Mapbender 4 - create applications for your needs with the new version

Astrid Emde WhereGroup

FOSS4G Europe 2024

Tartu (Estonia)

Programme Link: https://talks.osgeo.org/foss4g-europe-2024/talk/YMU3UV/

Astrid Emde

GIS-Consultant
FOSS-Academy Trainings

Mapbender PSC & technical Lead

OSGeoLive PSC
QGIS-DE
OSGeo
FOSSGIS e.V.

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WhereGroup GmbH
Bonn

Mapbender PSC

Olaf Knopp
Mapbender Chair

Geschäftsführer der WhereGroup und Mapbender-Projektleiter. Entscheidend bei der grundlegenden konzeptionellen Ausrichtung der Software und dem Zusammenhalt des Teams.

Astrid Emde
Mitglied des PSC

Technische Leitung des Projekts. Absolute Mapbender-Expertin. Hat schon zahlreiche Projekte mit Mapbender umgesetzt, Workshops und Schulungen gehalten. Qualitätssicherung, Dokumentation, Testing und OSGeoLive.

Thorsten Hack
Mitglied des PSC

Technischer Kopf mit viel Leidenschaft und Spaß an den Details.

Frederik Häfker
Mitglied des PSC

Spezialist für Mapbender im realen Einsatz - seine Schwerpunkte sind die Integration in bestehende Systeme und Workflows rund um die Software.

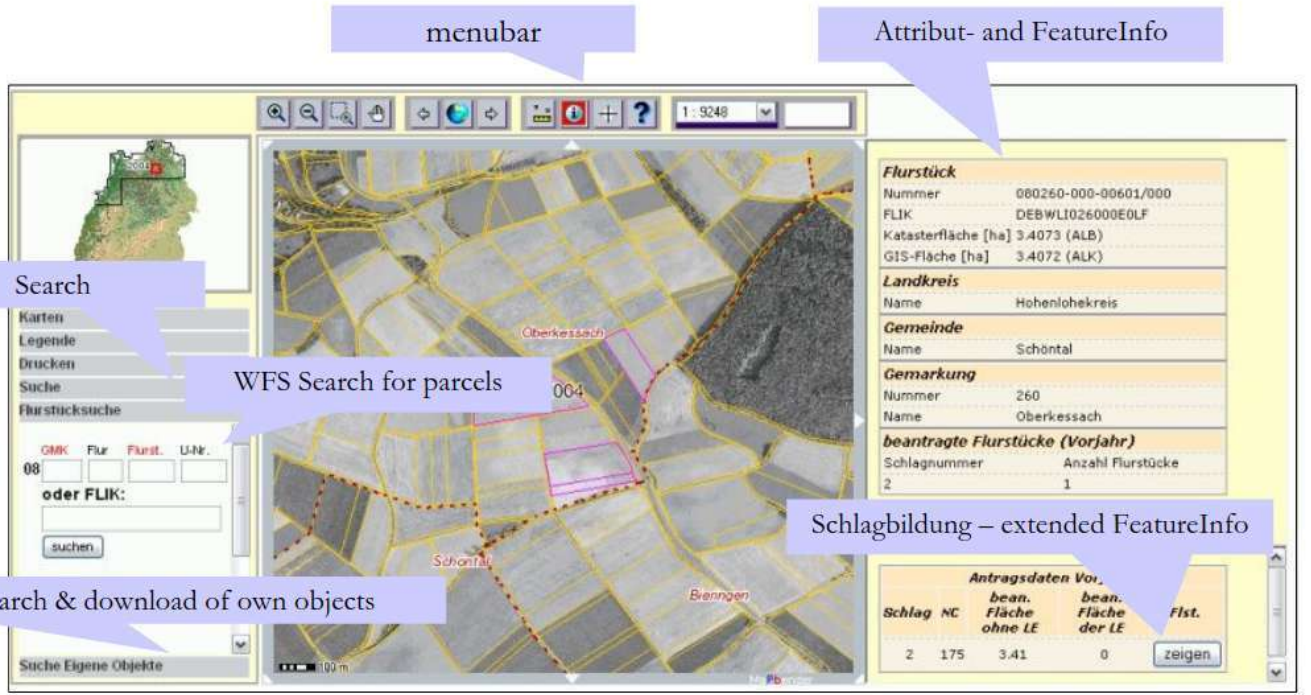
Jörg Thomsen
Mitglied des PSC

Als Berater und Trainer seit vielen Jahren am Aufbau und der Konfiguration von zahlreichen Anwendungen maßgeblich beteiligt.

WhereGroup

- 50 employees - developers, consultants & geospatial experts
- Working with & supporting Open Source Geospatial Software for more than 15 years
- Berlin | Bonn | Freiburg | Hamburg
- FOSSGIS e.V. member & OSGeo sponsor
- Company behind Mapbender & MapComponents
- Training Institute FOSS Academy

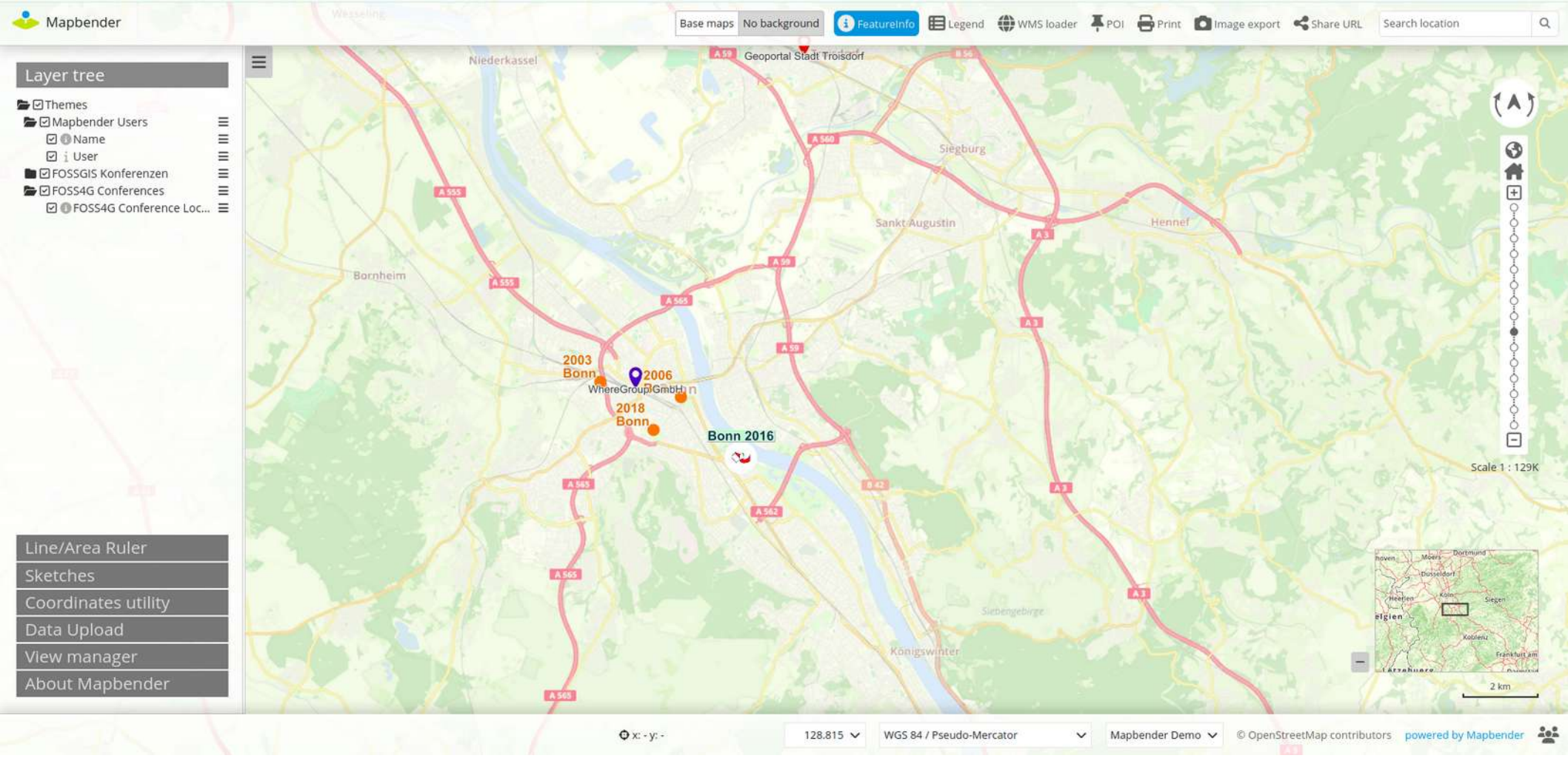
Component of the GIS

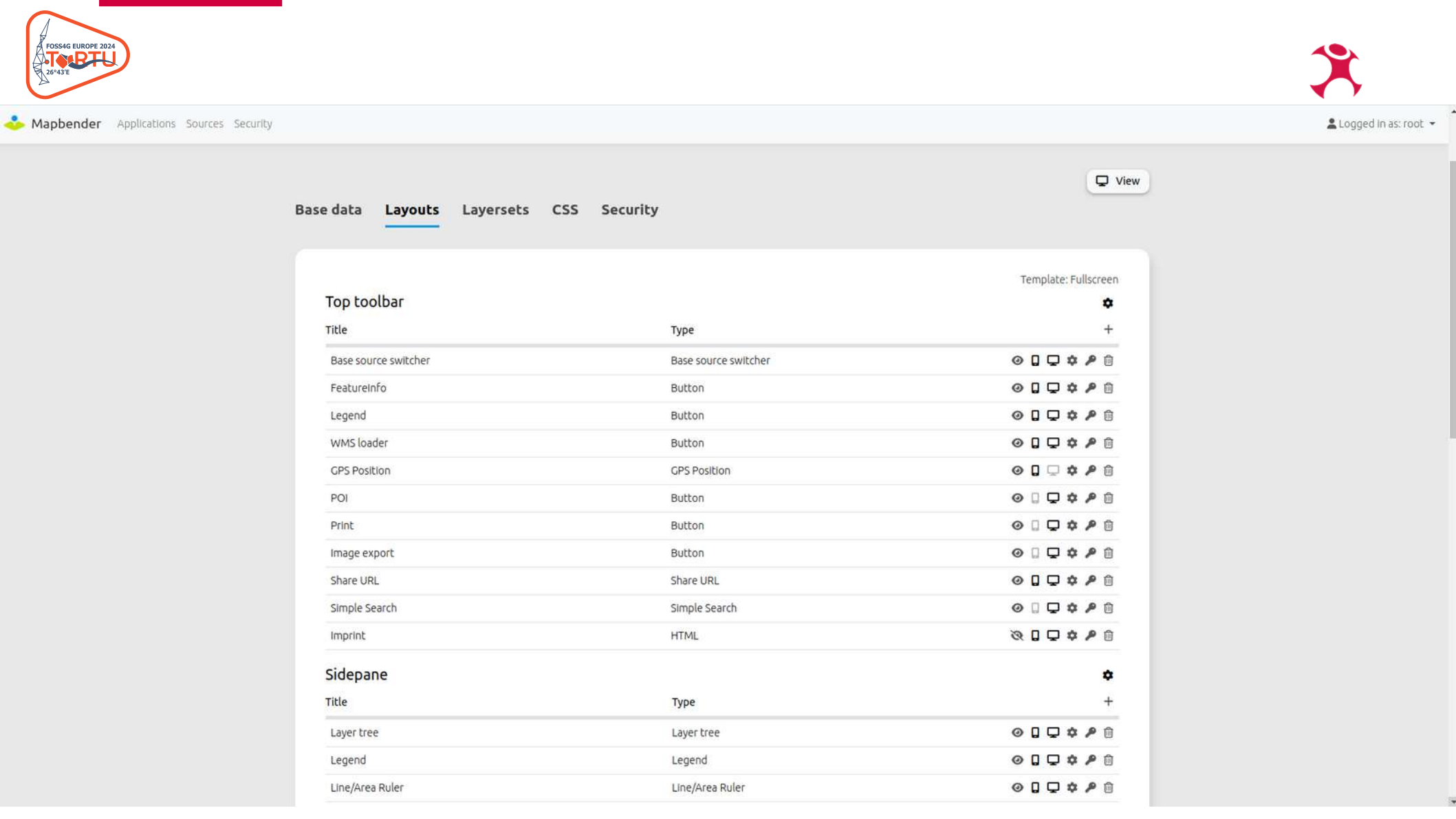


What is Mapbender

New in Version 4.0.0

Future


Mapbender
Base maps
No background
FeatureInfo
Legend
WMS loader
POI
Print
Image export
Share URL
Search location
Layer tree
Themes
Mapbender Users
Name
User
FOSSGIS Konferenzen
FOSS4G Conferences
FOSS4G Conference Loc...
Line/Area Ruler
Sketches
Coordinates utility
Data Upload
View manager
About Mapbender
Geoportal Stadt Troisdorf
Niederkassel
Siegburg
Sankt Augustin
Hennef
Bornheim
2003
Bonn
2006
WhereGroup GmbH
2018
Bonn
Bonn 2016
Königswinter
Siebengebirge
Scale 1 : 129K
2 km
x: - y: -
128.815
WGS 84 / Pseudo-Mercator
Mapbender Demo
© OpenStreetMap contributors
powered by Mapbender


FOSS4G EUROPE 2024
TARTU
26°43'E
Mapbender
Applications
Sources
Security
Logged in as: root
View
Base data
Layouts
Layersets
CSS
Security
Template: Fullscreen
Top toolbar
Title
Type
Base source switcher
Base source switcher
FeatureInfo
Button
Legend
Button
WMS loader
Button
GPS Position
GPS Position
POI
Button
Print
Button
Image export
Button
Share URL
Share URL
Simple Search
Simple Search
Imprint
HTML
Sidepane
Title
Type
Layer tree
Layer tree
Legend
Legend
Line/Area Ruler
Line/Area Ruler

References.

