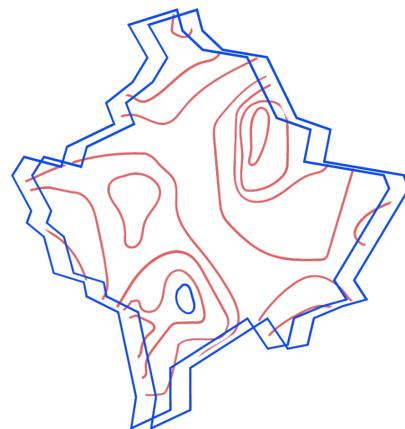




State of GeoNetwork



FOSS4G
Prizren, 2023

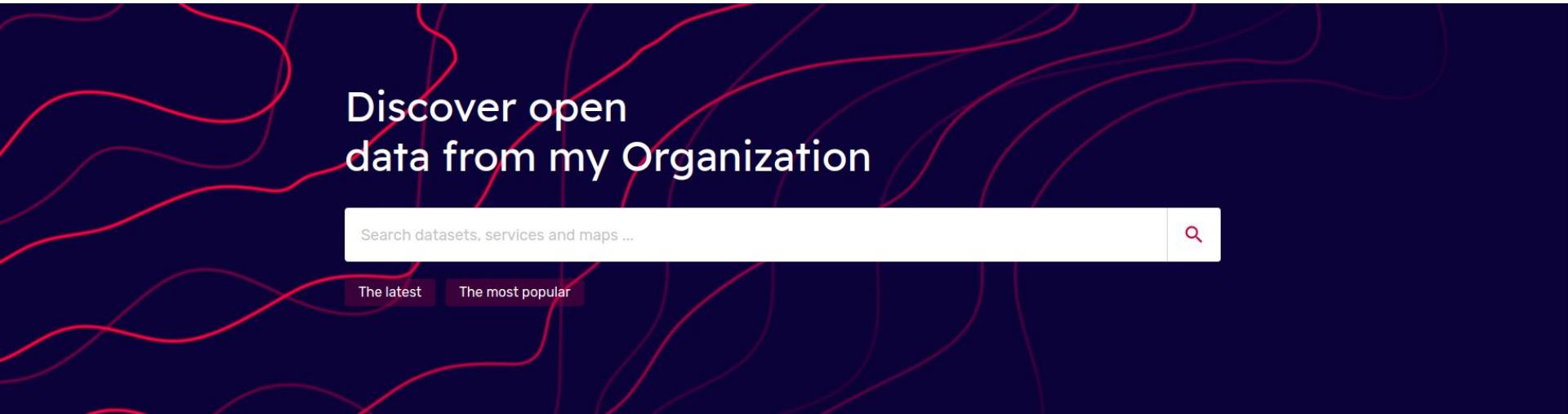


Florent Gravin



Jeroen Ticheler

The FOSS metadata catalog



Discover open
data from my Organization

Search datasets, services and maps ...



The latest

The most popular

What is GeoNetwork?

- Very comprehensive metadata editing and management tool
- The glue in a Spatial Data Infrastructure
- The Basic Building Blocks:

ISO TC211 Standards

OGC Standards (Open Geospatial Consortium)

Project history

Started in 2000 at Food and Agriculture Organization (FAO-UN)

- Code and issues on github
- ~1000 downloads per month
- Active global developer and user community

~85% of the current national INSPIRE end-points

This screenshot shows a web browser displaying the National Georegister website (nationalegeoregister.nl) for the BRT Achtergrondkaart dataset.

The page title is "BRT Achtergrondkaart".

