



Crazy about
(OpenStreet)Mapping

Who am I?

- Pieter Vander Vennet
- Studied informatics
- Heavy OSM-contributor
- Working for a small company on mobility (with OSM)
- Bit crazy about mapping and OSM...
- ... I'll tell you why

BeCentral

Go



Search Results



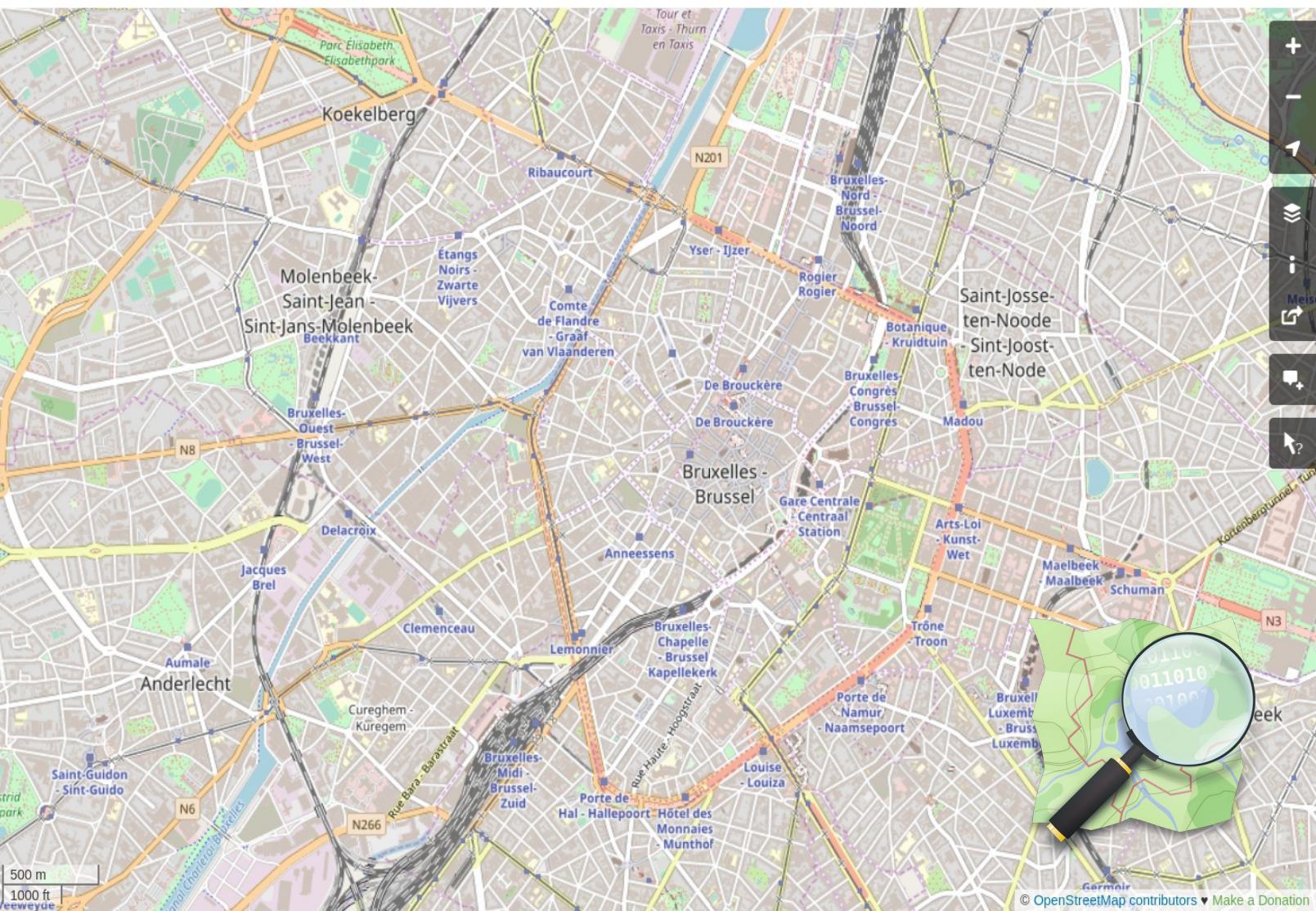
Results from OpenStreetMap Nominatim

Coworking space BeCentral, 10, Cantersteen - Kantersteen, Quartier du Centre - Centrumwijk, Brussels, Ville de Bruxelles - Stad Brussel, Brussels-Capital, 1000, Belgium

[More results](#)

Results from GeoNames

No results found



9, Elf-Julistraat, Brugge-Centrum, Brugge, Bru

Station Brugge, Stationsplein, Brugge-Centrum

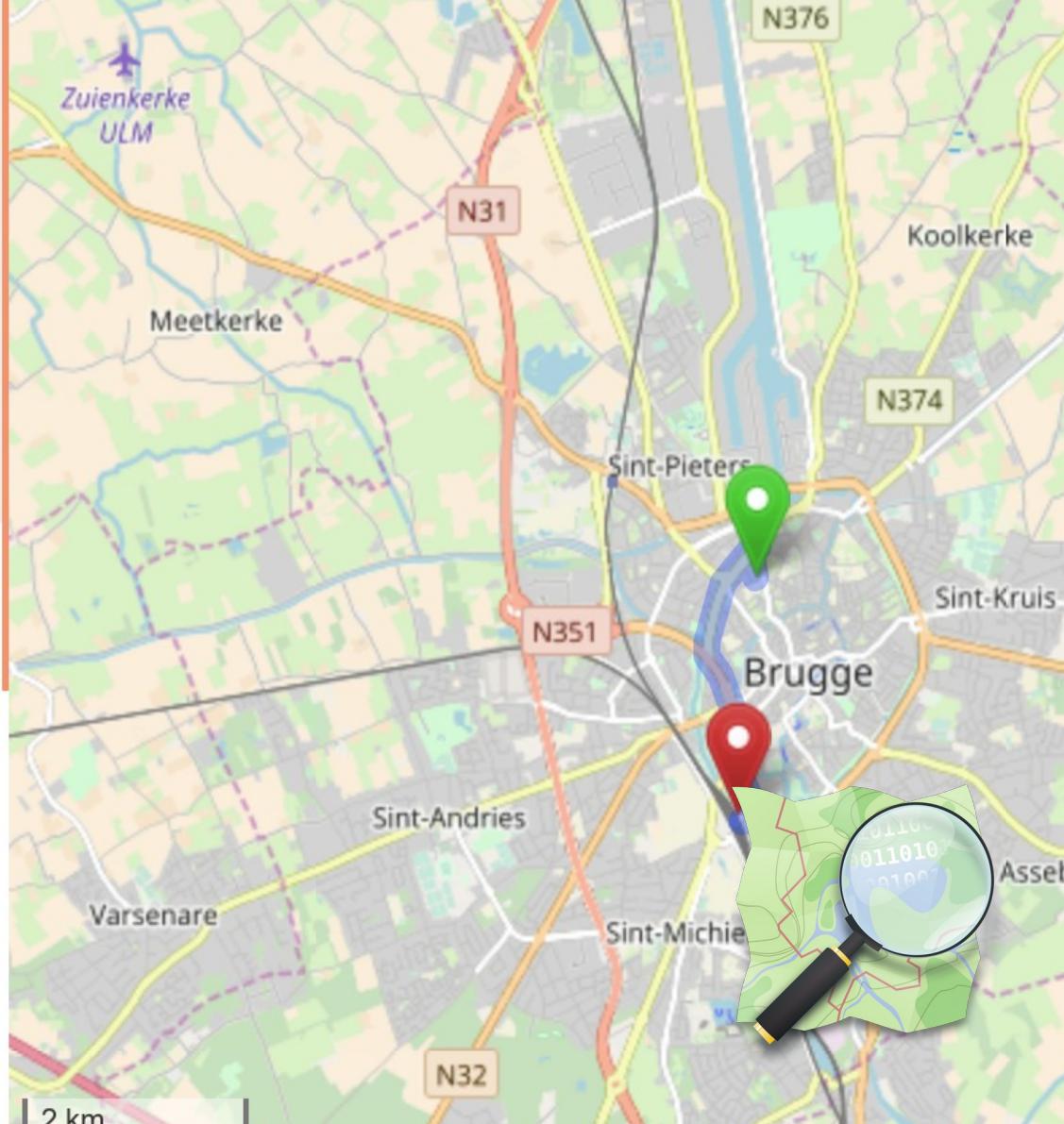
Car (OSRM)

[Reverse Directions](#)

Directions

Distance: 3.1km. Time: 0:08.

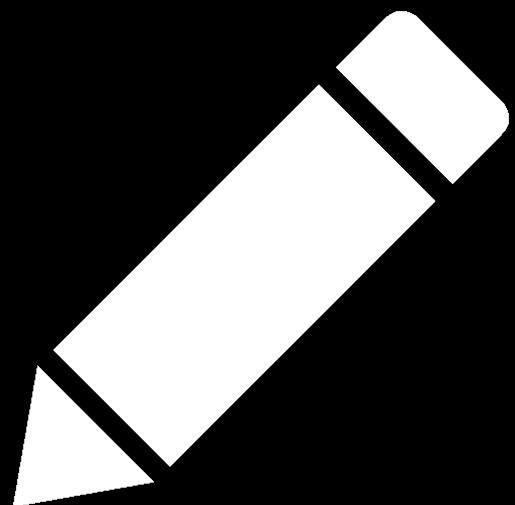
- ↑ 1. Start on **Elf-Julistraat** 180m
- 2. Turn right onto **Koningin Elisabethlaan (R30)** 130m
- ↓ 3. U-turn along **Koningin Elisabethlaan** 400m
- ↑ 4. Continue on **Gulden-Vlieslaan (R30)** 700m





What is OpenStreetMap?

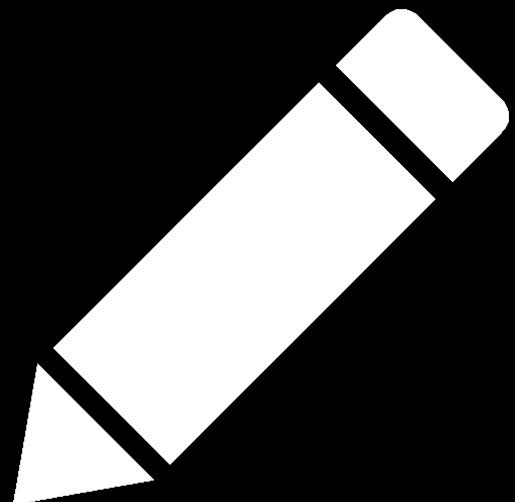
Freedom to add data



Freedom to add data

- As long as it is *verifiable on the ground*
- As long as it is *somewhat permanent*
- As long as no *copyright* is infringed

Go add your specific needs!



28

active pieces of software
to edit OpenStreetMap with
as of dec '20

(and around 15 deprecated)

Creating an account

Login

Don't have an account? [Register now](#)

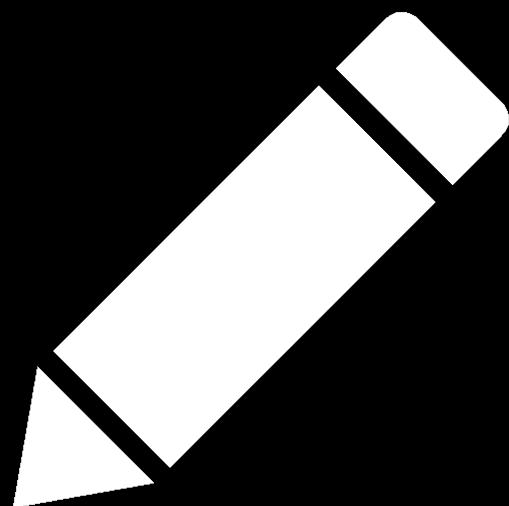
Email Address or Username:

Password:

[Lost your password?](#)

Remember me

Login



Creating an account

Sign Up



Email Address:

Confirm Email Address:

Your address is not displayed publicly, see our [privacy policy](#) for more information

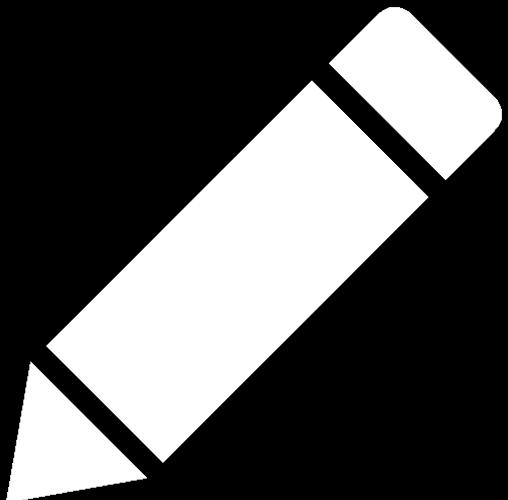
Display Name:

Your publicly displayed username. You can change this later in the preferences.

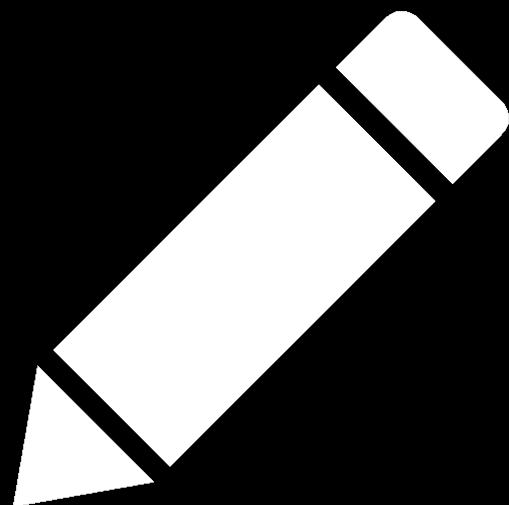
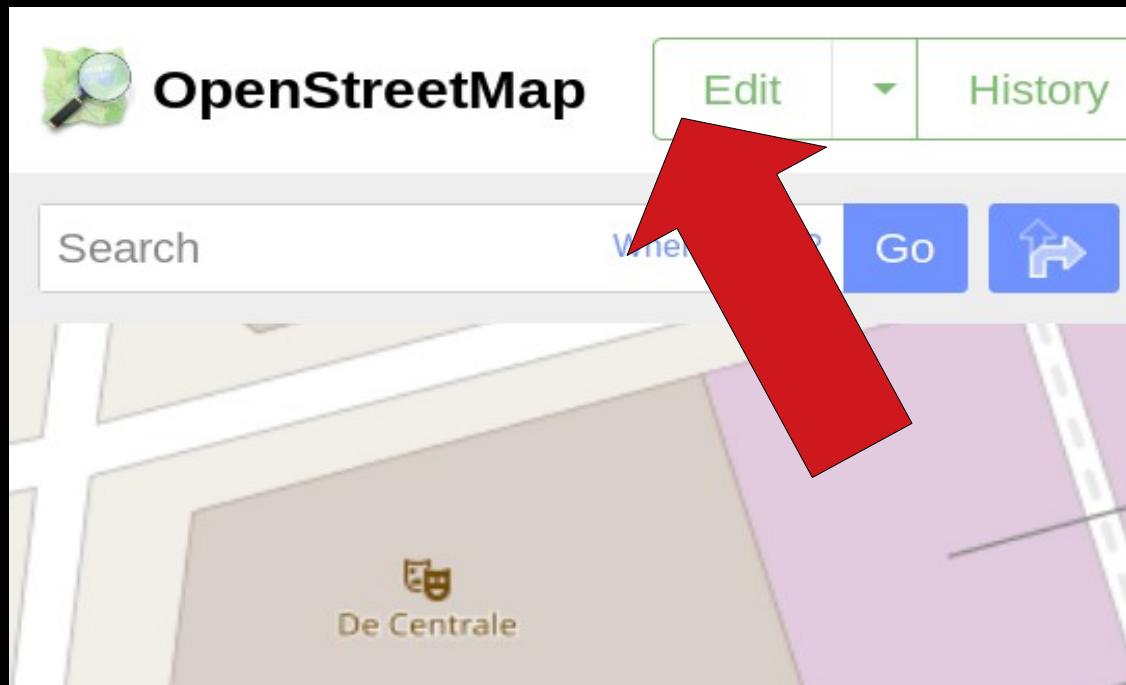
Password:

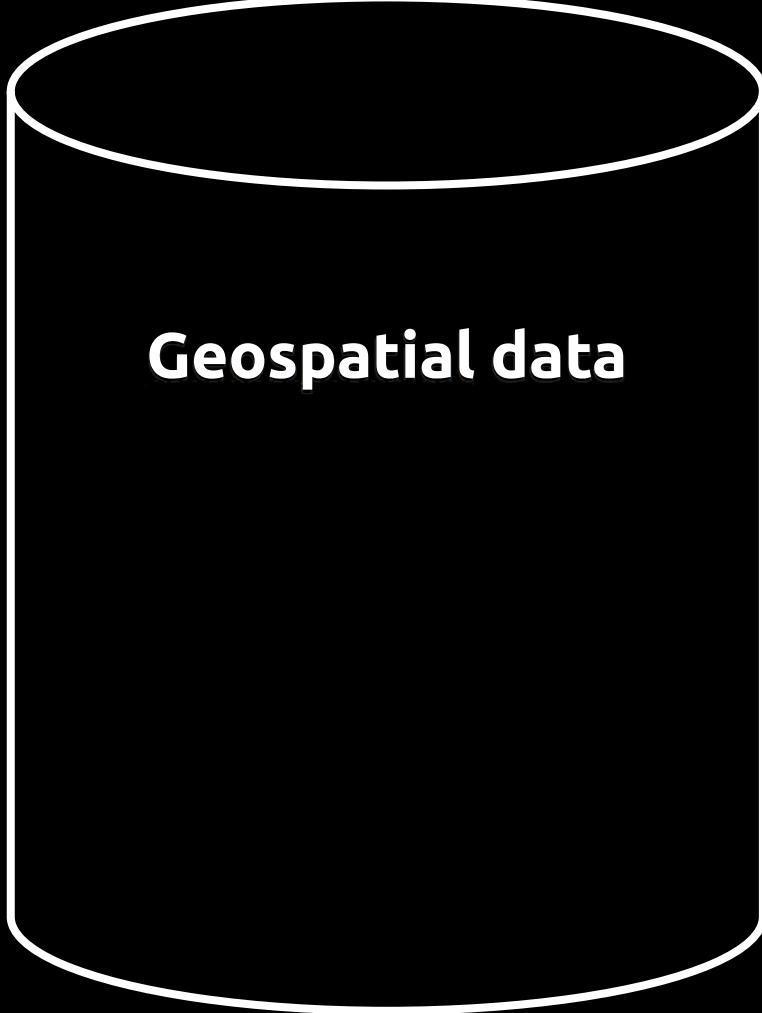
Free and editable
Unlike other maps, OpenStreetMap is completely created by people like you, and it's free for anyone to fix, update, download and use.

Sign up to get started contributing. We'll send an email to confirm your account.



Creating an account





Geospatial data



Geospatial data

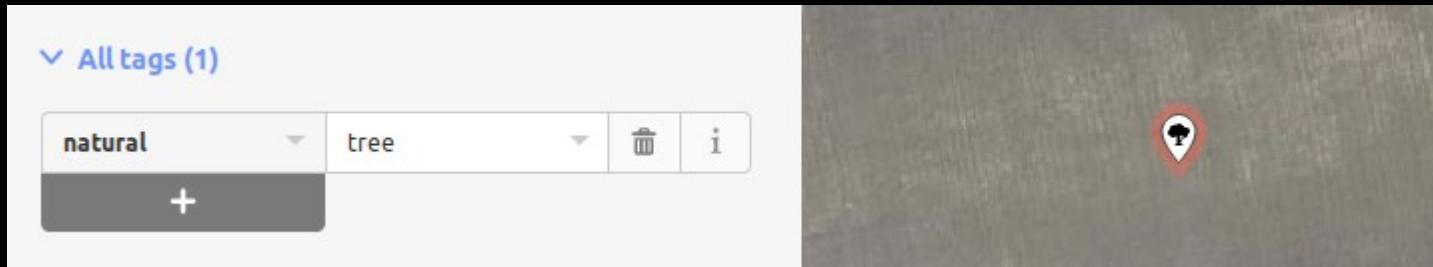
Lines and dots

+

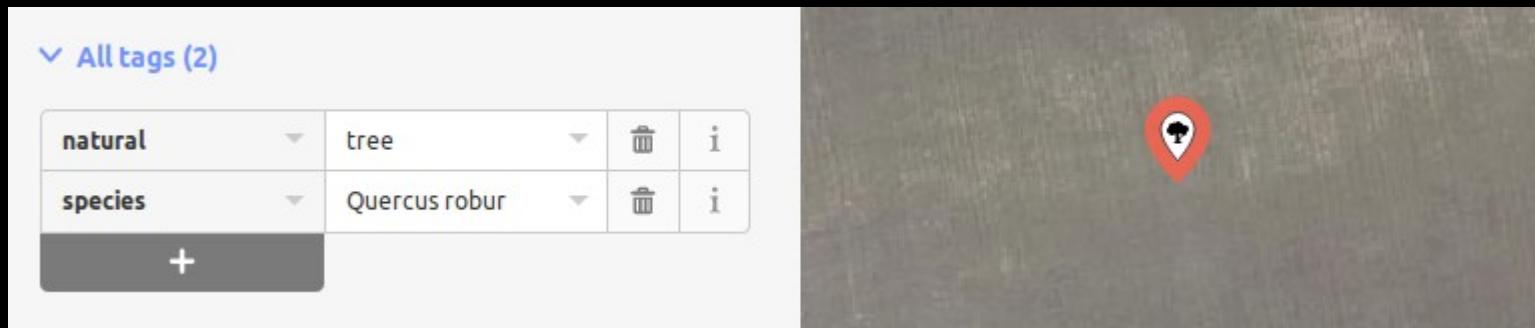
**Some information
on each line and dot**



Tags (attributes)



Tags (attributes)



Tags (attributes)

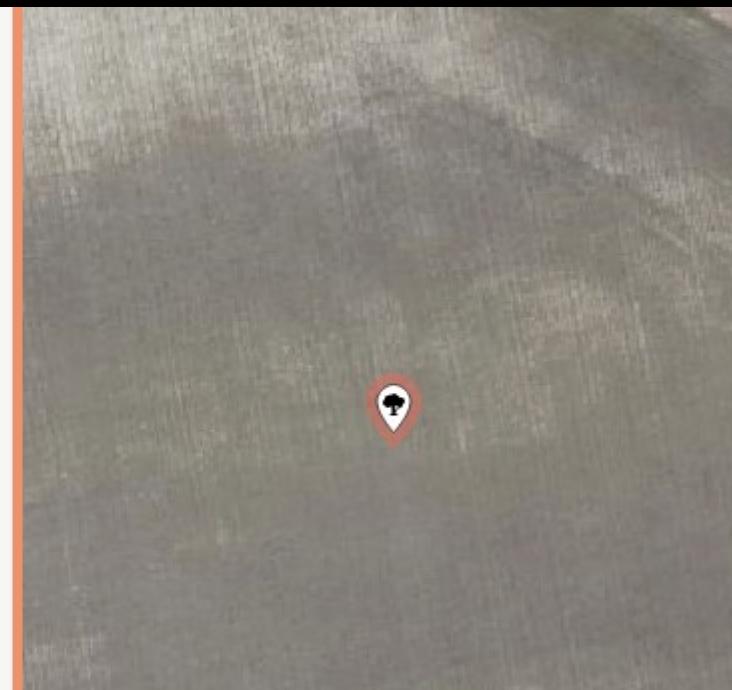
The property we are
describing (Key)

The value of the property
(Value)

All tags (8)

height	100
heritage	yes
heritage:operator	Ergoedcel Brugge
heritage:ref	681
natural	tree
species	Quercus robur
start_date	1812-12-01
width	2

+



Euhm...

I don't know any of those tags

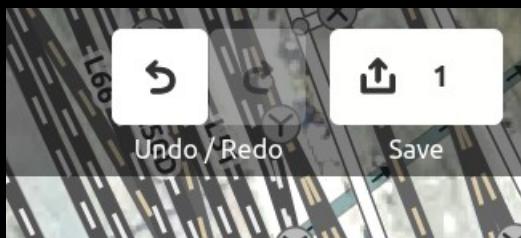
- A tremendous lot is known by the editor
- Something special: have a look on wiki.osm.org
- Ask the community (of the country where you are mapping)
- Still no answer? Invent something, in collaboration with the community



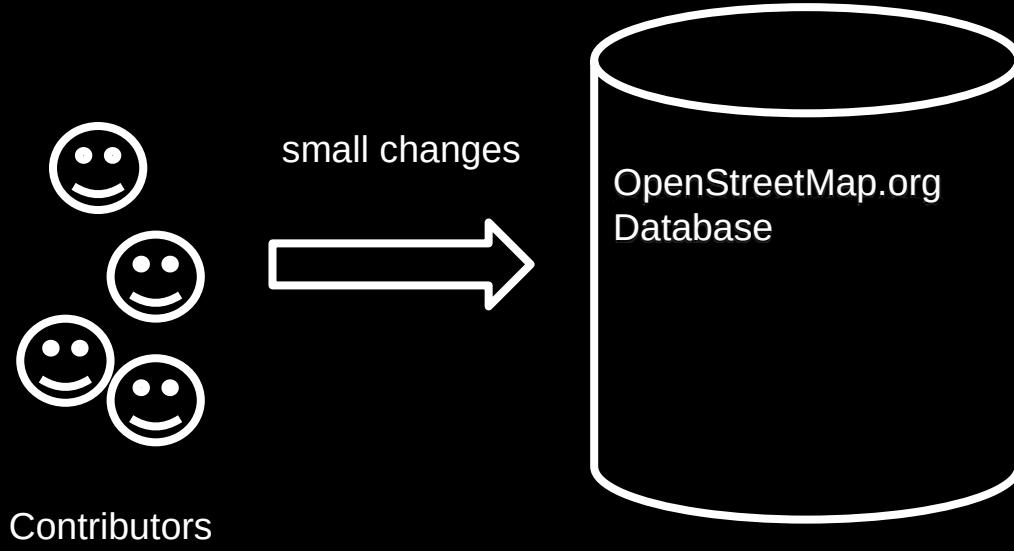
Editing (attributes)

**While editing on osm.org:
don't forget to click 'save' to actually
upload.**

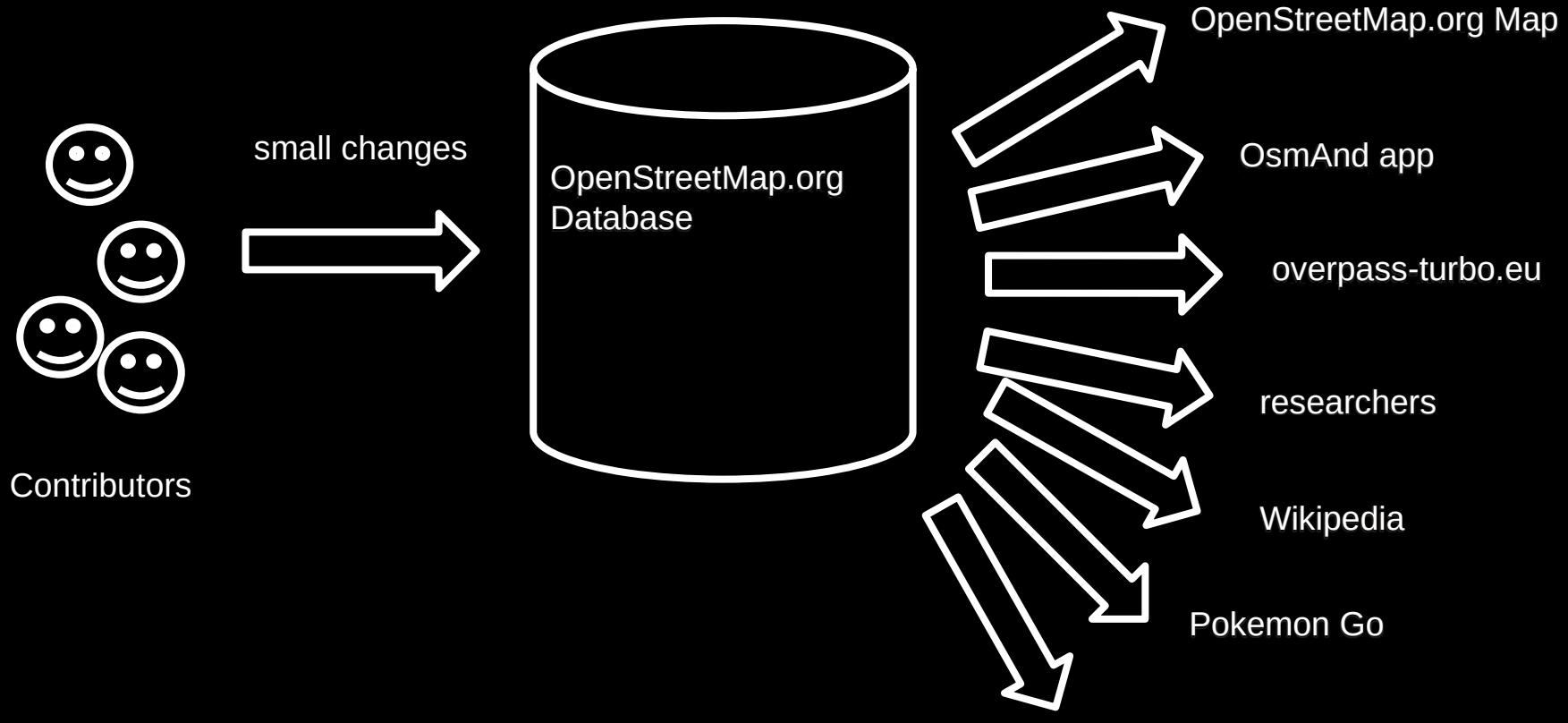
This creates a 'changeset' (~commit)



Dataflow



Dataflow





What is OpenStreetMap?

