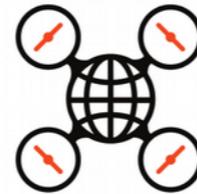


Mapbender



OpenDroneMap



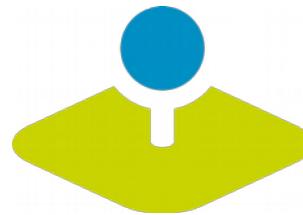
Von der Drohne ins WebGIS

-

Zusammenspiel von OpenDroneMap und Mapbender

Robert Klemm





Mapbender



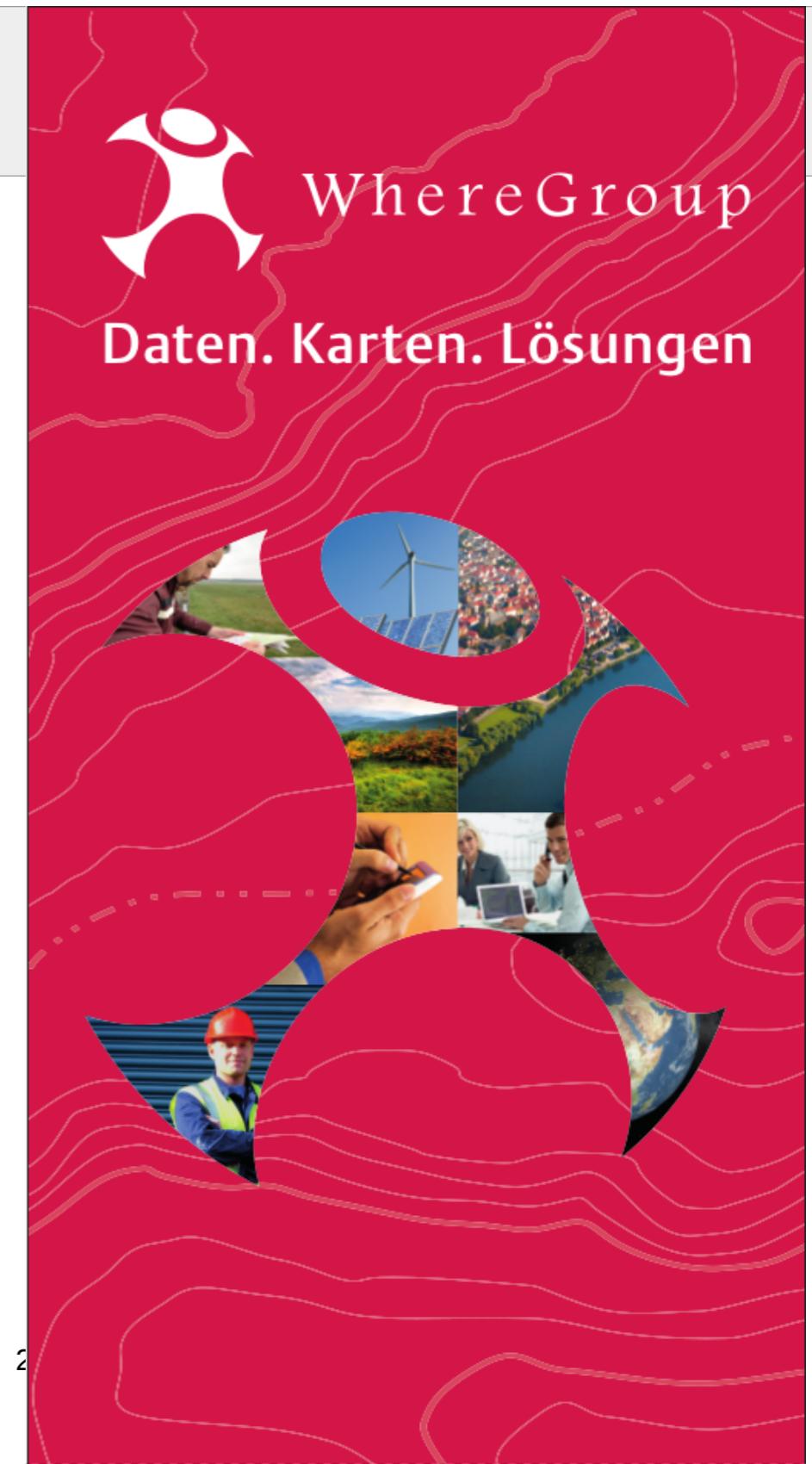
OpenDroneMap

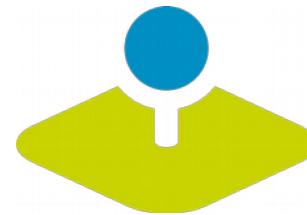


Robert Klemm

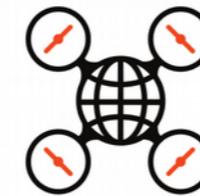
- WhereGroup Berlin (Germany)
- GIS-Consultant & Entwickler
- Kartographie- /GIS-Studium Beuth-Hochschule
- Mapbender Entwickler
- OSM-Mapper/ Community seit 2010