The main content area includes:

- A search bar with buttons for "Terug naar zoeken", "Vorig", and "Volgende".
- Download and view options.
- A large thumbnail image showing a satellite view of a road and surrounding terrain.
- A section titled "Overzicht" (Overview) featuring a map of a city area.
- A "large_thumbnail" image showing a detailed view of a bridge or industrial structure.
- A "thumbnail" image showing a different perspective of the same or similar area.
- A section titled "Ruimtelijke dekking" (Spatial coverage) featuring a map of the Netherlands.
- Two "Downloads, views en links" sections:
 - "WMTS view service BRT achtergrondkaart, alle varianten":

Deze dataset is gepubliceerd in de view service (WMTS)
https://service.pdok.nl/brt/achtergrondkaart/wmts/v2_0?request=GetCapabilities&service=wmts met identificatie WMTS view service BRT achtergrondkaart, alle varianten.
 - "WMTS view service BRT achtergrondkaart, alle varianten":

Deze dataset is gepubliceerd in de view service (WMTS)
<https://geodata.nationalegeoregister.nl/tiles/service/wmts?request=GetCapabilities&service=wmts> met identificatie WMTS view service BRT achtergrondkaart, alle varianten. Deze viewservice wordt in oktober 2021 uitgefaseerd en tot die tijd niet meer bijgewerkt.
- Two additional "Downloads, views en links" sections:
 - "BRT achtergrondkaart Grijs WMTS":

De achtergrondkaart PDOK is de kaartlaag waarop locatiegebonden content wordt afgebeeld. De achtergrondkaart moet ervoor zorgen dat de eindgebruiker zich kan oriënteren tijdens het gebruik van geografische applicaties. Data automatisch gegeneraliseerd op basis van TOPoNL....meer...
 - "BRT achtergrondkaart Pastel WMTS":

Coralstaarde conica...

Powerful Metadata Editor

Tiendwegen

Categories ▾ Group ▾ Validate Cancel Save & close Save metadata

Identification info

Title ***** Tiendwegen

Date ***** Creation 07/06/2016

Citation identifier

Code ***** 6b95b19f-cbbe-4a2a-9de2-a8e180b261ac

Abstract ***** Tiendwegen zijn polderwegen als verbinding tussen bouw- en weilanden en de boerderijen. Tiendwegen zijn ontstaan als karrenpaden en lopen evenwijdig aan de ontginningsbasis van een polder. Ze staan haaks op de langgerekte kavels.

In deze dataset zijn de Tiendwegen opgenomen op basis van de gegevens van Paul Minkjan.

Purpose Het project 'Landschapsatlas'

Status Completed

Point of contact

Organisation name Individual name Electronic mail address Role

Validation

Overview



Choose or drop an image here

Associated resources

+ Add ▾

Online resources

Sort by Protocol ▾ Url Title

OGC:WMS <https://services.rce.gevoorziening.nl/landschap/tiendwegen>

OGC:WFS <https://services.rce.gevoorziening.nl/landschap/tiendwegen>

Administrative Interface

The screenshot displays the Geonetwork Enterprise administrative interface. The left sidebar contains a navigation menu with the following items:

- Summary (selected)
- Metadata and templates
- Users and groups
- Harvesting
- Statistics and status
- Reports
- Classification systems
- Settings
- Tools

The top navigation bar includes links for Search, Map, Contribute, Admin console (selected), and user authentication (admin/admin, ADMINISTRATOR). The language is set to English.

The main dashboard features a grid of icons and data summary cards:

Icon	Label	Description
Metadata and templates	Dataset	32
Users and groups	Service	7
Harvesting	service-download	4
Statistics and status	service-view	2
Reports	Feature catalog	1
Classification systems	service-OGC:WMS	1
Settings	RI_623	1
Tools	records in the catalog	41

OSGeo Project since 2007



GeoNetwork PSC

7 active members

Jo Cook
Jose Garcia
Paul van Genuchten
Florent Gravin
Simon Pigot
François Prunayre
Jeroen Ticheler

1 monthly meeting

Where are we now

3.12.10

Long term support (sustained through GeoCat GeoNetwork Enterprise)

4.2.4

Last stable branch

Implementing Standards



Open
Geospatial
Consortium®



International
Organization for
Standardization

OGC:API Records - Improve discoverability

Search GIS data

→ Find GIS data

The screenshot shows a Google search results page with the following details:

- Search Query:** High Resolution Layer: Tree Cover Density Change 2012-2015 (raster 100m)
- Number of Results:** Environ 27 900 résultats (0,55 secondes)
- First Result:**
 - Title:** geo.data.gouv.fr › datasets • Traduire cette page
 - Description:** High Resolution Layer: Tree Cover Density Change 2012-2015 (raster 100m), May 2018.
 - Details:** Type : jeu de données; Licence : non renseignée; Catégorie : imagerie, ...
- Second Result:**
 - Title:** sdi.eea.europa.eu › fise › api › records • Traduire cette page
 - Description:** High Resolution Layer: Tree Cover Density Change 2012-2015 ...
 - Details:** High Resolution Layer: Tree Cover Density Change 2012-2015 (raster 100m), May 2018. The high resolution forest product consists of three types of (status) ...
- Third Result:**
 - Title:** land.copernicus.eu › pan-european • Traduire cette page
 - Description:** High Resolution Layers — Copernicus Land Monitoring Service
 - Details:** Pan-European High Resolution Layers (HRL) provide information on specific land cover ... The main sources are now (since the 2018 reference year) the Sentinel ... Tree cover density, dominant leaf type and forest type products + new change ... features as vector product, but also available in 5m and 100m raster version.
- Fourth Result:**
 - Title:** hub.arcgis.com › datasets • Traduire cette page
 - Description:** Forest Type 100m 2012 | ArcGIS Hub
 - Details:** Title: High Resolution Layer: Forest Type 2012 (raster 100m), Apr. 2018 ... tree cover density change product for 2012-2015 (% increase or decrease of real tree ...)
- Fifth Result:**
 - Title:** geodcat-ap.semico.eu › resource • Traduire cette page
 - Description:** CSW-4-Web - Semantic Interoperability Community (SEMICO)

OGC API Records

Meeting in London (2022)

Meeting in Bussigny (2023)

Meet with the OGC community

Facets proposal



OGC API Records Part I core (draft)

