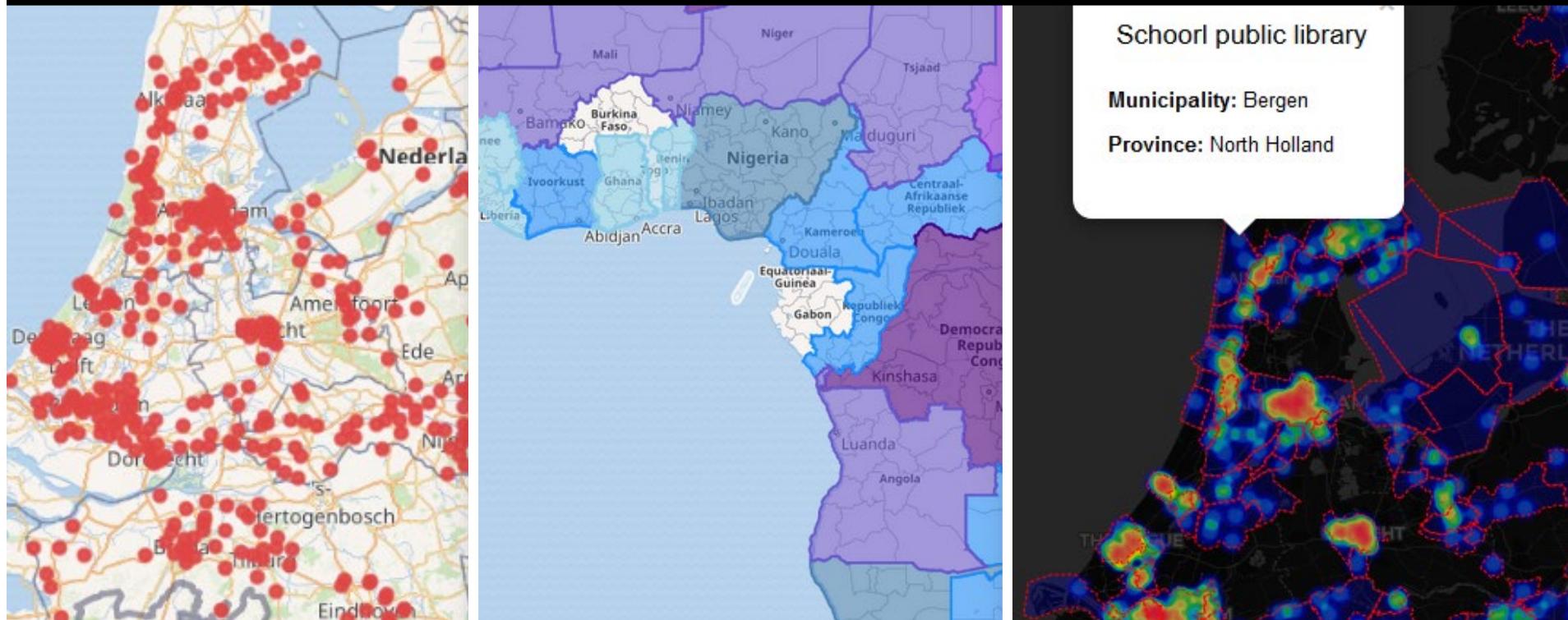


# Map making workshop

## from Wikidata to interactive off-Wiki maps in three steps



Wiki Techstorm, Amsterdam, Sat 23 November 2019

Olaf Janssen, National Library of the Netherlands

User:OlafJanssen // olaf.janssen@kb.nl // @ookgezellig

KB } nationale  
bibliotheek



- <https://phabricator.wikimedia.org/T236041>
- [https://www.mediawiki.org/wiki/Wiki\\_Techstorm/Programme/Creating\\_maps](https://www.mediawiki.org/wiki/Wiki_Techstorm/Programme/Creating_maps)

## ! Map making workshop – from Wikidata to interactive off-Wiki maps in three steps (9.00-10.30)

Open, High

 Public

### Description

See the full explanation & detailed workshop outline on

- <https://github.com/ookgezellig/WikidataMapMakingWorkshop>
- <https://github.com/ookgezellig/WikidataMapMakingWorkshop/blob/master/OutlineAndNotes.md>

And see [https://www.mediawiki.org/wiki/Wiki\\_Techstorm/Programme/Creating\\_maps](https://www.mediawiki.org/wiki/Wiki_Techstorm/Programme/Creating_maps)

 Edit Task

 Edit Related Tasks...

 Edit Related Objects...

 Automatically Subscribed

 Mute Notifications

 Protect as security issue

 Award Token

 Flag For Later

ookgezellig / WikidataMapMakingWorkshop

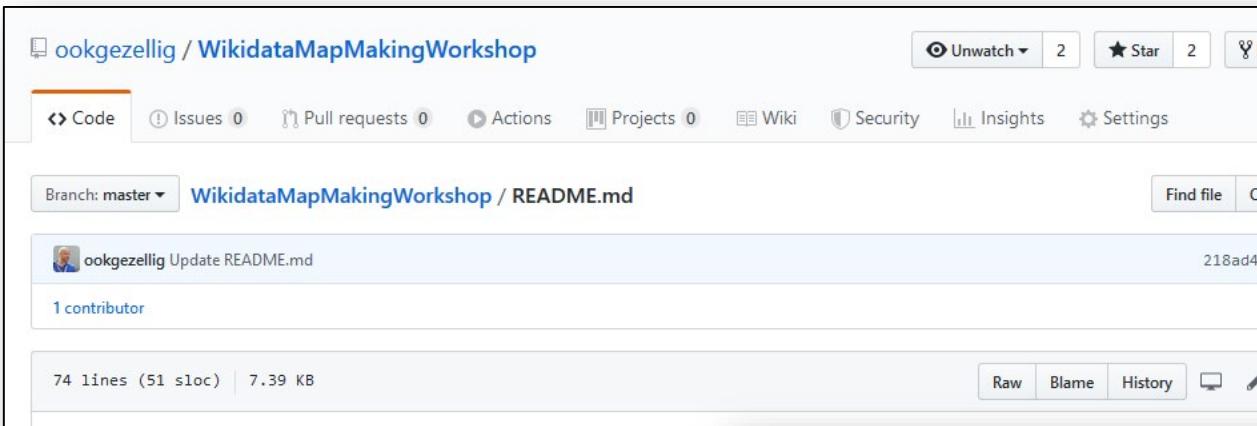
Code Issues 0 Pull requests 0 Actions Projects 0 Wiki Security Insights Settings

Branch: master WikidataMapMakingWorkshop / README.md

ookgezellig Update README.md 218ad40  
1 contributor

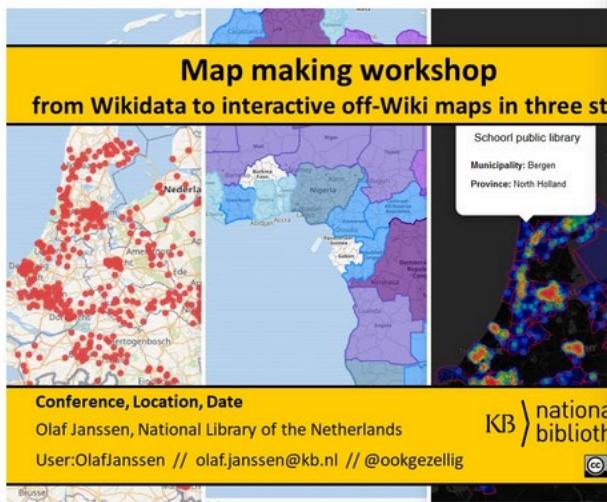
74 lines (51 sloc) | 7.39 KB

Raw Blame History



# Map making workshop – from Wikidata to interactive off-Wiki maps in three steps

Latest update: 21 November 2019



## Workshop description

In this 90-120 minutes workshop you will learn how to make both flat, clustered, layered, embedded, interactive, on-Wiki and off-Wiki maps from sets of geo-referenced ([P625](#)) items in Wikidata.

You will do this in 3 modules of approx. 30-40 minutes each:

- **Module 1:** You will start by making various basic [flat](#) and [clustered maps](#) in Wikidata using SPARQL queries. Next you will make some [layered maps](#), where groups of items can be toggled on/off in the map.
- **Module 2:** After having explored maps in the Wikidata query interface, you are now ready to learn how to embed Wikidata-driven maps in other Wikimedia projects, such as Wikipedia and Commons ([examples](#)). In addition to SPARQL we will look at [OpenStreetMap](#), [GeoJSON](#) and the Mediawiki Kartograph extension.
- **Module 3:** Finally you will learn the steps for creating interactive, layered Wikidata-driven maps that can be used off-Wiki, ie. in regular HTML pages. In addition to the above tools & techniques, we will use some basic Python, [Jupyter Notebooks](#) ([PAWS](#)), [Jupyter Leaflet](#) and [Jupyter widgets](#).

See the [full outline of the workshop](#) for a more detailed description.

## Intended audiences

While this workshop is tech-focused and will discuss basic Wikidata, Wikipedia and Wikimedia Commons techniques and programming tools, it is meant to be approachable by beginning Wikidata contributors and programmers. The [workshop leader](#), by no means an advanced Python programmer nor Wikidata nor SPARQL guru himself, is providing examples and code snippets that you can easily adapt yourself with basic SPARQL, Wikidata and Python skills, to make them work for your own datasets.

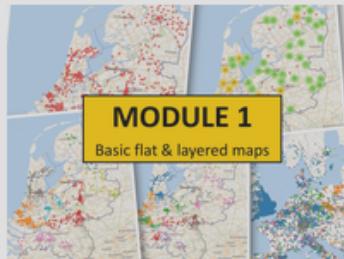
As the workshop is comprised of three 30-40 minute modules, you can decide to skip the modules that you find too advanced (or basic) for your individual knowledge level.

# Full workshop outline & notes

## Workshop outline and notes

*Latest update: 21 November 2019*

### Module 1: Basic flat & layered maps



#### Prerequisites for this Module

- [Wikimedia account](#)
- Working knowledge of [Wikidata](#)
- Basic understanding of [SPARQL](#) and the [Wikidata Query Service](#) (WDQS)
- A Wikidata set of items with geo coordinates [P625](#)

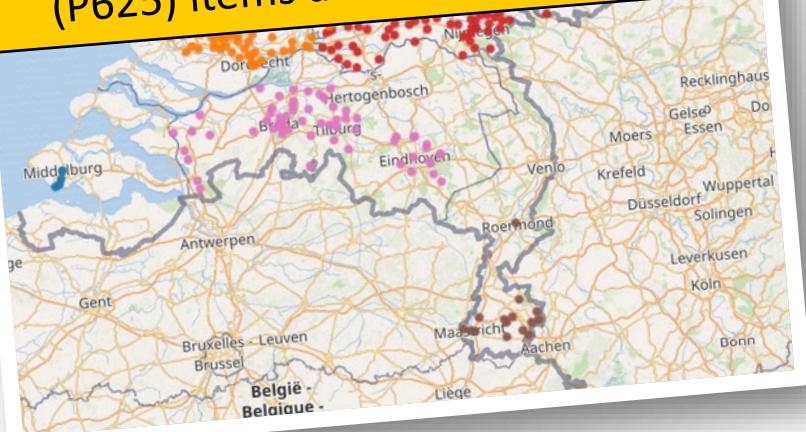
If you do not have, or cannot create such a Wikidata set, you can use one of these:

1. [Public libraries in The Netherlands](#)

[https://github.com/ookgezellig/WikidataMapMakingWorkshop/  
blob/master/OutlineAndNotes.md](https://github.com/ookgezellig/WikidataMapMakingWorkshop/blob/master/OutlineAndNotes.md)

# Learning objectives

*Module 1, basic:* Understand steps to make **basic flat and layered maps** in Wikidata, based on geo referenced (P625) items and SPARQL queries



# Learning objectives

**Module 1, basic:** Understand steps to make **basic flat and layered maps** in Wikidata, based on geo referenced (P625) items and SPARQL queries



Hoofdpagina  
Welkom

Data:DutchPublicLibraries.map  
Uit Wikimedia Commons

Map of Dutch public libraries, work in progress, 21-5-2019

**Module 2, intermediate:** Understand steps to **embed maps in Wikimedia sites** like Wikipedia, Wikimedia Commons and Wikidata

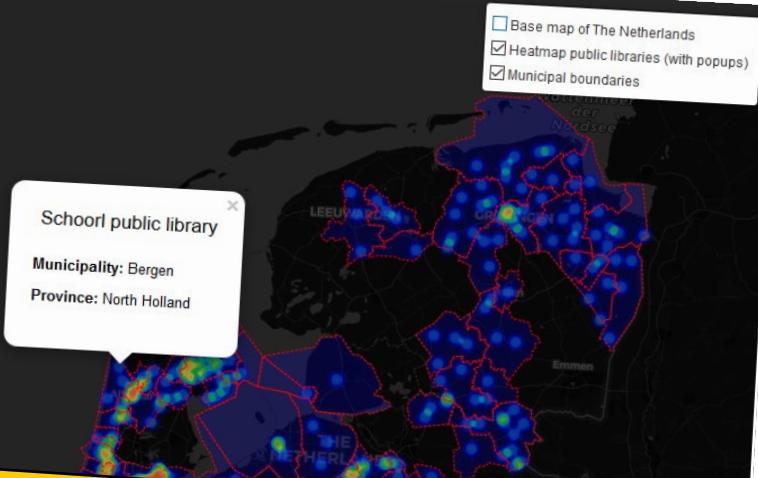
Contact

Afdrukken/exporteren  
Als PDF downloaden  
Hulpmiddelen  
Verwijzingen naar deze pagina  
Verwante wijzigingen  
Speciale pagina's  
Permanente koppeling  
Paginagegevens  
Geocoding Recent Changes  
Geocoding Search  
Geocoding Daily Log  
Subpagina's  
Voor verwijdering nomineren

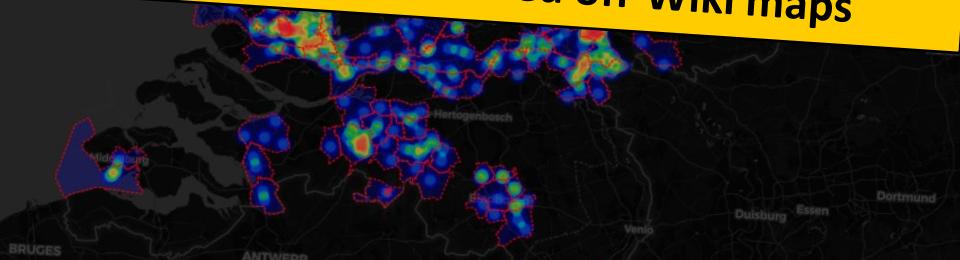


# Learning objectives

Module 1, basic: Understand steps to make **basic flat and layered maps** in Wikidata, based on geo referenced items and SPARQL queries



Module 3, advanced: Understand steps to create **Wikidata-based off-Wiki maps**



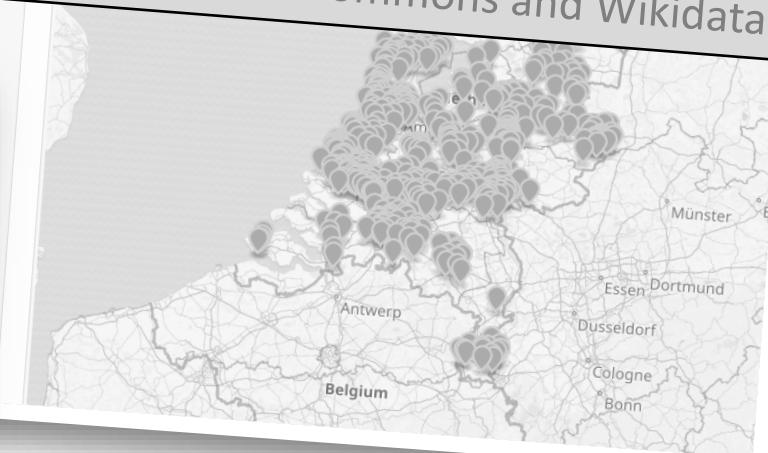
WIKIMEDIA  
COMMONS

Hoofdpagina  
Welkom

Data:DutchPublicLibraries.map  
Uit Wikimedia Commons

Map of Dutch public libraries, work in progress, 21-5-2019

Module 2, intermediate: Understand steps to embed maps in **Wikimedia sites** like Wikipedia, Wikimedia Commons and Wikidata



# Learning objectives

Module 1, basic: Understand steps to make **basic flat and layered maps** in Wikidata, based on geo referenced items and SPARQL queries



Module 3, advanced: Understand steps to create **Wikidata-based off-Wiki maps**



Module 2, intermediate: Understand steps to embed maps in **Wikimedia sites** like Wikipedia, Wikimedia Commons and Wikidata



PAWS WikidataMapMakingWorkshop Last Checkpoint één uur geleden (autosaved)

File Edit View Insert Cell Kernel Widgets Help

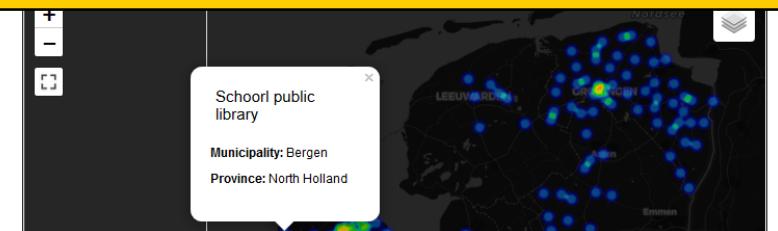
Public Link

```
# First, we start with a simple basemap of The Netherlands
basemap=basemaps.Esri.WorldTopoMap
default_layer = basemap_to_tiles(basemap)
default_layer.name='Base map of The Netherlands'

# Overview of more basemaps: https://leaflet-extras.github.io/leaflet-providers/preview/ +
# https://github.com/jupyter-widgets/ipyleaflet/blob/master/ipyleaflet/basemaps.py
map_center=(52.088889, 5.33) #Utrecht city
map_zoom=8

# Set layout of map
map_layout = {
    'width': '800px',
    'height': '900px',
    'border': '1px solid black',
    'padding': '1px',
    'margin': '10 auto 0 auto'}
```

Access to map making resources, SPARQL examples and Python code snippets **to build upon**



# Tips & tricks welcome!

I'm not a maps / Wikidata / SPARQL guru....

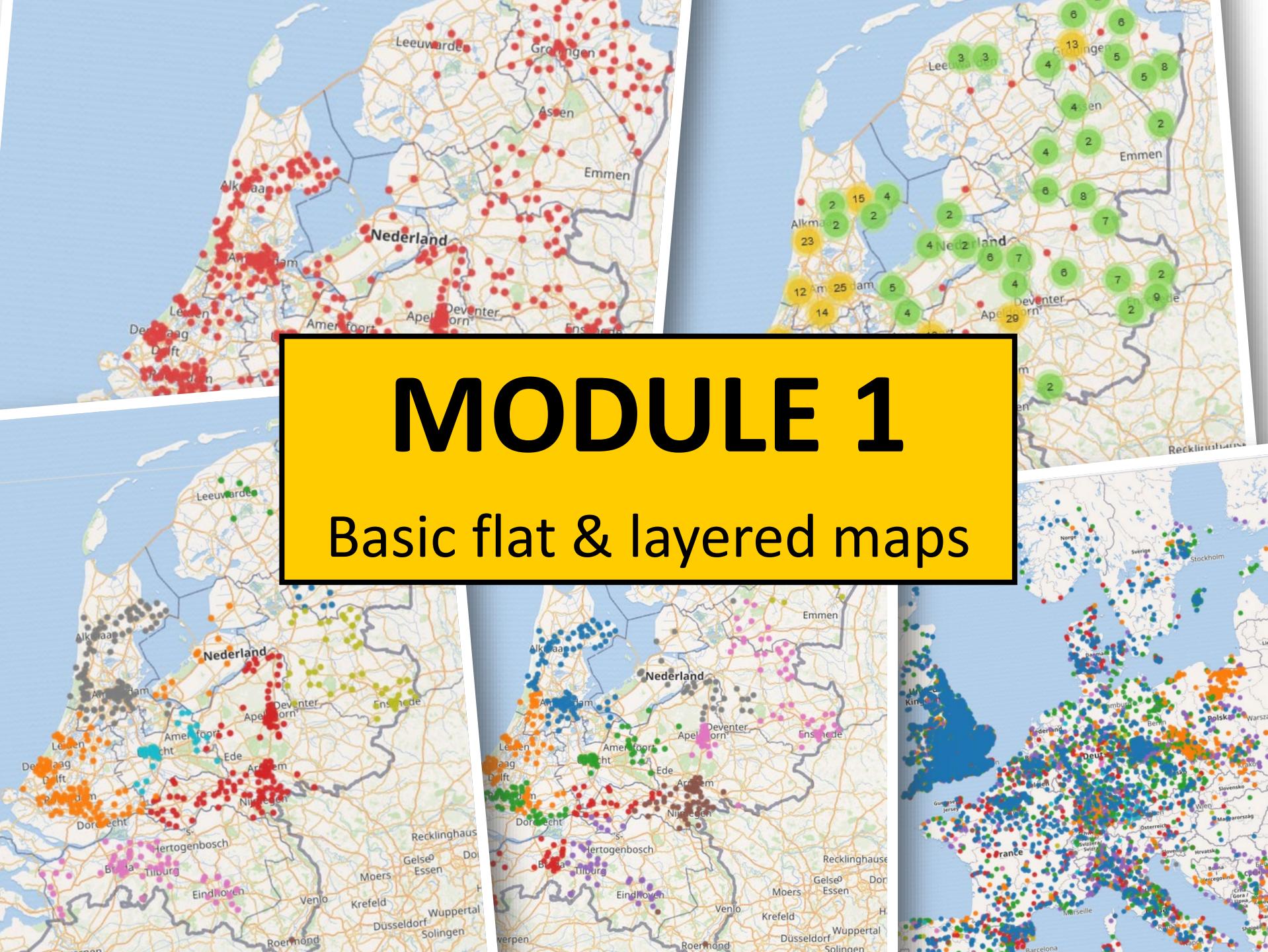


# 3 MODULES

- 1) Basic flat & layered maps
- 2) Embedded maps in Wikimedia projects
- 3) Interactive, layered off-Wiki maps  
driven by Wikidata

# MODULE 1

Basic flat & layered maps





# For this Module, you will need

- Wikimedia account
- Working knowledge of Wikidata...
- ... and SPARQL
- A Wikidata set of items with geo coordinates  
**(P625)**....

# coordinate location (P625)

geocoordinates of the subject. For Earth, please note that only WGS84 coordinating system is supported at the moment

[edit](#)

coordinates | co-ordinate location | co-ordinates | coords | co-ords | geographic coordinate | gps coordinate | gps co-ordinate | gps coordinates | gps co-ordinates | gps location | geotag | wgs 84 | wgs-84 | wgs84 | position | longitude | latitude | gps | coordinate location | geographical coordinates | geo | location | point on a map | point on the globe | point on earth | location on earth | geolocation | geocoordinates | Location on map

## ▼ In more languages

Language	Label	Description	Also known as
English	coordinate location	geocoordinates of the subject. For Earth, please note that only WGS84 coordinating system is supported at the moment	coordinates co-ordinate location co-ordinates coords co-ords geographic coordinate gps coordinate gps co-ordinate gps coordinates gps co-ordinates gps location geotag wgs 84 wgs-84 wgs84 position longitude latitude gps coordinate location geographical coordinates geo location point on a map point on the globe point on earth location on earth geolocation geocoordinates Location on map
German	geographische Koordinaten	Koordinaten eines sich auf der Erde befindlichen Objekts, momentan werden nur WGS84-basierte Koordinaten unterstützt.	Koordinate geografische Koordinate Koordinaten

P625

<https://www.wikidata.org/wiki/Property:P625>

# Amsterdam

[wd:Q9899](#)

coordinate location

P625



+ add value

edit

Point(4.883333,52.366667)

+ add value

office held by head of government

Mayor of Amsterdam

edit

▼ 0 references

+ add reference

+ add value

head of government

Femke Halsema

edit

start time

12 July 2018

end time

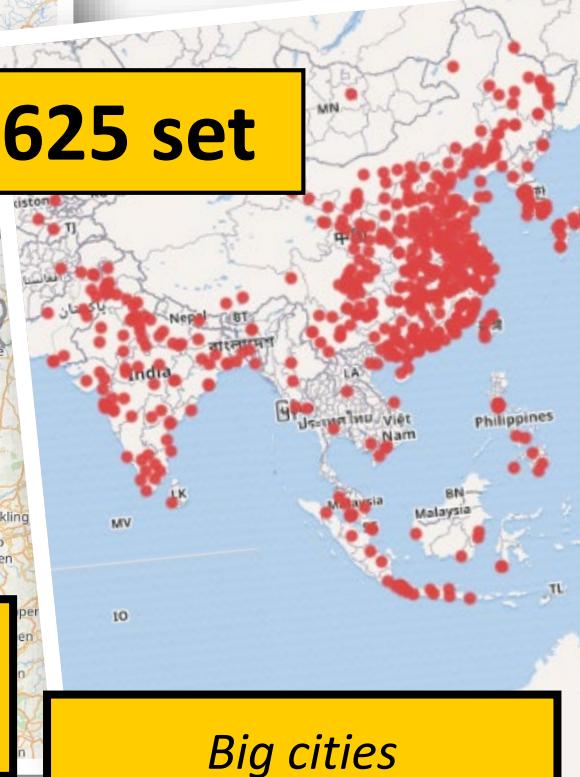
no value



**Time to create  
your own P625 dataset**



# If you don't have a Wikidata P625 set



# If you don't have a Wikidata P625 set



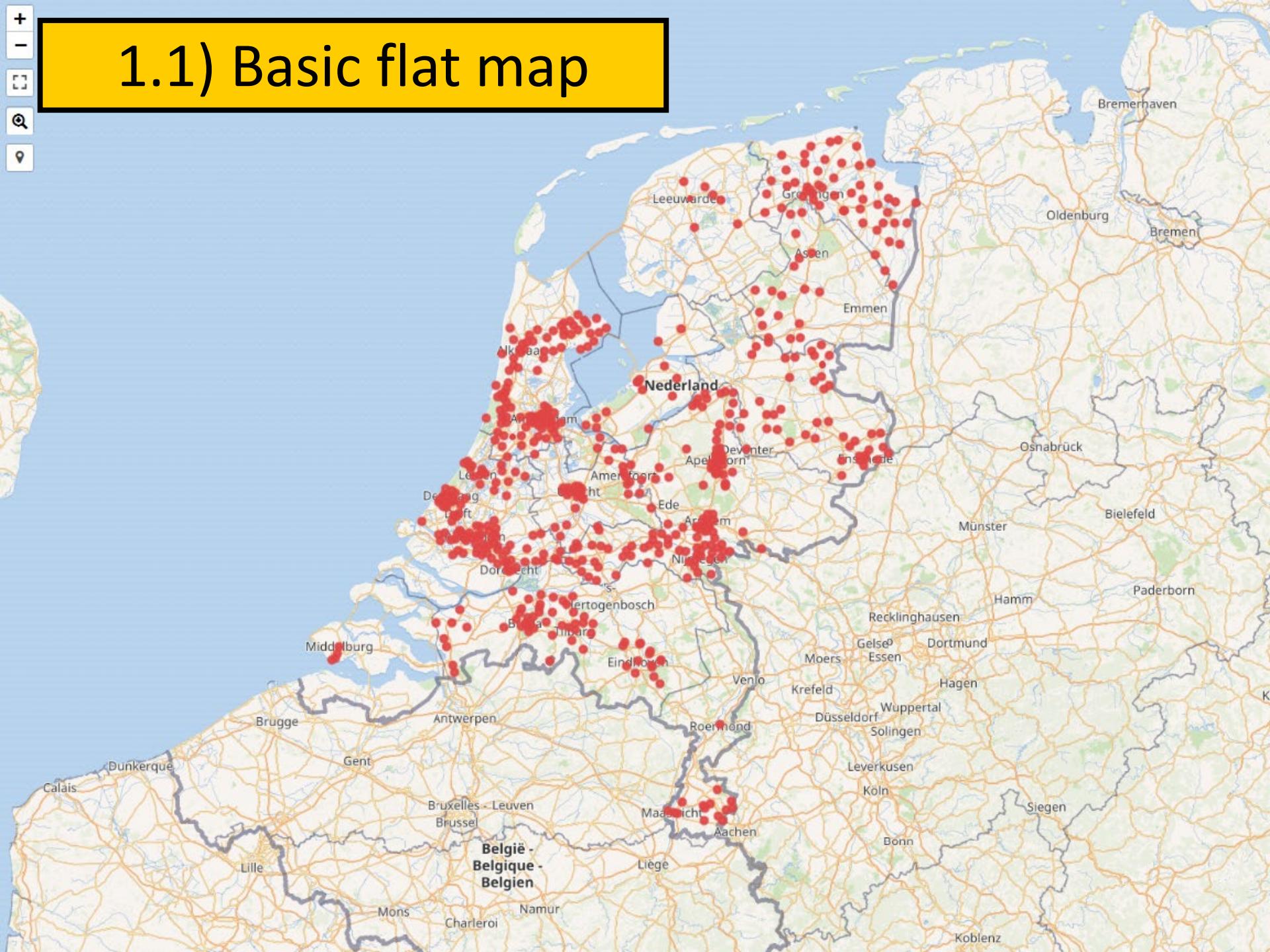
*Volcanos of the world*  
<https://w.wiki/6e9>