Mapbender is used by a variety of map applications for publishing geodata. Here are a number of examples:

https://mapbender.org/en/showcase/

Bebauungspläne online (Stadt Gütersloh)

CentropeMAP (Planungsgemeinschaft OST)

Denkmalatlas Niedersachsen

Geoportal Kreis Groß-Gerau

Geoport.HRO (Hansestadt Rostock)

Geoportal Kreis Lippe

Geoportal Kreis Ostprignitz-Ruppin

Geoportal Landkreis Spree-Neiße

Mapbender

- WebGIS Client Suite with administration web interface
- Create applications without writing a single line of code!
- Any number of applications with only one installation
- Create and maintain an OWS repository
- User & role management
- Grant users and groups access to applications and services
- Supports several languages & add support for your language

Mapbender

- Modular
- You can add your own functionality
- You can add your own design
- You can overwrite settings and code

Mapbender

- MIT License
- OSGeo project since 2006
- You are welcome to join the community

Some Links

- Mapbender auf Github https://github.com/mapbender
- Mapbender Dokumentation https://docs.mapbender.org
- Developer Documentation
  https://github.com/mapbender/mapbender/blob/master/docs/README.md
- Mapbender Workshop Repository https://github.com/mapbender/mapbender-workshop
- Gallery https://mapbender.org/en/showcase/
- Demo https://demo.mapbender.org/

Requirements

Running on your server

Needs a WebServer like Apache HTTP Server or NGINX

Needs PHP & some extensions

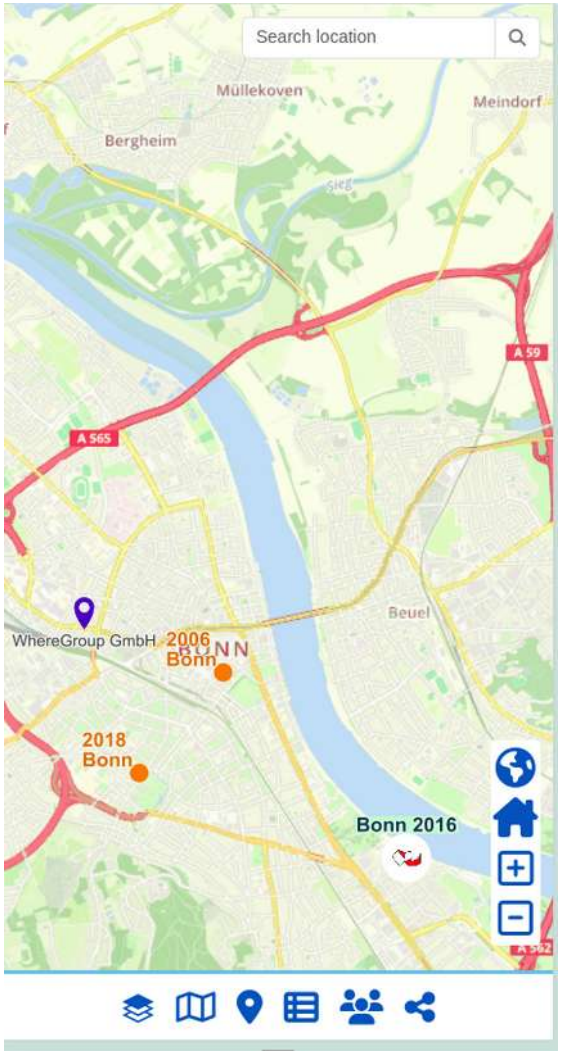
Database for administration i.e. SqLite or PostgreSQL

Functionality

Offers many features that you can combine.

Offers elements to visualize, create and edit data.

Search & print funtionality & much more



Applications

Offers template applications

Template applications demonstrate the functionality

Create a copy & build your own appliction

Or start from scratch

Mapbender 4.0.0

- Release 26. June 2024
- Many updates & improvements
- Try it out!
- Visual Changelog https://mapbender.org/aktuelles/details/mapbender-version-400-released/

Mapbender – Update of the Components

Symfony
Symfony 6.4 LTR
Support till 11/2027
PHP 8.2 und 8.3 Support
PHP >= 8.1

OpenLayers
9.x
Support for OL2 is now deprecated

Bootstrap
5.3.2

jQuery / jQuery
jQuery 3.7.1
jQuery UI 1.13.2

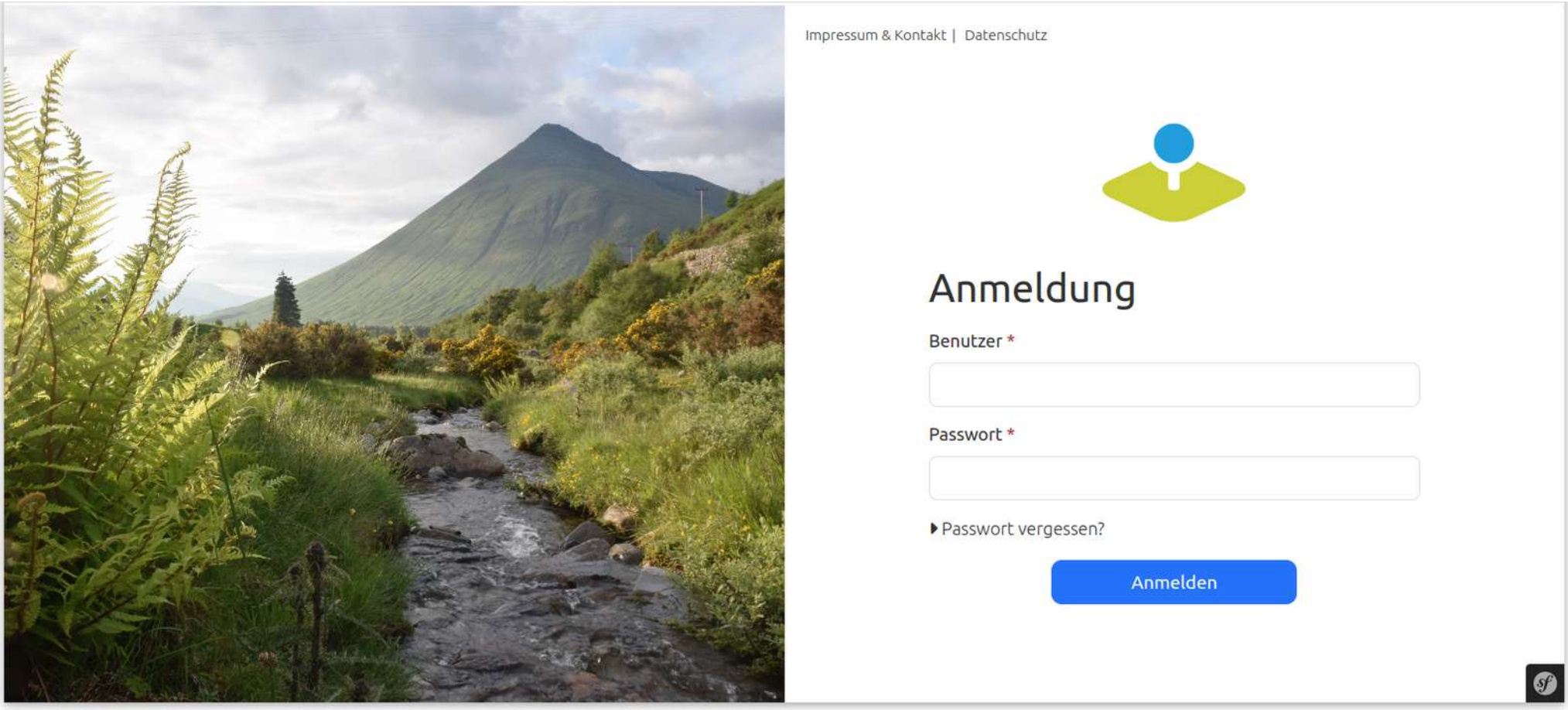
FontAwesome
6.4.2

underscore.js
No use anymore

Mapbender 4.0 - Update Overview

- Documentation update
- Workshop Bundle update
  https://github.com/mapbender/mapbender-workshop/tree/master
- Production & Developer mode via APP_ENV
  index.php instead of app.php
  index_dev.php instead of app_dev.php
- CoordinatesUtility is now part of MapbenderCore
  DataManager, DataSource are part of Digitizer
- OpenLayers 2 is deprecated
- Directory structure changed
- No local Webserver anymore.
  Alternative: Symfony CLI
  symfony server:start --no-tls
- .yaml statt .yml
- config.yml is deprecated – Information is now in other files for example doctrine.yaml and env.local

New Login Image



Login Image

branding.login_backdrop

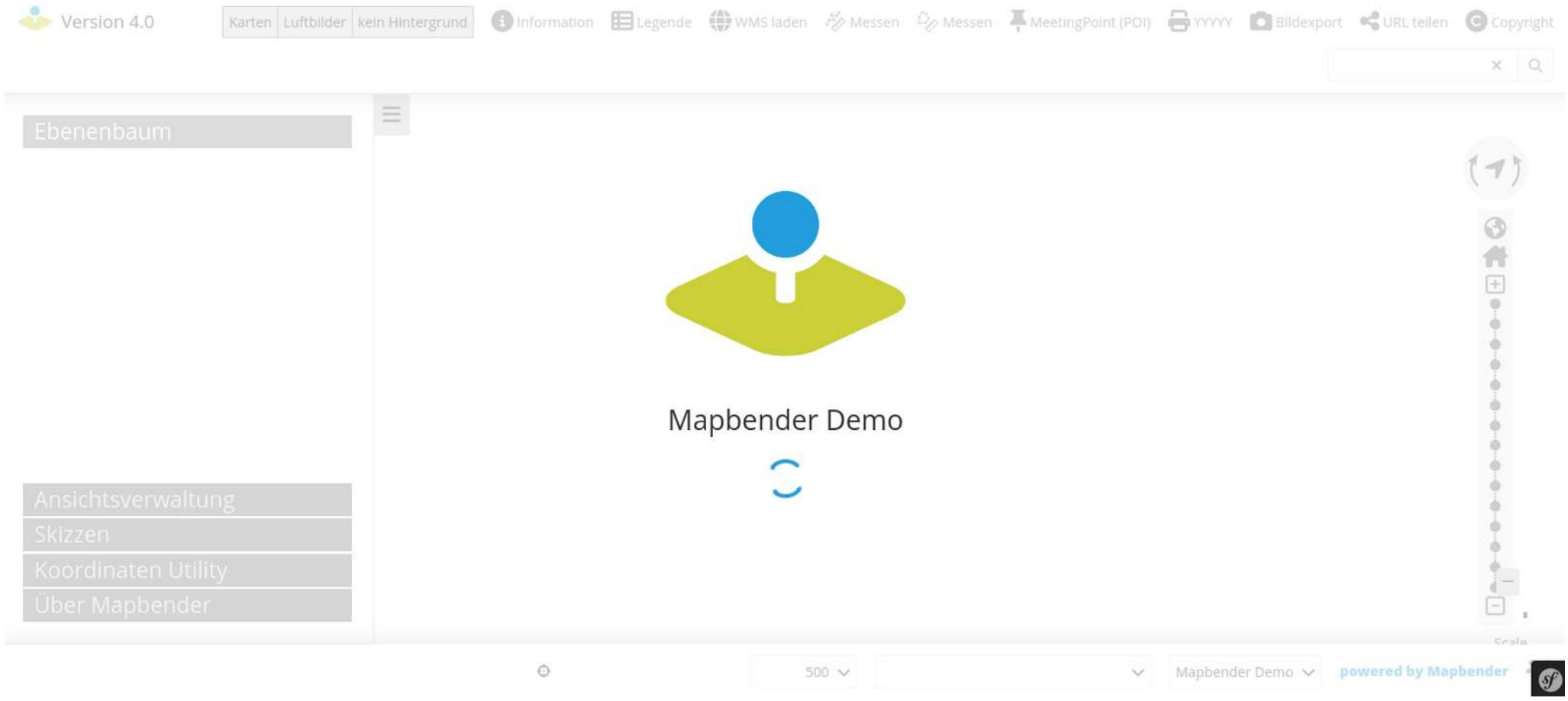
Definition in file parameters.yaml

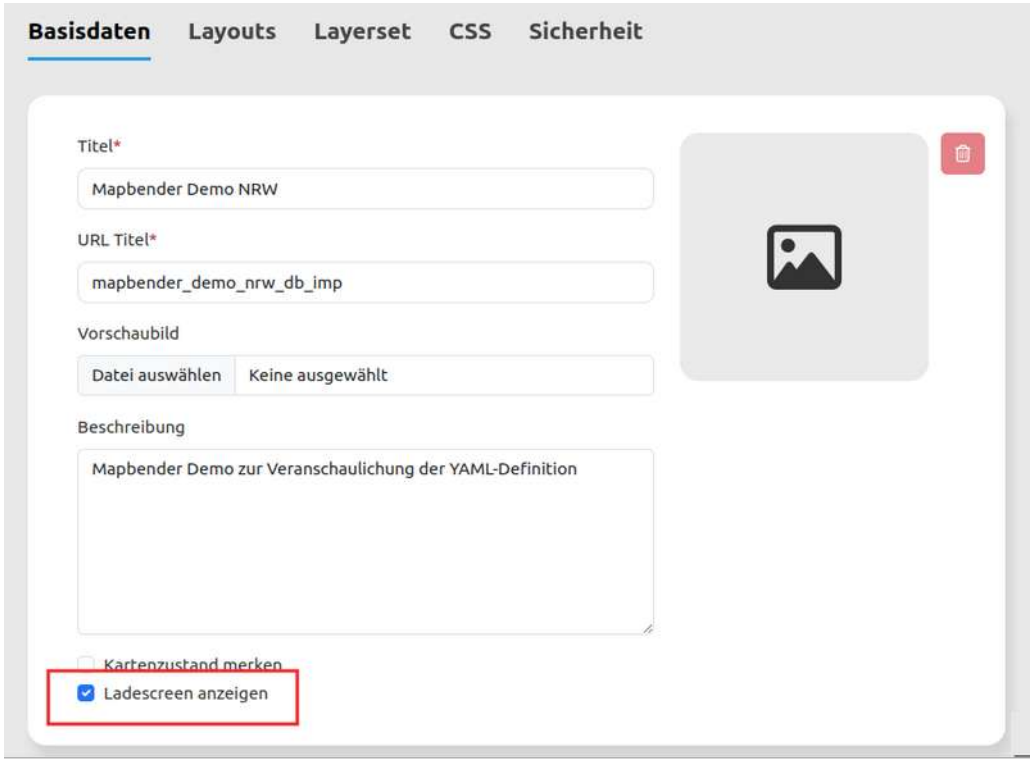
branding.login_backdrop: ./image/backdrop.jpg

