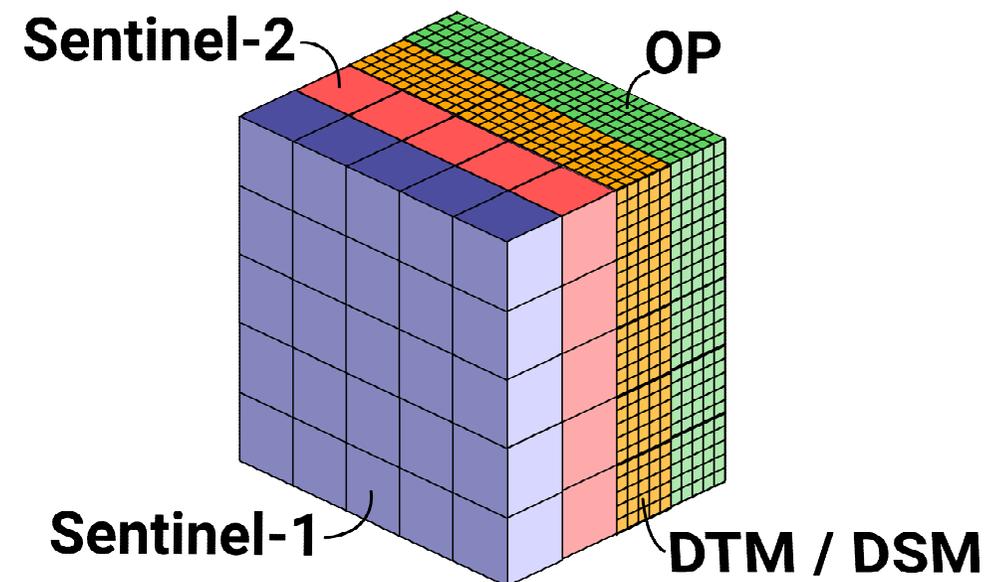


TOPO4E

# TOPO4EO

## Improved earth observation for monitoring the green transition by combining topographic and Copernicus data for Austria

