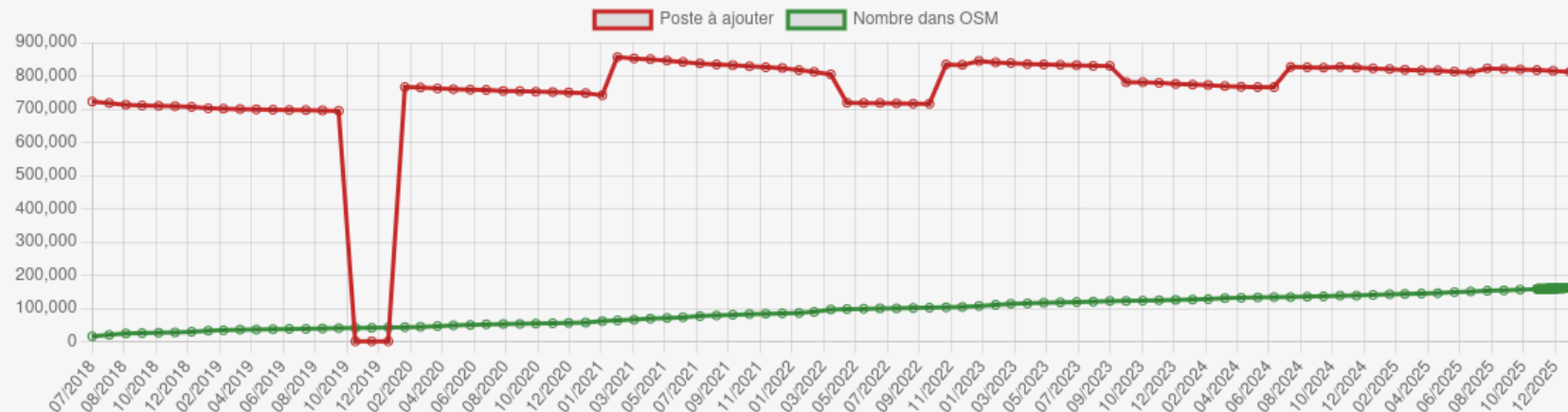


Monitoring OpenStreetMap contribution topics with Podoma

Progress



FOSDEM'26

FOSDEM Geospatial
31st January 2026

François Lacombe