Major Release

Very Major release brings a new Login Image

Splash Screen





Splash Screen

Is shown while application is loading

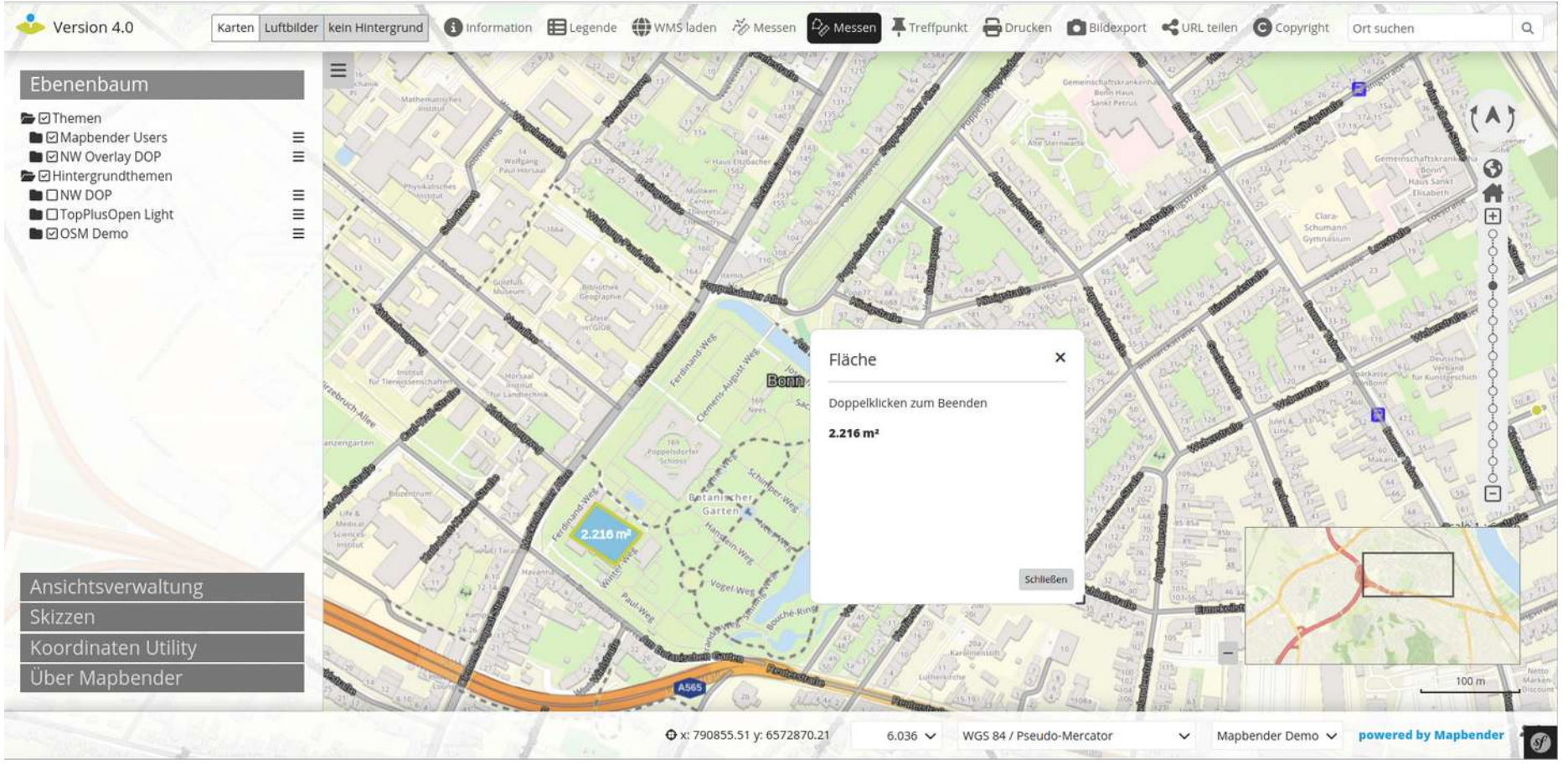
Image and applications title

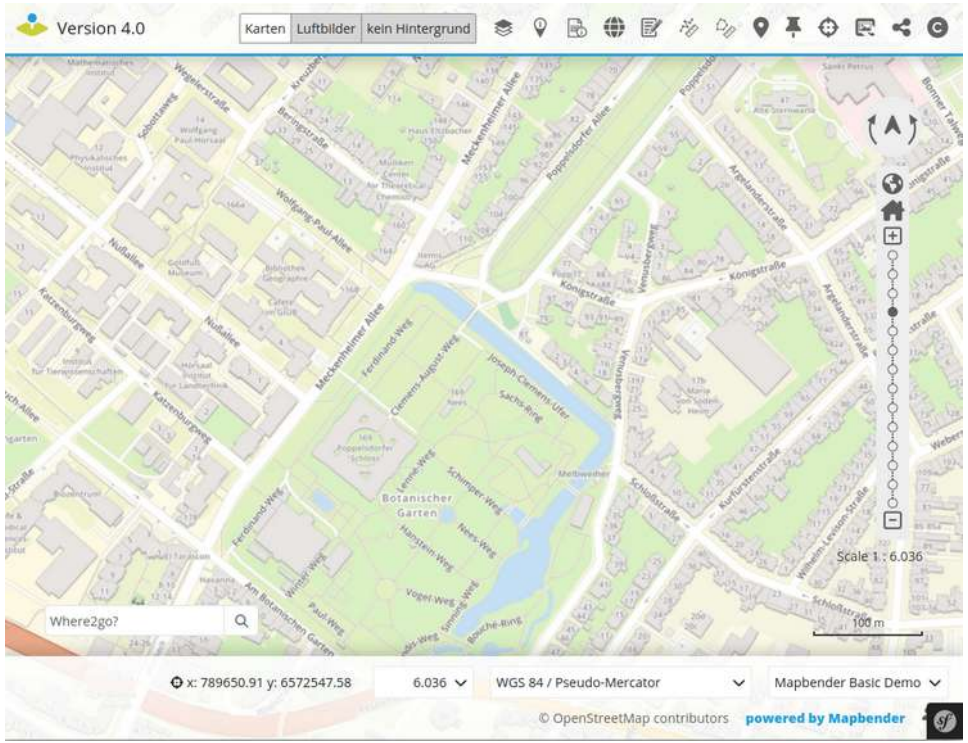
Define Image per Application

In parameters.yaml you can refer to images per application

```
branding.splashscreen_image:
  default: ./bundles/workshopdemo/images/mapbender_logo.png
  mapbender_demo: ./bundles/workshopdemo/images/ws_logo.png
```

