Geonovum

Open tender tool adjustments OGC-API-Features

Auteur Pieter Bresters

Datum 7th of November 2022

GEONOVUM

Why this tender?

Geonovum wants to strengthen the Dutch public geospatial infrastructure by:

- making the Dutch public geospatial data better accessible, also outside the geodomain;

- helping Dutch INSPIRE data providers;

- following and supporting EU developments;

- Improving interoperability by stimulating the use of standards.

Problem: tools to serve spatial data via OGC-API-Feature services don't comply with the standards.

Goal

Improve the tooling to serve spatial data via OGC-API-Features service in the Netherlands and EU according to the standards.

What standards

1. OGC standards:
   - OGC-API-Features Part 1:Core
   - OGC-API-Features Part 2 on coordinate systems.

2. Dutch API Design Rules

3. INSPIRE requirements as setup by a INSPIRE working group

Background

- [Guideline](#) for Dutch data providers
  - describes how Geonovum has looked at the requirements.
  - describes 4 examples of implementations.

- [Testbed](#)
  - GOAF, Pygeoapi, Geoserver
  - Conclusions: Insufficient support of CRS's, DUTCH API Design Rules and INSPIRE

Examples of missing requirements

- GOAF and Pygeoapi are not compliant with [OGC-API-Features Part 2](#)

- Geoserver is partly compliant with [OGC-API-Features Part 2](#), but can't add the links as required by INSPIRE.

- None of the tools fully comply with the DUTCH API design rules.

Results of examples

nr	Requirement	GOAF	Pygeoapi	Geoserver	GISspecialisten
1	OGC API Features Core	95%	95%	90%	95%
4	predefined download	50	66%	0%	0%
5	GeoJSON	100%	100%	100%	100%
6	bulk download	100%	100%	0%	0%
7	CRS ETRS89 and WGS84 (OGC API Features part 2)	0%	0%	90%	90%
8a	INSPIRE validated GML as input	0%	10%	50%	0%
8b	INSPIRE validated GML as output	0%	0%	0%	0%
9	Dutch API design rules	65%	65%	65%	65%
10	describing encoding	100%	100%	0%	0%
12	metadata links	50%	100%	0%	0%

Results are combination of tooling and dataset, so not all is due to tool deficiencies!

Examples in detail GOAF

Not all requirements from [Dutch API design rules](#) have been implemented:

1. no 404 result when "/" was used on the end of an URL: (https://publicatie.centrumvoorstandaarden.nl/api/adr/#api-48)

2. no complete version number in every return: (https://publicatie.centrumvoorstandaarden.nl/api/adr/#api-57).

See also: https://api.pdok.nl/geonovum/oaf/v1_0?f=html

Examples in detail Pygeoapi

CRS ETRS89 and WGS84

- The source data from the WFS was in ETRS89. Pygeoapi does have the option to specify the source_srs and target_srs, but it is not used yet because the output appears to be WGS84 regardless of the specified target_srs.

- OGC-API-Features Part 2 on CRS has not been implemented yet.

See also: https://apisandbox.geonovum.nl/pygeoapi_SU?f=html

Examples in detail Geoserver

INSPIRE requirement for _predefined download_:

Due to missing functionality for providing links,

1. there is no link to the metadata of the dataset,
2. there is no link to the feature concept metadata of the dataset,
3. the license link is missing.

See also:
https://apisandbox.geonovum.nl/geoserver/nl_su_nuts/ogc/features/

How to tender

- By e-mail to info@geonovum.nl addressed to Rob van de Velde

- Preferably in English, but Dutch is also excepted

- Not later than Friday, December the 9th, 2022

- Parties are allowed to tender for more than one tool. However, Geonovum has the freedom to only award one tool.

Tender content

- Motivation for the tool choice;

- The intended adjustments with reference to the requirements;

- Plan of approach;

- Time plan;

- Relevant references, cv's;

- Statement of agreement with the publication of the adjusted code and deliverables under a CC/by license;

- Description of how the contractor is going to convince Geonovum that the community has adopted the adjustments into their base code in a way that it will be taken into maintenance by the community.

Scope

- Tool to adjusted must be existing open source with a solid community and well maintained.

- The tool must have (expected) users in the Netherlands and/or EU.

- It concerns OGC-API-Feature services, so no other OGC-API services.

- Only Dutch API Design Rules core are relevant, so not the module extensions.

- INSPIRE: Multilinguality and filtering are out of scope.

Deliverables part 1

1. Adjustments supported by the tool community to:
    1. Base code
    2. Technical documentation
    3. User guide

2. Proof that the adjustments are accepted by the open source community of the tool and that it has become part of the base code and will be maintained in the future updates by this community as explained by the contractor in the offer.

Deliverables part 2

5. Test results that proof the conformance of the tool after the adjustments.

6. A running service based on a test dataset equal to one of the datasets used in the [guideline](#). This service should stay online for at least 2 years.

7. A presentation and demo at a final public event showing the adjustments made.

8. A report explaining the adjustments made and the lessons learned (max. 2 A4 pages)

Planning

Date	Event
7-11-2022	This meeting
17-11-2022	Information note
9-12-2022	Submitting deadline
22-12-2022 (not 15th as stated in tender doc)	Assignment
Beginning 2023	Project kick-off
17-3-2023	First delivery of working code
End of April 2023	Public presentation of the adjustments
1-5-2023	Final deliveries

Finance

- Fixed budget of € 20.000 per tool.

- Intention to reward for two different tools when enough qualifying tenders are received.

Organization

- Geonovum contact: Pieter Bresters

- Bi-weekly meetings at Geonovum in Amersfoort or on-line

- Publication:
  - In the guideline for Dutch data providers by Geonovum
  - Towards the tool community by contractor
  - Final presentation by contractor

- Acceptance is based on:
  - Test results and running service
  - Proof of acceptance by the community as proposed by contractor
  - Are all deliverables delivered.

Scoring criteria to judge the tenders

Criterium	Weight
Overall proposal	30%
Portfolio, References and CV	20%
Quality of open source community behind the tool and trust in adoption by the community	20%
Expected impact of adjusted tool	
Expected use in NL	15%
Expected use in EU	15%

Time for questions

Thank you for attending!

Geonovum

T 033 460 41 00
E info@geonovum.nl
I www.geonovum.nl

bezoekadres
Barchman Wuytierslaan 10
3818 LH Amersfoort

postadres
Postbus 508
3800 AM Amersfoort