✉ robert.klemm@wherengroup.com





Mapbender



OpenDroneMap



WhereGroup GmbH & Co. KG

Auswahl Technologien:



Mapbender



Metador



OpenLayers



GeoServer



Mops



OpenStreetMap

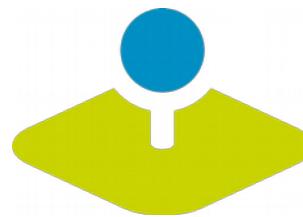


MapServer
open source web mapping

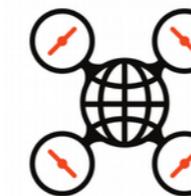


MapProxy





Mapbender



OpenDroneMap

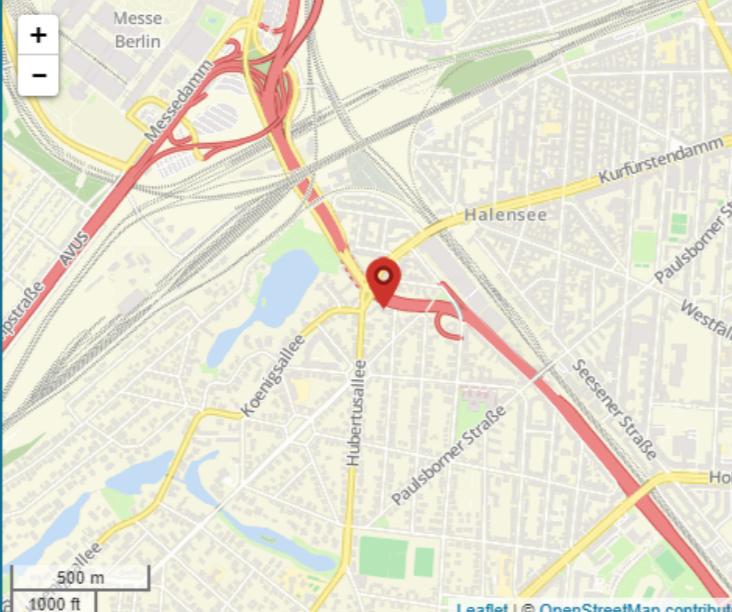


WhereGroup GmbH & Co. KG

Standort
Berlin

WhereGroup GmbH & Co. KG

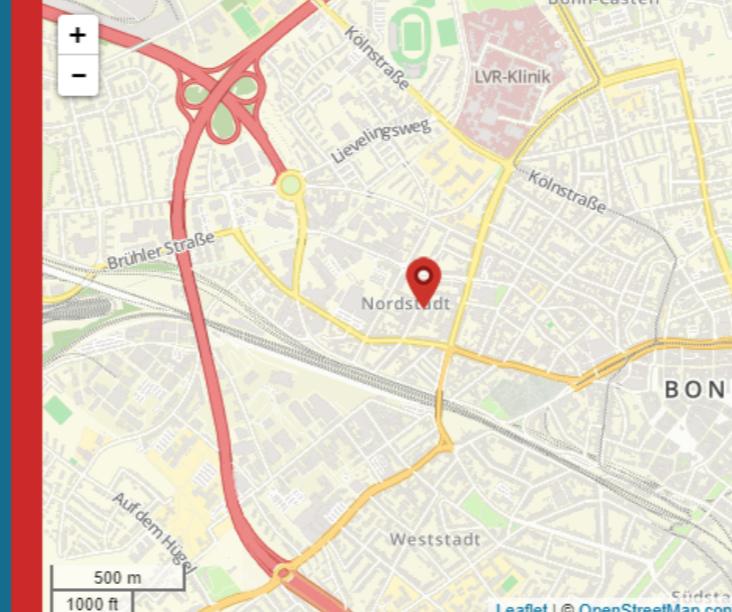
📍 Gillweg 3
14193 Berlin
📞 +49 (0)30 / 5 13 02 78 - 0
📠 +49 (0)30 / 5 13 02 78 - 11