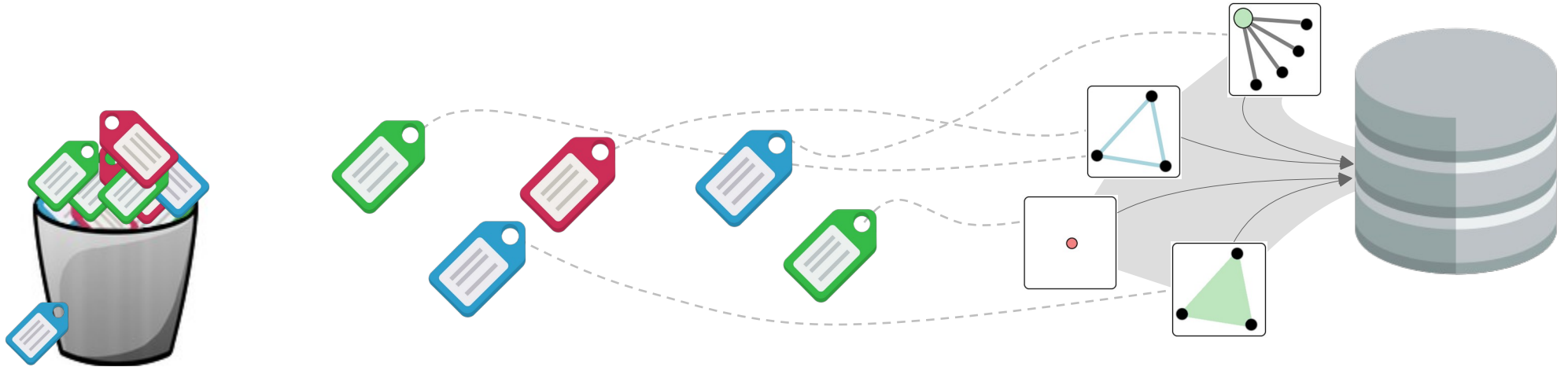


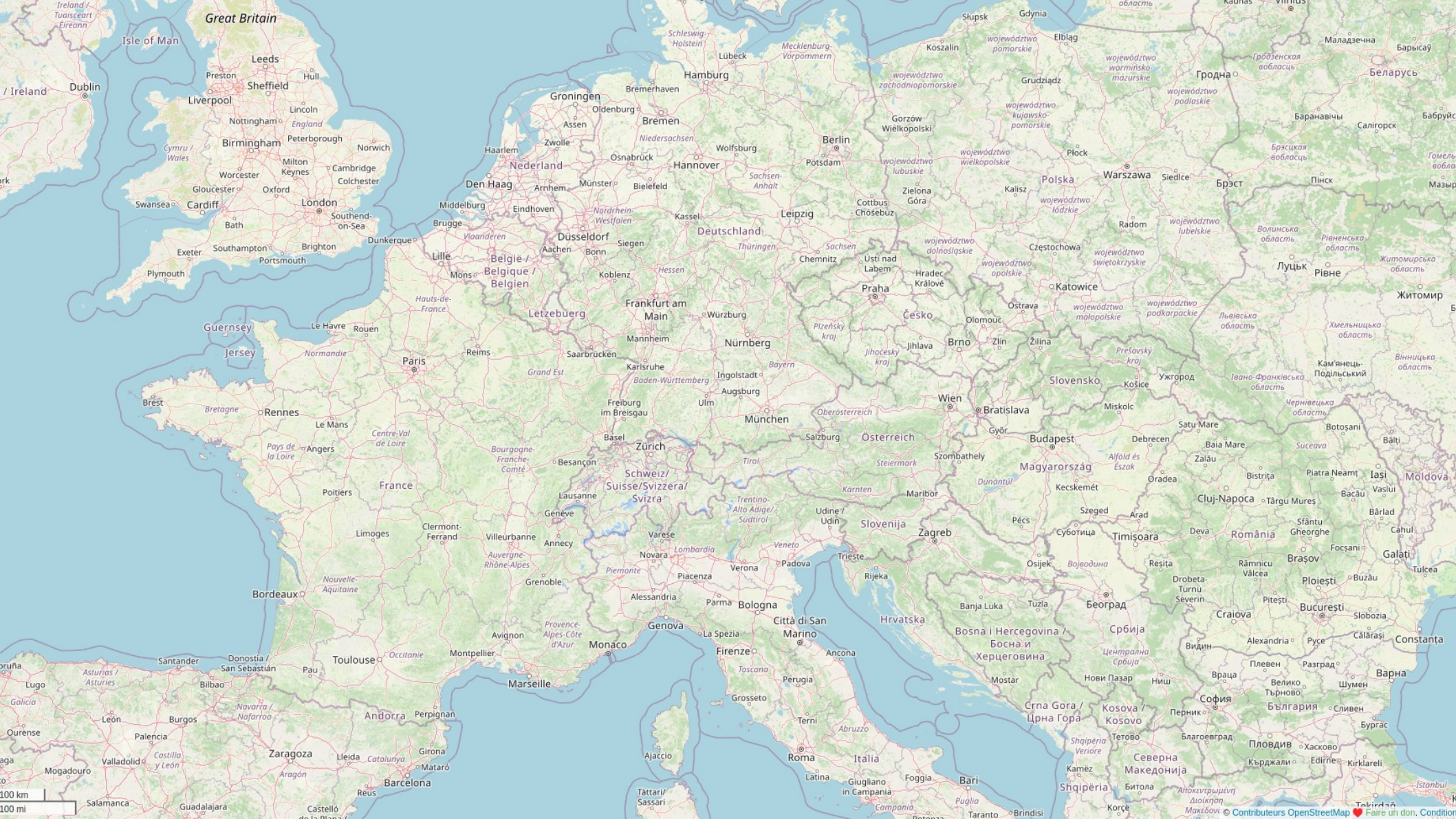
OpenStreetMap features

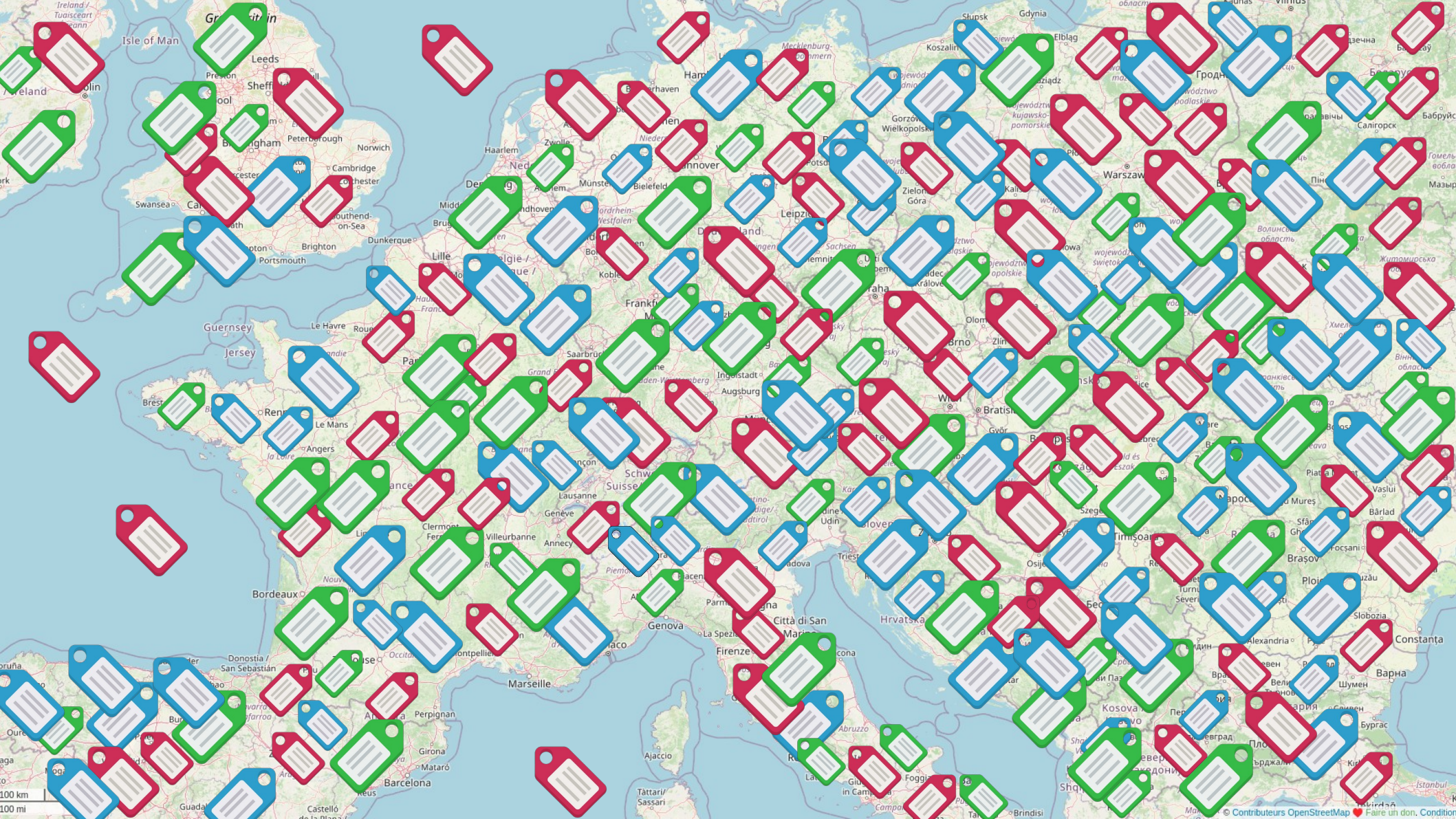
OpenStreetMap comes with nodes, ways, relations and... many many tags.