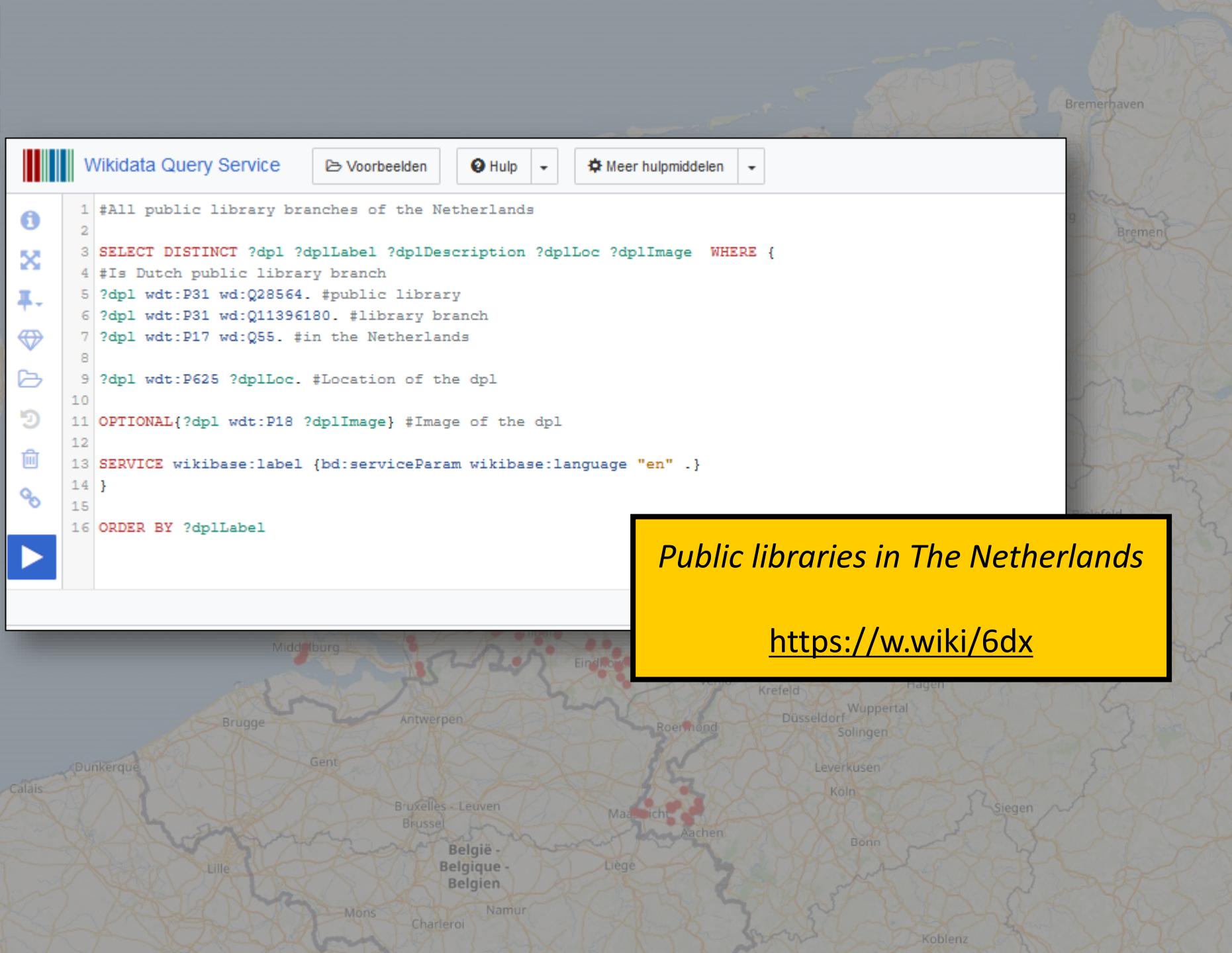


*Airports around equator*  
<https://w.wiki/6eB>



# 1.1) Basic flat map





Wikidata Query Service
Voorbeelden
Hulp
Meer hulpmiddelen

i
x
h
diamond
file
refresh
trash
link
play

583 resultaten in 512 ms

dpl	dplLabel	dplDescription	dplLoc	dplImage
<a href="#">Q</a> wd:Q61785962	's-Heerenberg public library	Public library in 's-Heerenberg, municipality of Montferland, The Netherlands	Point(6.2454886 51.8731333)	 <a href="#">com</a>
<a href="#">Q</a> wd:Q63677419	't Harde public library service point	Public library in the village of 't Harde, The Netherlands	Point(5.877917 52.4172699)	
<a href="#">Q</a> wd:Q61915721	Aalsmeer public library	Public library in Aalsmeer, The Netherlands	Point(4.7496987 52.2679063)	
<a href="#">Q</a> wd:Q59772713	Aalst public library	Public library in Aalst, The Netherlands	Point(5.1259789 51.7841643)	
<a href="#">Q</a> wd:Q60499424	Abbekerk public library	Public library in Abbekerk, municipality of Medemblik, The Netherlands	Point(5.0160659 52.7313345)	
<a href="#">Q</a> wd:Q63385185	Achterveld public library	Public library in the village of Achterveld, municipality of Leusden, The Netherlands	Point(5.4973655 52.1365067)	
<a href="#">Q</a> wd:Q60020855	Aduard public library	Public library in Aduard, province of Groningen, The Netherlands	Point(6.4570135 53.2599615)	
<a href="#">Q</a> wd:Q63890044	Akersloot public library	Public library in Akersloot, The Netherlands	Point(4.7322704 52.5633782)	 <a href="#">com</a> (518264)
<a href="#">Q</a> wd:Q59871315	Alblasserdam public library	Public library in Alblasserdam, The Netherlands	Point(4.65723 51.86473)	
<a href="#">Q</a> wd:Q63890048	Alkmaar De Mare public library	Public library in Alkmaar De Mare, The Netherlands	Point(4.7588585 52.6535348)	
<a href="#">Q</a> wd:Q63890041	Alkmaar Oudorp public library	Public library in the Oudorp neighbourhood in the city of Alkmaar , The Netherlands	Point(4.7657342 52.6240205)	

583 resultaten in 512 ms



Table



Image grid



Graph builder



Map



Line chart



Bar chart



Scatter chart



Area chart



Bubble chart



Tree map



Tree



Timeline



Dimensions



Graph



wd:Q60020855

Aduard public library

Public library

Point(6.4570135  
53.2599615)

wd:Q63890044

Akersloot public library

Public library

Point(4.7322704  
52.5633782)

wd:Q59871315

Alblasserdam public library

Public library in Alblasserdam, The Netherlands

Point(4.65723  
51.86473)

wd:Q63890048

Alkmaar De Mare public library

Public library in Alkmaar De Mare, The Netherlands

Point(4.7588585  
52.6535348)

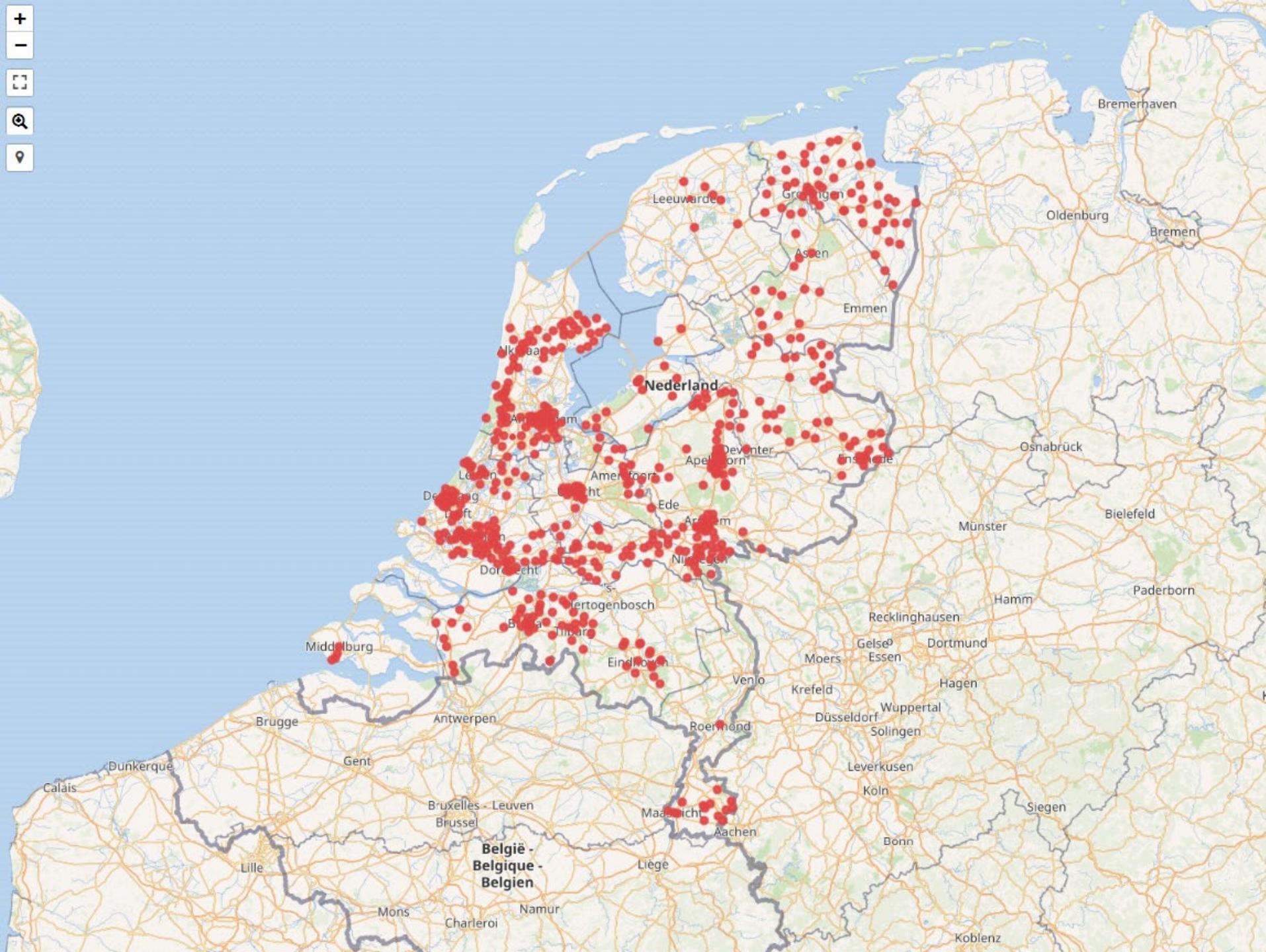
wd:Q63890041

Alkmaar Oudorp public library

Public library in the Oudorp neighbourhood in the city of Alkmaar , The Netherlands

Point(4.7657342  
52.6240205)

label	dplDescription	dplLoc	dplImage
s-Heerenberg public library	Public library in s-Heerenberg, municipality of Montferland, The Netherlands	Point(6.2454886 51.8731333)	
't Harde public library service point	Public library in the village of 't Harde, The Netherlands	Point(5.877917 52.4172699)	
Aalsmeer public library	Public library in Aalsmeer, The Netherlands	Point(4.7496987 52.2679063)	
in Aalst, The Netherlands	Public library	Point(5.1259789 51.7841643)	
Abbekerke public library	Public library in Abbekerke, municipality of Medemblik, The Netherlands	Point(5.0160659 52.7313345)	
Achterveld public library	Public library in the village of Achterveld, municipality of Leusden, The Netherlands	Point(5.4973655 52.1365067)	
Aduard public library	Public library in Aduard, province of Groningen, The Netherlands	Point(6.4570135 53.2599615)	
Akersloot public library	Public library in Akersloot, The Netherlands	Point(4.7322704 52.5633782)	 (518264)
Alblasserdam public library	Public library in Alblasserdam, The Netherlands	Point(4.65723 51.86473)	
Alkmaar De Mare public library	Public library in Alkmaar De Mare, The Netherlands	Point(4.7588585 52.6535348)	
Alkmaar Oudorp public library	Public library in the Oudorp neighbourhood in the city of Alkmaar , The Netherlands	Point(4.7657342 52.6240205)	



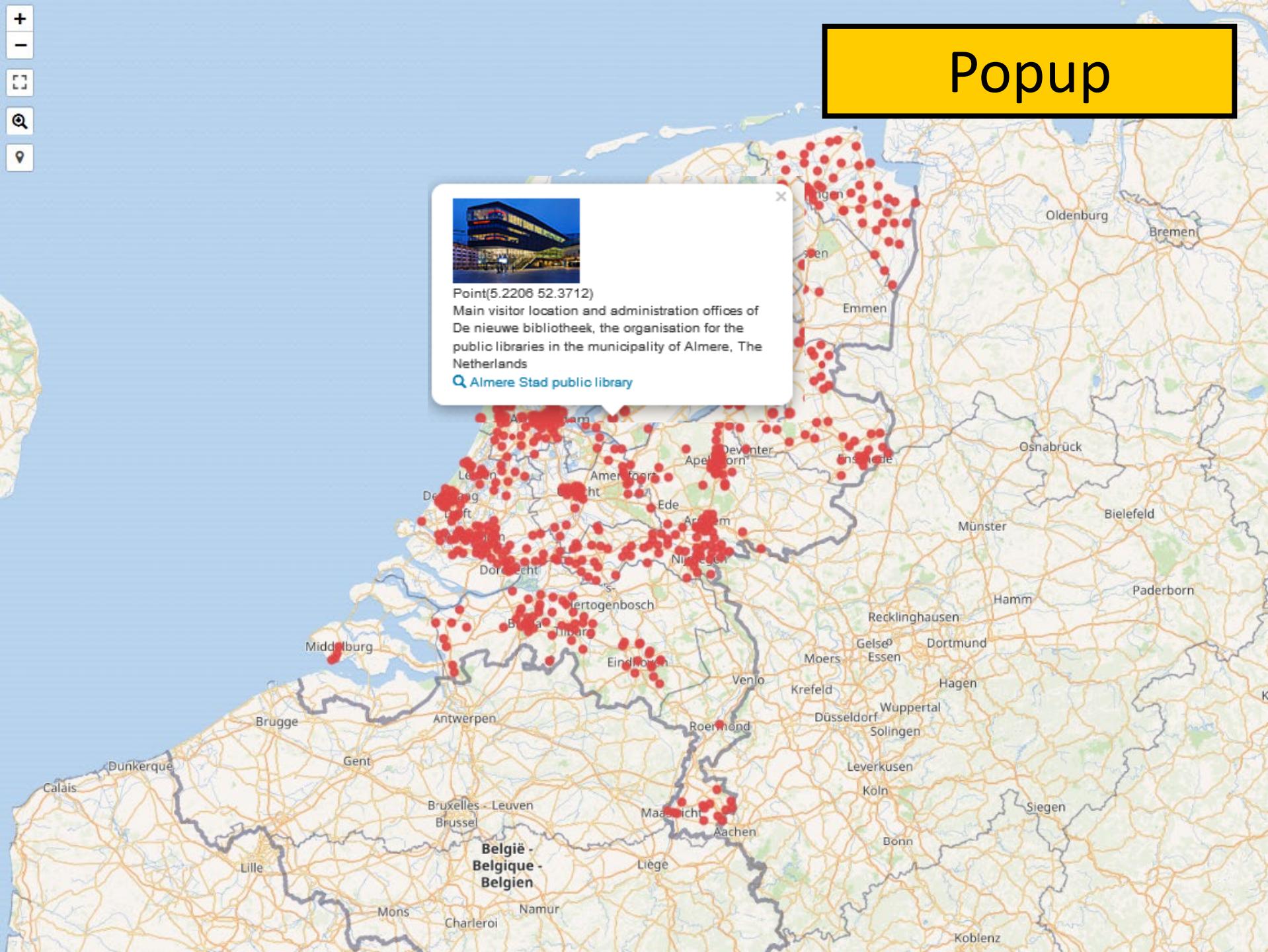
# Default map view

Wikidata Query Service Voorbeelden Hulp Meer hulpmiddelen

```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library branch
9 ?dpl wdt:P17 wd:Q55. #in the Netherlands
10
11 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
12
13 OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
14
15 SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .}
16 }
17
18 ORDER BY ?dplLabel
```

<https://w.wiki/6eq>

# Popup



# Relation between query and popup

The image shows a map of the Netherlands with red dots representing library locations. A callout box highlights a specific location in Almere, showing a building image and the following text:

Point(5.2206 52.3712)  
Main visitor location and administration offices of  
De nieuwe bibliotheek, the organisation for the  
public libraries in the municipality of Almere, The  
Netherlands  
Q Almere Stad public library

A red arrow points from the "Almere Stad public library" link in the callout box to the corresponding line in the Wikidata Query Service code.

**Wikidata Query Service**

```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library branch
9 ?dpl wdt:P17 wd:Q55. #in the Netherlands
10
11 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
12
13 OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
14
15 SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .}
16 }
17
18 ORDER BY ?dplLabel|
```

<https://w.wiki/6eq>

# Relation between query and popup

The screenshot shows the Wikidata Query Service interface. At the top, there's a map of Europe with several red dots indicating the locations of public libraries. A specific dot is highlighted over the city of Almere in the Netherlands. A red arrow points from this location on the map to a detailed information box (popup) overlaid on the map. The box contains a thumbnail image of a modern building, the coordinates "Point(5.2208 52.3712)", and a descriptive text: "Main visitor location and administration offices of De nieuwe bibliotheek, the organisation for the public libraries in the municipality of Almere, The Netherlands". Below the box, the query results are listed.

Wikidata Query Service

Voorbeelden Hulp Meer hulpmiddelen

```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library branch
9 ?dpl wdt:P17 wd:Q55. #in the Netherlands
10
11 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
12
13 OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
14
15 SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .}
16 }
17
18 ORDER BY ?dplLabel|
```

<https://w.wiki/6eq>

# Relation between query and popup

The image shows a map of Europe with a focus on the Netherlands. Numerous red dots represent the locations of public libraries. A specific location in Almere is highlighted with a callout box. Inside the box is a small image of a modern library building at night, its name, coordinates, a detailed description, and a link to the library's page.

The Wikidata Query Service screenshot shows the SPARQL query used to find these locations. The line circled in red in the screenshot corresponds to the line circled in red in the callout box above:

```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library branch
9 ?dpl wdt:P17 wd:Q55. #in the Netherlands
10
11 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
12
13 OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
14
15 SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .}
16 }
17
18 ORDER BY ?dplLabel|
```

<https://w.wiki/6eq>

# Relation between query and popup

The screenshot shows a map interface with a specific location highlighted. A red circle is drawn around the thumbnail image of a modern building in the popup window. A red arrow points from this image to the `?dplImage` part of the Wikidata Query Service code.

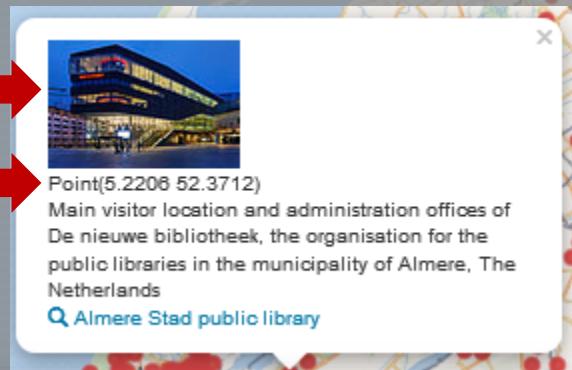
Wikidata Query Service

```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library branch
9 ?dpl wdt:P17 wd:Q55. #in the Netherlands
10
11 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
12
13 OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
14
15 SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .}
16 }
17
18 ORDER BY ?dplLabel|
```

<https://w.wiki/6eq>

# Hiding fields from popup

Hide image and coordinates

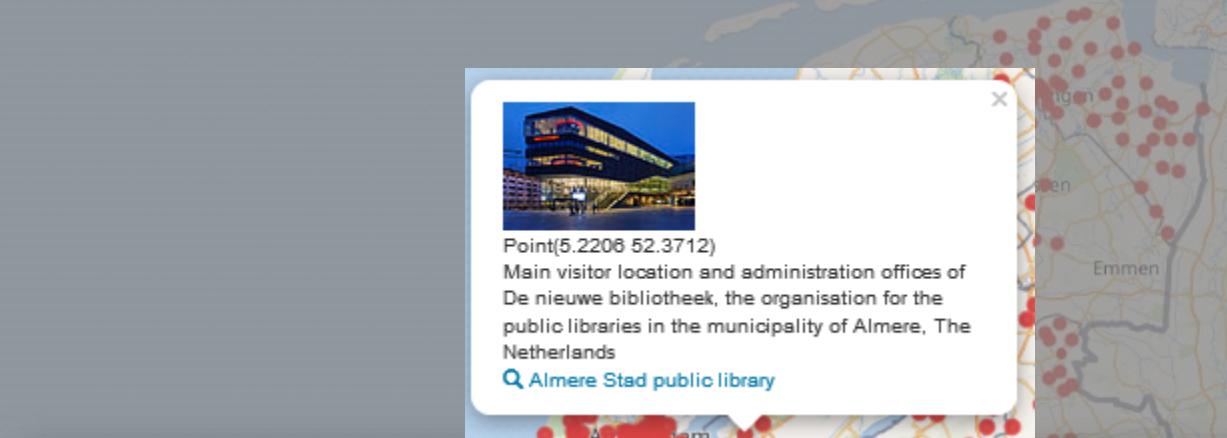


Wikidata Query Service

Voorbeelden Hulp Meer hulpmiddelen

```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library branch
9 ?dpl wdt:P17 wd:Q55. #in the Netherlands
10
11 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
12
13 OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
14
15 SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .}
16 }
17
18 ORDER BY ?dplLabel|
```

# Hiding fields from popup



Wikidata Query Service

Voorbeelden Hulp Meer hulpmiddelen

```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map{"hide":["?dplLoc", "?dplImage"]}
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library branch
9 ?dpl wdt:P17 wd:Q55. #in the Netherlands
10
11 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
12
13 OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
14
15 SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .}
16 }
17
18 ORDER BY ?dplLabel|
```

A red arrow points to the line "#defaultView:Map{"hide":["?dplLoc", "?dplImage"]}" in the Wikidata query code.

<https://w.wiki/6mU>

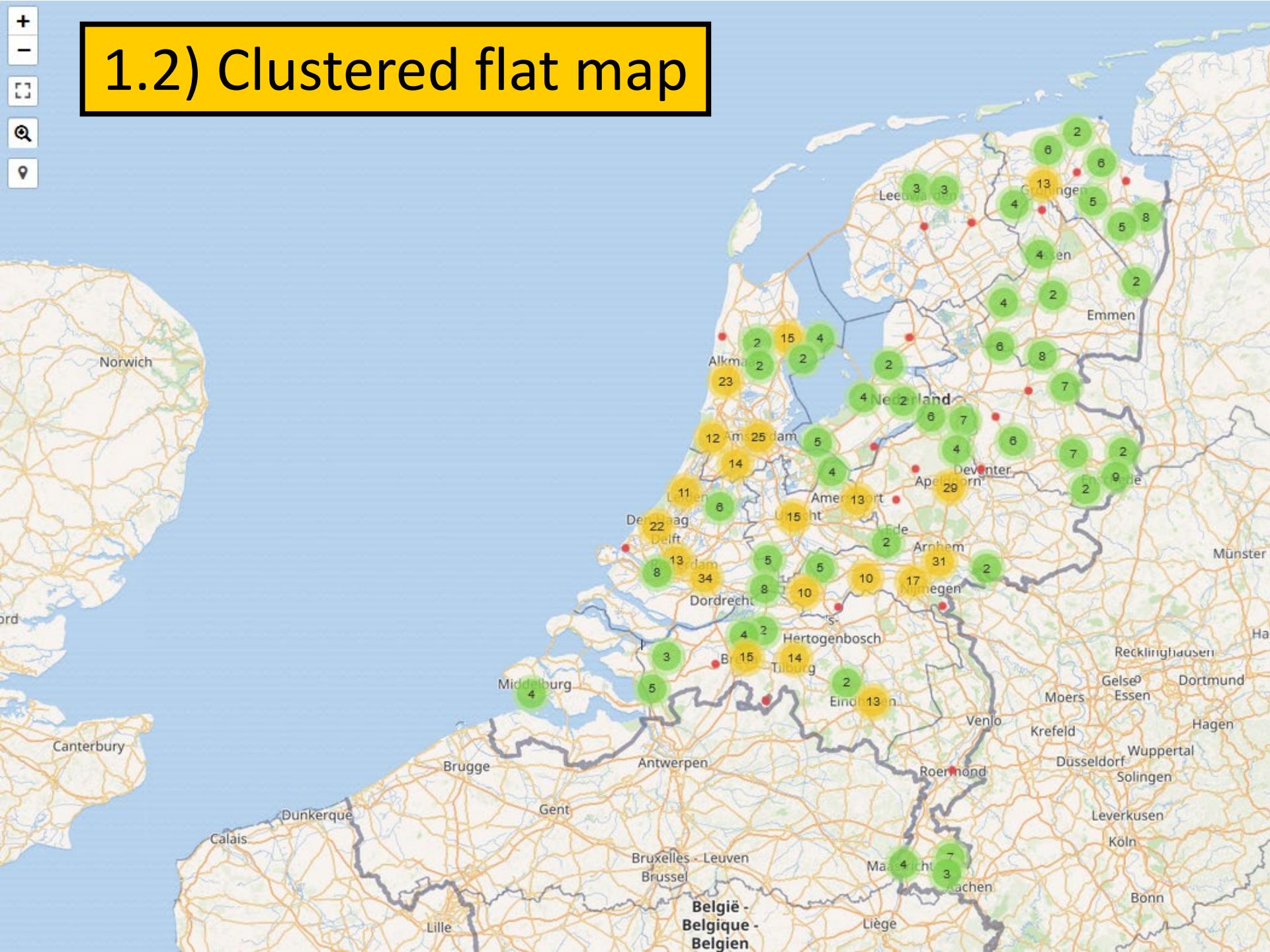
# Hiding fields from popup

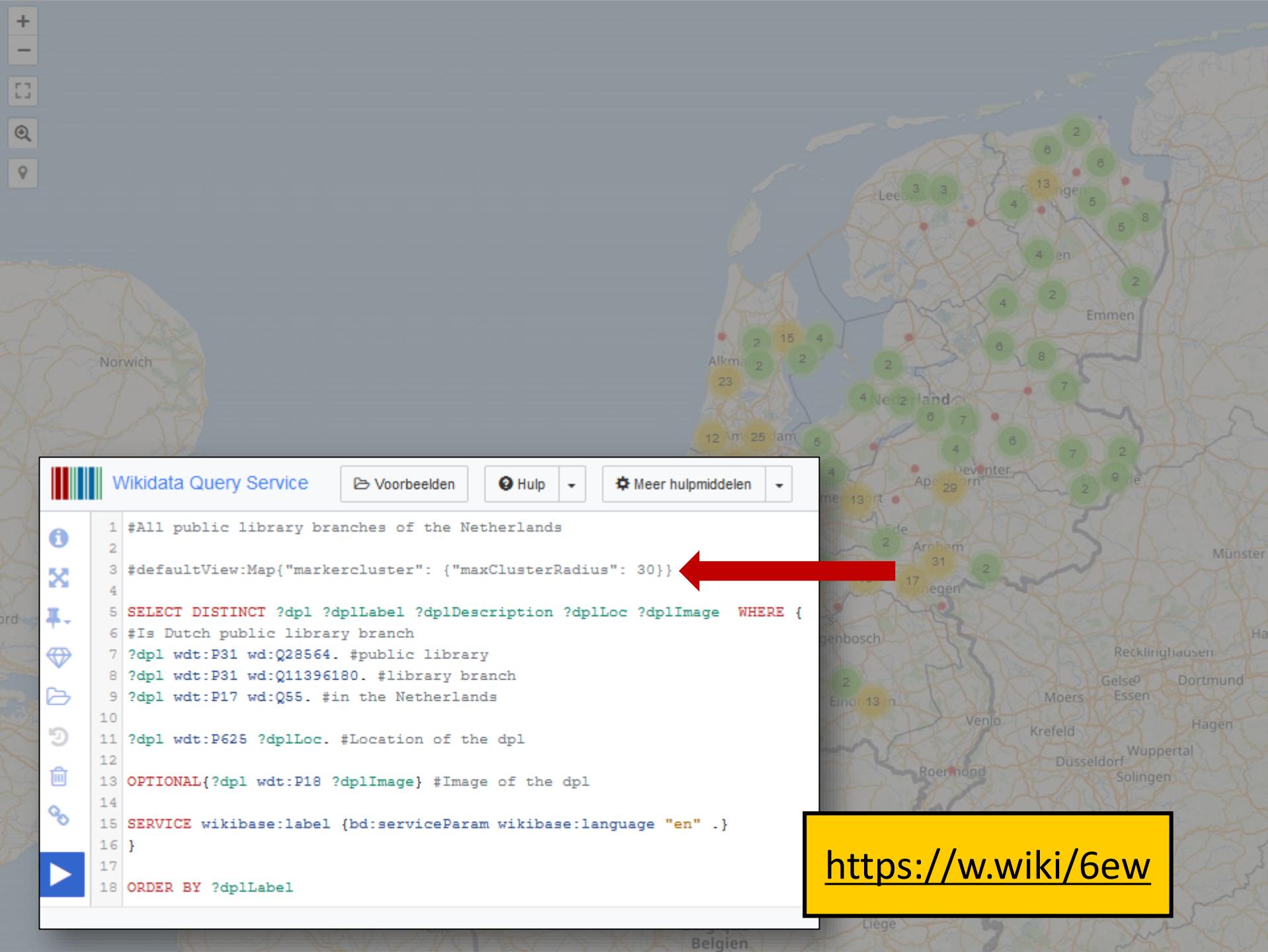
The Wikidata Query Service interface is shown, featuring a sidebar with icons for search, add, edit, and more. The main area displays a SPARQL query:

```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map{"hide":["?dplLoc", "?dplImage"]}
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library branch
9 ?dpl wdt:P17 wd:Q55. #in the Netherlands
10
11 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
12
13 OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
14
15 SERVICE wikibase:label {bd:serviceParam wikibase:language "en" .}
16 }
17
18 ORDER BY ?dplLabel|
```

