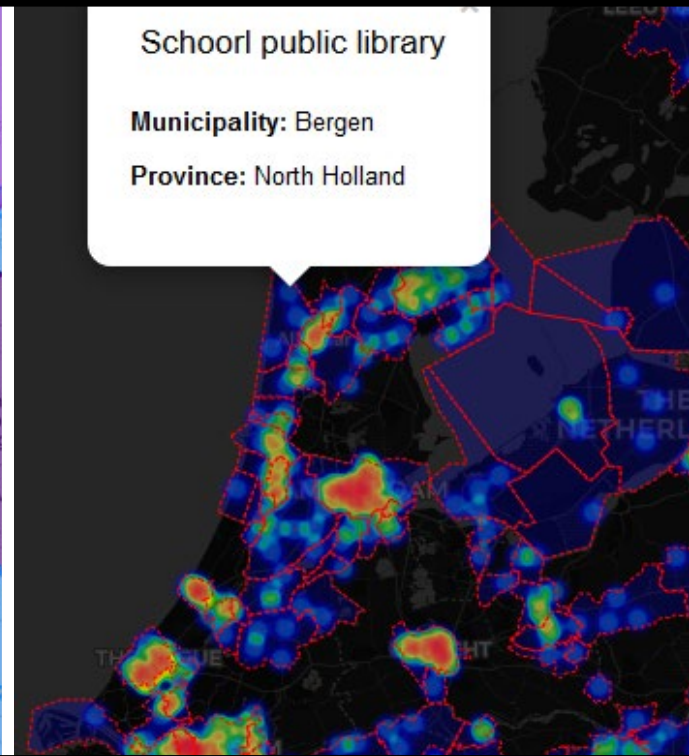
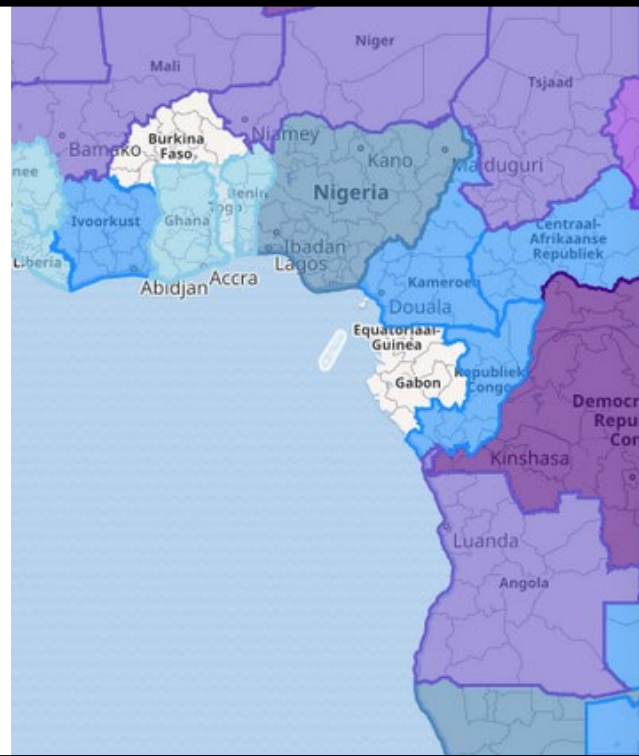


# Map making workshop

from Wikidata to interactive off-Wiki maps in three steps



WikidataCon2019, Berlin, Fri 25<sup>th</sup> October 2019

Olaf Janssen, National Library of the Netherlands

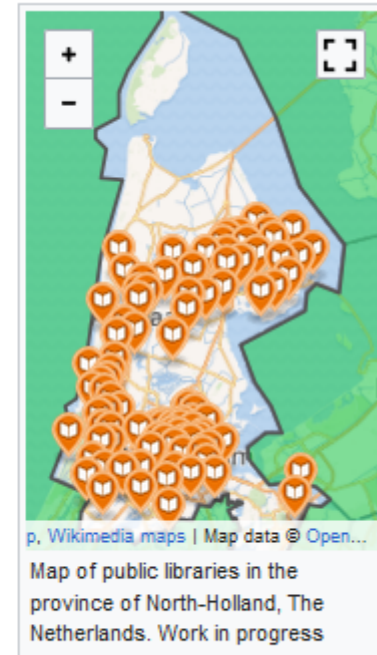
User:OlafJanssen // olaf.janssen@kb.nl // @ookgezellig

KB } nationale bibliotheek



## Map making workshop – from Wikidata to interactive off-wiki maps in three steps [ bewerken ]

- Topic and goal: See [Map making workshop – from Wikidata to interactive off-wiki maps in three steps](#)
- Working materials: [Full workshop description](#) on Github
- Organizer: [OlafJanssen](#), [@oakgezellig](#), [olaf.janssen@kb.nl](mailto:olaf.janssen@kb.nl)
- Timeslot: 1,5 to 2 hours Friday 25th 17:00-18:30
- Location: Austen room
- Interested to attend:
  - [OlafJanssen](#) (overleg) 08:24, 1 August 2019 (UTC) (organizer and workshop lead)
  - [Salgo60](#) (overleg) 16:47, 22 August 2019 (UTC)
  - [Beireke1](#) (overleg) 10:44, 3 September 2019 (UTC)
  - [Armineaghayan](#) (overleg) 12:14, 4 September 2019 (UTC)
  - [Librarian lena](#) (overleg) 17:54, 6 September 2019 (UTC)
  - .....



ookgezellig / WikidataMapMakingWorkshop

Unwatch 2 Star 1 Fork 0

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

Branch: master WikidataMapMakingWorkshop / README.md Find file Copy path

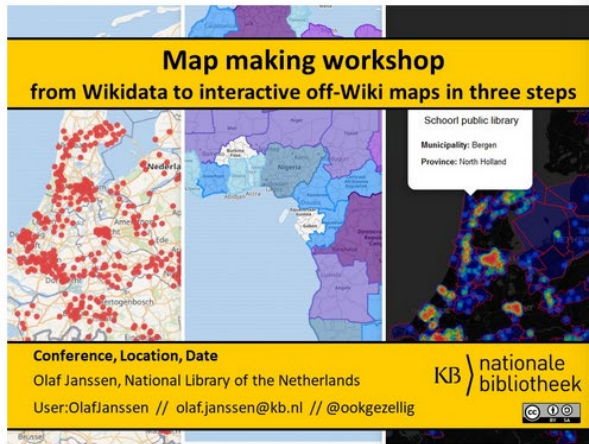
ookgezellig Update README.md 9be924e 20 hours ago

1 contributor

75 lines (51 sloc) 7.25 KB Raw Blame History

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

Latest update: 22 October 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 [Kartographer 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 \(RAWS\)](#), [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.

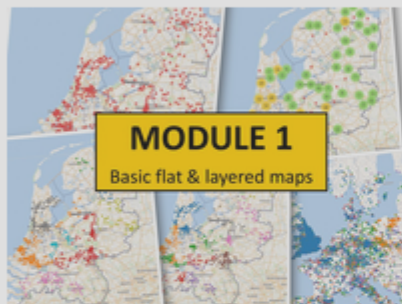
As the workshop is comprised of three 30-40 minute modules, you can decide to skip the modules that you find too advanced (or basic) for your individual knowledge level.

# Full workshop outline & notes

## 🔄 Workshop outline and notes

*Latest update: 22nd October 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

If you do not have, or cannot create such a

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

1. [Public libraries in The Netherlands](#) (incomplete set, per 12-8-2019)



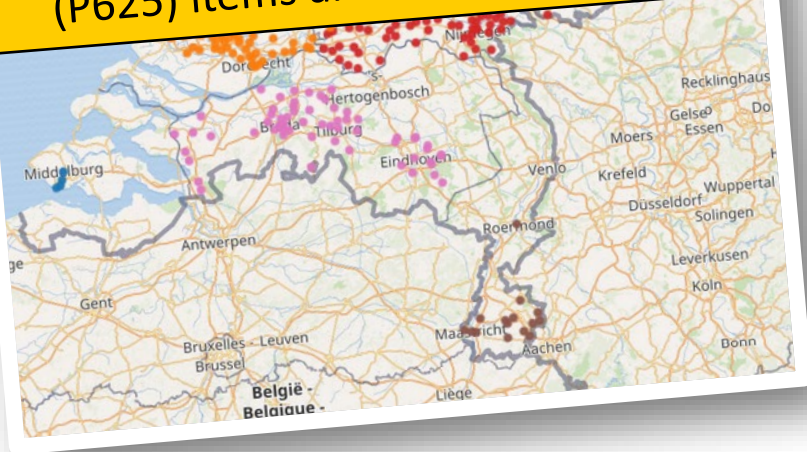
# Tips & tricks welcome!

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



# 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

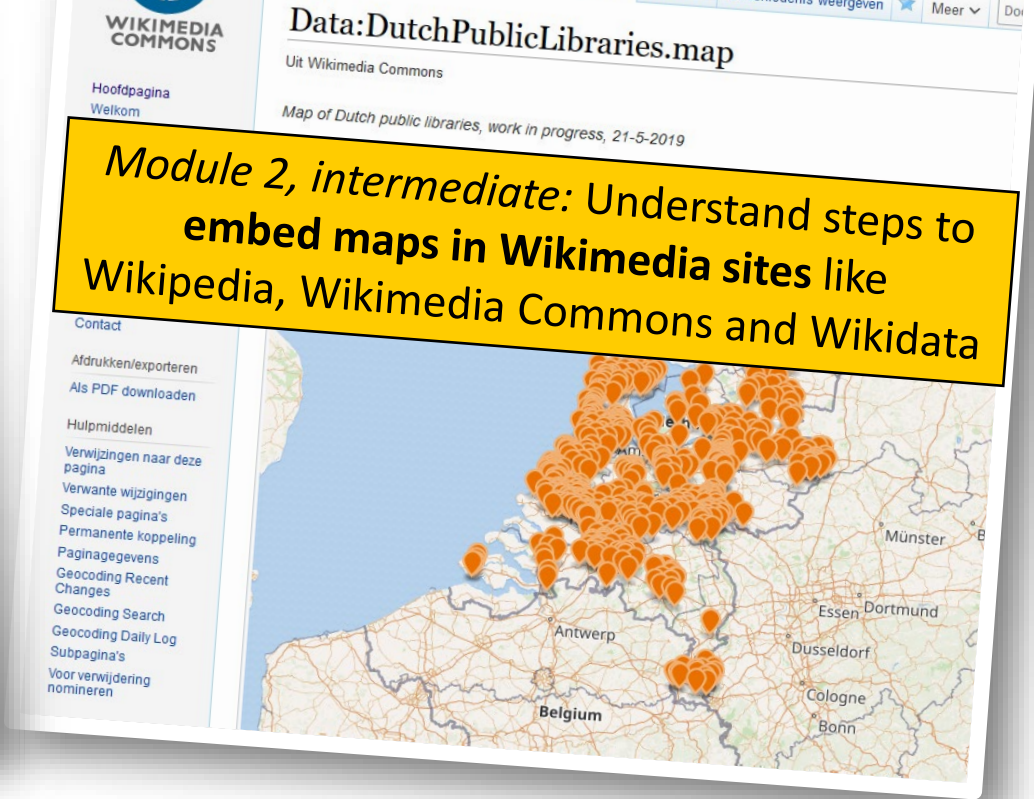


# Learning objectives

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



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



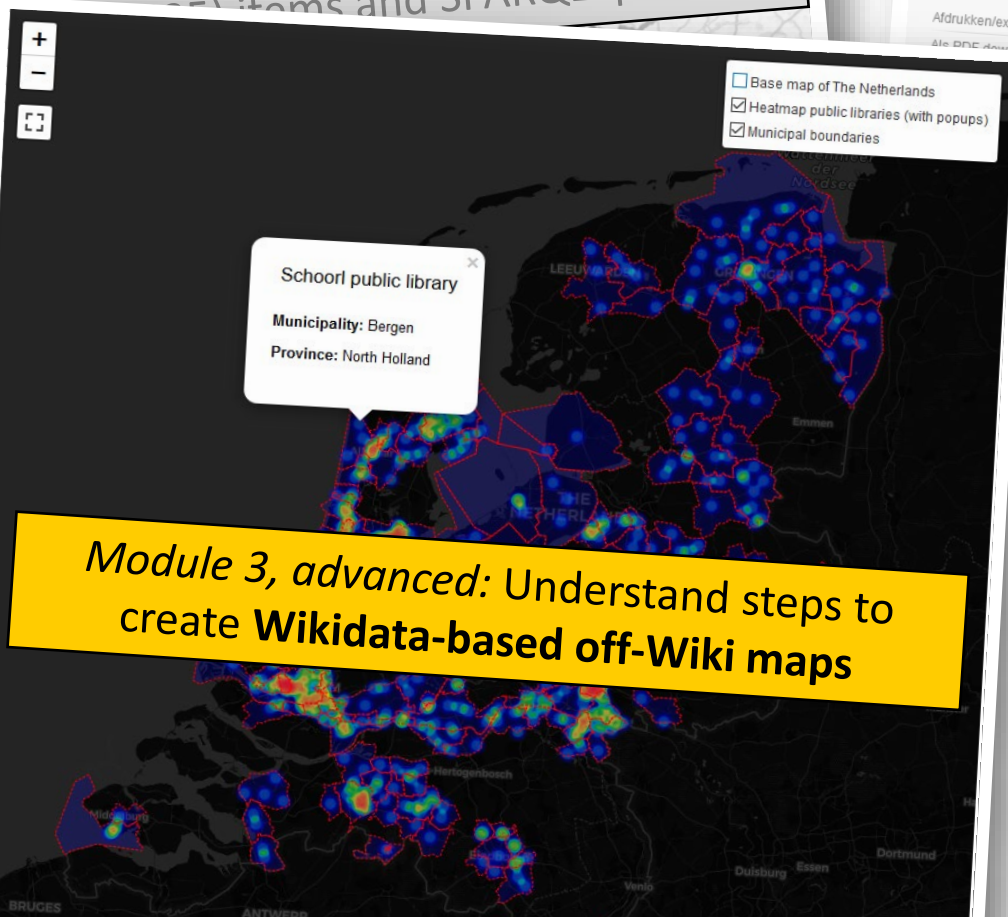


# Learning objectives

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

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

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





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

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

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



```
PAWS WikidataMapMakingWorkshop Last Checkpoint: één uur geleden (autosaved)
File Edit View Insert Cell Kernel Widgets Help
+ - Run Code
2
3 # First, we start with a simple basemap of The Netherlands
4 basemap=basemaps.Esri.WorldTopoMap
5 default_layer = basemap_to_tiles(basemap)
6 default_layer.name='Base map of The Netherlands'
7
8 # Overview of more basemaps: https://leaflet-extras.github.io/leaflet-providers/preview/ +
9 # https://github.com/jupyter-widgets/ipyleaflet/blob/master/ipyleaflet/basemaps.py
10
11 # Set initial center and zoom level of basemap
12 map_center=(52.088889, 5.33) #Utrecht city
13 map_zoom=8
14
15 # Set layout of map
16 map_layout = {
17     'width': '800px',
18     'height': '900px',
19     'border': '1px solid black',
20     'padding': '1px',
21     'margin': '10 auto 0 auto'
22 }
```





# 3 MODULES

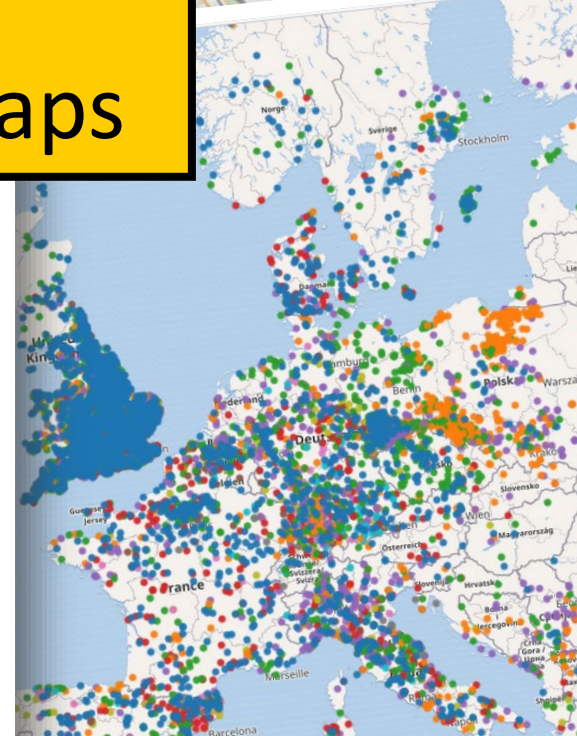
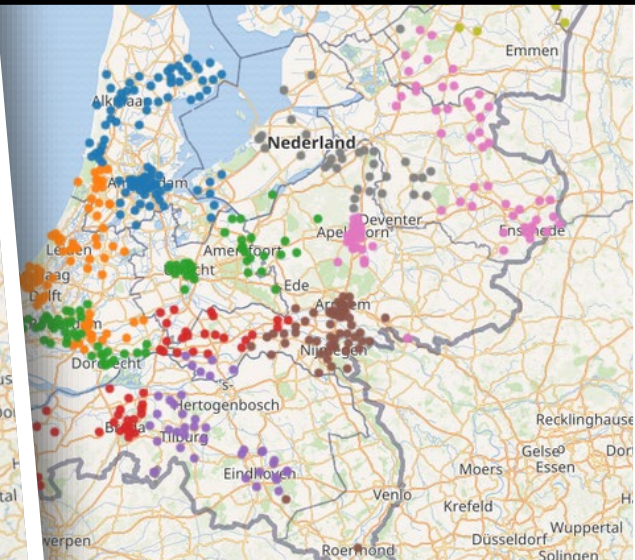
- 1) Basic flat & layered maps
- 2) Embedded maps in Wikimedia projects
- 3) Interactive, layered off-Wiki maps driven by Wikidata





# 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

[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	<a href="#">coordinates</a> <a href="#">co-ordinate location</a> <a href="#">co-ordinates</a> <a href="#">coords</a> <a href="#">co-ords</a> <a href="#">geographic coordinate</a> <a href="#">gps coordinate</a> <a href="#">gps co-ordinate</a> <a href="#">gps coordinates</a> <a href="#">gps co-ordinates</a> <a href="#">gps location</a> <a href="#">geotag</a> <a href="#">wgs 84</a> <a href="#">wgs-84</a> <a href="#">wgs84</a> <a href="#">position</a> <a href="#">longitude</a> <a href="#">latitude</a> <a href="#">gps</a> <a href="#">coordinate location</a> <a href="#">geographical coordinates</a> <a href="#">geo</a> <a href="#">location</a> <a href="#">point on a map</a> <a href="#">point on the globe</a> <a href="#">point on earth</a> <a href="#">location on earth</a> <a href="#">geolocation</a> <a href="#">geocoordinates</a> <a href="#">Location on map</a>
German	geographische Koordinaten	Koordinaten eines sich auf der Erde befindlichen Objekts, momentan werden nur WGS84-basierte Koordinaten unterstützt	<a href="#">Koordinate</a> <a href="#">geografische Koordinate</a> <a href="#">Koordinaten</a>

**P625**

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

# Stockholm

[wd:Q1754](#)

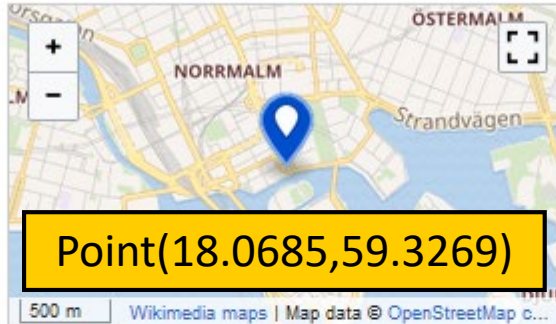
0 references

+

+ add value

coordinate location

P625



59°19'46"N, 18°47"E

1 reference

edit

+ add value

office held by head of government

mayor ⓘ

0 references

edit


+ add reference

+ add value

head of government

Karin Wanngård ⓘ

edit



**Time to create  
your own P625 dataset**

sapling

# If you don't have a Wikidata P625 set

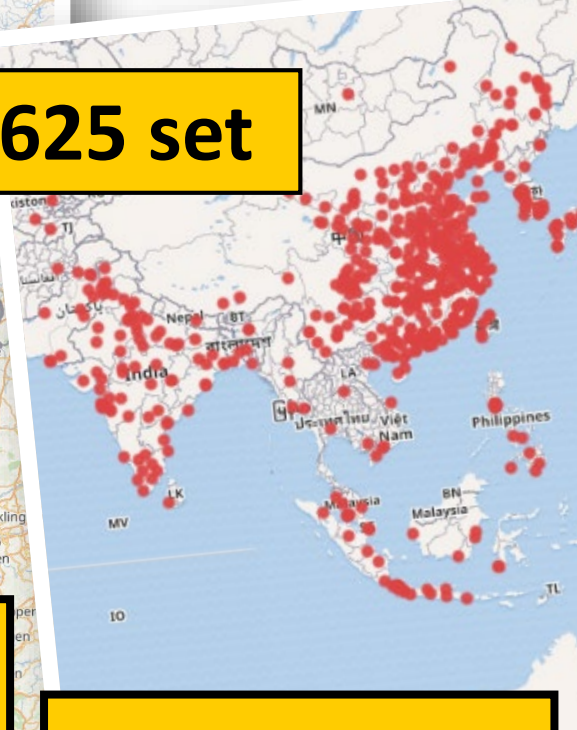


*Public libraries in  
The Netherlands*  
<https://w.wiki/6dx>

*Dutch national heritage sites*  
<https://w.wiki/6dy>

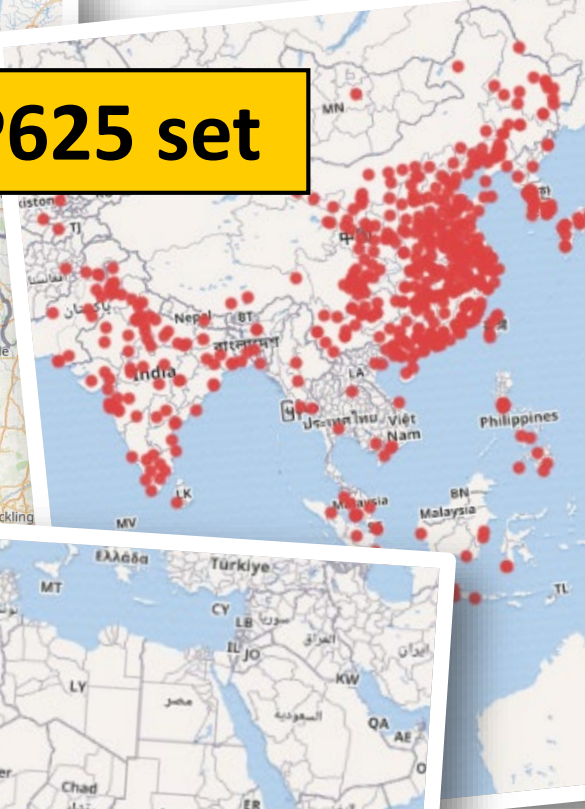
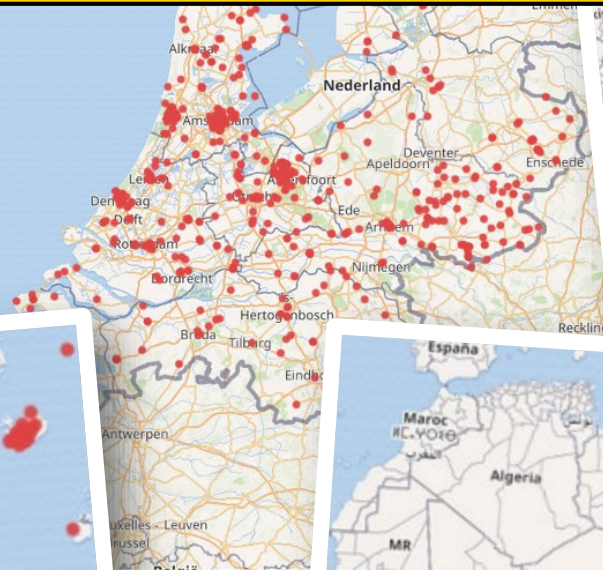