Standort
Bonn

WhereGroup GmbH & Co. KG

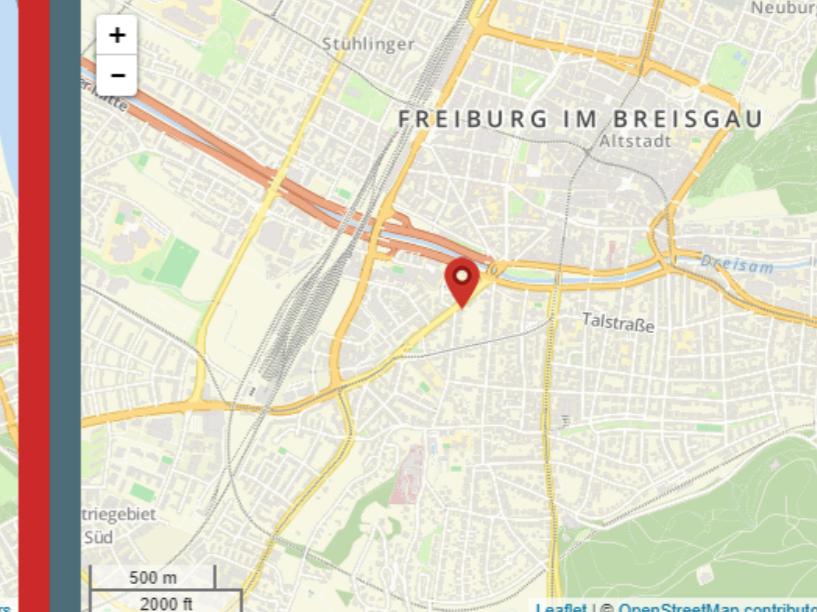
📍 Eifelstraße 7
53119 Bonn
📞 +49 (0) 228 / 90 90 38 - 10
📠 +49 (0) 228 / 90 90 38 - 11



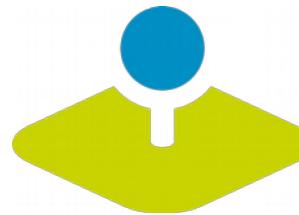
Standort
Freiburg

WhereGroup GmbH & Co. KG

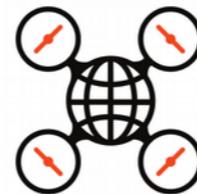
📍 Schwimmbadstraße 2
79100 Freiburg im Breisgau
📞 +49 (0)761 / 51 91 02 - 0
📠 +49 (0)761 / 51 91 02 - 11







Mapbender



OpenDroneMap



Mapbender

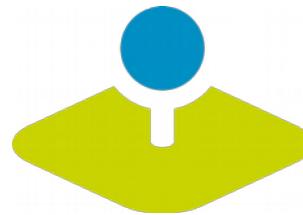


„(...) ist ein Content Management System für Geodatendienste und Kartenanwendungen. Mit Mapbender können Sie Anwendungen erstellen, ohne eine einzige Zeile Code zu schreiben. Mapbender ist ein flexibler Client für OGC-Dienste.“ (*Wikipedia*)