Demo Applications





Demo Application

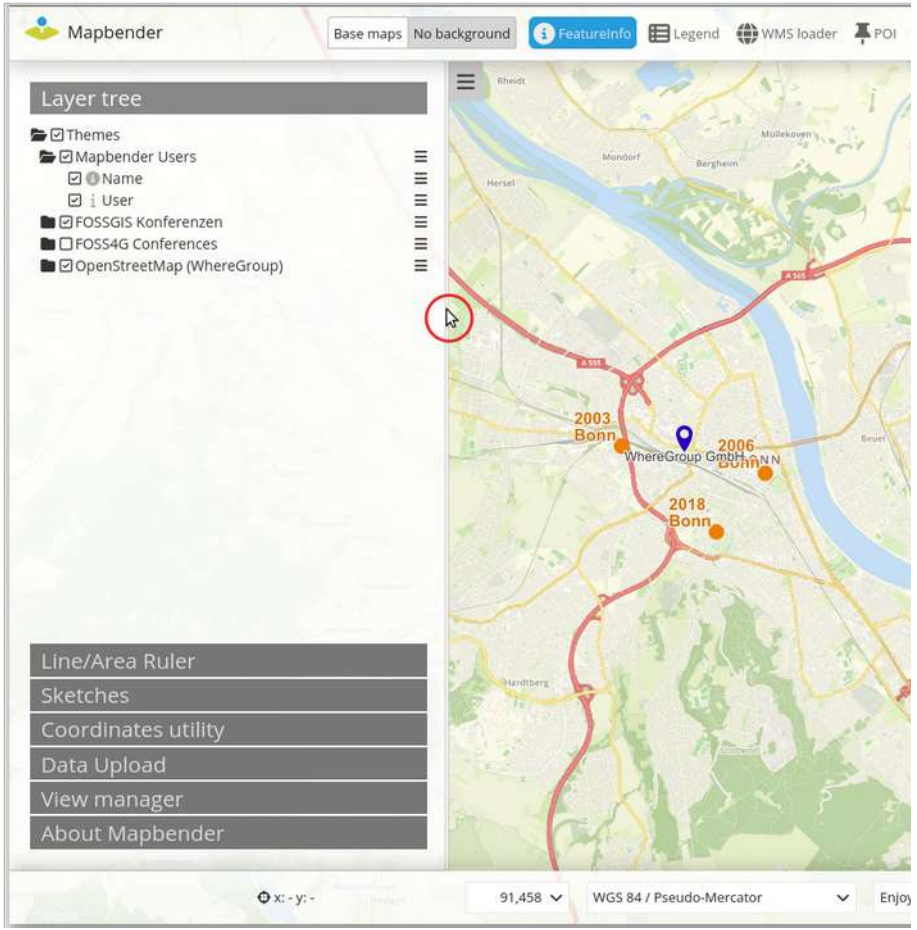
3 Applications

Mobile & Desktop demos

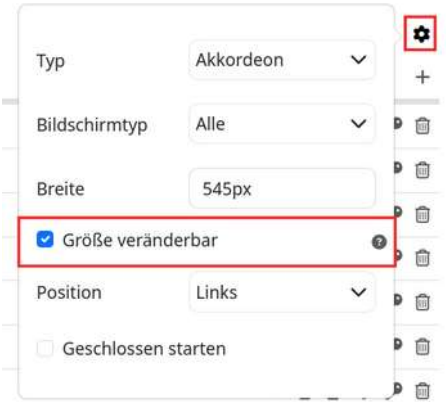
Demonstrating most of the Elements

Showing Design Adoptions

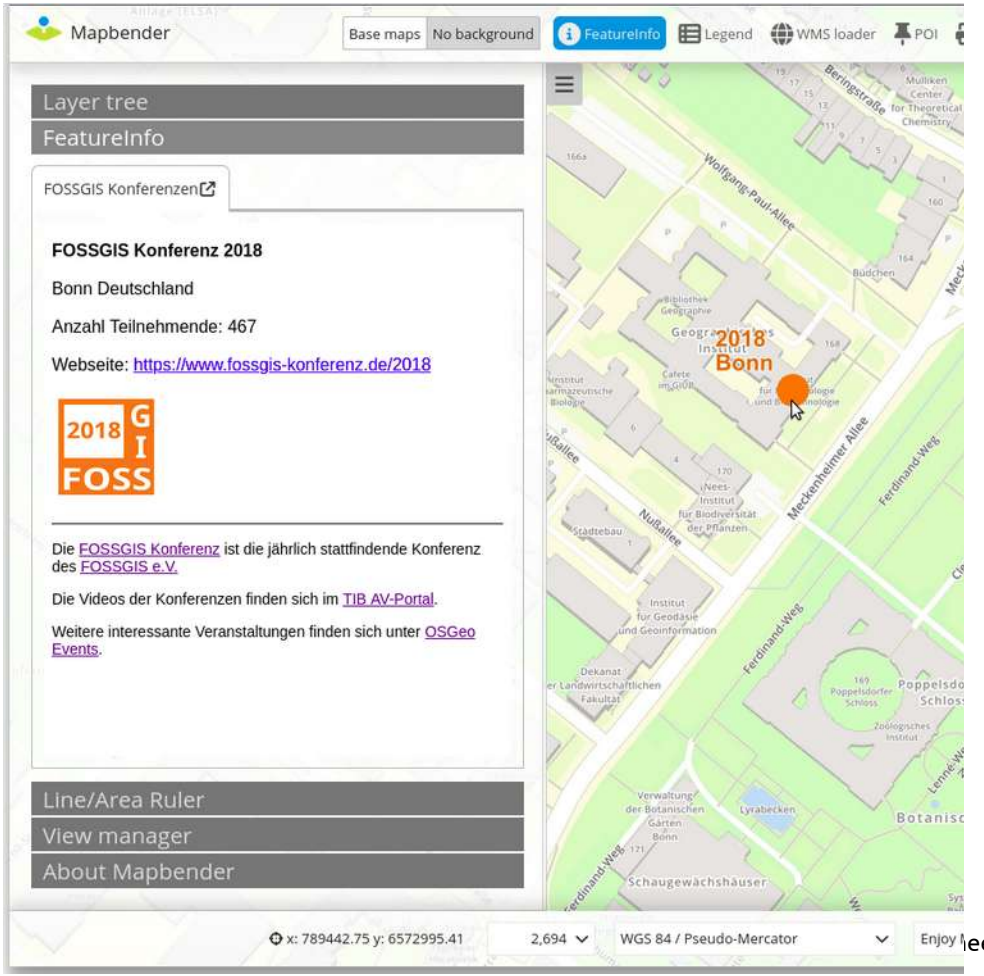
Drag the Sidepane



You can disable this feature

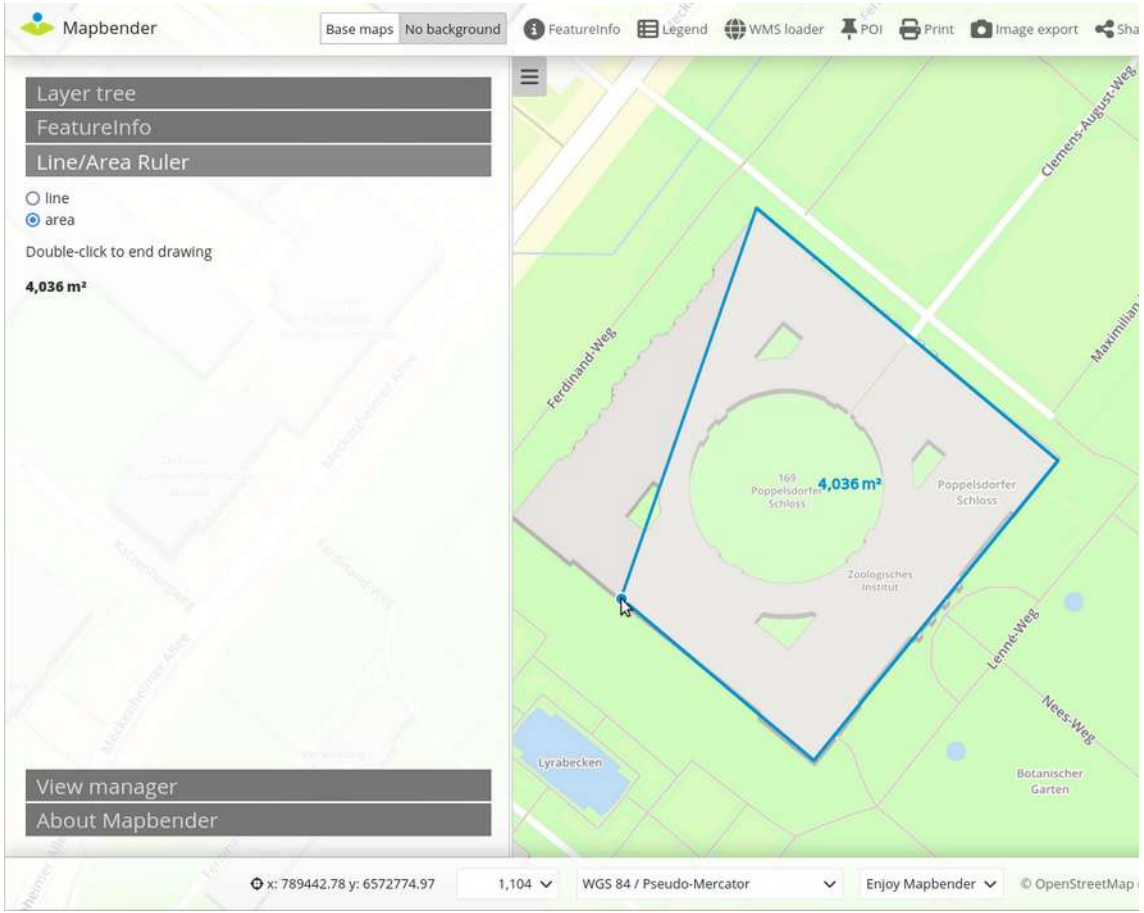


Use Information element in the Sidepane



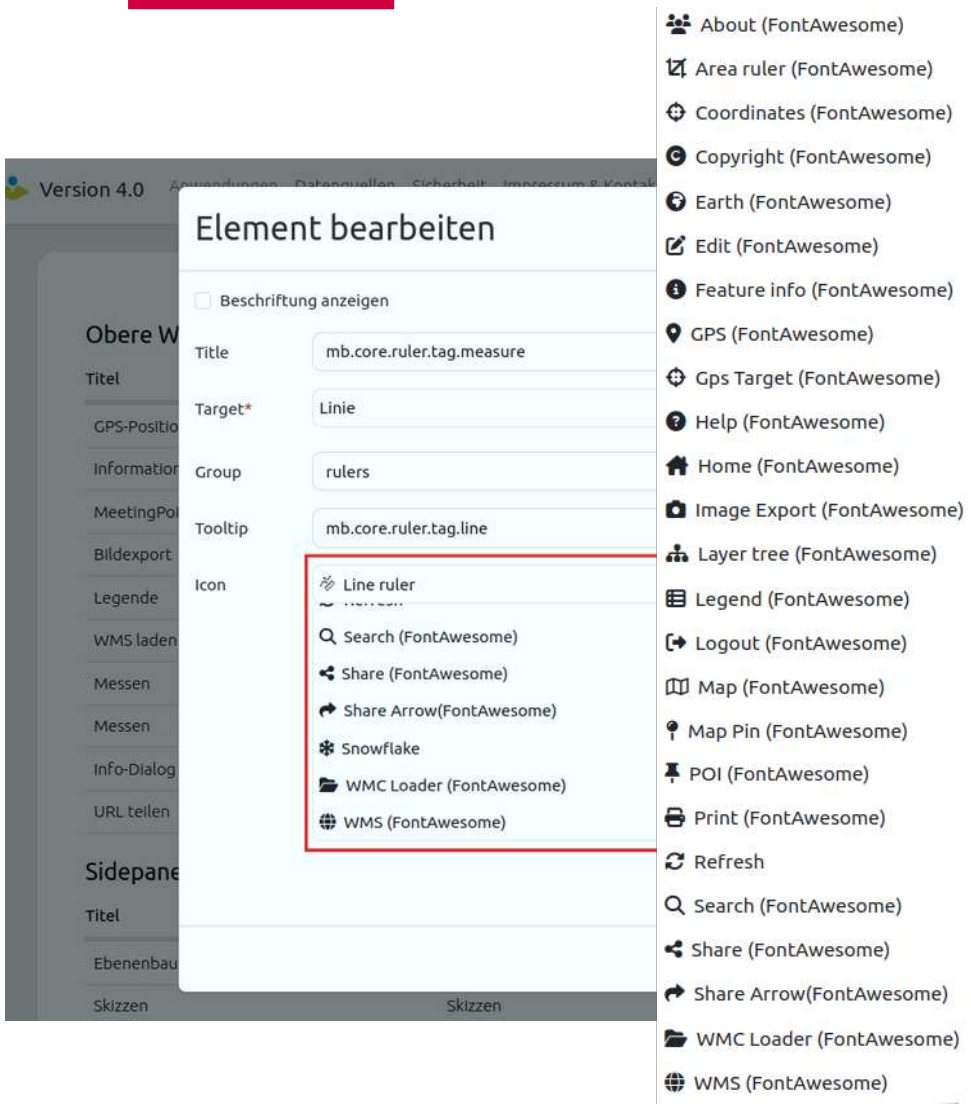
Show results in the Sidepane

Use measuring tool in the Sidepane



Switch between line/area

Show results in the sidepane



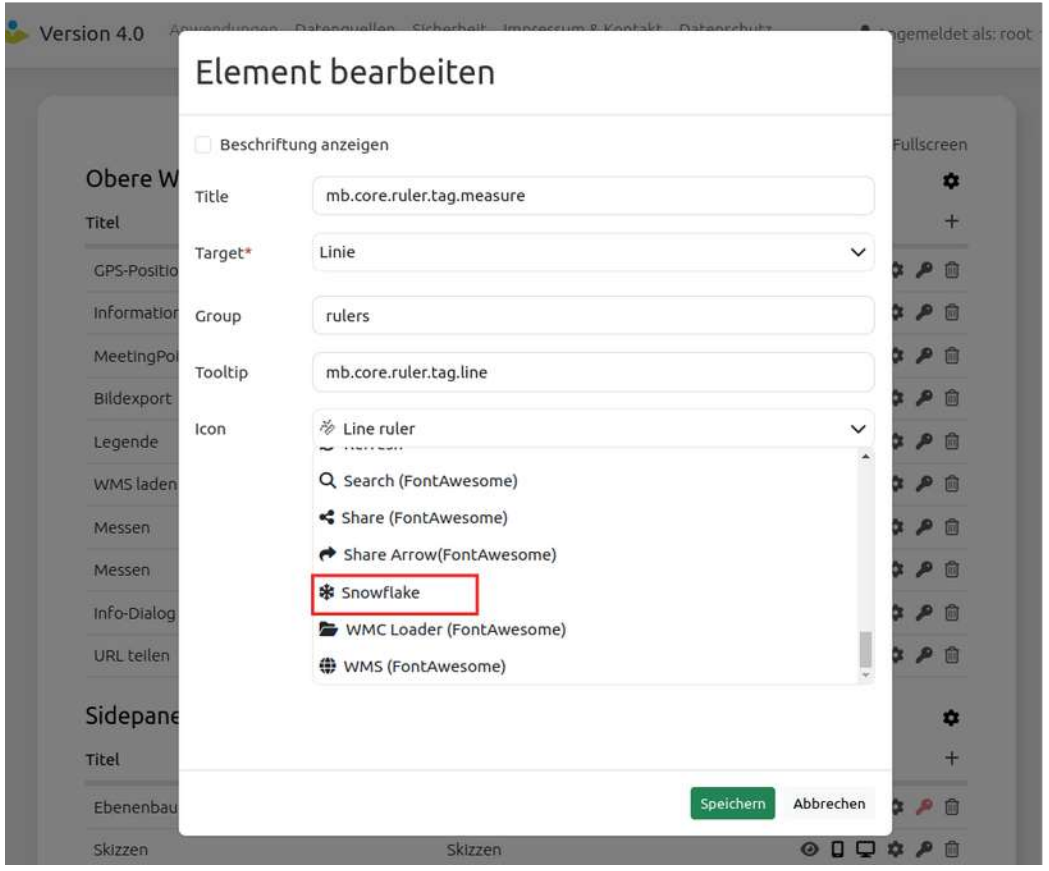
Symbols

Modified Symbols

New Symbols from the new Font Awesome Version

We use the free symbols

We integrated more symbols



Define Symbole

Define your own Symbols

In parameters.yaml

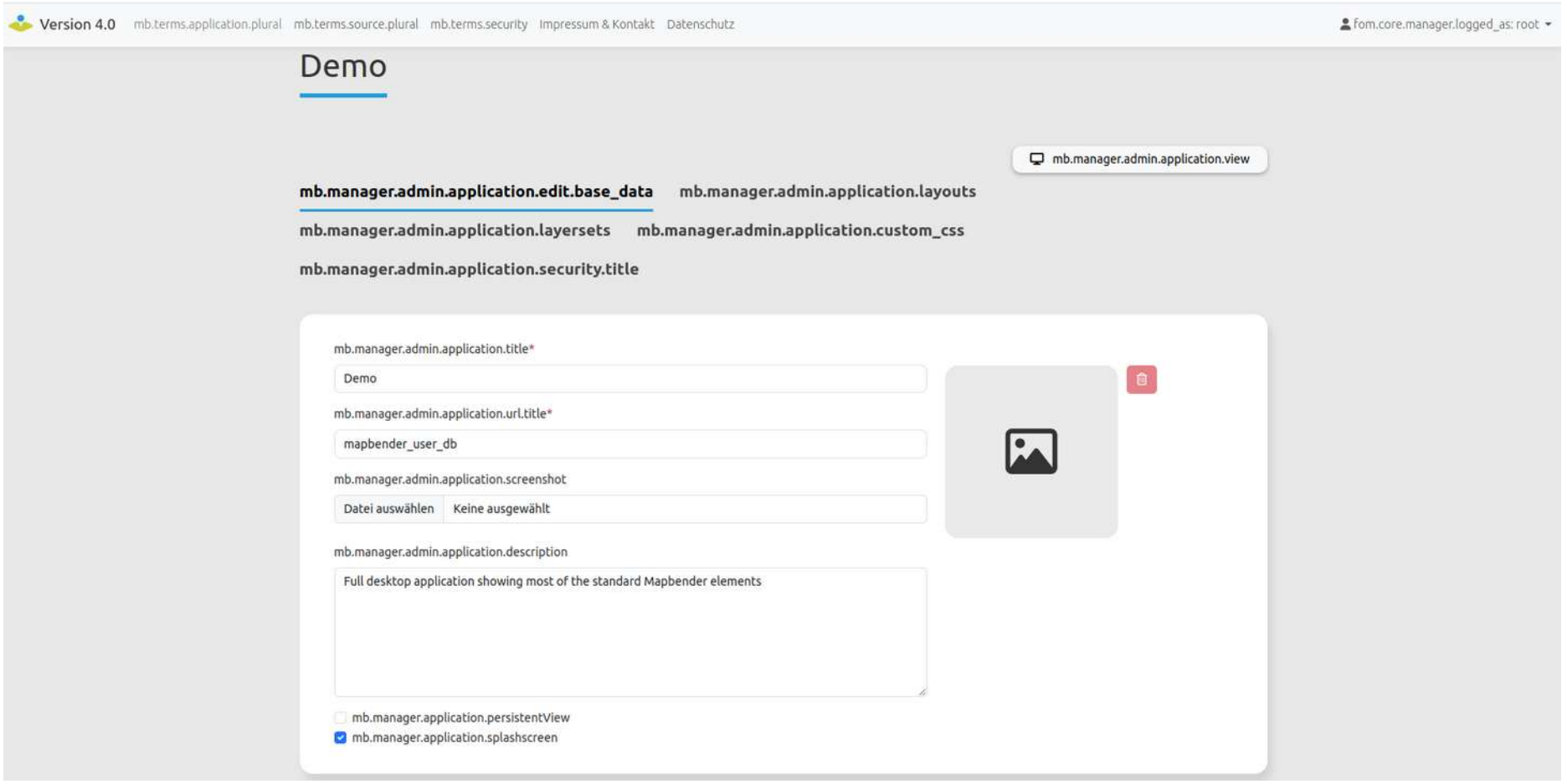
```
mapbender.icons.custom:
  - name: iconSnowflake
    title: Snowflake
    class: fa-solid fa-snowflake
```