Its datamodel remained almost the same since the beginning in 2004.

Tagging has evolved significantly.



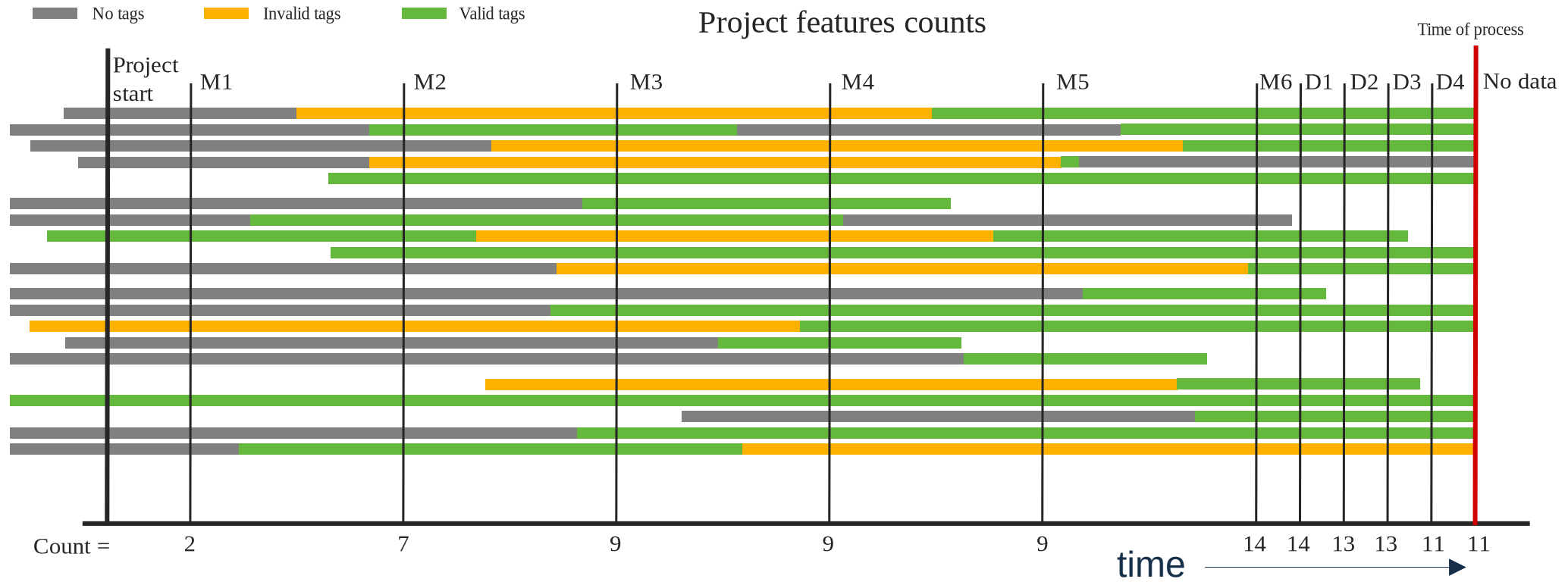




OpenStreetMap changes

Contributors continuously add or change tags, create or delete features to produce several versions of existing objects. It is possible to revert changes at any time.

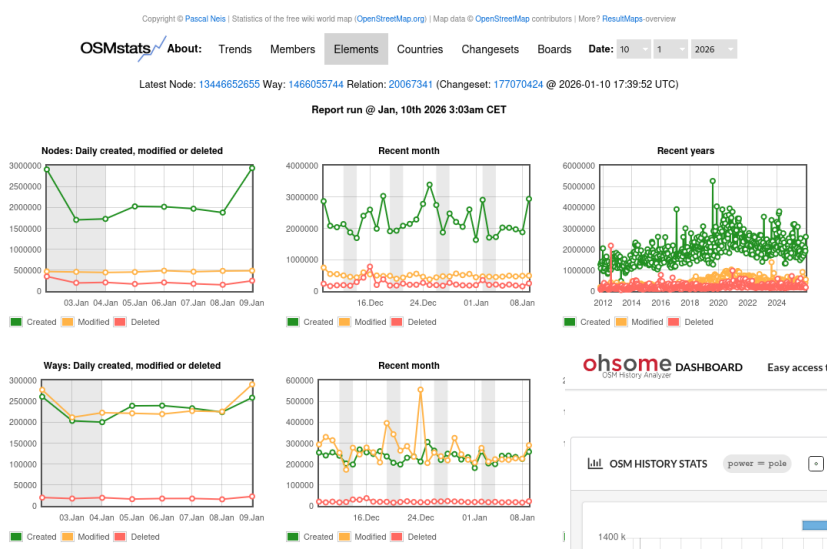
Let's say you run a project on a particular topic, filter features according to their tags, here you go:



OpenStreetMap statistics

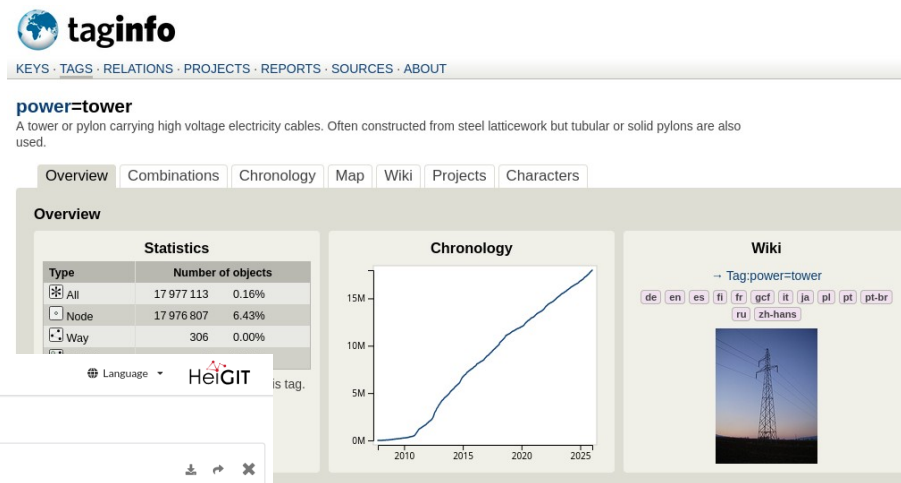
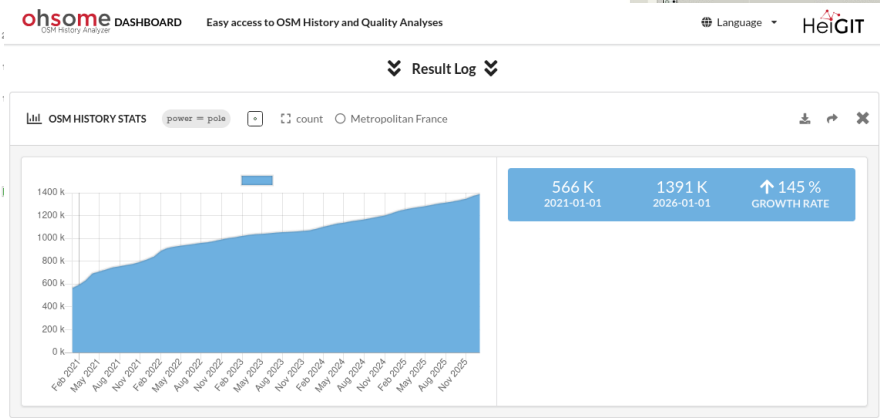
Several solutions already exist to get some measurements and statistics. Here are a few:

However, we miss a daily-updated **topic focused** platform



OSMStats by Pascal Neis

OhSome Dashboard By HeiGIT



Taginfo by Jochen and Christian Topf

Podoma

Created in 2020
OSM-France projects of
the month



Slightly extended
OSM-France partnerships



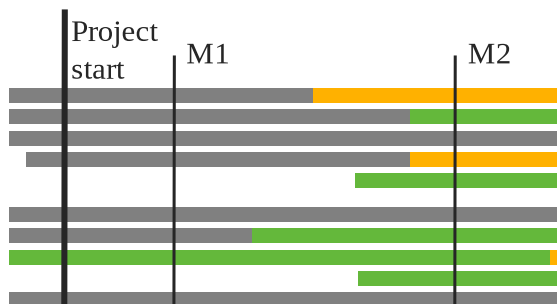
Scaling up to world
MapYourGrid initiative



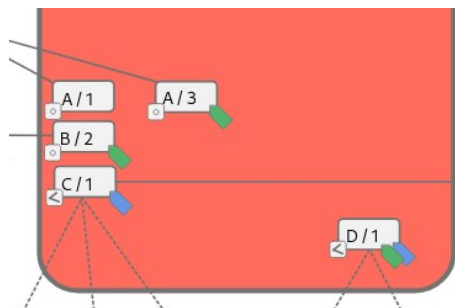
To be
continued

Automates OSM processing:

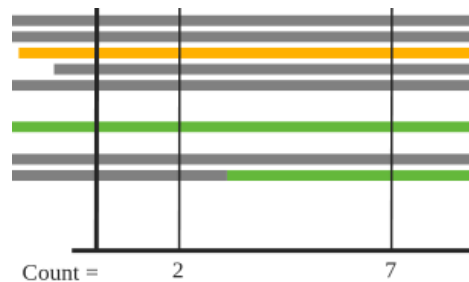
OSM change log maintenance



Feature labeling



Counting



Geographical and team breakdown



- Init once from OSH data
- Updated daily on filtered diffs
- Completed with **Overpass API**

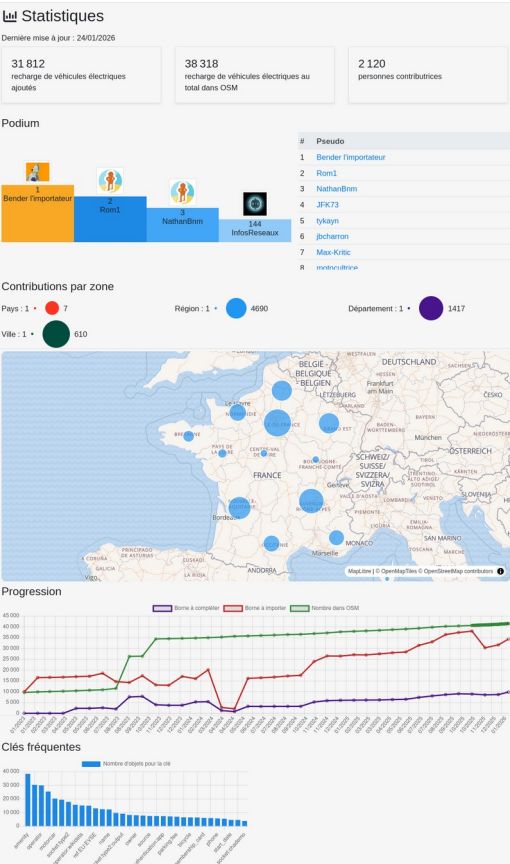
- Broad select with **Osmium**
- Get more selective filters with PostgreSQL / JSON path language