*Big cities*  
<https://w.wiki/Aa9>





# If you don't have a Wikidata P625 set



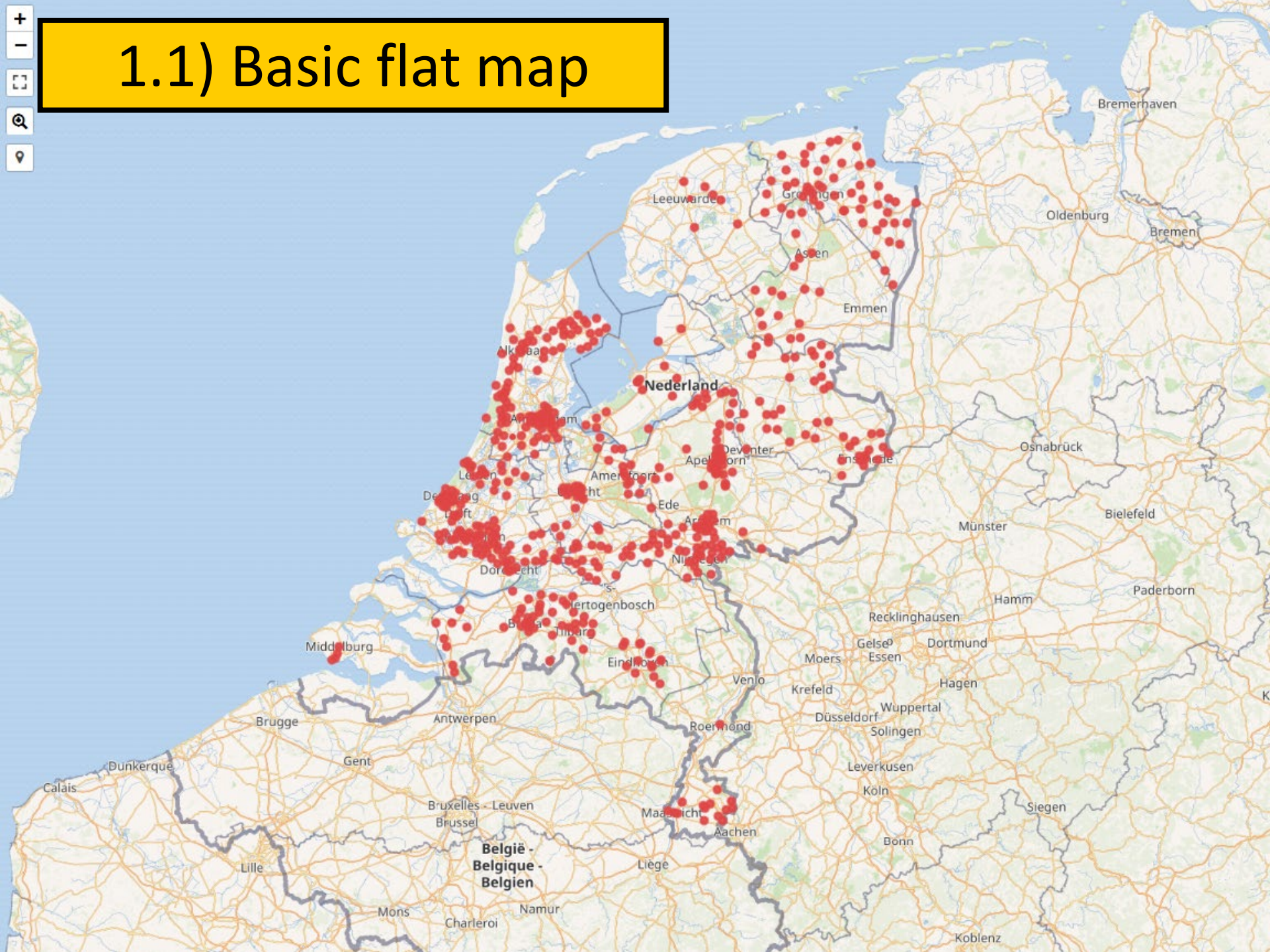
*Volcanos of the world*  
<https://w.wiki/6e9>



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



# 1.1) Basic flat map







Wikidata Query Service

Voorbeelden

Hulp

Meer hulpmiddelen



1 #All public library branches of the Netherlands

2



3 **SELECT DISTINCT** ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage **WHERE** {

4 #Is Dutch public library branch



5 ?dpl wdt:P31 wd:Q28564. #public library

6 ?dpl wdt:P31 wd:Q11396180. #library branch



7 ?dpl wdt:P17 wd:Q55. #in the Netherlands

8



9 ?dpl wdt:P625 ?dplLoc. #Location of the dpl

10



11 **OPTIONAL**{?dpl wdt:P18 ?dplImage} #Image of the dpl

12



13 **SERVICE** wikibase:label {bd:serviceParam wikibase:language "en" .}

14 }



15

16 **ORDER BY** ?dplLabel



*Public libraries in The Netherlands*

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



533 resultaten in 512 ms



dpl	dplLabel	dplDescription	dplLoc	dplma
<a href="#">wd:Q61785962</a>	's-Heerenberg public library	Public library in s-Heerenberg, municipality of Montferland, The Netherlands	Point(6.2454886 51.8731333)	<a href="#">commons</a>
<a href="#">wd:Q63677419</a>	't Harde public library service point	Public library in the village of 't Harde, The Netherlands	Point(5.877917 52.4172699)	
<a href="#">wd:Q61915721</a>	Aalsmeer public library	Public library in Aalsmeer, The Netherlands	Point(4.7496987 52.2679063)	
<a href="#">wd:Q59772713</a>	Aalst public library	Public library in Aalst, The Netherlands	Point(5.1259789 51.7841643)	
<a href="#">wd:Q60499424</a>	Abbekerk public library	Public library in Abbekerk, municipality of Medemblik, The Netherlands	Point(5.0160659 52.7313345)	
<a href="#">wd:Q63385185</a>	Achternveld public library	Public library in the village of Achternveld, municipality of Leusden, The Netherlands	Point(5.4973655 52.1365067)	
<a href="#">wd:Q60020855</a>	Aduard public library	Public library in Aduard, province of Groningen, The Netherlands	Point(6.4570135 53.2599615)	
<a href="#">wd:Q63890044</a>	Akersloot public library	Public library in Akersloot, The Netherlands	Point(4.7322704 52.5633782)	<a href="#">commons</a> (518264)
<a href="#">wd:Q59871315</a>	Alblasserdam public library	Public library in Alblasserdam, The Netherlands	Point(4.65723 51.86473)	
<a href="#">wd:Q63890048</a>	Alkmaar De Mare public library	Public library in Alkmaar De Mare, The Netherlands	Point(4.7588585 52.6535348)	
<a href="#">wd:Q63890044</a>	Alkmaar Oudorp public library	Public library in the Oudorp neighbourhood in the city of Alkmaar , The Netherlands	Point(4.7657342 52.6340305)	

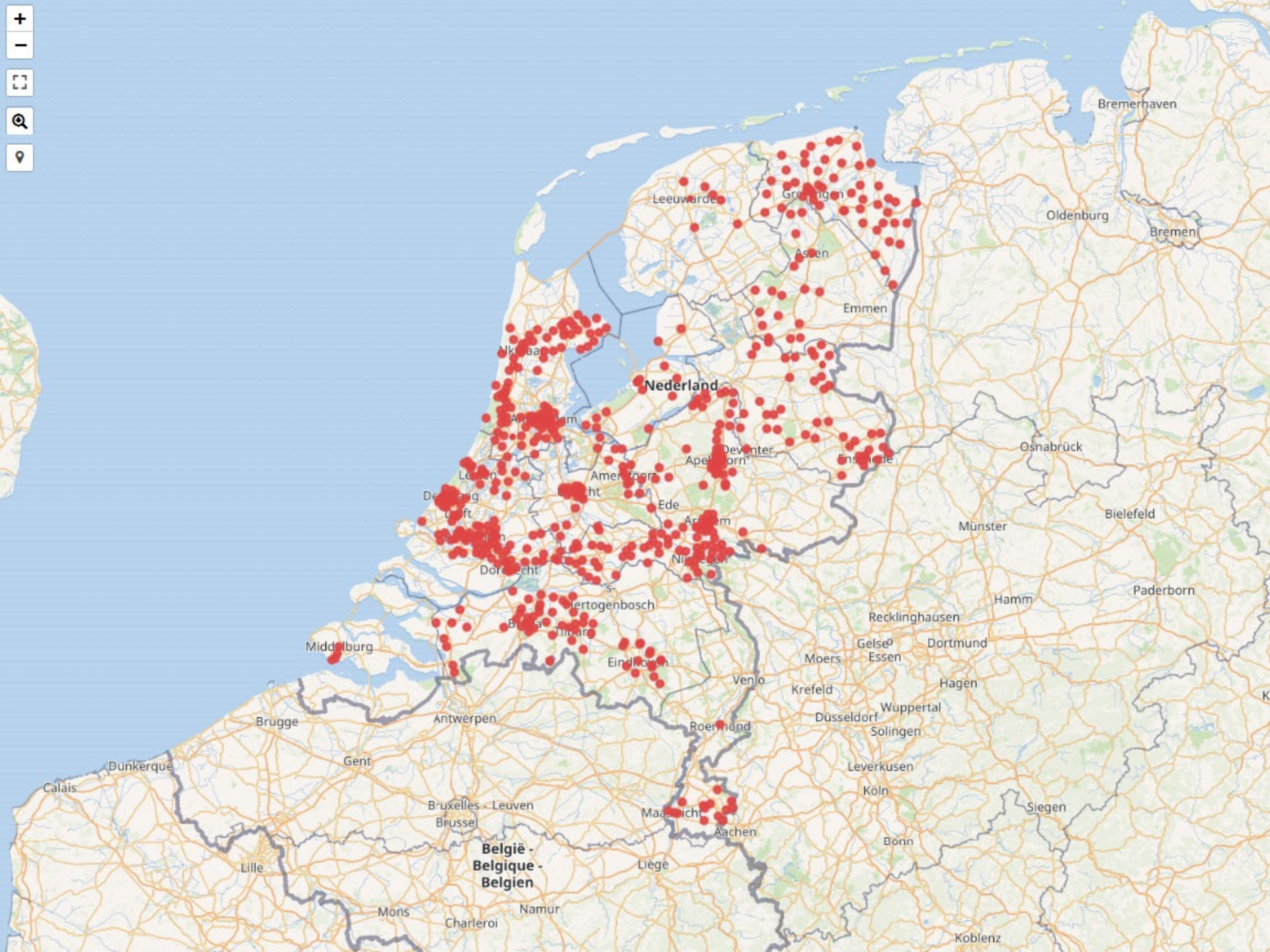




583 resultaten in 512 ms

- Table
- Image grid
- Graph builder
- Map**
- Line chart
- Bar chart
- Scatter chart
- Area chart
- Bubble chart
- Tree map
- Tree
- Timeline
- Dimensions
- Graph

Label	dplDescription	dplLoc	dplma
s-Heerenberg public library	Public library in s-Heerenberg, municipality of Montferland, The Netherlands	Point(6.2454886 51.8731333)	commons
...le public library service point	Public library in the village of 't Harde, The Netherlands	Point(5.877917 52.4172699)	
...eer public library	Public library in Aalsmeer, The Netherlands	Point(4.7496987 52.2679063)	
...public library	Public library in Aalst, The Netherlands	Point(5.1259789 51.7841643)	
...kerk public library	Public library in Abbekerk, municipality of Medemblik, The Netherlands	Point(5.0160659 52.7313345)	
...rveld 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)	commons (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 52.6340305)	





# 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>

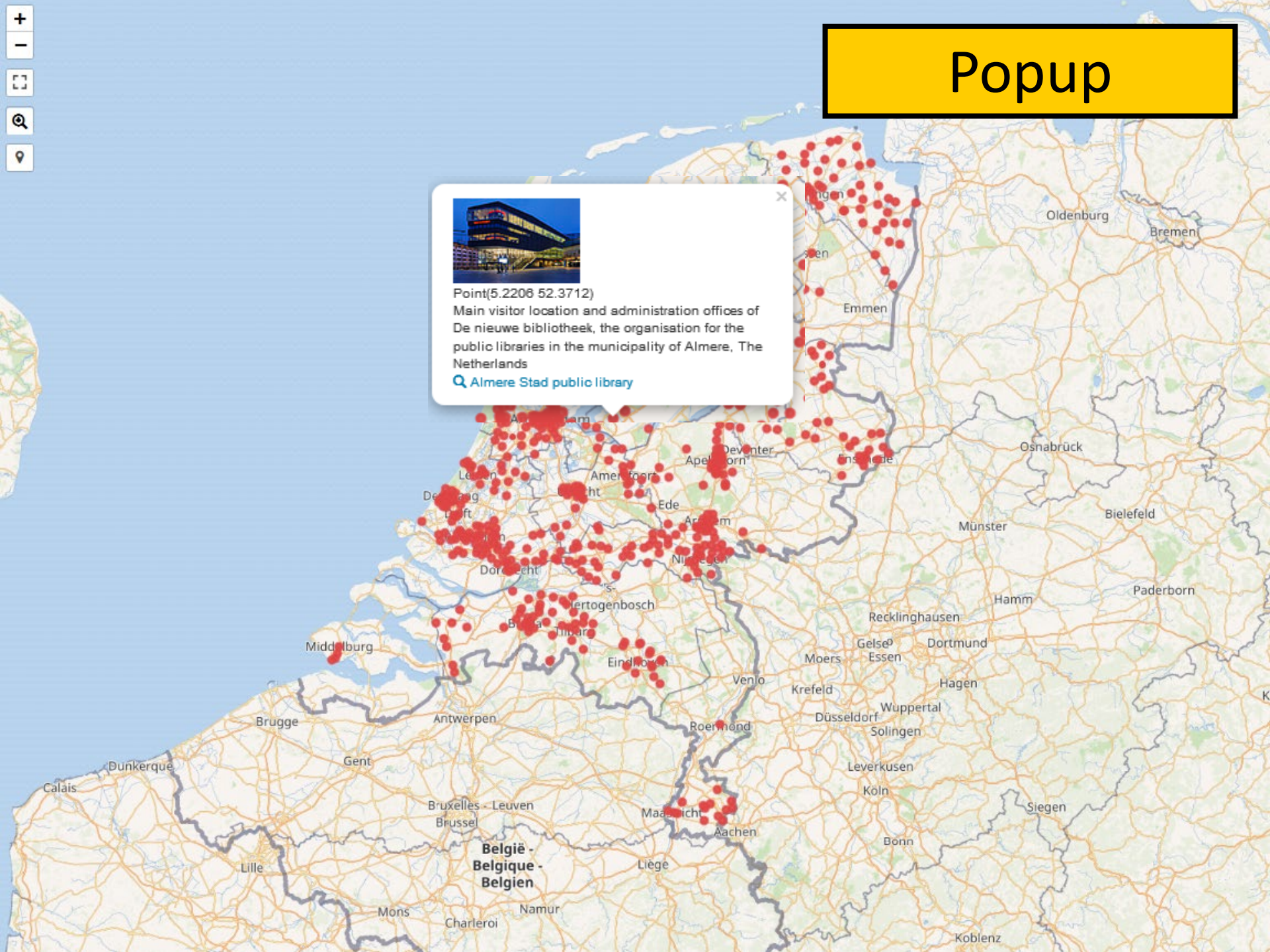
# Popup



Point(5.2208 52.3712)

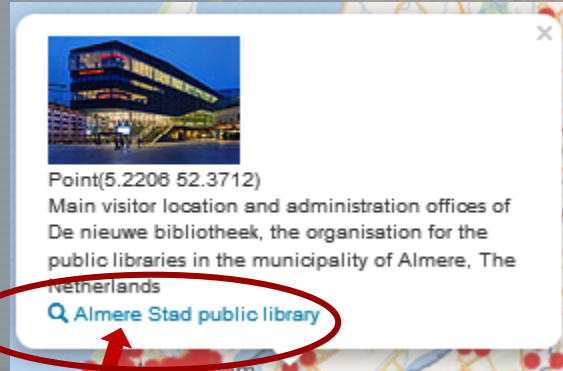
Main visitor location and administration offices of De nieuwe bibliotheek, the organisation for the public libraries in the municipality of Almere, The Netherlands

[Almere Stad public library](#)





# Relation between query and popup



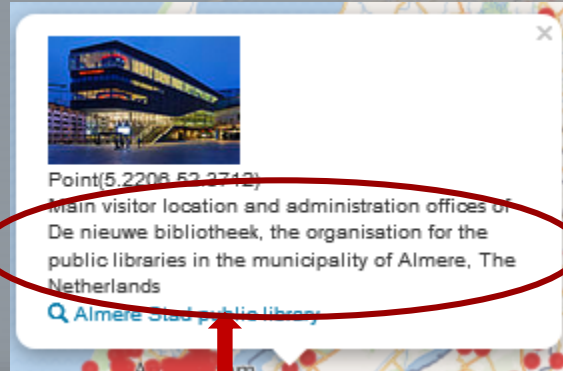
Wikidata Query Service

Volvo beelden 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



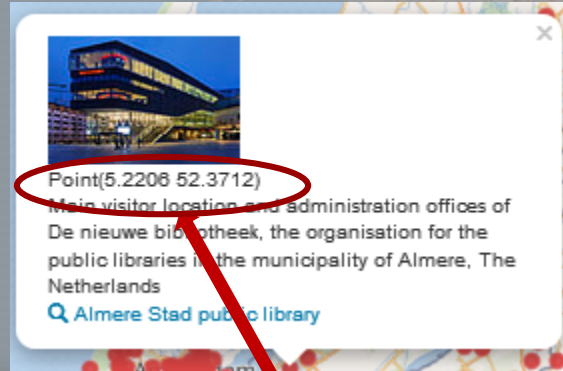
Wikidata Query Service

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



Wikidata Query Service

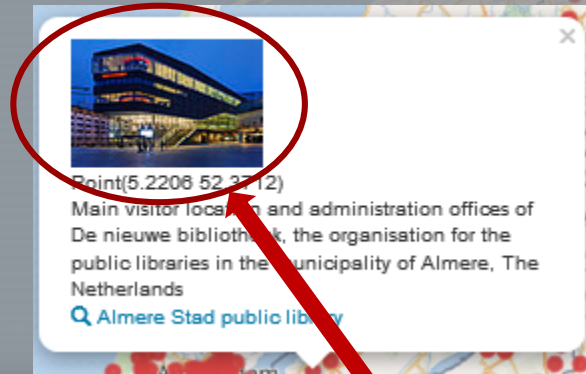
Voorbeelden Help Meer hulpmiddelen

```
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



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



Point(5.2208 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

[Almere Stad public library](#)



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
```

```
6 #Is Dutch public library branch
```

```
7
```

```
7 ?dpl wdt:P31 wd:Q28564. #public library
```

```
8
```

```
8 ?dpl wdt:P31 wd:Q11396180. #library branch
```

```
9
```

```
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
```

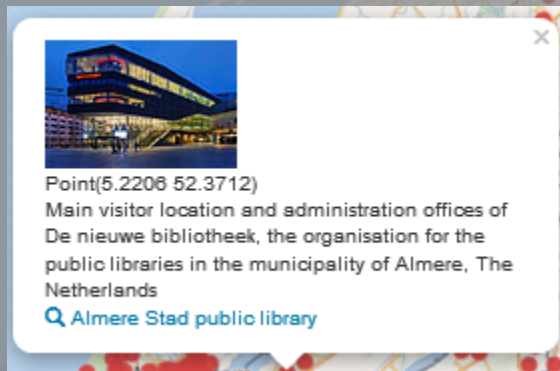
```
16 }
```

```
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
```

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

# Hiding fields from popup



Main visitor location and administration offices of De nieuwe bibliotheek, the organisation for the public libraries in the municipality of Almere, The Netherlands  
[Almere Stad public library](#)

Wikidata Query Service

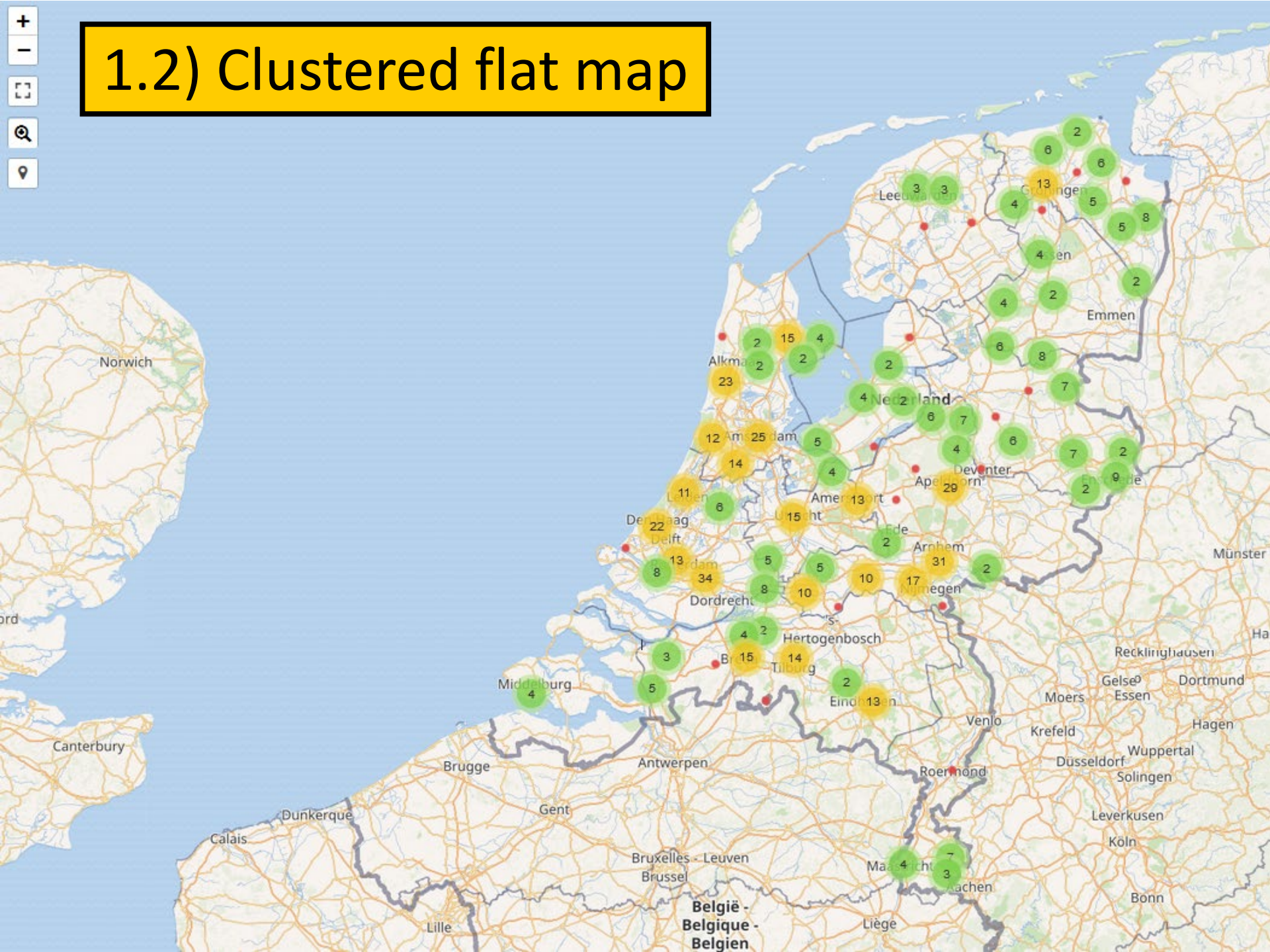
Voorbeelden Hulp Meer hulpmiddelen

```
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
```

