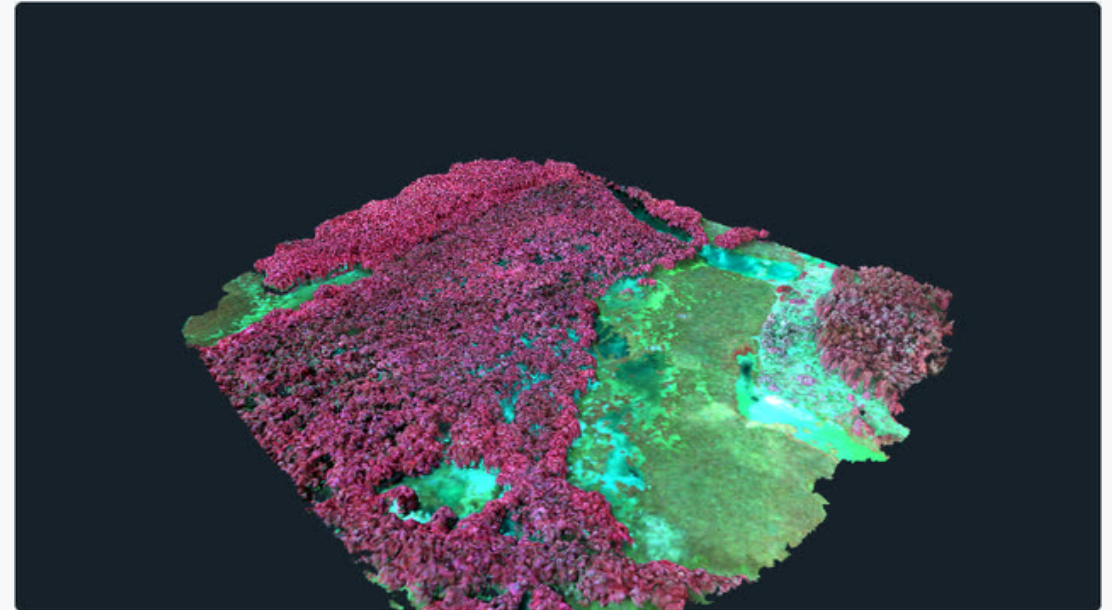
The operational decision

Where should a qualified inspector follow up before maintenance is planned?

Capture / review / maintenance handoff

Agree the defect class and sensing plan.
Link observations to assets and evidence.
Compare with an inspector's reference.
Measure coverage, misses and review time.

Next step: agree the site, asset owner, baseline and pass criteria.



Existing multispectral demo · Newington wetland
Adjacent capability; not a port inspection result.

A focused waterfront pilot

A proposal for combining specialist sensing, drone operations and analytics around one asset owner's maintenance decision. No site, payload, commercial terms or performance targets have been agreed.

Recommended first use case

Inspect the visible surface and fixtures of one accessible quay section. Use a baseline and one repeat capture to identify candidate changes that warrant closer review by a qualified inspector. Select the final site and defect class with the operator before choosing the payload.

The operational question

Where should an inspector follow up before maintenance is planned? The first deliverable is an evidence-linked observation register: asset ID, image reference, location, observation, coverage limitations, review disposition and proposed next action.

Proposed inspection workflow

1. **Define:** asset boundary, inspection question, reference method and pass criteria.
2. **Capture:** agreed views, control, timestamps and conditions; record missed coverage.
3. **Review:** candidate observations with original imagery and a qualified reviewer.
4. **Hand off:** export reviewed records using the owner's maintenance-system fields.
5. **Repeat:** compare the same assets and evaluate usefulness and total effort.

Initial boundaries

Include visible quay surfaces, drainage inlets and accessible fixture surfaces only where the capture plan can resolve the agreed feature. Exclude submerged defects, load-bearing capacity, structural certification and automatic repair decisions. Dual-wavelength LiDAR, thermal or other sensing is a separate feasibility decision, not an assumed capability of this pilot.

Responsibilities to agree

Asset owner: access, asset register, inspection standard and final maintenance decisions.