<https://w.wiki/6mU>

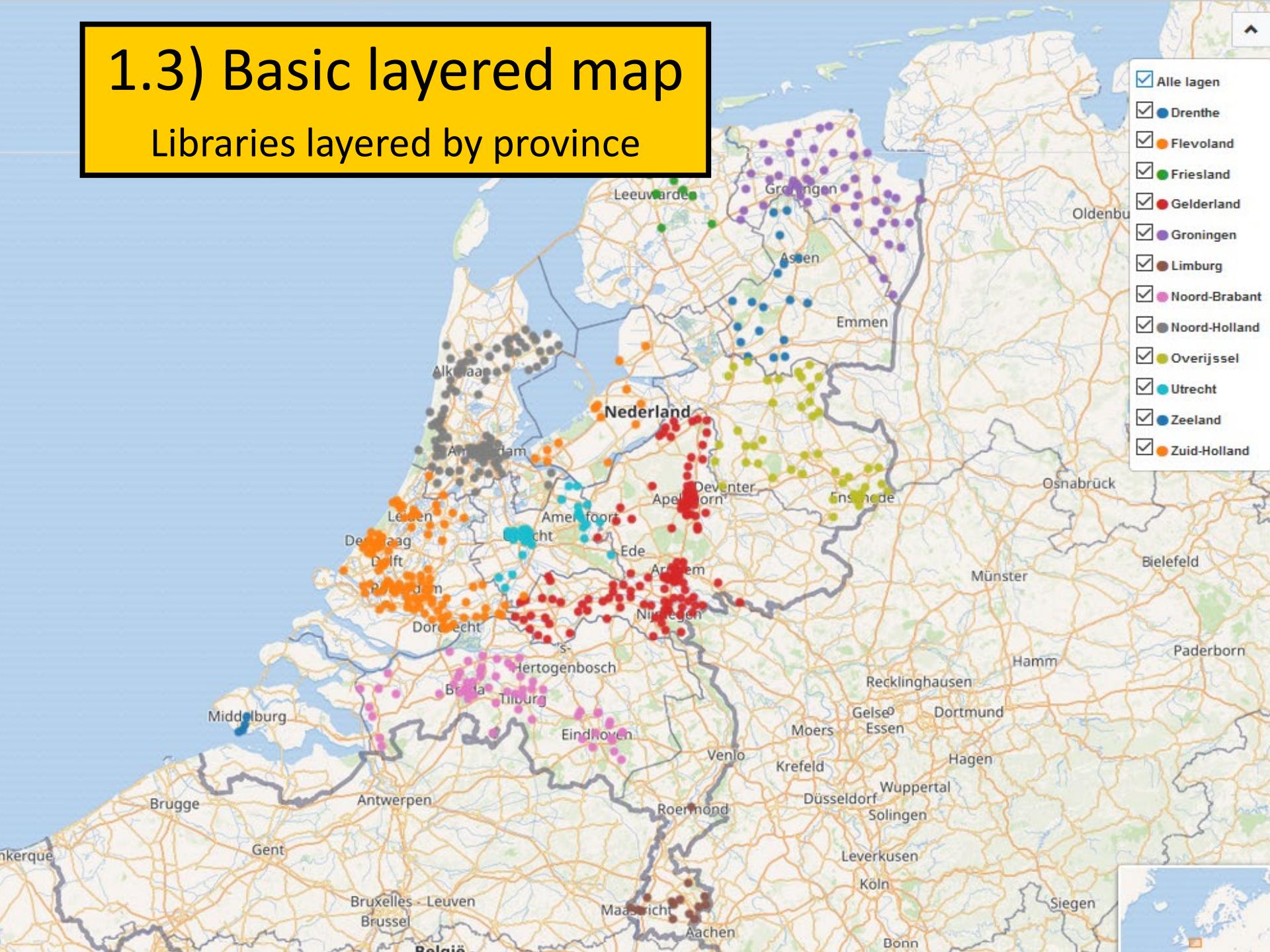
## 1.2) Clustered flat map





# 1.3) Basic layered map

Libraries layered by province



- Alle lagen
- Drenthe
- Flevoland
- Friesland
- Gelderland
- Groningen
- Limburg
- Noord-Brabant
- Noord-Holland
- Overijssel
- Utrecht
- Zeeland
- Zuid-Holland



Wikidata Query Service

Voorbeelden

Hulp

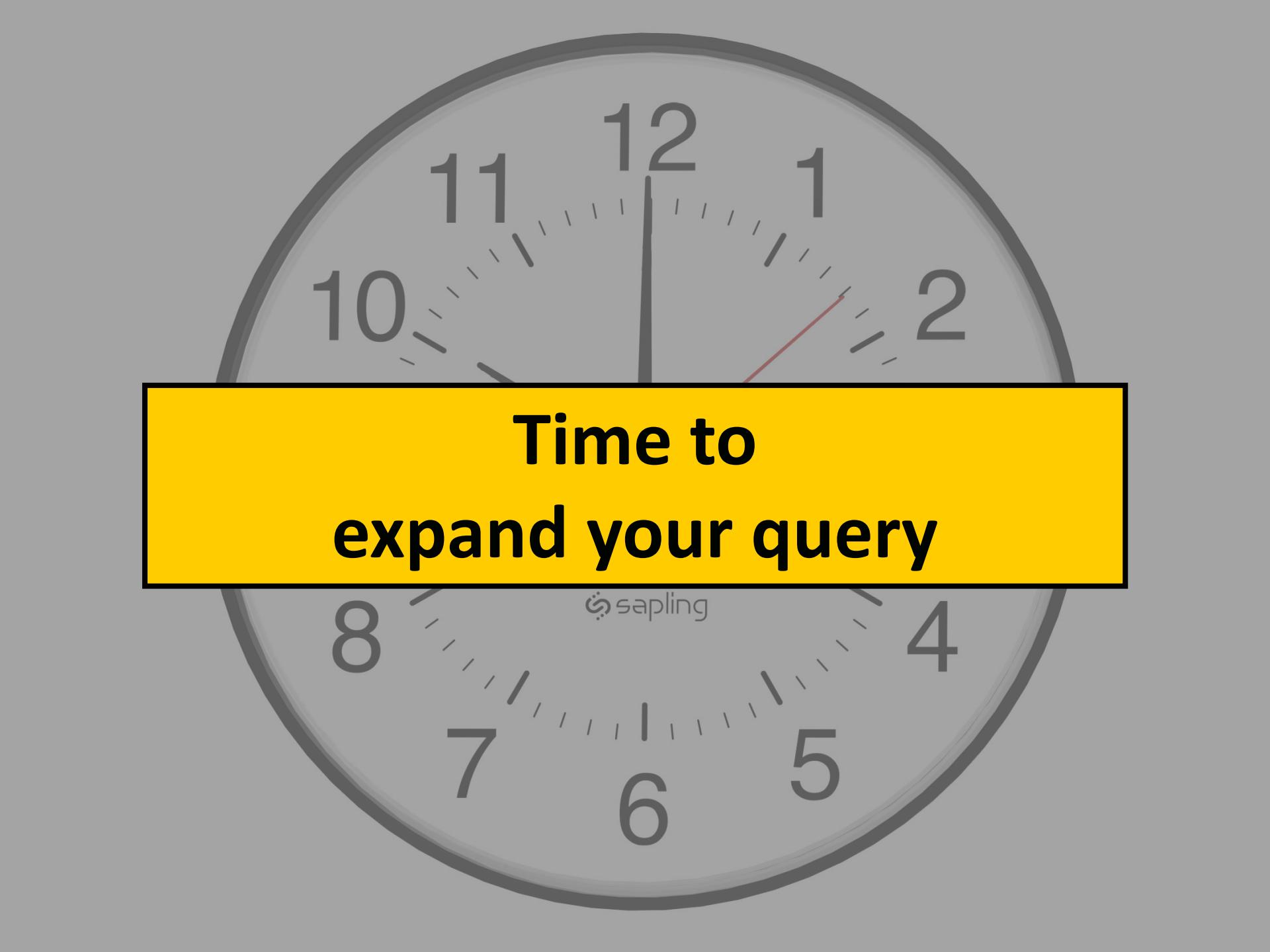
Meer hulpmiddelen

```

1 #All public library branches of the Netherlands, layered by province
2
3 #defaultView:Map{"hide": ["?dplLoc"], "layer": "?provLabel"}
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplImage ?dplLoc ?muniLabel ?provLabel WHERE {
6   ?dpl p:P31/ps:P31 wd:Q28564,wd:Q11396180;wdt:P17 wd:Q55. #public library branch in The Netherlands
7   ?dpl wdt:P625 ?dplLoc. #Geo location of the dpl
8   OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
9
10  --- Find the municipality the library is in
11  ?dpl wdt:P131 ?muni. #municipality derived from library item, has one single value
12  ?muni p:P31 [ps:P31 ?muniIsA].
13  VALUES ?muniIsA {wd:Q2039348}
14  #Instead of the the above line, you can also do: FILTER(?muniIsA = wd:Q2039348)
15
16  --- Find the province the municipality is in
17  ?muni wdt:P131 ?prov. #find the province
18  ?prov p:P31 [ps:P31 ?provIsA].
19  VALUES ?provIsA {wd:Q134390} #Only: province of the Netherlands (Q134390)
20
21 SERVICE wikibase:query {
22   bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en".}
23 }
24 ORDER BY ?provLabel
  
```

Expand your query  
with layering variable  
→ Include provinces

<https://w.wiki/6gJ>



**Time to  
expand your query**

 sapling



## Wikidata Query Service

Voorbeelden

Hulp

Meer hulpmiddelen

```
1 #All public library branches of the Netherlands, layered by province
2
3 #defaultView:Map{"hide": ["?dplLoc"], "layer": "?provLabel"} -----
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplImage ?dplLoc ?muniLabel ?provLabel WHERE {
6   ?dpl p:P31/ps:P31 wd:Q28564,wd:Q11396180;wdt:P17 wd:Q55. #public library branch in The Netherlands
7   ?dpl wdt:P625 ?dplLoc. #Geo location of the dpl
8   OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl
9
10 --- Find the municipality the library is in
11 ?dpl wdt:P131 ?muni. #municipality derived from library item, has one sing
12 ?muni p:P31 [ps:P31 ?muniIsA].
13 VALUES ?muniIsA {wd:Q2039348}
14 #Instead of the the above line, you can also do: FILTER(?muniIsA = wd:Q203
15
16 --- Find the province the municipality is in
17 ?muni wdt:P131 ?prov. #find the province
18 ?prov p:P31 [ps:P31 ?provIsA].
19 VALUES ?provIsA {wd:Q134390} #Only: province of the Netherlands (Q134390)
20
21 SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". }
22
23 }
24 ORDER BY ?provLabel
```

Non-custom layer names  
= labels from WD-items

<https://w.wiki/6gJ>

- 
- Alle lagen
  - Drenthe
  - Flevoland
  - Friesland
  - Gelderland
  - Groningen
  - Limburg
  - Noord-Brabant
  - Noord-Holland
  - Overijssel
  - Utrecht
  - Zeeland
  - Zuid-Holland

## Wikidata Query Service

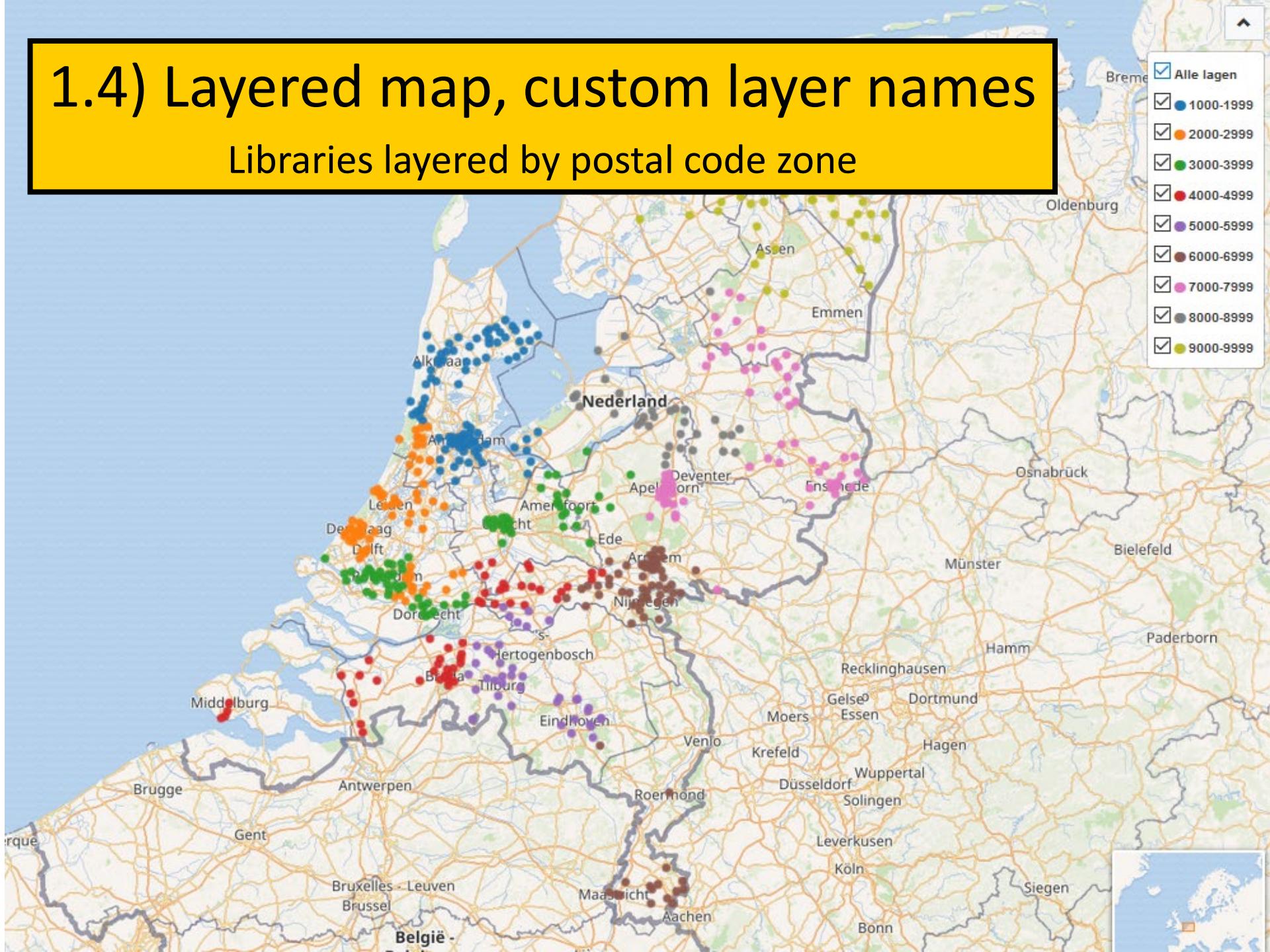
[Voorbeelden](#)[Hulp](#)[Meer hulpmiddelen](#)

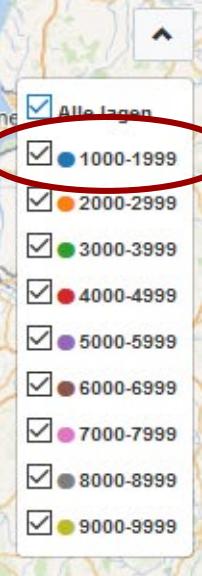
```
1 #All public library branches of the Netherlands, layered by province
2
3 #defaultView:Map{"hide": ["?dplLoc"], "layer": "?provLabel"}
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplImage ?dplLoc ?muniLabel ?provLabel WHERE {
6   ?dpl p:P31/ps:P31 wd:Q28564,wd:Q11396180;wdt:P17 wd:Q55. #public library branch in The Netherlands
7   ?dpl wdt:P625 ?dplLoc. #Geo location of the dpl
8   OPTIONAL{?dpl wdt:P18 ?dplImage} #Image of the dpl}
9
10 --- Find the municipality the library is in
11 ?dpl wdt:P131 ?muni. #municipality derived fr
12 ?muni p:P31 [ps:P31 ?muniIsA].
13 VALUES ?muniIsA {wd:Q2039348}
14 #Instead of the the above line, you can also do
15
16 --- Find the province the municipality is in
17 ?muni wdt:P131 ?prov. #find the province
18 ?prov p:P31 [ps:P31 ?provIsA].
19 VALUES ?provIsA {wd:Q134390} #Only: province of the Netherlands (Q134390)
20
21 SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en".}
22
23 }
24 ORDER BY ?provLabel
```

Layer order

# 1.4) Layered map, custom layer names

Libraries layered by postal code zone





Amsterdam Public Library, OBA De Hallen (Q60290390)

Public library in De Hallen building in the Kinkerbuurt neighbourhood of Amsterdam, The Netherlands

 edit

[▼ In more languages](#)

Language	Label	Description	Also known as
English	Amsterdam Public Library, OBA De Hallen	Public library in De Hallen building in the Kinkerbuurt neighbourhood of Amsterdam, The Netherlands	
German	No label defined	öffentliche Bibliothek in den Niederlanden	
Spanish	No label defined	No description defined	
French	No label defined	No description defined	
Italian	No label defined	No description defined	
Dutch	OBA De Hallen	Openbare Bibliotheek Amsterdam in de Kinkerbuurt	Postal code zone = 1000 - 1009

Postal code zone =  
1000 - 1999

## All entered languages

postal code

1053RT

## ► 1 reference

P281

phone number

+31-20-616-3275

## ► 1 reference

 edit

[+ add value](#)

 [edit](#)

[+ add value](#)

e-mail address

<mailto:dehallen@oba.nl>

## ► 1 reference

 [edit](#)

+ add value

<https://www.wikidata.org/wiki/Q60290390>

- Alle lagen
- 1000-1999
- 2000-2999
- 3000-3999
- 4000-4999
- 5000-5999
- 6000-6999
- 7000-7999
- 8000-8999
- 9000-9999

Wikidata Query Service    [Voorbeelden](#)    [Hulp](#)    [Meer hulpmiddelen](#)

```

1 #Maps of public library branches The Netherlands, layered by postal codes zones (1000-1999, 2000-2999 etc)
2
3 #defaultView:Map{"layer":"?pczone"}
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplImage ?dplLoc ?postcode ?pcdigits ?pczone
6
7 WHERE {
8   ?dpl p:P31/ps:P31 wd:Q28564,wd:Q11396180;wdt:P17 wd:Q55. #public library branch in The Netherlands
9   ?dpl wdt:P625 ?dplLoc. #Geo location of the library
10
11 ?dpl (p:P281/ps:P281) ?postcode. #postal code of the library, format = 4 digits + 2 letters , e.g. '1073RT'
12
13 BIND(SUBSTR(str(?postcode), 1, 4) as ?pcdigits). #get 4 first digits of postal code
14
15 # Create layer object (= ?pczone) with the postal code zones as layers
16 BIND(
17   IF(?pcdigits > "1000" && ?pcdigits <= "1999", "1000-1999",
18   IF(?pcdigits > "2000" && ?pcdigits <= "2999", "2000-2999",
19   IF(?pcdigits > "3000" && ?pcdigits <= "3999", "3000-3999",
20   IF(?pcdigits > "4000" && ?pcdigits <= "4999", "4000-4999",
21   IF(?pcdigits > "5000" && ?pcdigits <= "5999", "5000-5999",
22   IF(?pcdigits > "6000" && ?pcdigits <= "6999", "6000-6999",
23   IF(?pcdigits > "7000" && ?pcdigits <= "7999", "7000-7999",
24   IF(?pcdigits > "8000" && ?pcdigits <= "8999", "8000-8999",
25   IF(?pcdigits > "9000" && ?pcdigits <= "9999", "9000-9999",
26   "REST")))))))) AS ?pczone).
27
28 SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". }
29
30
31 ORDER BY ?pczone #ascending order by postal code zone

```

Do not click,  
copy-paste in browser!

<https://bit.ly/3368DPk>

- Alle lagen
- 1000-1999
- 2000-2999
- 3000-3999
- 4000-4999
- 5000-5999
- 6000-6999
- 7000-7999
- 8000-8999
- 9000-9999

Wikidata Query Service    [Voorbeelden](#)    [Hulp](#)    [Meer hulpmiddelen](#)

```

1 #Maps of public library branches The Netherlands, layered by postal codes zones (1000-1999, 2000-2999 etc)
2
3 #defaultView:Map{"layer":"?pczone"} 
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplImage ?dplLoc ?postcode ?pcdigits ?pczone 
6
7 WHERE {
8   ?dpl p:P31/ps:P31 wd:Q28564,wd:Q11396180;wdt:P17 wd:Q55. #public library branch in The Netherlands
9   ?dpl wdt:P625 ?dplLoc. #Geo location of the library
10
11 ?dpl (p:P281/ps:P281) ?postcode. #postal code of the library, format = 4 digits + 2 letters , e.g. '1073RT'
12
13 BIND(SUBSTR(str(?postcode), 1, 4) as ?pcdigits). #get 4 first digits of postal code
14
15 # Create layer object (= ?pczone) with the postal code zones as layers
16 BIND(
17   IF(?pcdigits > "1000" && ?pcdigits <= "1999", "1000-1999",
18   IF(?pcdigits > "2000" && ?pcdigits <= "2999", "2000-2999",
19   IF(?pcdigits > "3000" && ?pcdigits <= "3999", "3000-3999",
20   IF(?pcdigits > "4000" && ?pcdigits <= "4999", "4000-4999",
21   IF(?pcdigits > "5000" && ?pcdigits <= "5999", "5000-5999",
22   IF(?pcdigits > "6000" && ?pcdigits <= "6999", "6000-6999",
23   IF(?pcdigits > "7000" && ?pcdigits <= "7999", "7000-7999",
24   IF(?pcdigits > "8000" && ?pcdigits <= "8999", "8000-8999",
25   IF(?pcdigits > "9000" && ?pcdigits <= "9999", "9000-9999",
26   "REST")))))})
27 AS ?pczone) 
28
29 SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en".}
30
31 ORDER BY ?pczone #ascending order by postal code zone

```

<https://bit.ly/3368DPk>

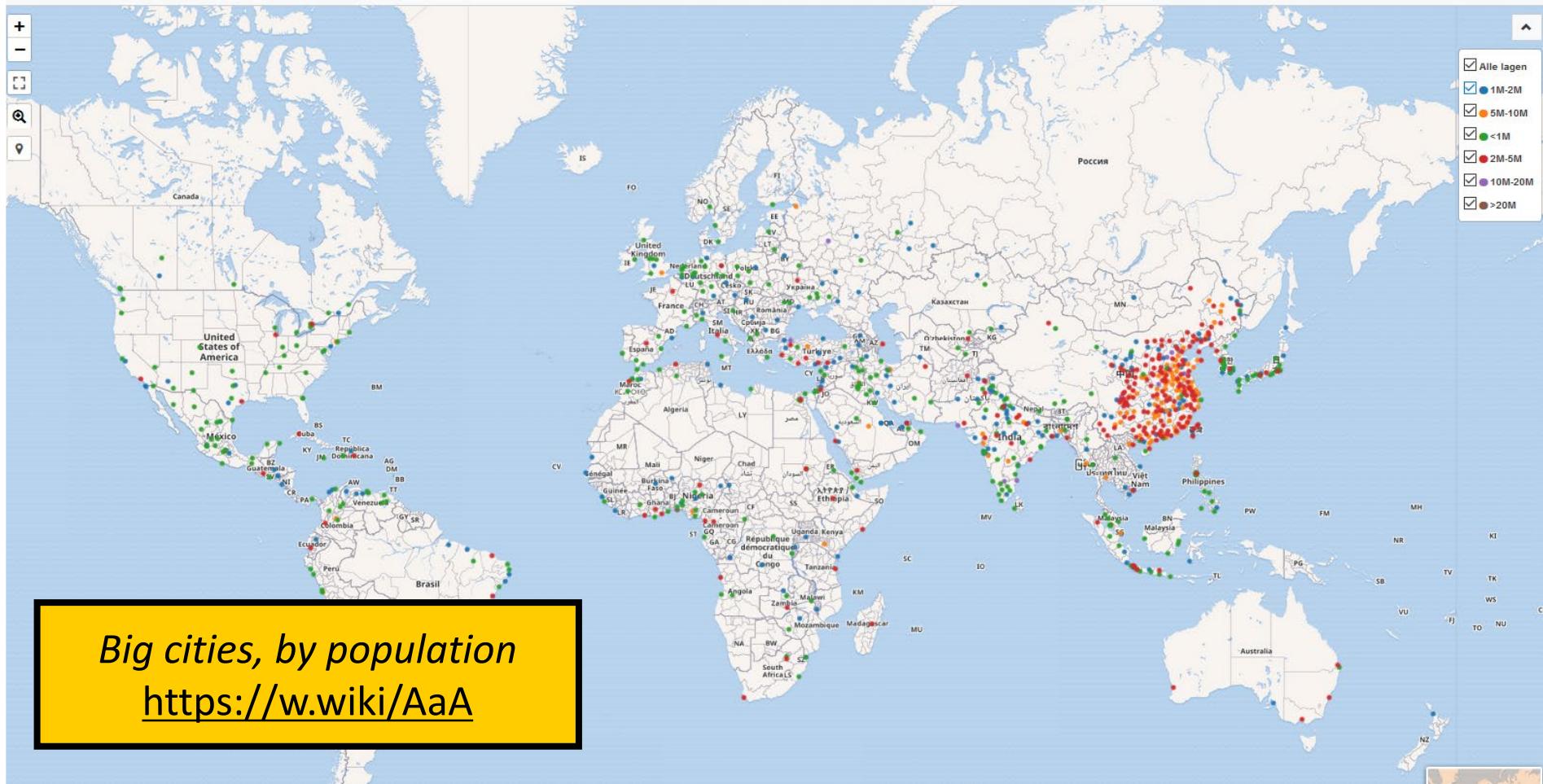
- Alle lagen
- 1000-1999
- 2000-2999
- 3000-3999
- 4000-4999
- 5000-5999
- 6000-6999
- 7000-7999
- 8000-8999
- 9000-9999

## Custom layer names

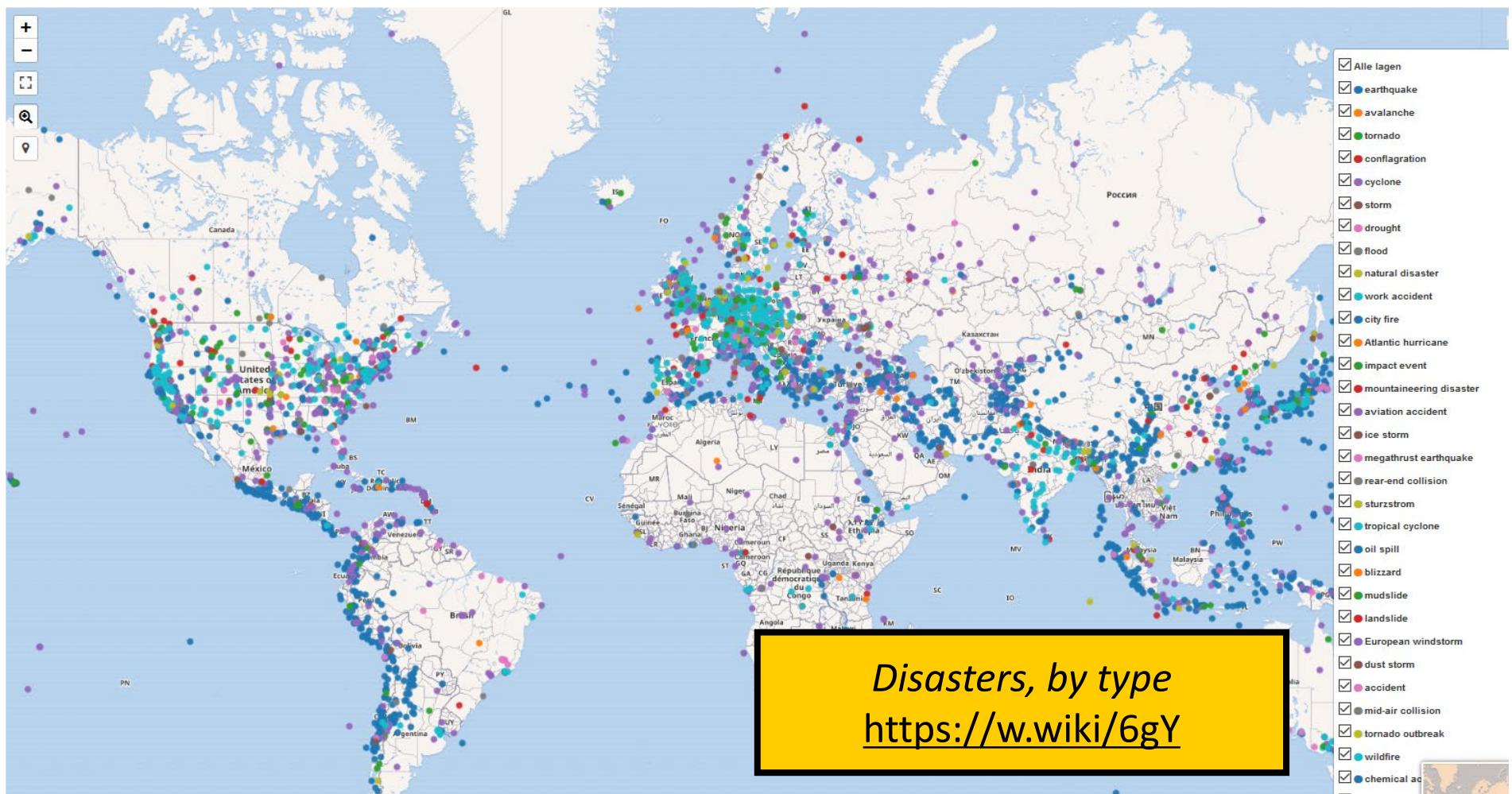
```
"1000-1999",
"2000-2999",
"3000-3999",
"4000-4999",
"5000-5999",
"6000-6999",
"7000-7999",
"8000-8999",
"9000-9999",
"REST") )))))))) AS ?pczone).
```

```
1 #Maps of public library branches The Netherlands, layered by postal codes zones (1000-1999, 2000-2999 etc)
2
3 #defaultView:Map{"layer":"?pczone"}
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplImage ?dplLoc ?postcode ?pcdigits ?pczone
6
7 WHERE {
8   ?dpl p:P31/ps:P31 wd:Q28564,wd:Q11396180;wdt:P17 wd:Q55. #public library branch in The Netherlands
9   ?dpl wdt:P625 ?dplLoc. #Geo location of the library
10
11 ?dpl (p:P281/ps:P281) ?postcode. #postal code of the library, forma
12
13 BIND(SUBSTR(str(?postcode), 1, 4) as ?pcdigits). #get 4 first digits
14
15 # Create layer object (= ?pczone) with the postal code zones as layers
16 BIND(
17   IF(?pcdigits > "1000" && ?pcdigits <= "1999", "1000-1999",
18   IF(?pcdigits > "2000" && ?pcdigits <= "2999", "2000-2999",
19   IF(?pcdigits > "3000" && ?pcdigits <= "3999", "3000-3999",
20   IF(?pcdigits > "4000" && ?pcdigits <= "4999", "4000-4999",
21   IF(?pcdigits > "5000" && ?pcdigits <= "5999", "5000-5999",
22   IF(?pcdigits > "6000" && ?pcdigits <= "6999", "6000-6999",
23   IF(?pcdigits > "7000" && ?pcdigits <= "7999", "7000-7999",
24   IF(?pcdigits > "8000" && ?pcdigits <= "8999", "8000-8999",
25   IF(?pcdigits > "9000" && ?pcdigits <= "9999", "9000-9999",
26   "REST")))))))) AS ?pczone).
27
28 SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". }
29
30
31 ORDER BY ?pczone #ascending order by postal code zone
```