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



# 1.2) Clustered flat map





Wikidata Query Service

Voorbeelden

Hulp

Meer hulpmiddelen



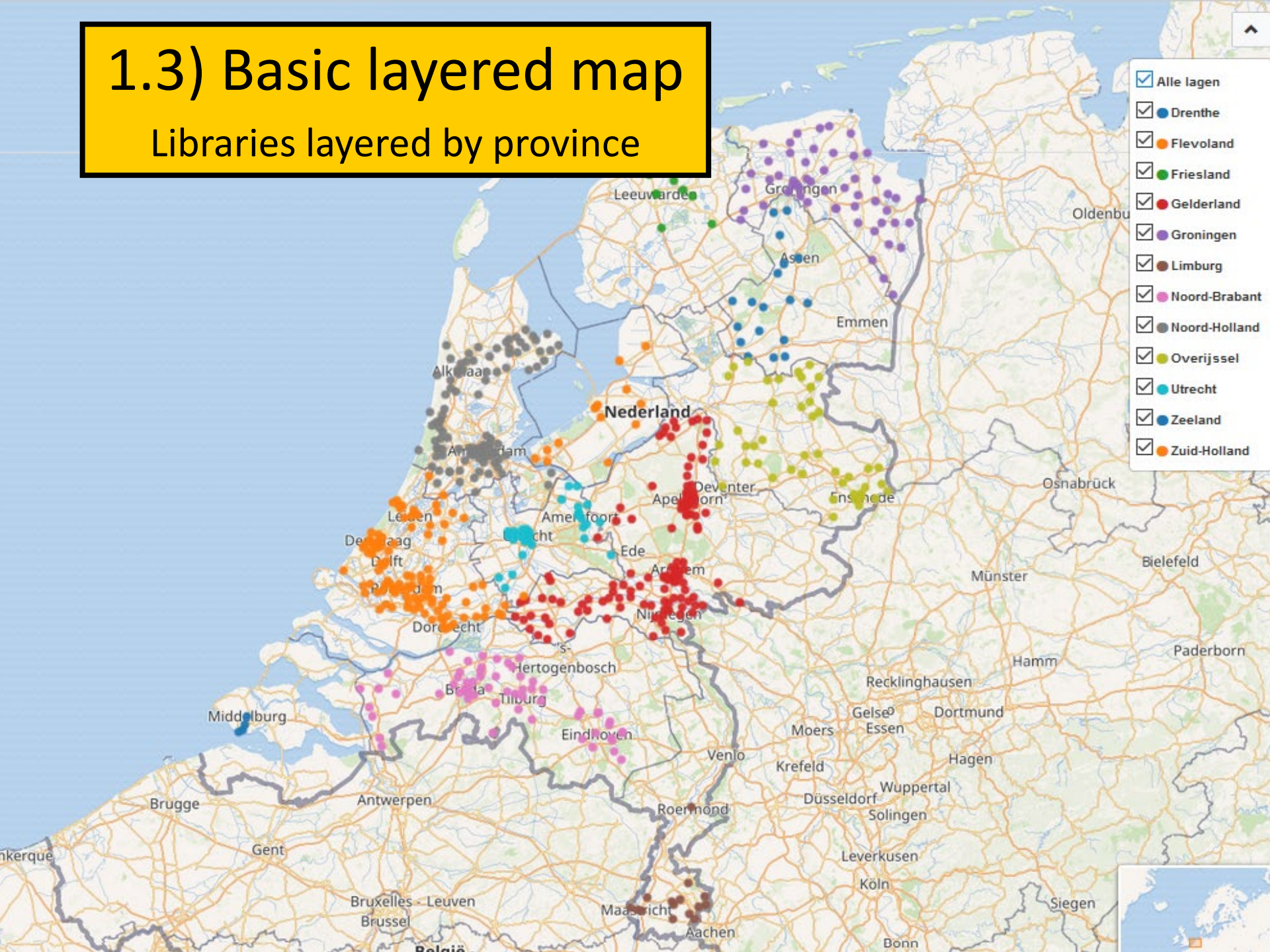
```
1 #All public library branches of the Netherlands
2
3 #defaultView:Map{"markercluster": {"maxClusterRadius": 30}}
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplDescription ?dplLoc ?dplImage WHERE {
6 #Is Dutch public library branch
7 ?dpl wdt:P31 wd:Q28564. #public library
8 ?dpl wdt:P31 wd:Q11396180. #library 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/6ew>



# 1.3) Basic layered map

Libraries layered by province





```

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:label {wd:PropertyPageLabel language "[AUTO_LANGUAGE],en".}
22
23 }
24 OR

```

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

**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 single
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: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 from
12 ?muni p:P31 [ps:P31 ?muniIsA].
13 VALUES ?muniIsA {wd:Q2039348}
14 #Instead of the the above line, you can also
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
```

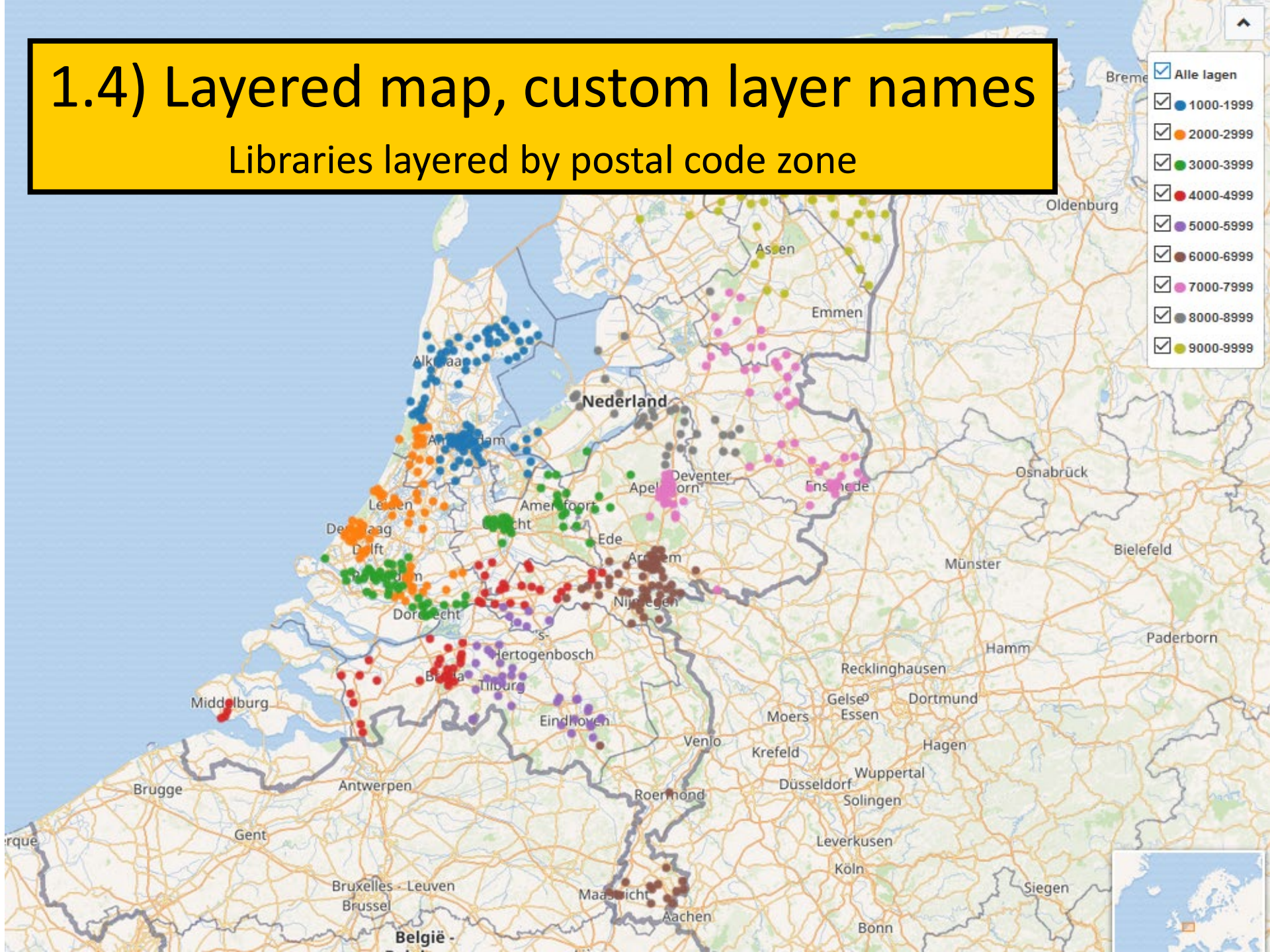
Layer order

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



# 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 in de Kinkerbuurt	

All entered languages

postal code

1053RT

[edit](#)

[1 reference](#)

[+ add value](#)

**P281**

phone number

+31-20-616-3275

[edit](#)

[1 reference](#)

[+ add value](#)

e-mail address

mailto:dehallen@oba.nl

[edit](#)

[1 reference](#)

[+ add value](#)

Postal code zone =  
1000 - 1999

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

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





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
```

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
```

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

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



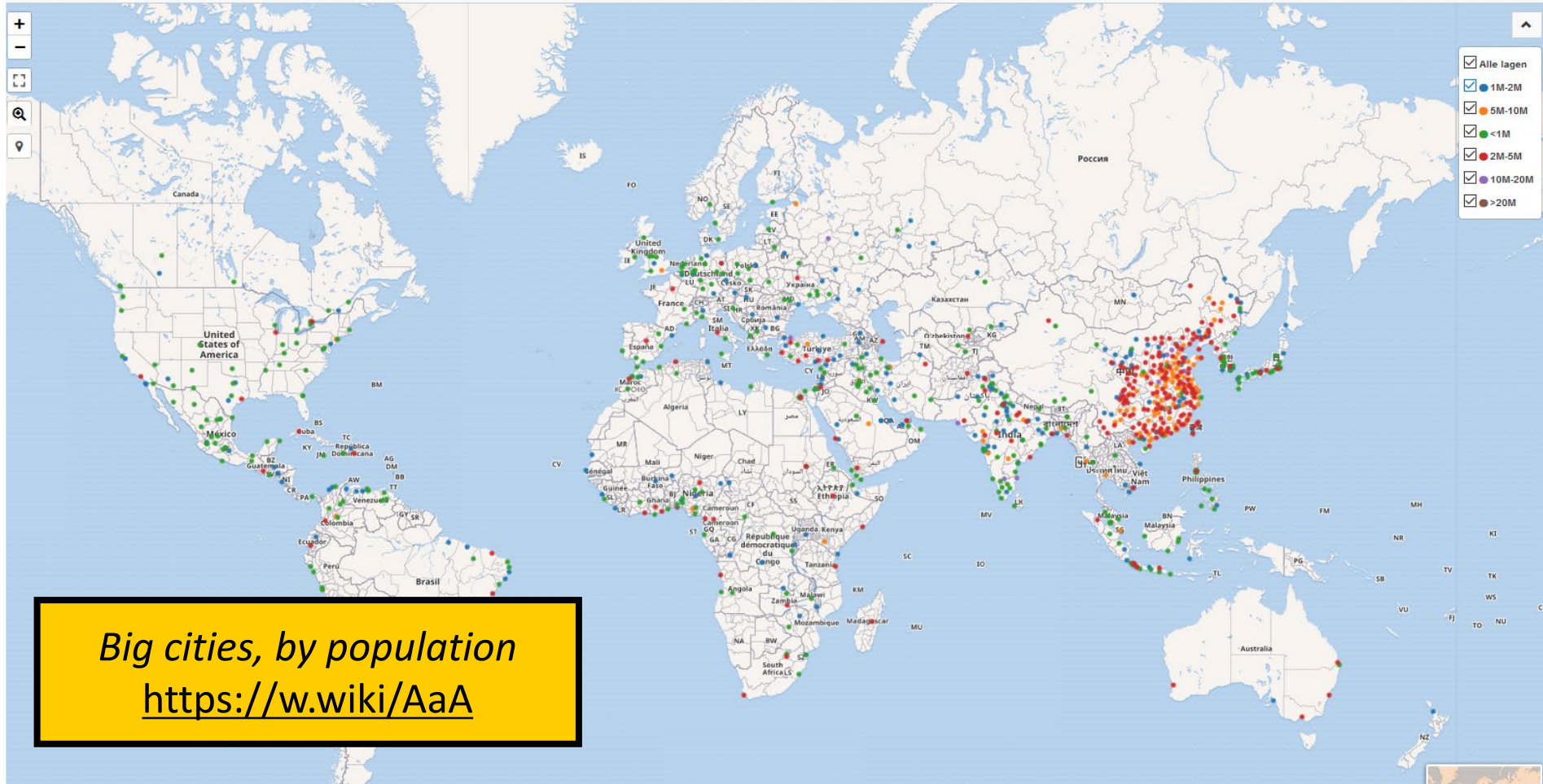
```
1 #Maps of public library branches The Netherlands, layered by postal codes zones (1000-1999, 2000-2999 etc)
2
3 #defaultView:Map{"layer":"?pczone"}
4
5 SELECT DISTINCT ?dpl ?dplLabel ?dplImage ?dplLoc ?postcode ?pcdigits ?pczone
6
7 WHERE {
8   ?dpl p:P31/ps:P31 wd:Q28564,wd:Q11396180;wdt:P17 wd:Q55. #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, formatted
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")))))))
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
```

Custom layer names

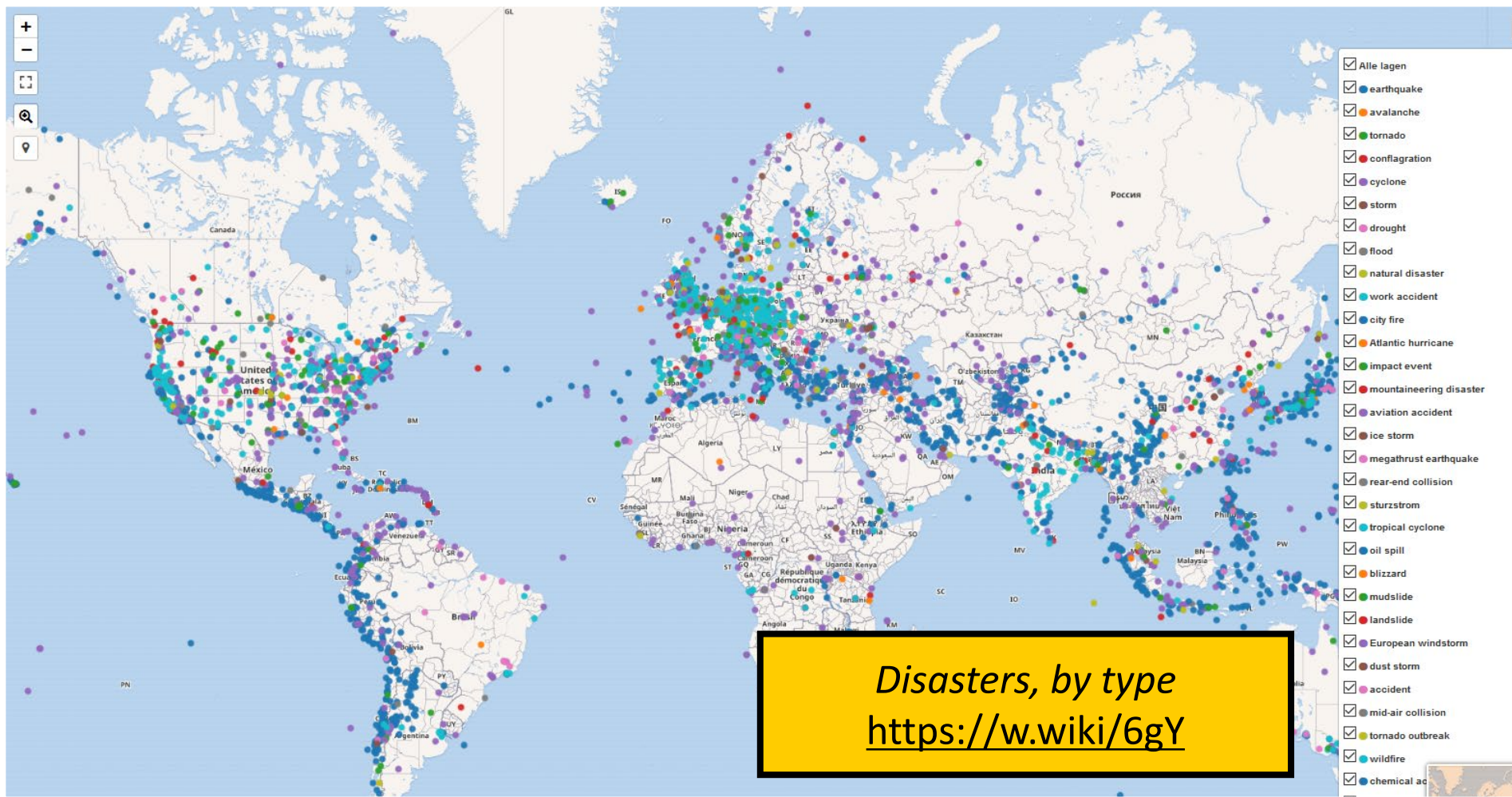
- Alle lagen
- 1000-1999
- 2000-2999
- 3000-3999
- 4000-4999
- 5000-5999
- 6000-6999
- 7000-7999
- 8000-8999
- 9000-9999