Crowdsourced

BeCentral

Go



Search Results



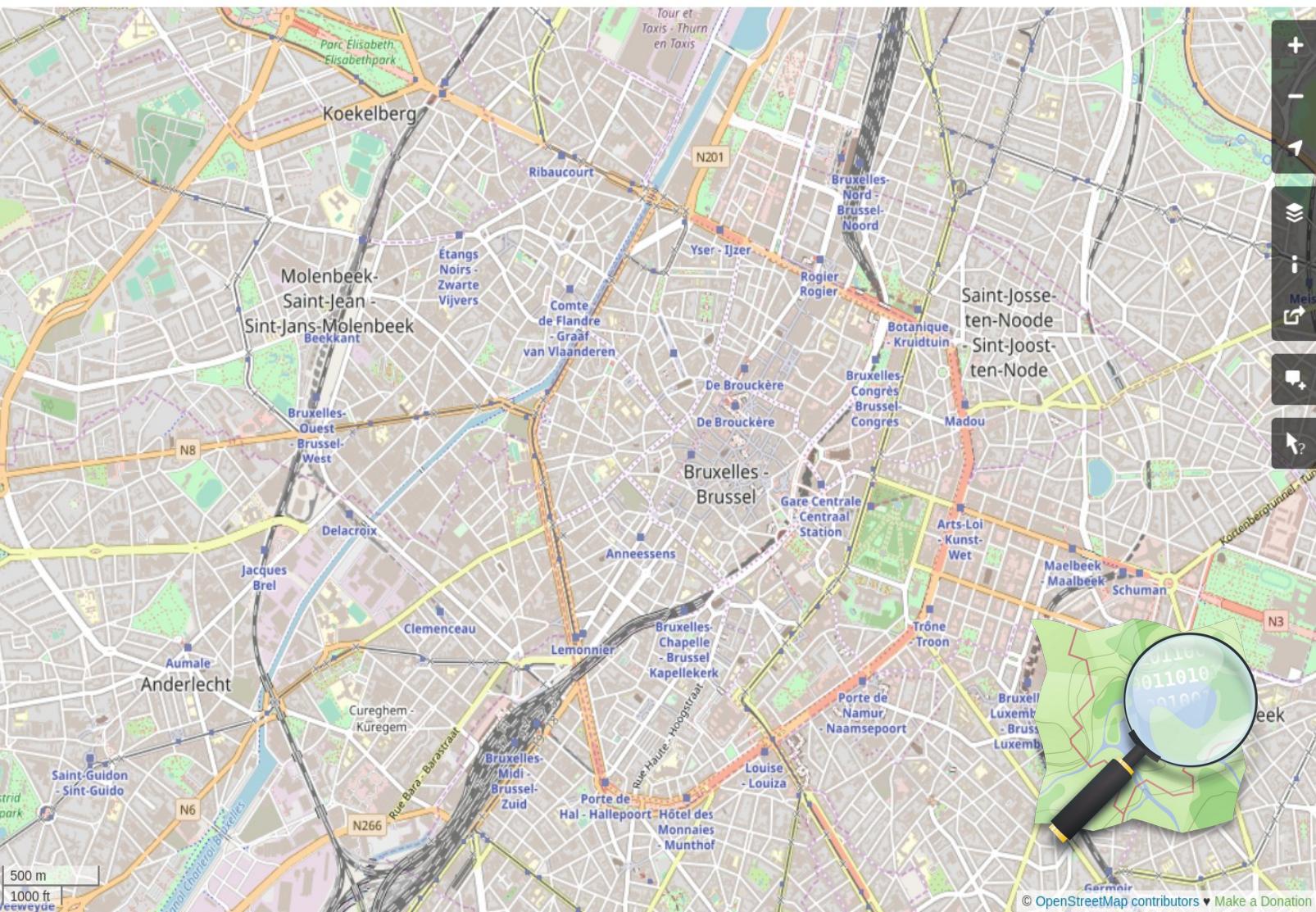
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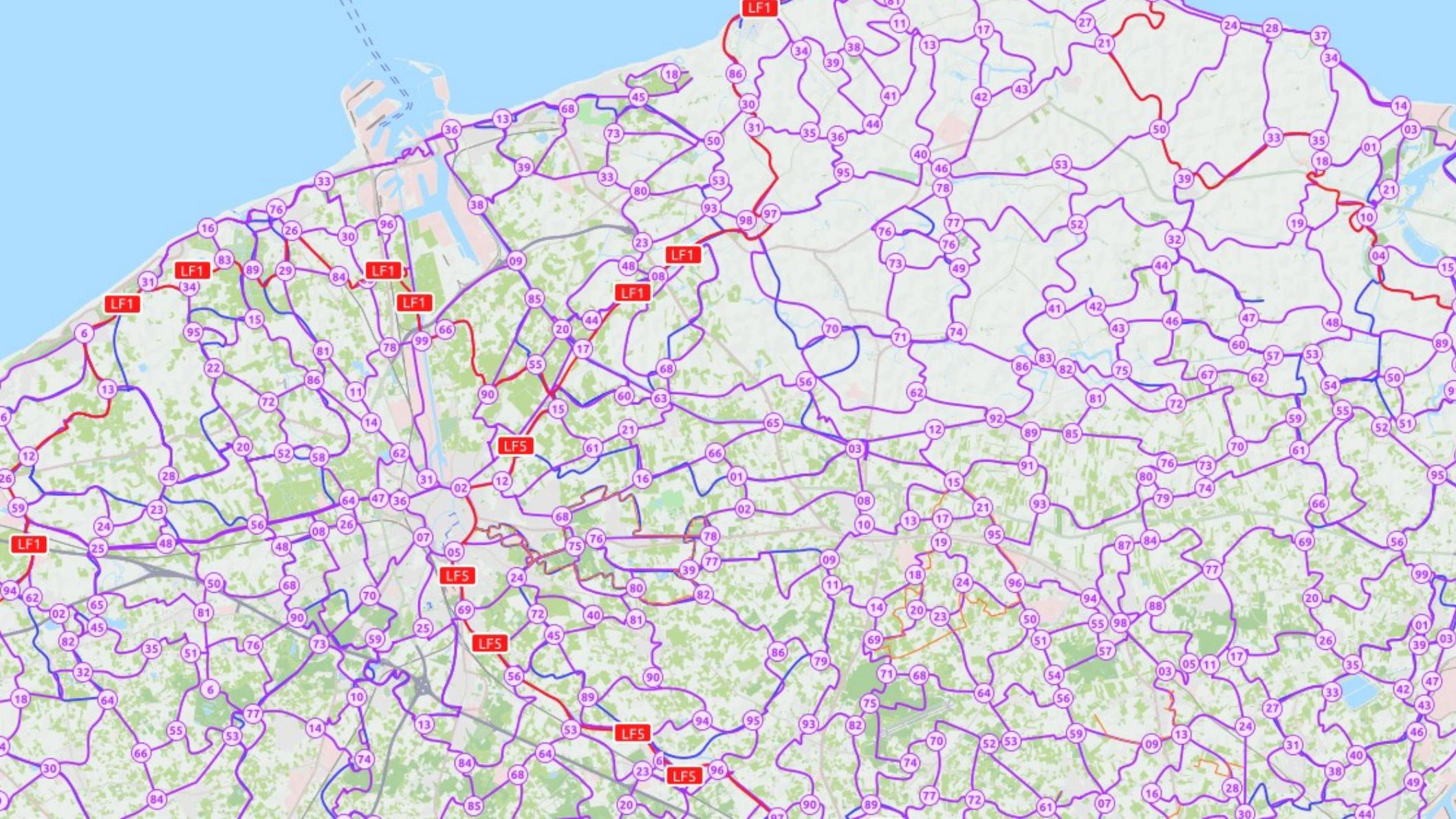
Coworking space BeCentral, 10, Cantersteen - Kantersteen, Quartier du Centre - Centrumwijk, Brussels, Ville de Bruxelles - Stad Brussel, Brussels-Capital, 1000, Belgium

[More results](#)

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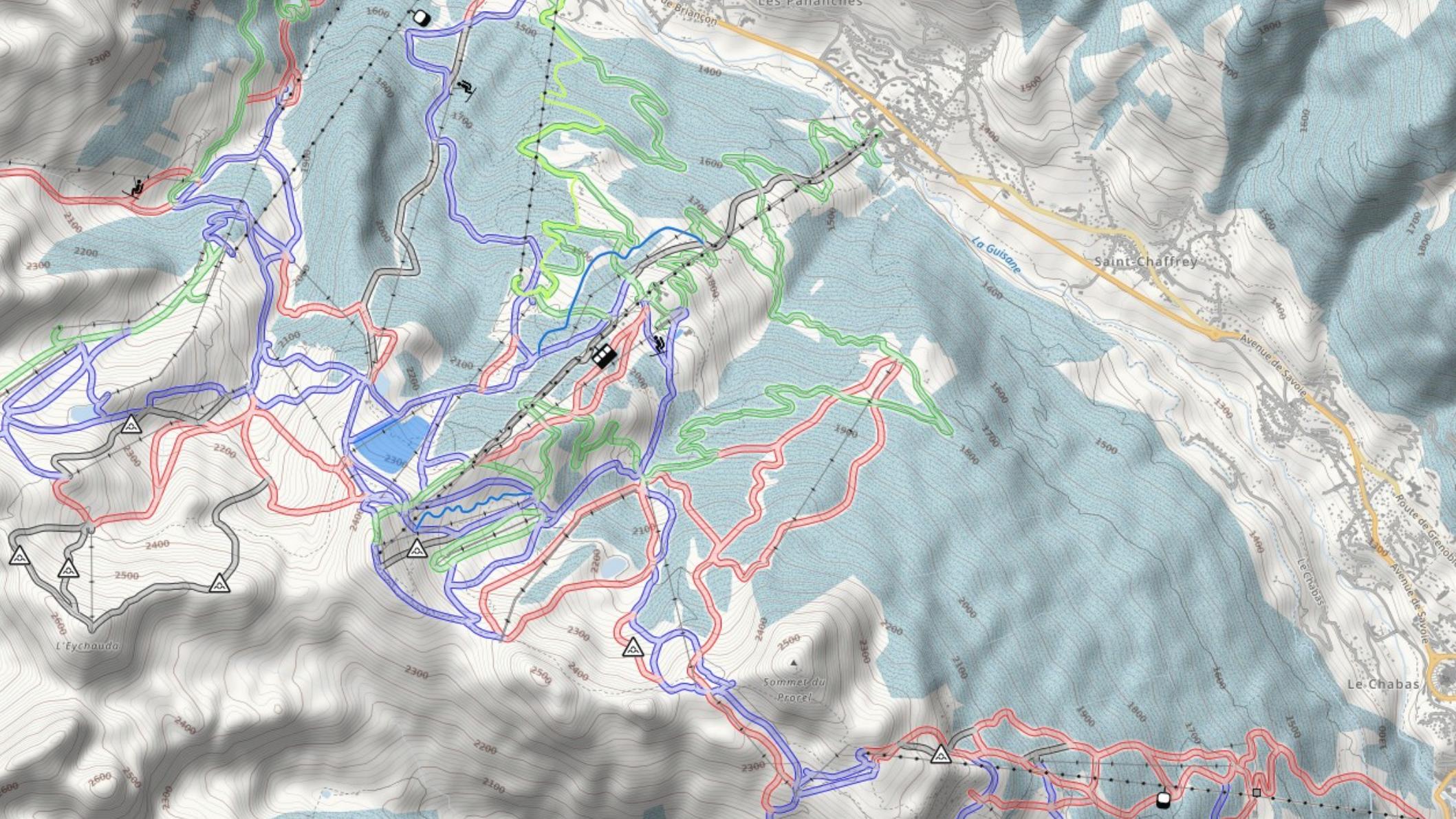