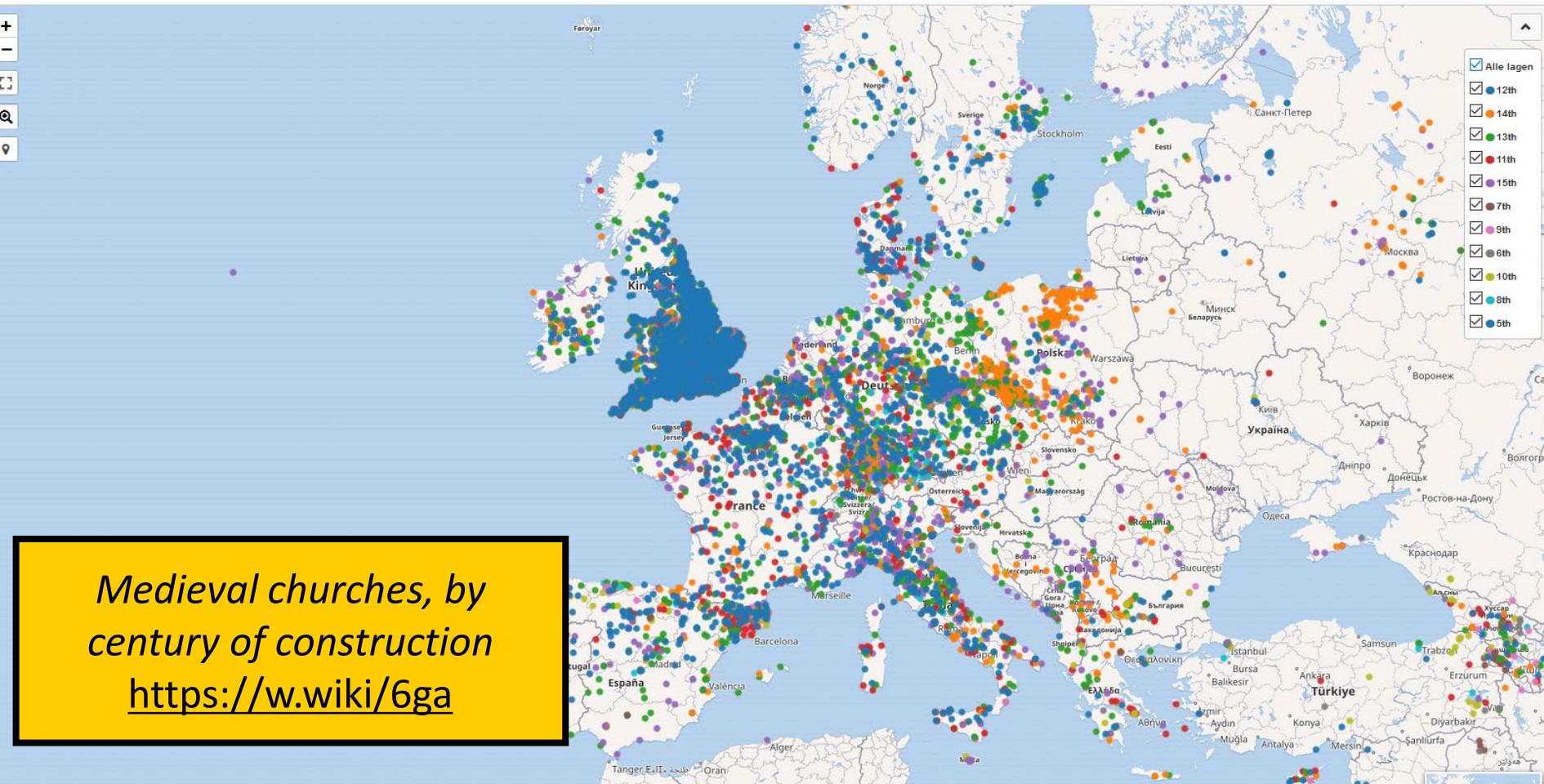
# 1.5) Other cool layered maps



# 1.5) Other cool layered maps



## 1.5) Other cool layered maps



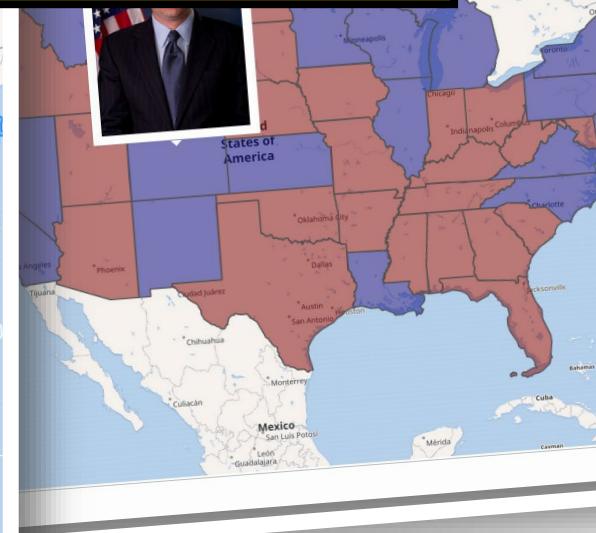
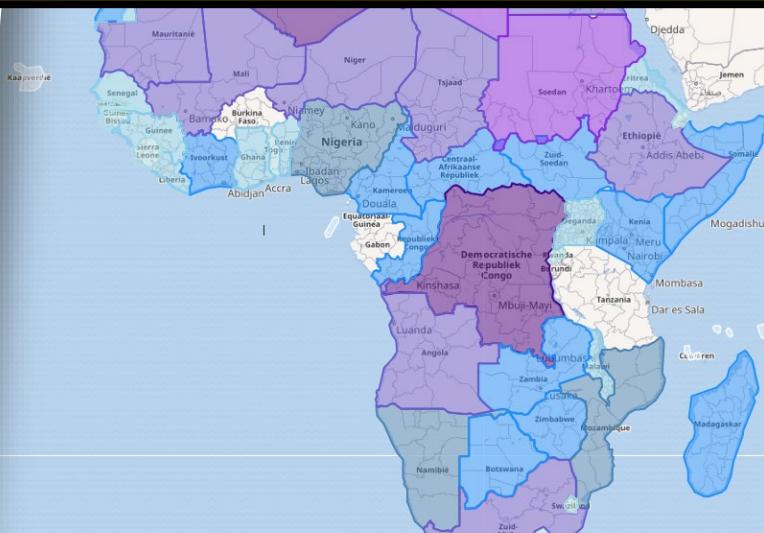
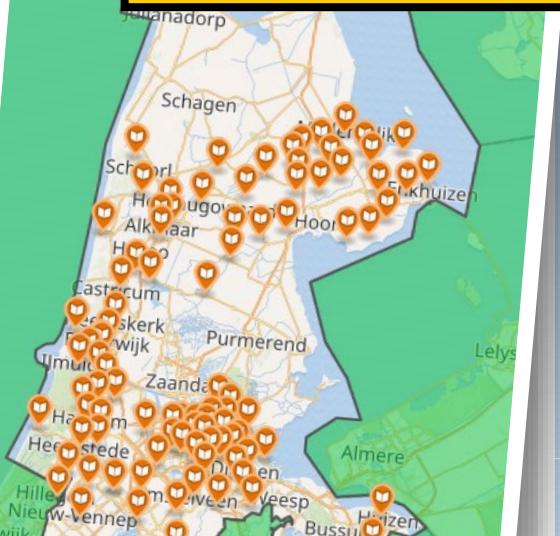
# 1.5) Other cool layered maps

*Dutch municipalities, by number  
of public libraries*  
<https://w.wiki/6gb>



# MODULE 2

## Embedded maps in Wikimedia projects





## For this Module, you will (also) need

- User page on Wikipedia, Commons, Wikidata
- With Sandbox

Nice to have: some knowledge about

- OpenStreetMap and
- GeoJSON

# Extension:Kartographer



Main page  
Get MediaWiki  
Get extensions  
Tech blog  
Contribute

Support

User help  
FAQ

Technical manual  
Support desk  
Communication

Development

Bug tracker  
Code repository  
Code docs  
Statistics

MediaWiki.org

Community portal  
Recent changes  
Translate content  
Random page  
Current issues  
Sandbox

Print/export

...

English OlafJanssen 23 26 Talk Preferences Beta Watchlist Contributions Log out

Help Discussion

Read Edit View history More

Search MediaWiki



## Help:Extension:Kartographer

Translate this page

**Other languages:** Bahasa Indonesia • Deutsch • English • Ripoarisch • Tiếng Việt • asturianu • español • français • galego • italiano • magyar • português do Brasil • suomi • svenska • македонски • русский • עברית • سنڌي • العربية • অসমীয়া • 中文 • 日本語 • 한국어



Note: When you edit this page, you agree to release your contribution under the CC0. See Public Domain Help Pages for more info.

Edit - Translate



The Kartographer extension powers interactive maps on Wikimedia wikis. This page shows techniques for creating dynamic maps by using the Kartographer tags <mapframe>, which embeds maps right in wiki pages, and <maplink>, which creates links to dynamic maps.

### Contents [hide]

- 1 Getting started
- 2 <mapframe> usage
  - 2.1 Frames
- 3 <maplink>
  - 3.1 <maplink> and auto-counters
- 4 Markers
- 5 Groups
- 6 External data
  - 6.1 GeoShapes via Wikidata Query
  - 6.2 Map data from Commons
  - 6.3 Combining multiple data
- 7 Styling
  - 7.1 Styling Wikidata ID elements
  - 7.2 Overlapping elements

<https://www.mediawiki.org/wiki/Help:Extension:Kartographer>



WIKIPEDIA  
De vrije encyclopedie

Gebruiker Overleg

Gebruiker:OlafJanssen/Kladblok

< Gebruiker:OlafJanssen

Hoofdpagina

Vind een artikel

Vandaag

Etalage

Categorieën

Recente wijzigingen

Nieuwe artikelen

Willekeurige pagina

Informatie

Gebruikersportaal

Snelcursus

Hulp en contact

Donaties

Hulpmiddelen

Koppelingen vanaf deze pagina

Links naar deze pagina

Verwante wijzigingen

Gebruikersbijdragen

Logboeken

Deze gebruiker e-mailen

Gebruikersgroepen weergeven

Bestand uploaden

Speciale pagina's

Permanente koppeling

Paginagegevens

Afdrukken/exporteren

Boek maken

Downloaden als PDF

Printvriendelijke versie

Talen



# Basic embedded map, no data

(in my Sandbox on Dutch Wikipedia)

Embedded maps in Dutch Wikipedia [ bewerken | brontekst bewerken ]

Basic embedded map of The Netherlands [ bewerken | brontekst bewerken ]





WIKIPEDIA  
De vrije encyclopedie

Hoofdpagina  
Vind een artikel  
Vandaag  
Etalage  
Categorieën  
Recente wijzigingen  
Nieuwe artikelen  
Willekeurige pagina

Informatie  
Gebruikersportaal  
Snelcursus  
Hulp en contact  
Donaties

Hulpmiddelen  
Koppelingen van pagina  
Links naar deze pagina  
Verwante wijzigingen  
Gebruikersbijdragen  
Logboeken  
Deze gebruiker e-gebruikersgroepen weergeven  
Bestand uploaden  
Speciale pagina's  
Permanente koppeling  
Paginagegevens

Afdrukken/exporteren  
Boek maken  
Downloaden als PDF  
Printvriendelijke versie

Talen

Gebruiker Overleg

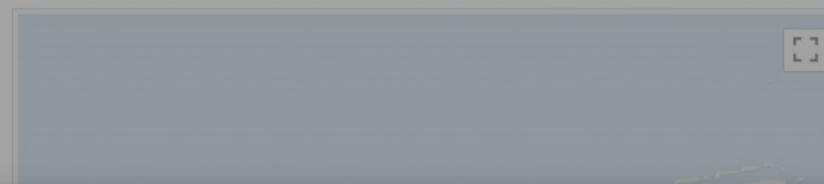
Lezen Bewerken

# Gebruiker:OlafJanssen/KladblokMapMakingWorkshopWM2019

< Gebruiker:OlafJanssen

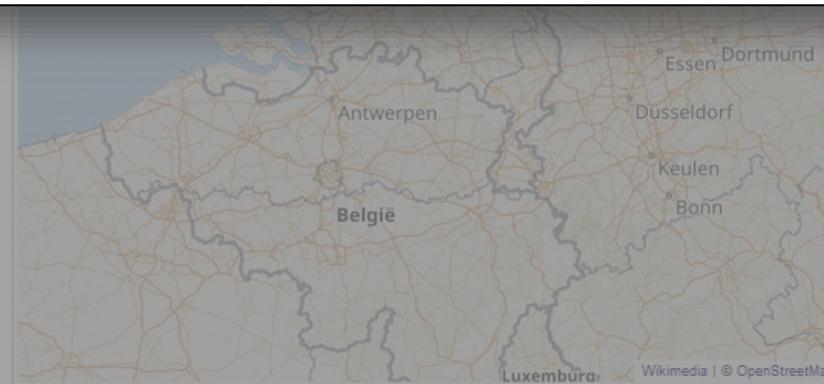
## Embedded maps in Dutch Wikipedia [ bewerken | brontekst bewerken ]

### Basic embedded map of The Netherlands [ bewerken | brontekst bewerken ]



**== Basic embedded map of The Netherlands ==**

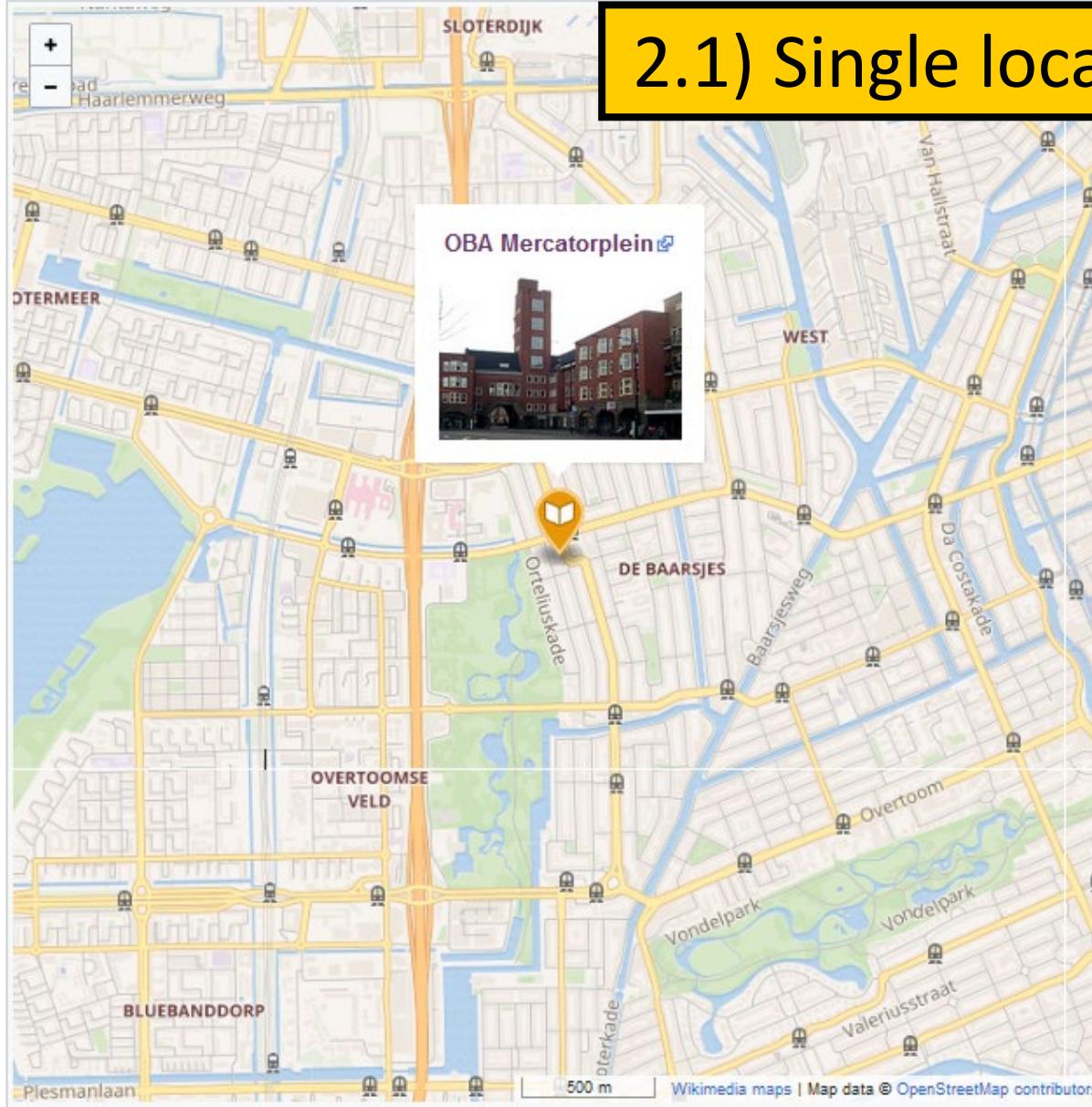
```
<mapframe width=600 height=700 zoom=7 latitude=52.20 longitude=5.179627565 text="Basic embedded map of [[w:The_Netherlands|The Netherlands]]" align=left/>
```



Basic embedded map of The Netherlands

One public library in Amsterdam, geo coordinates hard coded

## 2.1) Single location, hard-coded



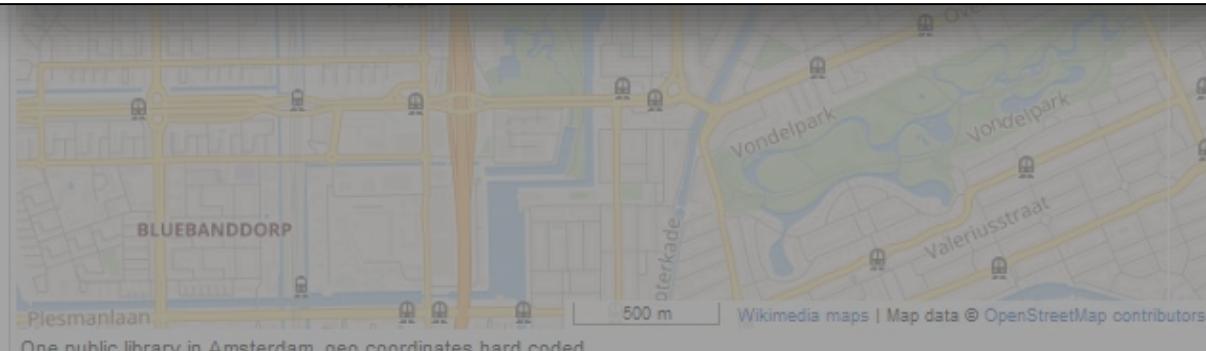
One public library in Amsterdam, geo coordinates hard coded

## One public library in Amsterdam, geo coordinates hard coded

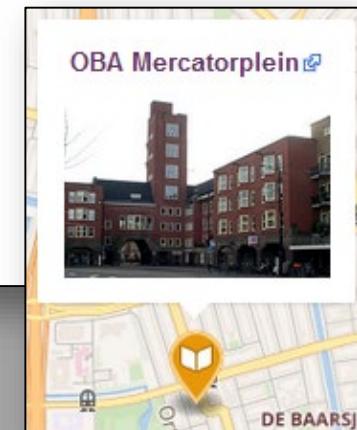


== One public library in Amsterdam, geo coordinates hard-coded ==

```
<mapframe text="One public library in Amsterdam, geo coordinates hard-coded" width=700 height=700 zoom=14
latitude=52.3693887 longitude=4.8502319 align=left>
{
  "type": "Feature",
  "geometry": { "type": "Point", "coordinates": [4.8502319, 52.3693887] },
  "properties": {
    "title": "[https://www.oba.nl/vestigingen/oba-mercatorplein.html OBA Mercatorplein]",
    "description": "[[File:Mercatorplein west.JPG|300px]]",
    "marker-symbol": "library",
    "marker-size": "large",
    "marker-color": "ea9809"
  }
}
</mapframe>
```



One public library in Amsterdam, geo coordinates hard coded



## One public library in Amsterdam, geo coordinates hard coded

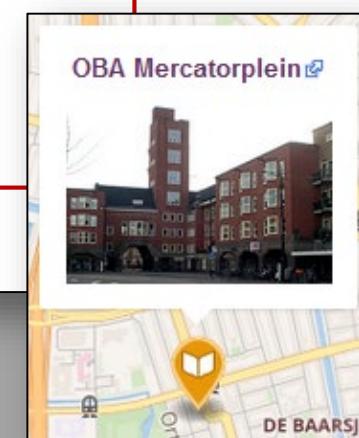


```
== One public library in Amsterdam, geo coordinates hard-coded ==
```

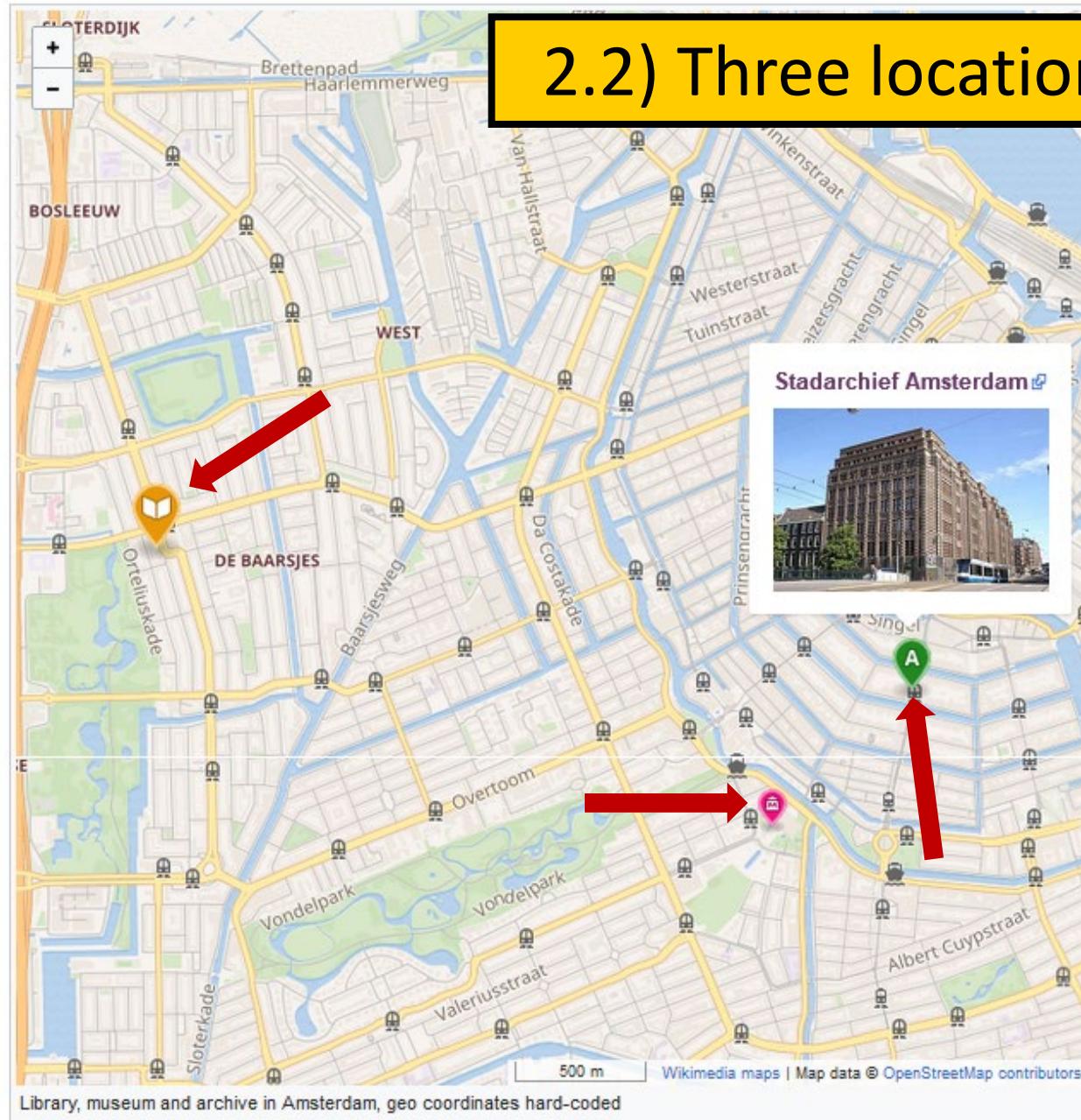
```
<mapframe text="One public library in Amsterdam, geo coordinates hard-coded" width=700 height=700 zoom=14
latitude=52.3693887 longitude=4.8502319 align=left>
{
  "type": "Feature",
  "geometry": { "type": "Point", "coordinates": [4.8502319, 52.3693887] },
  "properties": {
    "title": "[https://www.oba.nl/vestigingen/oba-mercatorplein.html OBA Mercatorplein]",
    "description": "[[File:Mercatorplein west.JPG|300px]]",
    "marker-symbol": "library",
    "marker-size": "large",
    "marker-color": "ea9809"
  }
}</mapframe>
```

### Styling of markers

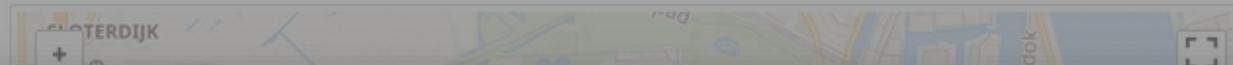
- <https://github.com/mapbox/simplestyle-spec/tree/master/1.1.0#3-client-behavior>
- <https://www.mediawiki.org/wiki/Help:Extension:Kartographer>



## 2.2) Three locations, hard-coded



# Library, museum and archive in Amsterdam, geo coordinates hard-coded



```
== Library, museum and archive in Amsterdam, geo coordinates hard-coded ==

<mapframe text="Library, museum and archive in Amsterdam, geo coordinates hard-coded" width=700 height=700 zoom=14 latitude=52.3693887 longitude=4.871111111111111 [
  {
    "type": "FeatureCollection", "features": [
      [
        {
          "type": "Feature",
          "geometry": { "type": "Point", "coordinates": [4.8502319, 52.3693887] },
          "properties": {
            "title": "[https://www.oba.nl/vestigingen/oba-mercatorplein.html OBA Mercatorplein]",
            "description": "[[File:Mercatorplein west.JPG|300px]]",
            "marker-symbol": "library",
            "marker-size": "large",
            "marker-color": "ea9809"
          }
        },
        {
          "type": "Feature",
          "geometry": { "type": "Point", "coordinates": [4.8846644, 52.3598658] },
          "properties": {
            "title": "[https://www.rijksmuseum.nl Rijksmuseum]",
            "description": "[[File:Rijksmuseum.Amsterdam.jpg|300px]]",
            "marker-symbol": "museum",
            "marker-size": "small",
            "marker-color": "f01080"
          }
        },
        {
          "type": "Feature",
          "geometry": { "type": "Point", "coordinates": [4.8923905, 52.3645600] },
          "properties": {
            "title": "[https://www.amsterdam.nl/stadsarchief/ Stadsarchief Amsterdam]",
            "description": "[[File:Gebouw de Bazel.jpg|300px]]",
            "marker-symbol": "-letter",
            "marker-size": "medium",
            "marker-color": "228b22"
          }
        }
      ]
    }
  ]
</mapframe>
```