- Fast counting from changelog
- Features, contribution and mappers counts

- Custom boundary and teams definition
- Nested boundaries

Podoma

Web dashboard



API

```
data:
  0:
    x: "2024-01-01T00:00:00.000Z"
    labels:
      distribution:
        amount: 115874
        length: "286769760.368422"
        area: "545662230.084512"
      transmission:
        amount: 662250
        length: "4383114901.96195"
        area: "37314546.1644793"
      transmission_overhead:
        amount: 643517
        length: "4337750818.5848"
        area: "36586614.6658449"
    amount: 970963
    length: "5292783046.90086"
    area: "687249448.158295"
  1:
    x: "2024-02-01T00:00:00.000Z"
    labels:
      distribution:
        amount: 118242
        length: "291347161.425342"
        area: "545657840.9636"
      transmission:
        amount: 669096
        length: "4401656152.3561"
        area: "37435916.412967"
      transmission_overhead:
        amount: 650201
        length: "4356093824.1639"
        area: "36707649.5325377"
    amount: 979739
    length: "5313061937.23702"
    area: "687249448.158295"
```

Web editor

Ajouter une borne manquante

☐ Vous êtes connecté : ce formulaire va éditer directement OpenStreetMap

Nom de la borne

Service payant ?

☐ Oui ☐ Non ☒ Je ne sais pas

Véhicules autorisés

☒ Auto ☒ Moto ☒ Vélo

Nombre de places

Nombre de véhicules qui peuvent être chargés en même temps

Nom commercial du réseau

Gestionnaire du réseau

Prises disponibles

☒ Type E ☒ Type 2 ☒ T2 Combo



Gamification

tykayn

[Profil OpenStreetMap - Contact](#)

3228
groupes de modifications

Inscription sur OSM le
3 juin 2015

Badges reçus

Ecoles (novembre 2025)



A participé



100+ points

Laboratoires d'analyses médicales (mai 2021)



A participé



6+ points

Défibrillateurs (septembre 2020)



A participé



100+ points

Recharge de véhicules électriques (mars 2020)



A participé



Près du podium (28%)

API allows custom dashboards

Third party dashboard can consume API and show their own KPI.



Progress of the MapYourGrid project

COUNTS

LENGTH

TABLES

MAPPERS

POWER GRID MAP



The data displayed on this dashboard are from **2024-01-01** to **2025-12-29 00:00:00**.

Transmission assets over **50 kV**.

Select a country to view its indicators. By default, **global indicators** are shown.

Country

Colombia

Line length (km)

21,759

24h 21,759 =

1M 19,671 ▲ +9.6%

Circuits relations length (km)

25,535

24h 25,535 =

1M 6,343 ▲ +75.16%

Substations area (km²)

58

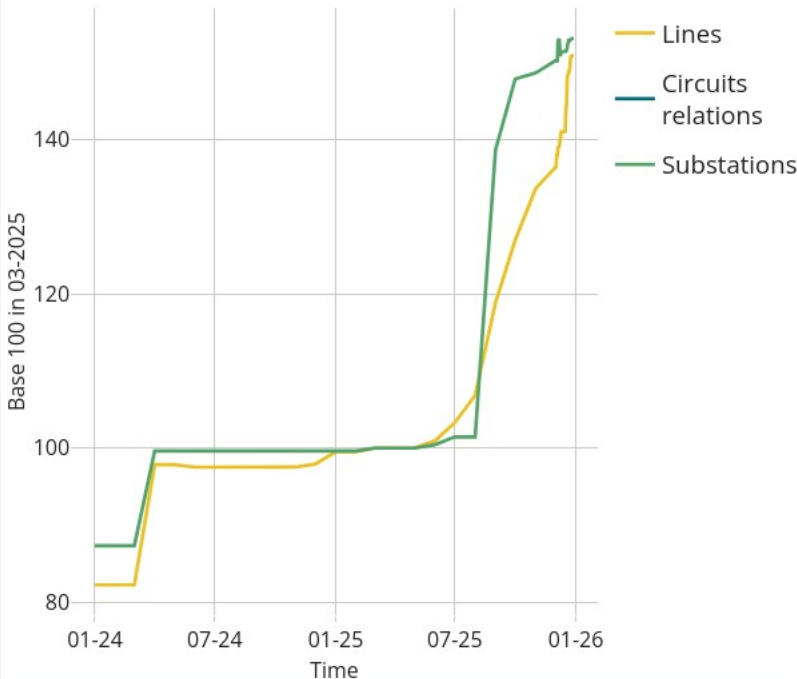
24h 58 =

1M 57 ▲ +1.87%

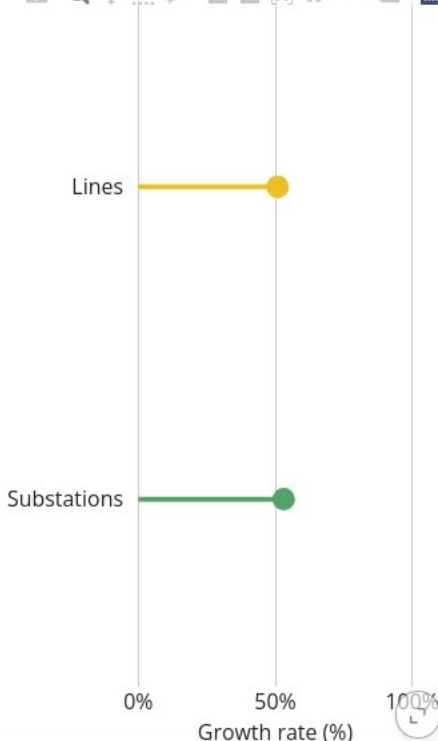
Evolutions base 100 in March 2025

Show legend

Hide legend



Growth rate since March 2025



Let's try it!

On a easy enough topic to initiate
a project in less than 15 minutes.

Can you guess what we are
going to count?



Let's try it!

On an easy enough topic to initiate a project in less than 15 minutes.