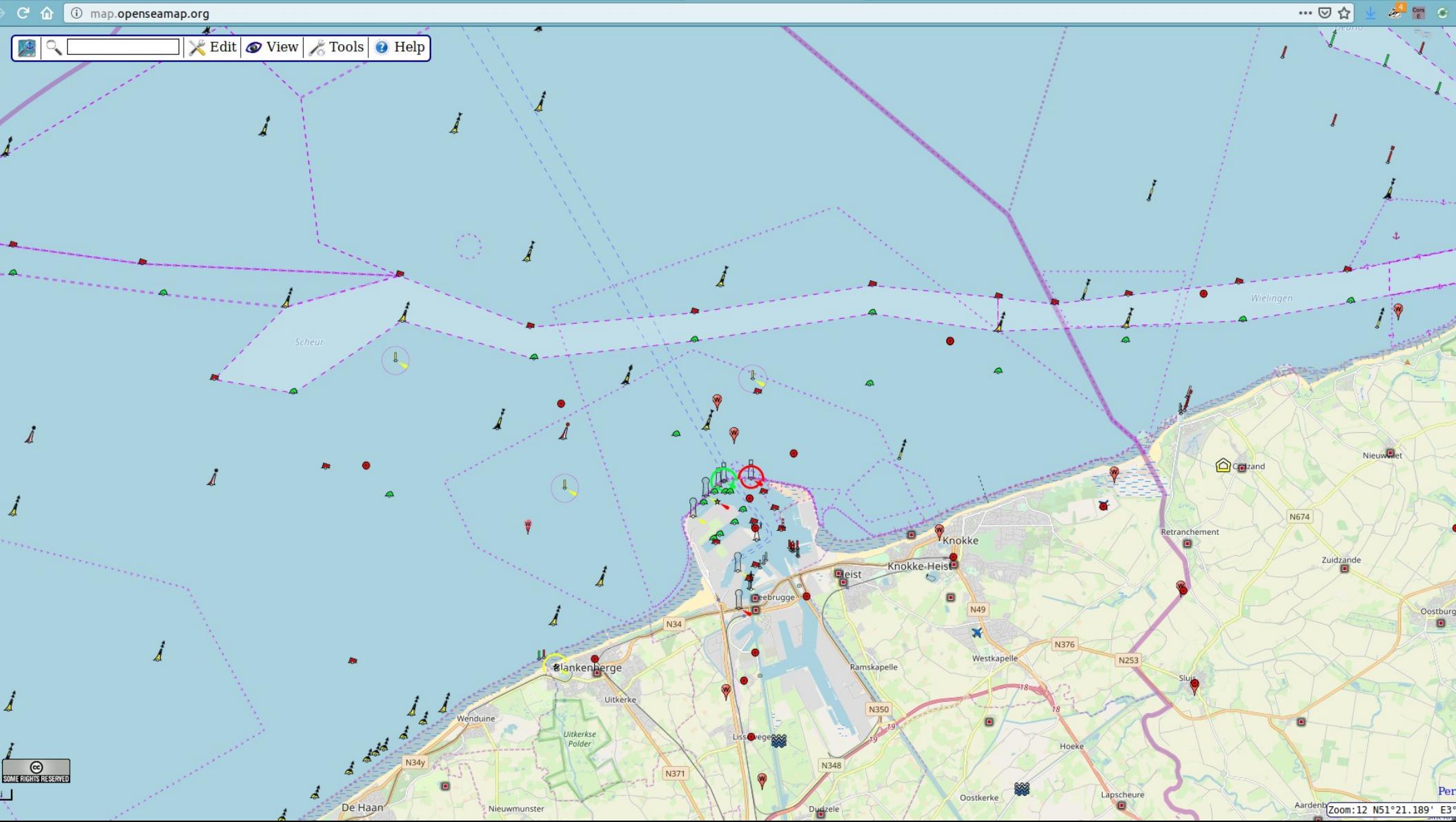


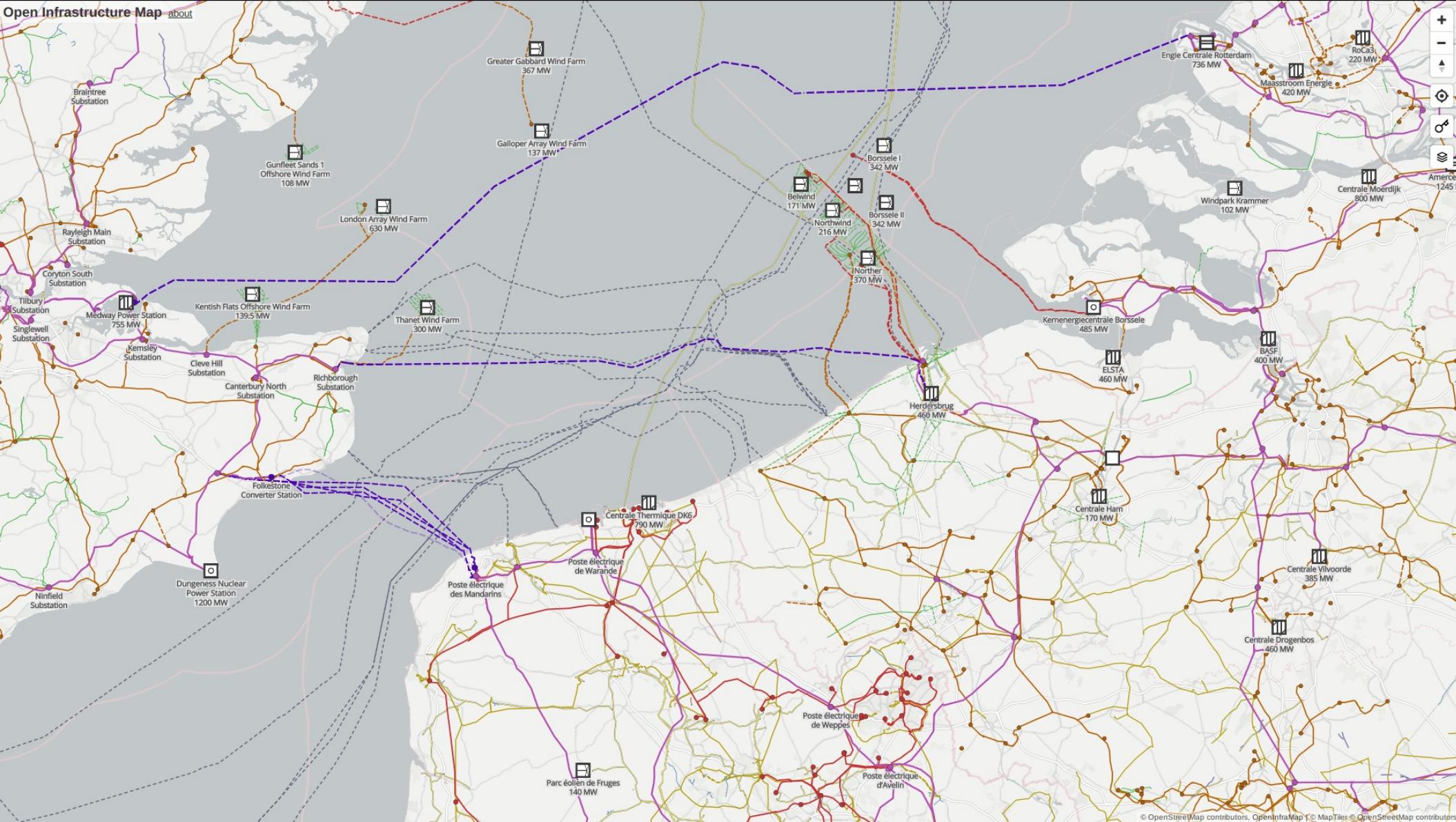
200 m

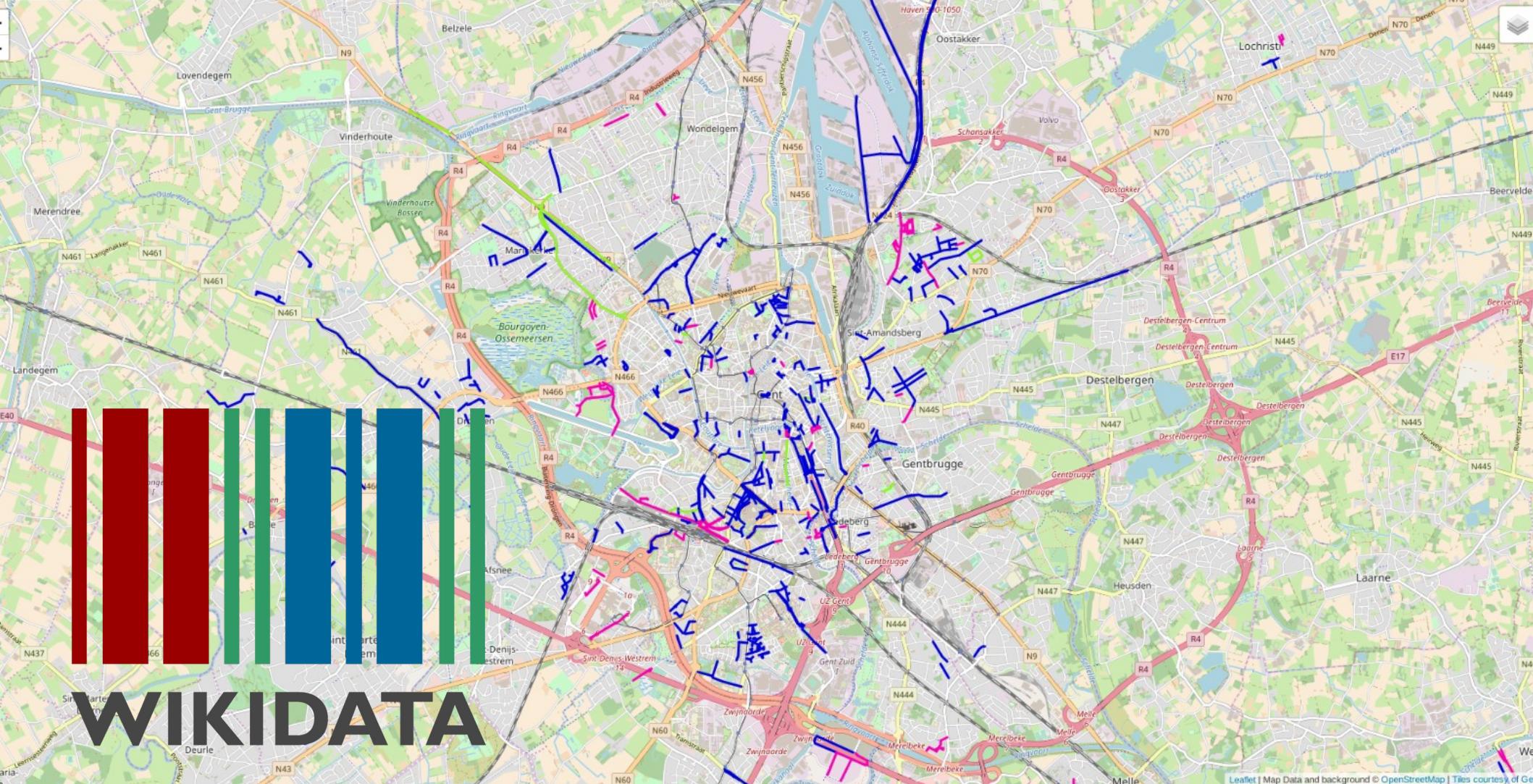
Leaflet © OpenStreetMap contributors Data:ODbL, Map:cc-by-sa











WIKIDATA

le: 1252 (79%)

Male: 1252 (75%)

known: 142 (Mostly things not named after a human + few cases where gender of the person is not known)





MEDECINS SANS FRONTIERES
DOCTORS WITHOUT BORDERS





Instructions

Entities to map

Buildings and Roads

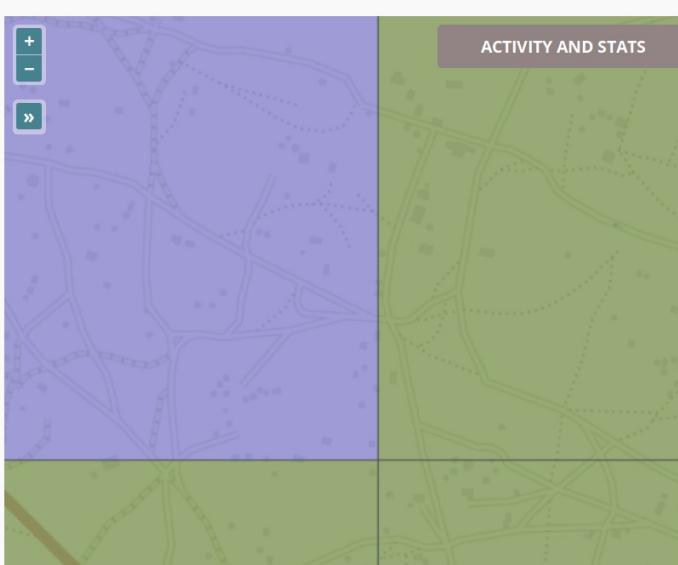
Changeset Comment

#hotosm-project-4341 #MissingMaps #EliminateMalaria #Botswana

Imagery Notes

- Please use Bing Aerial Imagery, which is the newest available imagery.
- Align buildings/infrastructure to the imagery in each task. In some cases, you may move mapped objects to match up other mapping done in the near by areas.

Project Specific Mapping Notes



Saving lives

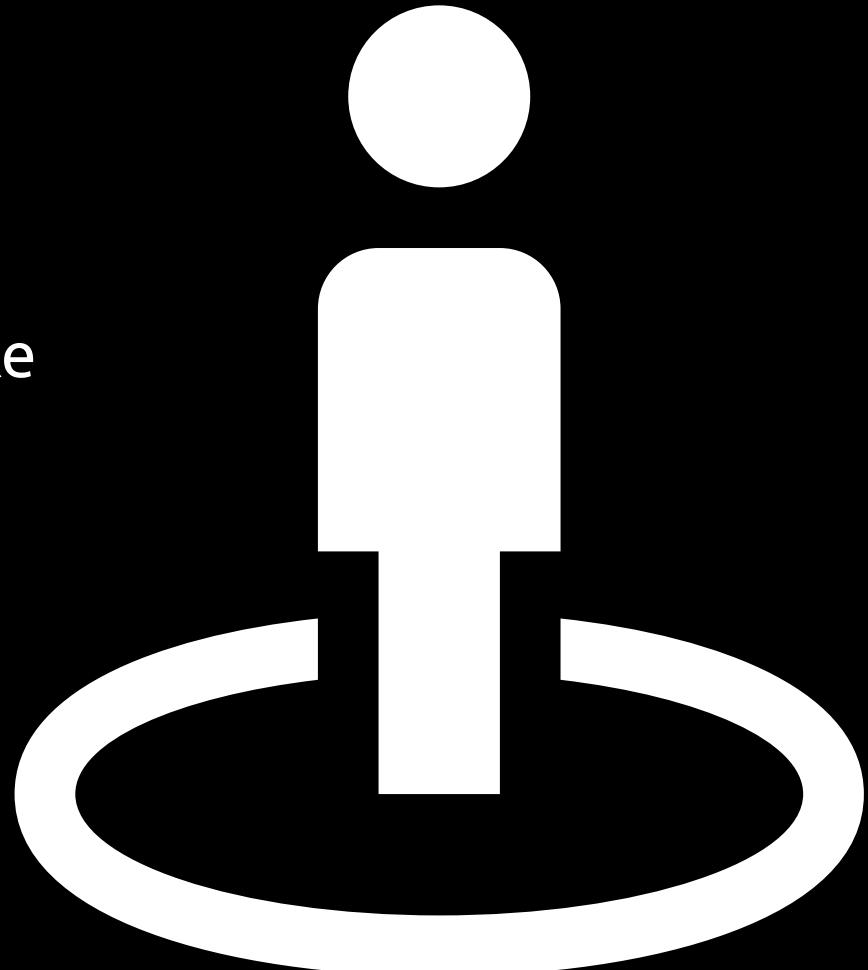


What is OpenStreetMap?

A license: ODbL

Open Database License

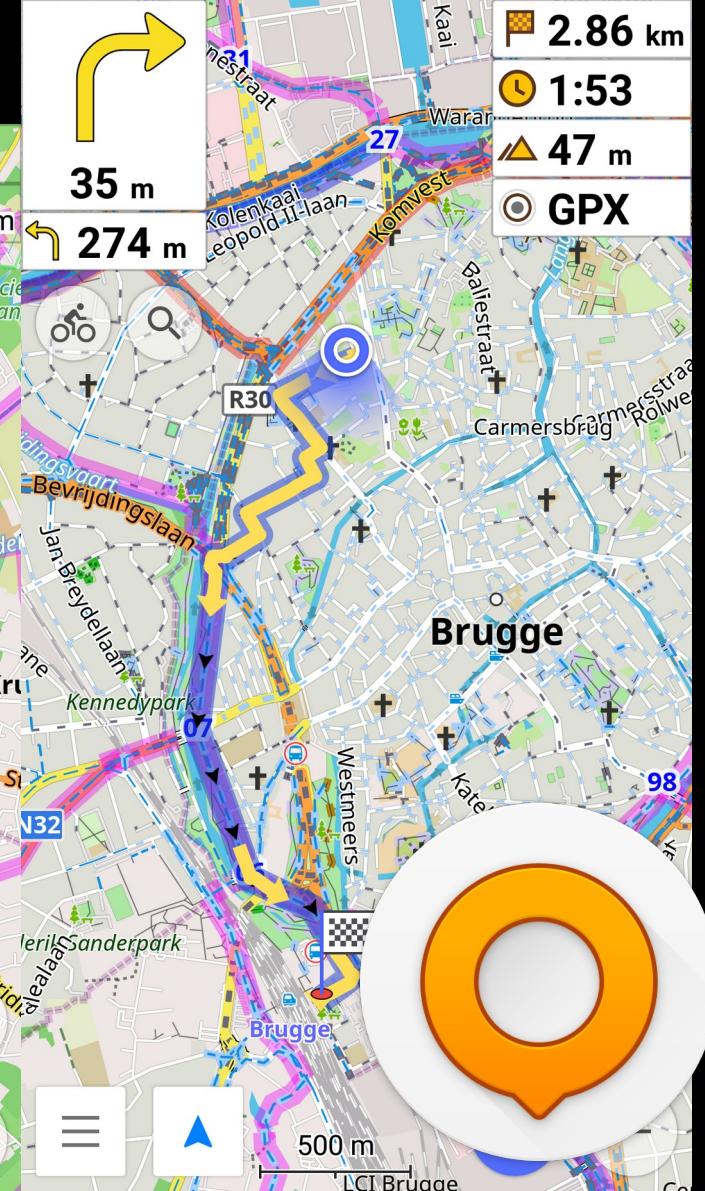
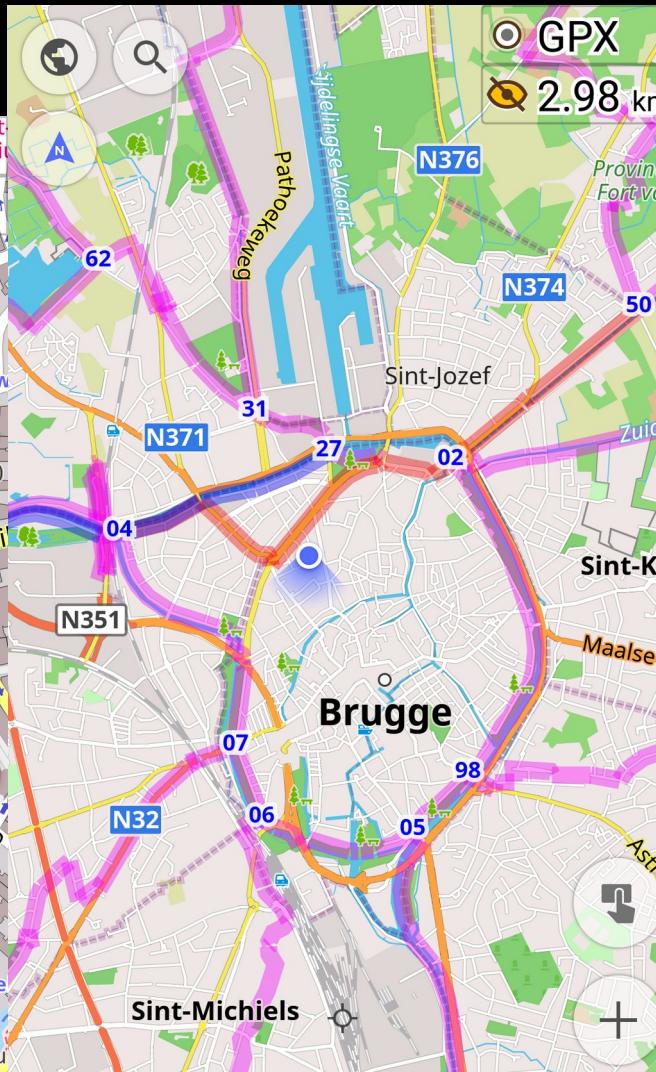
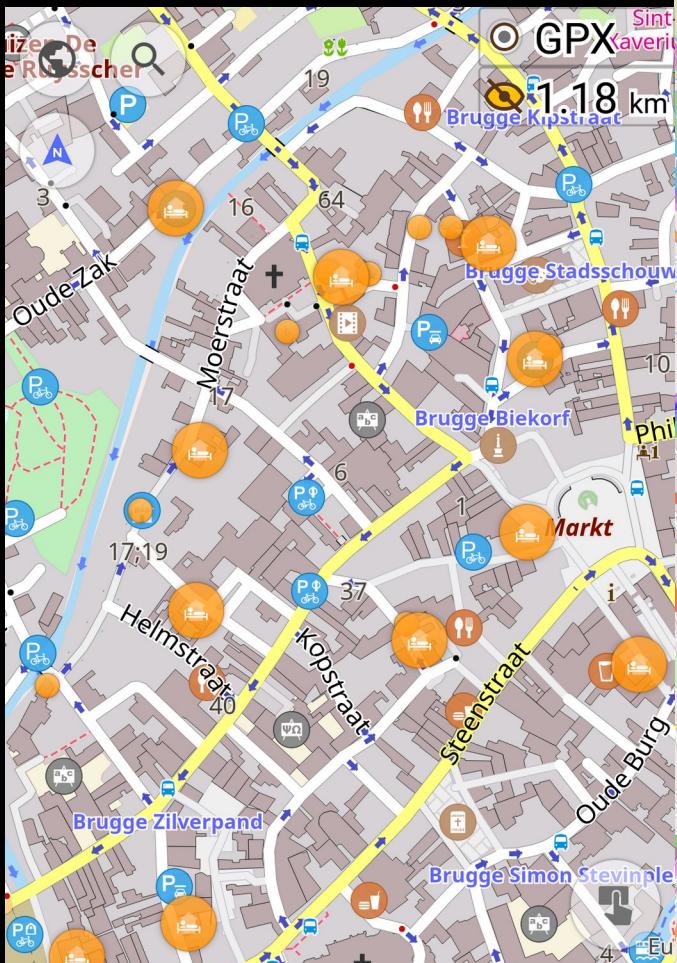
You can use the data how you like
as long as you give **attribution**
and keep the data open