Drone operator: flight planning, permissions, capture and operational coordination.

Sensing partner: payload selection, calibration and data quality requirements.

One Jump: candidate analysis, evidence interface, evaluation and reporting.

Requirements and acceptance

Capture and sensing

Specify the smallest feature to review, required views, resolution, standoff, control and repeat-survey alignment. Test payload suitability on representative surfaces before a full capture. RGB is a starting point for visible condition; LiDAR supports geometry only where justified. Do not infer submerged condition from the existing wetland demo.

Operational fit

Confirm the site owner, permitted area, access window, vessel or vehicle movements, weather limits, tide records where relevant, safe launch areas and data-handling requirements. Start with a supervised operator-led inspection. Any autonomous mission capability requires separate integration and field validation.

Measures to agree before capture

Coverage: reviewed asset area divided by the agreed inspectable area; report obscured and excluded areas separately.

Detection: precision = confirmed candidates / all candidates; recall = detected reference findings / all reference findings. Report counts by defect class and severity. If there are no reference defects, recall is not established.

Repeatability: alignment uncertainty and inspection-condition differences; do not call a change smaller than the measurement uncertainty.

Workflow: total staff hours, time from capture to approved register and handoff completeness. Count capture, processing, review and reporting.

Reference and acceptance process

Use a qualified inspector's independent reference on the same asset area. Agree thresholds and critical-miss handling with the owner before collection. Retain separate data for final evaluation after model tuning. Report false alarms, misses and coverage gaps alongside successful examples; a small pilot cannot establish every operating condition.

Adjacent pilot options

Warehouses: one roof exterior and its drainage, using matched views and a roof inspector's reference. Thermal interpretation and leak diagnosis require separate validation.

Transport hubs: one controlled yard zone, with surface and access observations reviewed by the operator. Exclude rail integrity and live traffic control from the initial scope.

Minimum handoff fields: asset ID, capture date, source-image ID, location and coordinate reference, observation class, evidence status, reviewer, disposition, action owner, review date and closure evidence. Agree the target schema and access controls before integrating.

Validation and commercial path

Stage 1 · Scope and feasibility

Confirm one asset owner, site and operational decision. Review representative data, payload feasibility, access and the current inspection process. Deliver a capture plan, baseline measurement plan, agreed thresholds and a priced pilot proposal. Stop or rescope if the required feature cannot be captured reliably.

Stage 2 · Baseline and repeat inspection

Capture the approved area, review observations and repeat under comparable conditions. Demonstrate the register using the owner's fields. Deliver original-image references, coverage records, a reviewed observation register and an evaluation report against the agreed reference. Site access and data quality determine the schedule.

Stage 3 · Decide whether to deploy

The asset owner and partners review accuracy, critical misses, coverage, total effort and usefulness of the handoff. Proceed only if agreed requirements are met. Otherwise, record the failure mode and propose a bounded remedy or stop. API integration and autonomous operation remain separate delivery milestones.

Recurring inspection model

If the pilot is useful, agree a repeat cadence linked to the asset's maintenance needs. Price capture and sensing, analysis, reviewer time, integration and support explicitly. Define data ownership, service expectations, escalation and responsibility for maintenance decisions. Expand to additional sites or asset types only after validating the new conditions.

Economic assessment

Compare full inspection cost and effort with the existing process. Include mobilisation, aircraft and payload costs, permissions, compute, reviewer time, reinspection and ongoing support. Released staff hours are capacity, not automatic cash savings. Reduced risk or downtime must be supported by operational evidence before being claimed.

What the demo establishes today

The new workflow demonstrates three scenario choices, synthetic repeat-visit observations, reviewer dispositions, a sample CSV handoff and an editable effort calculation. It does not connect to aircraft, live sensors or a maintenance system. Existing roof, yard and wetland datasets illustrate adjacent capabilities; they are not validation results for a waterfront pilot.

