

GeoRhena

Breaking down borders and administrative levels through data interoperability

Stéphane RITZENTHALER

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A brief overview of GeoRhena



The Upper Rhine region, situated between three countries.

Funded three times trough INTERREG programmes, it now operates independently. 25 years of existence.

Covering a range of topics, with the primary mission of sharing data and providing technical support on cartographic aspects for cross-border projects (bottom-up).

Data portal : https://geoportal.georhena.eu/datahub

The origins of the need for interoperability

GeoRhena

INSPIRE Directive (Directive 2007/2/EC

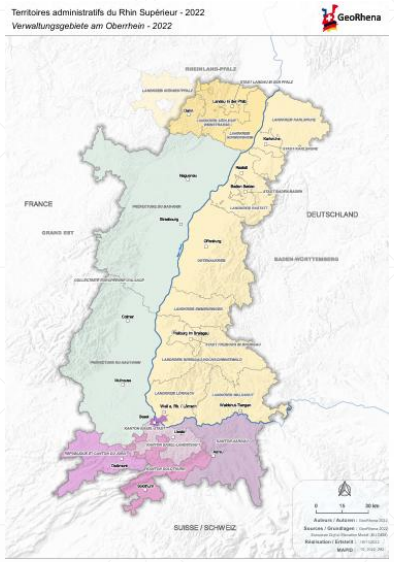
→ Facilitate **data sharing** between public authorities and ensure that spatial data is accessible under harmonized conditions.

The technical tools (free and open-source) that form the basis of GeoRhena were originally designed to comply with the INSPIRE Directive.

- The use of standards, particularly in relation to metadata, has enabled the effective sharing of multilingual data across the Upper Rhine region.
- This directive, which was originally intended for spatial data, has demonstrated the value of interoperable systems and has led to the development of particularly effective tools for sharing data

Data Sharing

Sharing of data at various levels, depending on our partners' needs.



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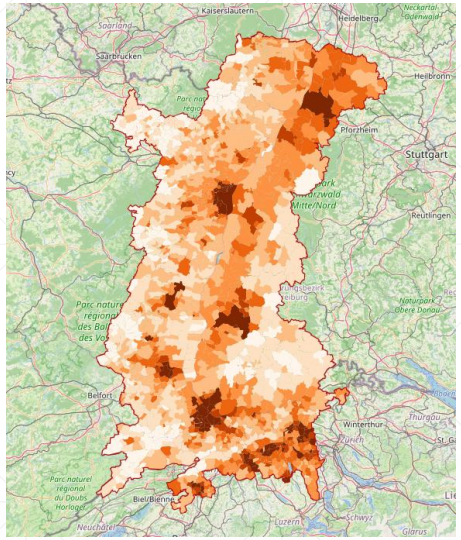
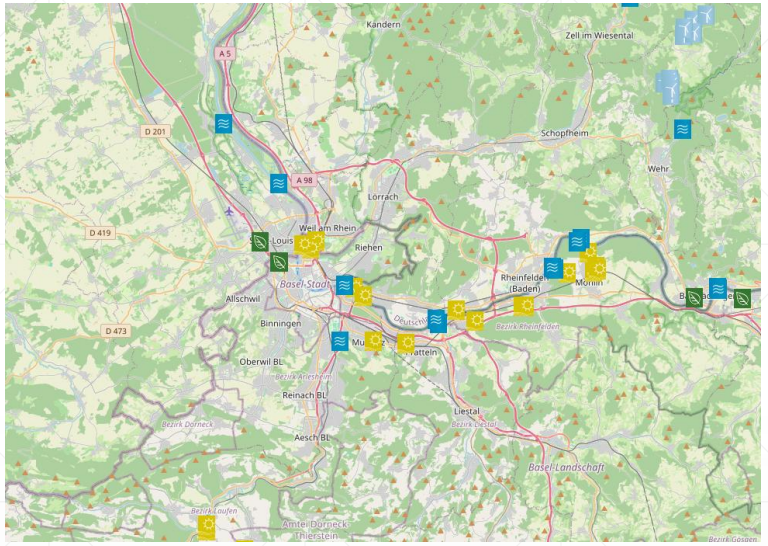


LAU



Detailed data

Almost 100% of the data is open data and accessible via two types of services:

Data visualisation services: Use of mapping standards (Open Geospatial Consortium) such as Web Map Services

Data download services: Use of mapping standards (Open Geospatial Consortium) such as Web Features Services and also 'new ways of sharing', such as API Features.

Various formats are currently available: Shapefile, GeoPackage, JSON, CSV, Excel….