**Sebastian Mikolka-Flöry**, Markus Hollaus,  
Benjamin Schumacher and Christian Briese

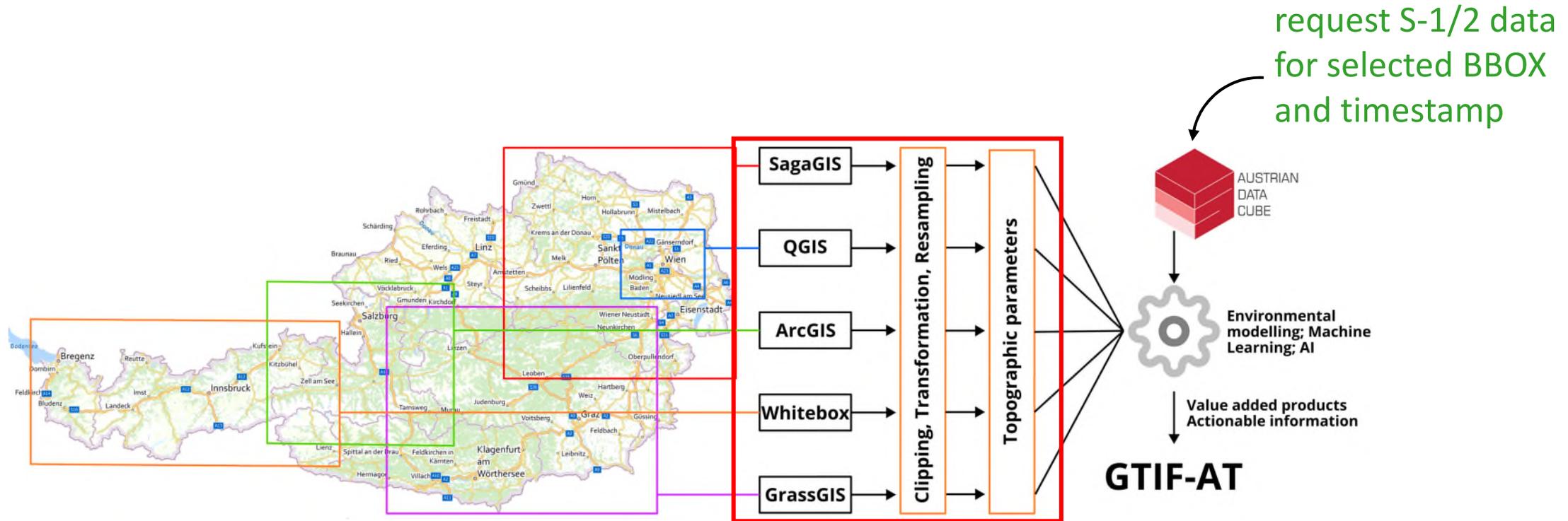


# Motivation

- satellite based EO often combined with **high-resolution topographic models**
  - processing and storage of both sources completely different
  - unified access to both sources would facilitate development of new methods

Sentinel-1/2	Topographic models
Stored and processed <b>centrally</b>	Stored and processed <b>locally</b>
Cloud computing infrastructure	Processed <b>locally</b>
Direct access with various software	<b>manual download</b>

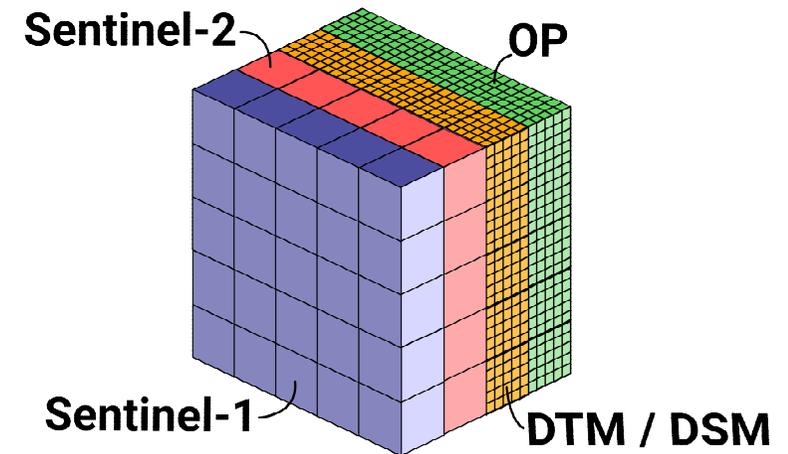
# Motivation



- Download individual tiles
- Merge, transform, reproject
- Calculate topographic parameters

# Aim

- unified and simplified access to all high resolution topographic datasets of Austria
  - conversion into cloud optimized formats
  - integration into STAC catalogue
  - unified access with S-1/2 data
- demonstration through selected use cases
  - Sentinel-1 based forest disturbance
  - Above ground biomass
  - Natural retention ponds



# Current status

- most recent release of the DTM, DSM and nDSM are available through EODCs STAC catalogue:
  - <https://services.eodc.eu/browser/>
- currently preparation of all public countrywide
  - topographic models i.e. DTM, DSM (1m x 1m)
  - orthophotos i.e. RGB + NIR (0.2m x 0.2m)

## EODC Data Catalogue

[Browse](#) [Search](#)

### Description

A STAC-compliant API to query for metadata within the EODC Data Catalogue.

Catalogs 1/57 [Tiles](#) [List](#) [Ascending](#) [Descending](#)

[Topographic data](#)



### Topographic datacube Austria

Topographic datacube of Austria containing the digital terrain (DTM), surface (DSM) and normalized surface (nDSM) model in EPSG:3035/EPG:9274.

1/1/2006, 12:00:00 AM UTC - 12/31/2024, 12:00:00 AM UTC

# Hands-on workshop

- You are using DTM/DSM together with S-1/2?
- You see potential for your work / project?
- **Hands-on workshop:**
  - **11.12 – 14:00 – 15:00**
  - Demonstration of access through Python and QGIS
  - <https://tuwien.zoom.us/j/62252439843?pwd=MaZ41QwdOysP3SmoC2WTyLW0f2l8m9.1>



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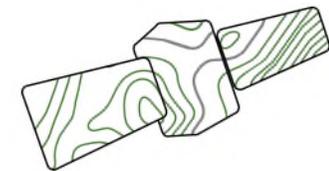
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# Thank you for your attention!

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**BFW**  
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