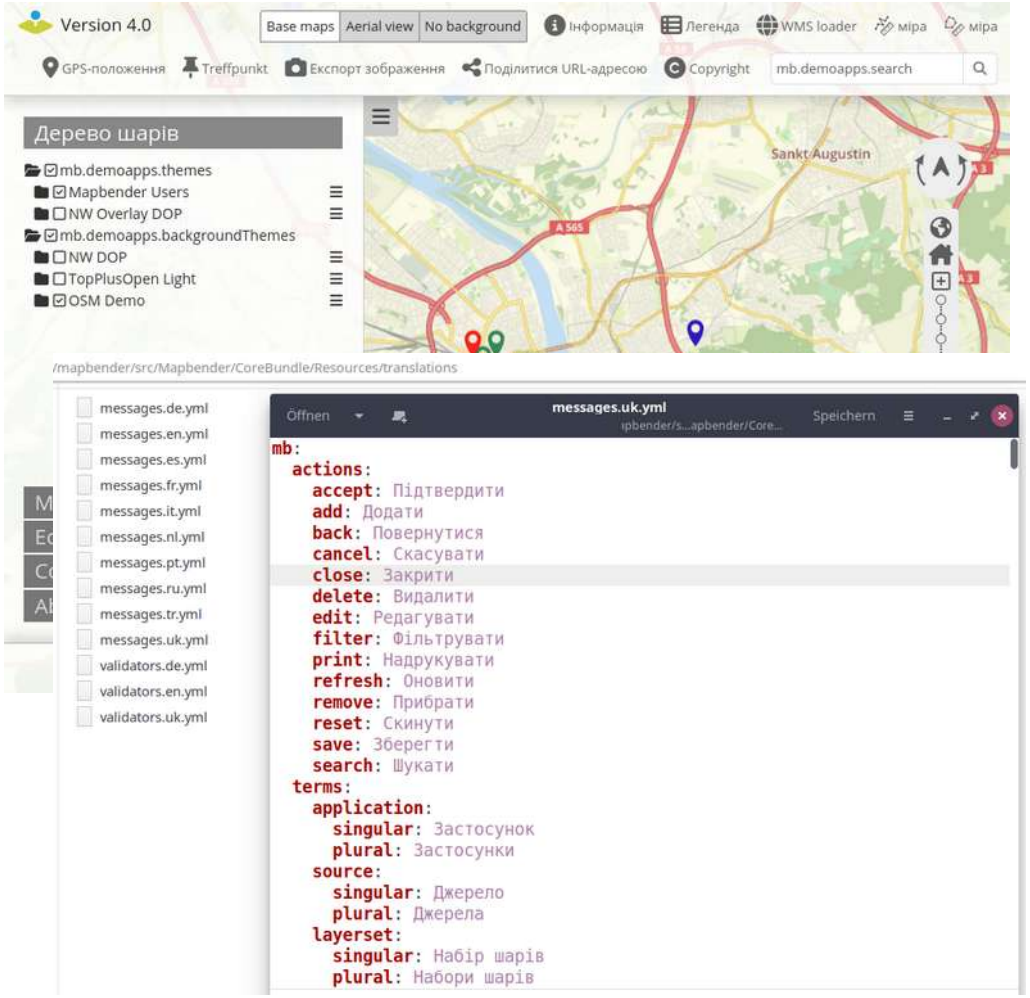
Deactivate the Standard Symbols

In parameters.yaml

```
mapbender.icons.disable_default: false
mapbender.icons.disable_default_fa: false
```

Translations





Translations

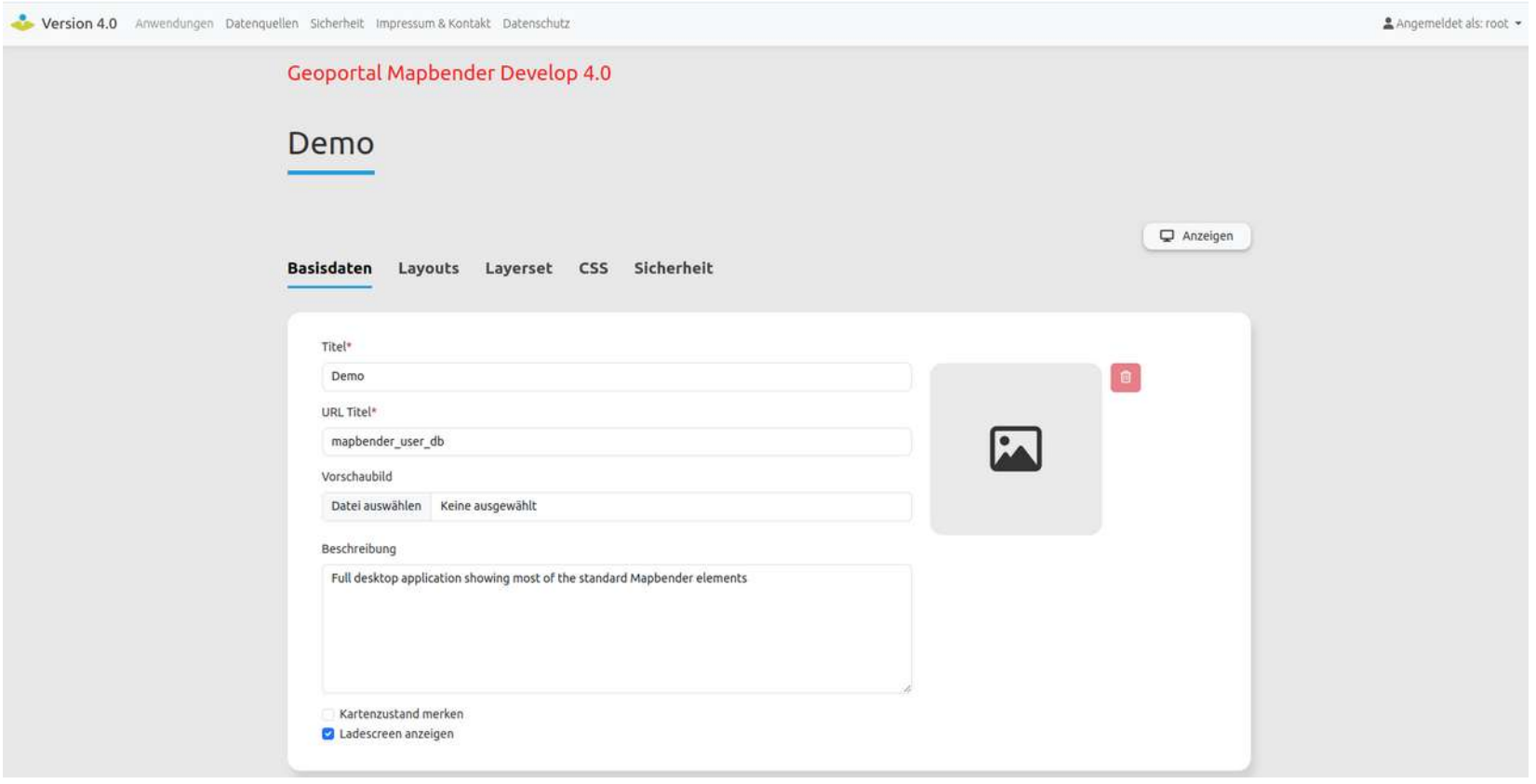
Mapbender takes the language of the Browser

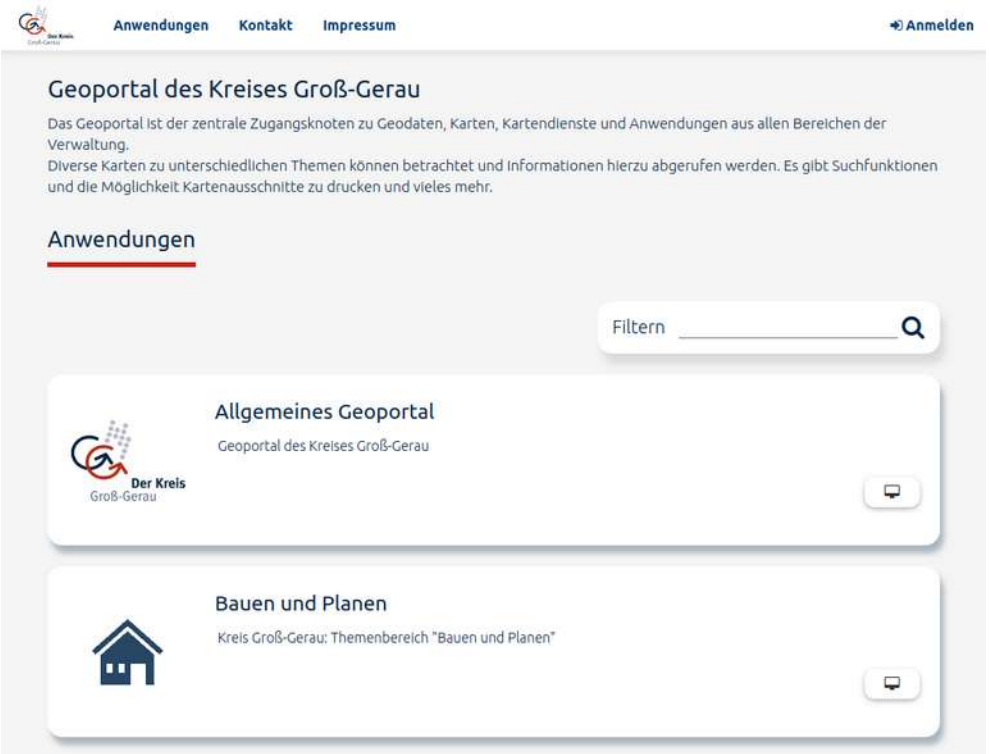
Or you define the Language to use

In parameters.yaml

```
mapbender.automatic_locale: false
fallback_locale:  en
locale:         uk
```

Overwrite Code





Overwrite Code

twig-Templates

Overwrite via templates/bundles/<bundlename>

https://doc.mapbender.org/en/faq.html#overwriting-twig-templates

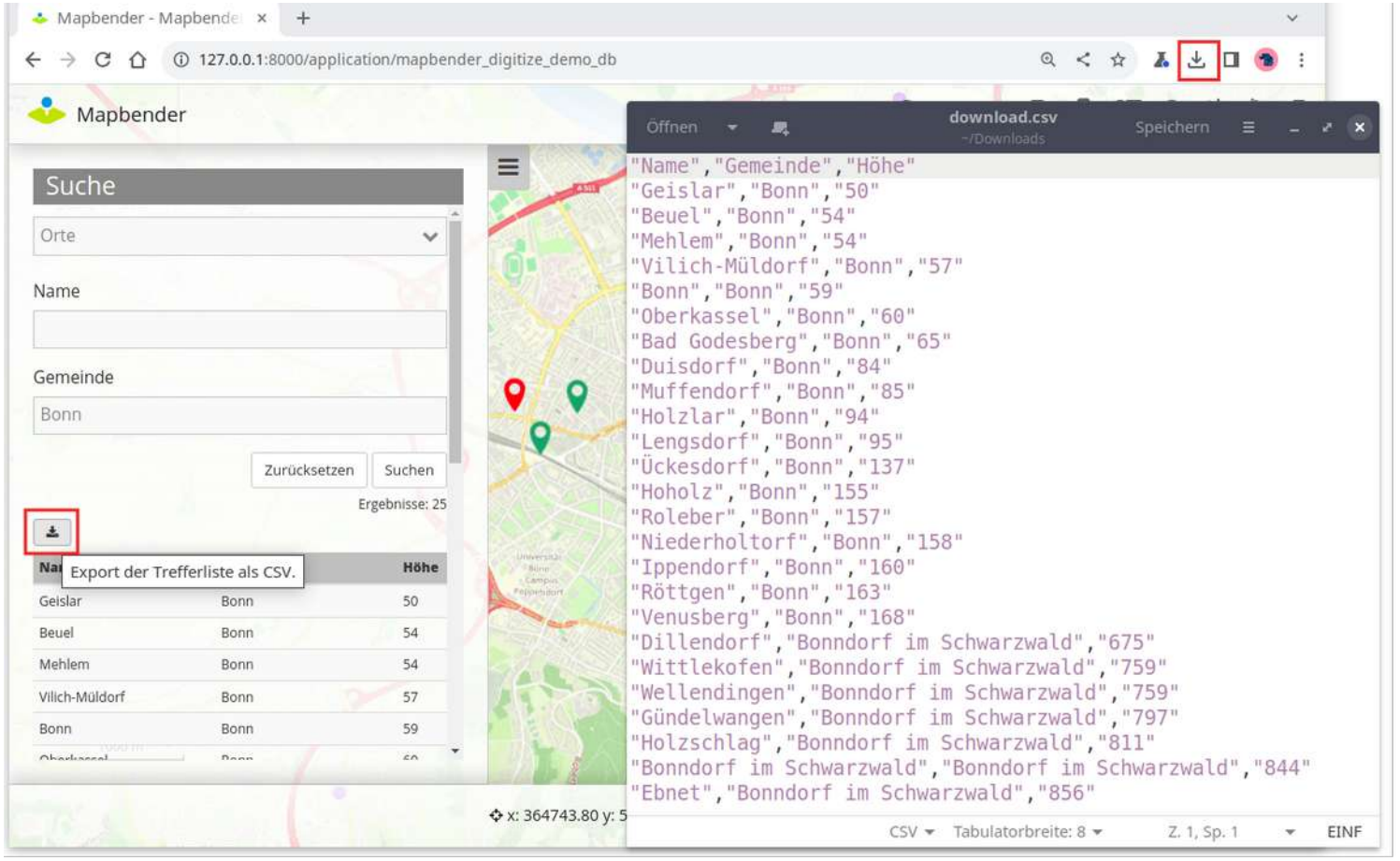
JavaScript & CSS/Sass

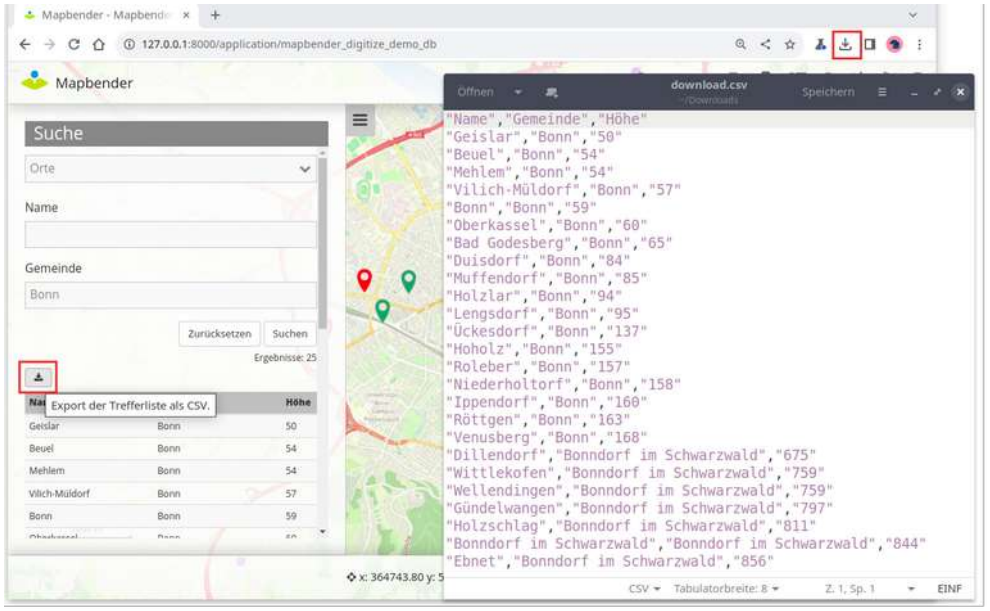
Make use of the ApplicationAssetService class