ogc-api-records microservice

GET {root}/conformance

GET {root}/collections

GET /collections/{collectionId}

GET {root}/collections/{collectionid}/items

GET {root}/collections/{collectionid}/items/{recordid}

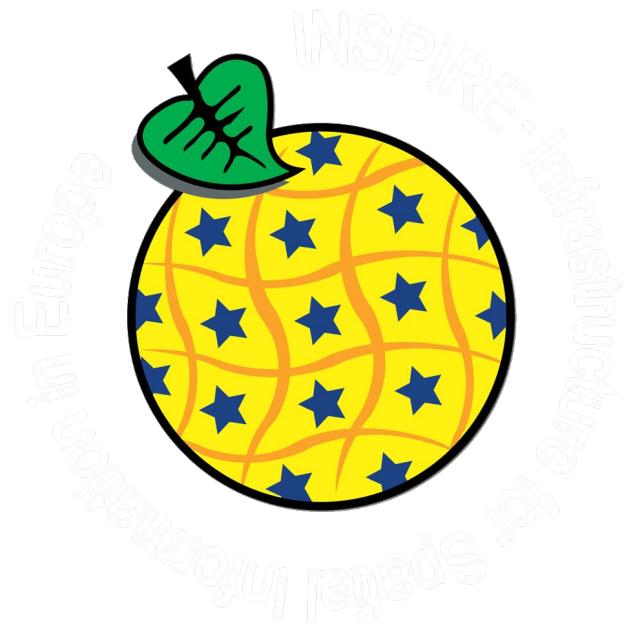


OGC API Records

Output formats

- HTML
- XML (ISO19139, ISO19115-3)
- JSON
- RSS
- DCAT
- Turtle
- Schema.org

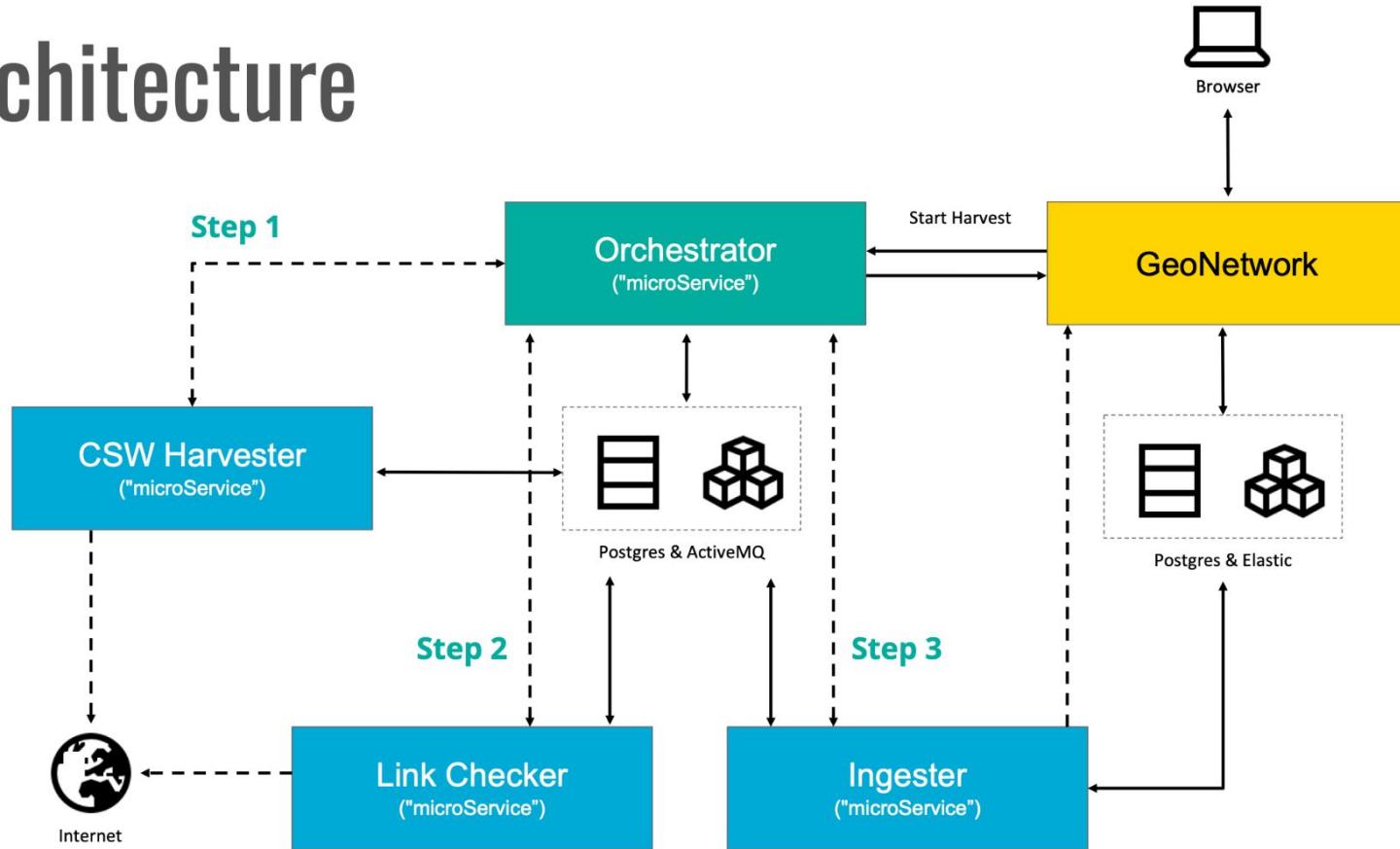
Supporting the INSPIRE Directive



The JRC INSPIRE Portal project

- Project to replace the existing EU Geoportal with GeoNetwork opensource
- 4 new components developed for GeoNetwork 4
- Operational since the last reporting period (December 2022)

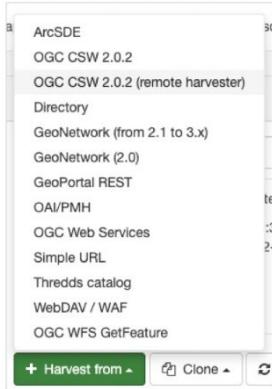
Architecture



Harvester console

Added a new harvester type: Remote CSW harvester, to configure the CSW servers of the member states to harvest

- URL of the server to harvest
- CSW filter configuration
- Error conditions handling
- etc.