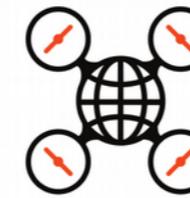
GitHub

Mapbender is Open Source





Mapbender



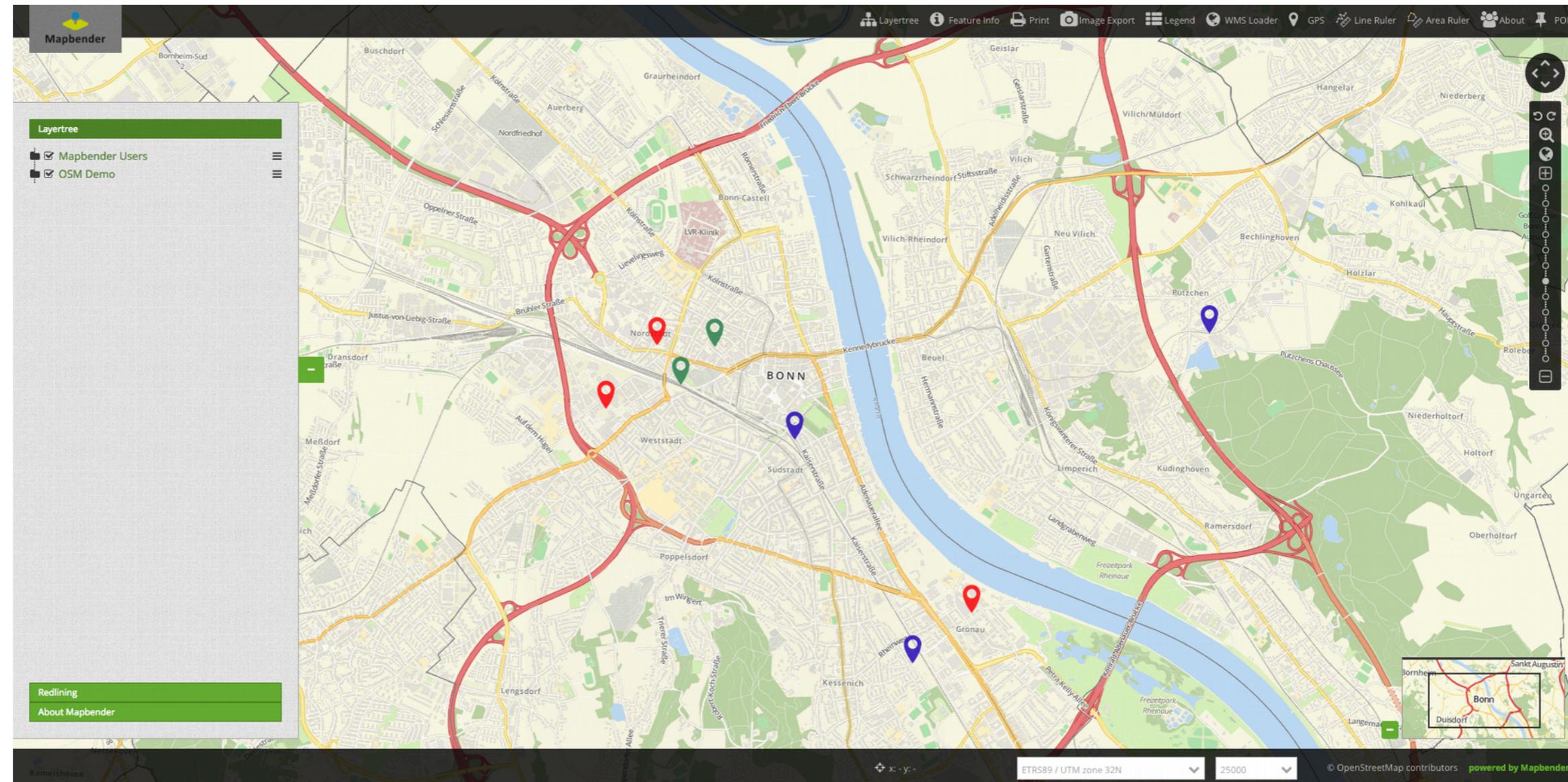
OpenDroneMap

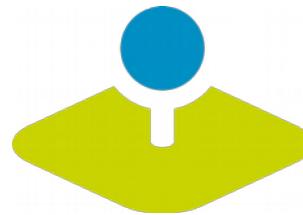
OSGeo
Park



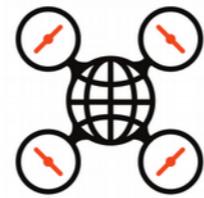
Mapbender

Mapbender





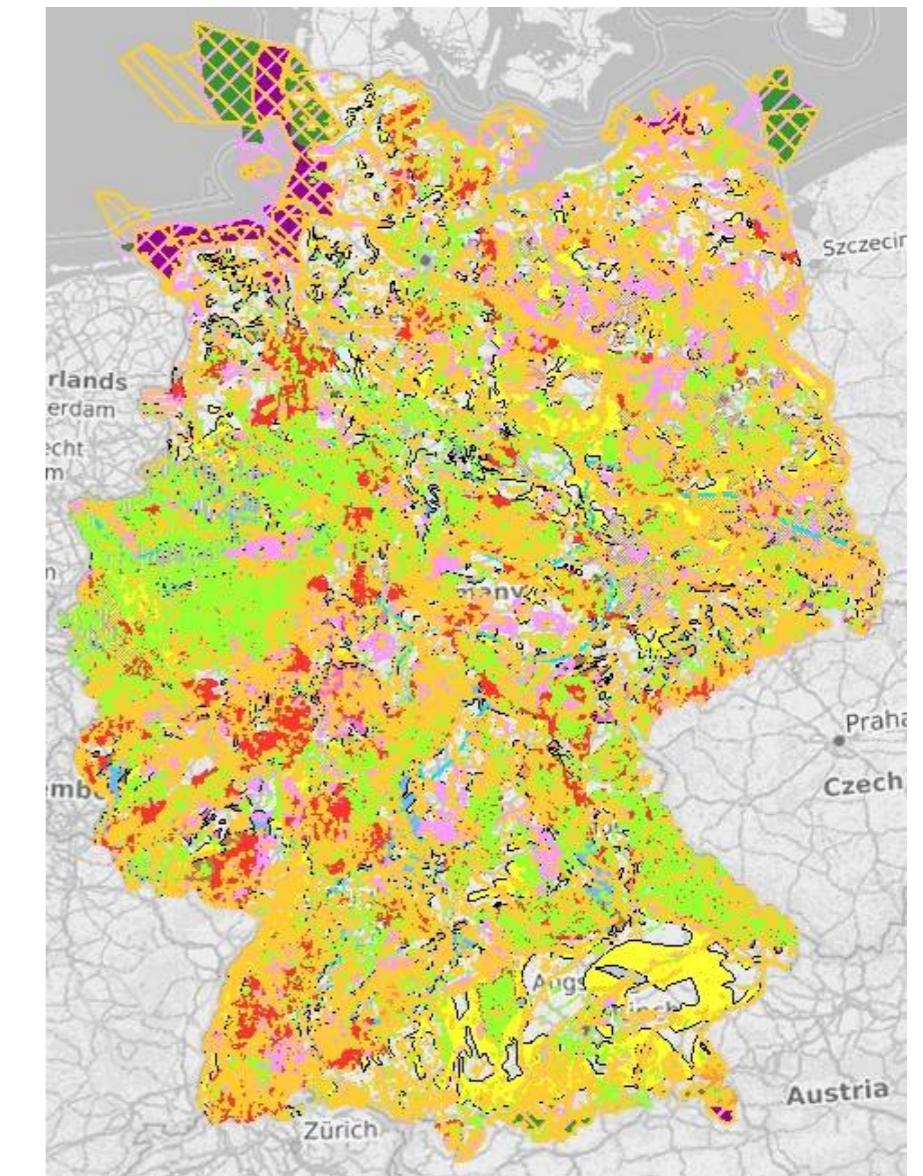
Mapbender

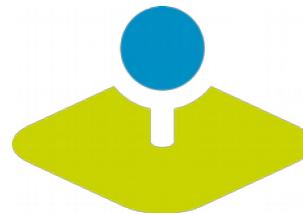


OpenDroneMap



GisInfoService





Mapbender