Overwrite the configuration in parameters.yaml

https://doc.mapbender.org/en/customization/yaml.html#overriding-javascript-and-css-sass-resources

Export Search Results as CSV





Export Search Results

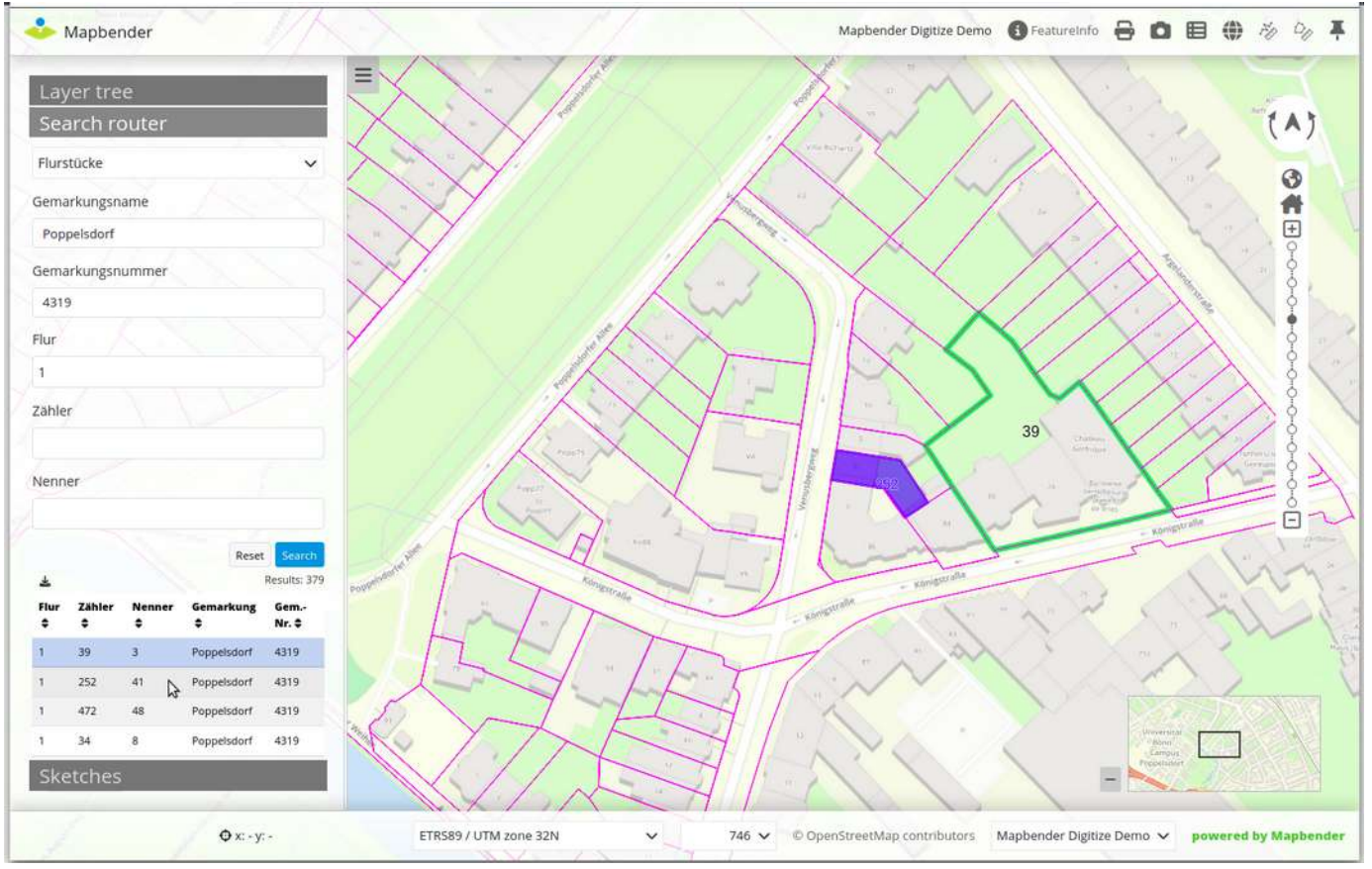
exportcsv

Download csv file with results
Export all columns
No export of the geometry column

New Parameter

results:
  view: table
  count: true
  exportcsv: true

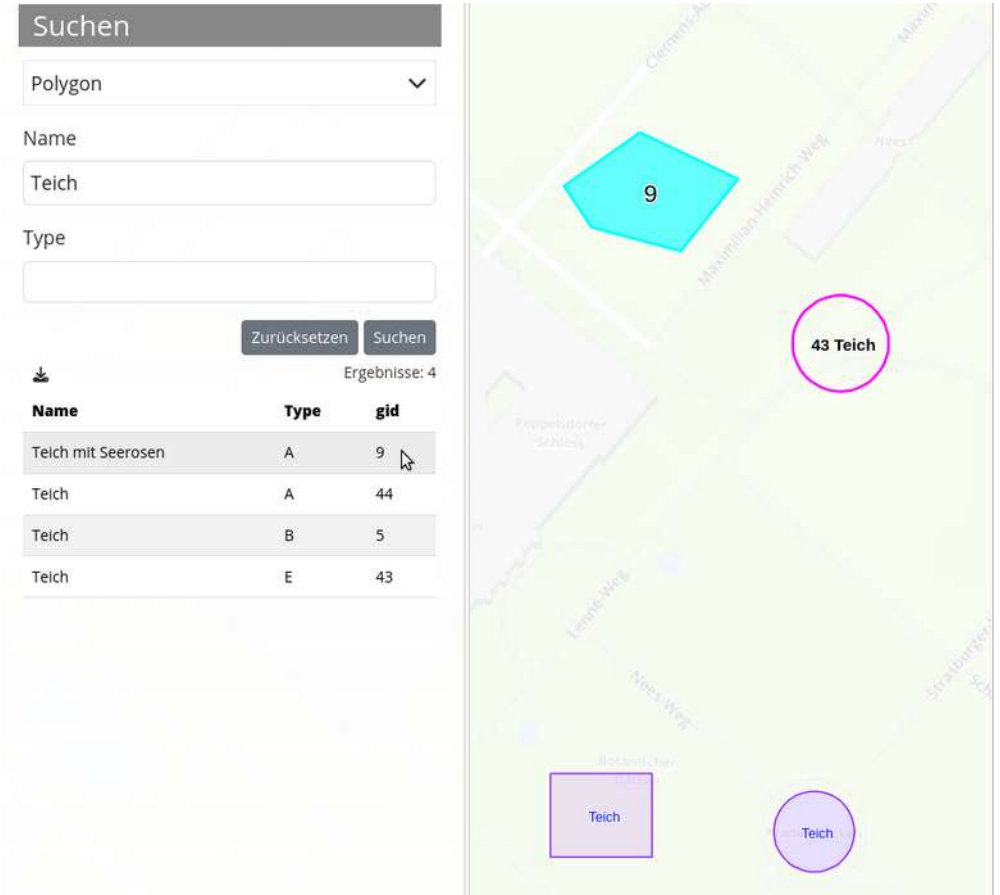
Sortable Search Results



New Parameter

```
results:
  view: table
  count: true
  sortBy: gemarkung
  sortOrder: Asc
```

SearchRouter – label Results



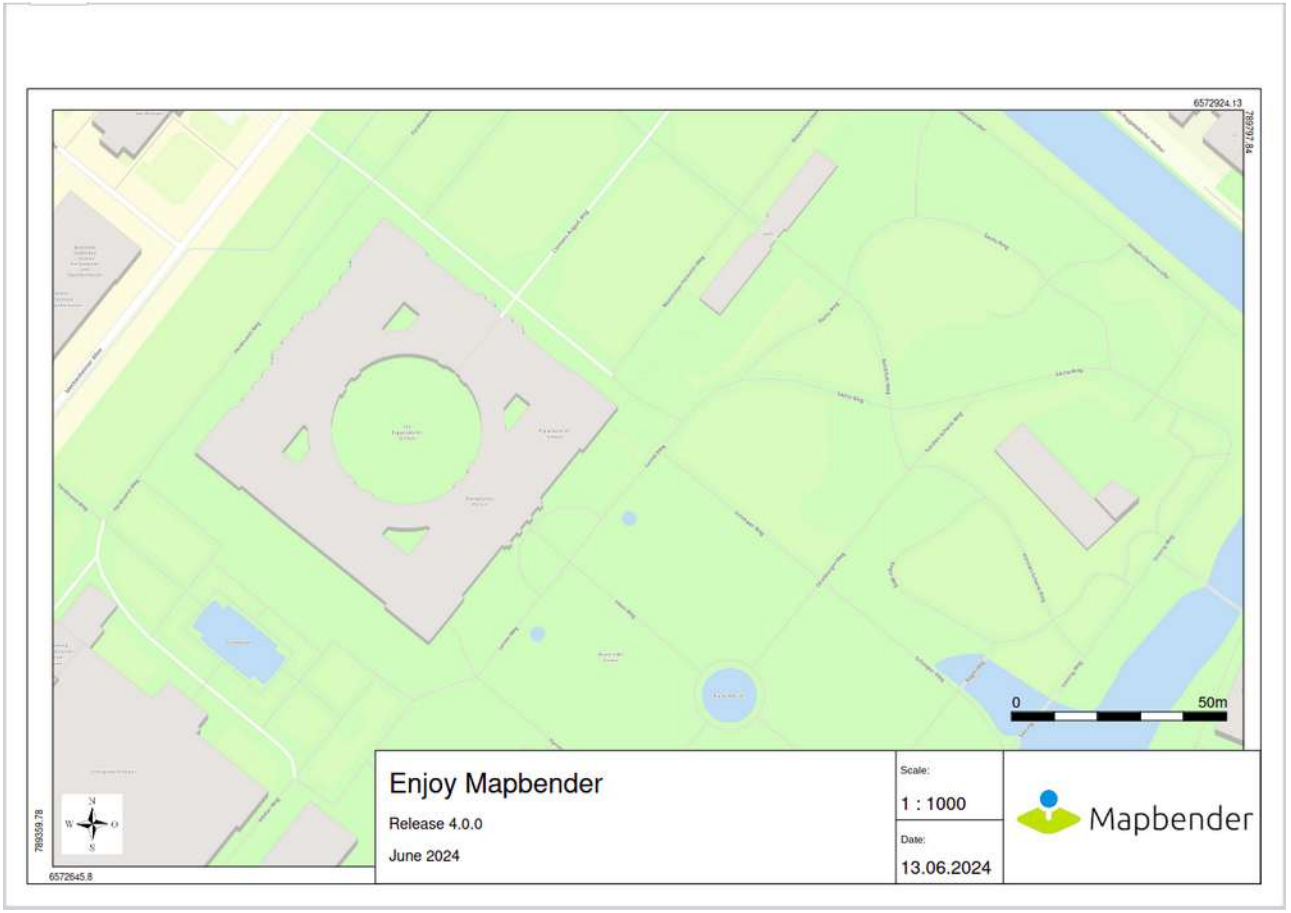
New parameter for labeling

label → refer to 1 -n columns or a fixed text

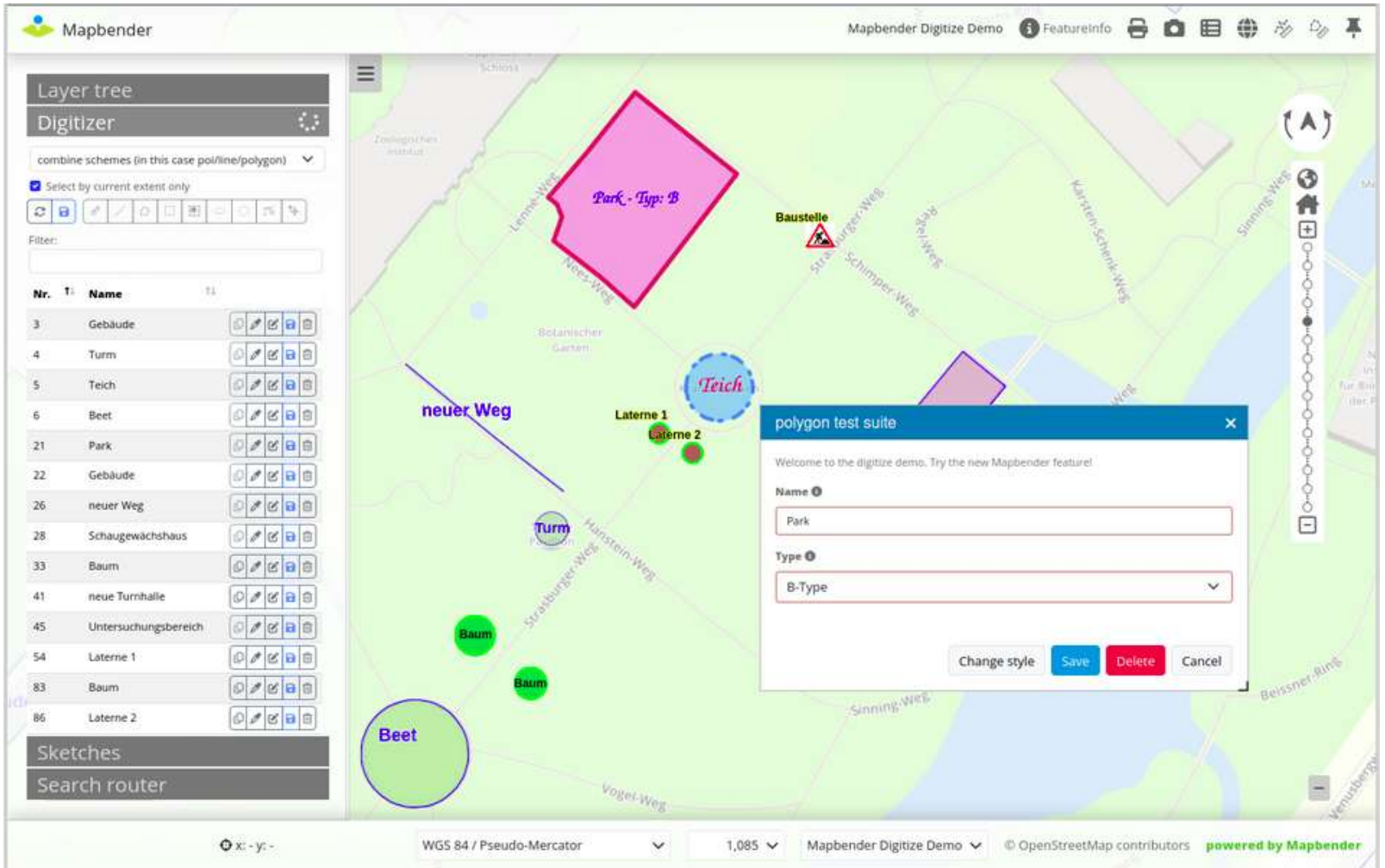
Multiple styling parameter

```
select:
    strokeColor: '#ff00ff'
    strokeWidth: 2
    strokeOpacity: 1
    fillColor: '#ff00ff'
    fillOpacity: 0
    fillWidth: 12
    label: ${gid} ${name}
    fontColor: "#000000"
    fontSize: 12px
    fontFamily: 'Arial, Courier New, monospace'
    fontWeight: bold
    labelOutlineColor: '#fffffe'
    labelOutlineWidth: 1
    labelYOffset: 18
    labelXOffset: 18
```