Public benches in Belgium!

amenity=bench



Podoma setup

OpenStreetMap user for oAuth2



OpenStreetMap data files



Belgium Bounding Box



```
{
  "WEBSITE_NAME": "Podoma Fosdem",
  "WEBSITE_MOTTO": "The OpenStreetMap Fosdem statistics engine",
  "WEBSITE_URL": "https://podoma.fr",
  "WEBSITE_DESCRIPTION": "Podoma is a powerful, full-featured, engine and dashboard for getting precise statistics about OpenStreetMap community contributions over specific topics.",
  "OSM_URL": "https://www.openstreetmap.org",
  "OSM_API_URL": "https://api.openstreetmap.org",
  "OSM_USER": "** secret **",
  "OSM_PASS": "** secret **",
  "OSM_CLIENT_ID": "** secret **",
  "OSMOSE_URL": "https://osmose.openstreetmap.fr",
  "NOMINATIM_URL": "https://nominatim.openstreetmap.org",
  "MAPILLARY_URL": "https://www.mapillary.com",
  "MAPILLARY_API_KEY": "** secret **",
  "PANORAMAX_URL": "https://explore.panoramax.fr",
  "MATOMO_HOST": null,
  "MATOMO_SITE": null,
  "REPOSITORY_URL": "https://github.com/osm-fr/podoma",
  "JOSM_REMOTE_URL": "http://localhost:8111",
  "OSH_PBF_AUTHORIZED": true,
  "OSH_PBF_URL": "https://osm-internal.download.geofabrik.de/europe/belgium-internal.osh.pbf",
  "OSM_PBF_URL": null,
  "POLY_URL": "https://download.geofabrik.de/europe/belgium.poly",
  "VECT_STYLE": "https://tile-vect.openstreetmap.fr/styles/liberty/style.json",
  "PDM_TILES_URL": "https://fosdem.infos-reseaux.com/tiles",
  "DB_USE_IMPOSM_UPDATE": false,
  "WORK_DIR": "/data/files/pdm",
  "GEOJSON_BOUNDS": {
    "type": "Polygon",
    "coordinates": [
      [
        [2.3889137, 51.5516667], [6.408097, 51.5516667], [6.408097, 49.4969821],
        [2.3889137, 49.4969821], [2.3889137, 51.5516667]
      ]
    ]
  }
}
```


A simple project

An id, a name

Some dates (start, end...)