# 1.5) Other cool layered maps



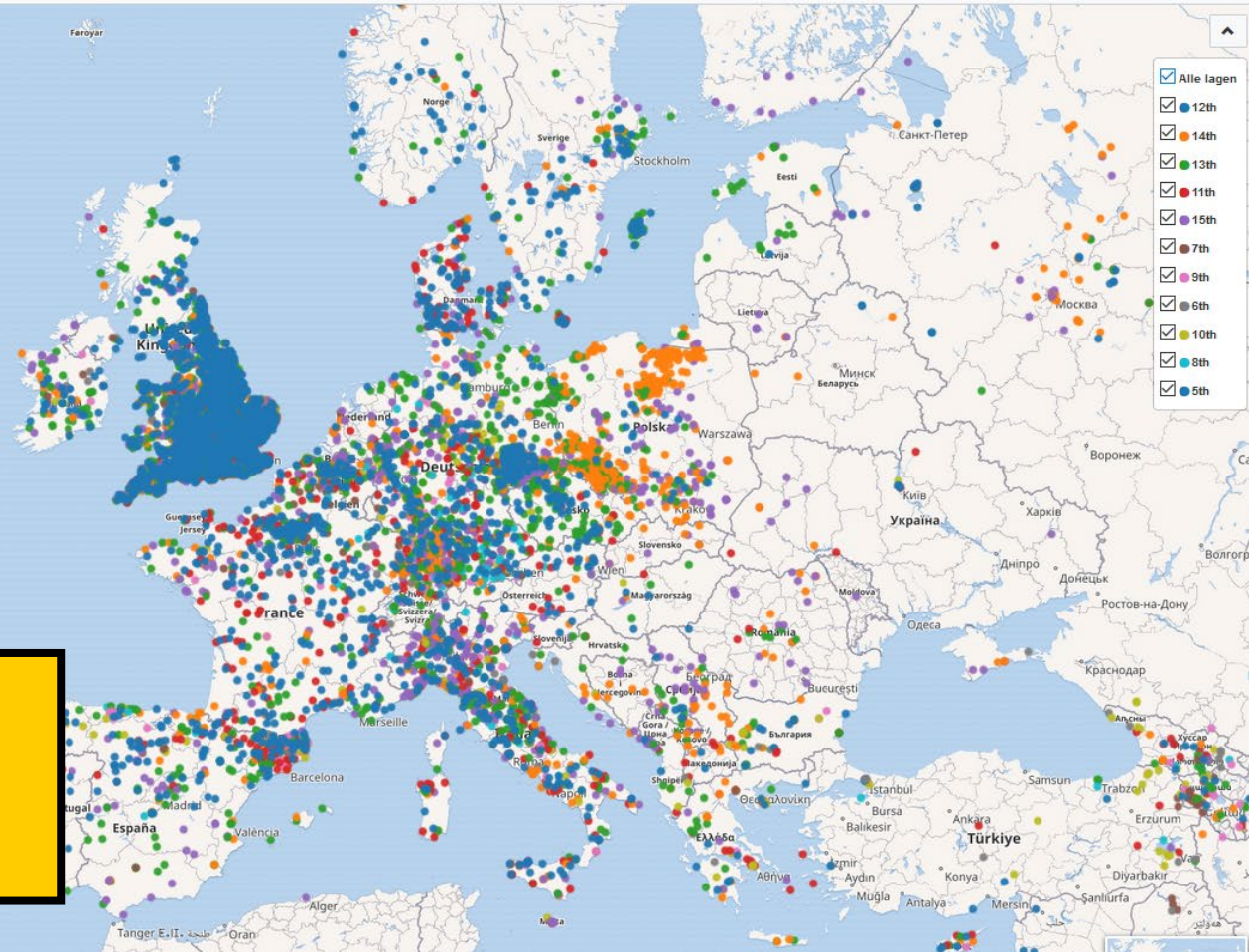
# 1.5) Other cool layered maps





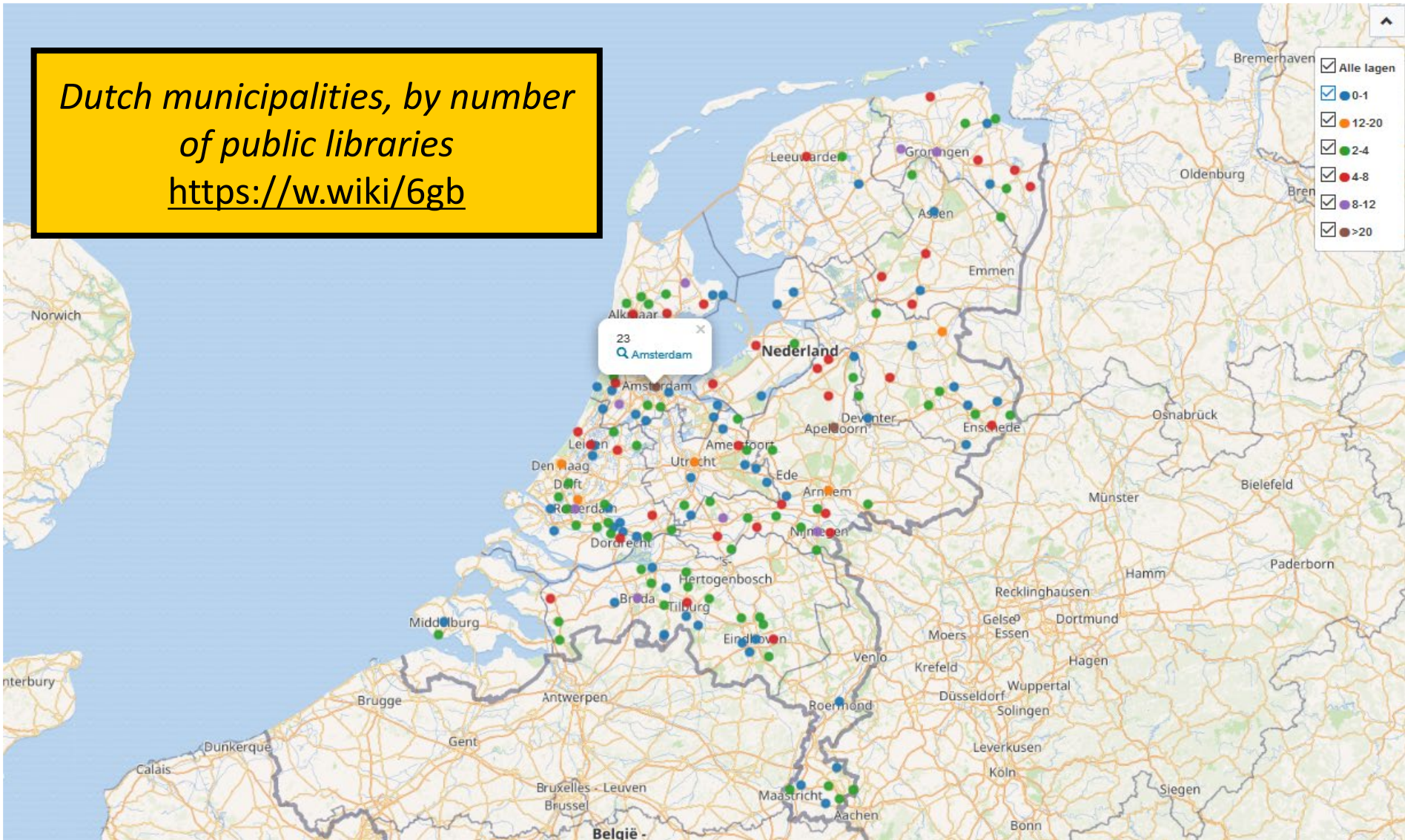
# 1.5) Other cool layered maps

*Medieval churches, by century of construction*  
<https://w.wiki/6ga>

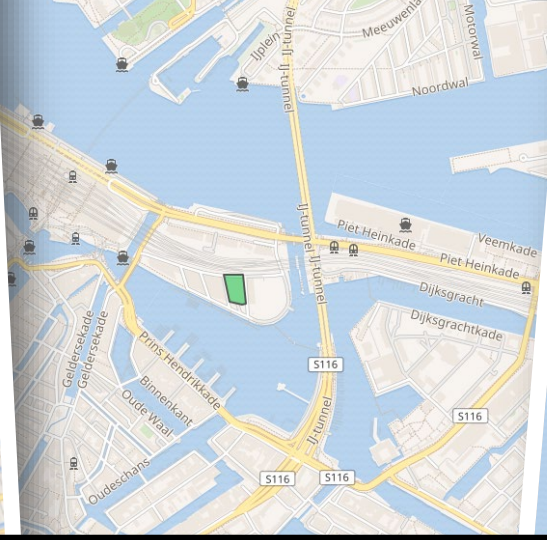
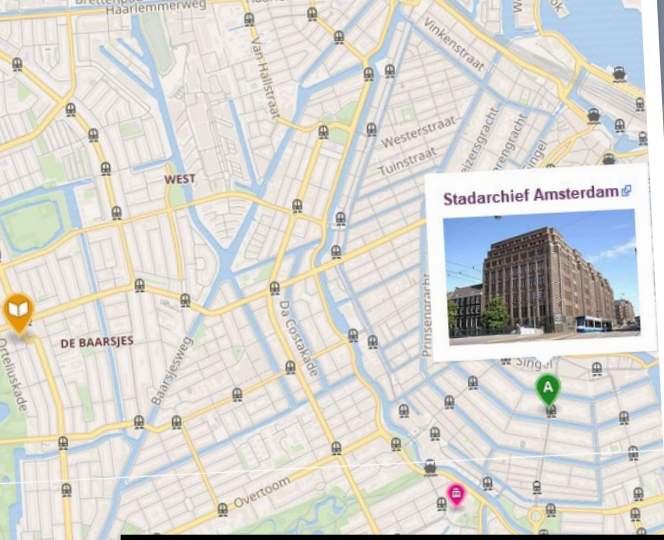


# 1.5) Other cool layered maps

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

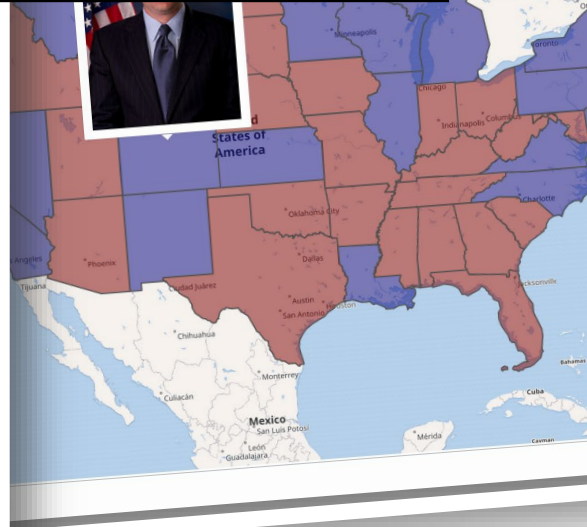
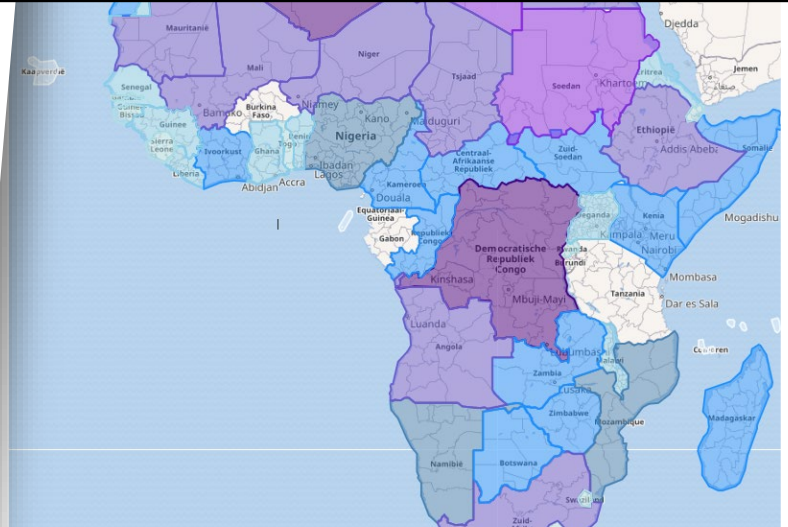
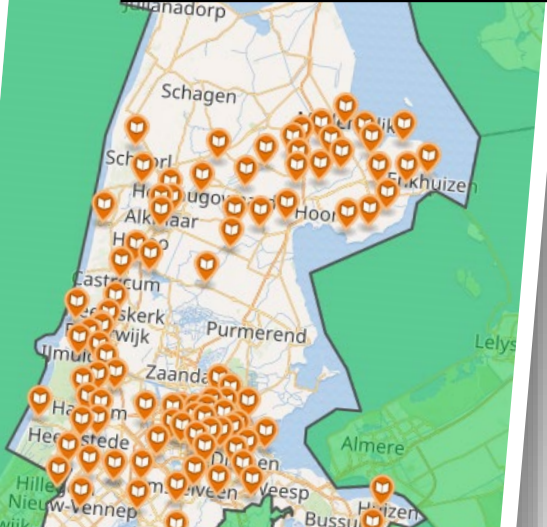






# MODULE 2

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

Help Discussion

Read Edit View history More

## Help:Extension:Kartographer

Translate this page

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

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[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](#)

- Getting started
- `<mapframe>` usage
  - Frames
- `<maplink>`
  - `<maplink>` and auto-counters
- Markers
- Groups
- External data
  - GeoShapes via Wikidata Query
  - Map data from Commons
  - Combining multiple data
- Styling
  - Styling Wikidata ID elements
  - Overlapping elements

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



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 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

Gebruiker [Overleg](#)

Gebruiker:OlafJanssen/Klad

[< Gebruiker:OlafJanssen](#)

Embedded maps in Dutch Wikipedia [\[ bewerken | brontekst bewerken \]](#)

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



Basic embedded map, no data  
(in my Sandbox on Dutch Wikipedia)

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





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 bewerkt
- Gebruikersgroep toevoegen

- Bestand uploaden
- Speciale pagina's
- Permanente koppelingen
- Paginagegevens

- Afdrukken/exporteren
- Boek maken
- Downloaden als PDF
- Printvriendelijke versie

- Talen

Gebruiker Overleg

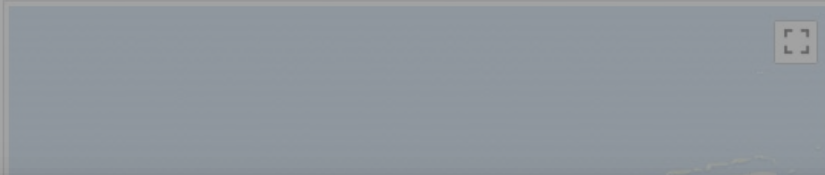
Lezen Bewerken

## Gebruiker:OlafJanssen/KladblokMapMakingWorkshopWM2019

< Gebruiker:OlafJanssen

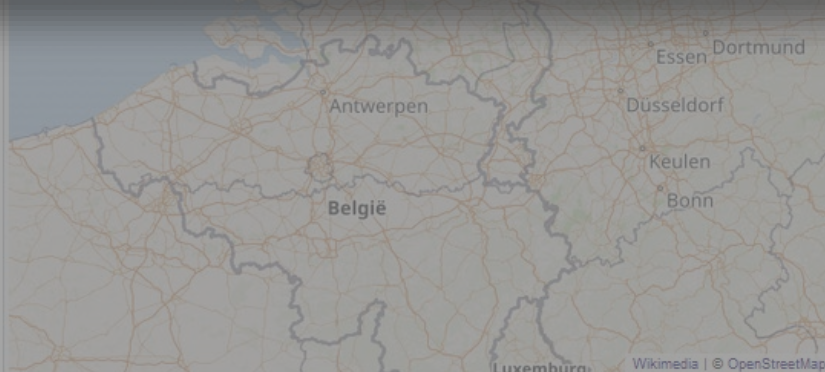
### Embedded maps in Dutch Wikipedia [ bewerken | brontekst bewerken ]

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



== Basic embedded map of The Netherlands ==

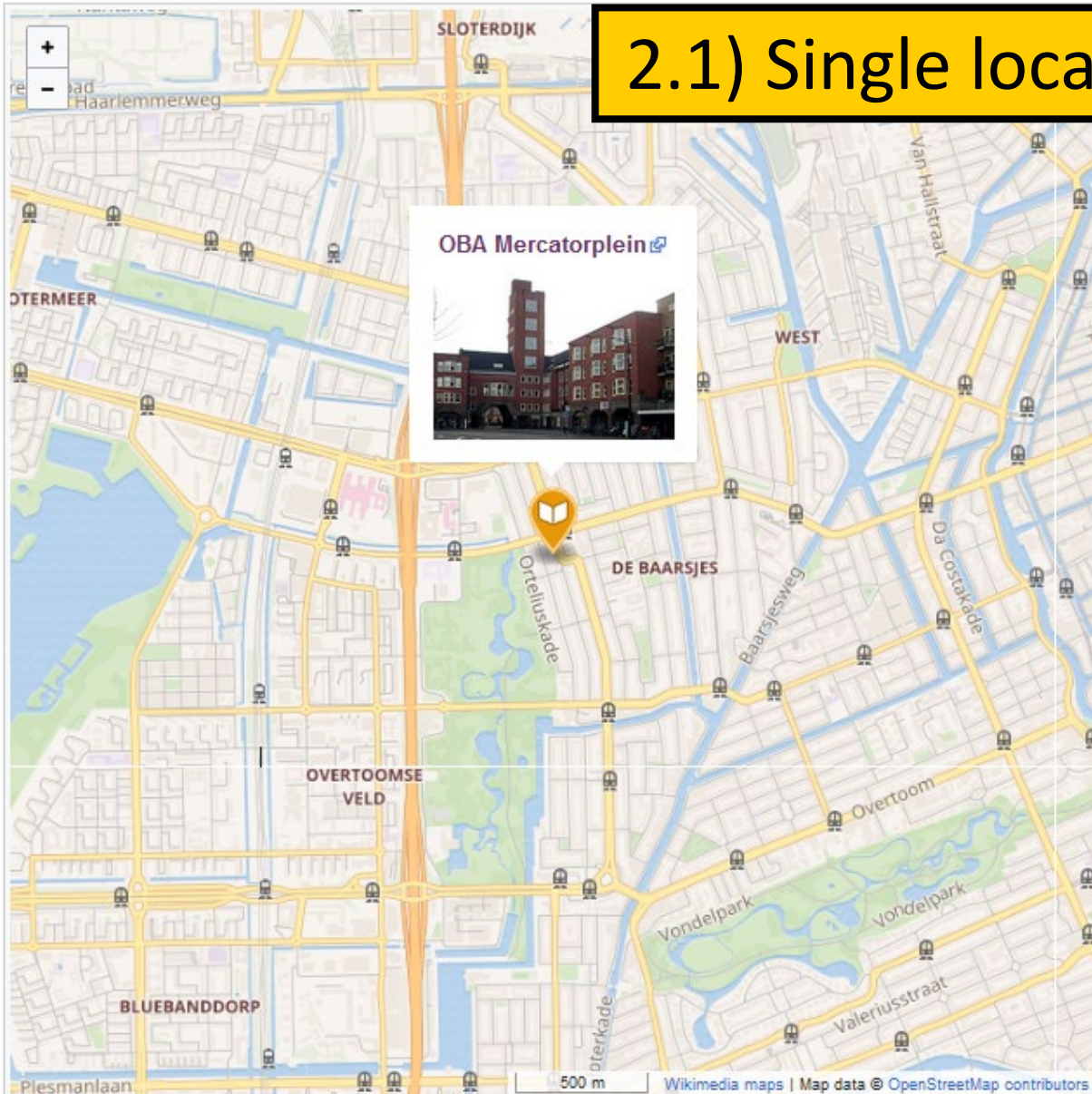
```
<mapframe width=600 height=700 zoom=7 latitude=52.20  
longitude=5.179627565 text="Basic embedded map of  
[[w:The_Netherlands|The Netherlands]]" align=left/>
```



Basic embedded map of The Netherlands

One public library in Amsterdam, geo coordinates hard coded

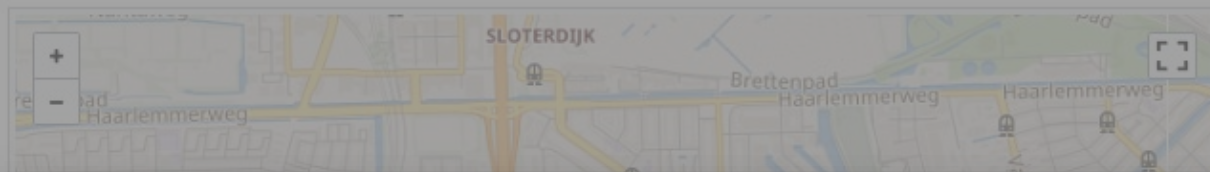
## 2.1) Single location, hard-coded



One public library in Amsterdam, geo coordinates hard coded



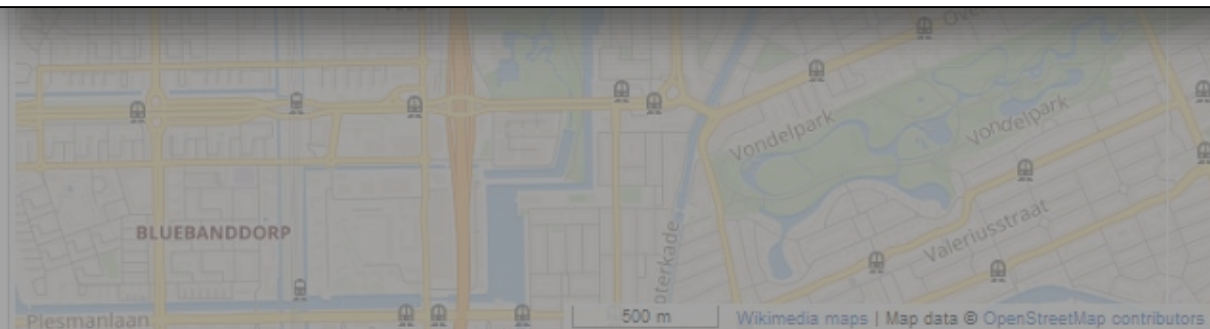
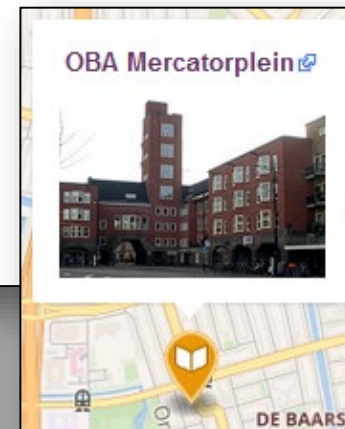
## One public library in Amsterdam, geo coordinates hard coded



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

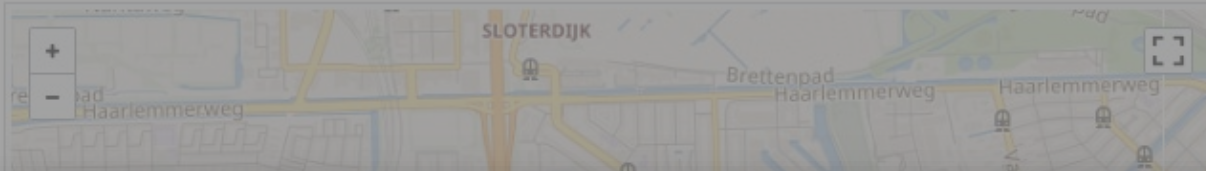
```
<mapframe text="One public library in Amsterdam, geo coordinates hard-coded" width=700 height=700 zoom=14 latitude=52.3693887 longitude=4.8502319 align=left>
```

```
{  
  "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

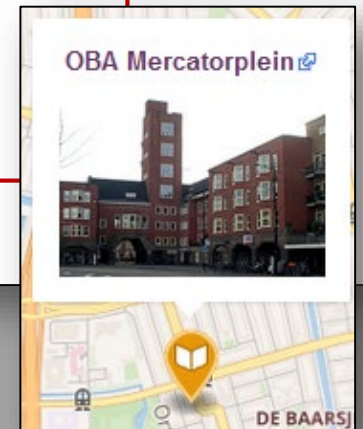


== One public library in Amsterdam, geo coordinates hard-coded ==

```
<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>
```

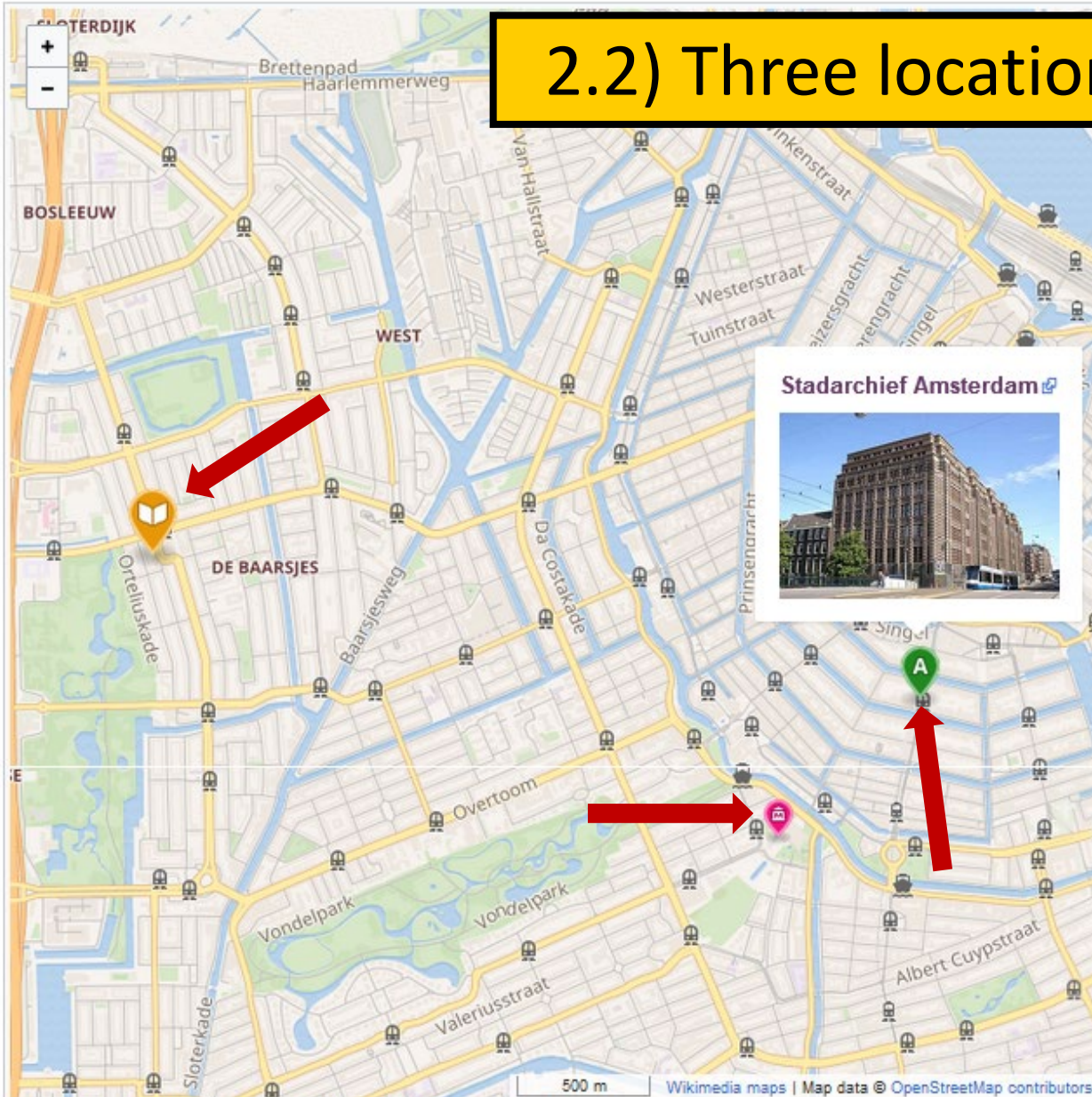
### Styling of markers

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



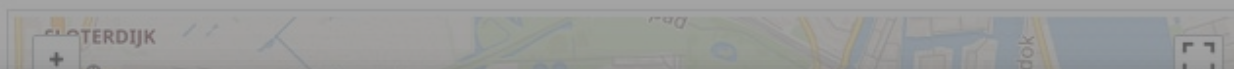


## 2.2) Three locations, hard-coded



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

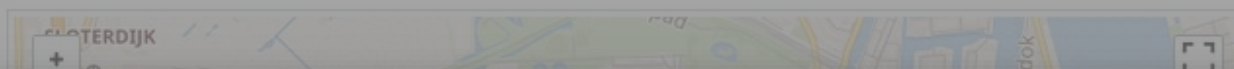
## Library, museum and archive in Amsterdam, geo coordinates hard-coded



== 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=4.87
{
  "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

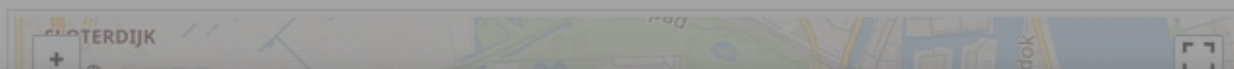


== Library, museum and archive in Amsterdam, geo coordinates hard-coded ==