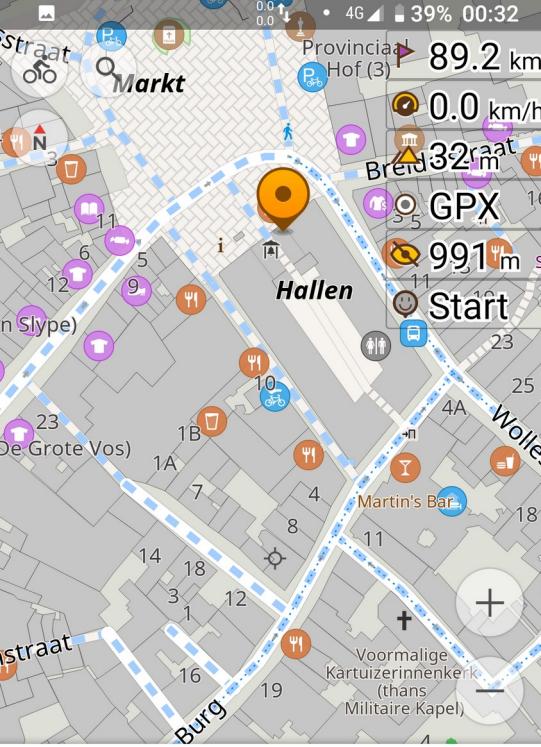
Tons of apps, tools and websites, ...

- Big and sometimes confusing ecosystem
- Tools and businesses grow (and sometimes die)
- An overview of the most important ones are here

OsmAnd



OsmAnd

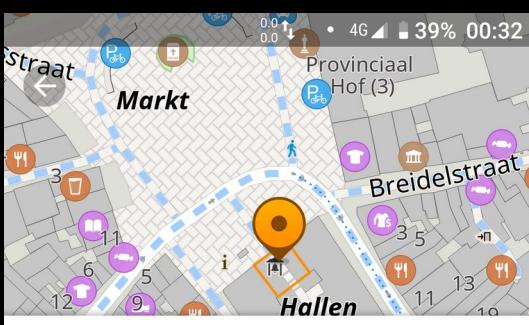


Belfry of Bruges

Wikipedia: Hallen, Brugge-Centrum

▼ 885 m

[READ ARTICLE](#)



Belfort

Tower: Hallen, Brugge-Centrum

Open from 09:30 • ▾ 888 m



Add



Marker



Share



Actions

[COLLAPSE](#)

[DIRECTIONS](#)

Historic_Yes
yes

Mon-Sun 09:30-18:00

Description
Belfort-Hall of Halleoren

Height
83

Fee
€10/adult;€8/senior (>)

Alt_name
Halleoren

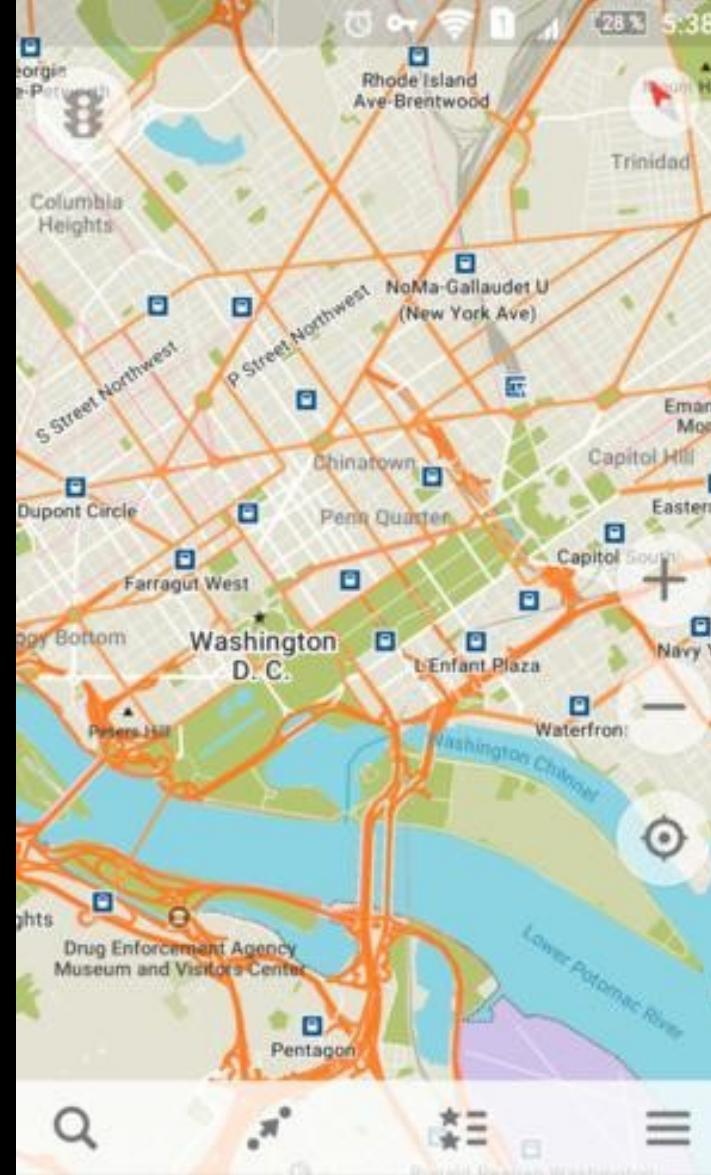
Belfry of Bruges

The **Belfry of Bruges** (Belfort van Brugge) is a [medieval bell tower](#) in the centre of [Bruges, Belgium](#). One of the city's most prominent symbols, the belfry formerly housed a treasury and the municipal archives, and served as an observation post for spotting fires and other danger. A narrow, steep staircase of 366 steps, accessible by the public for an entry fee, leads to the top of the 83 m (272 feet) high building, which leans 87 centimeters to the east.

To the sides and back of the tower stands the former market hall, a rectangular building only 44 m broad but [READ FULL ARTICLE \(ONLINE\)](#) courtyard. The belfry, accordingly, is



Organic Maps



On paper: maposmatic

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Search for a map

Welcome to MyOSMatic

This is a free software web service that allows you to generate maps of cities using OpenStreetMap data. The generated maps are available in PNG, PDF and SVG formats and are ready to be printed.

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[Learn more](#) [Create a map »](#)



Plain Layout

Platform status

All systems are operational.

✓ The rendering daemon is running.

✓ The GIS database is online and up to date, updated 0 minutes ago.

✓ The Waymarked route database is online and up to date, updated 2 minutes ago.

Latest news

- Coming soon: multi file uploads published 1 week, 2 days ago
- Upcoming: new papersize form step published 3 weeks, 4 days ago
- Data area bounds revisited published 1 month ago
- Custom paper size choice published 1 month ago

MapOSMatic is a free software webservice to generate maps of cities using OpenStreetMap data.

hartmut@php.net [irc://irc.freenode.net/#maposmatic](#)

[Privacy statement](#)

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« 1 2 ... 4209 4210 »

Maps

North Shore

Bounding Box

49°31'17"N, 123°25'38"W ↘ 49°16'36"N, 122°48'31"W (ca. 44 x 27 km²)



plain

OpenTopoMap

at 1264x844 mm²

Canada

omitted Feb. 26, 2020, 1:38 a.m.

started Feb. 26, 2020, 1:38 a.m., after 0 minutes in the queue

Feb. 26, 2020, 1:41 a.m., after 2 minutes

[Recreate](#)



hüringen

»x 51°16'10"N, 10°0'57"E ↘ 51°10'36"N, 10°15'19"E (ca. 16 x 10 km²)



plain

StreetsWithoutNames

at 594x420 mm²





<https://demo.f4map.com>

Search a place...



3D



10m

F4map © F4

Map data © OpenStreetMap contributors (updated 2 minutes ago) Credits

Discover our solutions



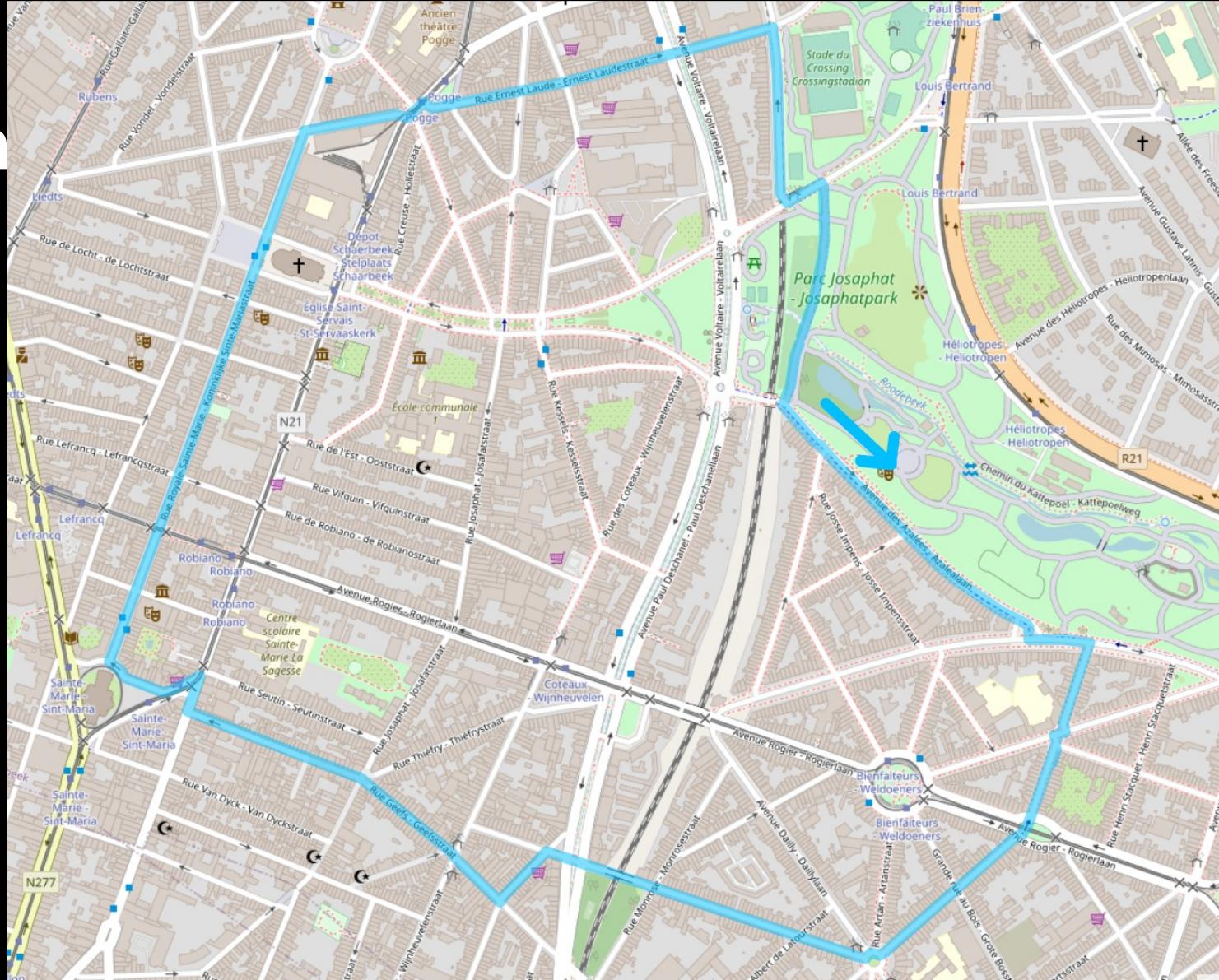


Umap.openstreetmap.fr

- Ideal to add geodata *not* suited for OSM itself
 - Preparing an event
 - Planning an outing
 - ...



UMa



Mobilité - Forest

Cette carte reprend toutes les informations relatives à la mobilité à Forest. 11.531 weergaven DELEN

Vélo / Fiets - parkings

Vélo / Fiets - Stations de réparation / r...

- Station Mystère
- Station Van Haelen
- Station Saint-Denis / Sint-Denijns
- Station Bempt
- ... Nog 6 meer

Villo

Voitures partagées

Zone 30

Services vélo à BXL | Fietsdienst...

177 weergaven
Alle wijzigingen opgeplaatst in Drive

Laag voorveer Delen Voorbeend weergaven

BUY A SECOND-HAND BIKE

- Best Bike Brussels
- Bike Bruxelles
- CityBike
- Cyclo
- Cyclo Atelier
- Cyclo Atelier Boekelyst
- Dover Bike
- Hot Wheelz - 55 Bike Distrib...
- La Pouderie ASBL / Emmala
- Magic Vélos
- QONKOM
- Vélocity
- velosofiet

BUY A NEW BIKE

- Ahooga House
- Morning Cycles
- Bike Avenue
- Biketastic
- Best Bike Brussels
- Au Guilde Vert
- Cyclo Europe

HOME

TOT UW DIENST

A > Z

- Aanvragen en documenten
- Bouwen en renoveren
- Duurzame ontwikkeling
- Leefmilieu
- Energie
- Handel
- Huisvesting
- Kinderen
- Mobiliteit**
- Onderwijs
- Openbare reinheid
- Openbare ruimte
- Sociaal
- Tewerkstelling

U bent hier: Home / Tot uw dienst / Mobiliteit / Met de fiets / Openbare fietspompen

Openbare fietspompen

Fietsboxen, fietsbogen, fietsstraten, fietsherstelpunten, fietspompen,... Qua fietsinfrastructuur kan Jette ondertussen uitpakken met een indrukwekkend arsenaal aan voorzieningen ten behoeve van de fietser.