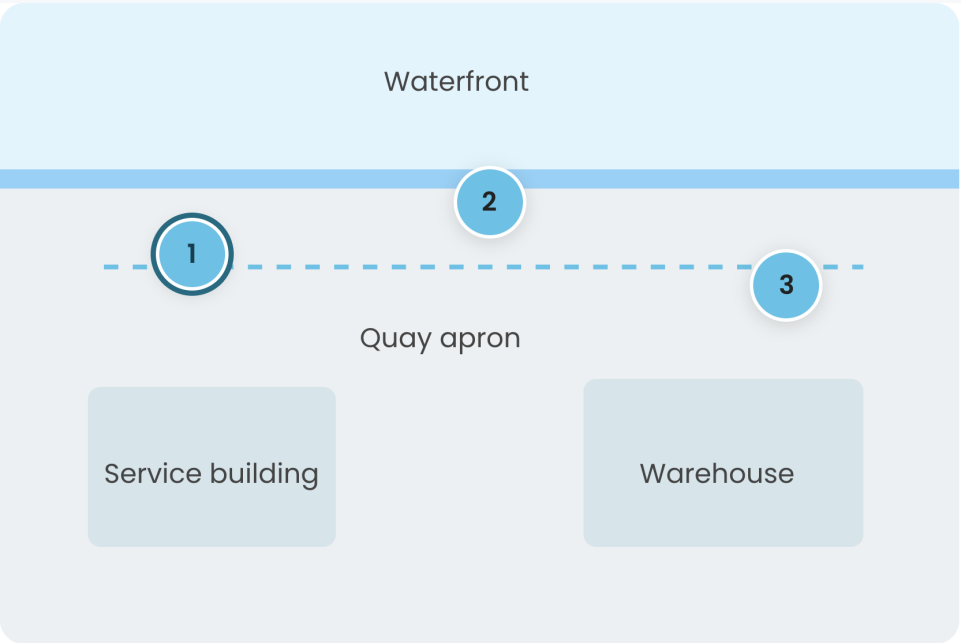
Discussion basis: partner discovery on 7 October 2026 and the follow-up brief prioritising waterfront facilities, warehouses and transport hubs. All proposed scopes and responsibilities above remain subject to agreement.

Explore existing flight demos: onejumpinc.com/drones/

Discuss a pilot: calendly.com/onejumpinc/meet

Waterfront facilities – inspection plan

Synthetic workflow example. Not a field inspection or confirmed defect. The schematic is not to scale.



1. Q-01 – Candidate surface discontinuity

Evidence required: Geolocated close-up, scale reference, original image and repeat view under comparable lighting.

2. Q-02 – Candidate coating change

Evidence required: Oblique RGB close-ups, fixture identifier and inspector reference; record any occlusion.

3. Q-03 – Candidate drainage obstruction

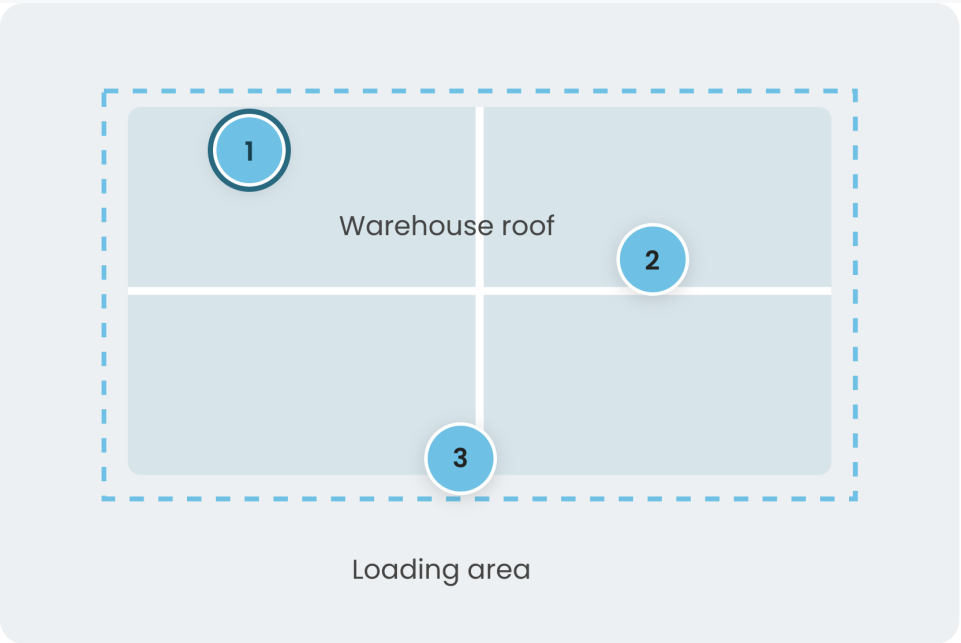
Evidence required: Context and close-up images tied to the inlet ID; ground confirmation of flow and obstruction.

