



PRODUCT BRIEF

GeoModel

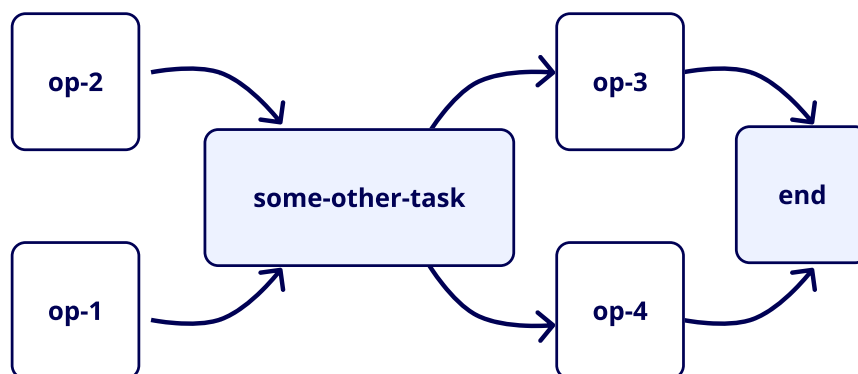
**Digital Framework That Automates
Spatial Workflows**

GeoModel Product Overview

GeoModel is a digital framework that automates spatial workflows by defining how data layers are created, processed, and published. It acts as the geospatial automation backbone that links business logic, data generation, and visualization.

By converting geospatial data processing, business logic, and delivery into structured, reusable pipelines, GeoModel reduces manual effort, ensures consistency, and accelerates the path from raw data to operational outputs.

GeoModel at a Glance



GeoModel provides:

- Business logic representation: Models and executes rules, workflows, and spatial calculations.
- Automated layer generation: Creates and publishes data layers across both vector and raster formats.
- Automated data processing: Processes geospatial datasets programmatically based on user-defined business rules.

Key Features and Capabilities



Digital Framework for Spatial Automation

Automates how spatial data layers are generated, processed, and exposed, establishing repeatable, rule-driven workflows.



Business Logic Automation Backbone

Applies user-defined rules, validations, and calculations across all data layers, turning complex GIS procedures into consistent, maintainable processes.



Automated Data Layer Creation & Publishing

Creates vector and raster layers based on configurable definitions and publishes them as web maps, feature services, or APIs without manual intervention.



API-Driven Integration & Orchestration

Integrates seamlessly with the Quartile GeoIntelligence ecosystem, enabling orchestration, monitoring, and consumption of models via standardized APIs.



High-Performance Batch and Real-Time Processing

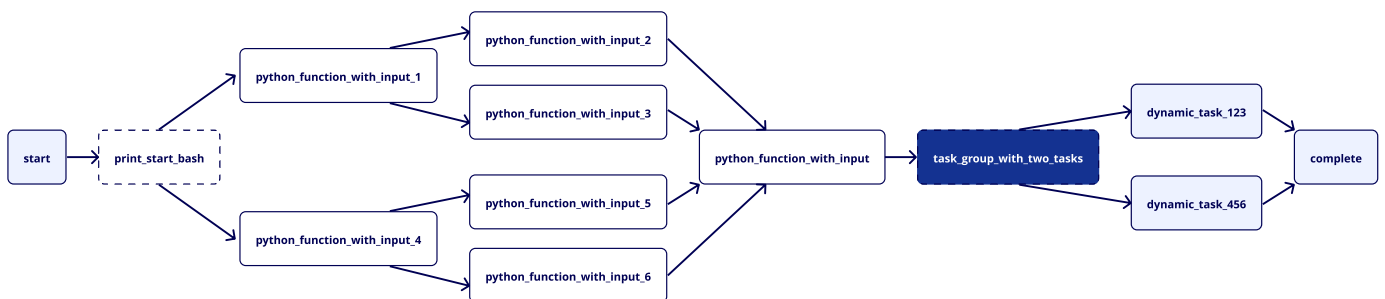
Executes large-scale spatial processing and real-time transformations using cloud-native infrastructure.