```
<mapframe text="Library, museum and archive in Amsterdam, geo coordinates hard-coded" width=700 height=700 zoom=14 latitude=52.3693887 longitude=4.87
{
  "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



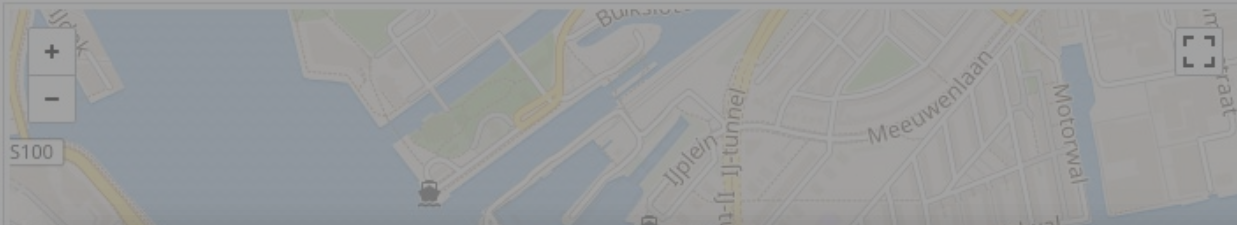
== Library, museum and archive in Amsterdam, geo coordinates hard-coded ==

```
<mapframe text="Library, museum and archive in Amsterdam, geo coordinates hard-coded" width=700 height=700 zoom=14 latitude=52.3693887 longitude=4.87
{
  "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

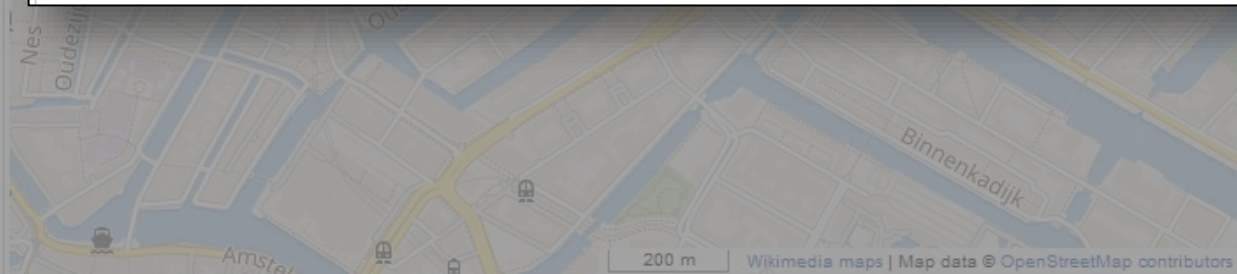
## Outline (geoshape) of Amsterdam public library (main site), using Wikidata and Open Street Map



```
== 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

 [edit](#)

OBA Oosterdok (Centrale)





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

[In more languages](#)

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)	Hoofdvestiging en administratief hoofdkantoor van de Openbare Bibliotheek Amsterdam	OBA Oosterdok (Centrale) Centrale OBA

[All entered languages](#)

## Statements

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

<https://www.openstreetmap.org/way/240467636#map=19/52.37605/4.90853>

Zoeken  Waar is dit?

**Weg: OBA Oosterdok (240467636)**

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

25 minutes ago geleden bewerkt door OlafJanssen  
Versie #12 · Wijzigingset #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	<a href="https://www.oba.nl/vestigingen/centrale-oba.html">https://www.oba.nl/vestigingen/centrale-oba.html</a>
---------	---

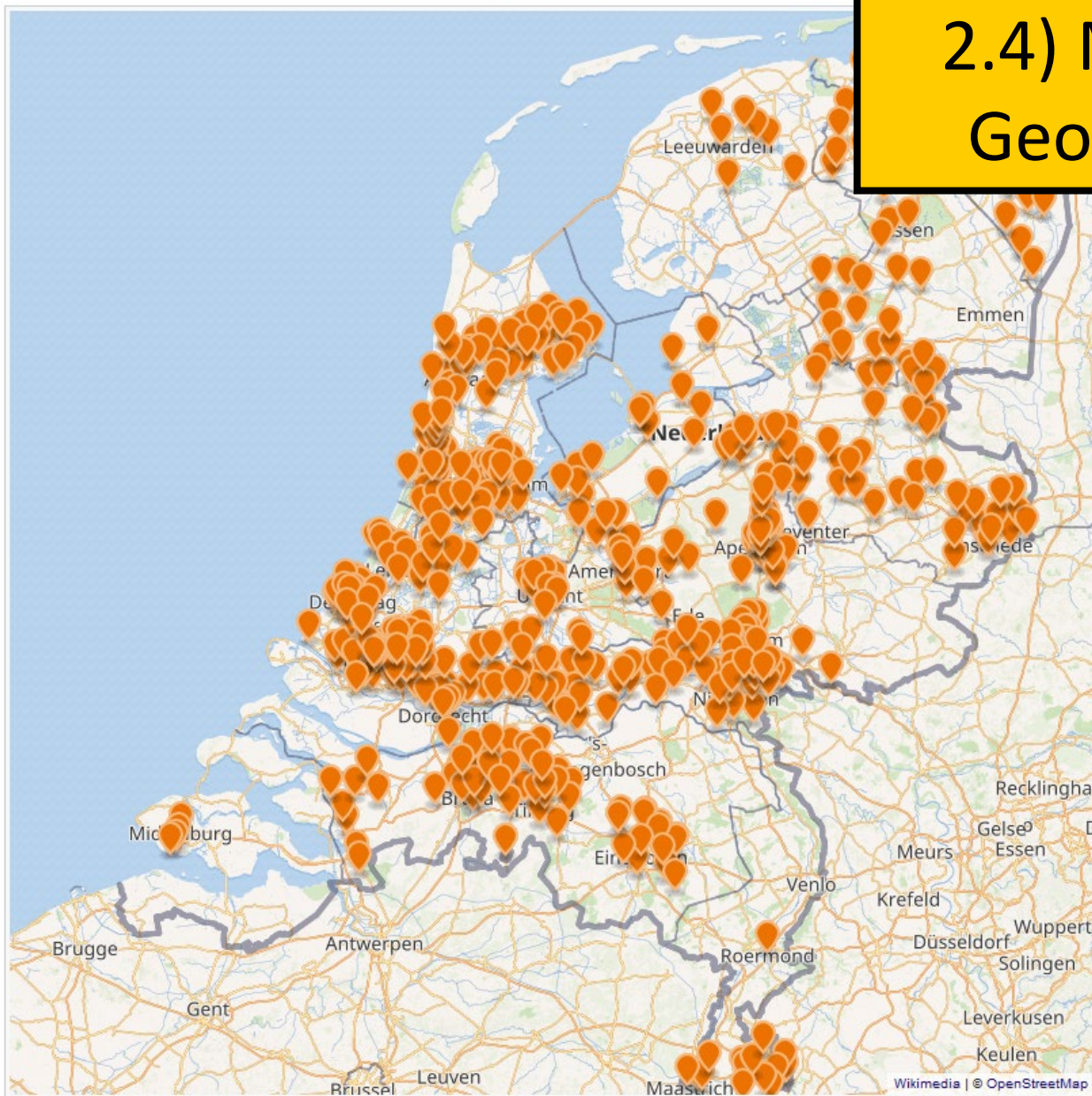
wheelchair	yes
------------	-----

wikidata	<a href="https://www.wikidata.org/wiki/Q50413436">Q50413436</a>
----------	---



GeoShape in OSM

## 2.4) Many locations, GeoJSON .map file



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



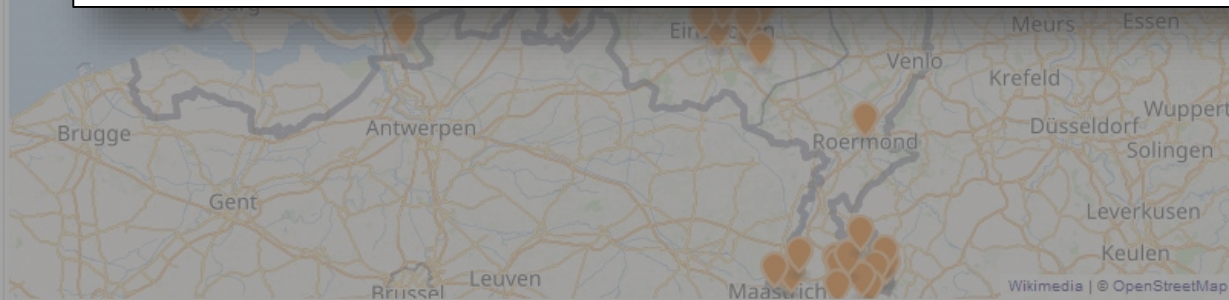


```
== Map of Dutch public libraries, work in progress, 21-5-2019 ==
```

```
<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>
```





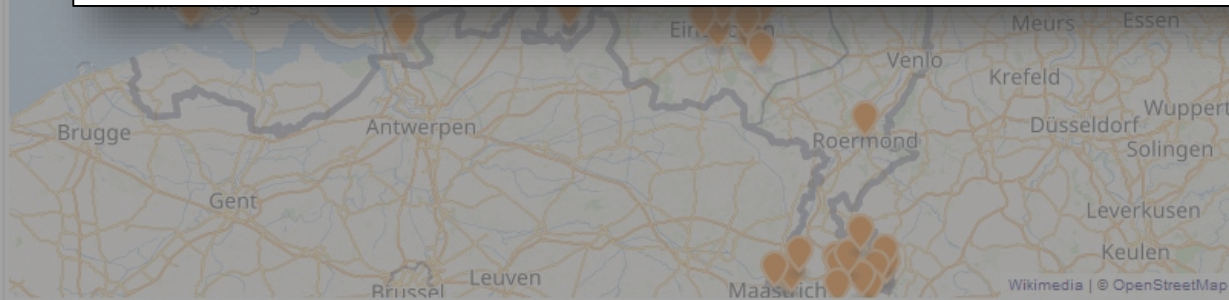
```
== Map of Dutch public libraries, work in progress, 21-5-2019 ==
```

```
<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>
```





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

# Data:DutchPublicLibraries.map

Uit Wikimedia Commons

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



- Hoofdpagina
- Welkom
- Gebruikersportaal
- De Kroeg
- Hulp
- Doe mee
- Bestand uploaden
- Recente wijzigingen
- Recente bestanden
- Willekeurig bestand
- 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







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 description.
- 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 data may have any number of `"properties"` fields, such as `"title"`, `"description"`, `"fill"` (color), and others. Additionally, the `"title"` and `"description"` fields may be either strings or localized strings (e.g. tabular data). This allows the same map data to appear differently depending on the user's language.

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[What links here](#)





Edittools

```
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 “}”

# Geojson.io

The screenshot displays the Geojson.io web application interface. On the left, a world map is shown with various geographical features and country labels. The map includes a search bar, a toolbar with icons for zooming, panning, and adding features, and a scale bar at the bottom right indicating 3000 km and 2000 mi. The top navigation bar contains links for 'Open', 'Save', 'New', 'Share', 'Meta', and 'unsaved'. The right side of the interface features a JSON editor with a code editor icon, a 'Table' view icon, and a 'Help' icon. The JSON content is as follows:

```
</> JSON Table ? Help anon | login
1 {
2   "type": "FeatureCollection",
3   "features": []
4 }
```

At the bottom left, the 'Mapbox' logo is visible, and at the bottom center, there are links for 'Feedback | About | © Mapbox © OpenStreetMap Improve this map'.

# Geojson.io

The screenshot shows the Geojson.io web application interface. At the top, there is a navigation bar with menu items: Open, Save, New, Share, Meta, and a status indicator 'unsaved'. The main area is a map of the Arctic region, showing the Arctic Ocean, Greenland Sea, Barents Sea, Kara Sea, and Laptev Sea. A red arrow points to the 'Open' button in the top-left corner. A yellow callout bubble with the text 'Open' is positioned near the arrow. On the right side, there is a JSON editor showing a simple GeoJSON structure:

```
</> JSON Table ? Help anon | login
1 {
2   "type": "FeatureCollection",
3   "features": []
4 }
```

Overlaid on the map is a Windows file explorer window titled 'Bestand uploaden'. The address bar shows the path: < KB > LOD-Wikidata > OBWikidataproject > GeoMappingStuff >. The search bar contains 'Zoeken in GeoMappingStuff'. The left sidebar shows the file system structure, with 'OSDisk (C:)' selected. The main pane displays a list of files:

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' field at the bottom contains 'LibraryMapInputData.tsv' and the file type is set to 'Alle bestanden (\*.\*)'. The 'Openen' button is highlighted. At the bottom of the map, there are scale indicators for 3000 km and 2000 mi, and a footer with 'Mapbox Satellite OCM OSM' and 'Feedback | About | © Mapbox © OpenStreetMap Improve this map'.



LibraryMapInputData.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 Haafden 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		
30								

# Geojson.io

Open Save New Share Meta unsaved

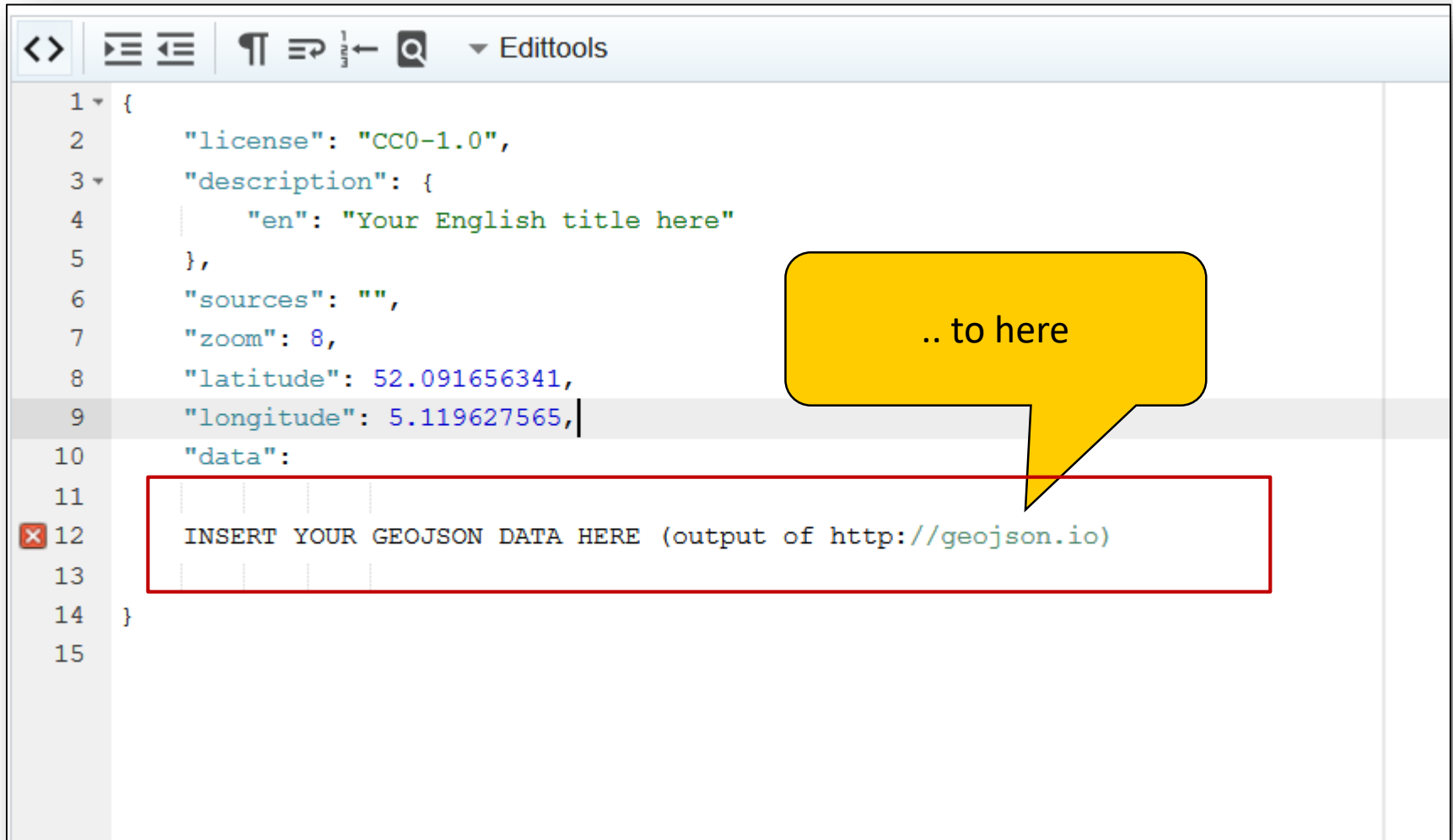


Copy this whole GeoJSON to....

<> JSON Table ? Help anon | login

```
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  INSERT YOUR GEOJSON DATA HERE (output of http://geojson.io)
13
14 }
15
```





# Adapt this query, save output as .tsv

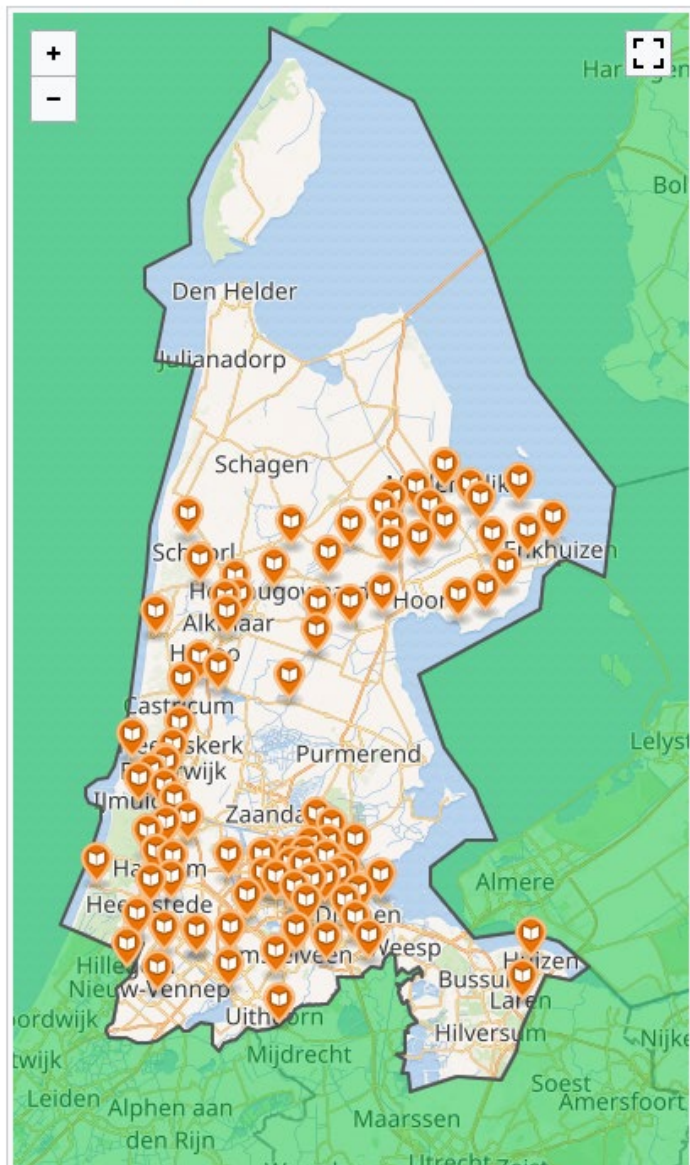
Wikidata Query Service

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!



[NetherlandsPublicLibrariesNorthHolland.map](#), Wikimedia maps | Map data © OpenStreet...

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

## 2.5) Combining data types

GeoShape + .map





```
<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>
```

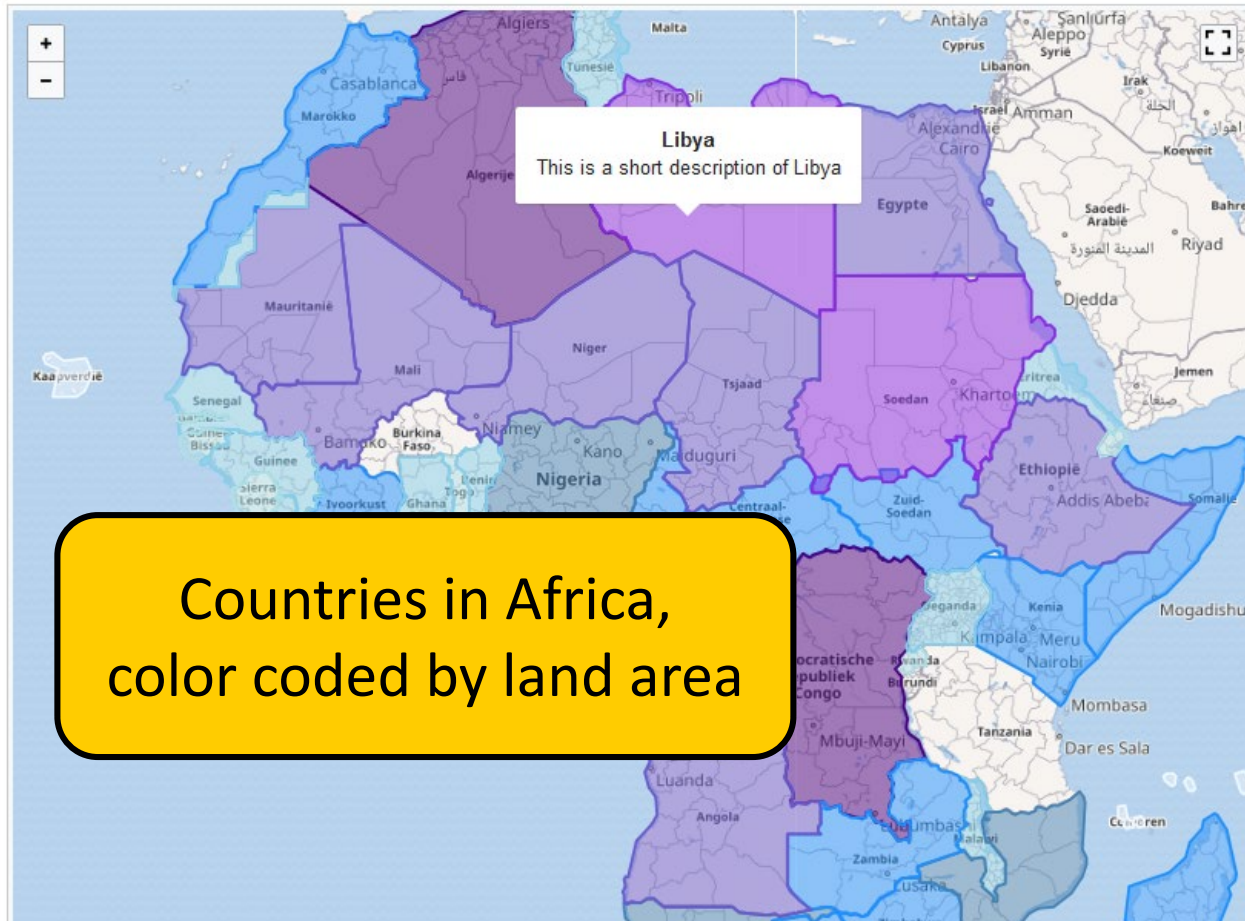


<https://commons.wikimedia.org/wiki/Data:DutchPublicLibrariesNorthHolland.map>

## 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 | Gebruikersdagboeke

name:xl	Либудин Аһы Социгализмин Араб Улс Орн
name:xmf	ლიბია
name:yi	ליביע
name:yo	Líbyà
name:yue	利比亞
name:zea	Libië
name:zgh	ⵍⵢⵔⵉⴰ
name:zh	利比亚
name:zu	iLibiya
official_name:cs	Libyjský stát
timezone	Africa/Tripoli
type	boundary
wikidata	Q1016
wikipedia	ar:ليبيا

Onderdeel van

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