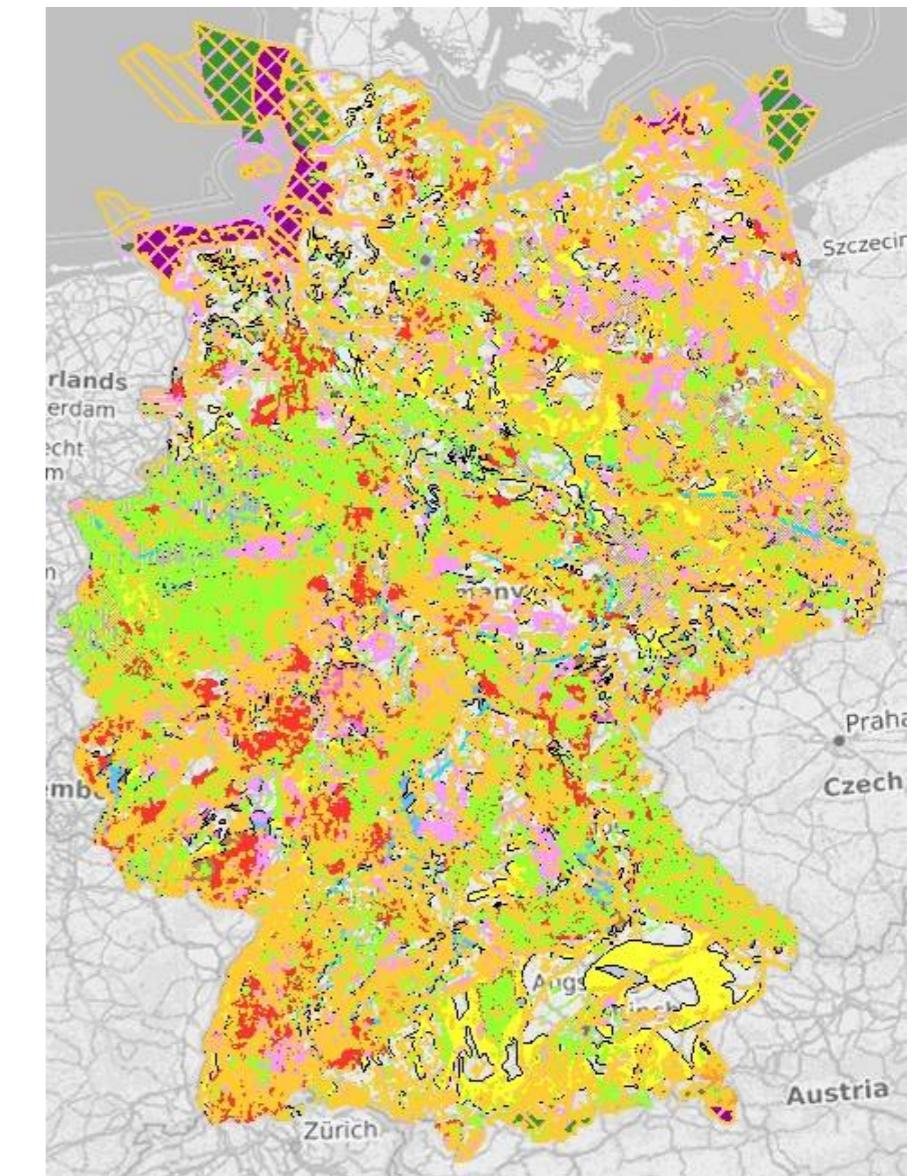


OpenDroneMap



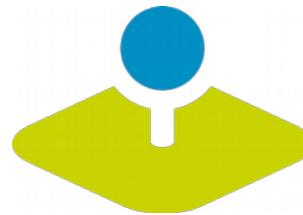
GisInfoService

- Online-GIS der deutschen Rohstoffverbände für die Unternehmen der Steine- und Erden Industrie
- Zugriff über jeden Webbrowser möglich
- Verteilung von Geodaten über Webkartendienste:
 - **Luftbilder**, Kataster, Bodenkarten,
 - Bergbaupläne, Renaturierungspläne,
 - Immobilien- und Landmanagementpläne

