SEAGLASS FOUNDRY

Forged For Speed. Refined by Craft.

AI AGENT BUILDERS

ForgeData™

Geospatial Data Routing, Native to MCP

ForgeData™ is a data-intelligence layer that speaks the Model Context Protocol: a 49-tool server an agent hands a data question to — *which dataset covers this area at the right resolution, and what does it cost to read?* — and gets back a ranked, costed answer instead of a hardcoded file path. It turns a dozen incompatible sources into one query surface, remembers what was already computed, and fails with structured errors an agent can branch on rather than a wrong dataset.

49

MCP tools over stdio JSON-RPC

query, route, publish, sync, and verify — one server surface

1 call

intent in, ranked answer out

name an operation and an area; get best-fit candidates, costed and deduplicated

13 → 1

sources behind one interface

PostGIS, STAC, ArcGIS, WCS/WFS, S3 COGs, OSM, and more

Route, don’t hardcode

A conventional agent bakes in which file to open and breaks when the data moves. ForgeData ranks candidates by coverage, then resolution, then extent-fit, with access cost as the deciding tiebreaker, and dedups overlapping tiles to a minimal covering set — so the agent asks by intent and the routing follows the data.

Structured refusal

When nothing covers an area or a read is unsupported, ForgeData returns a typed error code with a reason — *aoi_out_of_coverage*, *windowed_read_unsupported* — not an empty success or the nearest wrong tile. An agent branches on the code instead of trusting a plausible result.

Memory of prior work

Computed a slope raster once? Register it back, and the next routing call surfaces the cached product ahead of recomputing. Derived-product memory is inspectable and lives in the catalog, not baked into a prompt — so multi-step workflows compound instead of repeating.

CONTINUED ON REVERSE →

WHO THIS IS FOR

Agents that reason about real geometry

An agent that asks what overlaps what, what is visible from a vantage point, or where a constraint is satisfied needs the underlying data to be correct, not merely present. ForgeData exposes the suite's data surface by intent, so the calling agent does not need to know projections, schemes, or which tile lives where — it names the operation and gets the right dataset.

MCP-native runners and orchestrators

ForgeData drops into MCP-native agent runners as a tool provider. ForgeMind and ForgeGIS Studio already consume the same surface; a third-party agent uses the identical stdio JSON-RPC contract. File paths come back as absolute paths external readers can open, so a downstream compute step needs no glue.

Builders shipping multi-tenant or edge data packs

The catalog is one portable GeoPackage with the source recipes inside and no secrets baked in. Federate several bucket catalogs behind one logical surface — reads fan out and merge with namespaced IDs — or ship a single curated bundle to an edge host. Same query contract either way.

PROOF POINTS

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operations bound to data requirements

routing is a registry lookup, not per-operation conditionals you maintain

5

access tiers, self-calibrating

remote-COG cost learns measured latency after the first read, persisted

2-way

MCP-consistent surface

the same tools ForgeMind and Studio drive, available to any MCP client

Graceful with sparse metadata. Coverage and resolution are the primary sort keys, so thin or unknown metadata yields a coarser ranking, not an empty result. Unknown-resolution rows are kept; imagery with an unknown band count falls back to an unfiltered category query so single-band sources still route. Richer metadata sharpens the answer; it is never a precondition for getting one.

Publish from the agent. An agent-computed raster contributes back in one call: ForgeData probes it, copies it into hash-sharded managed storage, computes SHA-256, and registers a provenance-stamped row — idempotent, so re-publishing the same bytes is a silent no-op rather than a duplicate.

Build with ForgeData

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A Technical Brief with the architecture, the cost model, and MCP integration contracts is available on request. An evaluation build is available to qualified teams.