Why metadata is important

Metadata = Data that describes data



DATA

METADATA

File name: orange_cat.jpg

Format: JPEG

Size: 3.2 MB

Author: Sarah Johnson

Date: 15 May 2026

Keywords: cat, pet, feline

Location: London, UK

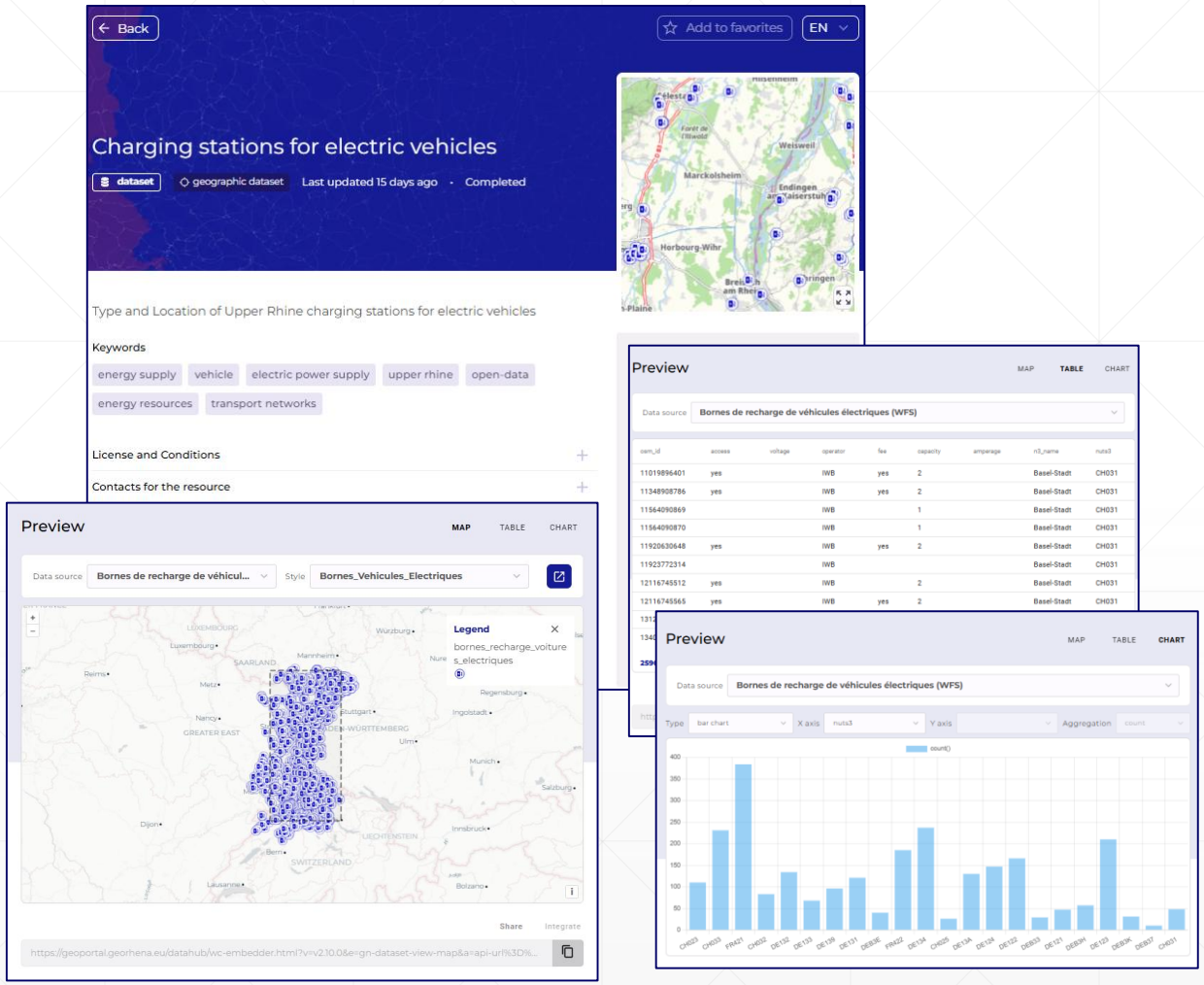
Facilitating reuse of data

Data referencing

Ability to work in multiple languages

Automation of harvesting between catalogues

Practical examples of interoperability





GeoRhena metadata in the Swiss National Catalogue

GeoRhena metadata in the « Grand Est » Regional Catalogue

Interoperability between components

Interoperability between partners

Future challenges

- Use a framework that is **less complex than the INSPIRE** technical specifications and **adapted to alphanumeric data**
- Continue to **use standards** for metadata, data formats and distribution methods
- Ensuring excellent data and metadata **quality**
- **Certify** the data?
- Adapting to **new data formats** (e.g. Parquet)
- Equipping ourselves with IT infrastructure and **sovereign** tools
- **Pooling** resources between public authorities

Issues relating to AI from the perspective of data providers

Thank you for your attention

www.georhena.eu

GeoRhena



Stéphane Ritzenthaler
GeoRhena (Upper Rhine Conference)