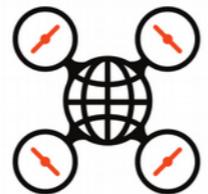


Rohstoffkarte von Deutschland
(BSK1000 der BGR)





Mapbender



OpenDroneMap



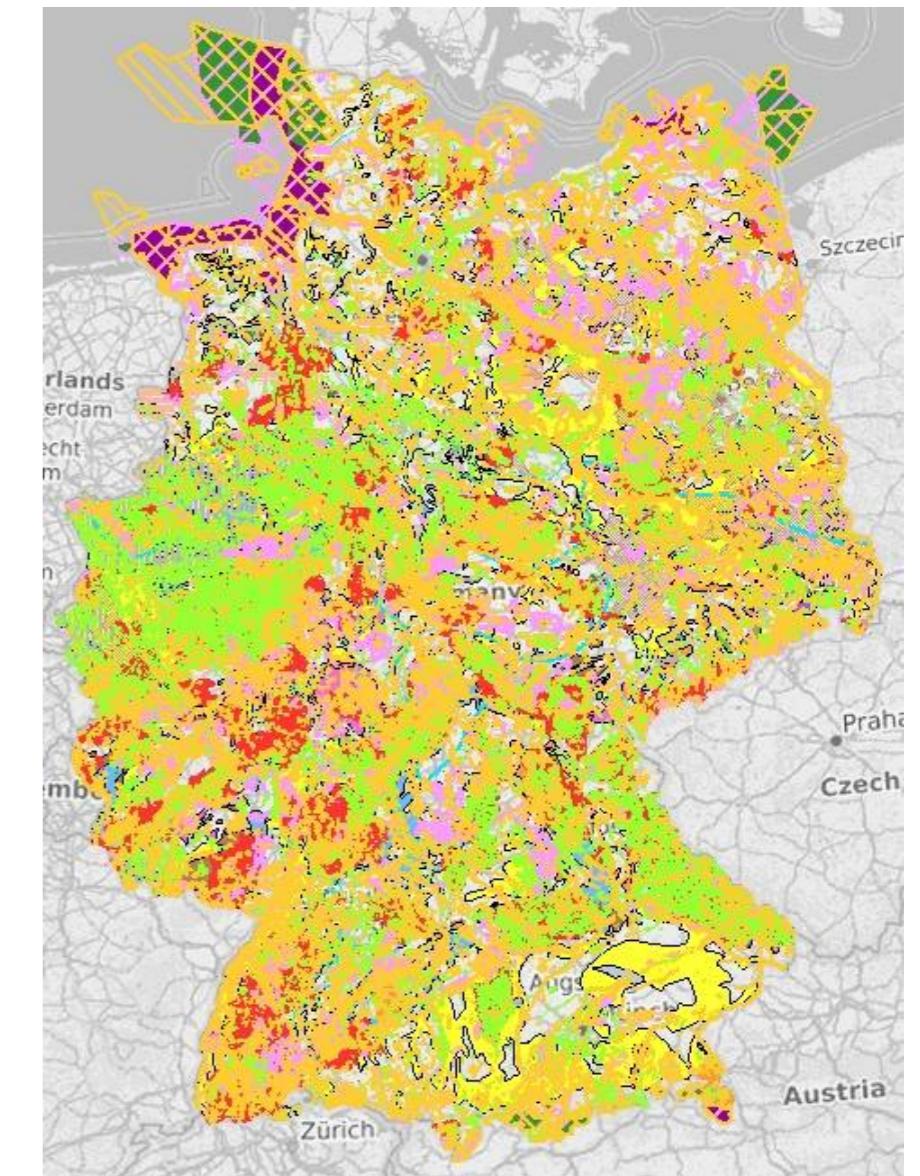
GisInfoService

Fachinformationssystem mit

ca. 400

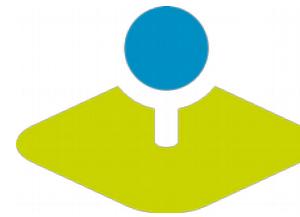
Kartendiensten zu den Themen Geologie, Boden,
Umwelt, Wasser, Wald, Landwirtschaft, (...)

GISINFOSERVICE



Rohstoffkarte von Deutschland
(BSK1000 der BGR)





Mapbender



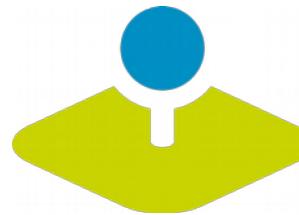
OpenDroneMap



GISINFOSERVICE

Wie können wir erreichen, dass diese Daten in Mapbender angezeigt werden?





