

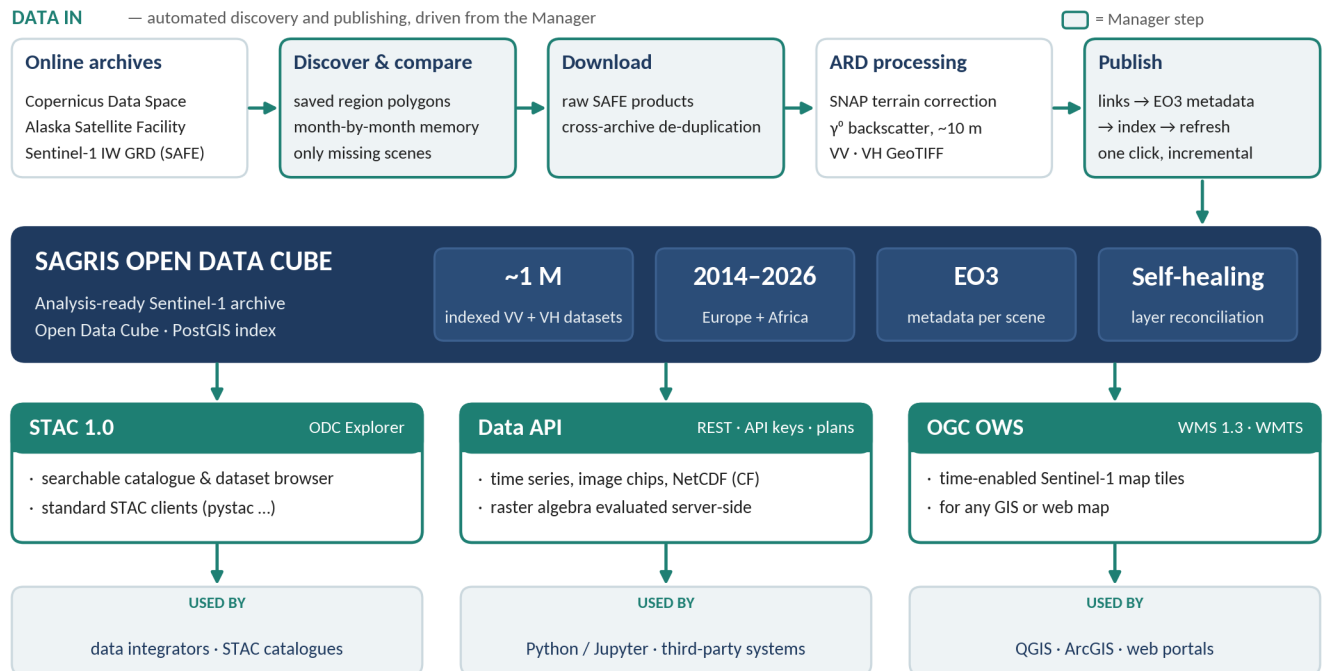
SAGRIS Open Data Cube

From raw Sentinel-1 archives to open-standard analytics — one managed platform

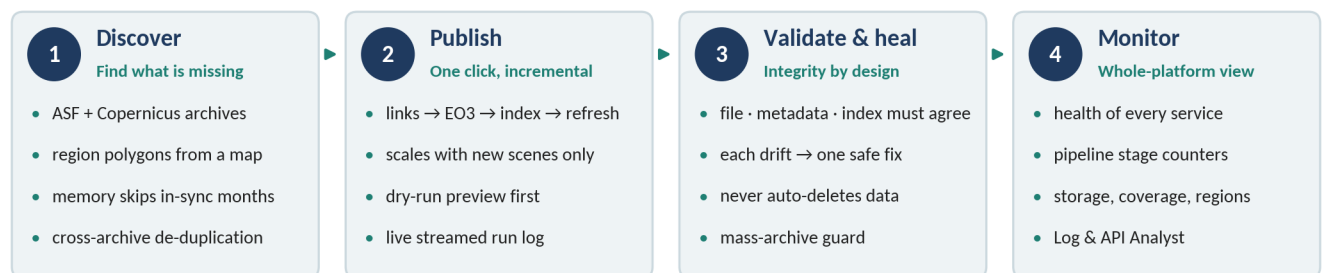
An ESA-developed Earth-observation platform by Geomatrix UAB: automated ingestion, a single analysis-ready index, and full STAC + API + OWS access — operated from one control panel.

SAGRIS ODC turns the Copernicus Sentinel-1 radar archive into an analysis-ready data cube that any client can use. New scenes are found in the online archives, processed to terrain-corrected γ^0 backscatter and published into **one Open Data Cube index**. From that single index, **three open interfaces** — a STAC catalogue, a REST Data API and OGC map services — are refreshed together, so every scene that is searchable is also queryable and mappable. The **Manager** control panel runs and verifies the whole chain, and **built-in applications** let users test every capability and design new index formulas.