Quay surface and visible asset condition

Asset	Sample visit 1	Sample visit 2	Proposed next action
Q-01	Line visible; not assessed	Line visible; closer capture needed	Request close capture, then refer to a qualified inspector if the feature remains unexplained.
Q-02	Partial view	Colour patch visible	Have the asset owner arrange inspection of the fixture before assigning a repair.
Q-03	No example object shown	Example object at inlet	Ask site operations to verify whether clearance is needed and record the outcome.

Warehouses – inspection plan

Synthetic workflow example. Not a field inspection or confirmed defect. The schematic is not to scale.



1. W-01 – Candidate gutter obstruction

Evidence required: Gutter ID, original oblique image, scale and ground confirmation.

2. W-02 – Candidate roof surface change

Evidence required: Matched views of the same roof plane and a qualified inspection reference.

3. W-03 – Obscured roof edge

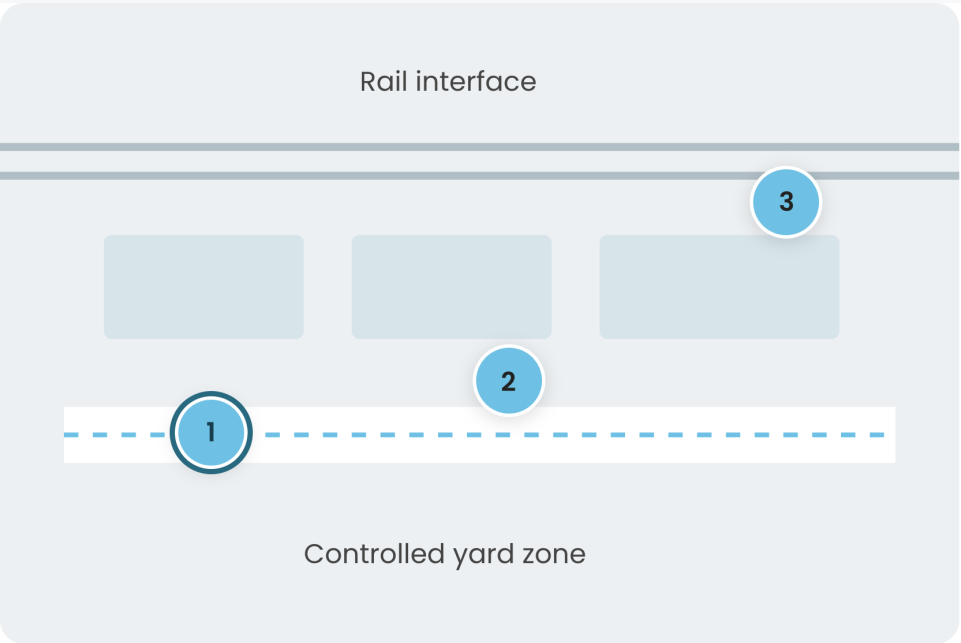
Evidence required: Capture footprint, visibility mask and a safe alternative viewing angle.

Warehouse roof and drainage review

Asset	Sample visit 1	Sample visit 2	Proposed next action
W-01	Gutter visible	Example debris shown	Request a maintenance review of the gutter and record access requirements.
W-02	Patch visible	Patch visible	Request closer capture before deciding whether to refer for inspection.
W-03	Obscured	Obscured	Request a repeat view so the inspection does not silently treat missing coverage as clear.

