SEAGLASS FOUNDRY

Forged For Speed. Refined by Craft.

ForgeData™

The Data-Intelligence Layer of the Forge Suite

ForgeData™ is the component that decides *which* geospatial data to use and *how* to get it. A modern workload pulls elevation, imagery, hydrography, and point clouds from a dozen incompatible places; ForgeData answers, on every request, which datasets cover the area, which are at the right resolution, which is cheapest to read, and whether the suite already computed the result. It is bundled with the Forge suite — never sold separately — so ForgeGIS, ForgeMind, and ForgeGIS Studio stay focused on what each does best.

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heterogeneous sources, one interface

PostGIS, STAC, ArcGIS, WCS/WFS, S3 COGs, and more — one ranked answer

Single

portable catalog file

all state in one GeoPackage; safe to copy, ship, or air-gap

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MCP tools

the same surface ForgeMind and Studio consume over stdio JSON-RPC

What it is

ForgeData sits beneath the suite and owns the cross-cutting problem of data discovery and access. It keeps one catalog — what you can query and the recipes that refresh it — and routes every request to the best-fit dataset across local files and remote services alike, with no hardcoded paths and no per-project glue.

Why it matters

Most platforms make the customer build the routing layer themselves: bespoke catalog tables, hand-maintained config, hardcoded paths nobody wants to own. ForgeData ships that layer in the box, so the suite works against a realistic, scattered data landscape on day one rather than after an integration project.

How it's built differently

The catalog *is* the configuration — recipes live in the same file as the inventory, so nothing drifts out of sync, and API keys stay in the environment, never the file. Routing is fidelity-first: coverage, then resolution, then extent-fit, with access cost as the deciding tiebreaker.

CONTINUED ON REVERSE →

WHO FORGEDATA IS FOR

Suite buyers who want it to Just Work against real data

When a ForgeMind workflow asks for a viewshed or a slope analysis, the agent does not need to know one dataset is a local SRTM tile and another is a remote COG on S3. It calls one operation and gets back a ranked, costed list — best-fit correct dataset first. No hardcoded paths, no “where is the right elevation data for Wyoming?” delays.

Teams with a heterogeneous data estate

PostGIS, STAC, ArcGIS REST, Overpass, OGC WCS and WFS, OpenTopography, NOAA, Copernicus, Mapzen Terrarium, TIGER/Line roads and addresses, S3/HTTP COGs, and plain local directories are all addressable through one query interface. The customer’s environment can be a mix; the suite sees one ranked answer.

Programs that ship catalogs to the edge

The entire catalog is a single GeoPackage file with the data-source recipes inside it and no secrets baked in. Pre-curated catalog bundles ship to field laptops, edge devices, or air-gapped sites and query on arrival — readable in QGIS or DB Browser if a non-Forge tool needs to inspect them.

PROOF POINTS

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spatial operations in the routing registry

each declares its data requirements, so routing is a lookup, not glue code

5

access tiers, cheapest to most expensive

remote-COG cost self-calibrates on measured latency after the first read

1

fat JAR, Java 17+

no native install step, no daemon, no schema migrations to run by hand

Pre-computed work is remembered. When ForgeGIS computes a slope raster over an area, the result registers back into the catalog as a derived product. The next request that needs the same thing finds it cheaply instead of recomputing — so over a long-running project, workflows get faster the longer the suite runs.

Healthchecks come built in. A *doctor* command and bulk presence-verification tooling identify orphaned files, broken sources, and stale catalog rows, so operators get a clear picture of catalog state without writing their own scripts.

Get the full Technical Brief

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A Technical Brief with the architecture, the cost model, and deployment guidance is available on request.