



Aan de slag met API's in FME

FLAGIS Geo Atelier

24-04-2024

Erik Brouwer, Geodata Engineer



Smart Geo Insights

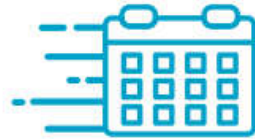
www.gim.be

GIM in figures



2

Sites. Leuven & Gembloux



27

Years of experience



70

Motivated geo-experts



750

Happy Customers

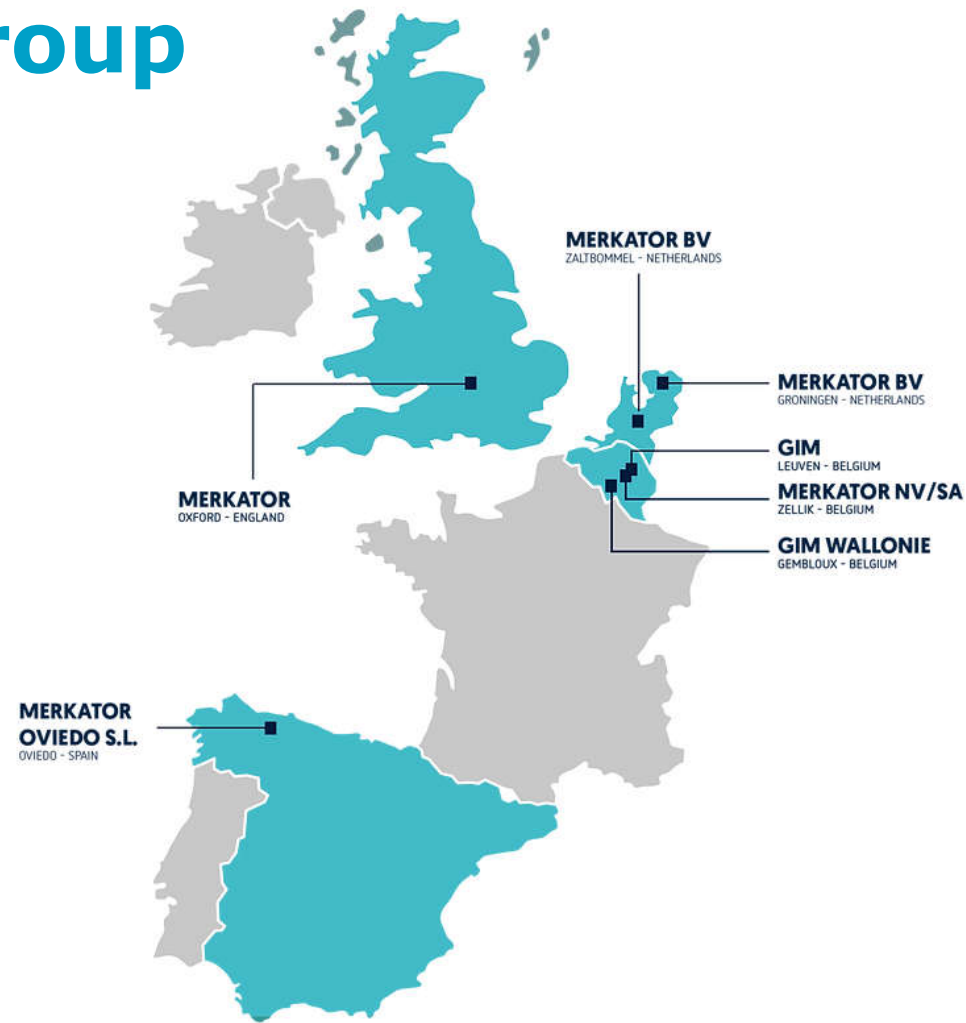


2500

GIS Training Center Alumni



Part of a strong group





All-round expertise for the collection, integration and exchange of geodata



#GEOSPATIAL AI



#GEODATA INTEGRATION



#GEOICT



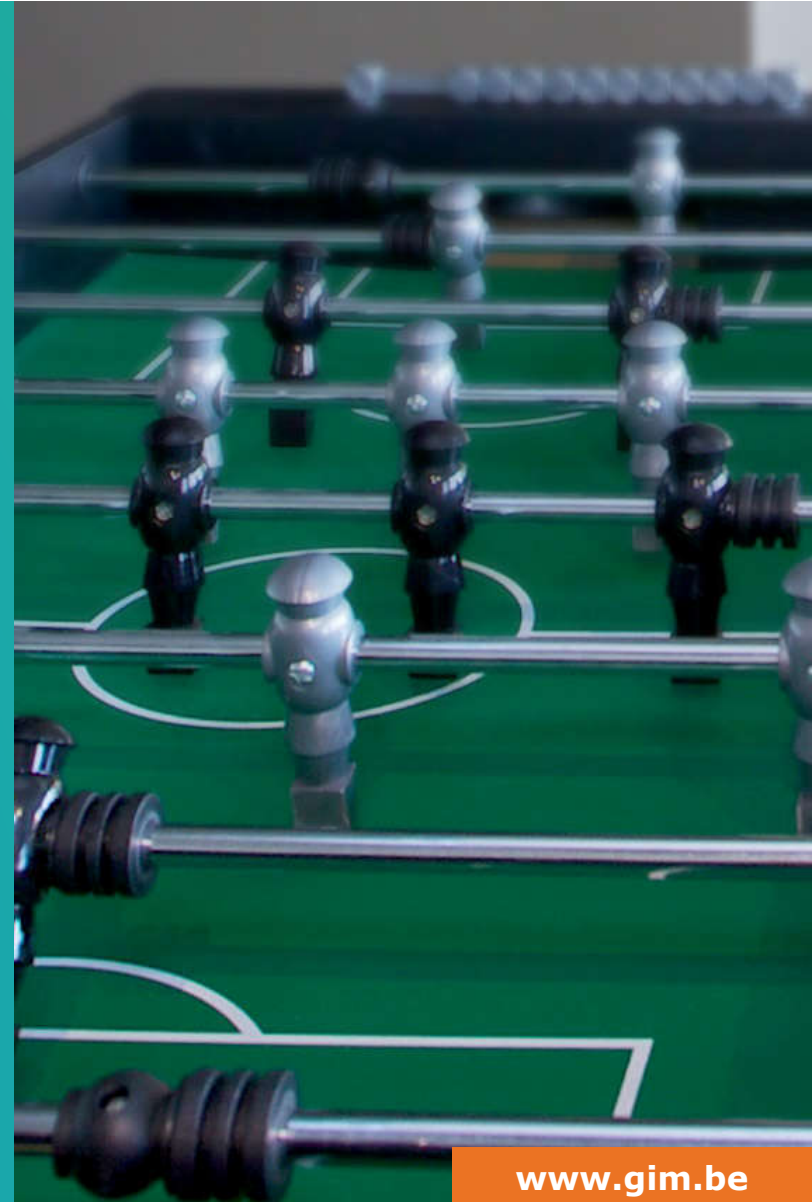
Aan de slag met API's in FME

1. Wat is FME?

2. API's in FME

3. FME-API Challenge

Wat is FME?



Introductie tot FME



<https://www.safe.com/fme/>

Introductie tot FME



The screenshot shows the FME Workbench interface with a workflow titled "MULTI -> OGCKML (C:\FME_Presentation\Demo\Exemple_FME_WT.fmw) - FME Workbench". The workflow is divided into four main sections: INPUTS, TRANSFORMATIONS, SET UP KML PROPERTIES, and OUTPUT KML.

INPUTS: Includes "Provinces" (RegionCode, ProvCode, ProvName) and "communes" (INS, NCM, SHAPE_Length, SHAPE_Area, SHAPE_A_1).

TRANSFORMATIONS:

- AttributeFilter:** Routes features to different output ports based on attribute value.
- StringCaseChanger:** Changes the case of text attributes.
- FeatureMerger:** Merges features based on a Requestor and Supplier.
- Tester:** Selects communes based on the number of inhabitants.
- CenterOf_Gravity:** Replaces polygons with their center of gravity.
- AttributeRemover:** Removes unnecessary attributes.
- AttributeMapper:** Classifies the "Number of inhabitants" attribute.

SET UP KML PROPERTIES:

- KMLStyler_2:** Sets up KML style for the filtered data.
- KMLPropertySetter:** Sets up common KML properties.
- KMLStyler:** Sets up KML style for the merged data.

OUTPUT KML: Outputs the final KML file with class attributes like INS, NCM, and NCM_HABITANTS.

Translation Log:

```

0.9 1
90000 1
-----
Total Features Written 16
-----
Translation was SUCCESSFUL with 4 warning(s) (16 Feature(s) output)
FME Session Duration: 1.6 seconds. (CPU: 0.7s user, 0.4s system)
END - ProcessID: 5400, peak process memory usage: 117392 KB, current process memory usage: 116060 KB
Translation was SUCCESSFUL
    
```

Help:

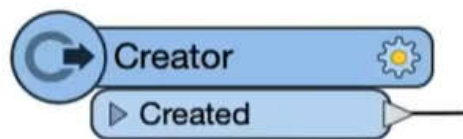
Category: All

All transformers are displayed in this category.