Transport hubs – inspection plan

Synthetic workflow example. Not a field inspection or confirmed defect. The schematic is not to scale.



Intermodal yard surface and access review

Asset	Sample visit 1	Sample visit 2	Proposed next action
T-01	Feature visible	Feature visible	Refer for qualified inspection if the feature remains after image review.
T-02	No object shown	Example object shown	Ask site operations to confirm access conditions before any intervention.
T-03	No usable view	No usable view	Agree a safe repeat capture with the operator; do not infer condition from absent imagery.

1. T-01 – Candidate pavement change

Evidence required: Matched surface views, scale, location and operator ground inspection.

2. T-02 – Candidate access obstruction

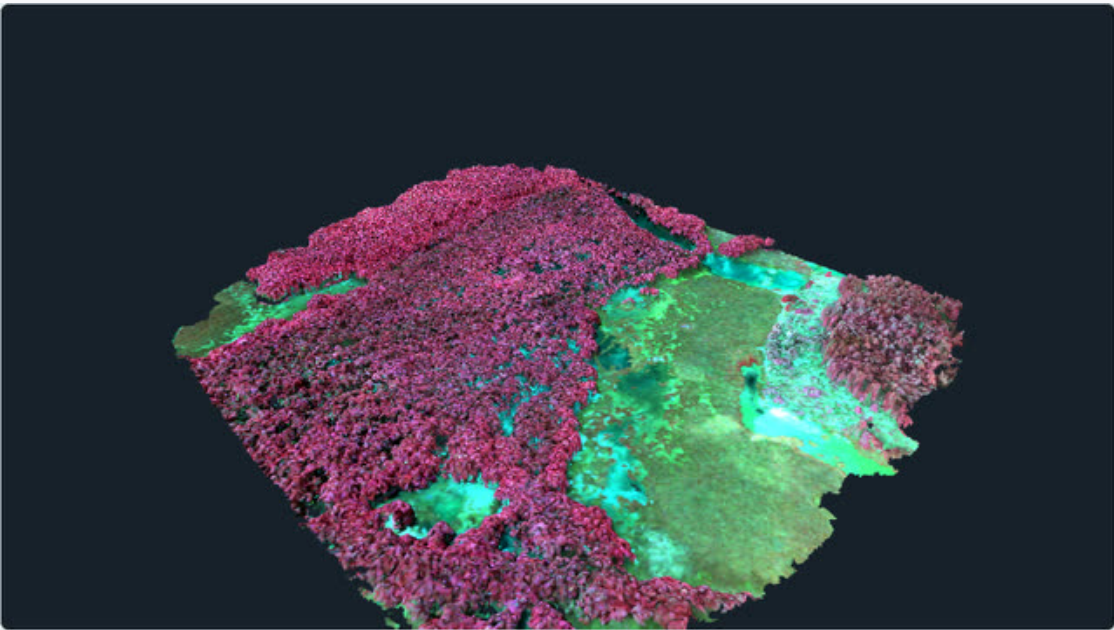
Evidence required: Timestamp, lane identifier and context view; verify current conditions on site.

3. T-03 – Incomplete boundary coverage

Evidence required: Flight coverage and occlusion records tied to the permitted inspection boundary.