```
== 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

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

id	title	description	fill	stroke
<a href="#">Q912</a>	Mali	This is a short description of Mali	#6A5ACD	#6A5ACD
<a href="#">Q916</a>	Angola	This is a short description of Angola	#6A5ACD	#6A5ACD
<a href="#">Q79</a>	Egypt	This is a short description of Egypt	#6A5ACD	#6A5ACD
<a href="#">Q114</a>	Kenya	This is a short description of Kenya	#1E90FF	#1E90FF
<a href="#">Q924</a>	Tanzania	This is a short description of Tanzania	#4682B4	#4682B4
<a href="#">Q115</a>	Ethiopia	This is a short description of Ethiopia	#6A5ACD	#6A5ACD
<a href="#">Q117</a>	Ghana	This is a short description of Ghana	#87CEEB	#87CEEB
<a href="#">Q929</a>	Central African Republic	This is a short description of Central African Republic	#1E90FF	#1E90FF
<a href="#">Q948</a>	Tunisia	This is a short description of Tunisia	#87CEEB	#87CEEB
<a href="#">Q262</a>	Algeria	This is a short description of Algeria	#4B0082	#4B0082
<a href="#">Q945</a>	Togo	This is a short description of Togo	#B0E0E6	#B0E0E6
<a href="#">Q953</a>	Zambia	This is a short description of Zambia	#1E90FF	#1E90FF
<a href="#">Q258</a>	South Africa	This is a short description of South Africa	#6A5ACD	#6A5ACD
<a href="#">Q657</a>	Chad	This is a short description of Chad	#6A5ACD	#6A5ACD
<a href="#">Q954</a>	Zimbabwe	This is a short description of Zimbabwe	#87CEEB	#87CEEB
<a href="#">Q958</a>	South Sudan	This is a short description of South Sudan	#87CEEB	#87CEEB
<a href="#">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](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 map
?title       #Popul
?description  #Description in t
?fill        #Color the geosha
?stroke      #Color of the geo
```

Variables must have these  
names

```
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)
```

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

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

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

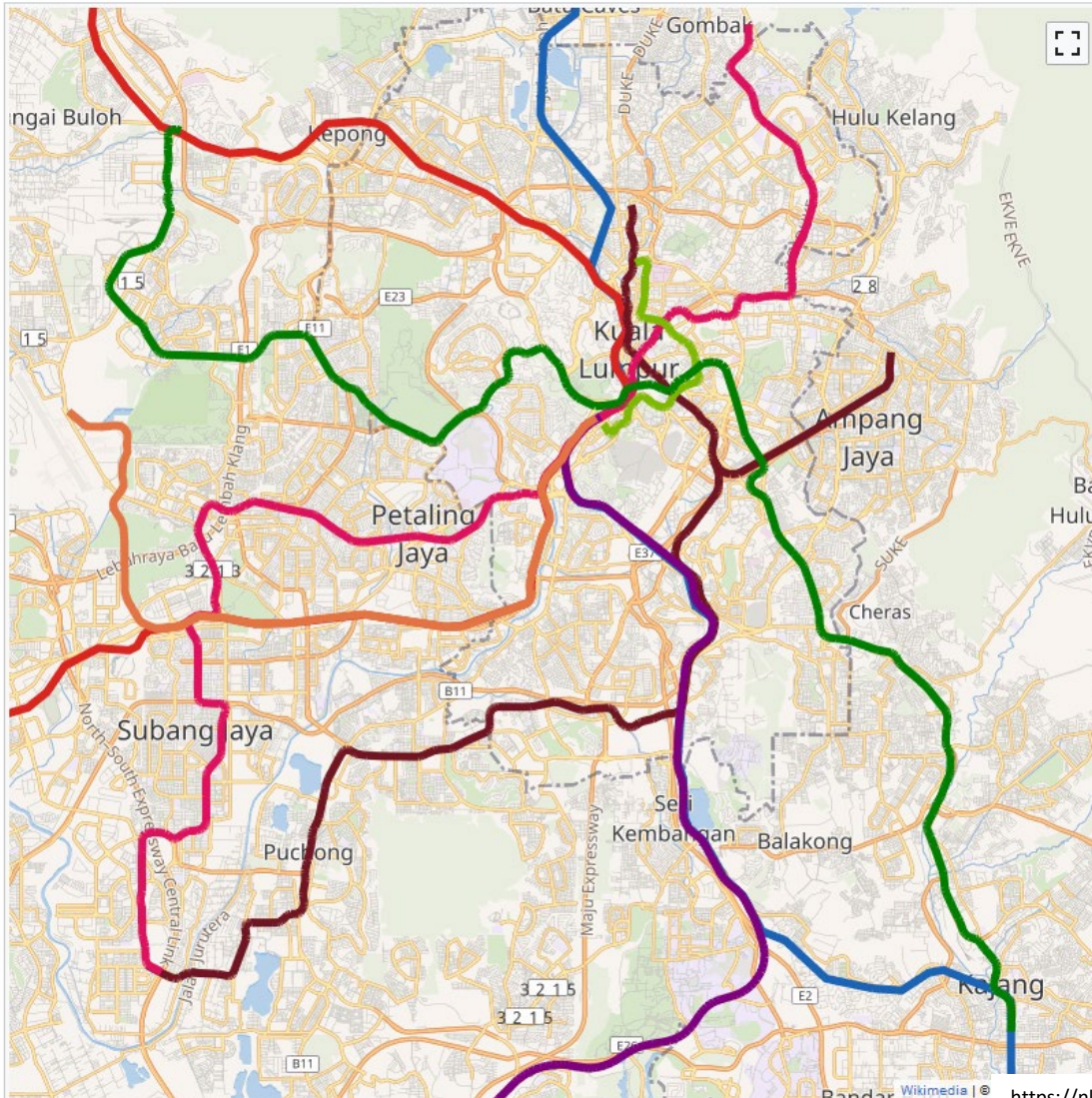
```
}
```

#----- End SPARQL query -----



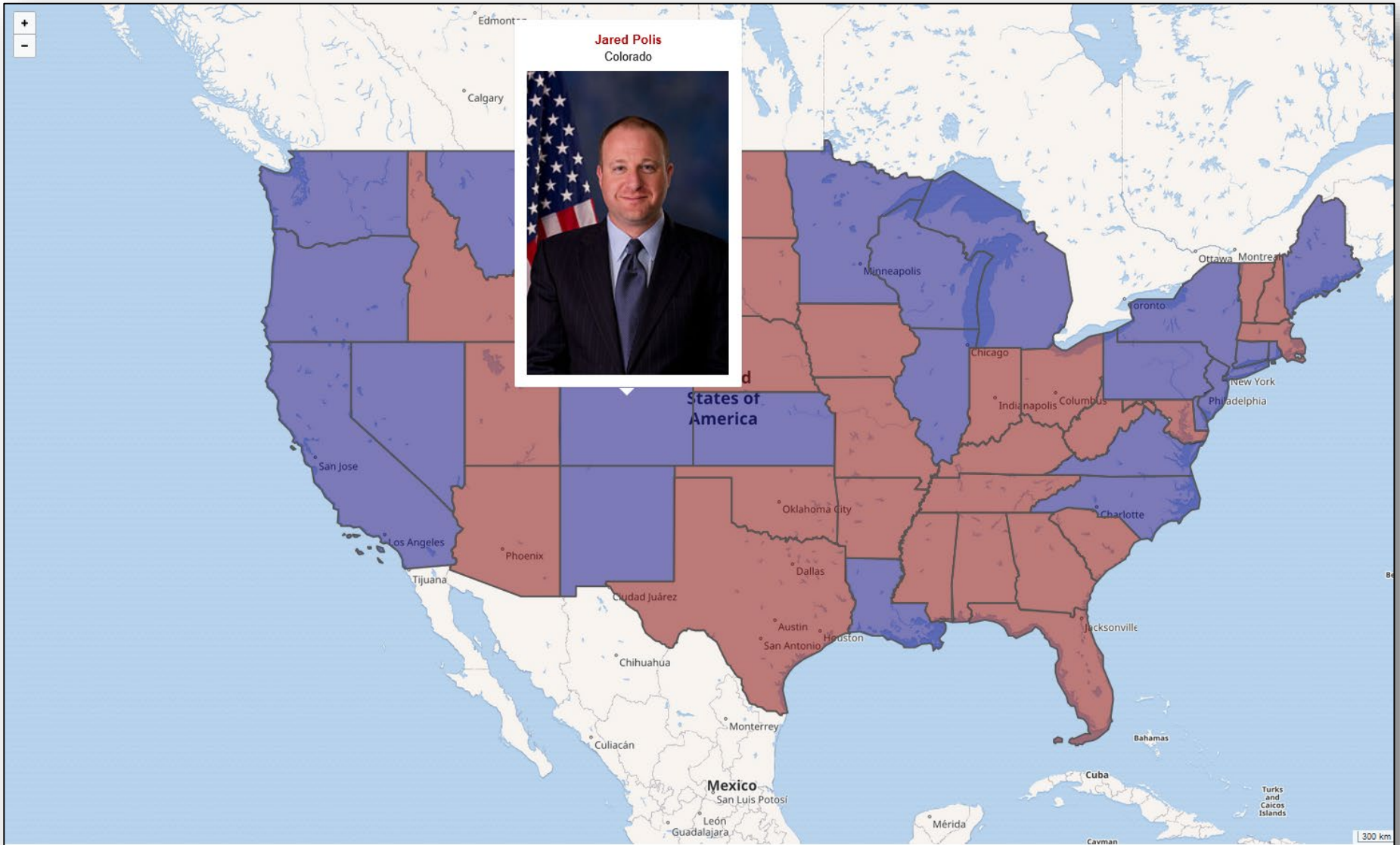
## 2.7) Other cool embedded maps

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



Railway lines around Klang Valley, Malaysia

<https://nl.wikipedia.org/wiki/Gebruiker:OlafJanssen/KladblokMapMakingWorkshopWM2019>,  
from [https://en.wikipedia.org/wiki/User:\\*angys\\*/sandbox](https://en.wikipedia.org/wiki/User:*angys*/sandbox)



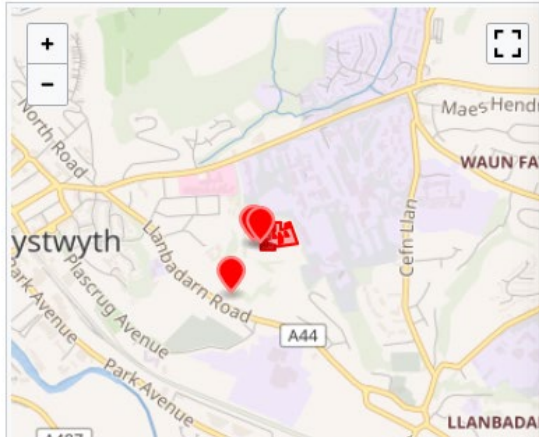
Governors of US states with their party affiliation

<https://www.r>

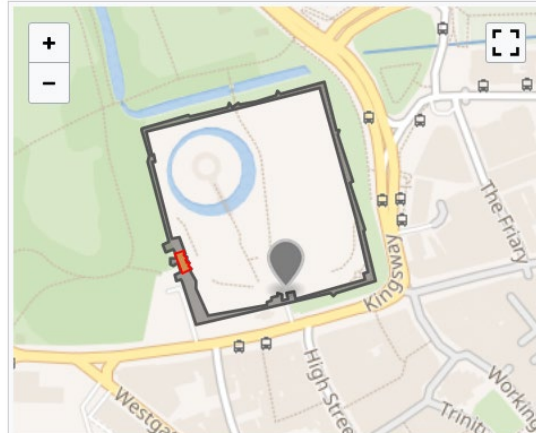
<https://www.mediawiki.org/wiki/Help:Extension:Kartographer#/map/4>



## GeoShapes [ edit ]



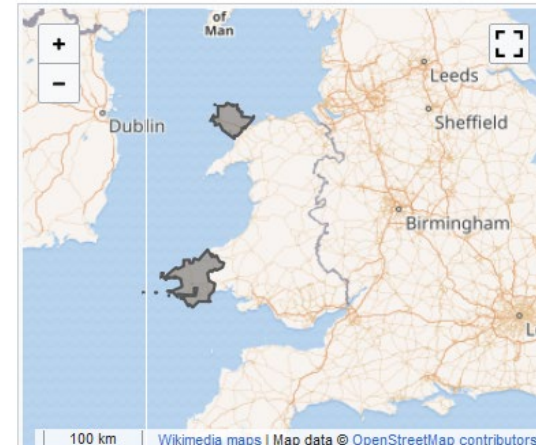
Commons: National Library of Wales.map, Wikimedia maps | Map data © OpenStreetMap contributors  
National Library of Wales collections



Commons: Cardiff Castle.map, Wikimedia maps | Map data © OpenStreetMap contributors  
Cardiff Castle with library



Commons: counties of Wales/Denbighshire.map, Wikimedia maps | Map data © OpenStreetMap contributors  
Historic counties of Wales

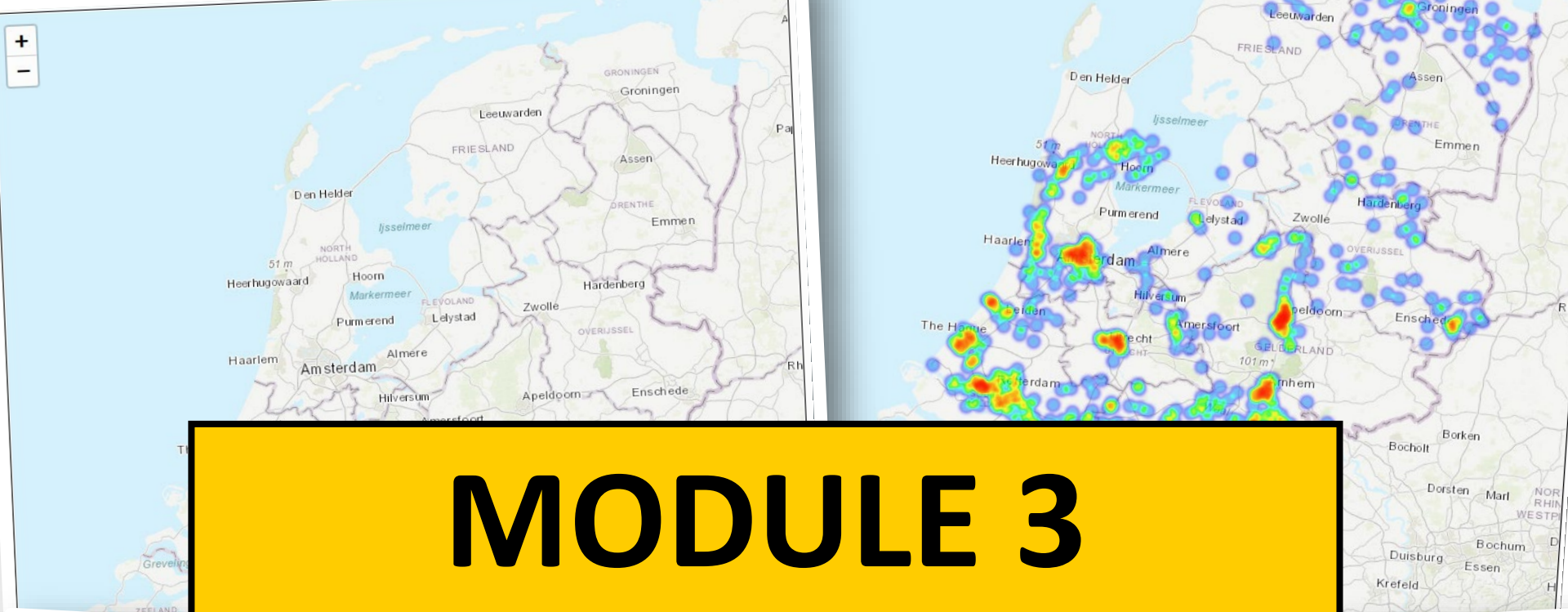


Commons: Anglesey and Pembrokeshire.geomask, Wikimedia maps | Map data © OpenStreetMap contributors  
Anglesey and Pembrokeshire geomask

Governors of US states with their

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





# MODULE 3

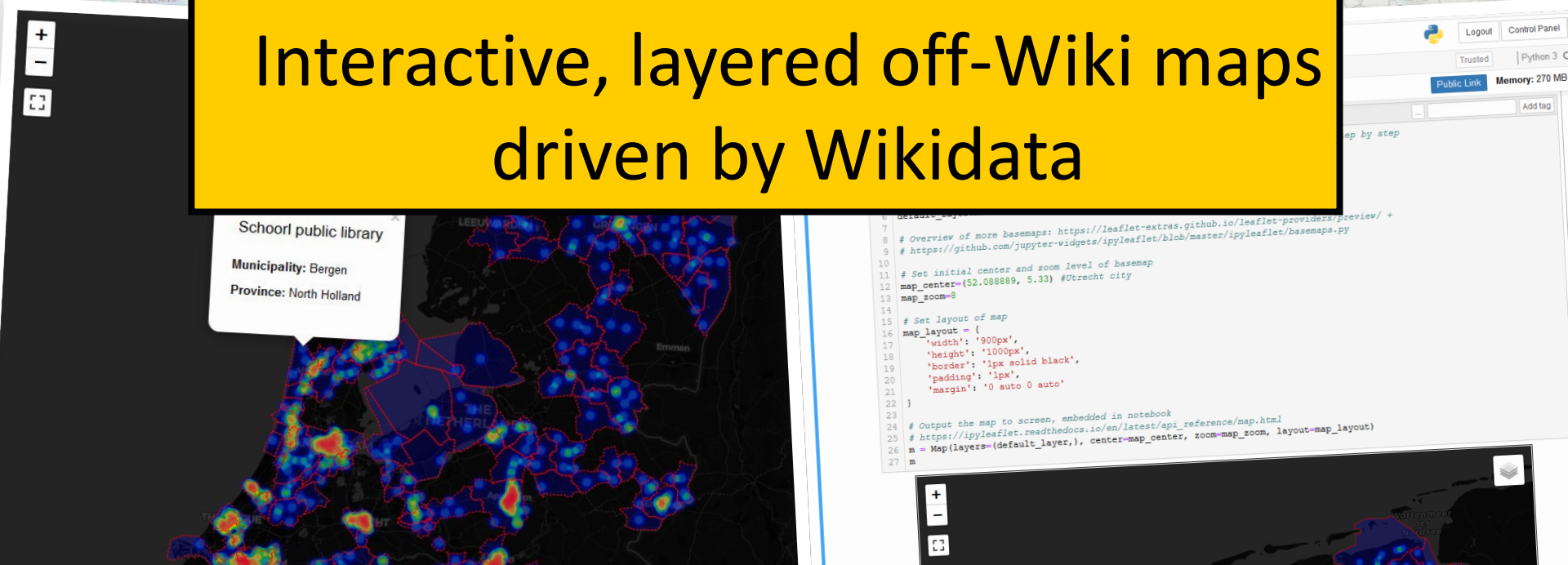
Interactive, layered off-Wiki maps driven by Wikidata




School public library

Municipality: Bergen





Province: North Holland