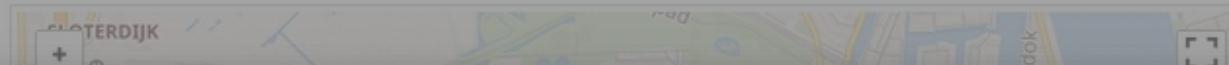
# Library, museum and archive in Amsterdam, geo coordinates hard-coded



```
== Library, museum and archive in Amsterdam, geo coordinates hard-coded ==

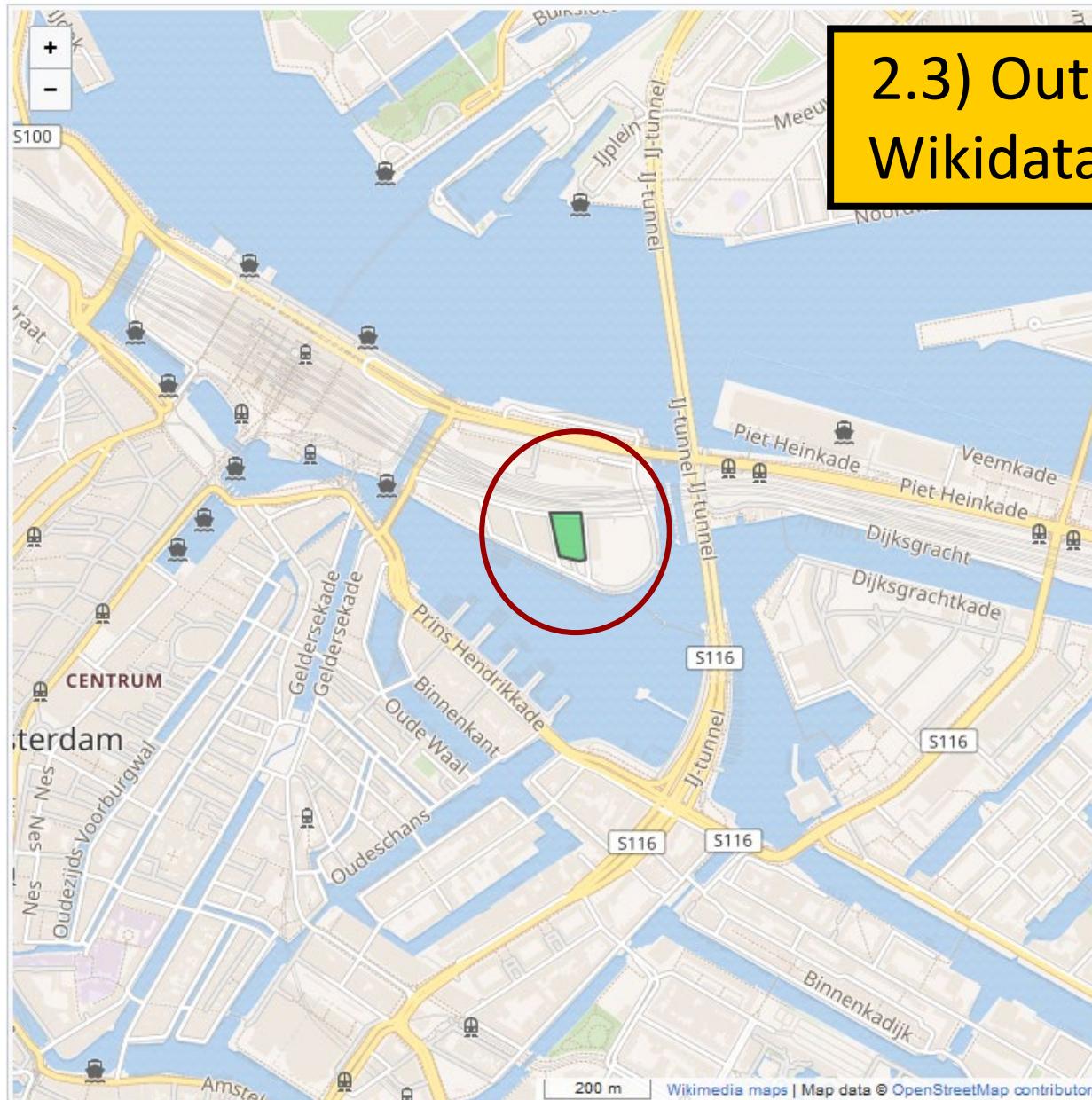
<mapframe text="Library, museum and archive in Amsterdam, geo coordinates hard-coded" width=700 height=700 zoom=14 latitude=52.3693887 longitude=4.872222222222222 {
  "type": "FeatureCollection", "features":
  [
    { "type": "Feature",
      "geometry": { "type": "Point", "coordinates": [4.8502319, 52.3693887] },
      "properties": {
        "title": "[https://www.oba.nl/vestigingen/oba-mercatorplein.html OBA Mercatorplein]",
        "description": "[[File:Mercatorplein west.JPG|300px]]",
        "marker-symbol": "library",
        "marker-size": "large",
        "marker-color": "ea9809" }
    },
    { "type": "Feature",
      "geometry": { "type": "Point", "coordinates": [4.8846644, 52.3598658] },
      "properties": {
        "title": "[https://www.rijksmuseum.nl Rijksmuseum]",
        "description": "[[File:Rijksmuseum.Amsterdam.jpg|300px]]",
        "marker-symbol": "museum",
        "marker-size": "small",
        "marker-color": "f01080" }
    },
    { "type": "Feature",
      "geometry": { "type": "Point", "coordinates": [4.8923905, 52.3645600] },
      "properties": {
        "title": "[https://www.amsterdam.nl/stadsarchief/ Stadarchief Amsterdam]",
        "description": "[[File:Gebouw de Bazel.jpg|300px]]",
        "marker-symbol": "-letter",
        "marker-size": "medium",
        "marker-color": "228b22" }
    }
  ]
}
</mapframe>
```

# Library, museum and archive in Amsterdam, geo coordinates hard-coded



```
== Library, museum and archive in Amsterdam, geo coordinates hard-coded ==

<mapframe text="Library, museum and archive in Amsterdam, geo coordinates hard-coded" width=700 height=700 zoom=14 latitude=52.3693887 longitude=4.871111111111111 {
  "type": "FeatureCollection", "features":
  [
    { "type": "Feature",
      "geometry": { "type": "Point", "coordinates": [4.8502319, 52.3693887] },
      "properties": {
        "title": "[https://www.oba.nl/vestigingen/oba-mercatorplein.html OBA Mercatorplein]",
        "description": "[[File:Mercatorplein west.JPG|300px]]",
        "marker-symbol": "library",
        "marker-size": "large",
        "marker-color": "ea9809" }
    },
    { "type": "Feature",
      "geometry": { "type": "Point", "coordinates": [4.8846644, 52.3598658] },
      "properties": {
        "title": "[https://www.rijksmuseum.nl Rijksmuseum]",
        "description": "[[File:Rijksmuseum.Amsterdam.jpg|300px]]",
        "marker-symbol": "museum",
        "marker-size": "small",
        "marker-color": "f01080" }
    },
    { "type": "Feature",
      "geometry": { "type": "Point", "coordinates": [4.8923905, 52.3645600] },
      "properties": {
        "title": "[https://www.amsterdam.nl/stadsarchief/ Stadarchief Amsterdam]",
        "description": "[[File:Gebouw de Bazel.jpg|300px]]",
        "marker-symbol": "-letter",
        "marker-size": "medium",
        "marker-color": "228b22" }
    }
  ]
}
</mapframe>
```



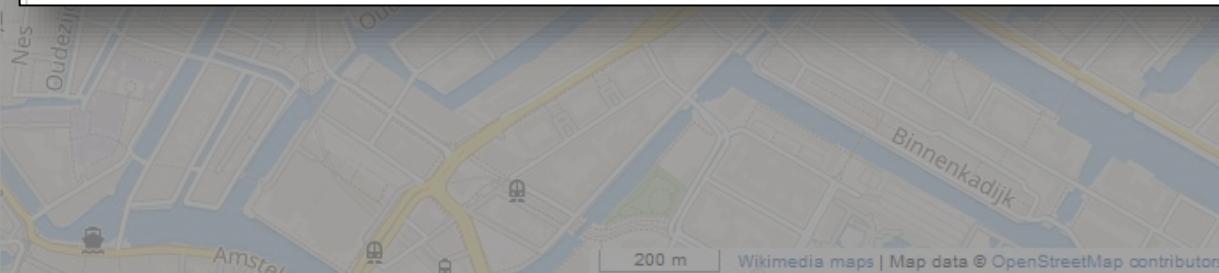
## 2.3) Outline (GeoShape) via Wikidata & OpenStreetMap

## Outline (geoshape) of Amsterdam public library (main site), using Wikidata and Open Street Map



```
== Outline (geoshape) of Amsterdam public library (main site), using Wikidata and Open Street Map ==

<mapframe width=700 height=700 zoom=15 latitude=52.3757964 longitude=4.9079461 text="Outline (geoshape) of Amsterdam public library (main site), using Wikidata and Open Street Map" align=left>
{
  "type": "ExternalData",
  "service": "geoshape",
  "ids": "Q50413436", ←
  "properties": {
    "fill": "#07c63e", "title": "Amsterdam public library, main site" }
}
</mapframe>
```



# Amsterdam Public Library, OBA Oosterdok (Centrale) (Q50413436)

Main visitor location and administration offices of the Amsterdam Public Library, The Netherlands

OBA Oosterdok (Centrale)

 edit

▼ In more languages

<https://www.wikidata.org/wiki/Q50413436>

Language	Label	Description	Also known as
English	Amsterdam Public Library, OBA Oosterdok (Centrale)	Main visitor location and administration offices of the Amsterdam Public Library, The Netherlands	OBA Oosterdok (Centrale)
German	No label defined	Bibliothek	
Spanish	No label defined	No description defined	
French	No label defined	bibliothèque	
Italian	No label defined	No description defined	
Dutch	OBA Oosterdok (Centrale)	Hoofvestiging en administratief hoofdkantoor van de Openbare Bibliotheek Amsterdam	OBA Oosterdok (Centrale) Centrale OBA

[All entered languages](#)

## Statements

instance of	 <a href="#">public library</a> ▼ 0 references	 edit   + add reference
	 <a href="#">library branch</a> ▼ 0 references	 edit   + add reference

Zoeken

Waar is dit?

OK

<https://www.openstreetmap.org/way/240467636#map=19/52.37605/4.90853>**Weg: OBA Oosterdok (240467636)**

De oude gegevens verwijzen naar de Stichting Openbare Bibliotheeken Amsterdam (Q2105660 op Wikidata), de nieuwe verwijzen naar Q50413436, de belangrijkste bezoekerslocatie en het hoofdkantoor van deze organisatie

25 minutes ago bewerkt door OlafJanssen

Versie #12 · Wijzigingenset #72901147

## Tags

addr:city	Amsterdam
addr:housenumber	143
addr:postcode	1011 DL
addr:street	Oosterdokskade
alt_name	Openbare Bibliotheek Amsterdam
amenity	library
building	yes

## website

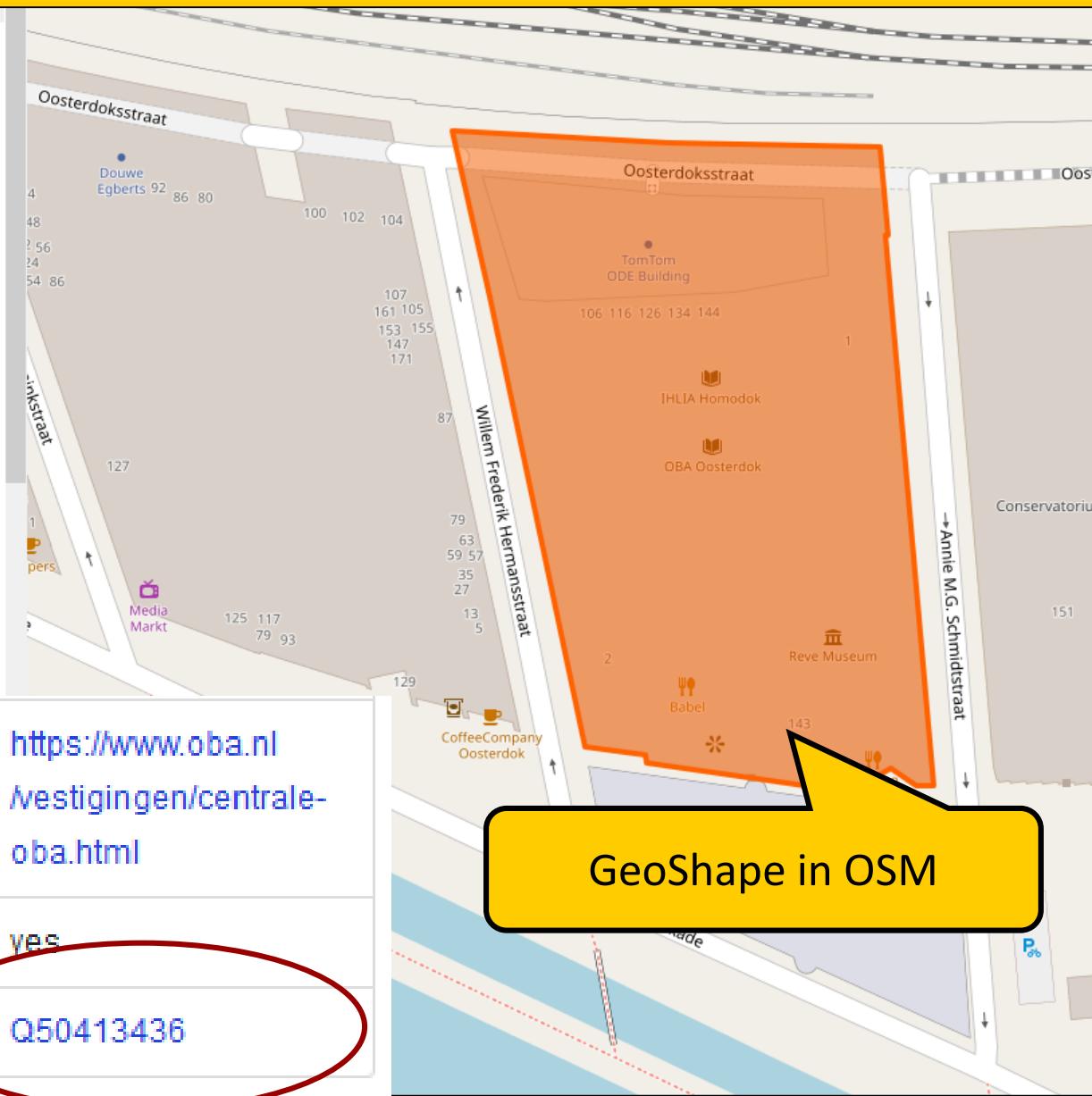
[https://www.oba.nl  
Nestigingen/centrale-  
oba.html](https://www.oba.nl/Nestigingen/centrale-oba.html)

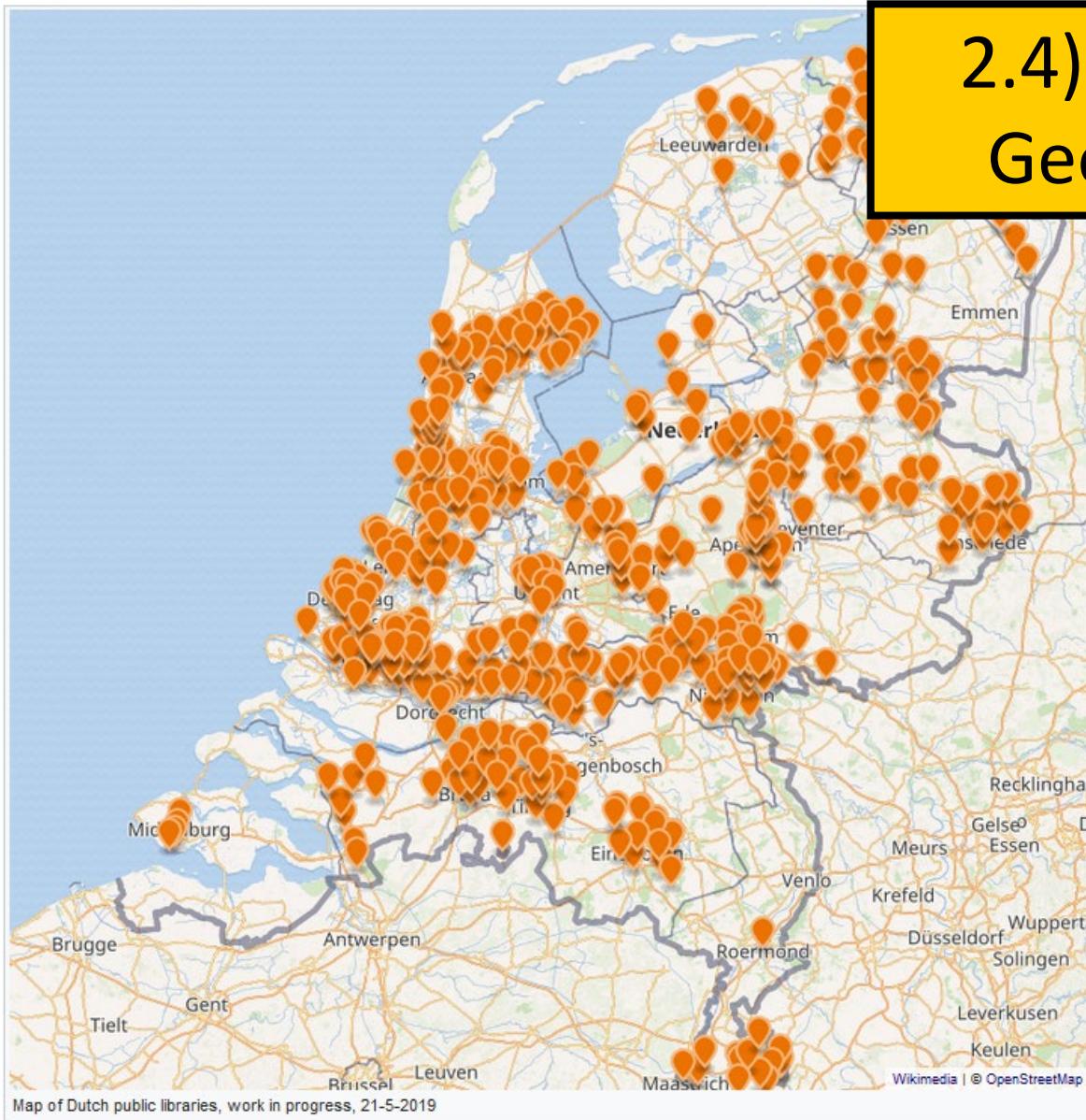
## wheelchair

yes

## wikidata

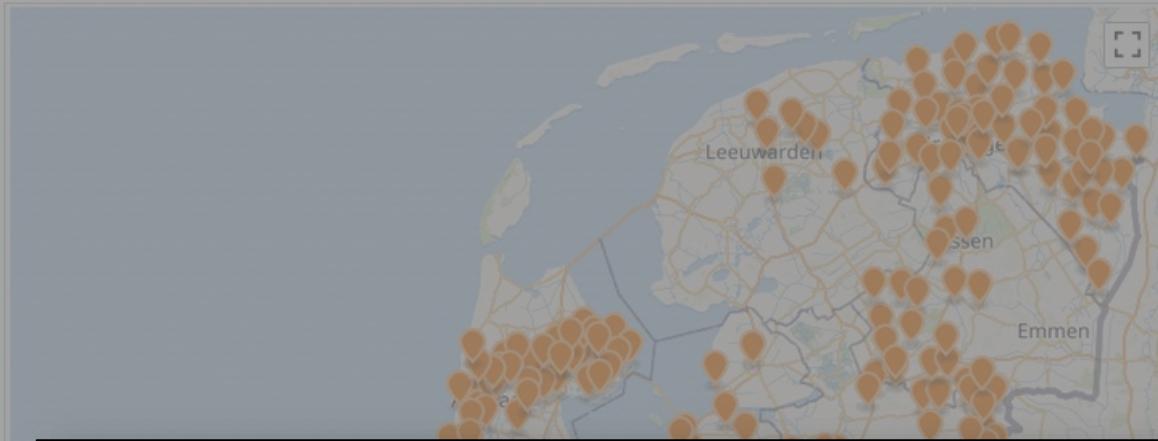
Q50413436



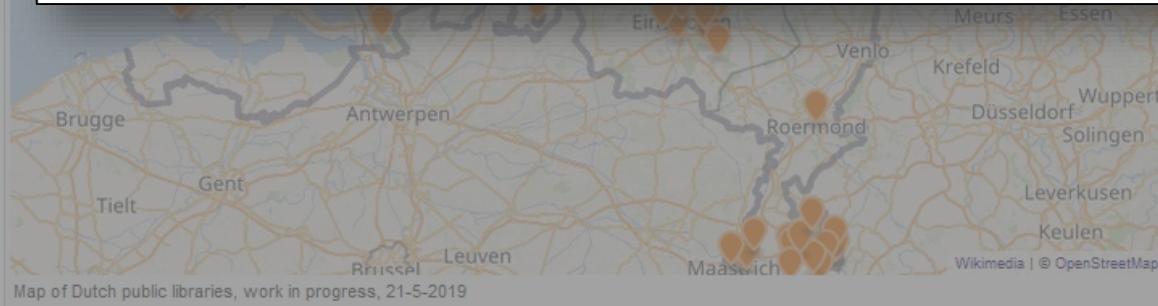


## 2.4) Many locations, GeoJSON .map file

SPARQL-query used to make DutchPublicLibraries.map (further instructions in the query)



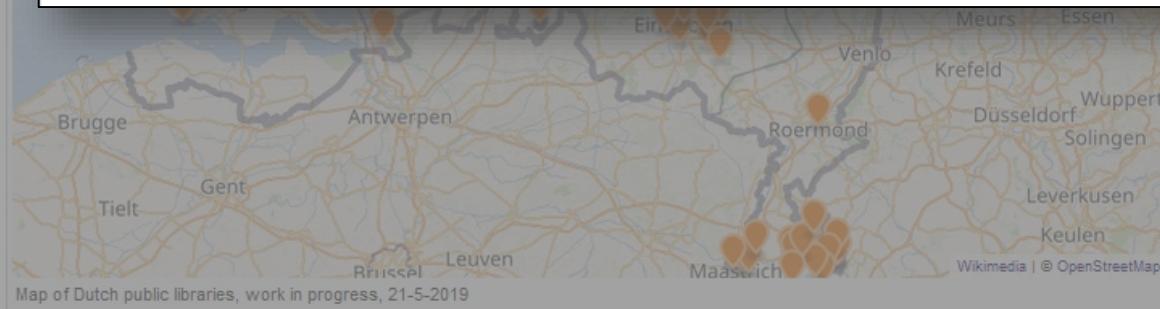
```
-- Map of Dutch public libraries ==
<mapframe width=800 height=800 zoom=8 latitude=52.20 longitude=5.119627565 text="Map of Dutch
public libraries, work in progress, 21-5-2019" align=left>
{
  "type": "ExternalData",
  "service": "page",
  "title": "DutchPublicLibraries.map",
}
</mapframe>
```



SPARQL-query [used to make DutchPublicLibraries.map](#) (further instructions in the query)



```
-- Map of Dutch public libraries ==
<mapframe width=800 height=800 zoom=8 latitude=52.20 longitude=5.119627565 text="Map of Dutch
public libraries, work in progress, 21-5-2019" align=left>
{
  "type": "ExternalData",
  "service": "page",
  "title": "DutchPublicLibraries.map",
}
</mapframe>
```



SPARQL-query [used to make DutchPublicLibraries.map](#) (further instructions in the query)



WIKIMEDIA  
COMMONS

Main page

Welcome

Community portal

Village pump

Help center

Taal

English

Participate

Upload file

Recent changes

Latest files

Random file

Contact us

Print/export

Download as PDF

Tools

What links here

Related changes

Special pages

Permanent link

Page information

Subpages

Nominate for deletion

In Wikipedia

Add links

Data

Not logged in Talk Contribution

<https://commons.wikimedia.org/wiki/Data:DutchPublicLibraries.map>

# Data:DutchPublicLibraries.map

Wikimedia Commons in het Nederlands

From Wikimedia Commons, the free media repository

Map of Dutch public libraries, incomplete, work in progress, 10-8-2019





Hoofdpagina  
Welkom  
Gebruikersportaal  
De Kroeg  
Hulp  
  
Doe mee  
  
Bestand uploaden  
Recente wijzigingen  
Recente bestanden  
Willekeurig bestand  
Contact  
  
Hulpmiddelen  
  
Verwijzingen naar deze pagina  
Verwante wijzigingen  
Speciale pagina's  
Paginagegevens  
Geocoding Recent Changes  
Geocoding Search  
Geocoding Daily Log  
Subpagina's  
Voor verwijdering nomineren

Data Overleg

Lezen

Bewerken

Geschiedenis weergeven

Nederlands

OlafJanssen

## Bewerken van Data:DutchPublicLibraries.map



Note: When you edit this page, you agree to release your contribution under the CC0.



<> Edittools

```
1 < {  
2     "license": "CC0-1.0",  
3     "description": {  
4         "en": "Map of Dutch public libraries, work in progress, 10-8-2019"  
5     },  
6     "sources": "",  
7     "zoom": 7,  
8     "latitude": 52.091656341,  
9     "longitude": 5.119627565,  
10    "data": {  
11        "type": "FeatureCollection",  
12        "features": [  
13            {  
14                "type": "Feature",  
15                "properties": {  
16                    "title": "[[d:Q59772713|Aalst public library]]",  
17                    "marker-size": "small",  
18                    "marker-color": "#ee7302",  
19                    "type": "Point"  
20                },  
21            }  
22        ]  
23    }  
24}
```



Standard [ ] { } {{ }} - - " ' < < " , . x o € ← → § ~~~~  
<pre> &nbsp; [[Category:]] [:File:]] [[Media:]] {{DEFAULTSORT:}} {{NAMESPACE:}} {{PAGENAME:}} #REDIRECT[[<galler

<noinclude>

<onlyinclude>

<translate>

<tvar>

<languages>



Help Discussion

[https://www.mediawiki.org/wiki/Help:Map\\_Data](https://www.mediawiki.org/wiki/Help:Map_Data)

# Help:Map Data



Note: When you edit this page, you agree to release your contribution under the CC0. See [Public Domain Help Pages](#) for more info.

[Edit](#) · [Translate](#)

Map data allows users to store [GeoJSON](#) data on wiki, similar to images. Other wikis may use this data to draw on top of the maps, together with other map customizations.

To create a new map data, go to [Wikimedia Commons](#), and create a new page in the **Data** namespace with the **.map** suffix, such as [Data:Sandbox/Name/Example.map](#). For experiment by creating pages with the **Sandbox/<username>/** prefix. For now, page content can only be edited in the raw [JSON format](#). Eventually, we hope there will be a page editor to simplify GeoJSON creation.

## Data licensing [\[edit\]](#)

All data in the **Data:** namespace must licensed under one of the following licences:

- CC0-1.0
- CC-BY versions: CC-BY-1.0, CC-BY-2.0, CC-BY-2.5, CC-BY-3.0, CC-BY-4.0, CC-BY-4.0+
- CC-BY-SA versions: CC-BY-SA-1.0, CC-BY-SA-2.0, CC-BY-SA-2.5, CC-BY-SA-3.0, CC-BY-SA-4.0, CC-BY-SA-4.0+
- ODbL-1.0

The default license is empty string (e.g invalid license) and when a user tries to save page with invalid license, they will be notified of the allowed licenses.

## Top-level fields [\[edit\]](#)

Map data has several required and optional top-level elements:

- The **required** `"license"` field must always be set to one of the allowed string values, e.g. `"cc0-1.0"` (see [#Data licensing](#)).
- The **optional** `"description"` field must be set to a localized string value - an object with at least one key-value, where the key is a language code (e.g. "en"), and the value is the localized string.
- The **optional** `"sources"` field must be a Wiki markup string value that describes the source of the map data.
- The **optional** `"zoom"` field must be an integer between 0 and 18. This value is only used for displaying map on its own page, not when including it in the articles.
- The **optional** `"latitude"` and `"longitude"` fields specify the center of the map when displaying it on its own page, not when including it in the articles.
- The **required** `"data"` field must be set to the valid [GeoJSON](#) content. Per [GeoJSON specification](#), `"properties"` field may be set for every Feature object. The map properties, such as `"title"`, `"description"`, `"fill"` (color), and others. Additionally, the `"title"` and `"description"` fields may be either strings or localized tabular data). This allows the same map data to appear differently depending on the user's language.



Hoofdpagina  
Welkom  
Gebruikersportaal  
De Kroeg  
Hulp  
  
Doe mee  
  
Bestand uploaden  
Recente wijzigingen  
Recente bestanden  
Willekeurig bestand  
Contact  
  
Hulpmiddelen  
  
Verwijzingen naar deze pagina  
Verwante wijzigingen  
Speciale pagina's  
Paginagegevens  
Geocoding Recent Changes  
Geocoding Search  
Geocoding Daily Log  
Subpagina's  
Voor verwijdering nomineren

Data Overleg

Nederlands OlafJanssen

Lezen Bewerken Geschiedenis weergeven

## Bewerken van Data:DutchPublicLibraries.map



Note: When you edit this page, you agree to release your contribution under the CC0.