Existing flight evidence

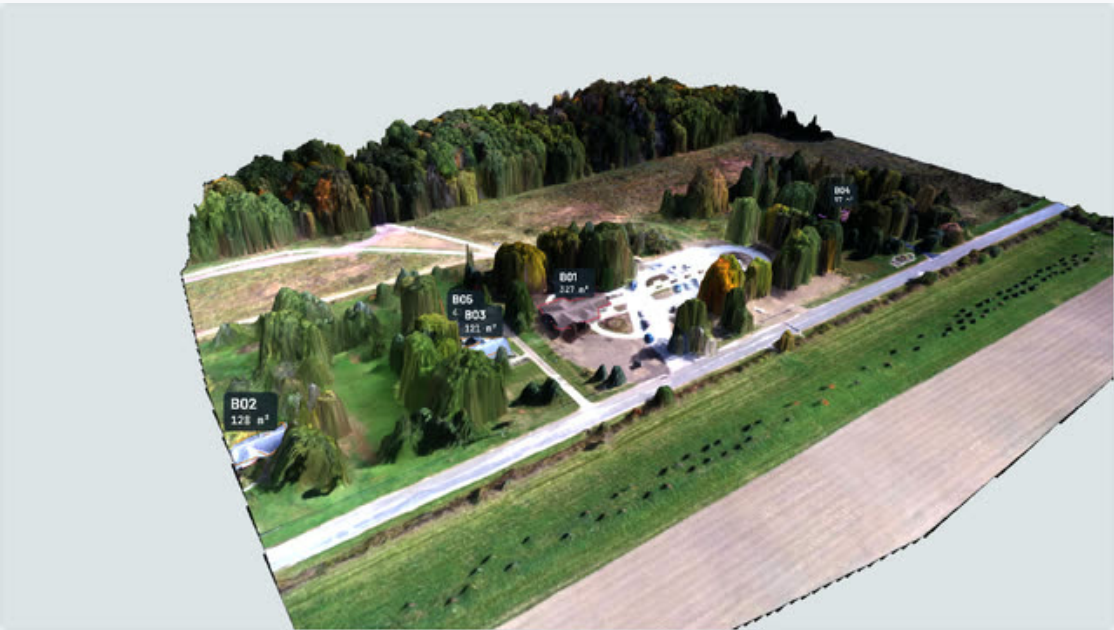
Static views of existing drone datasets. These images do not validate the synthetic pilot observations.



Newington wetland

Existing multispectral model. False-colour imagery illustrates vegetation analysis; it is not a quay or submerged-structure inspection.

[Open the related interactive demo](#)



Roof inspection

Existing building model with roof measurements and condition indicators. Warehouse materials and defect performance still need validation.

[Open the related interactive demo](#)

Site and asset context

Static views of existing drone datasets. These images do not validate the synthetic pilot observations.



Carter Street recycling yard

Existing yard model with stockpiles and equipment. An adjacent operational workflow, not a validated transport-hub inspection.

[Open the related interactive demo](#)



Pilgrim Park property records

Existing commercial precinct model. Building and site records illustrate asset context for review and reporting.

[Open the related interactive demo](#)

Additional model previews

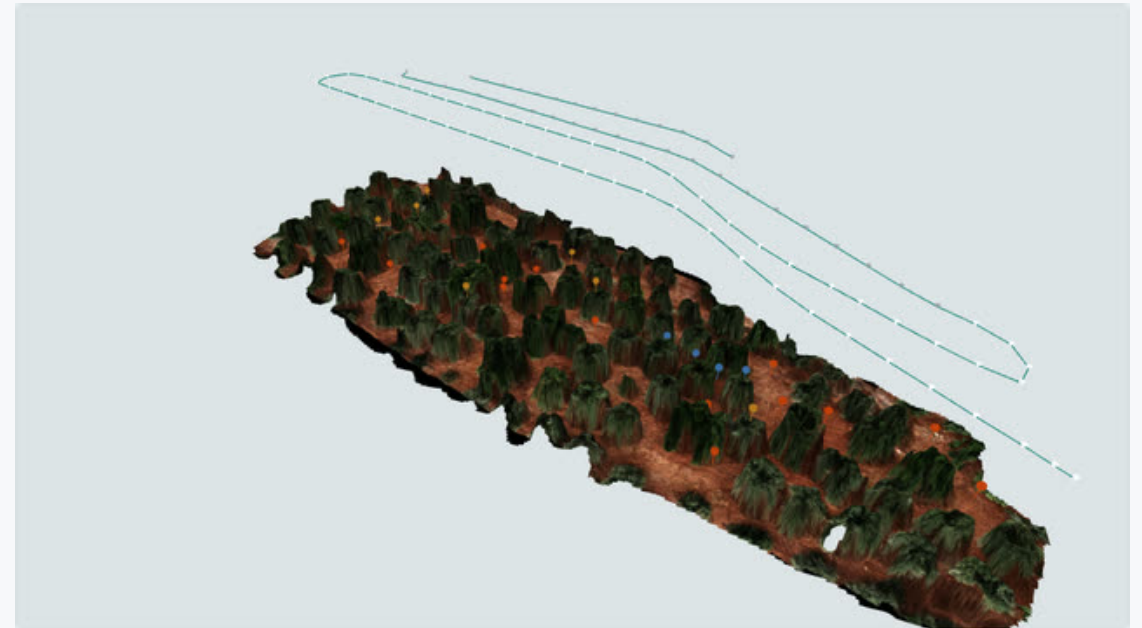
Static views of existing drone datasets. These images do not validate the synthetic pilot observations.