```
7 # Overview of more basemaps: https://leaflet-extras.github.io/leaflet-providers/preview/ +
8 # https://github.com/jupyter-widgets/ipyleaflet/blob/master/ipyleaflet/basemaps.PY
9
10 # Set initial center and zoom level of basemap
11
12 map_center=(52.088889, 5.33) #Utrecht city
13 map_zoom=8
14
15 # Set layout of map
16 map_layout = {
17     'width': '900px',
18     'height': '1000px',
19     'border': '1px solid black',
20     'padding': '1px',
21     'margin': '0 auto 0 auto'
22 }
23
24 # Output the map to screen, embedded in notebook
25 # https://ipyleaflet.readthedocs.io/en/latest/api_reference/map.html
26 m = Map(layers=(default_layer,), center=map_center, zoom=map_zoom, layout=map_layout)
27 m
```

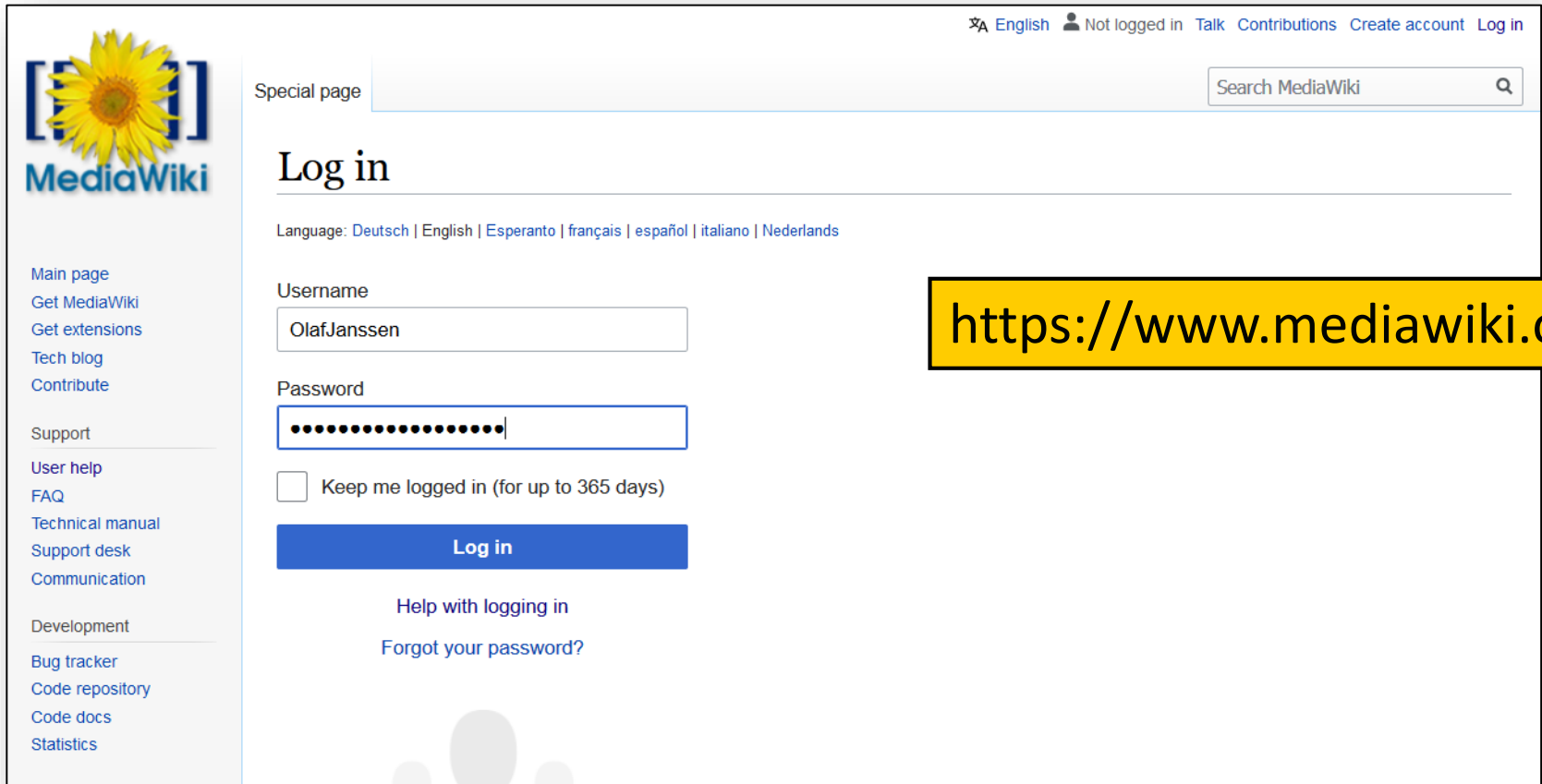




**For this Module, it's nice to have basic experience with**

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

# MediaWiki account + login



The screenshot shows the MediaWiki login page. At the top right, there are links for "English", "Not logged in", "Talk", "Contributions", "Create account", and "Log in". Below these is a search bar labeled "Search MediaWiki". The main heading is "Log in". Underneath, there are language options: "Deutsch | English | Esperanto | français | español | italiano | Nederlands". The "Username" field contains "OlafJanssen". The "Password" field is filled with dots. There is a checkbox for "Keep me logged in (for up to 365 days)". A blue "Log in" button is present. Below the button are links for "Help with logging in" and "Forgot your password?". On the left side, there is a navigation menu with categories like "Main page", "Support", "User help", "Development", and "Bug tracker".

Special page  Search MediaWiki

## Log in

Language: [Deutsch](#) | [English](#) | [Esperanto](#) | [français](#) | [español](#) | [italiano](#) | [Nederlands](#)

Username

Password

Keep me logged in (for up to 365 days)

[Log in](#)

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

[Main page](#)  
[Get MediaWiki](#)  
[Get extensions](#)  
[Tech blog](#)  
[Contribute](#)

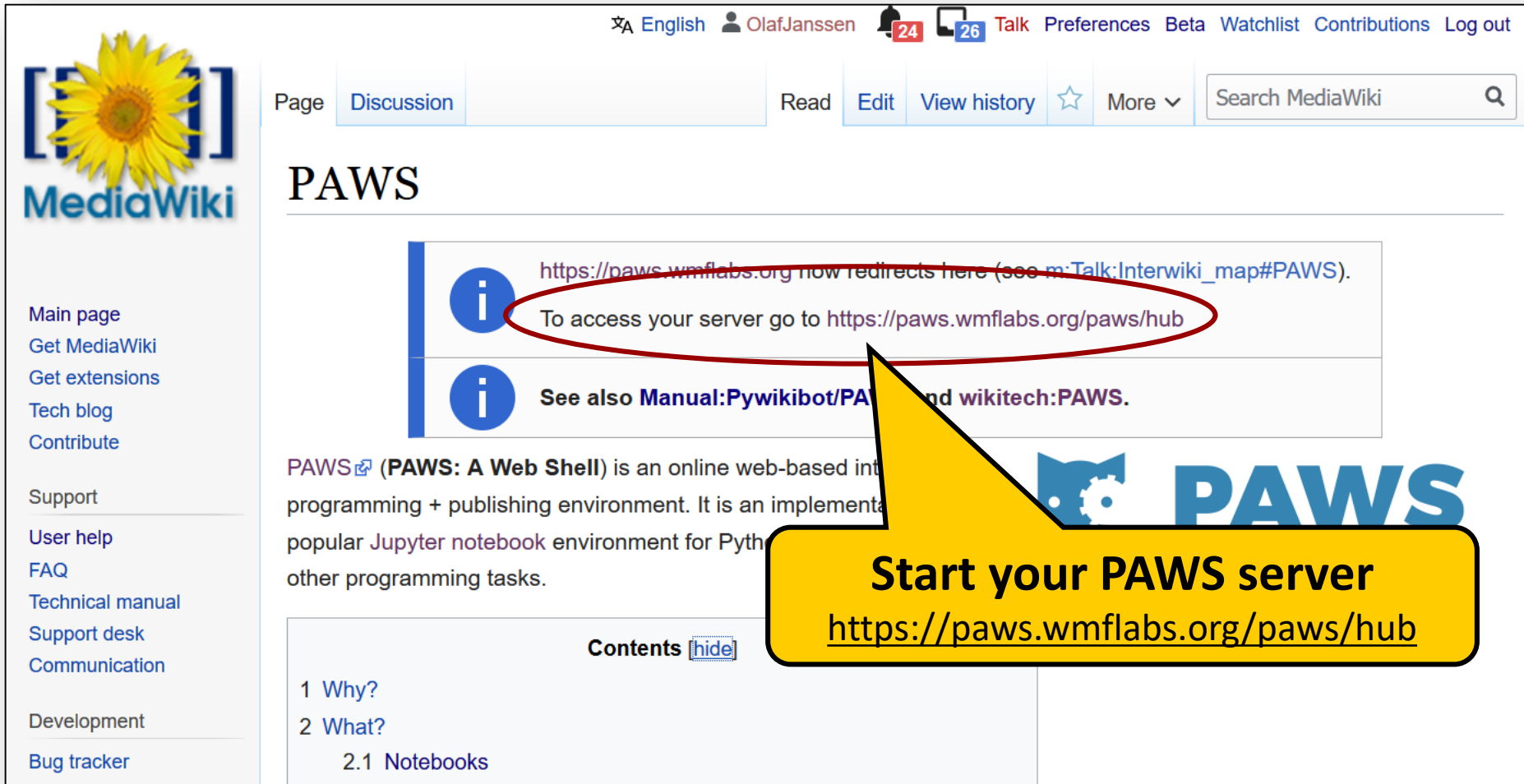
[Support](#)  
[User help](#)  
[FAQ](#)  
[Technical manual](#)  
[Support desk](#)  
[Communication](#)

[Development](#)  
[Bug tracker](#)  
[Code repository](#)  
[Code docs](#)  
[Statistics](#)

<https://www.mediawiki.org>



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



The screenshot shows the MediaWiki page for PAWS. The top navigation bar includes language (English), user (OlafJanssen), and notification counts (24, 26). The page title is "PAWS". A red oval highlights the URL <https://paws.wmflabs.org/paws/hub> in the first information box. A yellow callout bubble points to this URL with the text "Start your PAWS server https://paws.wmflabs.org/paws/hub". The second information box says "See also Manual:Pywikibot/PAWS and wikitech:PAWS." The main text describes PAWS as an online web-based interactive programming + publishing environment. A table of contents is visible at the bottom left.

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 a popular Jupyter notebook environment for Python and other programming tasks.

**PAWS**

Contents [hide](#)

- 1 Why?
- 2 What?
  - 2.1 Notebooks

Main page  
Get MediaWiki  
Get extensions  
Tech blog  
Contribute  
Support  
User help  
FAQ  
Technical manual  
Support desk  
Communication  
Development  
Bug tracker

# Starting your PAWS server

You might see this screen...

The screenshot shows a web browser window displaying the Wikimedia OAuth authorization page. The URL in the address bar is [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 "Special page: OAuth" and the subtitle is "Allows usage of OAuth 1.0a for API authorization".

The page content includes a sidebar with various navigation links and a main content area with a list of permissions. A yellow callout box points to the permissions list and the "Allow" button, which is circled in red.

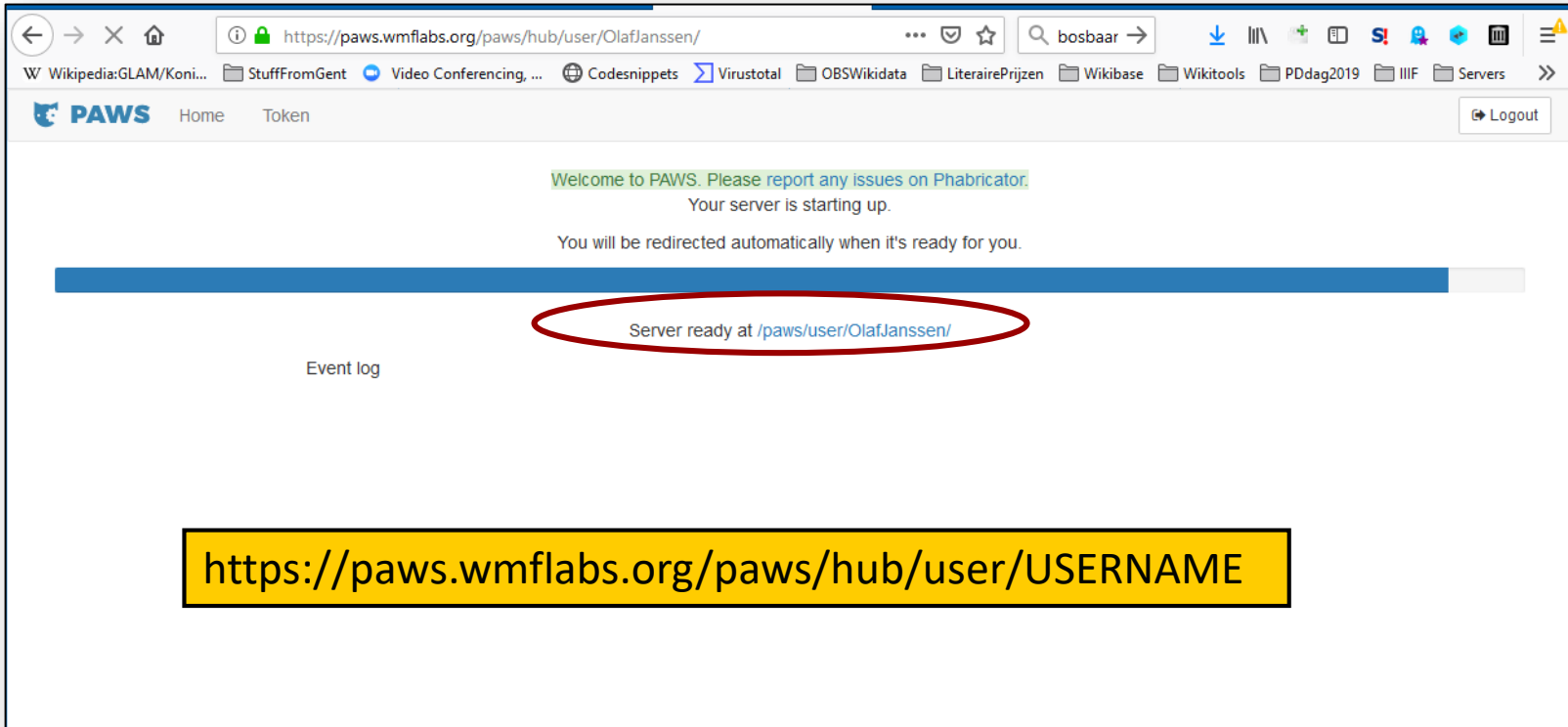
**Hi OlafJanssen,**

In order to complete your request, **PAWS** needs permission to perform the following actions on your behalf on all projects of this site:

- **Perform high volume activity**  
High-volume editing
- **Interact with pages**  
Edit existing pages; Edit protected pages; Create, edit, and move pages; Patrol changes to pages
- **Interact with media**  
Upload new files; Upload, replace, and move files
- **Perform administrative actions**  
Rollback changes to pages
- **Interact with your watchlist**  
View your watchlist
- **Miscellaneous activity**  
Edit your watchlist

[Privacy policy](#)

# 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 welcome message: "Welcome to PAWS. Please report any issues on Phabricator. Your server is starting up. You will be redirected automatically when it's ready for you." Below this is a blue progress bar. A red oval highlights the text "Server ready at /paws/user/OlafJanssen/". An "Event log" link is visible on the left. At the bottom, a yellow box contains the URL `https://paws.wmflabs.org/paws/hub/user/USERNAME`.

PAWS Home Token Logout

Welcome to PAWS. Please report any issues on Phabricator.  
Your server is starting up.  
You will be redirected automatically when it's ready for you.

Server ready at </paws/user/OlafJanssen/>

Event log

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



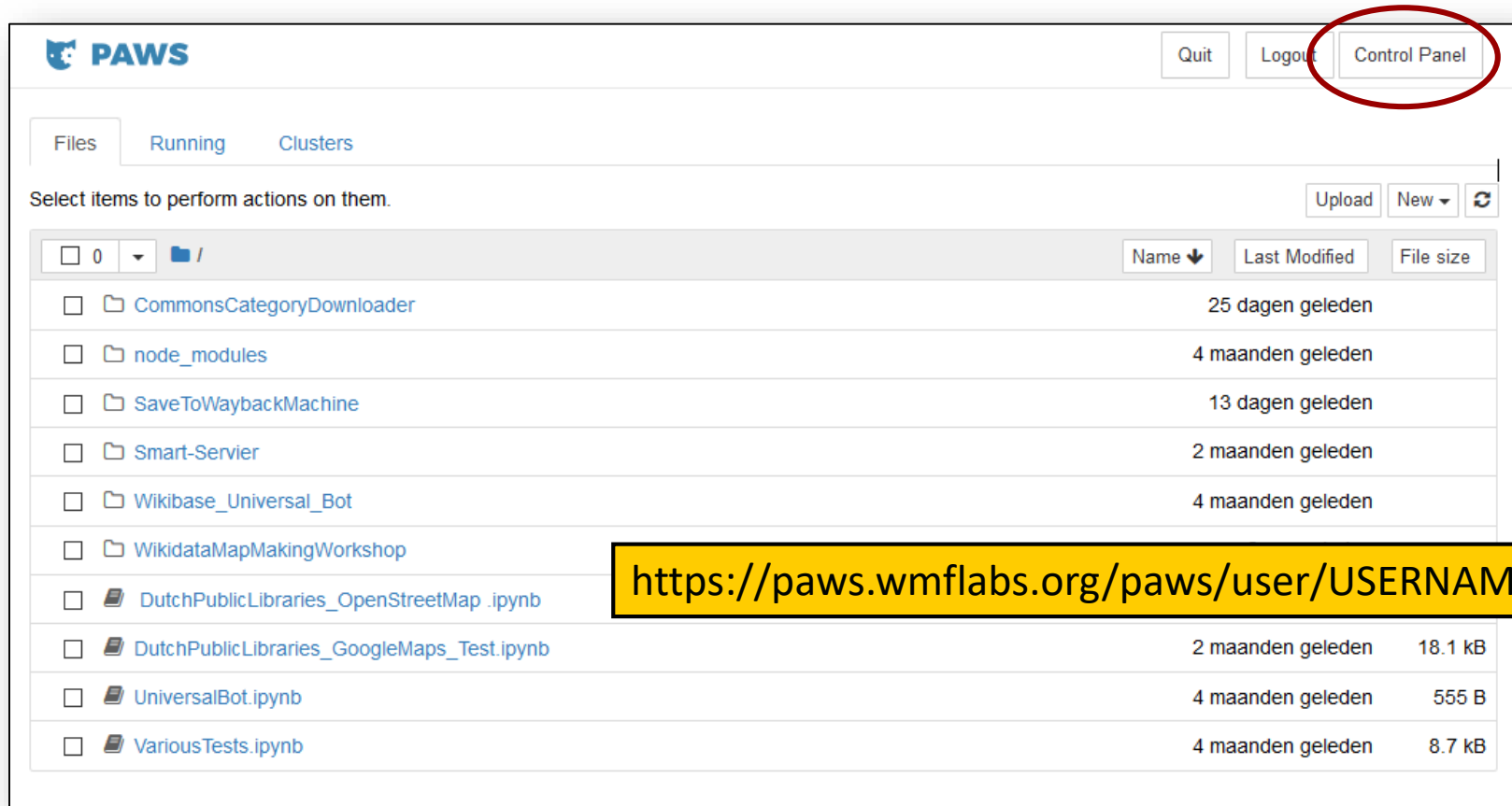
# Your PAWS server running

The screenshot shows the PAWS web interface. At the top left is the PAWS logo. On the right are buttons for 'Quit', 'Logout', and 'Control Panel'. Below the logo are tabs for 'Files', 'Running', and 'Clusters'. A message says 'Select items to perform actions on them.' with 'Upload', 'New', and a refresh icon. A file list is shown with columns for 'Name', 'Last Modified', and 'File size'. The file 'DutchPublicLibraries\_GoogleMaps\_Test.ipynb' is circled in red. A yellow callout bubble points to it with the text '.ipynb = interactive python notebook'. A yellow box below the callout contains the URL 'https://paws.wmflabs.org/paws/user/USERNAME/tree'.

Name	Last Modified	File size
<input type="checkbox"/> CommonsCategoryDownloader		
<input type="checkbox"/> node_modules		
<input type="checkbox"/> SaveToWaybackMachine		
<input type="checkbox"/> Smart-Server		
<input type="checkbox"/> Wikibase_Universal_Bot		
<input type="checkbox"/> WikidataMapMakingWorkshop		
<input type="checkbox"/> DutchPublicLibraries_OpenStreetMap.ipynb	2 uur geleden	442 kB
<input type="checkbox"/> DutchPublicLibraries_GoogleMaps_Test.ipynb	2 maanden geleden	18.1 kB
<input type="checkbox"/> UniversalBot.ipynb		
<input type="checkbox"/> VariousTests.ipynb	4 maanden geleden	8.7 kB

- [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 web interface. At the top right, there are three buttons: 'Quit', 'Logout', and 'Control Panel'. The 'Control Panel' button is circled in red. Below the buttons, there are tabs for 'Files', 'Running', and 'Clusters'. The 'Files' tab is active, showing a file tree. The tree has a root folder '/' with a subfolder '0'. The subfolder '0' contains several folders and files:

- CommonsCategoryDownloader (25 dagen geleden)
- node\_modules (4 maanden geleden)
- SaveToWaybackMachine (13 dagen geleden)
- Smart-Servier (2 maanden geleden)
- Wikibase\_Universal\_Bot (4 maanden geleden)
- WikidataMapMakingWorkshop
- DutchPublicLibraries\_OpenStreetMap.ipynb
- DutchPublicLibraries\_GoogleMaps\_Test.ipynb (2 maanden geleden, 18.1 kB)
- UniversalBot.ipynb (4 maanden geleden, 555 B)
- VariousTests.ipynb (4 maanden geleden, 8.7 kB)

A yellow box at the bottom of the screenshot contains the URL: <https://paws.wmflabs.org/paws/user/USERNAME/tree>

# Stopping your PAWS server

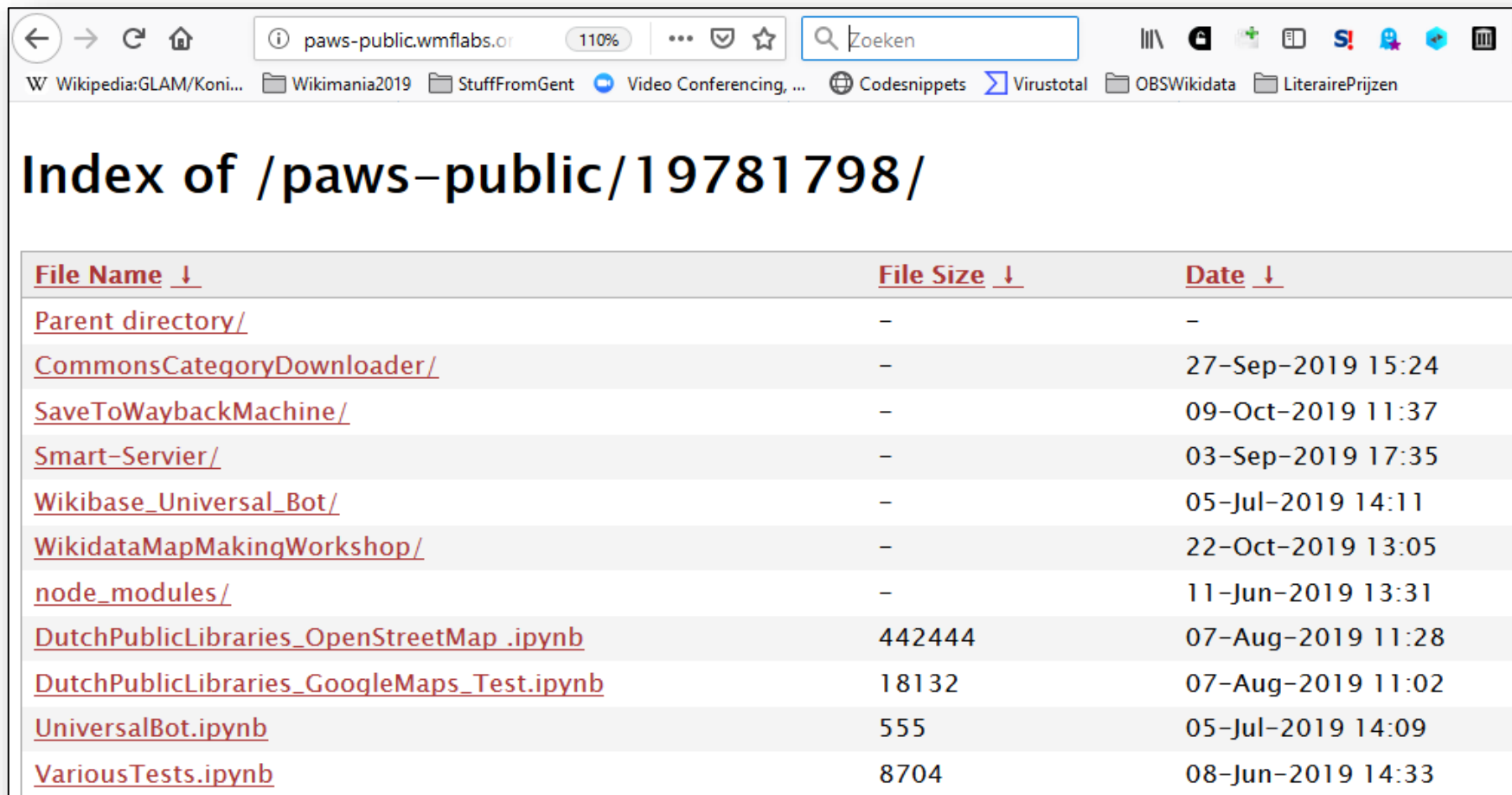


The screenshot shows a web browser window with the URL `https://paws.wmflabs.org/paws/hub/home`. The page features the PAWS logo and navigation links for 'Home' and 'Token'. A green message reads: "Welcome to PAWS. Please report any issues on Phabricator." Below this, there are two buttons: a red button labeled "Stop My Server" and a blue button labeled "My Server". A red arrow points to the "Stop My Server" button.

`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 address bar displaying 'paws-public.wmflabs.org'. The page title is 'Index of /paws-public/19781798/'. Below the title is a table listing files and directories. The table has three columns: 'File Name', 'File Size', and 'Date'. The files listed include 'Parent directory/', 'CommonsCategoryDownloader/', 'SaveToWaybackMachine/', 'Smart-Servier/', 'Wikibase\_Universal\_Bot/', 'WikidataMapMakingWorkshop/', 'node\_modules/', 'DutchPublicLibraries\_OpenStreetMap.ipynb', 'DutchPublicLibraries\_GoogleMaps\_Test.ipynb', 'UniversalBot.ipynb', and 'VariousTests.ipynb'.

<u>File Name</u> ↓	<u>File Size</u> ↓	<u>Date</u> ↓
<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

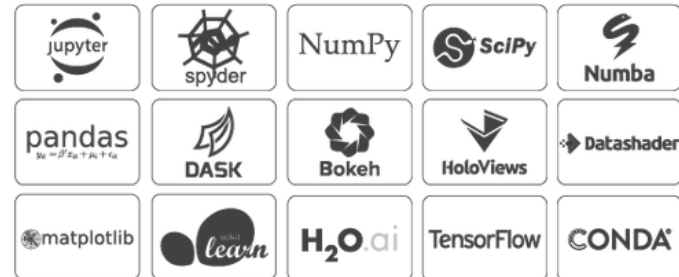
## Anaconda Distribution

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](#), [Datashader](#), and [Holoviews](#)



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

# Go to public PAWS folder of User:OlafJanssen



Browser address bar: paws-public.wmflabs.org

## Index of /paws-public/19781798/

<u>File Name</u> ↓	<u>File Size</u> ↓	<u>Date</u> ↓
<a href="#">Parent directory/</a>	-	-
<a href="#">CommonsCategoryDownloader/</a>	-	14
<a href="#">SaveToWaybackMachine/</a>	-	7
<a href="#">Smart-Servier/</a>	-	5
<a href="#">Wikibase Universal Bot/</a>	-	
<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

**Go to this folder**

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



# In folder 'WikidataMapMakingWorkshop'

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

<u>File Name</u> ↓	<u>File Size</u> ↓	<u>Date</u> ↓
<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>		09 11:12
<a href="#">popupstyle.css</a>		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)

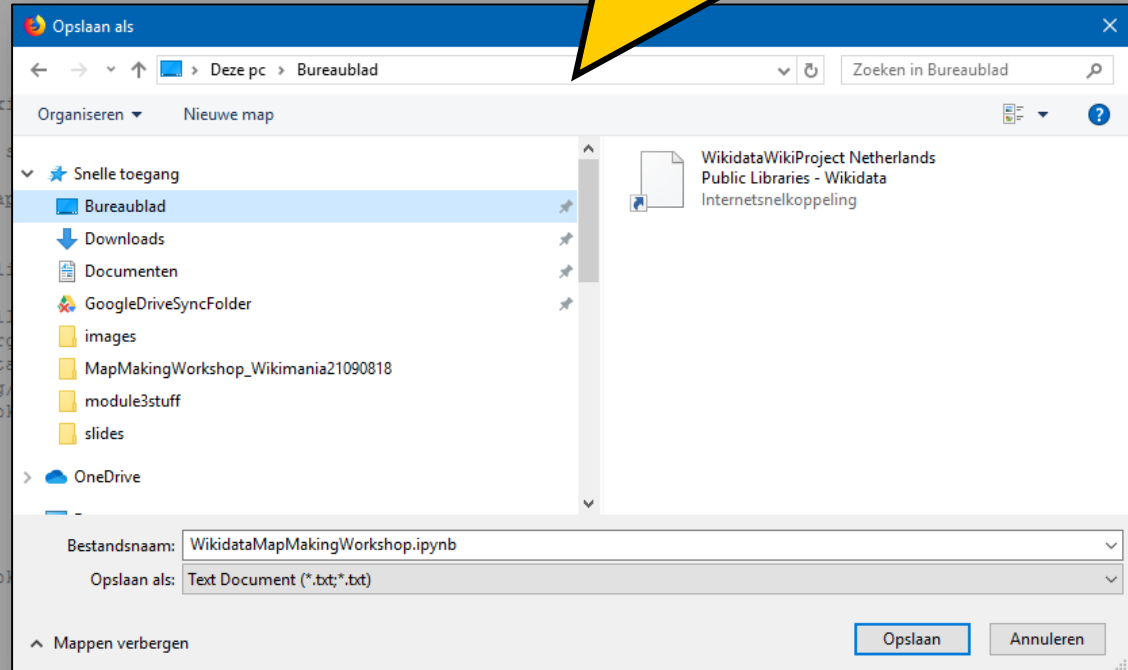
```
{
  "cells": [
    {
      "cell_type": "markdown",
      "metadata": {},
      "source": [
        "# Building a stand-alone off-Wiki layered map using Wikidata & SPARQL\n",
        "\n",
        "This Jupyter notebook shows you step by step how to make a Wikidata-driven layered map that can be 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": "markdown",
      "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",

```

<https://paws-public.wmflabs.org/paws-public/User:OlafJanssen/WikidataMapMakingWorkshop/WikidataMapMakingWorkshop.ipynb?format=raw>

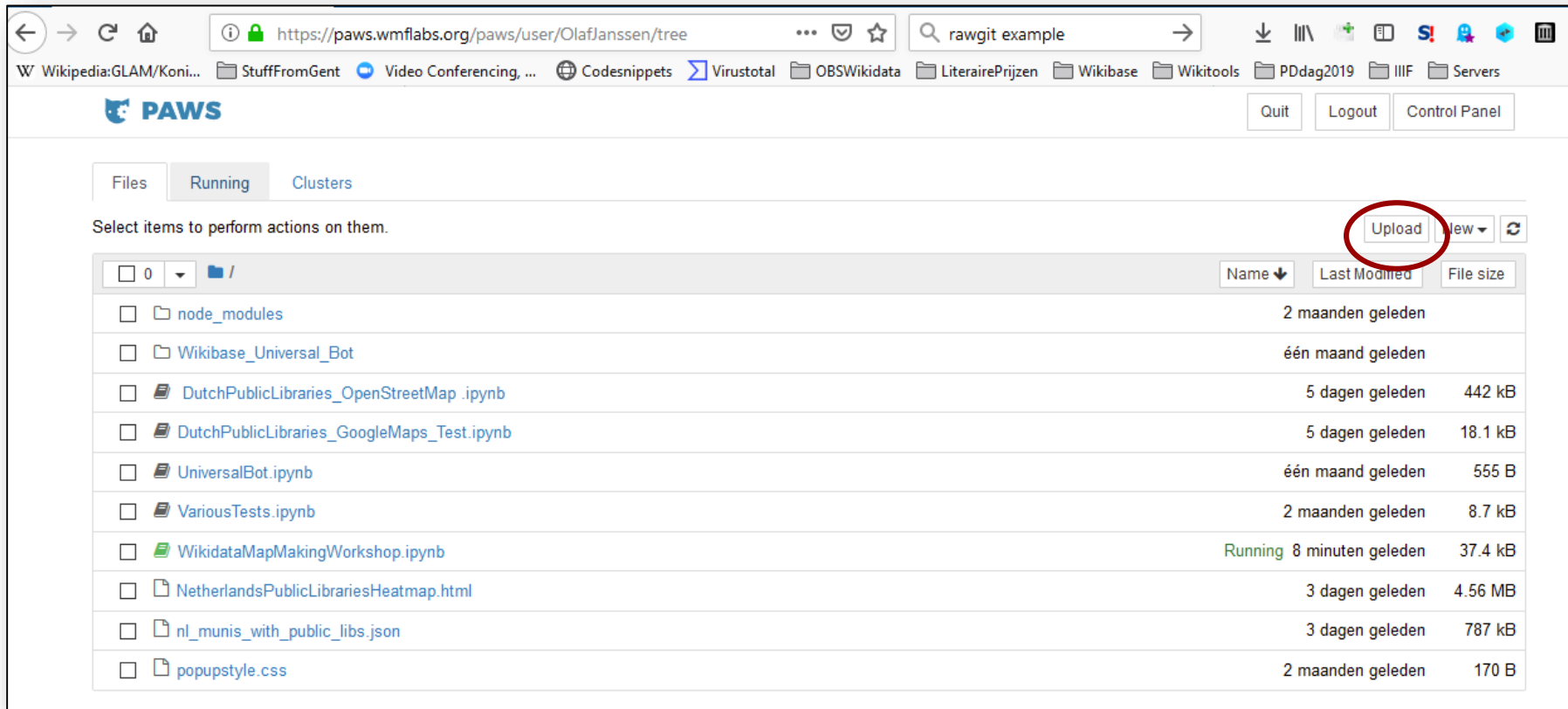
Save this raw file to your PC