De openbare fietspompen op het Jetse grondgebied vind je op volgende locaties:

- **Woestelaan, Onze-Lieve-Vrouwvoordeplein:** voor de Onze-Lieve-Vrouw van Lourdeskerk
- **Kardinaal Mercierplein:** aan de Franstalige bibliotheek*
- **Koningin Astridplein:** aan Theodor 108*
- **Jean-Louis Thysplein:** beneden aan de trap komende van de J. Neyberghlaan, voor de fietsbogen
- **E. de Grijsestraat:** op het pleintje van de school Aurora
- **Oude Afspanningsplein:** naast het Villo!-station
- **A. Gomandstraat:** aan de ingang van GC Essegem
- **Belgicalaan:** voor de ingang van metrostation Belgica aan de J.-B. Serkeynstraat
- **Amnesty Internationalplein:** naast de fietsbogen en de fietsbox
- **Boudewijnpark (fase 2):** naast het speelplein langs de E. Toussaintstraat

* Op deze twee locaties vind je ook telkens een overdekt fietsherstelpunt.

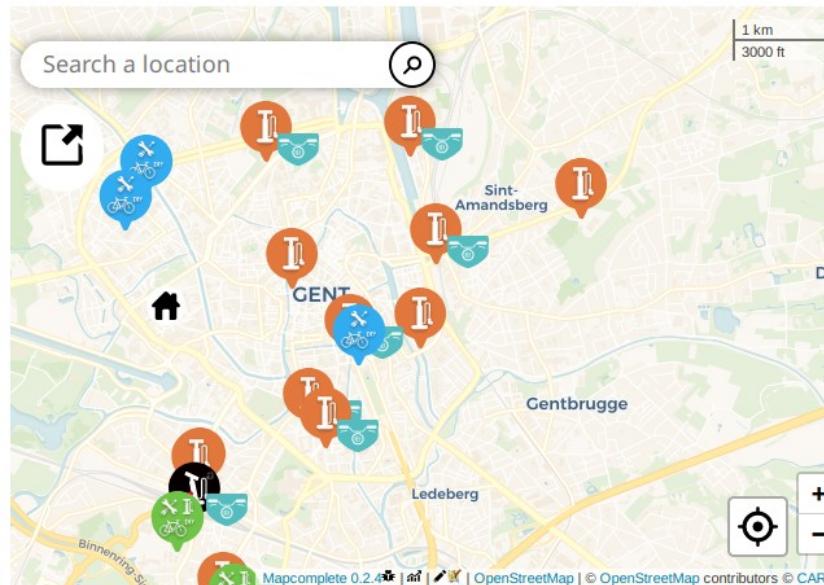
“In het kader van Fietsplan Brugge zetten we prioritair in op verbeterde fietsinfrastructuur door meer **veiligheid en comfort** te creëren. Op die manier kunnen we meer fietsers aantrekken op Brugs grondgebied”, zegt schepen van Mobiliteit Annick Lambrecht.

“We nemen dus initiatieven om het fietsen aangenamer en aantrekkelijker te maken. De aankoop van nieuwe publieke fietspompen, bovenop de acht al geplaatste fietspompen, passen perfect in de uitvoering van dit plan.”

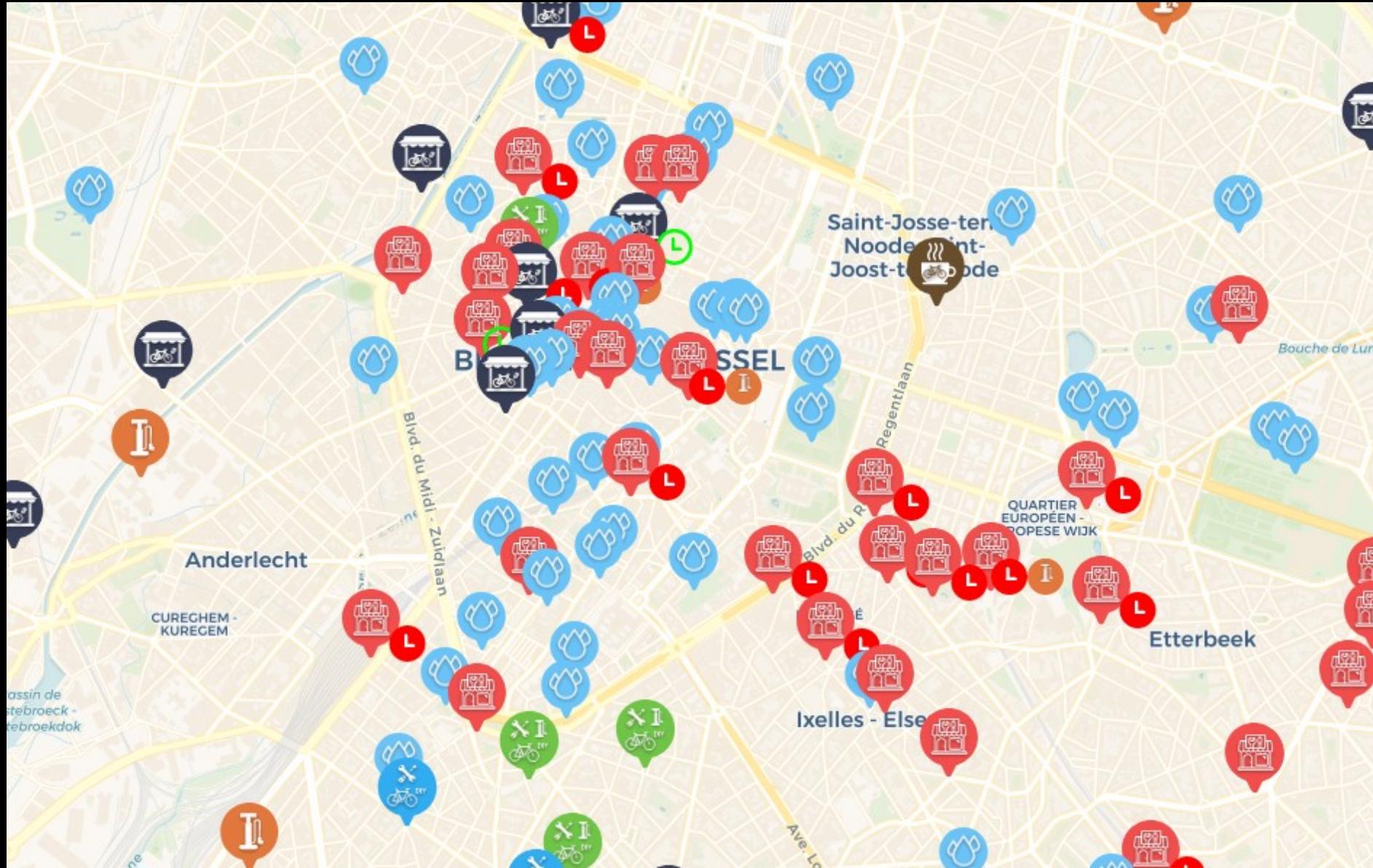
Een fietspomp in jouw buurt

Platte band? Geen probleem! In Gent kun je op verschillende plekken gebruik maken van een publieke fietspomp.

Vind een fietspomp in jouw buurt



Is er een fietspomp defect? Geef ons een seintje op info.defietsambassade@stad.gent of 09 266 77 00. We herstellen ze zo snel mogelijk.





Pieter Vander Vennet

136 ★8089 ↗ en ▾

Search a location



Add a point?

You clicked somewhere where no data is known yet.



Bike cafe

amenity=pub&pub=cycling



Bike repair/shop

shop=bicycle



Bike pump

amenity=bicycle_repair_station&
service:bicycle:tools=no&service:bicycle:pump=yes



Bike repair station and pump

amenity=bicycle_repair_station&
service:bicycle:tools=yes&service:bicycle:pump=yes



Bike repair station without pump

amenity=bicycle_repair_station&
service:bicycle:tools=yes&service:bicycle:pump=no



Drinking water

amenity=drinking_water

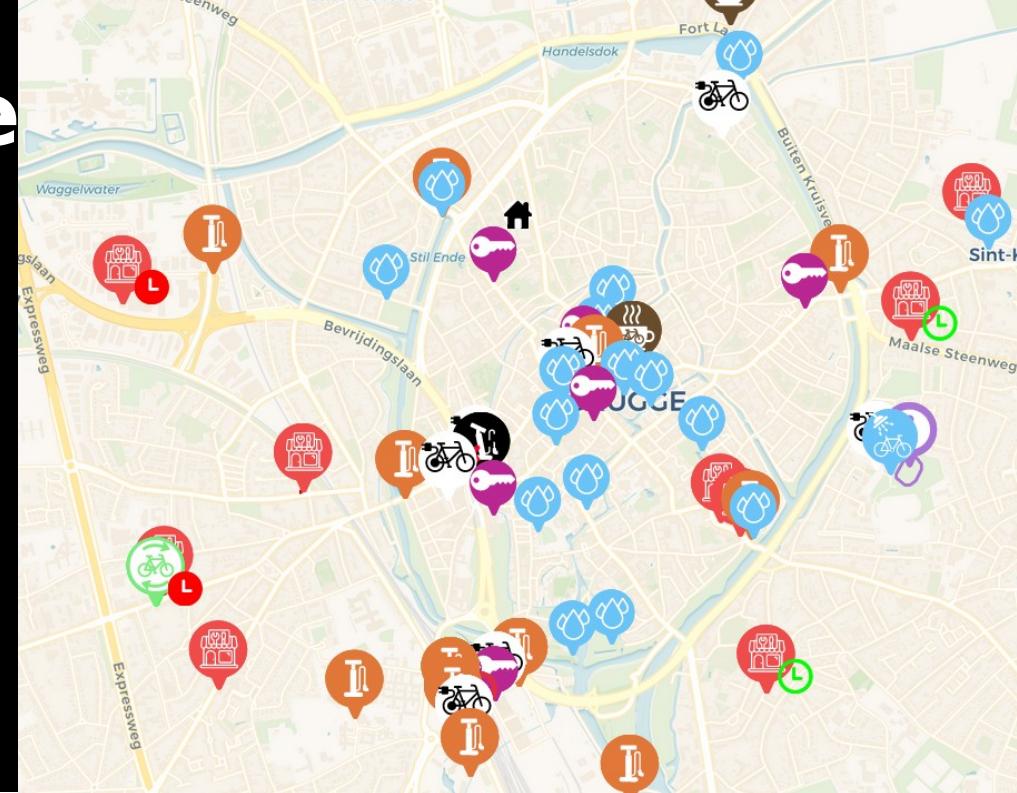
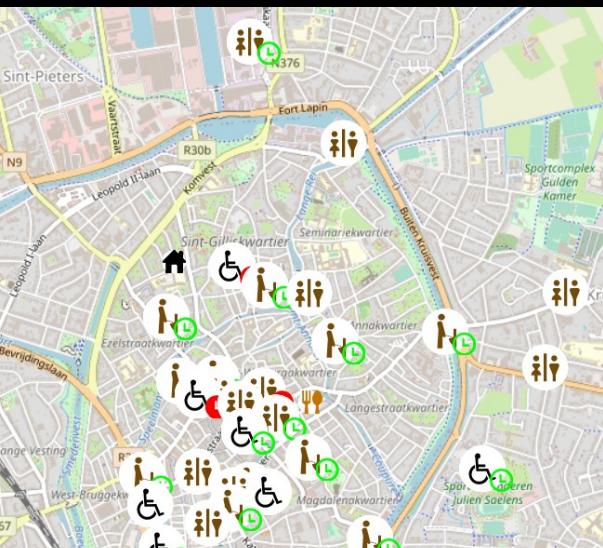
MapComplete.osm.be

MapComplete.osm.be

Website (PWA)

See features on a single topic

- Add and edit those features
- Excellent first contributor tool



Hydrants, Extinguishers, Fire stations, and Ambulance stations.

Map to show hydrants, extinguishers, fire stations, and ambulance stations.



Open Bookcase Map

A public bookcase is a small streetside cabinet, box, old phone boot or some other objects where books are stored



Open Toilet Map

A map of public toilets



Open AED Map

On this map, one can find and mark nearby defibrillators



Open Artwork Map

Welcome to Open Artwork Map, a map of statues, busts, graffiti and other artwork all over the world



Benches

A map of benches



Bicycle libraries



Campersites



Charging stations





Vormingplus MZW

@vormingplusmzw

Home

Posts

Like Share ...

Learn More

Send Message

Suggest Edits

About

FIND US

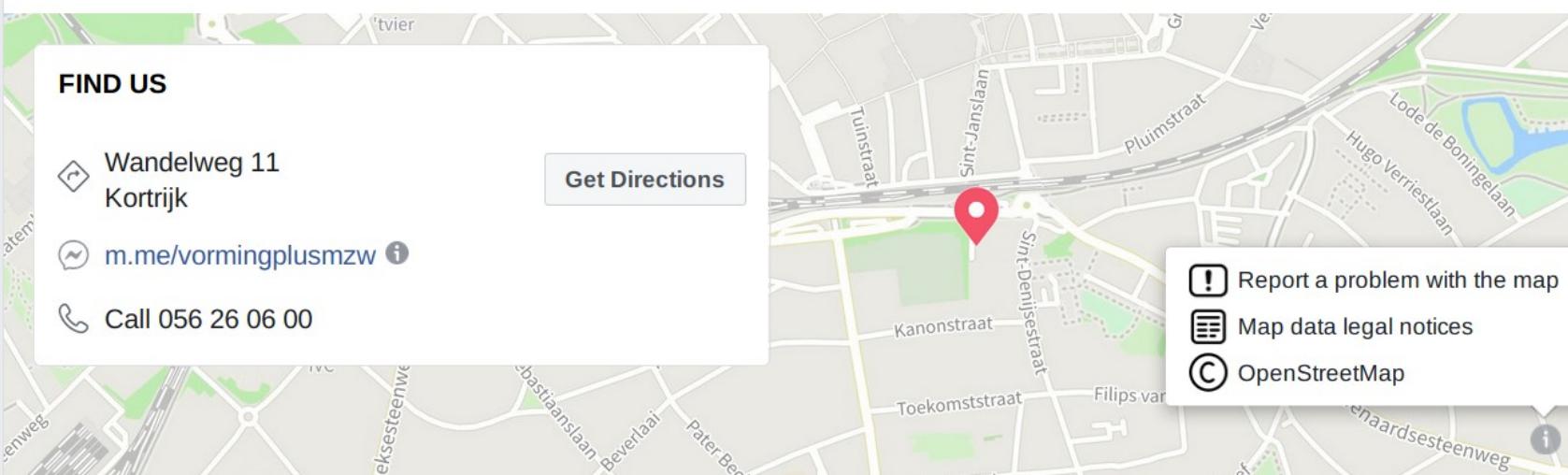
Wandelweg 11
Kortrijk

Get Directions

m.me/vormingplusmzw



Call 056 26 06 00



Report a problem with the map

Map data legal notices

OpenStreetMap

CULTUUR & MEDIA



Tim Pauwels
za 13 apr 2019 08:01

OMBUDSMAN **Hoe kaartenmakers soms beslissen in de plaats van journalisten**

Enkele kijkers en lezers contacteerden me over de kaart van Israël die recent door VRT NWS werd gebruikt. "Zijn de Golanoogten nu ineens gewoon een deel van de staat Israël?"