GeoModel Workflow Architecture

GeoModel includes two model types:

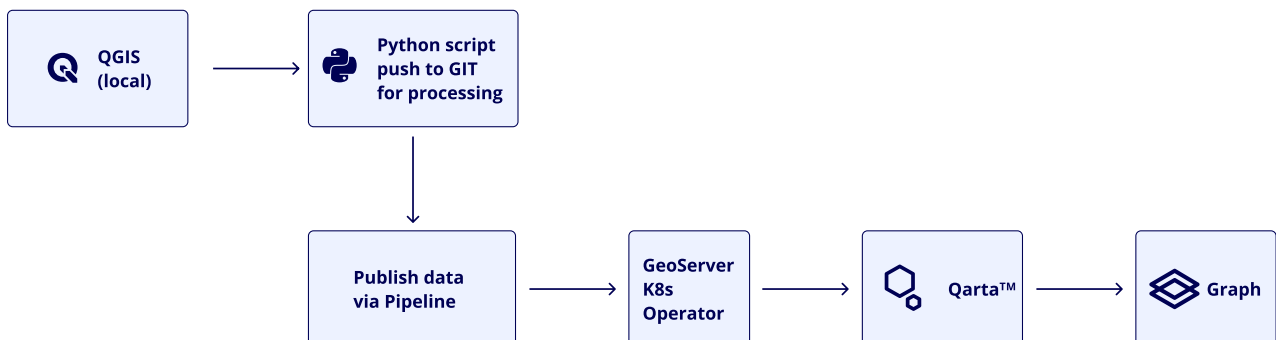
➔ Publish GeoModels

Define how spatial layers are delivered, controlling symbology, metadata, permissions, and publication formats for end-user access and visualization.



➔ Process GeoModels

Automate geospatial transformations and analyses, running server-side pipelines that support buffering, spatial joins, terrain analysis, data derivation, and more.



Business Benefits

✓ **Reduced Manual Work**

Automates geospatial processes so teams spend less time on repetitive tasks.

✓ **Faster Time to Value**

Accelerates the path from raw data to operational output through repeatable execution.

✓ **Operational Consistency**

Standardizes the creation, processing, and delivery of geospatial data across all business lines.

✓ **Workflow Orchestration**

Connects data inputs, processing logic, services, and visualization layers in one unified framework.

✓ **Operational Governance**

Provides structure and control for securely managing, extending, and scaling geospatial processes.

✓ **Reusable Execution**

Enables reusable spatial models across different teams, projects, and deployment environments.