Mapbender

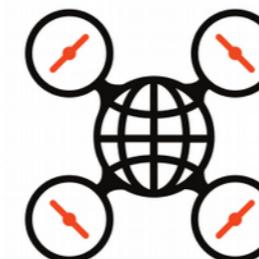


OpenDroneMap



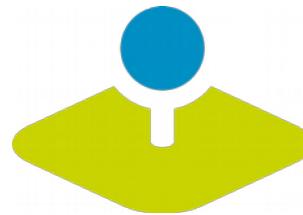
GISINFOSERVICE

Wie können wir erreichen, dass diese Daten in Mapbender angezeigt werden?

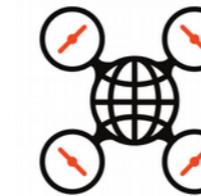


OpenDroneMap





Mapbender

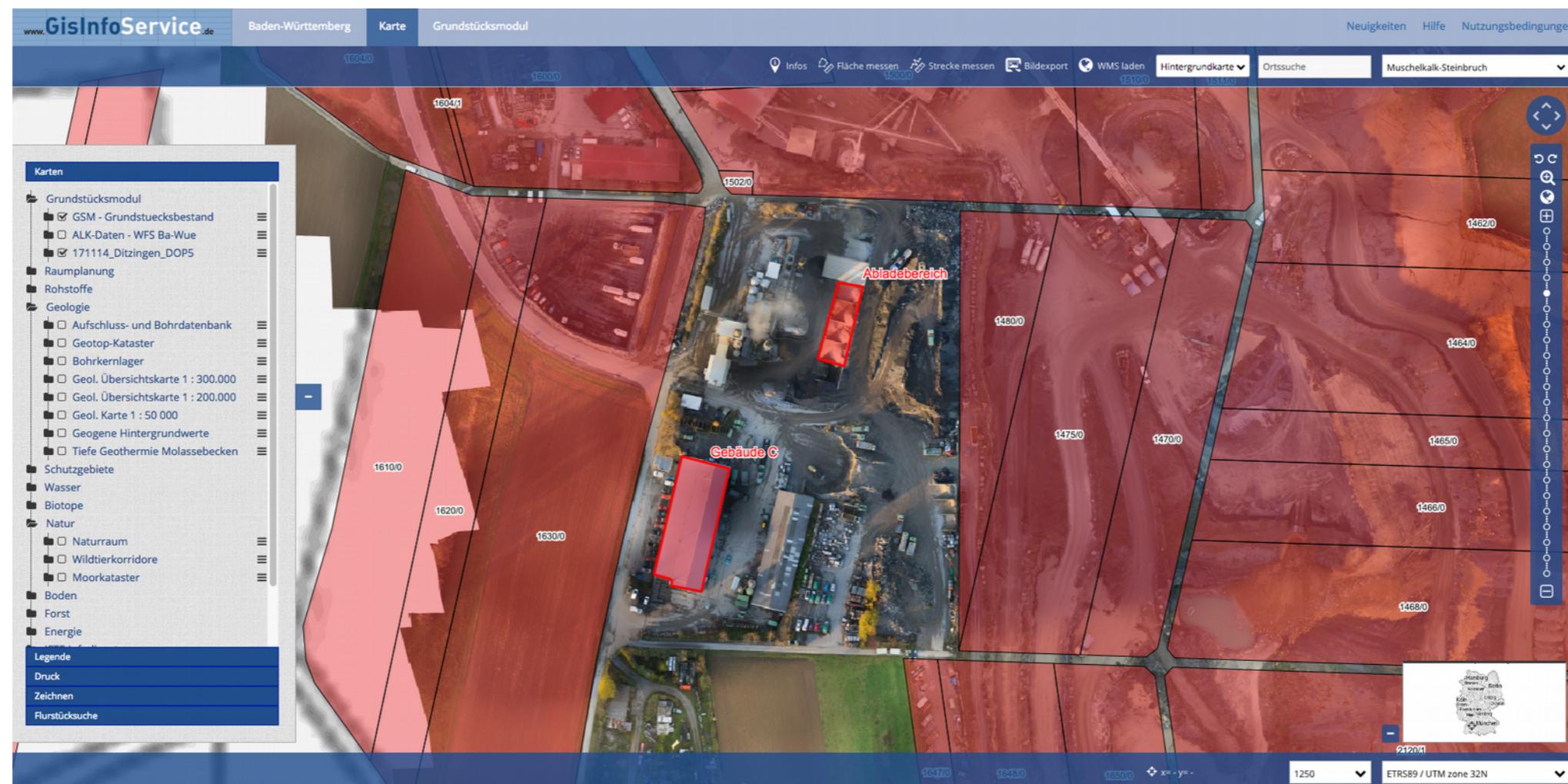


OpenDroneMap

OSGeo
Park

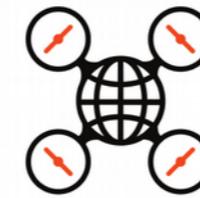
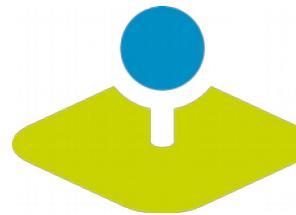