<> Edittools

```
1  {
2      "license": "CC0-1.0",
3      "description": {
4          "en": "Map of Dutch public libraries, work in progress"
5      },
6      "sources": "",
7      "zoom": 7,
8      "latitude": 52.091656341,
9      "longitude": 5.119627565,
10     "data": {
11         "type": "FeatureCollection",
12         "features": [
13             {
14                 "type": "Feature",
15                 "properties": {
16                     "title": "[[d:Q59772713|Aalst public library]]",
17                     "marker-size": "small",
18                     "marker-color": "#ee7302",
19                     "type": "Point"
20             }
21         ]
22     }
23 }
```

Data in  
GeoJSON format

<https://en.wikipedia.org/wiki/GeoJSON>

Standard [ ] { } {{ }} - - " ' < < " , . x o € ← → § ~~~~  
<pre> &nbsp; [[Category: <File: <Media: {{DEFAULTSORT: {{NAMESPACE}} {{PAGENAME}} #REDIRECT[[ <galler<br/><noinclude> <onlyinclude> <translate> <tvar> <languages>

Data Overleg Lezen Bewerken Geschiedenis weergeven

Nederlands OlafJanssen

Data Overleg Lezen Bewerken Geschiedenis weergeven

Recente bewerkingen van Data:DutchPublicLibraries.map

W C <> Edittools

Hoofd Welk Gebruik De K Hulp Doe Best Recl Reca Wille Cont Hulp Verw pagin Verw Spec Pag Geod Char Geod Geod Subp Voor nomi

1 {  
2 "license": "CC0-1.0",  
3 "description": {  
4 "en": "Your English title here"  
5 },  
6 "sources": "",  
7 "zoom": 8,  
8 "latitude": 52.091656341,  
9 "longitude": 5.119627565,  
10 "data":  
11 |  
12  INSERT YOUR GEOJSON DATA HERE (output of <http://geojson.io>)  
13 |  
14 }  
15

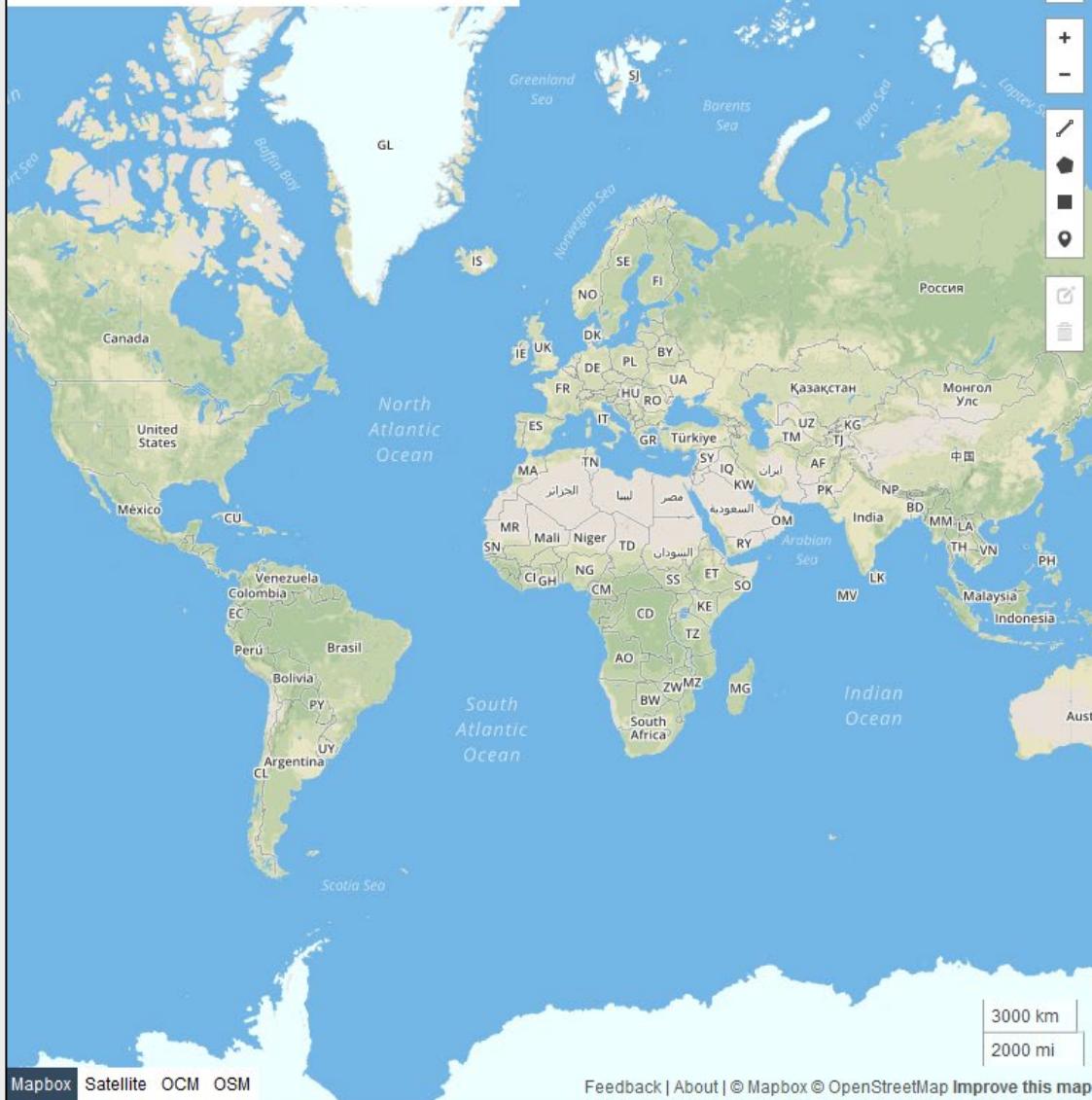
Single “}”

<noinclude> <onlyinclude> <translate> <tvar> <languages>

nomineren

# Geojson.io

Open Save New Share Meta  unsaved



</> JSON

## Table

? Help

[anon](#) | [login](#)

```
1 {
2   "type": "FeatureCollection",
3   "features": []
4 }
```

# Geojson.io

The screenshot shows the Geojson.io web application interface. At the top, there is a menu bar with options: Open, Save, New, Share, Meta, unsaved. To the right of the menu is a search bar and a JSON editor pane displaying the following code:

```
1 {  
2   "type": "FeatureCollection",  
3   "features": []  
4 }
```

Below the menu is a map of the Arctic region, including the Arctic Ocean, Greenland, and various seas. On the left side of the map, there is a vertical sidebar with icons for different layers: Deze pc, 3D-objecten, Afbeeldingen, Bureaublad, Documenten, Downloads, Muziek, Video's, OSDisk (C:), and a network share folder. A red arrow points upwards from this sidebar towards the 'Open' button in the top left.

A yellow callout bubble with the word 'Open' is positioned over a file browser window titled 'Bestand uploaden'. The browser window shows a file list with the following entries:

|  | Naam                                 | Gewijzigd op    | Type        |
|--|--------------------------------------|-----------------|-------------|
|  | GeocodingOSM                         | 1-5-2019 12:13  | Bestandsmap |
|  | LibraryMapInputData.tsv              | 22-5-2019 12:04 | TSV-bestand |
|  | LibraryMapInputData_NoordHolland.csv | 22-5-2019 12:59 | CSV-bestand |

The 'Bestandsnaam:' dropdown at the bottom of the browser window is set to 'LibraryMapInputData.tsv'. There are 'Openen' and 'Annuleren' buttons at the bottom right of the browser window.

At the very bottom of the page, there is a footer with links: Mapbox, Satellite, OCM, OSM, Feedback, About, © Mapbox © OpenStreetMap Improve this map.

# Geojson.io

Open Save New Share Meta unsaved

Arctic Ocean



</> JSON

Table

? Help

anon | login

LibraryMapInputData.tsv

```
1 title marker-size marker-color type long lat
2 [[d:Q59772713|Aalst public library]] small #ee7302 Point 5.1259789 51.7841643
3 [[d:Q59772714|Ammerzoden public library]] small #ee7302 Point 5.2201121 51.7506792
4 [[d:Q59772716|Asperen public library]] small #ee7302 Point 5.1045091 51.8806175
5 [[d:Q59772717|Beesd public library]] small #ee7302 Point 5.1930425 51.8868067
6 [[d:Q59772718|Beneden-Leeuwen public library]] small #ee7302 Point 5.516266 51.8777727
7 [[d:Q59772719|Culemborg public library]] small #ee7302 Point 5.223026 51.9574438
8 [[d:Q59772720|Dodewaard public library]] small #ee7302 Point 5.6607362 51.9090619
9 [[d:Q59772721|Dreumel public library]] small #ee7302 Point 5.4329593 51.846106
10 [[d:Q59772722|Druten public library]] small #ee7302 Point 5.6023973 51.8864962
11 [[d:Q59772723|Geldermalsen public library]] small #ee7302 Point 5.28966 51.87324
12 [[d:Q59772724|Haafoten public library]] small #ee7302 Point 5.209602 51.8222877
13 [[d:Q59772725|Herwijnen public library]] small #ee7302 Point 5.132461 51.8278308
14 [[d:Q59772726|Heukelum public library]] small #ee7302 Point 5.075112 51.8717037
15 [[d:Q59772727|Kerkdriel public library]] small #ee7302 Point 5.3380551 51.7712143
16 [[d:Q59772729|Kesteren public library]] small #ee7302 Point 5.5680087 51.9321838
17 [[d:Q59772731|Ochten public library]] small #ee7302 Point 5.5680429 51.9084892
18 [[d:Q59772732|Ophemert public library]] small #ee7302 Point 5.3849607 51.8441046
19 [[d:Q59772733|Opheusden public library]] small #ee7302 Point 5.6276707 51.9319108
20 [[d:Q59772735|Zaltbommel public library]] small #ee7302 Point 5.2321253 51.8034576
21 [[d:Q59772736|Self-service library point Boven-Leeuwen]] small #ee7302 Point 5.5459884 51.8853943
22 [[d:Q59772737|Self-service library point Brakel]] small #ee7302 Point 5.0926245 51.8141786
23 [[d:Q59772738|Self-service library point Deest]] small #ee7302 Point 5.6643959 51.8902209
24 [[d:Q59772739|Self-service library point Deil]] small #ee7302 Point 5.2459089 51.8840328
25 [[d:Q59772740|Self-service library point Horssen]] small #ee7302 Point 5.6090658 51.8547778
26 [[d:Q59772741|Self-service library point Lek en Linge]] small #ee7302 Point 5.2348588 51.9457687
27 [[d:Q59772742|Self-service library point Maasdriel]] small #ee7302 Point 5.5353727 51.8199371
28 [[d:Q59772743|Self-service library point Nederhemert]] small #ee7302 Point 5.1667443 51.7636824
29 [[d:Q59772745|Self-service library point Vuren]] small #ee7302 Point 5.0489027 51.8248737
30 [[d:Q59772808|Tiel public library]] small #ee7302 Point 5.4366236 51.8845787
```

2000 mi

# Geojson.io

Open Save New Share Meta unsaved

anon | login



Copy this whole  
GeoJSON to....

```
1 {
2   "type": "FeatureCollection",
3   "features": [
4     {
5       "type": "Feature",
6       "properties": {
7         "title": "[[d:Q59772713|Aalst public library]]",
8         "marker-size": "small",
9         "marker-color": "#ee7302",
10        "type": "Point"
11      },
12      "geometry": {
13        "type": "Point",
14        "coordinates": [
15          5.1259789,
16          51.7841643
17        ]
18      }
19    },
20    {
21      "type": "Feature",
22      "properties": {
23        "title": "[[d:Q59772714|Ammerzoden public library]]",
24        "marker-size": "small",
25        "marker-color": "#ee7302",
26        "type": "Point"
27      },
28      "geometry": {
29        "type": "Point",
30        "coordinates": [
31          5.2201121,
32          51.7506792
33        ]
34      }
35    },
36    {
37      "type": "Feature",
```

<https://commons.wikimedia.org/wiki/Data:DutchPublicLibraries.map>

```
1  {
2      "license": "CC0-1.0",
3      "description": {
4          "en": "Your English title here"
5      },
6      "sources": "",
7      "zoom": 8,
8      "latitude": 52.091656341,
9      "longitude": 5.119627565,
10     "data": [
11         ...
12     ]
13 }
14 }
```

.. to here

INSERT YOUR GEOJSON DATA HERE (output of <http://geojson.io>)

# But how do you make this TSV?

|    | title  | marker-size | marker-color | type  | long      | lat        |
|----|--|-------------|--------------|-------|-----------|------------|
| 1  | [[d:Q59772713 Aalst public library]]                     | small       | #ee7302      | Point | 5.1259789 | 51.7841643 |
| 2  | [[d:Q59772714 Ammerzoden public library]]                | small       | #ee7302      | Point | 5.2201121 | 51.7506792 |
| 3  | [[d:Q59772716 Asperen public library]]                   | small       | #ee7302      | Point | 5.1045091 | 51.8806175 |
| 4  | [[d:Q59772717 Beesd public library]]                     | small       | #ee7302      | Point | 5.1930425 | 51.8868067 |
| 5  | [[d:Q59772718 Beneden-Leeuwen public library]]           | small       | #ee7302      | Point | 5.516266  | 51.8777727 |
| 6  | [[d:Q59772719 Culemborg public library]]                 | small       | #ee7302      | Point | 5.223026  | 51.9574438 |
| 7  | [[d:Q59772720 Dodewaard public library]]                 | small       | #ee7302      | Point | 5.6607362 | 51.9090619 |
| 8  | [[d:Q59772721 Dreumel public library]]                   | small       | #ee7302      | Point | 5.4329593 | 51.846106  |
| 9  | [[d:Q59772722 Druten public library]]                    | small       | #ee7302      | Point | 5.6023973 | 51.8864962 |
| 10 | [[d:Q59772723 Geldermalsen public library]]              | small       | #ee7302      | Point | 5.28966   | 51.87324   |
| 11 | [[d:Q59772724 Haaften public library]]                   | small       | #ee7302      | Point | 5.209602  | 51.8222877 |
| 12 | [[d:Q59772725 Herwijnen public library]]                 | small       | #ee7302      | Point | 5.132461  | 51.8278308 |
| 13 | [[d:Q59772726 Heukelum public library]]                  | small       | #ee7302      | Point | 5.075112  | 51.8717037 |
| 14 | [[d:Q59772727 Kerkdriel public library]]                 | small       | #ee7302      | Point | 5.3380551 | 51.7712143 |
| 15 | [[d:Q59772729 Kesteren public library]]                  | small       | #ee7302      | Point | 5.5680087 | 51.9321838 |
| 16 | [[d:Q59772731 Ochten public library]]                    | small       | #ee7302      | Point | 5.5680429 | 51.9084892 |
| 17 | [[d:Q59772732 Ophemert public library]]                  | small       | #ee7302      | Point | 5.3849607 | 51.8441046 |
| 18 | [[d:Q59772733 Opheusden public library]]                 | small       | #ee7302      | Point | 5.6276707 | 51.9319108 |
| 19 | [[d:Q59772735 Zaltbommel public library]]                | small       | #ee7302      | Point | 5.2321253 | 51.8034576 |
| 20 | [[d:Q59772736 Self-service library point Boven-Leeuwen]] | small       | #ee7302      | Point | 5.5459884 | 51.8853943 |
| 21 | [[d:Q59772737 Self-service library point Brakel]]        | small       | #ee7302      | Point | 5.0926245 | 51.8141786 |
| 22 | [[d:Q59772738 Self-service library point Deest]]         | small       | #ee7302      | Point | 5.6643959 | 51.8902209 |
| 23 | [[d:Q59772739 Self-service library point Deil]]          | small       | #ee7302      | Point | 5.2459089 | 51.8840328 |
| 24 | [[d:Q59772740 Self-service library point Horssen]]       | small       | #ee7302      | Point | 5.6090658 | 51.8547778 |
| 25 | [[d:Q59772741 Self-service library point Lek en Linge]]  | small       | #ee7302      | Point | 5.2348588 | 51.9457687 |
| 26 | [[d:Q59772742 Self-service library point Maasbommel]]    | small       | #ee7302      | Point | 5.5353727 | 51.8199371 |
| 27 | [[d:Q59772743 Self-service library point Nederhemert]]   | small       | #ee7302      | Point | 5.1667443 | 51.7636824 |
| 28 | [[d:Q59772745 Self-service library point Vuren]]         | small       | #ee7302      | Point | 5.0489027 | 51.8248737 |
| 29 | [[d:Q59772808 Tiel public library]]                      | small       | #ee7302      | Point | 5.4366236 | 51.8845787 |

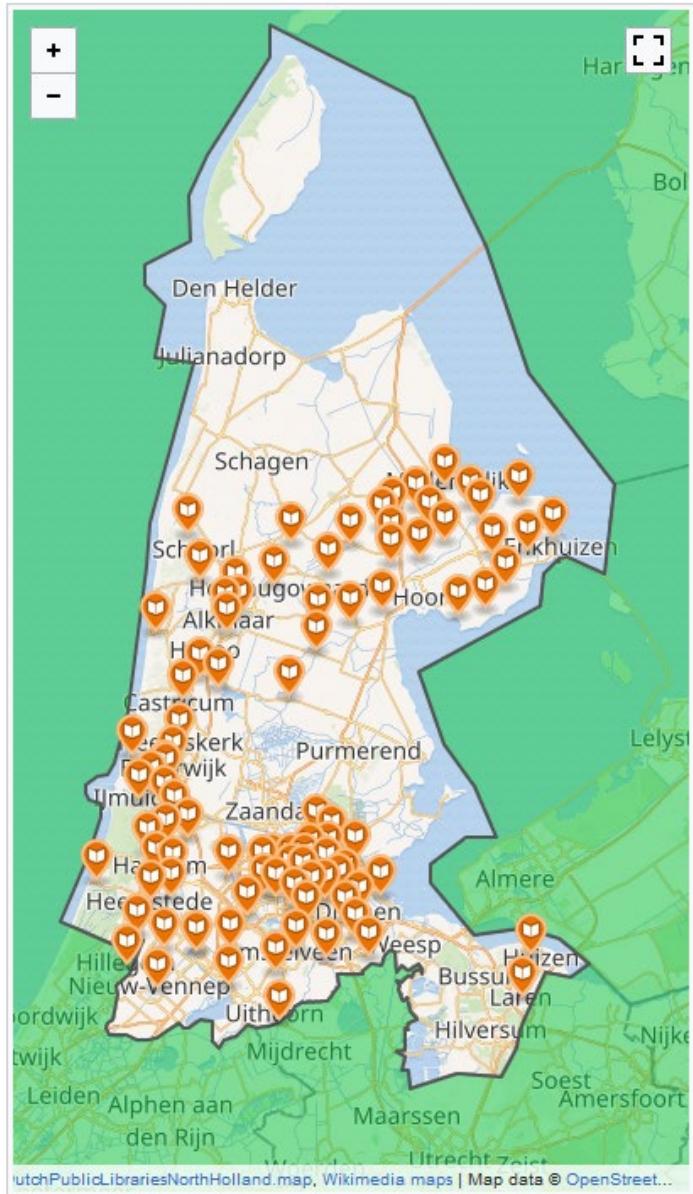
# Adapt this query, save output as .tsv

Wikidata Query Service    [Voorbeelden](#)    [Hulp](#)    [Meer hulpmiddelen](#)

```
1 #Query used to make GeoJSON input for https://commons.wikimedia.org/wiki/Data:DutchPublicLibraries.map
2 #Steps involved
3 #1) Download and save query result as tsv file
4 #2) Rename headers (replace '_' with '-') in this tsv file :
5 #     marker_size --> marker-size
6 #     marker_color --> marker-color
7 #     marker_symbol --> marker-symbol
8 #3) Upload this file to geojson.io (Open --> File)
9 #4) Copy-paste GeoJSON output (right pane) into Data:DutchPublicLibraries.map file (in the "data" field)
10
11 SELECT DISTINCT ?title ?marker_size ?marker_color ?type ?marker_symbol ?long ?lat WHERE {
12 #Is Dutch public library branch
13 ?dpl wdt:P31 wd:Q28564. #public library
14 ?dpl wdt:P31 wd:Q11396180. #library branch
15 ?dpl wdt:P17 wd:Q55. #in the Netherlands
16
17 ?dpl wdt:P625 ?dplLoc. #Location of the dpl
18
19 # Get the English Wikidata label of the dpl
20 ?dpl rdfs:label ?dplLabel.
21 FILTER (lang(?dplLabel) = 'en')
22
23 #Transform from 'http://www.wikidata.org/entity/Q63890044 Akersloot public library' to '[[d:Q63890044|Akersloot public library]]'
24 BIND(CONCAT('[[d:', STRAFTER(STR(?dpl), "http://www.wikidata.org/entity/"), '|', ?dplLabel, ']]') AS ?title)
25
26 # Set 4 default values
27 BIND("small" AS ?marker_size)
28 BIND("#ee7302" AS ?marker_color)
29 BIND("library" AS ?marker_symbol)
30 BIND("Point" AS ?type)
31
32 #Transform: 'Point(4.7322704 52.5633782)' (in 1 column) to '4.7322704', '52.5633782' ( i.e. 2 columns longitude + latitude)
33 BIND(STRBEFORE(STRAFTER(STR(?dplLoc), ' '), ',')) AS ?lat
34 BIND(STRBEFORE(STRAFTER(STR(?dplLoc), 'Point('), ',')) AS ?long)
35
36 }
37 ORDER BY ?title
```

<https://bit.ly/2YG48aY>

Copy-paste in browser!



## 2.5) Combining data types

### GeoShape + .map

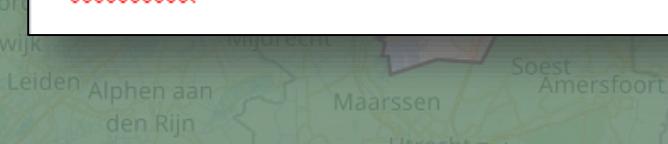
## Combining geoshape (with geomask) and .map

<https://nl.wikipedia.org/wiki/Gebruiker:OlafJanssen/KladblokMapMakingWorkshopWM2019>



```
<mapframe width=400 height=700 zoom=9 latitude=52.65 longitude=4.95 text="Map of public libraries in the province of North-Holland, The Netherlands. Geomask is used" align=left>
[
{
  "type": "ExternalData",
  "service": "geoshape",
  "service": "geomask", ←
  "ids": "Q701",
  "properties": {
    "fill": "#07c63e", "title": "Noord-Holland"
  }
},
{
  "type": "ExternalData",
  "service": "page",
  "title": "DutchPublicLibrariesNorthHolland.map"
}
]
</mapframe>
```

A red arrow points to the "geomask" service entry in the JSON code. A yellow box highlights the URL "https://commons.wikimedia.org/wiki/Data:DutchPublicLibrariesNorthHolland.map".



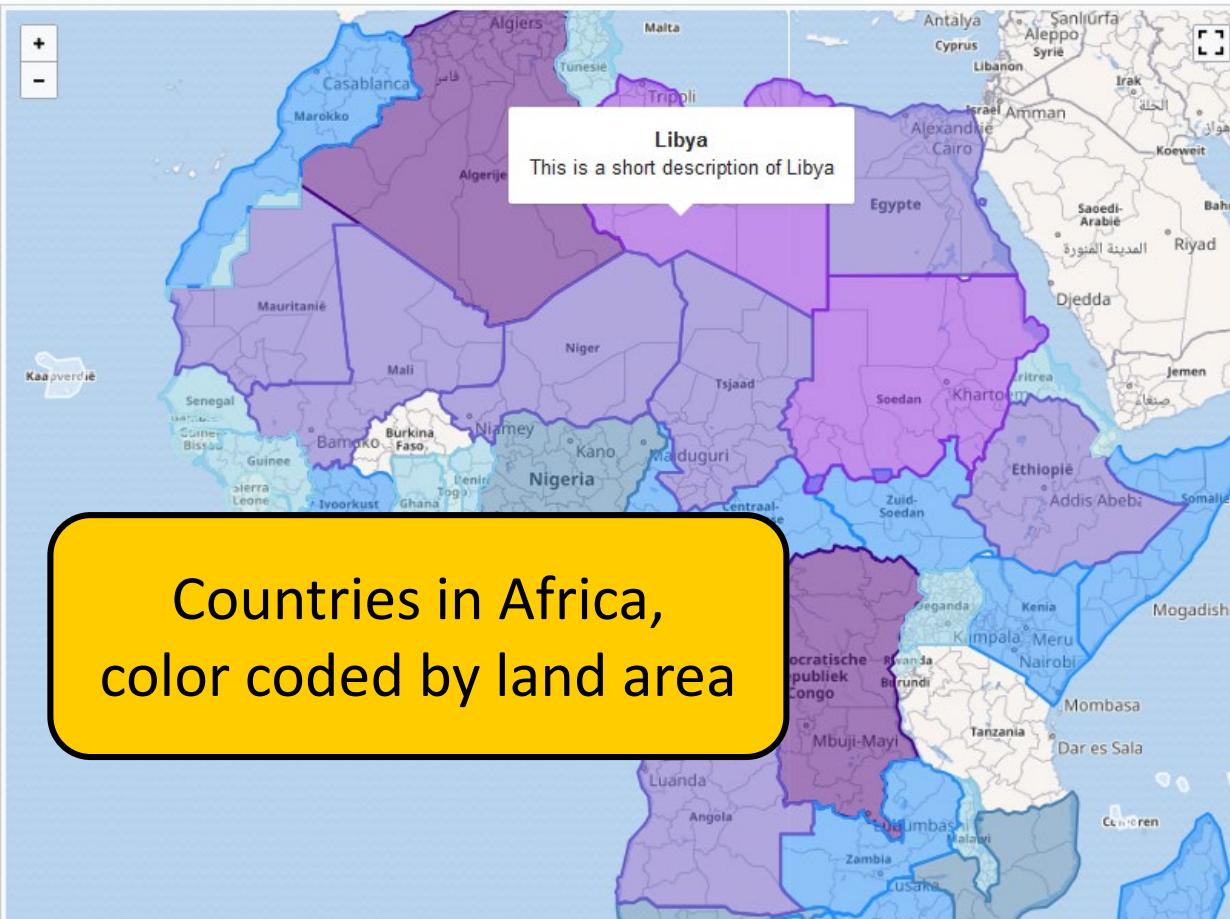
DutchPublicLibrariesNorthHolland.map, Wikimedia maps | Map data © OpenStreet...

Map of public libraries in the province of North-Holland, The Netherlands. Geomask is used

## 2.6) GeoShapes using SPARQL and OSM

Maps with geoshapes based on SPARQL queries in Wikidata

[https://www.mediawiki.org/wiki/Help:Extension:Kartographer#GeoShapes\\_via\\_Wikidata\\_Query](https://www.mediawiki.org/wiki/Help:Extension:Kartographer#GeoShapes_via_Wikidata_Query)



Countries in Africa,  
color coded by land area

[https://www.mediawiki.org/wiki/Help:Extension:Kartographer#GeoShapes\\_via\\_Wikidata\\_Query](https://www.mediawiki.org/wiki/Help:Extension:Kartographer#GeoShapes_via_Wikidata_Query)

<https://nl.wikipedia.org/wiki/Gebruiker:OlafJanssen/KladblokMapMakingWorkshopWM2019>

## 2.6) GeoShapes using SPARQL and OSM

OpenStreetMap Bewerken Geschiedenis Exporteren GPS-traces Gebruikersdagboeken

|                  |  |
|------------------|--|
| name:ka          | Либидин Ахы<br>Социгализмийн Араб<br>Үлс Орн |
| name:xmf         | ლიბია  |
| name:yi          | לביא   |
| name:yo          | Líbyà  |
| name:ue          | 利比亞  |
| name:zae         | Libië  |
| name:zgh         | ليبيا  |
| name:zh          | 利比亚  |
| name:zu          | ILibiya                                      |
| official_name:cs | Libyjský stát                                |
| timezone         | Africa/Tripoli                               |
| <b>type</b>      | <b>boundary</b>                              |
| wikidata         | <a href="#">Q1016</a>                        |
| wikipedia        | <a href="#">ar:ليبيا</a>                     |

Onderdeel van

GeoShape of Libya

<https://www.openstreetmap.org/relation/192758#map=5/22.086/20.039>

<https://nl.wikipedia.org/wiki/Gebruiker:OlafJanssen/KladblokMapMakingWorkshopWM2019>

```
-- Maps with geoshapes based on SPARQL queries in Wikidata ==
```

```
https://www.mediawiki.org/wiki/Help:Extension:Kartographer#GeoShapes\_via\_Wikidata\_Query
```

```
<mapframe width=900 height=900 zoom=4 latitude=0 longitude=12 text="Countries in Africa, color coded by land area" align=left>
```

```
{
```

```
    "type": "ExternalData",
    "service": "geoshape",
    "query": "
```

```
----- Begin SPARQL query // Make sure you only use single quotes ('') in the query, otherwise you get a JSON parse error ---
```

```
SELECT DISTINCT
```

```
    ?id          #Wikidata Qid matching the geoshape on Open Street Map
```

```
    ?title        #Popup title when you click on the country
```

```
    ?description  #Description in the popup
```

```
    ?fill         #Color the geoshape is filled with
```

```
    ?stroke       #Color of the geoshape outline
```

```
WHERE {
```

```
    ?id wdt:P31 wd:Q6256; wdt:P30 wd:Q15. #Country in the continent of Africa
```

```
    ?id wdt:P2046 ?area. # Land area of the country
```

```
    ?id rdfs:label ?idLabel . FILTER(lang(?idLabel)='en') #only English labels
```

```
    BIND(?idLabel as ?title)
```

```
    BIND(CONCAT('This is a short description of ',STR(?title)) as ?description)
```

```
    # Fill & stroke colors depend on land area of country
```

```
    BIND(
```

```
        IF(?area < 5000, '#F0F8FF',
```

```
        IF(?area < 100000, '#B0E0E6',
```

```
        IF(?area < 300000, '#87CEEB',
```

```
        IF(?area < 800000, '#1E90FF',
```

```
        IF(?area < 1000000, '#4682B4',
```

```
        IF(?area < 1500000, '#6A5ACD',
```

```
        IF(?area < 2000000, '#8A2BE2',
```

```
        '#4B0082')))))) AS ?color)
```

```
    BIND(?color as ?fill)
```

```
    BIND(?color as ?stroke)
```

```
}
```

```
----- End SPARQL query -----
```

```
"}
```

```
</mapframe>
```

<https://bit.ly/2YBxV4t>

== Maps with geoshapes based on SPARQL queries in Wikidata ==

[https://www.mediawiki.org/wiki/Help:Extension:Kartographer#GeoShapes\\_via\\_Wikidata\\_Query](https://www.mediawiki.org/wiki/Help:Extension:Kartographer#GeoShapes_via_Wikidata_Query)

<mapframe width=900 height=900 zoom=4 latitude=0 longitude=12 text="Countries in Africa, color coded by land area" align=left>