```
{
  "cells": [
    {
      "cell_type": "markdown",
      "metadata": {},
      "source": [
        "# Building a stand-alone off-Wiki\n",
        "\n",
        "This Jupyter notebook shows you\n",
        "\n",
        "It is part of Module 3 of the map\n",
        "/WikidataMapMakingWorkshop)\n",
        "\n",
        "See https://github.com/ookgezellig\n",
        "\n",
        "This notebook is publically avail\n",
        "** https://paws-public.wmflabs.org\n",
        "/paws-public/User:OlafJanssen/Wikidata\n",
        "** https://github.com/ookgezellig,\n",
        "(https://raw.githubusercontent.com/ook\n",
        ]\n",
      ],
      "cell_type": "markdown",
      "metadata": {},
      "source": [
        "For questions about this notebook\n",
        "https://twitter.com/ookgezellig\n",
        "\n",
        "*****\n",
        ]\n",
    },\n    {\n      "cell_type": "markdown",\n      "metadata": {},\n      "source": [
        "## Start of the workshop\n",
        ]\n",
    },\n    {\n      "cell_type": "markdown",\n      "metadata": {},\n      "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. **SPAROL queries** from Wikidata - https://www.wikidata.org + https://query.wikidata.org\n",
        ]\n",
    }\n  ]\n}
```





# ... and upload it to *your* PAWS server



The screenshot shows the PAWS web interface in a browser. The address bar displays <https://paws.wmflabs.org/paws/user/OlafJanssen/tree>. The interface includes a navigation bar with 'Files', 'Running', and 'Clusters' tabs. Below the navigation bar, there are buttons for 'Quit', 'Logout', and 'Control Panel'. The main content area shows a file list with columns for 'Name', 'Last Modified', and 'File size'. The 'Upload' button is circled in red.

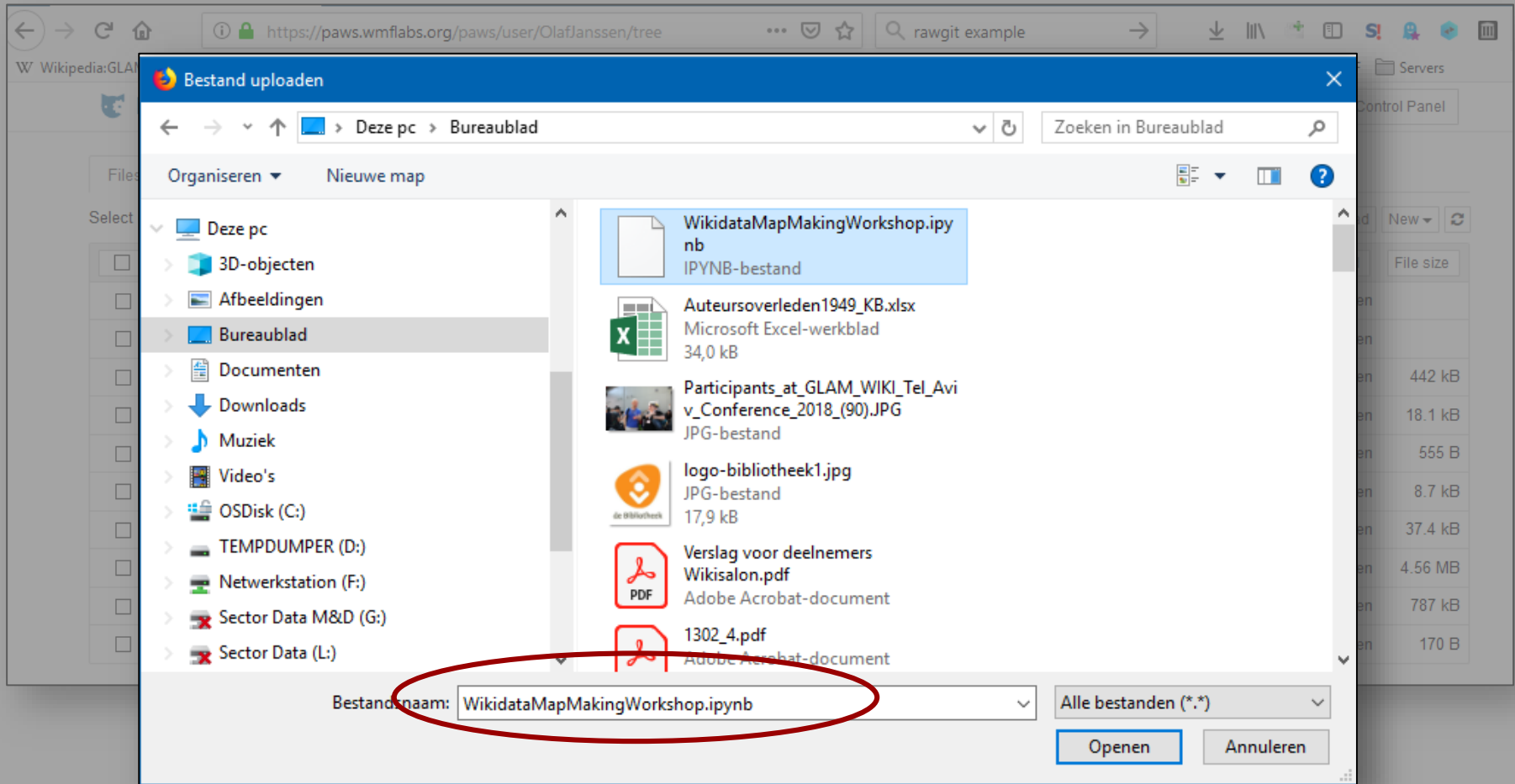
Select items to perform actions on them.

0  /

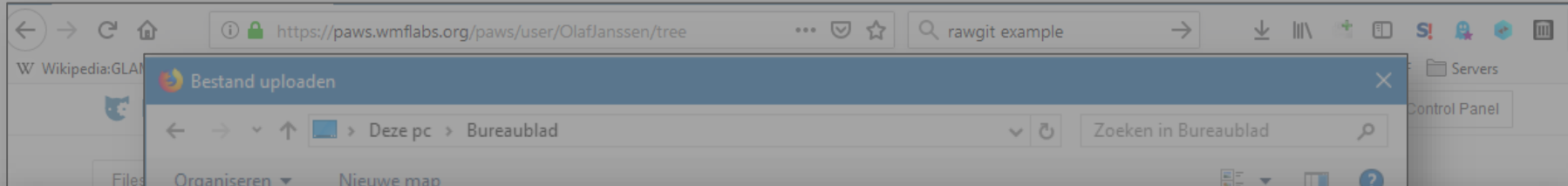
<input type="checkbox"/>	Name	Last Modified	File size
<input type="checkbox"/>	node_modules	2 maanden geleden	
<input type="checkbox"/>	Wikibase_Universal_Bot	één maand geleden	
<input type="checkbox"/>	DutchPublicLibraries_OpenStreetMap.ipynb	5 dagen geleden	442 kB
<input type="checkbox"/>	DutchPublicLibraries_GoogleMaps_Test.ipynb	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

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

... and upload it to your PAWS server



# ... and upload it to your PAWS server



**PAWS** Quit Logout Control Panel

Files Running Clusters

Select items to perform actions on them. Upload New Refresh

0 /

	Name	Last Modified	File size
<input type="checkbox"/>	WikidataMapMakingWorkshop.ipynb		
<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 28 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

Upload Cancel



# Notebook on your own PAWS server to play with



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



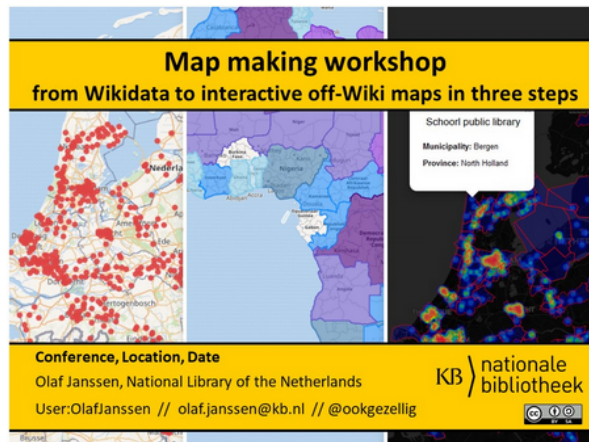
Public Link

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](#)



For more context to this workshop you can check the

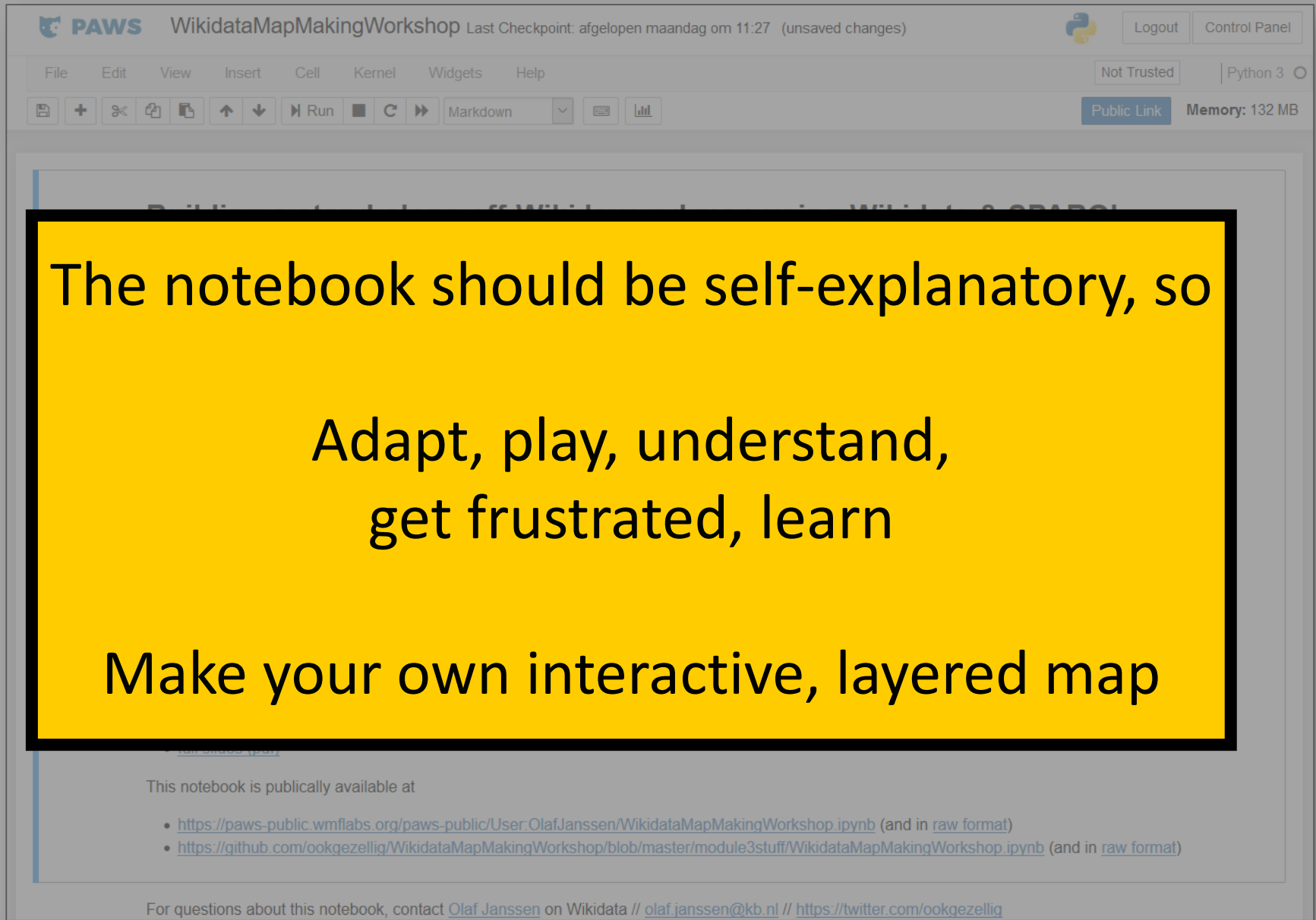
- [full layout](#), and
- [full slides \(pdf\)](#)

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 on the PAWS platform. The notebook title is "WikidataMapMakingWorkshop". The interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help), a toolbar with icons for file operations and execution, and a status bar showing "Not Trusted", "Python 3", "Public Link", and "Memory: 132 MB". The notebook content is partially obscured by a large yellow text box.

**The notebook should be self-explanatory, so**

**Adapt, play, understand,  
get frustrated, learn**

**Make your own interactive, layered map**

This notebook is publically available at

- <https://paws-public.wmflabs.org/paws-public/User:OlafJanssen/WikidataMapMakingWorkshop.ipynb> (and in [raw format](#))
- <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_state([m]))
6
7 # This map is available at http://ookgezellig.github.io/WikidataMapMakingWorkshop/NetherlandsPublicLibrariesHeatmap.html
```

**This is the end of the workshop**



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

The screenshot shows the PAWS (Python Analytics Web Shell) interface. At the top left is the PAWS logo. On the top right are buttons for 'Quit', 'Logout', and 'Control Panel'. Below the logo are tabs for 'Files', 'Running', and 'Clusters'. A toolbar contains buttons for 'Duplicate', 'Rename', 'Move', 'Download', 'View', 'Edit', and a trash icon. The 'Download' button is circled in red. To the right of the toolbar are 'Upload', 'New', and a refresh icon. The main area shows a file browser for the directory '/ WikidataMapMakingWorkshop'. A table lists files with columns for 'Name', 'Last Modified', and 'File size'. The file 'NetherlandsPublicLibrariesHeatmap.html' is selected, indicated by a checked checkbox and a red oval around the row. Other files include 'WikidataMapMakingWorkshop.ipynb', 'nl\_munis\_with\_public\_libs.json', and 'popupstyle.css'.

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

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

The screenshot shows a web browser window with the following elements:

- Address bar: `file:///C:/Users/oja010/AppData/Local/Temp/NetherlandsPublicLibrariesHeatmap.html` (circled in red)
- Map interface:
  - Legend:
    - Base map of The Netherlands
    - CartoDB.DarkMatter
    - Heatmap Dutch public libraries
    - Heatmap public libraries (with popups)
    - Municipal boundaries
  - Popup for "Schermer public library support point":
    - Municipality: Alkmaar
    - Province: North Holland

`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

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