✓ **Enterprise Fit**

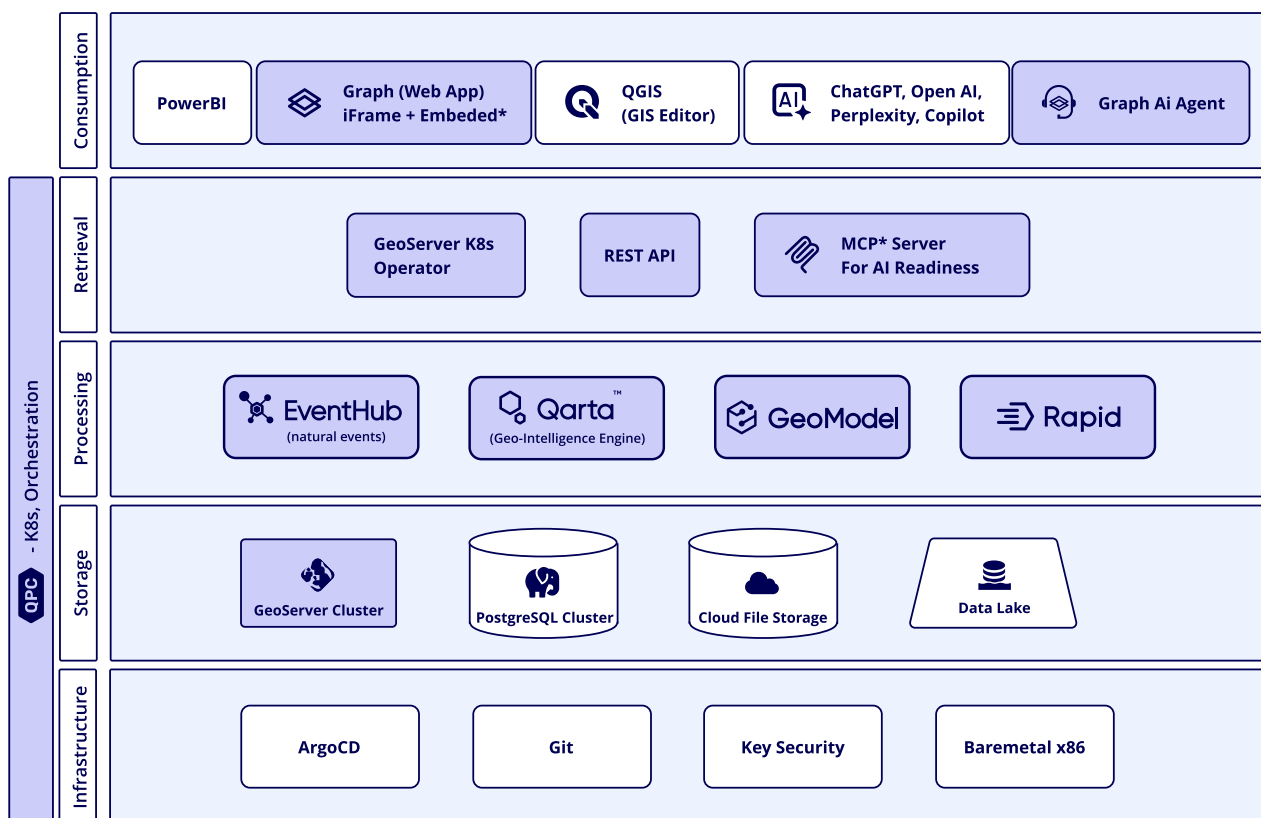
Replaces isolated scripts with a highly scalable, maintainable enterprise-grade system.

✓ **AI-Enabled Integration**

Optional AI integration via the [MCP Server](#) enables governed interaction with GeoModel workflows across the Quartile ecosystem.

GeoModel in the Quartile Ecosystem

GeoModel forms the automation layer within Quartile's cloud-native GeoIntelligence stack. It powers data preparation, processing, and publishing for a suite of products, ensuring reliable, AI-ready geospatial intelligence across the enterprise.



Qarta™ - a massively scalable geo-intelligence engine

Graph - a user-friendly location intelligence web application

Graph AI Agent - a chat interface to interact with geospatial data

Rapid - a blazing-fast vector and raster geo-enrichment API

EventHub - a real-time natural event capturing data hub

QPC - a unique Kubernetes orchestration and automation offering

MCP* - Model Context Protocol for AI integration and AI readiness

GeoModel - a digital framework that automates spatial workflows

Geoserver K8s Operator - streamlines configs and lifecycle mgmt of GeoServer-Cloud microservices using K8s-native tools

Who is This For?



Strategic Decision-Makers & Analysts

Automate complex analytics and scenario simulations with validated, repeatable workflows.



GIS Architects & Analysts

Build scalable, API-driven geospatial infrastructures that reduce manual processing and standardize data delivery across the enterprise.



Operations & IT Teams

Implement secure, maintainable automation that integrates cleanly with existing enterprise systems and cloud-native environments.



Public Sector & Utilities

Enhance environmental modeling, spatial event analysis, and asset management with automated, high-performance geospatial processes.



Quartile is an innovative company founded to help organizations harness the power of geospatial information and drive informed decision-making for their businesses. We use cloud-native technology and are enterprise-ready, delivering geocontent in a fast, flexible, and secure way for the world's largest corporations. Businesses use our products and services to translate real-world geospatial information into actionable insights and reach their full geolocation potential.



Ready to automate your geospatial workflows?

Reach out at **contact@quartile.ch**

Company Information

Headquarters: Baden, Switzerland
Development Centers: Arad and Timișoara, Romania
Founded: 2018
Core Expertise: Cloud-native
GeoServer-as-a-Service in any environment

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