A filter: nw/amenity=bench

Some aerial imagery and
Panoramax layers

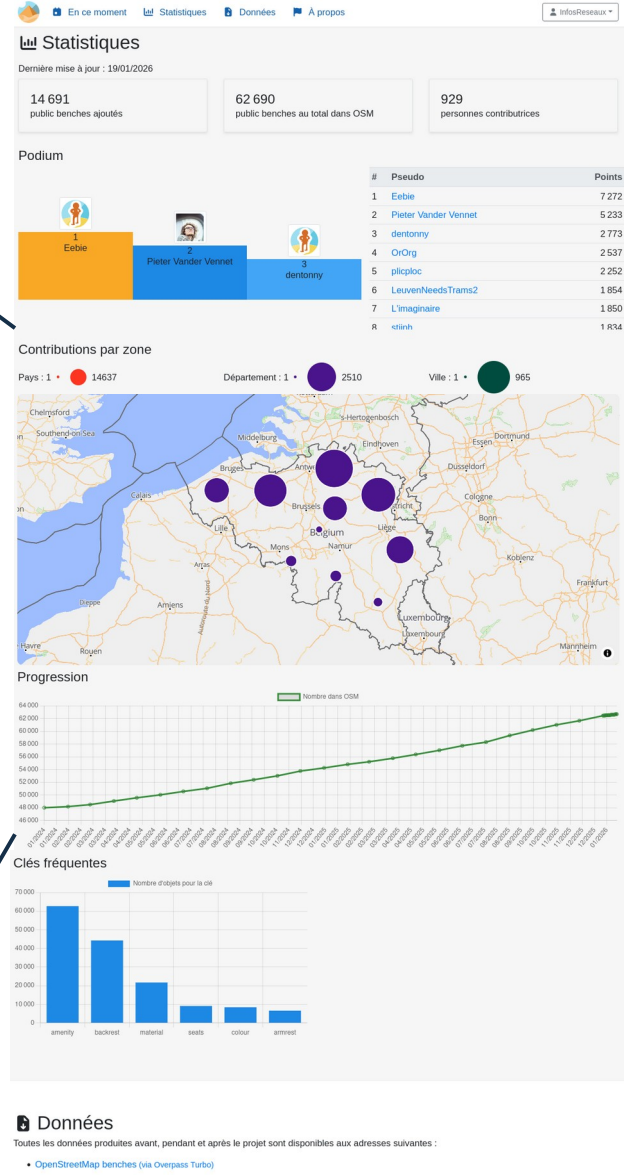
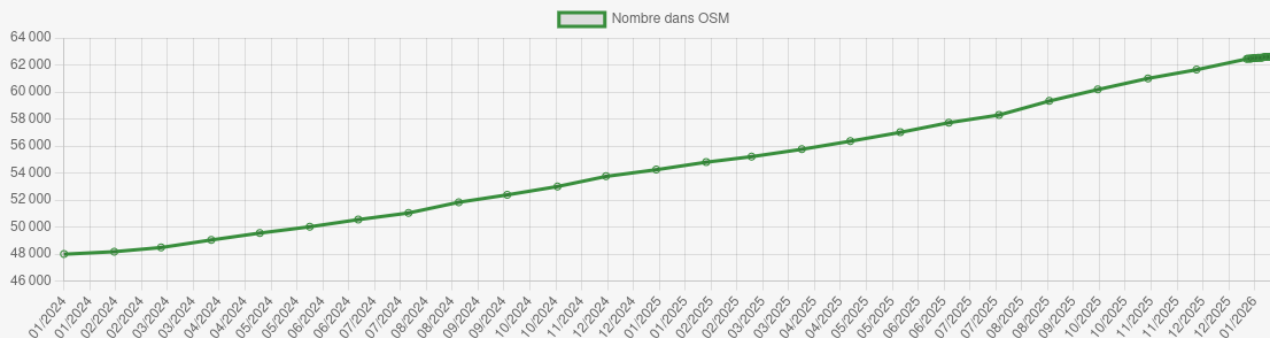
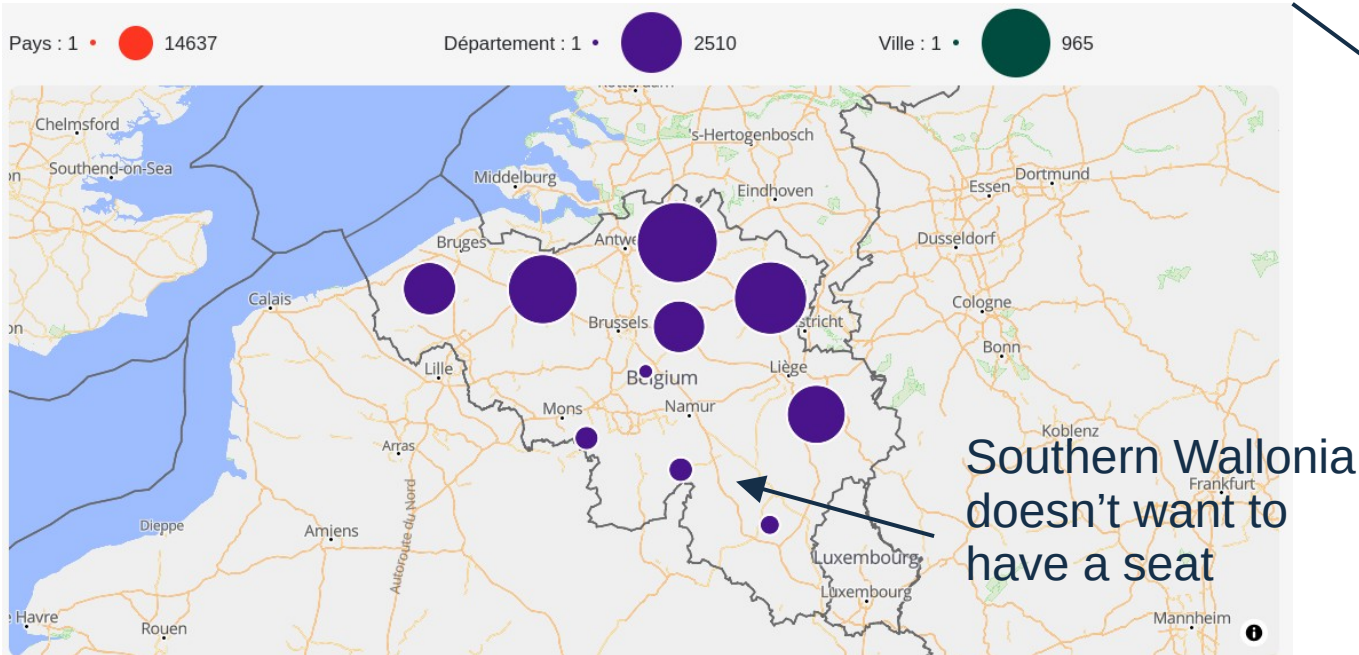
Statistics to be enabled

```
{
  "id": 1,
  "name": "2024-01_benches",
  "title": "Public benches",
  "start_date": "2024-01-01",
  "soft_end_date": "2025-06-01",
  "summary": "Let's map public benches!",
  "links": {
    "osmblog": "https://fosdem.org/2026/schedule/event/TJ8TQS-openstreetmap-podoma-monitoring-worldwide/"
  },
  "database": {
    "osmium_tag_filter": "nw/amenity=bench",
    "labels": {
    }
  },
  "datasources": [
    {
      "source": "osm",
      "name": "Benches in OSM",
      "description": "This bench already exists in OSM. You can update its attributes."
    },
    {
      "source": "background",
      "tiles": [ "https://geo.api.vlaanderen.be/OMWRGBMRVL/wms..." ],
      "name": "Digital Vlaanderen",
      "icon": "aerial",
      "attribution": "Digital Vlaanderen"
    },
    {
      "source": "background",
      "tiles": "panoramax",
      "name": "Street level pictures (Panoramax)",
      "icon": "picture"
    },
    { "source": "stats" }
  ],
  "statistics": {
    "count": true,
    "feature_name": "bench",
    "points": { "add": 3, "edit": 1, "note": 1 }
  }
}
```

Let's put it all in Docker...