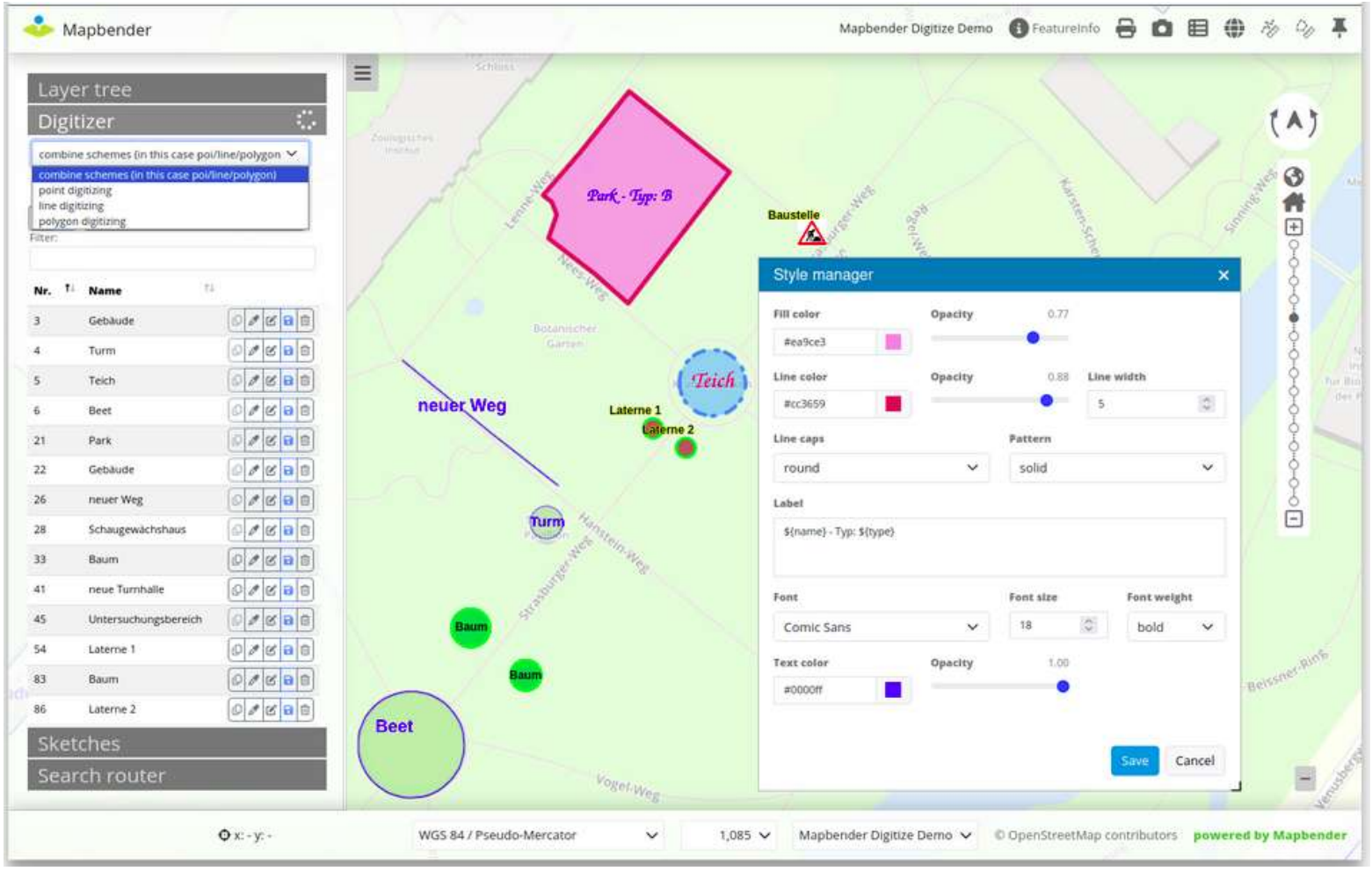
Print legend on the map



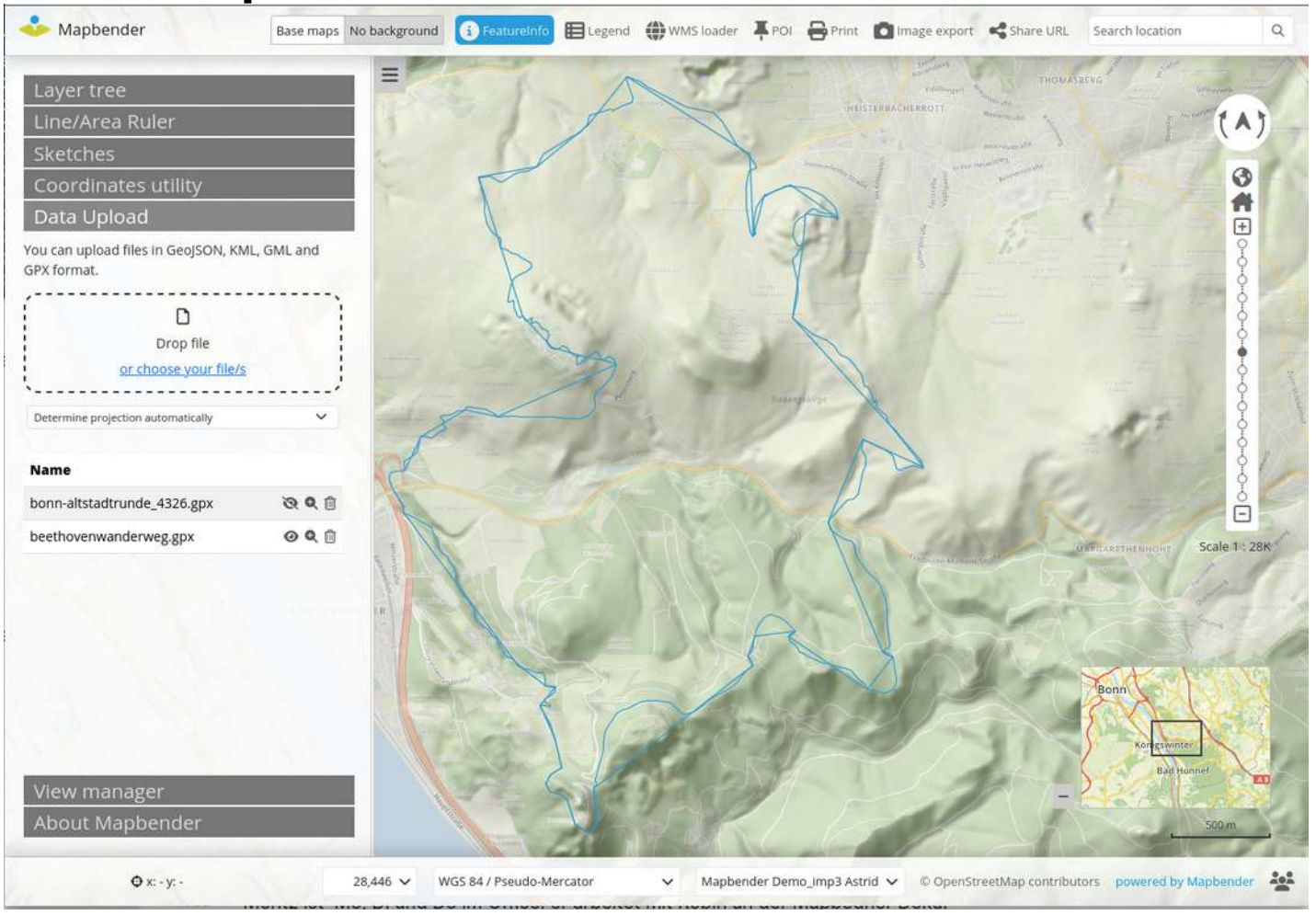
Digitizer Impovements

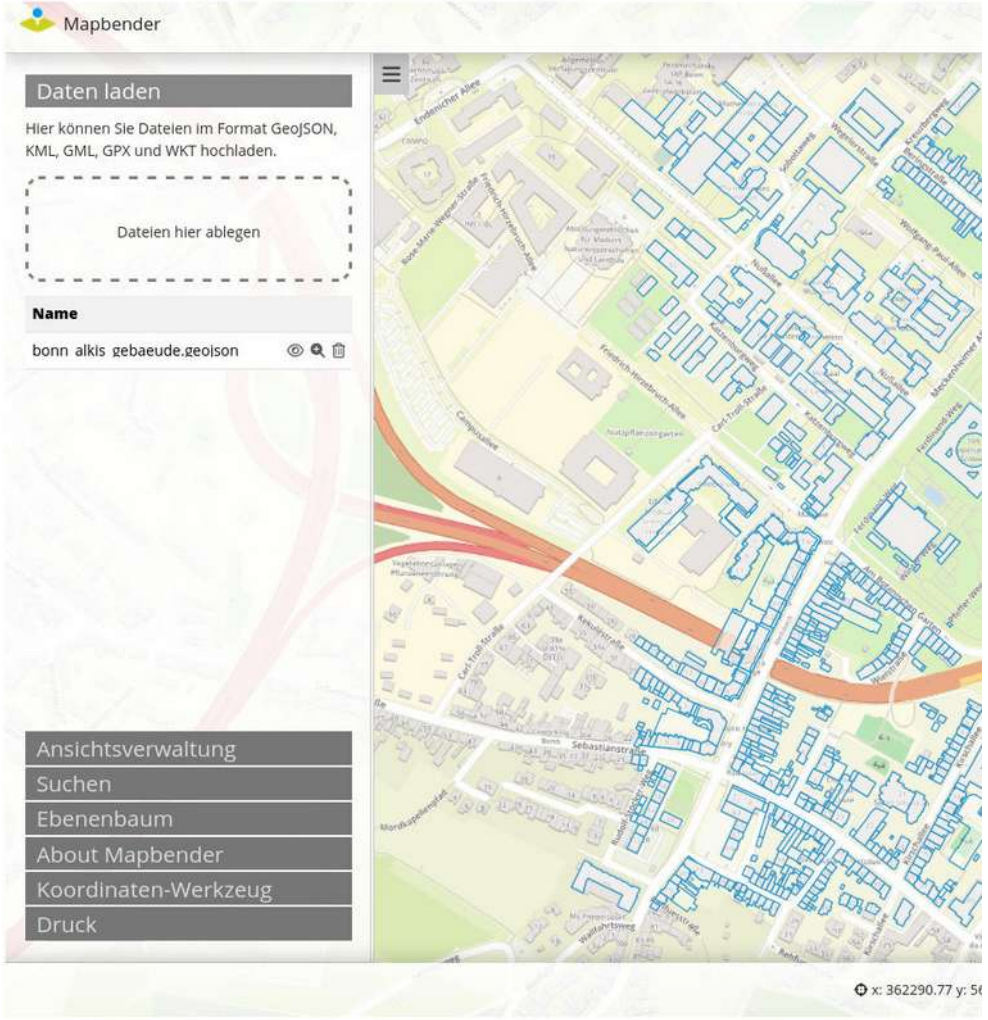


Digitizer Impovements



New Data upload Element





Data upload

Data upload in the Client

Temporary load data to the client
Supported formats: GML, GeoJSON, KML, GPX

Feature

Drag & Drop
Projection is detected or you can define it

Future

Labeling
Show attributes
Styling
Load vector data from the backend
Save data of the user

