

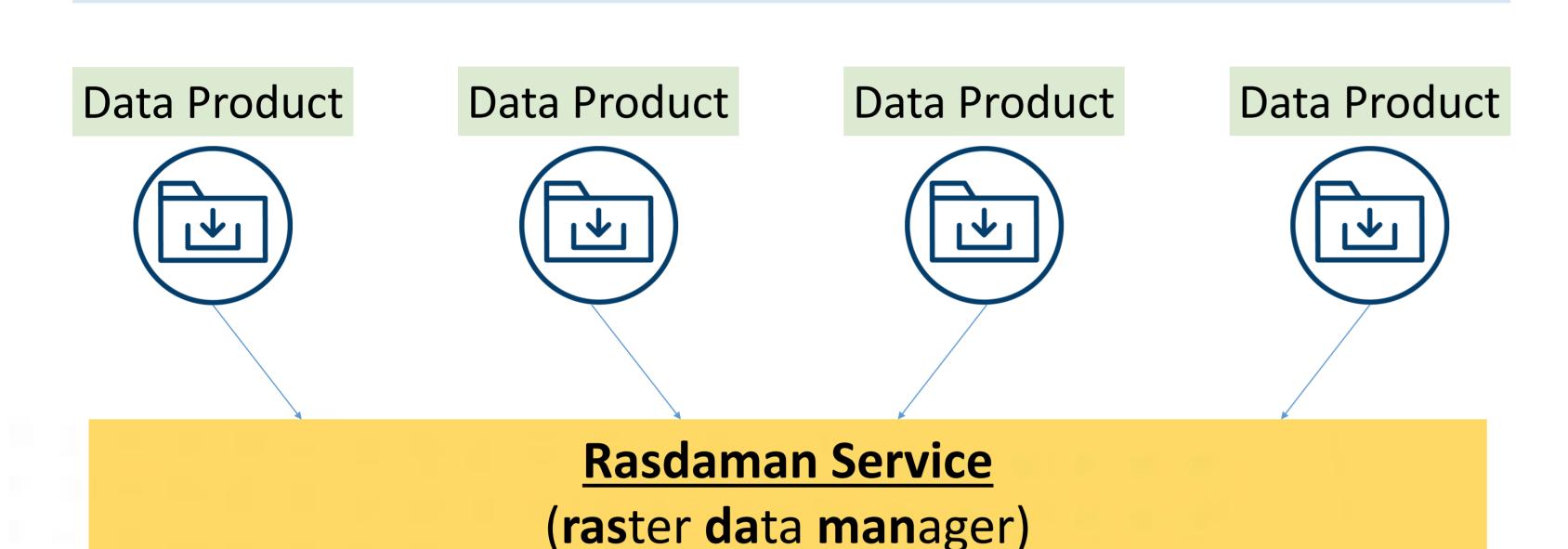
# Geodata enrichment for air quality

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# **TOAR** database

A database containing more than 100,000 time series recording surface level ozone measurements, ozone precursors and other meteorological data (e.g. temperature) from more than 10,000 measurements stations around the globe.



Send service and area to extract

Return all extracted data points

#### **GEO-PEAS**

(Geospatial Point Extraction and Aggregation Service)

- Exposes REST APIs to the user
- Each endpoint lets the user extract one specific dataset
- Define areas with latitude, longitude and radius
- Some services also have a time axis to allow extraction from different time periods
- With a radius the user can also define an aggregation method (e.g. mean, max, min, ...)

#### **Metadata enrichment**

We augment provider metadata information for the measurement stations with globally consistent information derived from multiple Earth Observation data products. This adds additional context to the description of measurement locations and thereby enriches the analysis possibilities.

# **Copernicus Sentinels**

In addition to retrieving data from the rasdaman service we could extract data from the Copernicus Open Access Hub and use the same infrastructure and outputs already known to the user.

Send service and area to extract

Return all extracted data points

Return

"type": "Feature",

Aggregate and return GeoJSON

Send request

### Request

.../service\_name/?lat=50.9&lon=6.4&year=2012&radius=1000&agg=mean

# **Service Arguments**

Lat - Latitude of area of interest

lon - Longitude of area of interest

year - Year of interest

radius - Area of interest around lat and lon [in meters]

agg - Aggregation method