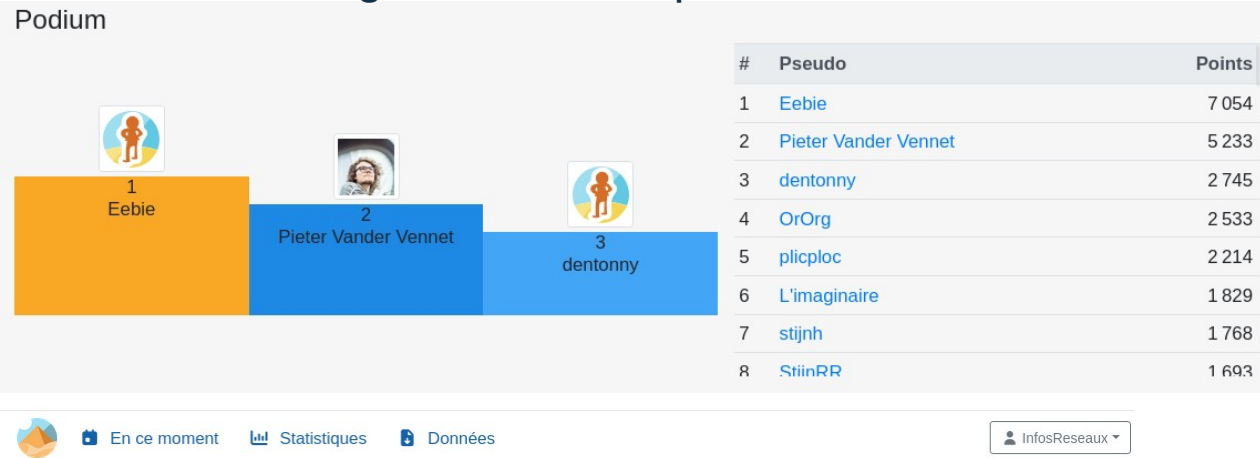
As a result

Live demo during fosdem at <https://fosdem.infos-reseaux.com>



And the winner is

Live demo during fosdem at <https://fosdem.infos-reseaux.com>



Eebie
Profil OpenStreetMap - Contact

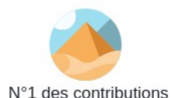
31158 groupes de modifications

Inscription sur OSM le 1 juillet 2012

1 participations

Badges reçus

Général



Public benches (janvier 2024)

A participé



1ère place



500+ points

Podoma paves the way for gamification.

Regarding public benches, 929 users contributed in Belgium, amounting to 65 116 points.

Eebie leads the podium

We need your help



<https://github.com/osm-fr/podoma>

Improve Podoma

Technical debt

Add tests

Optimize

Develop new features

- Custom counts
- Changelog API
- Boundary API
- Better KPI presentation in web interface

Use the changelog

Study and observe

Reuse it in your own software

Improve data collection

Create your own project

Counting is all you need

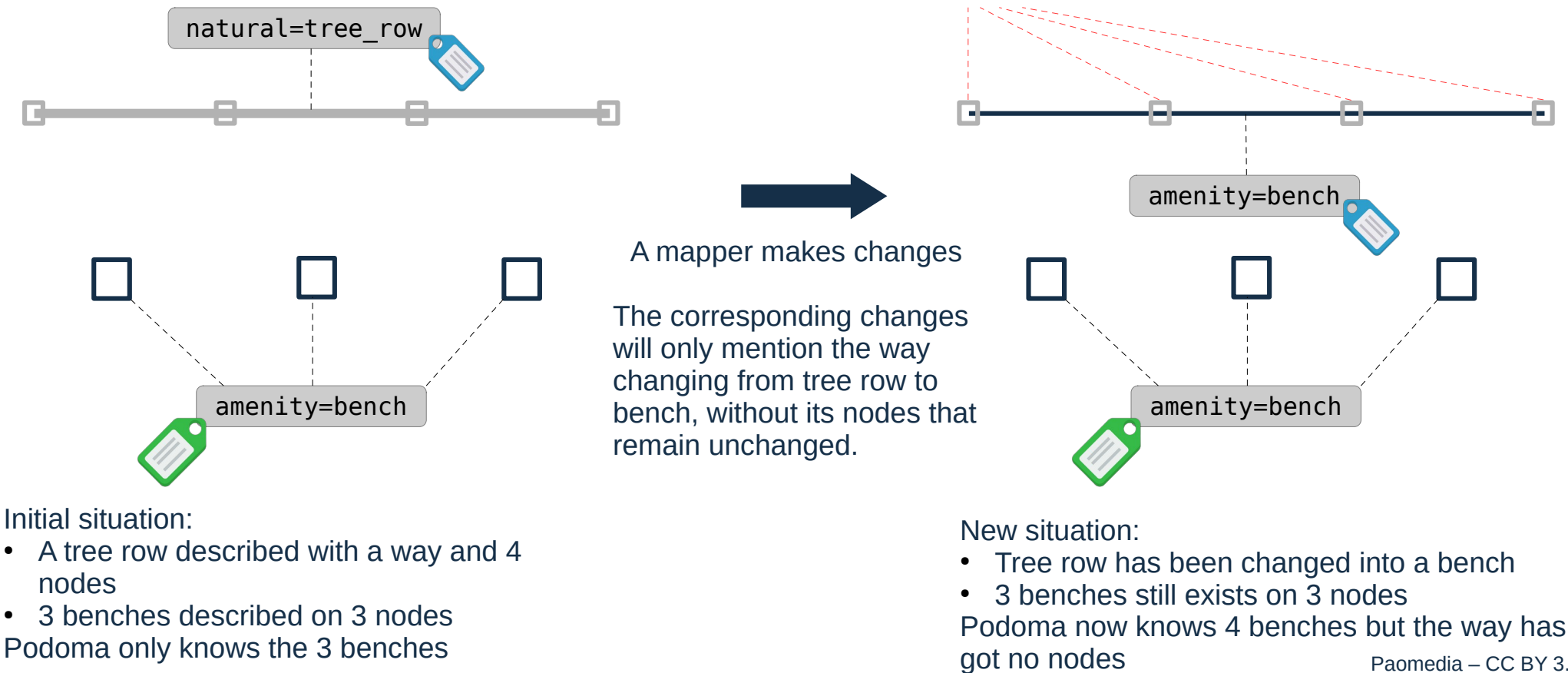
One more thing

It's time to think about enriched diffs (again?)

Local replicates often maintain cache to get missing members as soon as they are mentioned in a diff.

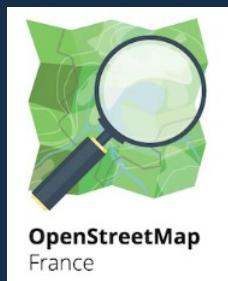
Podoma doesn't have such costly cache and will query Overpass to get missing members current version (this problem only occurs during present catch-up).

Enriched diffs could save from relying on Overpass.



Thank you

Any question ?



<https://www.openstreetmap.fr>

See Podoma in action at
<https://www.projetdumois.fr>

Find source at
<https://github.com/osm-fr/podoma>

 lacombef