New Permissionhandling

ACL-Bundle was deprecated

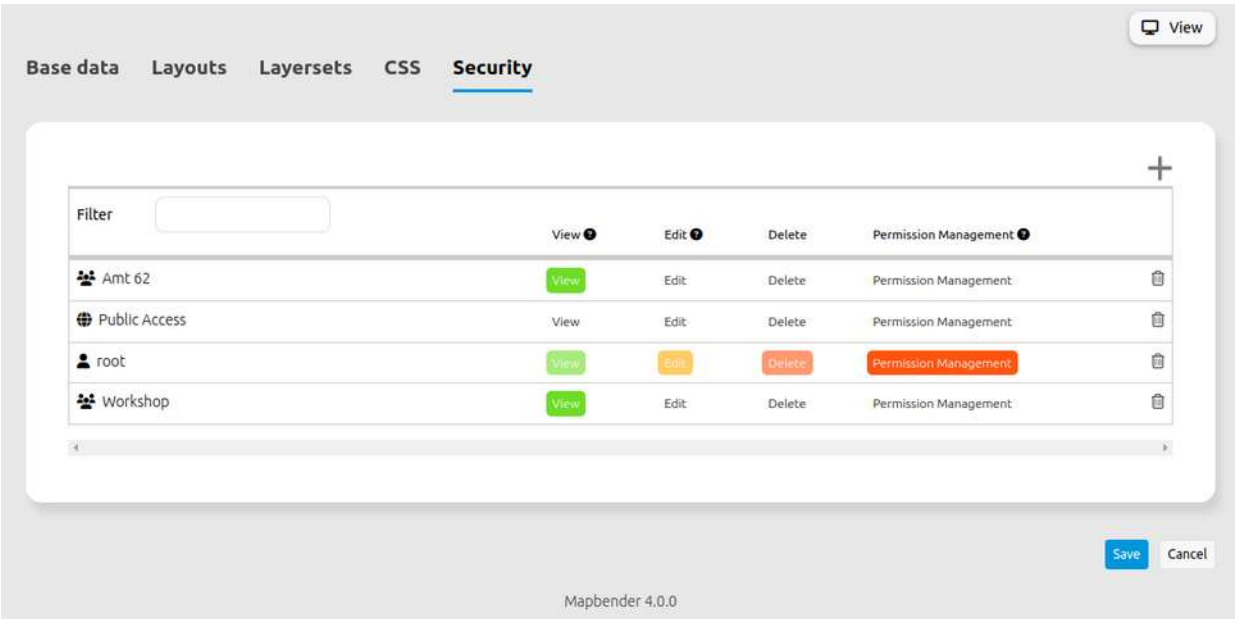
Need for a new solution

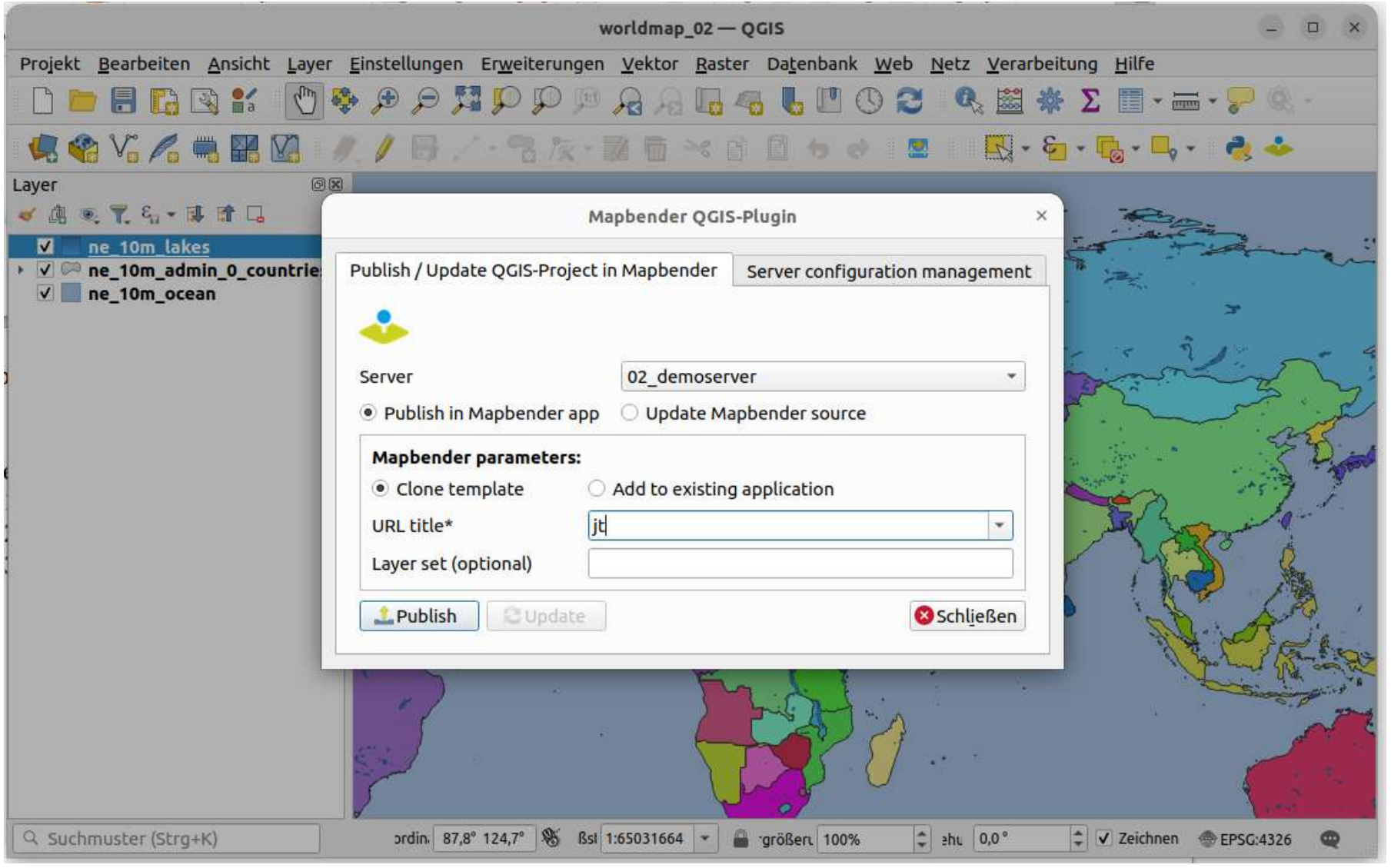
Direct integration in Mapbender

Simplified similar concept
Only one table that administrates the permissions

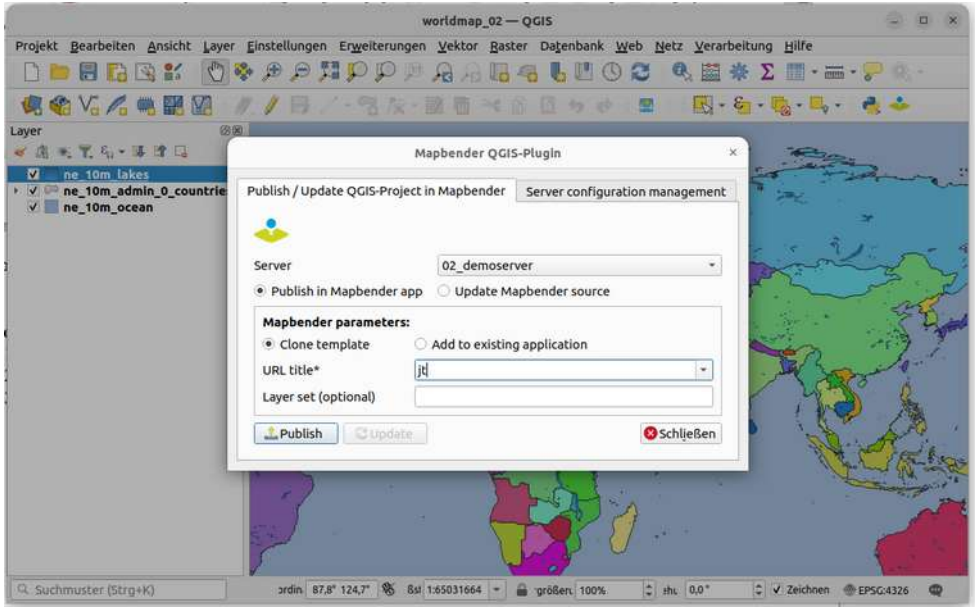
Easy update from an old versions

bin/console command to update permissions




worldmap_02 — QGIS
Projekt Bearbeiten Ansicht Layer Einstellungen Erweiterungen Vektor Raster Datenbank Web Netz Verarbeitung Hilfe
Layer
ne_10m_lakes
ne_10m_admin_0_countrie
ne_10m_ocean
Mapbender QGIS-Plugin
Publish / Update QGIS-Project in Mapbender
Server configuration management
Server
02_demoserver
Publish in Mapbender app
Update Mapbender source
Mapbender parameters:
Clone template
Add to existing application
URL title*
jt
Layer set (optional)
Publish
Update
Schließen
Suchmuster (Strg+K)
87,8° 124,7°
1:65031664
100%
0,0 °
Zeichnen
EPSG:4326

Mapbender QGIS Plugin



Easy publishing

QGIS Server WMS

QGIS Server project is transferred to the server

WMS Is published in Mapbender

First prototyp of the plugin

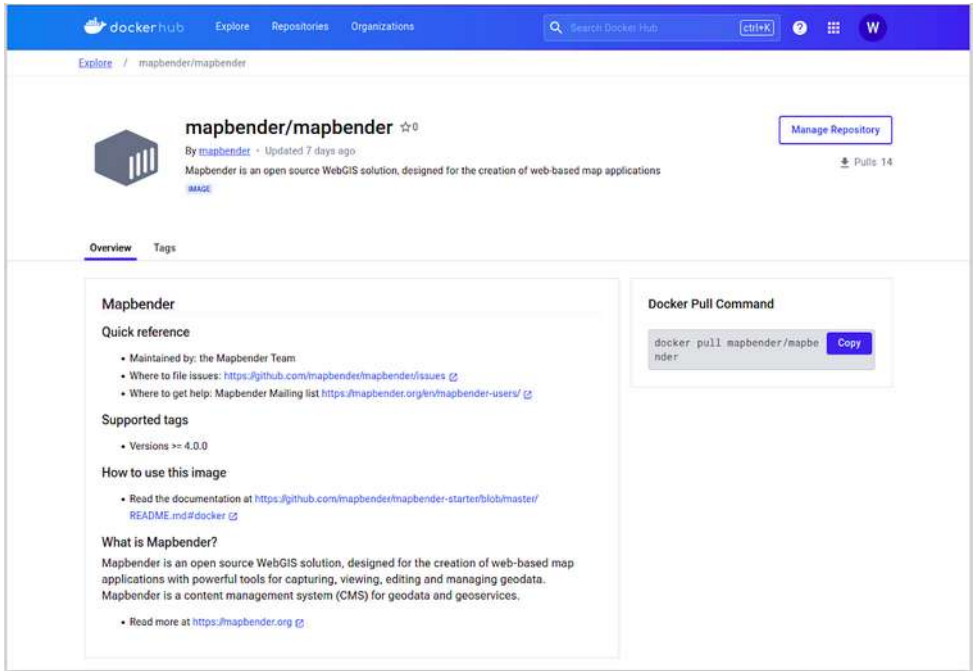
Minimum version Mapbender 4.0.0

New & enhanced console commands

bin/console mapbender:wms:assign <application> <source> [<layerset>]

https://wheregroup.com/blog/details/mapbender-anwendungen-einfach-direkt-aus-qgis-heraus-erstellen/

Docker integration



Every Release triggers action

Image is builds automatically
Release of a tag on Docker Hub

Adoptable to your project

Use the configuration for your own project

What is next?

Discussion about the Roadmap is going on

Update missing Repositories

QueryBuilder
Customer Modules

Support for more Formats

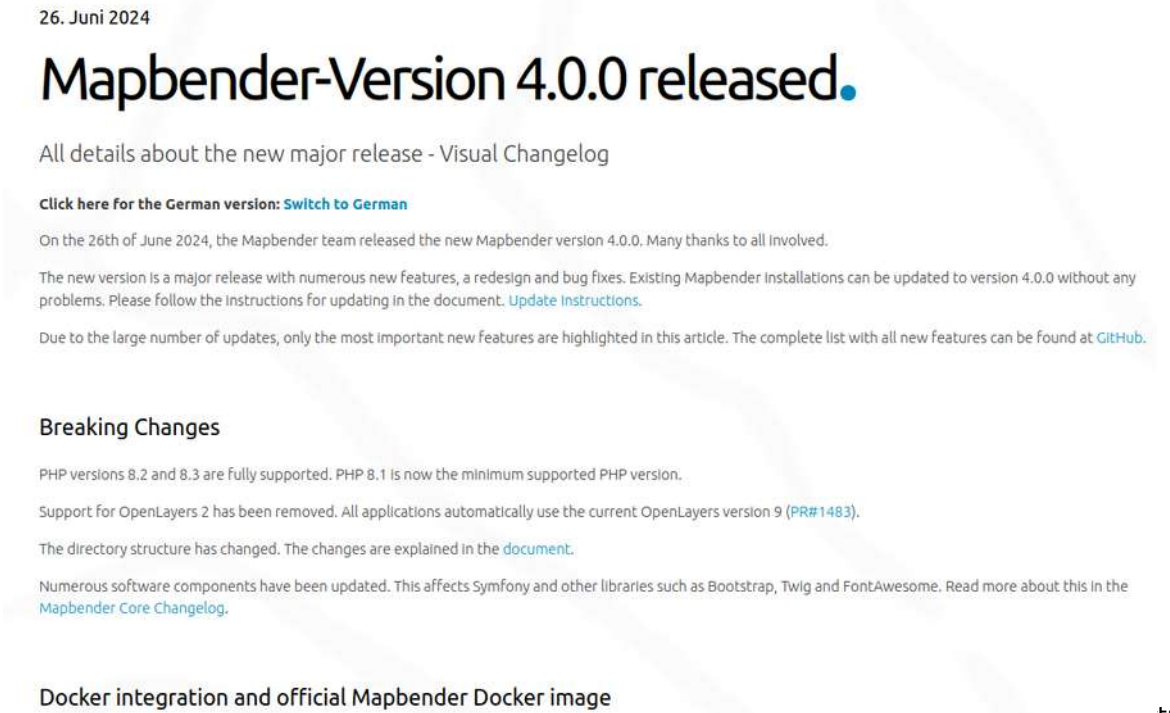
OGC API Features

Routing

Planned vor 2024

Find information in the Visual Changelog

https://mapbender.org/aktuelles/details/mapbender-version-400-released/



26. Juni 2024

Mapbender-Version 4.0.0 released.

All details about the new major release - Visual Changelog

Click here for the German version: Switch to German

On the 26th of June 2024, the Mapbender team released the new Mapbender version 4.0.0. Many thanks to all involved.

The new version is a major release with numerous new features, a redesign and bug fixes. Existing Mapbender installations can be updated to version 4.0.0 without any problems. Please follow the instructions for updating in the document. Update instructions.

Due to the large number of updates, only the most important new features are highlighted in this article. The complete list with all new features can be found at GitHub.

Breaking Changes

PHP versions 8.2 and 8.3 are fully supported. PHP 8.1 is now the minimum supported PHP version.

Support for OpenLayers 2 has been removed. All applications automatically use the current OpenLayers version 9 (PR#1483).

The directory structure has changed. The changes are explained in the document.

Numerous software components have been updated. This affects Symfony and other libraries such as Bootstrap, Twig and FontAwesome. Read more about this in the Mapbender Core Changelog.

Docker integration and official Mapbender Docker image

Thanks for your attention

Mapbender

https://talks.osgeo.org/foss4g-europe-2024/talk/YMU3UV/

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