Newington suburban roofs

Local roof-model preview covering a residential street. It is included here as an adjacent dataset; use the roof inspection link for the published related demo.

[Open the related interactive demo](#)



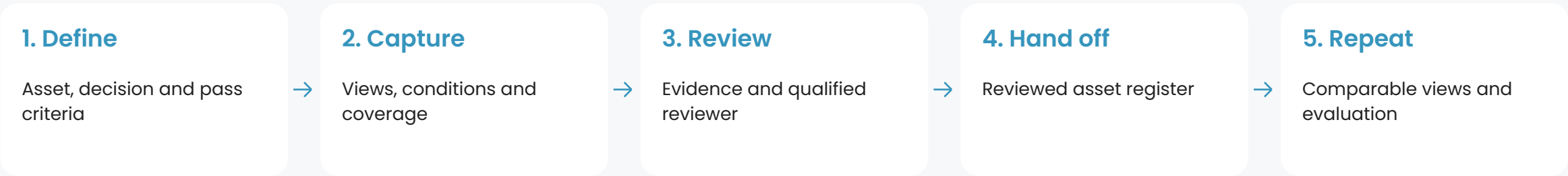
Olive grove inventory

Existing agricultural model with tree inventory and canopy analysis.
Included for visual completeness, not as proof of infrastructure-inspection accuracy.

[Open the related interactive demo](#)

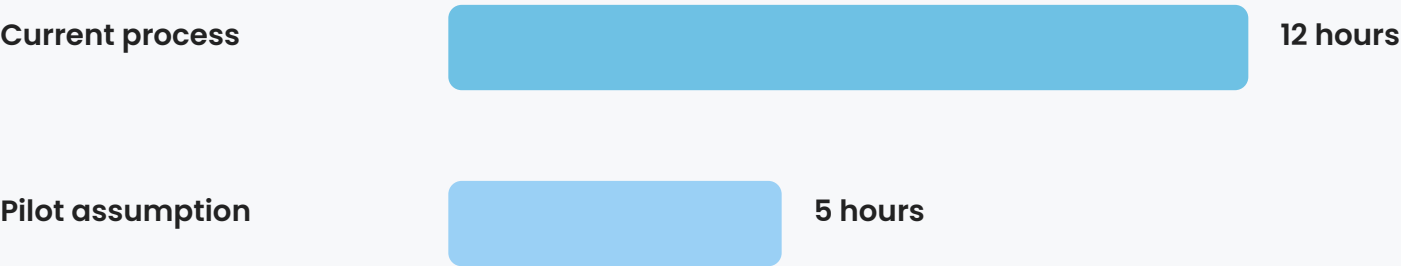
Review, handoff and inspection effort

Workflow and illustrative assumptions. No measured savings, automated maintenance decisions or live integration are implied.



Illustrative total effort per inspection

Capture + processing + review + reporting



84 hours / year

(12 - 5) hours x 12 inspections

Illustrative released capacity. Not guaranteed cash savings.

Review decisions: request closer capture, refer to a qualified inspector, monitor next visit, or dismiss after review. Keep the asset ID, original evidence and decision together in the register.

[Explore the interactive infrastructure pilot](#)