

Shared Artifact Schema

Every artifact in the GROW library — substrate, Systems, Execution, Trust, Coordination — opens with a YAML frontmatter block matching this schema exactly. The schema is the contract that makes cross-module wiring, evaluation gating, and registry queries deterministic. Artifacts missing a required field, or carrying disallowed enum values, fail the builders evaluation gate by definition.

Required Fields

id — Stable kebab-case identifier. Must match the filename slug (<id>.md). Globally unique across the library. Never renamed once status: shipped; superseded artifacts increment major version or get retired explicitly.

module — The GROW module ID, one of S1–S10 or substrate. This is the stable module identifier from the roadmap and does not track cluster order. The roadmap deliberately decouples module ID from course order: Course 6 (Compute Economics) is module S7; Course 7 (GovTech Compliance) is module S6. The module field is for traceability to the roadmap, not for cluster validation.

course — Integer 1–10 matching the course number (the cluster-ordered position in the roadmap), or the literal string substrate. The course number — not the module ID — drives cluster placement, artifact prefix, and directory. Course 6's module is S7 but its course number is 6, its prefix is e6, and its cluster is execution.

cluster — One of systems, execution, trust, coordination, or substrate. Validation rule (course-driven, corrected in v0.2.0): cluster must agree with the course number — courses 1–3 → systems; 4–6 → execution; 7–8 → trust; 9–10 → coordination. The prior v0.1.0 rule keyed cluster off the module ID and is retired because it mis-binds the two modules whose ID and course order differ (S7/Course 6, S6/Course 7).

Artifact-id prefix convention. Cluster artifact ids and filenames carry a cluster-letter + course-number prefix that encodes the course unambiguously: s1–s3 (systems), e4–e6 (execution), t7–t8 (trust), c9–c10 (coordination). The prefix tracks the course number, so it is stable even where the module ID differs (Compute Economics = e6- though its module is S7). Substrate files carry no prefix.

artifact_type — One of template, register, policy, spec, checklist, matrix, playbook, map, schema, glossary, report. Drives downstream tooling: registers expose tabular payloads, policies gate behavior, specs define contracts, checklists produce yes/no evidence.

version — Semantic version (MAJOR.MINOR.PATCH). MAJOR bumps on breaking schema or contract change. MINOR on additive field or new row class. PATCH on editorial fix. Pre-ship artifacts start at 0.1.0.

owner — Free-text string identifying the human or role accountable for the artifact. Not an email — a name or role tag ("GROW Library", "S1 Course Lead").

upstream_deps — List of artifact id strings this artifact reads from. Empty list [] if none. Used to compute the dependency DAG at gate-check time.

`downstream_consumers` — List of artifact id strings that read from this artifact. Empty list [] if none. Must be reciprocal with the consumer's `upstream_deps`; mismatches fail integration check.

`status` — One of draft, reviewed, shipped. draft = in progress. reviewed = peer-checked, contract-conformant, awaiting gate. shipped = passed the builders evaluation gate and locked.

`last_reviewed` — ISO date YYYY-MM-DD. Reset on every substantive edit. Artifacts older than 180 days auto-flag for re-review.

`evaluation_gate_ref` — Slug pointing to the gate that validates this artifact. Substrate and Systems artifacts reference `builders-evaluation-gate`. Cluster-specific gates override later.

Validation Rules

1. All twelve fields present; none null or empty (except `upstream_deps` and `downstream_consumers`, which may be []).
2. `course/cluster` agree per the course-driven rule (1–3 systems, 4–6 execution, 7–8 trust, 9–10 coordination); `module` is a free roadmap reference not bound to cluster.
3. `id` matches filename, and the `id` prefix matches the course (`s/e/t/c` + course number) for cluster artifacts.
4. `artifact_type` drawn from the enumerated list (template, register, policy, spec, checklist, matrix, playbook, map, schema, glossary, report).
5. `version` parses as semver.
6. `last_reviewed` parses as ISO date and is not in the future.
7. Reciprocal dep links resolve to existing artifact ids.

Example Frontmatter

```
---
id: s1-failure-mode-register
module: S1
course: 1
cluster: systems
artifact_type: register
version: 0.3.0
owner: "S1 Course Lead"
upstream_deps: [shared-artifact-schema, glossary]
downstream_consumers: [s2-eval-test-seed-matrix, s1-hitl-review-policy]
status: reviewed
last_reviewed: 2026-05-20
evaluation_gate_ref: builders-evaluation-gate
---
```

Cross-cluster example showing module/course decoupling (Compute Economics):

```
---
id: e6-routing-policy
module: S7          # roadmap module ID
course: 6           # cluster-ordered course number – drives cluster + prefix
cluster: execution
```

```
artifact_type: policy
version: 0.1.0
owner: "GROW Library"
upstream_deps: [e6-quality-cost-matrix, s1-threshold-escalation-spec]
downstream_consumers: [s2-audit-trail-schema, s1-hitl-review-policy, e6-latency-budget-spec]
status: draft
last_reviewed: 2026-05-29
evaluation_gate_ref: builders-evaluation-gate
---
```

Change log

- 0.3.0 — 2026-05-29. Added report as an allowed artifact_type enum value (in the field definition and Validation Rule 4) — the integration gate/reconciliation artifacts legitimately use report. Corrected the validation-rule field count (eleven → twelve). Fixed the first example frontmatter to obey the prefix rule (failure-mode-register → s1-failure-mode-register; downstream_consumers → s2-eval-test-seed-matrix, s1-hitl-review-policy).
- 0.2.0 — 2026-05-29. Corrected the cluster-agreement rule to be course-driven (courses 1–3/4–6/7–8/9–10 → systems/execution/trust/coordination) instead of module-driven, resolving the S7/Course 6 and S6/Course 7 mis-binding. Documented the s/e/t/c + course-number id-prefix convention. module is now an unbound roadmap reference.
- 0.1.0 — 2026-05-28. Initial schema.