The list is sorted alphabetically; if you know the name of the transformer you want, you can look here to find it.

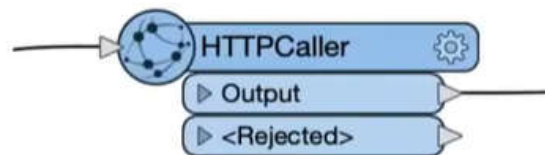
It is usually faster to locate and place a transformer by using the Workbench

API transformers in FME

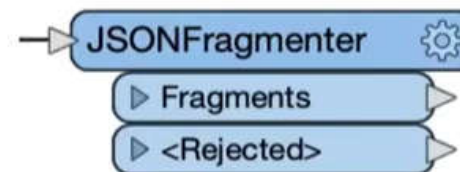


Normaal gesproken beginnen de meeste workflows in FME met een reader die de workflow initieert.

Maar omdat de meeste API's de HTTPCaller gebruiken als Reader, wordt de **Creator** wordt gebruikt om de workflow te starten



De **HTTPCaller** is waar de aanroep naar de REST API wordt gedaan



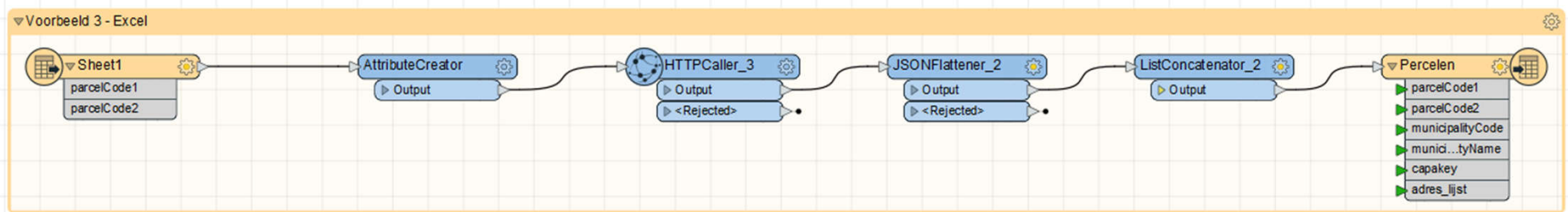
De meeste REST API's retourneren JSON. JSON kan worden ontleend in de **JSON fragmenter**.

Voorbeeld 1:

Capakey REST API

Doel:

Een lijst van percelen (Capakeys) aanvullen met bijkomende gegevens met behulp van de Capakey REST API





Voorbeeld 2: WFS GRB

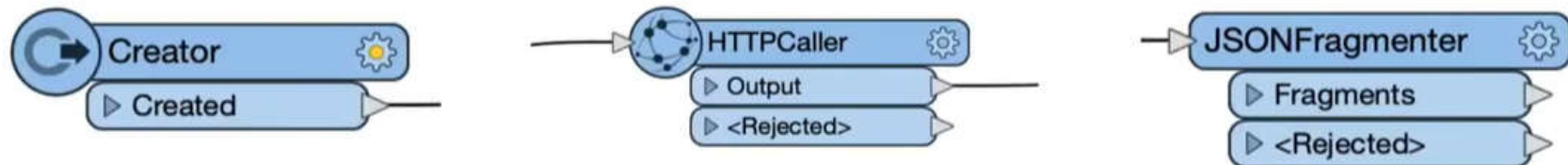
- Web Feature Service
- Opvragen en aanleveren van geografische data
- Communicatie via GML (XML voor geografische data)

Voorbeeld:

<https://geo.api.vlaanderen.be/GRB/wfs?request=GetCapabilities>

Waarom FME gebruiken bij APIs?

- FME maakt het werken met web API's eenvoudig via een reeks readers, writers en transformers
- No-coding oplossing
- Makkelijk te combineren met andere workflows



Challenge 1: HTTPCaller

In welke gemeente ligt het perceel met
Capakey 44412B0494/02C000

Tip: check de documentatie van de Capakey REST Service van Digitaal Vlaanderen

Challenge 2: WFS-GRB

1. Gebruik een FeatureReader in FME om de WFS van de gemeentegrenzen van Vlaanderen in te laden
2. Gebruik vervolgens de geometrie van de gemeente Gent als bounding box om een WFS reader te triggeren die de laag Spoorrail uit het GRB ophaalt met alleen sporen in Gent