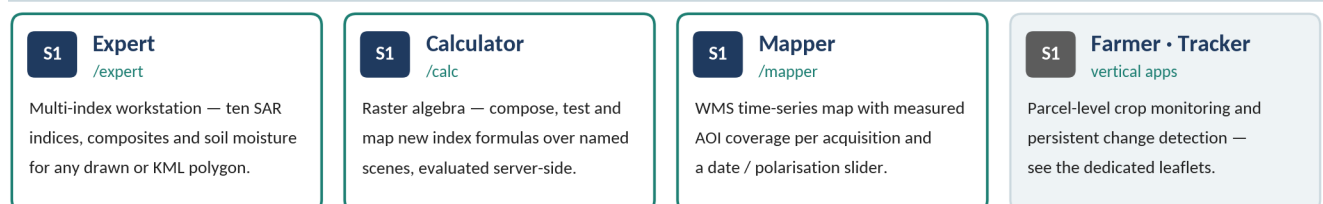
One cube, three open standards



Manager — one control panel for the whole pipeline



Built-in applications — test every capability



Open and portable. Built on Open Data Cube, PostGIS, EO3 / STAC and OGC standards — no vendor lock-in. The architecture is mission-agnostic: it extends from Sentinel-1 to other calibrated SAR and optical missions and can be deployed on national infrastructure.

Operating a continental Sentinel-1 data cube from one screen

S1 ODC Manager CONTROL PANEL

Overview

Essential tasks

- Profile setup
- Publish new data
- Preview sync
- Downloads
- Validate consistency
- Log analysis

Pipeline stages — image counts

Stage	Count
IMAGES	1,023,812
SYMLINKS	838,508
PREVIEWS	926,852
METADATA	999,956
INDEXED	999,022

Service health

Service	Status	Count
VV DATASETS	499,511	
VH DATASETS	499,511	
ARCHIVED (VV)	31	
REGION	EUROPE	
API-ERROR	ERROR	2,921 err · 601v
API-ACCESS	OK	0 req · 0.0% 5xx
MANAGER-ERROR	ERROR	597 err · 267v
MANAGER-ACCESS	OK	674 req · 0.0% 5xx
FRONTIER-ERROR	ERROR	2,178 err · 385v
FRONTIER-ACCESS	OK	0 req · 0.0% 5xx
OWS-ERROR	ERROR	1,485 err · 199v
OWS-ACCESS	OK	0 req · 0.0% 5xx
EXPLORER-ERROR	WARN	26 err · 38v
EXPLORER-ACCESS	OK	4 req · 0.0% 5xx

```

Publish new data    -65-15 min for a normal day

Run the full ingestion chain: scan NFS for newly-arrived TIFs, generate their YAMLS, inject into the STAC index, refresh Explorer. Use this after fresh data lands on the NFS shares.

Chain: SymLinks (detect new) → YAML (process incoming) → Indexing (inject + refresh) → Explorer + OWS refresh

o Publish new data    ☐ Dry-run (preview without writing anything)

PUBLISH-NEW-DATA - PROFILE S1_EUROPE / FINISHED IN 22M 23S  [Stop]

Deriving extents from materialised views and/or spatial indexes
Done.
Done.
[3/4] refreshing ranges for sagris-s1-rtc_vh_img_europe
Deriving extents from materialised views and/or spatial indexes
Done.
Done.
[4/4] restarting databcube-ows.service - ranges are read at startup
OWS restarted - time dimension now advertises up to 2026-09-24
— Publish check - YAMLS on disk vs indexed —
2026: 100528 YAML on disk - 100528 indexed - consistent

Publish new data - complete

```

The full ingestion chain in one click: detect new files, generate EO3 metadata, inject into the index, then refresh the STAC Explorer and OWS map services.

[illegible]

S1 ODC Manager

- Overview
- Storage
- Synlinks
- Previews
- Metadata
- Indexing
- Operations
- Downloads
- Coverage
- Regions**
- Maintenance
- LOG Analyst
- API Analyst

Sentinel-1A RD publishing PROFILE SL RUMORI Europe + LIVE Help SIGNAL-WAITING@MAIL.COM ADMIN helpdesk@slim.eu SLIM OFF Deflate

Build new region click a country - link "individual parts" to pick a single part (e.g. Schleswig-Holstein, Bremen)
No countries selected. Click a country on the map.

empty Inheritance: 0.16 select individual parts - select countries to see preview -

were_11_etc_1022_deg° 300 km configured as defaults only points points Restore default close



A map of Europe with several countries highlighted in pink, indicating they are part of the selected region. The highlighted areas include Denmark, Germany, Poland, Czech Republic, Slovakia, Austria, Hungary, Switzerland, Italy, France, Spain, Portugal, Greece, Turkey, and Bulgaria. Other countries like Sweden, Norway, Finland, Iceland, Ireland, United Kingdom, and Benelux are shown in grey.

name: MY_region description: optional overwrite if exists Save region Clear selection

Contact Geomatrix UAB · Mokslininkų g. 2A, Vilnius, Lithuania
www.geomatrix.lt · info@geomatrix.lt · +370 699 99940 · Service: odcube.landimage.info