Meest gelezen

CORONAVIRUS COVID-19

Szell, M. (2018). Crowdsourced Quantification and Visualization of Urban Mobility Space Inequality. *Urban Planning*, 3(1), 1-20. doi: <http://dx.doi.org/10.17645/up.v3i1.1209>

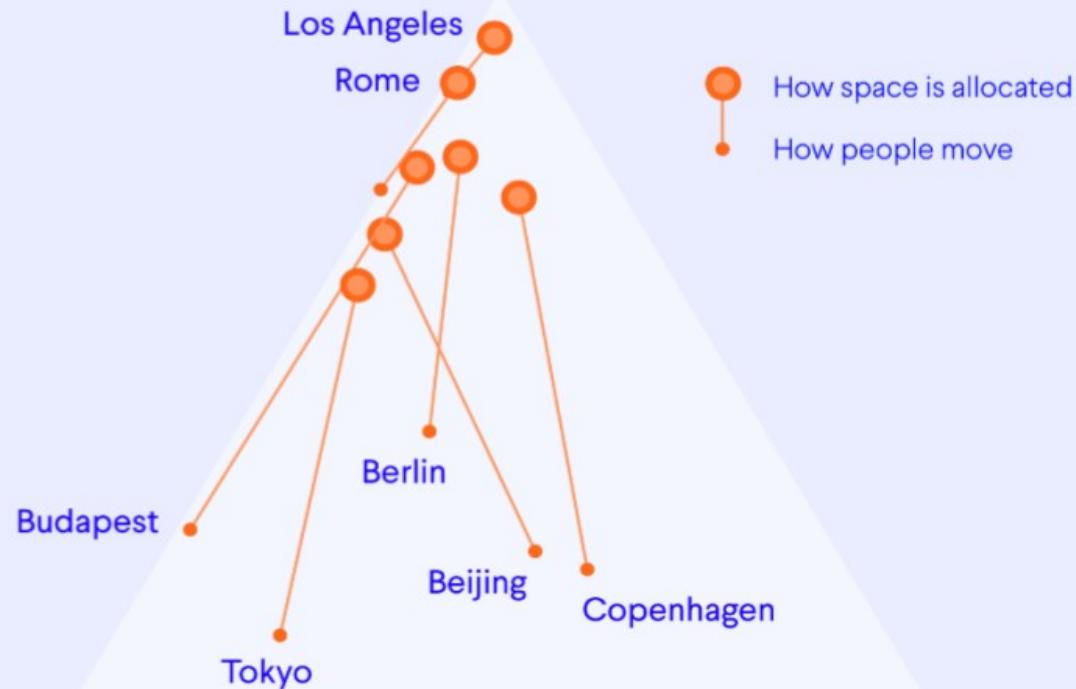


Figure 4. The mobility triangle expresses visually the discrepancy between mobility space distribution (“How space is allocated”) and modal share (“How people move”) as a connected pair of dots in a ternary plot, shown for seven selected cities.



On paper: maposmatic

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Search for a map

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- Data area bounds revisited published 1 month ago
- Custom paper size choice published 1 month ago

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hartmut@php.net [irc://irc.freenode.net/#maposmatic](#)

[Privacy statement](#)

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Maps

North Shore

Bounding Box

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plain

OpenTopoMap

at 1264x844 mm²

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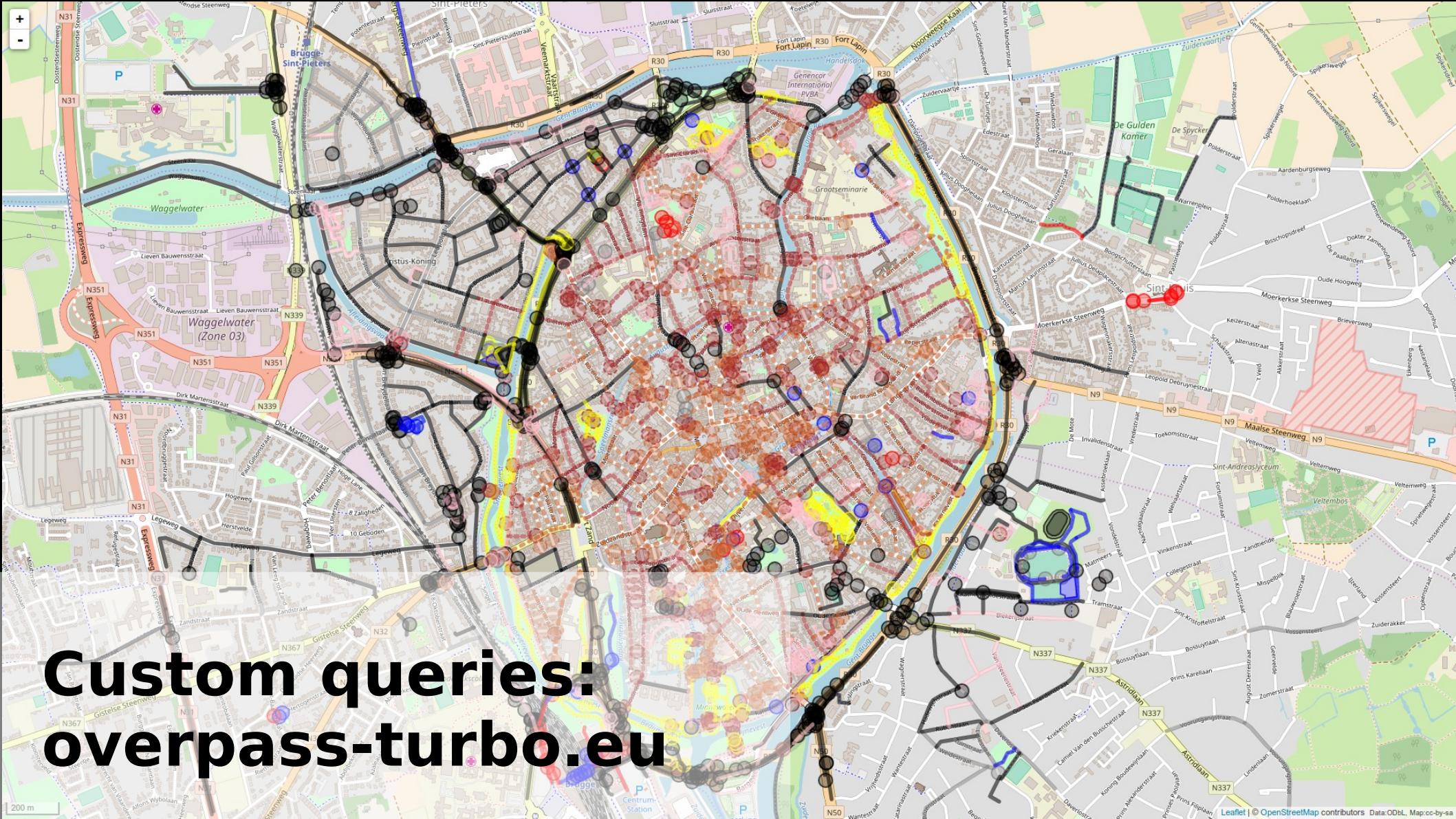
plain

StreetsWithoutNames

at 594x420 mm²

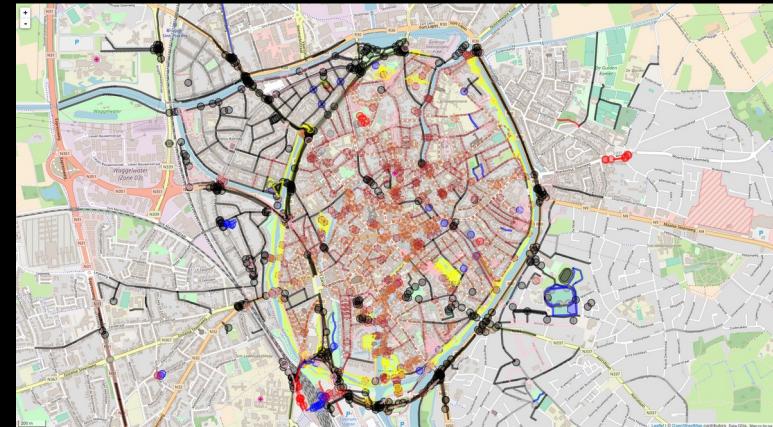
Mobility analysis sandbox to experiment

Disclaimer:
this slide is shameless self-promotion
for anyways.eu



Getting specific data

- Where are all the chimneys/hairdressers/roads with cobblestone/... in ... ?
- Ask overpass!



Overpass

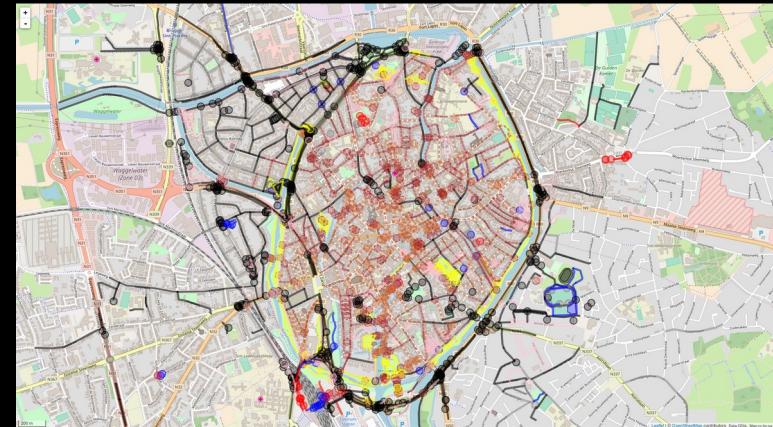
- Easily **query** the OSM-database
- Can be used to create an on-the-fly, automatically up-to-date map*
- Lots of complicated features
- 10'000 queries/(day*project)

(* often a few minutes behind osm.org)



Overpass-turbo.eu

- Where are all the chimneys/hairdressers/roads with cobblestone/... in ... ?
- Ask overpass!



Using overpass-turbo

- 1) Lookup the tag(s) on wiki.osm.org
- 2) Go to overpass-turbo.eu
- 3) Click 'wizard'
- 4) Enter your query

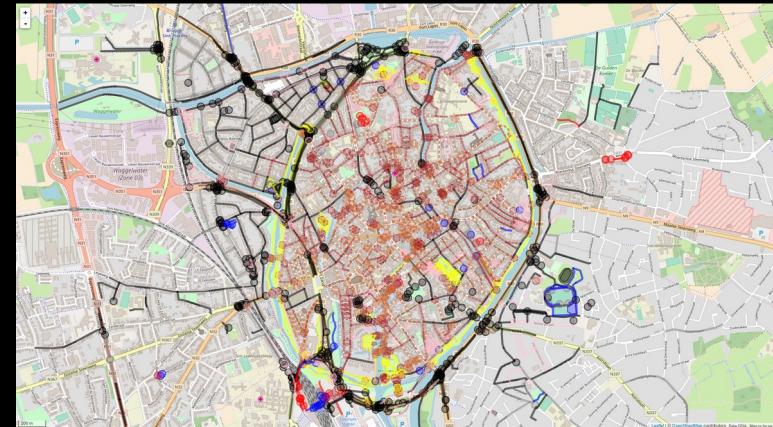
highway=* & surface=*

natural=water | water=*

natural=tree in Brussels

...

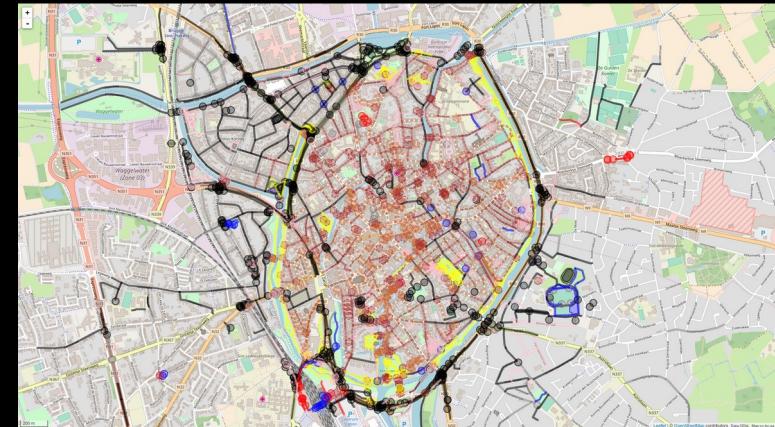
- 5) Click 'Build and run query'



Using overpass-turbo

Users of DuckDuckGo:

- 1) !wosm *bicycle parking*
- 2) !otw *amenity=bicycle_parking*
- 3) Done



Using overpass-turbo

Click 'export' to save as
GeoJson, GPX, XML, ...

... or to get a URI to query in another app
(such as JS to pass it to Leaflet)

Click 'share' to share with others



Pretty damn cool



What is
OpenStreetMap
NOT?

When did you last use a map?

- Which map was it?
- Why?
- How much did you pay to use it?

Price of maintaining a map

Google Maps costs around
??? dollar/year



Price of maintaining a map

Google Maps costs around
1 '000'000'000 dollar/year

(This number is a rumor, no official sources exist)



Price of maintaining a map

Google Maps costs around
1 billion dollar/year

(This number is a rumor, no official sources exist)



Price of maintaining a map

**Google Maps costs around
1 billion dollar/year**

(This number is a rumor, no official sources exist)

Buying and creating satellite and map data
Google Streetview costs \$200 'till \$1150/km
Google bought Waze for 1.1 billion dollar



Price of maintaining a map

Similar amounts for other services

Google bought Waze for 1.1 billion dollar

Nokia bought Navteq for 8 billion dollar
and 'burns' 1 billion a year

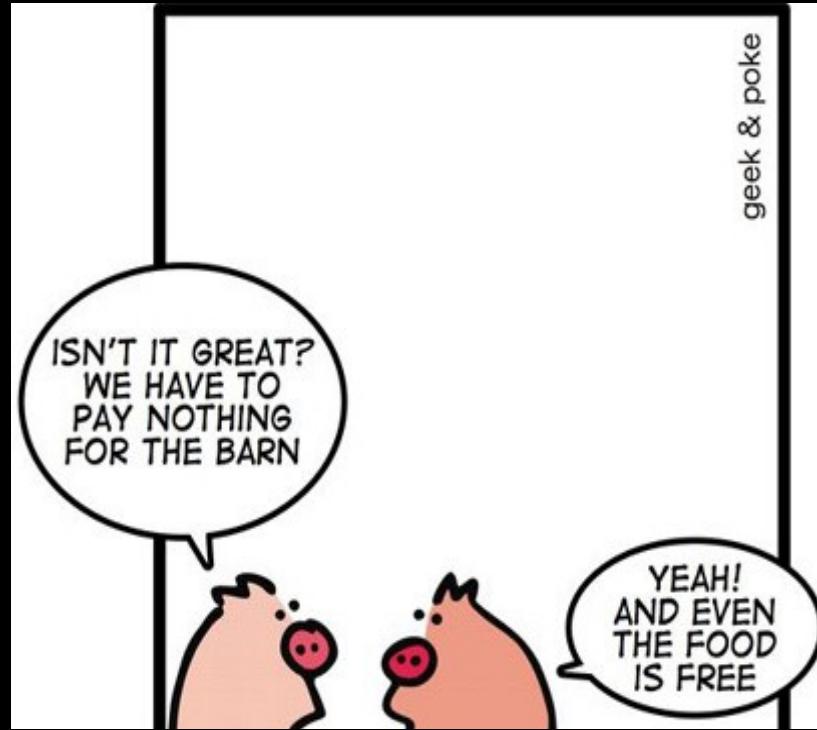
Apple maps burns around 1 billion dollar/year

<http://www.asymco.com/2012/12/18/how-much-to-maps-cost-and-what-are-they-worth/>



How much did you pay?