Settings Harvester history 542 Metadata records

Update harvester ES ✖ Delete Save ▶ Link checker ▶ Harvest Push metadata

Identification

Node name and logo

The name describing the remote node.

Group

Group which owns the harvested records. Only the catalog administrator or user admin of this group can manage this node.

Harvester console

Provides access to the harvester execution history

The screenshot shows a web-based harvester history interface. At the top, there are navigation tabs: 'Settings' (disabled), 'Harvester history' (selected), and '540 Metadata records'. Below the tabs, the title 'Harvester history' is displayed, along with a red 'Delete' button. The main content area lists three harvested sessions:

- 540 record(s) harvested in 4047 seconds**
🕒 a month ago
◦ total: 540
- 543 record(s) harvested in 1079 seconds**
🕒 a month ago
◦ total: 543
- 543 record(s) harvested in 796 seconds**
🕒 2 months ago
◦ total: 543

Each session entry includes a green circular arrow icon on the left and a 'Log file' download button on the right. At the bottom, there are navigation icons for page control and a message indicating '1 / 2 of 6 record(s)'.

Harvester console

And statistics about the metadata harvested, including:

- Date of the harvesting
- Number of metadata records harvested
- Number of metadata per type: datasets / series / services
- Downloadable datasets
- Viewable datasets

Harvester console

Settings Harvester history 542 Metadata records

Summary

Last run : a month ago (2022-04-26, 18:30:46)
Last run successful : a month ago (2022-04-26, 18:30:46)

 542
Metadata records

Filter

Type of resources ▾



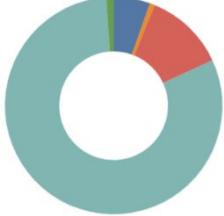
Dataset (241)
Service (300)
series (1)

Available in ▾

 165
Download service

 199
View service

Capabilities type. ▾
If > 1 capabilities, then the most common type (WMS/WFS/WMTS/ATOM) is displayed. If there is an equal number, then choose any one.



Capabilities Type	Count
Atom	15
CSW	2
WFS	33
WMS	223
WMTS	3

All the Capabilities Layer links resolved. ▾
PASS if, for any capabilities document, ALL the Capabilities Layer links resolve to a Dataset Metadata record.

 228
PASS

 72
FAIL

All OperatesOnLinks Dataset Metadata documents match a document. ▾
PASS if ALL of the OperatesOnLinks Dataset Metadata documents match a document linked from the Capabilities Layers (in any capabilities document).

 235
PASS

 65
FAIL

All OperatesOnLinks resolve to a Metadata document. ▾
PASS if ALL of the OperatesOnLinks resolve to a Dataset Metadata document.

 294
PASS

 6
FAIL

Other developments for GeoNetwork Version 4

- User interface improvements with better web accessibility support
- Security / library upgrades: Spring 5, JPA 2, Quartz, MySQL, Guava, Log4j2
- OpenAPI support for API documentation
- AngularJS & Bootstrap upgrade
- Java 11 support (to be merged)

Version 4 - Latest Features

- Support for OAuth2 OpenId Connect Single Sign-on
and
- Support for OIDC Bearer tokens
(tested with Azure Active Directory and KeyCloak)
- Many fixes and improvements in the main branch, improving the stability

The vision

User experience first !