52 resultaten in 102 ms

Code Downloaden Koppeling

| id                      | title                    | description   | fill    | stroke  |
|-------------------------|--------------------------|---|---------|---------|
| <a href="#">wd:Q912</a> | Mali                     | This is a short description of Mali                     | #6A5ACD | #6A5ACD |
| <a href="#">wd:Q916</a> | Angola                   | This is a short description of Angola                   | #6A5ACD | #6A5ACD |
| <a href="#">wd:Q79</a>  | Egypt                    | This is a short description of Egypt                    | #6A5ACD | #6A5ACD |
| <a href="#">wd:Q114</a> | Kenya                    | This is a short description of Kenya                    | #1E90FF | #1E90FF |
| <a href="#">wd:Q924</a> | Tanzania                 | This is a short description of Tanzania                 | #4682B4 | #4682B4 |
| <a href="#">wd:Q115</a> | Ethiopia                 | This is a short description of Ethiopia                 | #6A5ACD | #6A5ACD |
| <a href="#">wd:Q117</a> | Ghana                    | This is a short description of Ghana                    | #87CEEB | #87CEEB |
| <a href="#">wd:Q929</a> | Central African Republic | This is a short description of Central African Republic | #1E90FF | #1E90FF |
| <a href="#">wd:Q948</a> | Tunisia                  | This is a short description of Tunisia                  | #87CEEB | #87CEEB |
| <a href="#">wd:Q262</a> | Algeria                  | This is a short description of Algeria                  | #4B0082 | #4B0082 |
| <a href="#">wd:Q945</a> | Togo                     | This is a short description of Togo                     | #B0E0E6 | #B0E0E6 |
| <a href="#">wd:Q953</a> | Zambia                   | This is a short description of Zambia                   | #1E90FF | #1E90FF |
| <a href="#">wd:Q258</a> | South Africa             | This is a short description of South Africa             | #6A5ACD | #6A5ACD |
| <a href="#">wd:Q657</a> | Chad                     | This is a short description of Chad                     | #6A5ACD | #6A5ACD |
| <a href="#">wd:Q954</a> | Zimbabwe                 | This is a short description of Zimbabwe                 |         |         |
| <a href="#">wd:Q958</a> | South Sudan              | This is a short description of South Sudan              |         |         |
| <a href="#">wd:Q962</a> | Benin                    | This is a short description of Benin                    | #87CEEB | #87CEEB |

<https://bit.ly/2YBxV4t>

"]>

</mapframe>

```
-- Maps with geoshapes based on SPARQL queries in Wikidata --
https://www.mediawiki.org/wiki/Help:Extension:Kartographer#GeoShapes_via_Wikidata_Query
```

```
<mapframe width=900 height=900 zoom=4 latitude=0 longitude=12 text="Countries in Africa, color coded by land area" align=left>
{
  "type": "ExternalData",
  "service": "geoshape",
  "query": "
----- Begin SPARQL query // Make sure you only use single quotes ('') in the query, otherwise you get a JSON parse error -----
SELECT DISTINCT
  ?id          #Wikidata Qid mat
  ?title       #Popup
  ?description #Description in t
  ?fill         #Color the geoshap
  ?stroke       #Color of the geo
WHERE {
  ?id wdt:P31 wd:Q6256; wdt:P30 wd:Q15. #Country in the continent of Africa
  ?id wdt:P2046 ?area. # Land area of the country

  ?id rdfs:label ?idLabel . FILTER(lang(?idLabel)='en') #only English labels

  BIND(?idLabel as ?title)
  BIND(CONCAT('This is a short description of ',STR(?idLabel)) as ?description)

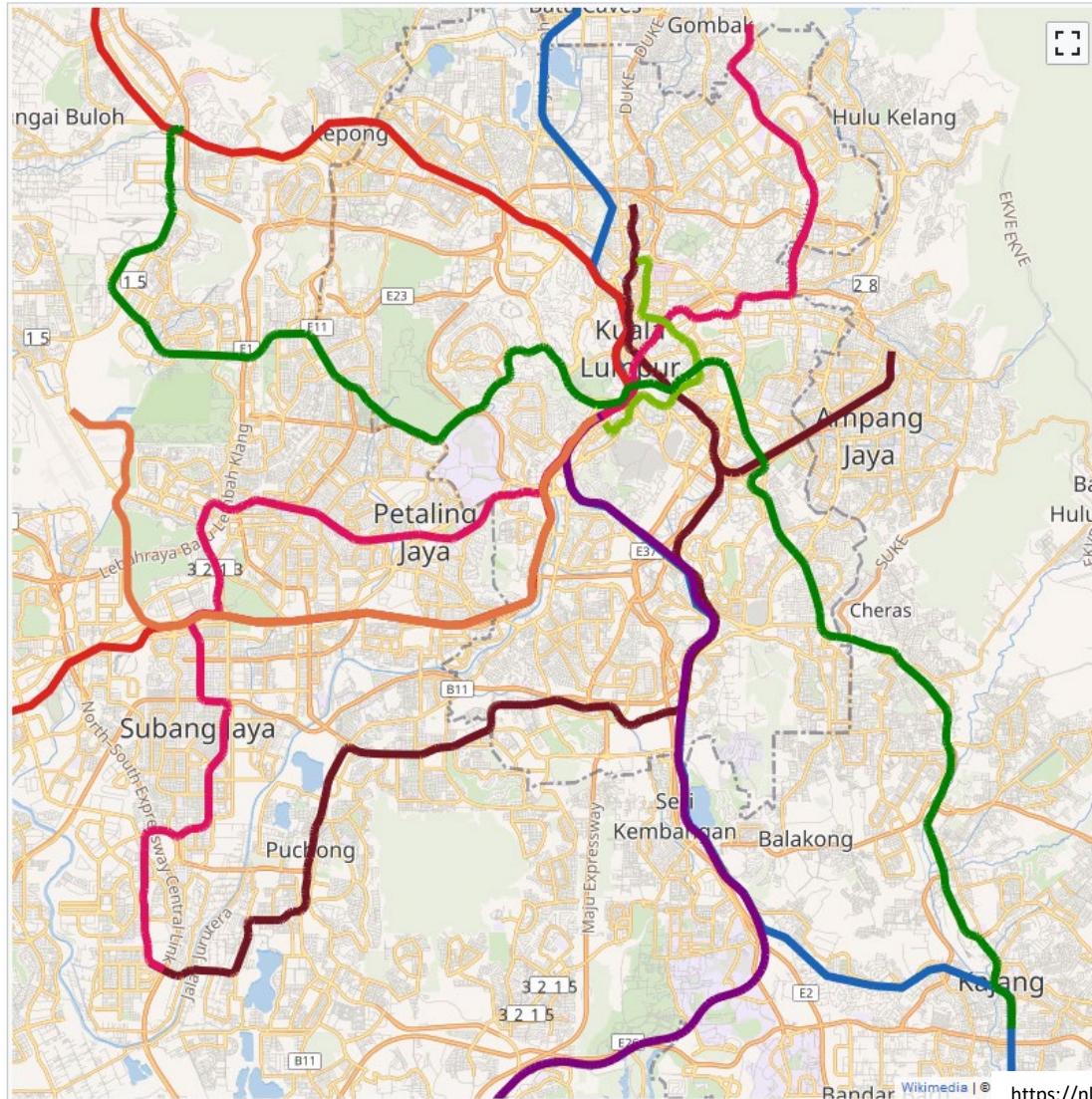
  # Fill & stroke colors depend on land area of country
  BIND(
    IF(?area < 5000, '#F0F8FF',
    IF(?area < 100000, '#B0E0E6',
    IF(?area < 300000, '#87CEEB',
    IF(?area < 800000, '#1E90FF',
    IF(?area < 1000000, '#4682B4',
    IF(?area < 1500000, '#6A5ACD',
    IF(?area < 2000000, '#8A2BE2',
    '#4B0082'))))) AS ?color)
  BIND(?color as ?fill)
  BIND(?color as ?stroke)
}
----- End SPARQL query -----"
```

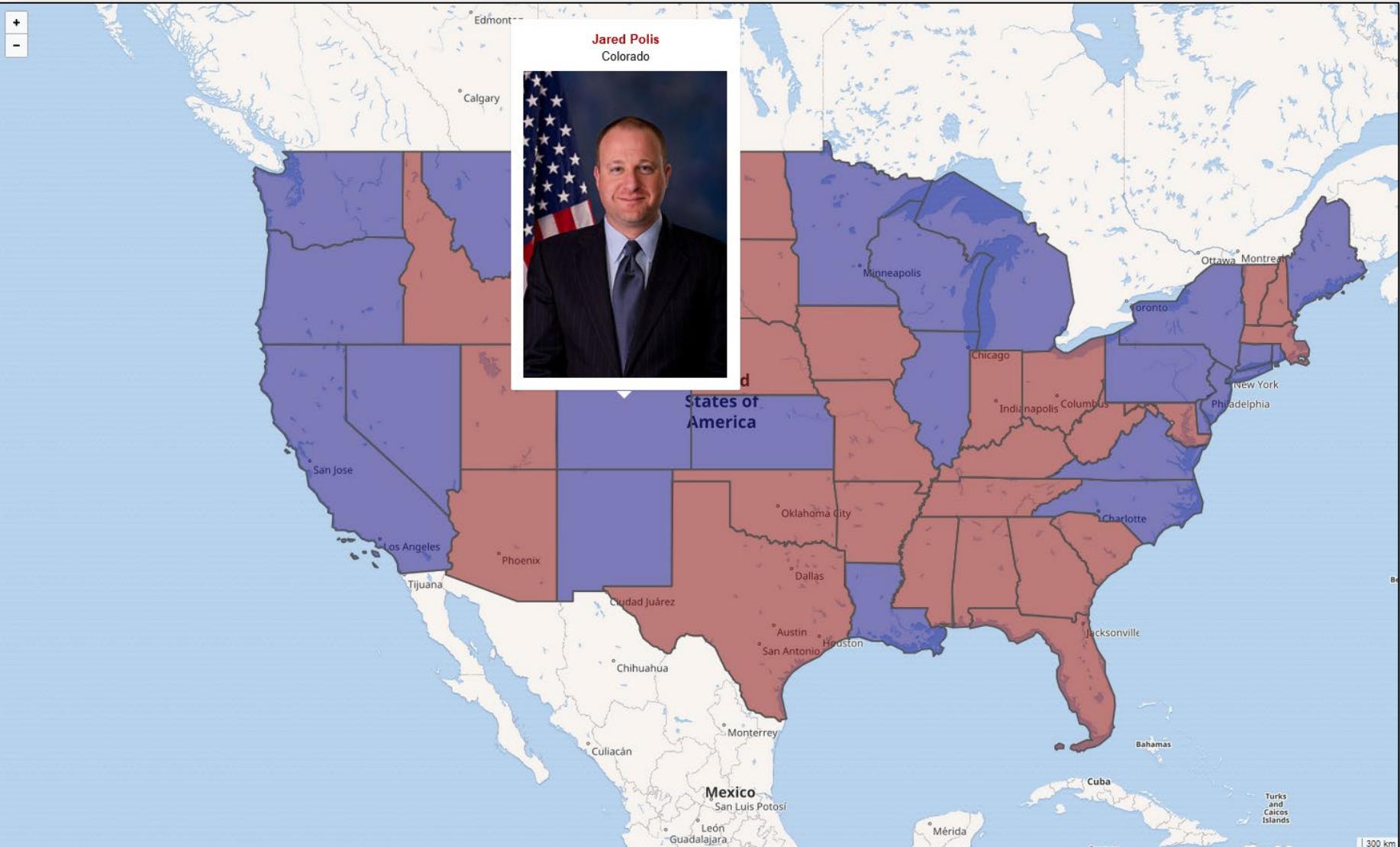
Variables must have these names

Only use single quotes,  
otherwise you'll get a  
JSON parse error

## 2.7) Other cool embedded maps

Railway lines around Klang Valley, Malaysia [ bewerken | brontekst bewerken ]



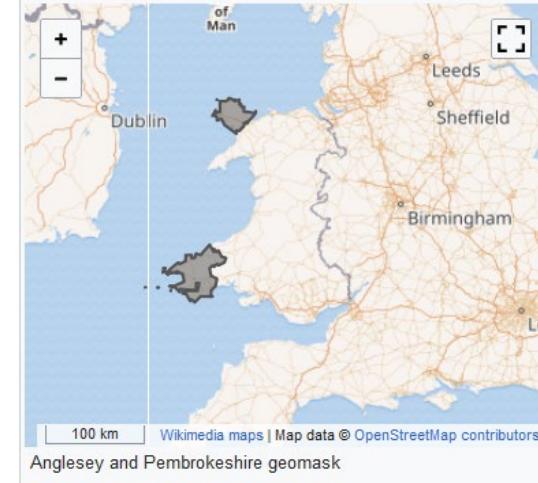
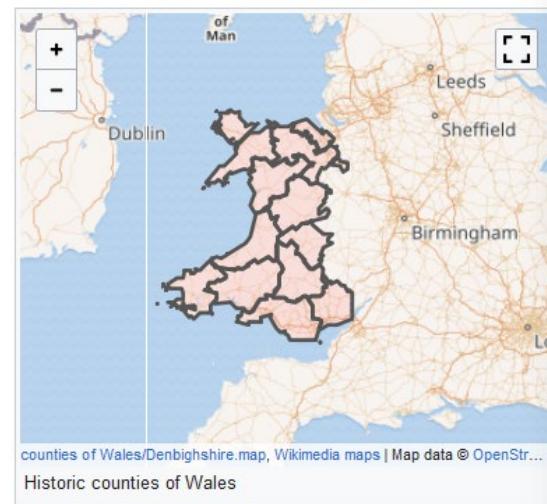
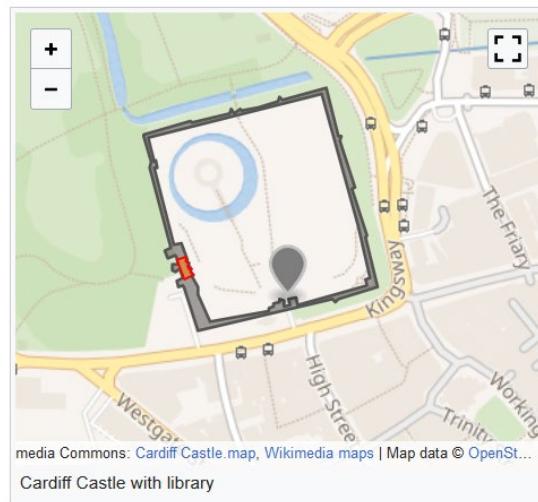


### Governors of US states with their party affiliation

<https://www.r>

<https://www.mediawiki.org/wiki/Help:Extension:Kartographer#/map/4>

## GeoShapes [edit]



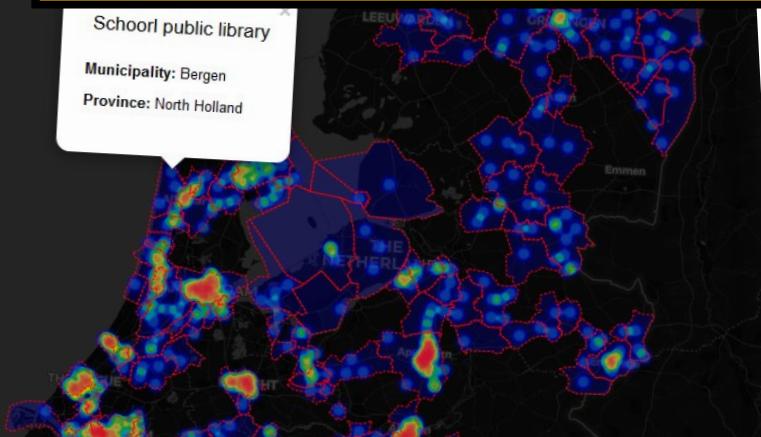
Governors of US states with their

<https://www.wikidata.org/wiki/User:Sic19#GeoShapes>

<https://www.wikidata.org/wiki/User:Sic19#GeoShapes>

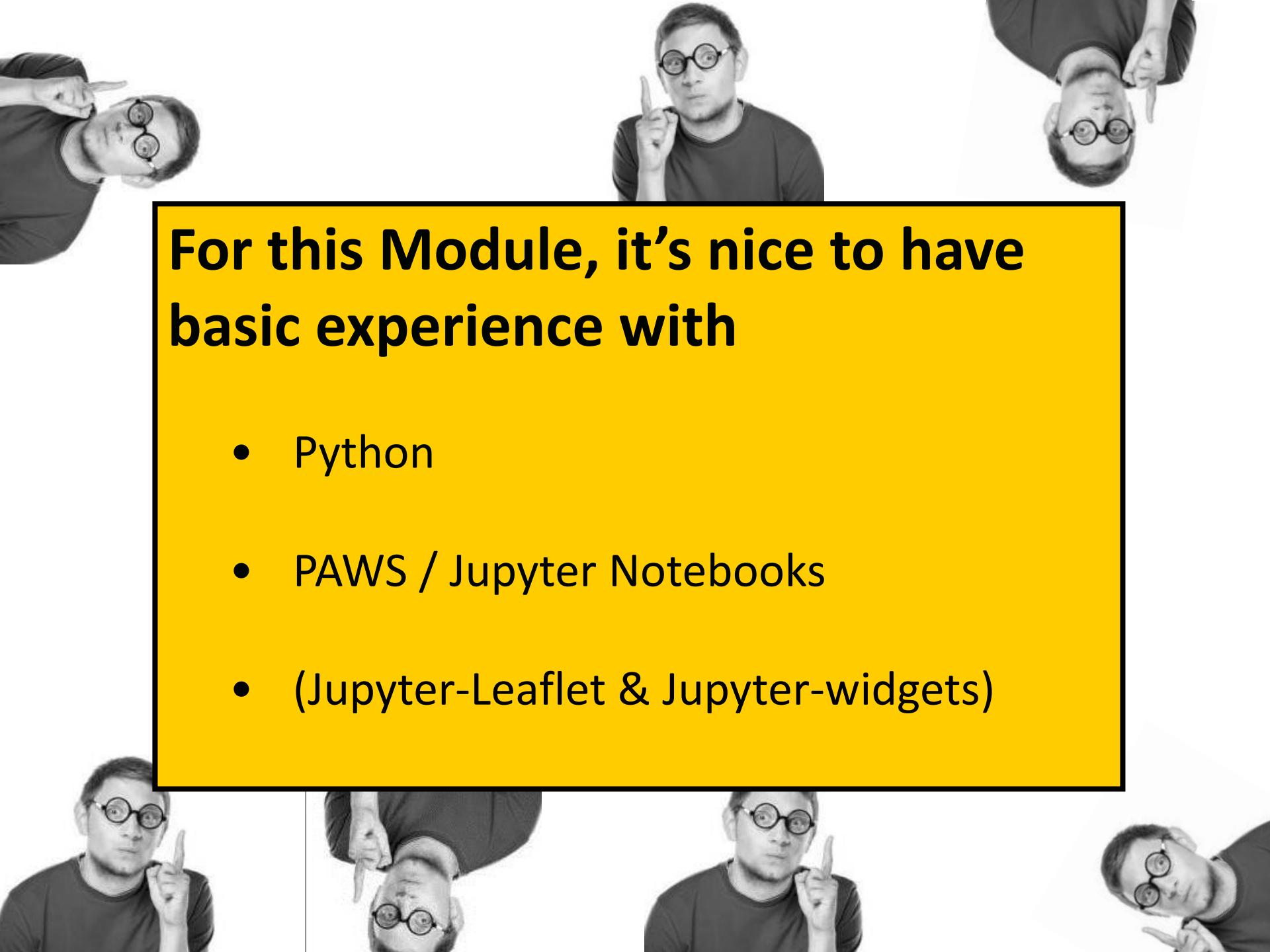
# MODULE 3

## Interactive, layered off-Wiki maps driven by Wikidata



```
1 # Load required libraries
2 import ipyleaflet as ipyleaflet
3 from ipyleaflet import Map, basemaps, LayerControl, Feature, FeatureCollection
4 from ipywidgets import widgets, Layout, Box, HBox, Vbox, Output, Textarea, Button
5
6 # Set up the map
7 map = Map()
8
9 # Set initial center and zoom level of basemap
10 map_center = (52.088889, 5.33) #Utrecht city
11 map_zoom = 8
12
13 # Set layout of map
14 map_layout = {
15     'width': '900px',
16     'height': '1000px',
17     'border': '1px solid black',
18     'padding': '1px',
19     'margin': '0 auto 0 auto'
20 }
21
22 # Output the map to screen, embedded in notebook
23 m = Map(layers=(default_layer,), center=map_center, zoom=map_zoom, layout=map_layout)
24
25 # https://ipyleaflet.readthedocs.io/en/latest/api_reference/map.html
```





**For this Module, it's nice to have  
basic experience with**

- Python
- PAWS / Jupyter Notebooks
- (Jupyter-Leaflet & Jupyter-widgets)

# MediaWiki account + login

Special page

Search MediaWiki

## Log in

Language: Deutsch | English | Esperanto | français | español | italiano | Nederlands

Username  
OlafJanssen

Password  
\*\*\*\*\*

Keep me logged in (for up to 365 days)

**Log in**

[Help with logging in](#)  
[Forgot your password?](#)

<https://www.mediawiki.org>

<https://www.mediawiki.org/wiki/PAWS>

MediaWiki

English OlafJanssen 24 26 Talk Preferences Beta Watchlist Contributions Log out

Page Discussion Read Edit View history More Search MediaWiki

# PAWS

**i** <https://paws.wmflabs.org> now redirects here (see [m:Talk:Interwiki\\_map#PAWS](#)).  
To access your server go to <https://paws.wmflabs.org/paws/hub>

**i** See also [Manual:Pywikibot/PAWS](#) and [wikitech:PAWS](#).

PAWS (PAWS: A Web Shell) is an online web-based interactive programming + publishing environment. It is an implementation of the popular Jupyter notebook environment for Python and other programming tasks.

Support User help FAQ Technical manual Support desk Communication Development Bug tracker

Contents [hide]

1 Why?  
2 What?  
2.1 Notebooks

**PAWS**

**Start your PAWS server**  
<https://paws.wmflabs.org/paws/hub>

# Starting your PAWS server

The screenshot shows a web browser window with the URL [https://meta.wikimedia.org/w/index.php?title=Special:OAuth/authenticate&oauth\\_token=41edf591bf825bd48d3cc83](https://meta.wikimedia.org/w/index.php?title=Special:OAuth/authenticate&oauth_token=41edf591bf825bd48d3cc83). The page title is "OAuth" and it says "Allows usage of OAuth 1.0a for API authorization". On the left, there's a sidebar with links like "Main page", "Community", "Tools", and "Special pages". A large yellow speech bubble points to a modal dialog box. The modal has a message to "Hi OlafJanssen," asking for permission to perform various actions: "Perform high volume activity", "Interact with pages", "Interact with media", "Perform administrative actions", "Interact with your watchlist", and "Miscellaneous activity". At the bottom of the modal are "Allow" and "Cancel" buttons, with "Allow" being circled in red.

You might see this screen...

# Starting your PAWS server

The screenshot shows a web browser window with the URL <https://paws.wmflabs.org/paws/hub/user/OlafJanssen/>. The page displays a message: "Welcome to PAWS. Please report any issues on Phabricator." Below it says "Your server is starting up." and "You will be redirected automatically when it's ready for you." A red oval highlights the text "Server ready at </paws/user/OlafJanssen/>". At the bottom left, there is a link "Event log". The browser's address bar also shows the same URL.

https://paws.wmflabs.org/paws/hub/user/USERNAME

# Your PAWS server running

The screenshot shows the PAWS (Wikimedia Analytics and Web Services) interface. At the top, there's a navigation bar with the PAWS logo, 'PAWS' text, and buttons for 'Quit', 'Logout', and 'Control Panel'. Below the navigation is a menu bar with 'Files' (selected), 'Running', and 'Clusters'. A message 'Select items to perform actions on them.' is displayed above the file list. On the right, there are buttons for 'Upload', 'New', and a refresh icon. The file list shows several items, including 'CommonsCategoryDownloader.ipynb', 'node\_modules.ipynb', 'SaveToWaybackMachine.ipynb', 'Smart-Server.ipynb', 'Wikibase\_Uiversal\_Bot.ipynb', 'WikidataMapMakingWorkshop.ipynb', 'DutchPublicLibraries\_OpenStreetMap.ipynb' (circled in red), 'DutchPublicLibraries\_GoogleMaps\_Test.ipynb', 'UniversalBot.ipynb', and 'VariousTests.ipynb'. To the right of the list are columns for 'Last Modified' and 'File size'. A large yellow speech bubble points from the circled file to the right, containing the text '.ipynb = interactive python notebook'. Below the file list is a yellow box containing the URL <https://paws.wmflabs.org/paws/user/USERNAME/tree>.

.ipynb =  
interactive **p**ython **n**ote**b**ook

<https://paws.wmflabs.org/paws/user/USERNAME/tree>

- [https://en.wikipedia.org/wiki/Project\\_Jupyter#Jupyter\\_Notebook](https://en.wikipedia.org/wiki/Project_Jupyter#Jupyter_Notebook)
- <https://realpython.com/jupyter-notebook-introduction>

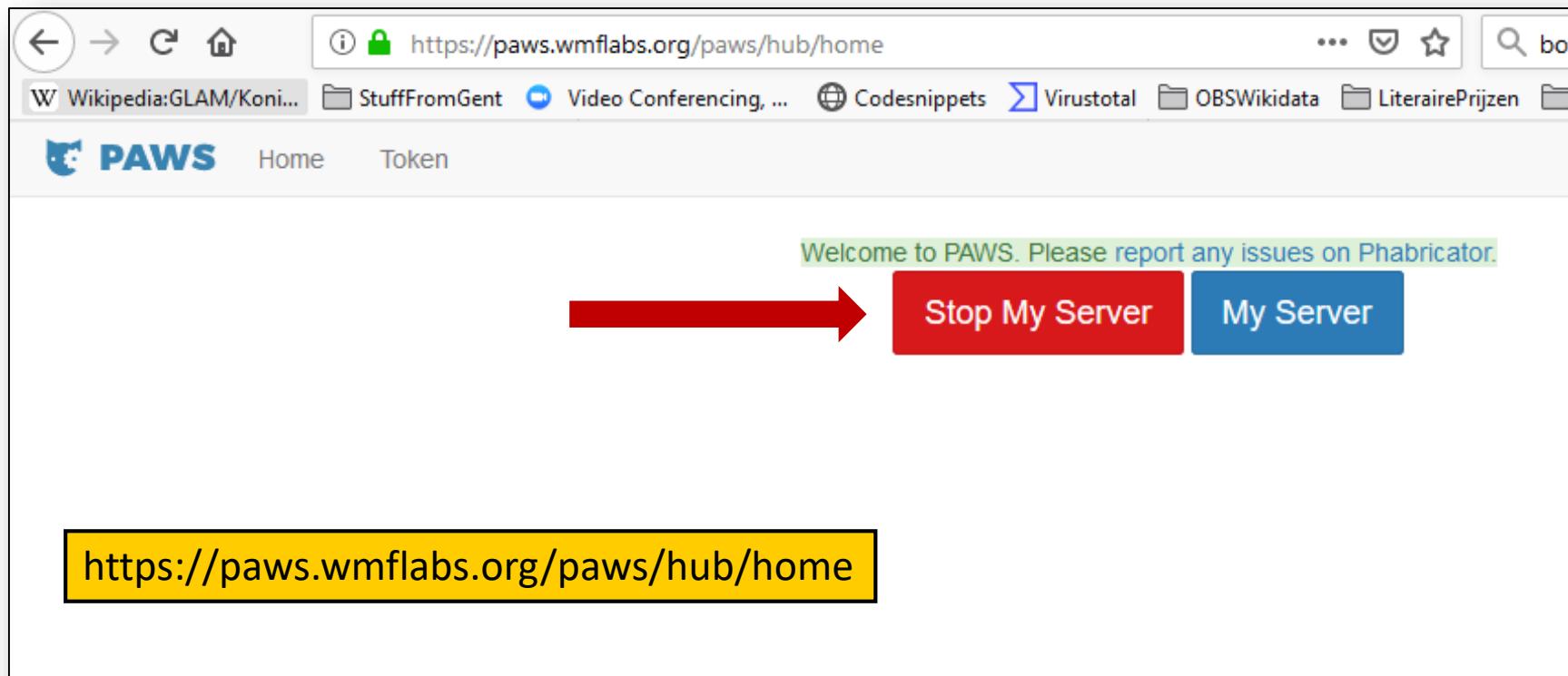
# Stopping your PAWS server

The screenshot shows the PAWS (Wikimedia Analytics Workstation) web interface. At the top, there is a navigation bar with tabs for 'Files' (selected), 'Running', and 'Clusters'. On the right side of the top bar are buttons for 'Quit', 'Logout', and 'Control Panel', with 'Control Panel' circled in red. Below the navigation bar is a search bar containing the placeholder 'Select items to perform actions on them.' To the right of the search bar are buttons for 'Upload', 'New', and a refresh icon. The main area is a file browser table with the following columns: Name, Last Modified, and File size. The table lists several items:

|                            | Name                                       | Last Modified     | File size |
|----------------------------|--|-------------------|-----------|
| <input type="checkbox"/> 0 | /  |                   |           |
| <input type="checkbox"/>   | CommonsCategoryDownloader                  | 25 dagen geleden  |           |
| <input type="checkbox"/>   | node_modules                               | 4 maanden geleden |           |
| <input type="checkbox"/>   | SaveToWaybackMachine                       | 13 dagen geleden  |           |
| <input type="checkbox"/>   | Smart-Servier                              | 2 maanden geleden |           |
| <input type="checkbox"/>   | Wikibase_Universal_Bot                     | 4 maanden geleden |           |
| <input type="checkbox"/>   | WikidataMapMakingWorkshop                  |                   |           |
| <input type="checkbox"/>   | DutchPublicLibraries_OpenStreetMap.ipynb   | 2 maanden geleden | 18.1 kB   |
| <input type="checkbox"/>   | DutchPublicLibraries_GoogleMaps_Test.ipynb | 4 maanden geleden | 555 B     |
| <input type="checkbox"/>   | UniversalBot.ipynb                         | 4 maanden geleden | 8.7 kB    |
| <input type="checkbox"/>   | VariousTests.ipynb                         |                   |           |

A yellow box highlights the URL <https://paws.wmflabs.org/paws/user/USERNAME/tree>.