There is no such thing as free lunch

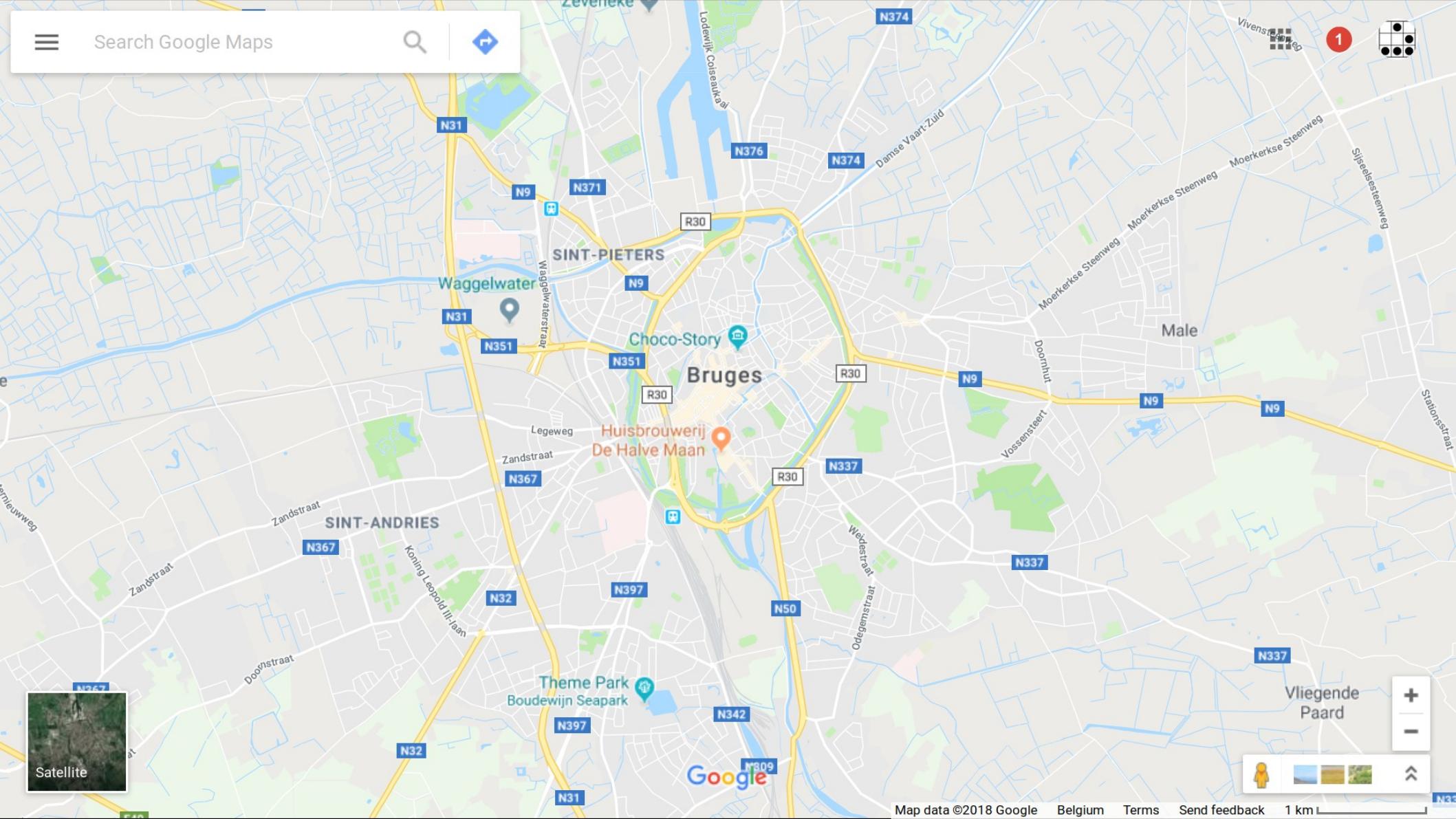




Search Google Maps



1



Satellite



Google

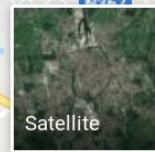
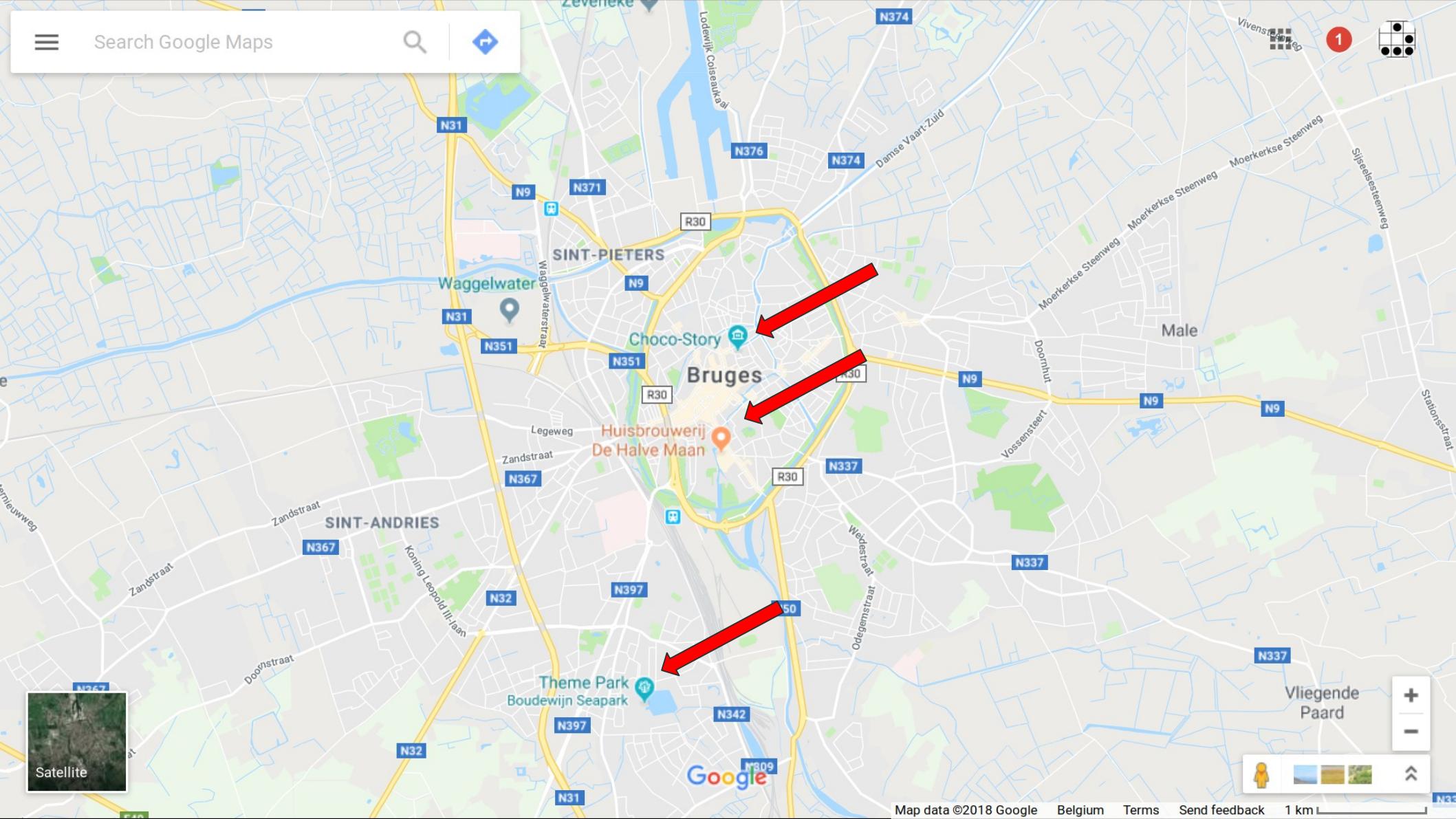
Map data ©2018 Google Belgium Terms Send feedback 1 km



Search Google Maps



1



Satellite



Map data ©2018 Google

Belgium

Terms

Send feedback

1 km

Google Maps is advertising

Google makes money by

- placing ads on the map
- giving some venues more priority in search

No incentive to map poor countries

“Google Maps only works within 100 miles of a starbucks”

Google Maps is tracking

Google tracks your searches and location through maps,
under the guise of features

“Share your location”, “Find my phone”, “Where am I?”

Very valuable information

- Better ads
- How effective is an ad pin?
- ...

Google Maps is a monopoly

- Little incentive for other companies to provide cartography services, cause 'google maps is free anyways' - the consumer
- You can look to it, but not reuse anything
- Google Maps uses lock-in-tricks
 - Sudden price hike for devs (1th may 2018)
 - Death by a thousand papercuts



... but

- Google Maps *does* have more information on shops and businesses because everyone searches them there

(It's even worse – a shop *not* on Google "does not exist")

but this is changing!



... but

- Google Maps *does* have more information on shops and businesses because everyone searches them there

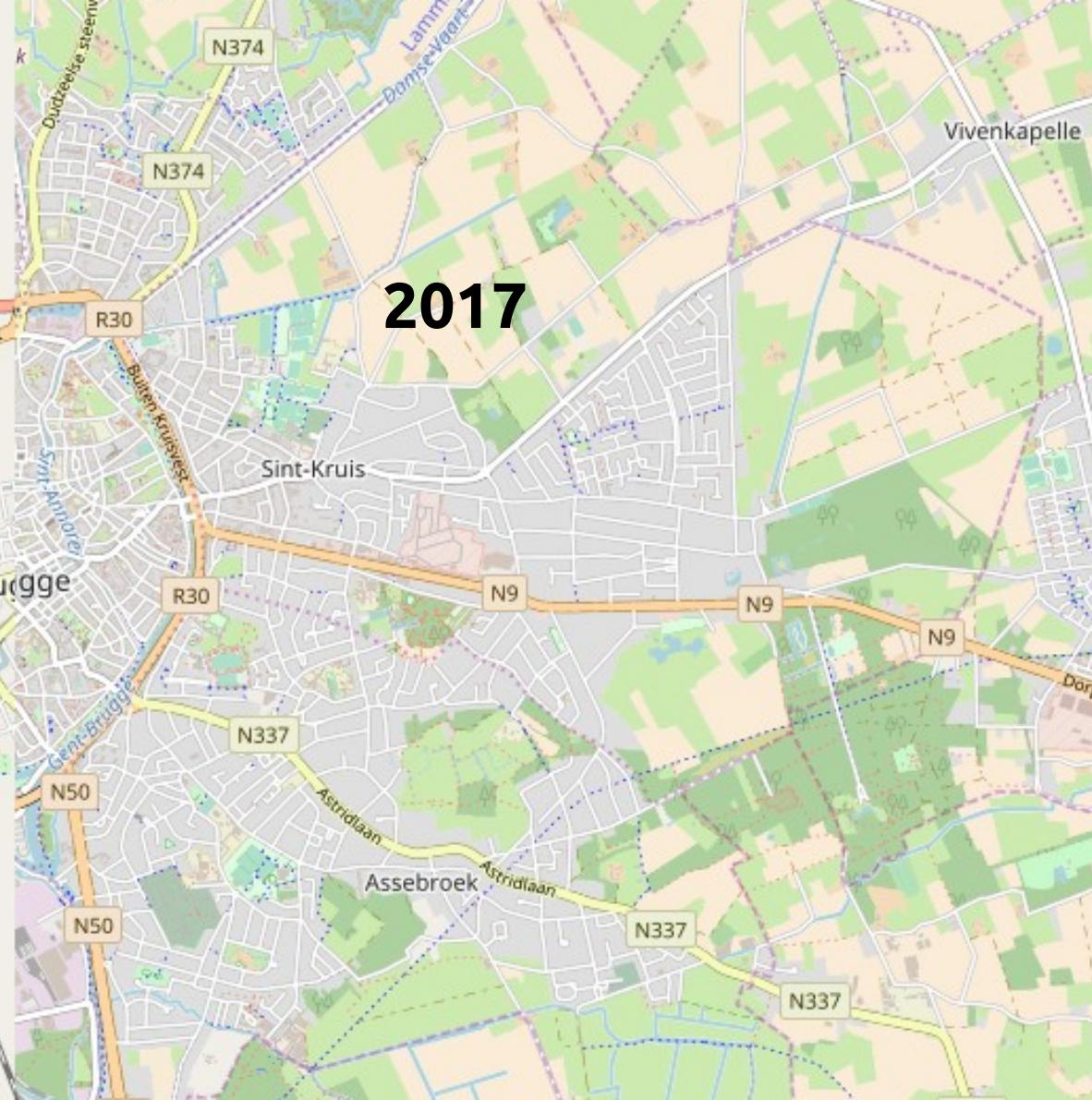
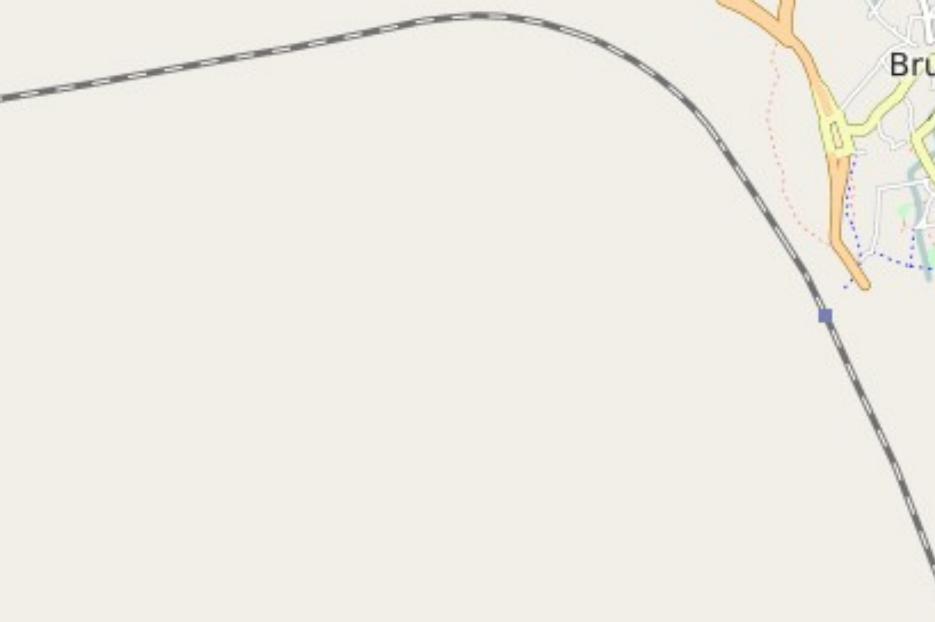
(It's even worse – a shop *not* on Google "does not exist")

but this is changing!



OSM is catching up!

2007



2017

OSM is truly free

Free as in beer*

Free as in freedom

However, if you can afford it, donate back

- Money for the server
- Data – contribute yourself
- Love – use it on the road and in your projects
- Users – spread the word

*There are commercial, paid solutions too for heavy map users

However, as there are multiple players, it is affordable





What is OpenStreetMap?



Community

The Belgian community does stuff

- Find us on [meetup.com](#)
- Talk to us on [element.io \(Matrix\)](#) (OSMBE - community)
- Donate so we can buy 360° camera's, stickers, vests, servers, ...
- Help our projects (map historical data, public bookcases, ...)

Osm.be



Working together

Working together

**on the
most accurate,
most detailed
most up-to-date and
most open global map**

Working together

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and I'm crazy about it