Address modern use cases

Data centric

Embrace open data world

Become a data platform



A unique catalog



geonetwork-ui

“From old fashioned SDI to blazing UIs”

“What you've ever missed within your SDI”

User Experience centric

Framework to build components & applications for data/metadata purposes.

Eco-system



Core

core-geonetwork

Micro services

geonetwork-microservices

User experience

geonetwork-ui

The Datahub

v1.0.3

- [Activity feed](#)
- Key figures
- Search filters
- Favorites
- Geospatial boost
- Entry by organisation
- [Web components](#)

Coming

- [Dataviz](#)
- Configurable filters
- Edition Dashboard
- Metadata quality widget
- Quick filters (focus)
- Backoffice

Toutes les données publiques des Hauts de France

ex: cadastre, littoral, antennes

Aperçu

CARTE

TABLEAU

GRAPHIQUE

Source de données [csv \(csv\)](#)

Les plus récentes

Les plus appréciées



ACCUEIL

DONNÉES

ORGANISATIONS

Fil d'activité

● Conservatoire botanique national de Bailleul
a créé ce jeu de données hier

Hauts-de-France - Lichens tous statuts - Pression d'inventaire (Période moderne - Par maille 1 km²)
0 ★

Nombre par commune d'observations de lichens (tous statuts) pour la région des Hauts-de-France, réalisées depuis 2000
Description du contenu Cette couche précise par commune des...



Quelques chiffres



6680
données



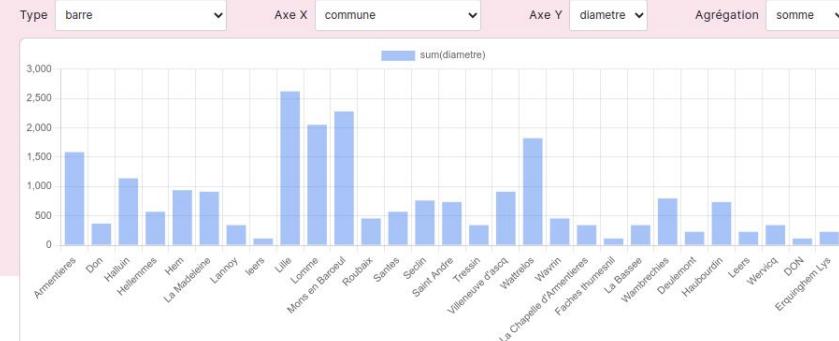
552
organisations

Aperçu

CARTE

TABLEAU

GRAPHIQUE



<https://mel.integration.apps.gs-fr-prod.campctocamp.com/datahub/wc-embedder.html?e=gn-dataset-view-chart&a=ap>

Cherchez des données cartographiques en Auvergne-Rhône-Alpes avec le CRAIG

ex: cadastre, littoral, antennes

ACCUEIL

DONNÉES

ORGANISATIONS

The Datahubs



+

+

+



swisstopo

camp to camp



The editor

“Make metadata accessible to everyone”

“Forget about metadata schemas”

“Build your own editor”



The community

A group of ten people are seated around a long table outdoors, eating a meal. They are under a wooden canopy with a yellow fabric roof. The table is covered with a green and white floral tablecloth and has several bottles of wine, glasses, and plates of food. The background shows a lush green garden with trees, a stone wall, and a clear blue sky.

2 Weeks summer code sprint
(20 August - 2 September 2023)



User meeting
October 3rd
Bern Switzerland

More on GeoNetwork this week



GeoNetwork Orientation and Demo

Today at 15:00–15:30 (Europe/Tirane), Drini

We look at what GeoNetwork is for

We peek under the hood

Look at examples of how GeoNetwork has been extended by organizations





Rethink geo/open metadata edition in GeoNetwork

Friday at 12:00–12:30 (Europe/Tirane),
Outdoor Stage

New alternative UI as a
facade on GN4 editing





Open Data Analytics API in GeoNetwork

Earlier today 12:00–12:30 (Europe/Tirane),
Drini

GeoNetwork toward a Data platform



Thank you!