# Stopping your PAWS server



<https://paws.wmflabs.org/paws/hub/home>

# Your PAWS public folder (even when server is offline)

The screenshot shows a web browser window with the URL <https://paws-public.wmflabs.org/> in the address bar. The page title is "Index of /paws-public/19781798/". The browser interface includes a search bar labeled "Zoeken" and various toolbar icons. Below the title, there is a table listing files and folders in the PAWS public folder.

| <a href="#">File Name ↓</a>                                | <a href="#">File Size ↓</a> | <a href="#">Date ↓</a> |
|--|-----------------------------|------------------------|
| <a href="#">Parent directory/</a>                          | -                           | -                      |
| <a href="#">CommonsCategoryDownloader/</a>                 | -                           | 27-Sep-2019 15:24      |
| <a href="#">SaveToWaybackMachine/</a>                      | -                           | 09-Oct-2019 11:37      |
| <a href="#">Smart-Servier/</a>                             | -                           | 03-Sep-2019 17:35      |
| <a href="#">Wikibase_Universal_Bot/</a>                    | -                           | 05-Jul-2019 14:11      |
| <a href="#">WikidataMapMakingWorkshop/</a>                 | -                           | 22-Oct-2019 13:05      |
| <a href="#">node_modules/</a>                              | -                           | 11-Jun-2019 13:31      |
| <a href="#">DutchPublicLibraries_OpenStreetMap.ipynb</a>   | 442444                      | 07-Aug-2019 11:28      |
| <a href="#">DutchPublicLibraries_GoogleMaps_Test.ipynb</a> | 18132                       | 07-Aug-2019 11:02      |
| <a href="#">UniversalBot.ipynb</a>                         | 555                         | 05-Jul-2019 14:09      |
| <a href="#">VariousTests.ipynb</a>                         | 8704                        | 08-Jun-2019 14:33      |

<https://paws-public.wmflabs.org/paws-public/User:USERNAME>

# PAWS alternative: local Notebook installation



Products

Why Anaconda?

Solutions

Resources

Company

Download

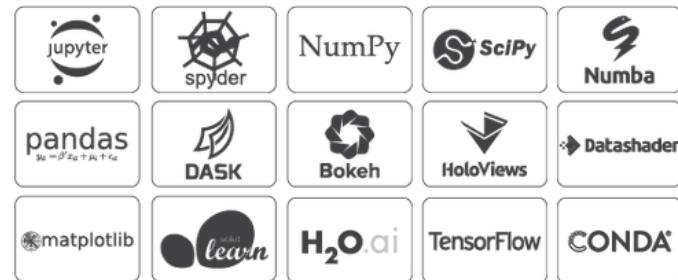
## Anaconda Distribution

The World's Most Popular Python/R Data Science Platform

Download

The open-source [Anaconda Distribution](#) is the easiest way to perform Python/R data science and machine learning on Linux, Windows, and Mac OS X. With over 15 million users worldwide, it is the industry standard for developing, testing, and training on a single machine, enabling *individual data scientists* to:

- Quickly download 1,500+ Python/R data science packages
- Manage libraries, dependencies, and environments with [Conda](#)
- Develop and train machine learning and deep learning models with [scikit-learn](#), [TensorFlow](#), and [Theano](#)
- Analyze data with scalability and performance with Dask, NumPy, pandas, and [Numba](#)
- Visualize results with [Matplotlib](#), [Bokeh](#), [Databricks](#), and [Holoviews](#)



- <https://jupyter.org/install>
- <https://www.anaconda.com/distribution/>
- <https://dataiseeasy.com/2019/03/how-to-install-anaconda-and-jupyter-notebook>

# Go to public PAWS folder of User:OlafJanssen

Screenshot of a web browser showing the index of a PAWS folder. The URL in the address bar is <https://paws-public.wmflabs.org/paws-public/User:OlafJanssen>. A yellow callout bubble points to the folder 'WikidataMapMakingWorkshop/'. A blue oval highlights the folder 'node\_modules/'. A yellow box at the bottom contains the URL.

| File Name ↓  | File Size ↓ | Date ↓            |
|--|-------------|-------------------|
| <a href="#">Parent directory/</a>                          | -           | -                 |
| <a href="#">CommonsCategoryDownloader/</a>                 | -           | 4                 |
| <a href="#">SaveToWaybackMachine/</a>                      | -           | 7                 |
| <a href="#">Smart-Servier/</a>                             | -           | 5                 |
| <a href="#">Wikibase Universal Bot/</a>                    | -           | 1                 |
| <a href="#">WikidataMapMakingWorkshop/</a>                 | -           | 22-Oct-2019 13:05 |
| <a href="#">node_modules/</a>                              | -           | 11-Jun-2019 13:31 |
| <a href="#">DutchPublicLibraries_OpenStreetMap.ipynb</a>   | 442444      | 07-Aug-2019 11:28 |
| <a href="#">DutchPublicLibraries_GoogleMaps_Test.ipynb</a> | 18132       | 07-Aug-2019 11:02 |
| <a href="#">UniversalBot.ipynb</a>                         | 555         | 05-Jul-2019 14:09 |
| <a href="#">VariousTests.ipynb</a>                         | 8704        | 08-Jun-2019 14:33 |

# In folder ‘WikidataMapMakingWorkshop’

## Index of /paws-public/19781798 /WikidataMapMakingWorkshop/

| <a href="#">File Name ↓</a>                            | <a href="#">File Size ↓</a> | <a href="#">Date ↓</a> |
|--|-----------------------------|------------------------|
| <a href="#">Parent directory/</a>                      | -                           | -                      |
| <a href="#">NetherlandsPublicLibrariesHeatmap.html</a> | 4562743                     | 09-Aug-2019 11:17      |
| <a href="#">WikidataMapMakingWorkshop.ipynb</a>        | 38900                       | 25-Sep-2019 16:29      |
| <a href="#">nl_munis_with_public_libs.json</a>         |                             | 9 11:12                |
| <a href="#">popupstyle.css</a>                         |                             | 9 13:21                |

Example notebook  
we will use

<https://paws-public.wmflabs.org/paws-public/User:OlafJanssen/WikidataMapMakingWorkshop/WikidataMapMakingWorkshop.ipynb>

# This notebook in raw format (json)

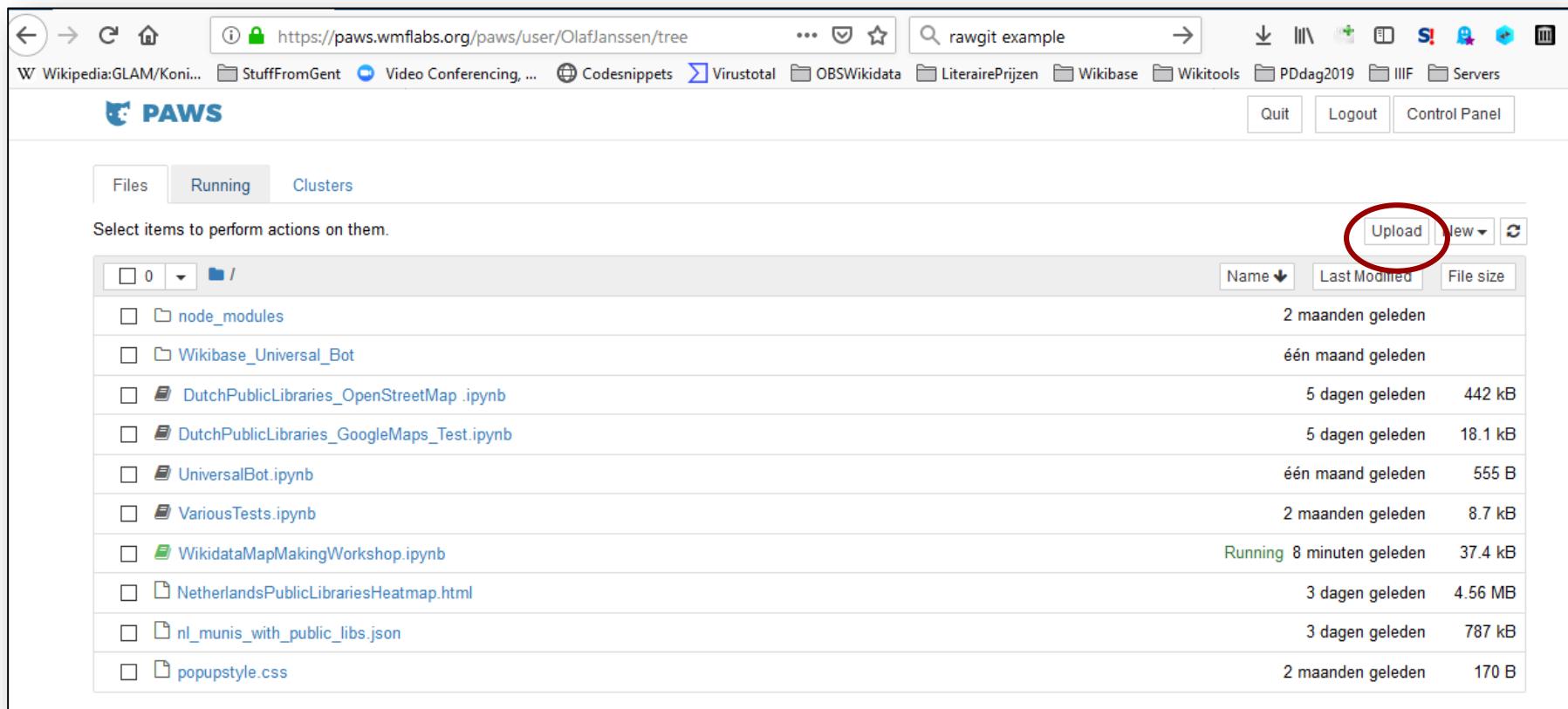
```
{  
  "cells": [  
    {  
      "cell_type": "markdown",  
      "metadata": {},  
      "source": [  
        "# Building a stand-alone off-Wiki layered map using Wikidata & SPARQL\n",  
        "\n",  
        "This Jupyter notebook shows you step by step **how to make a Wikidata-driven layered map that can be used off-Wiki**.\n",  
        "\n",  
        "It is part of Module 3 of the map making workshop [From Wikidata to interactive off-Wiki maps in three steps] (https://github.com/ookgezellig/WikidataMapMakingWorkshop)\n",  
        "\n",  
        "See https://github.com/ookgezellig/WikidataMapMakingWorkshop/blob/master/OutlineAndNotes.md for the full layout of this workshop\n",  
        "\n",  
        "This notebook is publically available at\n",  
        "* https://paws-public.wmflabs.org/paws-public/User:OlafJanssen/WikidataMapMakingWorkshop.ipynb (and in [raw format] (https://paws-public.wmflabs.org/paws-public/User:OlafJanssen/WikidataMapMakingWorkshop.ipynb?format=raw))\n",  
        "* https://github.com/ookgezellig/WikidataMapMakingWorkshop/blob/master/module3stuff/WikidataMapMakingWorkshop.ipynb (and in [raw format] (https://raw.githubusercontent.com/ookgezellig/WikidataMapMakingWorkshop/master/module3stuff/WikidataMapMakingWorkshop.ipynb))\n"  
      ]  
    },  
    {  
      "cell_type": "markdown",  
      "metadata": {},  
      "source": [  
        "For questions about this notebook, contact [Olaf Janssen] (https://www.wikidata.org/wiki/User:OlafJanssen) on Wikidata // olaf.janssen@kb.nl  
https://twitter.com/ookgezellig\n",  
        "\n",  
        "*****  
      ]  
    },  
    {  
      "cell_type": "text",  
      "metadata": {},  
      "source": [  
        "##  
      ]  
    },  
    {  
      "cell_type": "text",  
      "metadata": {},  
      "source": [  
        "To make the map we will use\n",  
        "1. **PAWS** (Jupyter Notebooks as a cloud service) - https://www.mediawiki.org/wiki/PAWS\n",  
        "2. **SPARQL queries** from Wikidata - https://www.wikidata.org + https://query.wikidata.org\n",  
      ]  
    }  
  ]  
}
```

# Save this raw file to your PC

The screenshot shows a web browser window with a yellow callout pointing to a save dialog box. The browser URL is <https://paws-public.wmflabs.org/paws-public/User:OlafJanssen/WikidataMapMakingWorkshop.ipynb>. The page content is a Jupyter Notebook raw file with JSON-like code blocks. A save dialog box titled "Opslaan als" (Save as) is displayed over the browser. The dialog shows the file path "Deze pc > Bureaublad" and the file name "WikidataMapMakingWorkshop.ipynb" in the "Bestandsnaam:" field. The "Opslaan als:" dropdown is set to "Text Document (\*.txt;\*.txt)". The "Opslaan" button is highlighted with a blue border.

```
{ "cells": [ { "cell_type": "markdown", "metadata": {}, "source": [ "# Building a stand-alone off-WikiData Jupyter Notebook\n\nThis Jupyter notebook shows you how to use PAWS to build a map.\n\nIt is part of Module 3 of the mapmaking workshop.\n\nWikidataMapMakingWorkshop)\n\nSee https://github.com/ookgezellig/WikidataMapMakingWorkshop\n\nThis notebook is publically available at\nhttps://paws-public.wmflabs.org/paws-public/User:OlafJanssen/WikidataMapMakingWorkshop.ipynb\n\nFor questions about this notebook, contact\nhttps://twitter.com/ookgezellig\n\n*****\n\n## Start of the workshop" ], "cell_type": "markdown", "metadata": {}, "source": [ "To make the map we will use\n1. **PAWS** (Jupyter Notebooks as a cloud service) - https://www.mediawiki.org/wiki/PAWS\n2. **SPARQL queries** from Wikidata - https://www.wikidata.org + https://query.wikidata.org\n\nWikidataProject Netherlands\nPublic Libraries - Wikidata\nInternetsnelkoppeling" ] } ] }
```

# ... and upload it to your PAWS server



The screenshot shows the PAWS (Wikimedia Foundation's Platform as a Service) web interface. At the top, there is a navigation bar with links like 'Wikipedia:GLAM/Koni...', 'StuffFromGent', 'Video Conferencing, ...', 'Codesnippets', 'Virustotal', 'OBSWikidata', 'LiterairePrijzen', 'Wikibase', 'Wikitoools', 'PDdag2019', 'IIIF', and 'Servers'. Below the navigation bar, the PAWS logo is visible, along with 'Quit', 'Logout', and 'Control Panel' buttons.

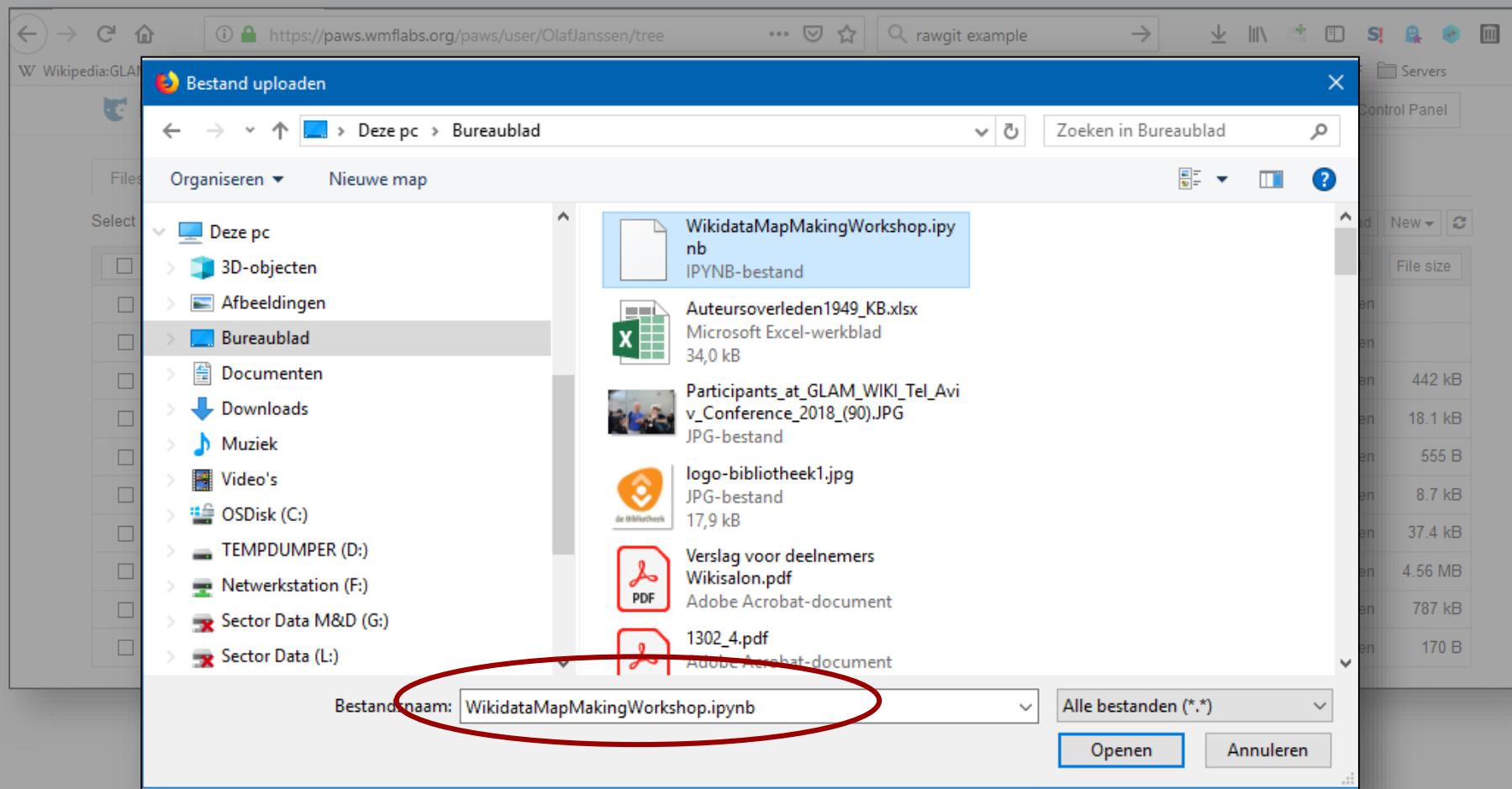
The main area has three tabs: 'Files' (selected), 'Running', and 'Clusters'. Under the 'Files' tab, there is a message 'Select items to perform actions on them.' followed by a file list. The file list includes:

|                          | Name                                       | Last Modified             | File size |
|--------------------------|--|---------------------------|-----------|
| <input type="checkbox"/> | 0  | 2 maanden geleden         |           |
| <input type="checkbox"/> | node_modules                               | 2 maanden geleden         |           |
| <input type="checkbox"/> | Wikibase_Universal_Bot                     | één maand geleden         |           |
| <input type="checkbox"/> | DutchPublicLibraries_OpenStreetMap.ipynb   | 5 dagen geleden           | 442 kB    |
| <input type="checkbox"/> | DutchPublicLibraries_GoogleMaps_Test.ipynb | 5 dagen geleden           | 18.1 kB   |
| <input type="checkbox"/> | UniversalBot.ipynb                         | één maand geleden         | 555 B     |
| <input type="checkbox"/> | VariousTests.ipynb                         | 2 maanden geleden         | 8.7 kB    |
| <input type="checkbox"/> | WikidataMapMakingWorkshop.ipynb            | Running 8 minuten geleden | 37.4 kB   |
| <input type="checkbox"/> | NetherlandsPublicLibrariesHeatmap.html     | 3 dagen geleden           | 4.56 MB   |
| <input type="checkbox"/> | nl_munis_with_public_libs.json             | 3 dagen geleden           | 787 kB    |
| <input type="checkbox"/> | popupstyle.css                             | 2 maanden geleden         | 170 B     |

In the top right corner of the file list area, there is an 'Upload' button, which is circled in red.

<https://paws.wmflabs.org/paws/user/USERNAME/tree>

# ... and upload it to your PAWS server



# ... and upload it to your PAWS server

The screenshot shows the PAWS (Public Access Web Services) interface. At the top, a browser window displays a file upload dialog titled "Bestand uploaden". The dialog shows a local file path: "Deze pc > Bureaublad". Below the browser is the PAWS application itself, featuring a navigation bar with tabs for "Files", "Running", and "Clusters". The "Files" tab is selected. A message "Select items to perform actions on them." is displayed above a list of files. The file list includes:

| File Name                                  | Last Modified     | Size    |
|--|-------------------|---------|
| WikidataMapMakingWorkshop.ipynb            | 2 maanden geleden |         |
| node_modules                               | één maand geleden |         |
| Wikibase_Universal_Bot                     | één maand geleden |         |
| DutchPublicLibraries_OpenStreetMap.ipynb   | 5 dagen geleden   | 442 kB  |
| DutchPublicLibraries_GoogleMaps_Test.ipynb | 5 dagen geleden   | 18.1 kB |
| UniversalBot.ipynb                         | één maand geleden | 555 B   |
| VariousTests.ipynb                         | 2 maanden geleden | 8.7 kB  |
| WikidataMapMakingWorkshop.ipynb            | Running           | 37.4 kB |
| NetherlandsPublicLibrariesHeatmap.html     | 3 dagen geleden   | 4.56 MB |
| nl_munis_with_public_libs.json             | 3 dagen geleden   | 787 kB  |
| popupstyle.css                             | 2 maanden geleden | 170 B   |

A red circle highlights the "Upload" button in the file upload dialog.

# Notebook on your own PAWS server to play with

PAWS WikidataMapMakingWorkshop Last Checkpoint: afgelopen maandag om 11:27 (unsaved changes)  Logout Control Panel

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3

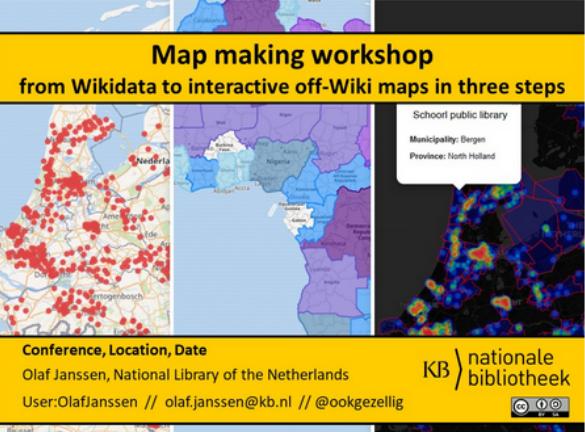
File Edit View Insert Cell Kernel Widgets Help Run Markdown

Public Link Memory: 132 MB

## Building a stand-alone off-Wiki layered map using Wikidata & SPARQL

This Jupyter notebook shows you step by step how to make a Wikidata-driven layered map that can be used off-Wiki.

It is part of Module 3 of the map making workshop [From Wikidata to interactive off-Wiki maps in three steps](#)



Map making workshop  
from Wikidata to interactive off-Wiki maps in three steps

Schoorl public library  
Municipality: Bergen  
Province: North Holland

Conference, Location, Date  
Olaf Janssen, National Library of the Netherlands  
User:Olafjanssen // olaf.janssen@kb.nl // @ookgezellig

KB } nationale  
bibliotheek

CC BY SA

For more context to this workshop you can check the

- [full layout](#), and
- [full slides \(pdf\)](#)

This notebook is publically available at

<https://paws.wmflabs.org/paws/user/USERNAME/notebooks/WikidataMapMakingWorkshop.ipynb>

For questions about this notebook, contact [Olaf Janssen](#) on Wikidata // [olaf.janssen@kb.nl](mailto:olaf.janssen@kb.nl) // <https://twitter.com/ookgezellig>

# Notebook on your own PAWS server to play with

The screenshot shows a Jupyter Notebook interface with the following details:

- Title Bar:** PAWS WikidataMapMakingWorkshop Last Checkpoint: afgelopen maandag om 11:27 (unsaved changes)
- Toolbar:** File, Edit, View, Insert, Cell, Kernel, Widgets, Help, Python 3, Not Trusted, Public Link, Memory: 132 MB.
- Icon Bar:** Includes icons for file operations like Open, Save, New, and Run, along with Markdown and cell type selection buttons.
- Content Area:** A large yellow box contains the following text:
  - The notebook should be self-explanatory, so**
  - Adapt, play, understand,  
get frustrated, learn**
  - Make your own interactive, layered map**
- Bottom Status Bar:** Shows '1 cell' and a link to 'View Cell'.
- Footer:** This notebook is publically available at <https://paws-public.wmflabs.org/paws-public/User:OlafJanssen/WikidataMapMakingWorkshop.ipynb> (and in [raw format](#)) and <https://github.com/ookgezellig/WikidataMapMakingWorkshop/blob/master/module3stuff/WikidataMapMakingWorkshop.ipynb> (and in [raw format](#)). For questions about this notebook, contact [Olaf Janssen](#) on Wikidata // [olaf.janssen@kb.nl](mailto:olaf.janssen@kb.nl) // <https://twitter.com/ookgezellig>

# Exporting your map to stand-alone, off-Wiki HTML page

As a final step for this workshop, we want to export the map to a (stand-alone, off-Wiki) HTML page that can be viewed in a browser.

<https://ipywidgets.readthedocs.io/en/latest/embedding.html#python-interface>

The map above is available at <http://ookgezellig.github.io/WikidataMapMakingWorkshop/NetherlandsPublicLibrariesHeatmap.html>

In [ ]:

```
1 # Export the map to html file
2 # https://ipywidgets.readthedocs.io/en/latest/embedding.html#python-interface
3 # The addition of 'state=dependency_state([m])' keeps the html file growing too large
4
5 embed_minimal_html('NetherlandsPublicLibrariesHeatmap.html', views=[m], state=dependency_st
6
7 # This map is available at http://ookgezellig.github.io/WikidataMapMakingWorkshop/Netherlan
```

**This is the end of the workshop**

# Exporting your map to stand-alone, off-Wiki HTML page

The screenshot shows the PAWS (Public Administration Workstation) interface. At the top, there is a navigation bar with links for 'Files', 'Running', and 'Clusters'. Below this is a toolbar with buttons for 'Duplicate', 'Rename', 'Move', 'Download' (which is circled in red), 'View', 'Edit', and a trash can icon. To the right of the toolbar are buttons for 'Upload', 'New', and a refresh icon. The main area displays a file list under the path '/WikidataMapMakingWorkshop'. The list includes:

| Name   | Last Modified             | File size |
|--|---------------------------|-----------|
| ..   | een paar seconden geleden |           |
| WikidataMapMakingWorkshop.ipynb  | één maand geleden         | 38.9 kB   |
| <input checked="" type="checkbox"/> NetherlandsPublicLibrariesHeatmap.html | 2 maanden geleden         | 4.56 MB   |
| nl_munis_with_public_libs.json   | 2 maanden geleden         | 787 kB    |
| popupstyle.css   | 5 maanden geleden         | 170 B     |

A red circle highlights the 'Download' button in the toolbar, and another red circle highlights the checked checkbox next to the 'NetherlandsPublicLibrariesHeatmap.html' file in the list.

# Exporting your map to stand-alone, off-Wiki HTML page

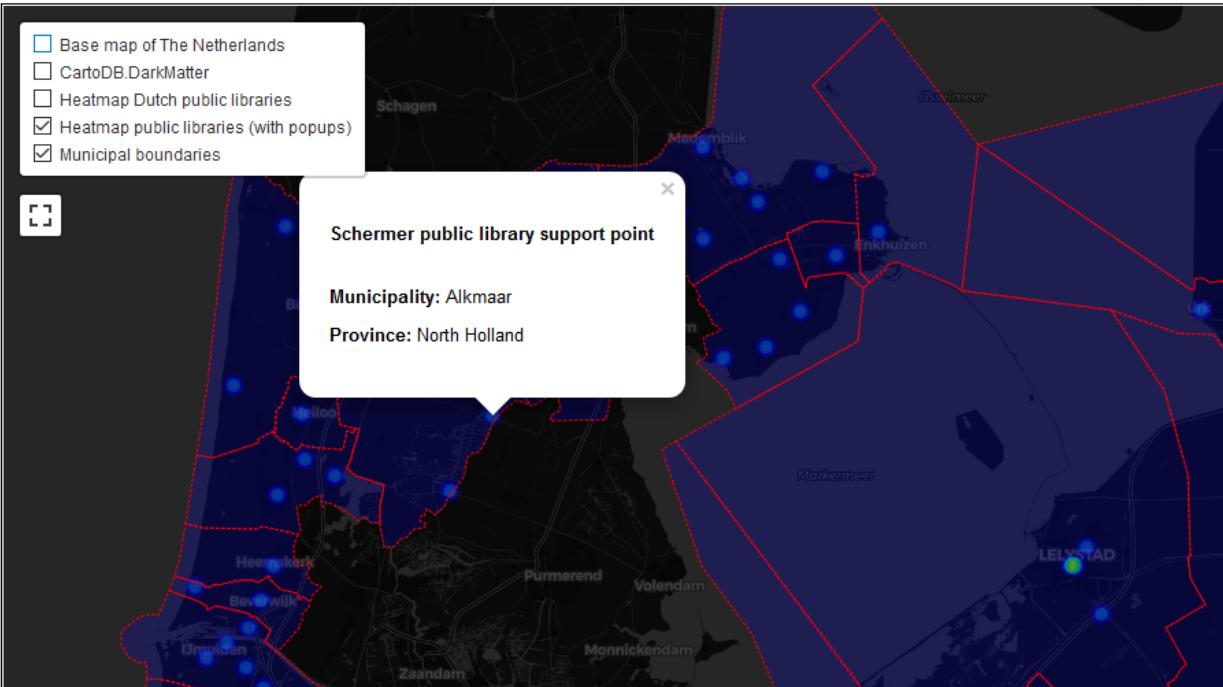
Screenshot of a web browser showing a map of Dutch public libraries. The map is a heatmap where darker shades represent higher concentrations of libraries. Red dashed lines indicate municipal boundaries. A tooltip for a point in Schermer shows:

- Base map of The Netherlands
- CartoDB.DarkMatter
- Heatmap Dutch public libraries
- Heatmap public libraries (with popups)
- Municipal boundaries

Schermer public library support point  
Municipality: Alkmaar  
Province: North Holland

The URL in the address bar is highlighted in yellow:

file:///C:/Users/oja010/AppData/Local/Temp/NetherlandsPublicLibrariesHeatmap.html





# THANKS!!!

Let me know your  
feedback on this workshop

In person // User:OlafJanssen // olaf.janssen@kb.nl // @ookgezellig

All content in this slidedeck is available under  
[Creative Commons Attribution-ShareAlike 4.0 International](#)