GisInfoService



Anforderungen an die Anzeige von UAV-Daten





OpenDroneMap

„OpenDroneMap ist eine Open-Source-Anwendung zur Verarbeitung von Luftdrohnenbildern. Typische Drohnen verwenden einfache Kompaktkameras, die nicht-metrische Bilder aus einer Vielzahl von aufgenommenen Bildern erzeugen. OpenDroneMap verwandelt diese einfachen Bilder in dreidimensionale Geodaten, die in Kombination mit anderen geografischen Datensätzen verwendet werden können.“ (*übersetzt aus dem OpenDroneMap-Wiki*)

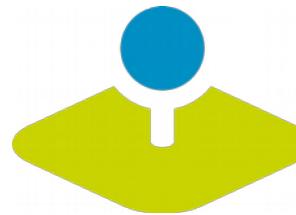
Webseite:

<https://www.opendronemap.org/>

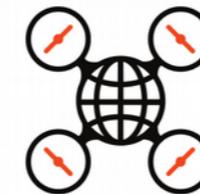
Dokumentation:

<https://www.opendronemap.org/docs/>
<http://docs.opendronemap.org/>





Mapbender



OpenDroneMap



OpenDroneMap

- Commando Line Tool (ODM)
- Benutzerfreundliche, erweiterbare Anwendung und API für die UAV-Bildverarbeitung
- Web-Schnittstelle zu ODM mit Visualisierungs-, Speicher- und Datenanalysefunktionen (WEBODM)
- REST-API-Webschnittstelle für den Zugriff auf verschiedene Funktionen

ODM



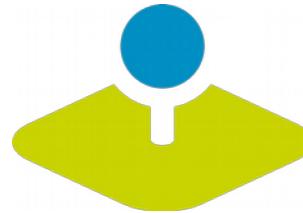
WEBODM



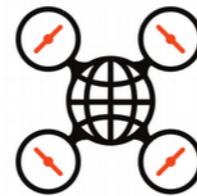
NodeODM

REST-API





Mapbender



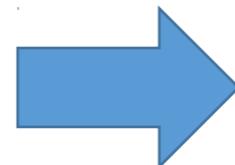
OpenDroneMap



OpenDroneMap

Eingabe-Formate

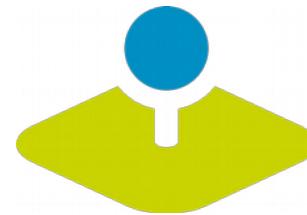
- JPEGs
- Bodenkontrollpunkte
- GeoTIFF (kommt in Kürze)



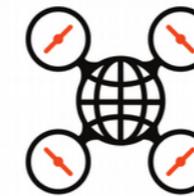
Ausgabe-Formate

- Digitale Oberflächenmodelle
- Digitale Geländemodelle
- Texturierte 3D-Modelle
- Klassifizierte Punktwolken
- Orthorektifizierte Bilder → WMS





Mapbender



OpenDroneMap

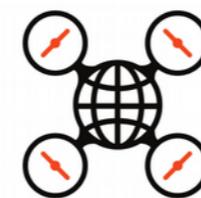


OpenDroneMap





Mapbender



OpenDroneMap



OpenDroneMap

WhereGroup WebODM

- Dashboard
- GCP Interface
- Processing Nodes
- Administration
- API
- Dokumentation
- Customize

First Project

Kiesgrube komplett
1 Tasks ▾ Edit

Kiesgrube 2
1 Tasks ▾ Edit

Kiesgrube
1 Tasks ▾ Edit

Camping 1.2
1 Tasks ▾ Edit

Task of 2018-04-19T08:24:40.544Z 364 10:52:43 Completed

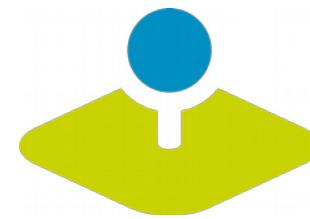
Camping 1.1
1 Tasks ▾ Edit

+ Add Project

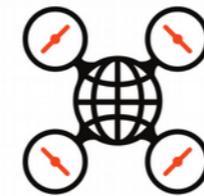
1 2 3 >

Select Images and GCP View Map





Mapbender

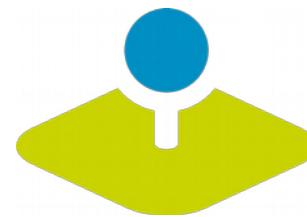


OpenDroneMap

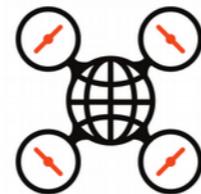


OpenDroneMap





Mapbender



OpenDroneMap

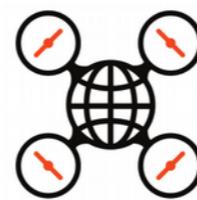


OpenDroneMap





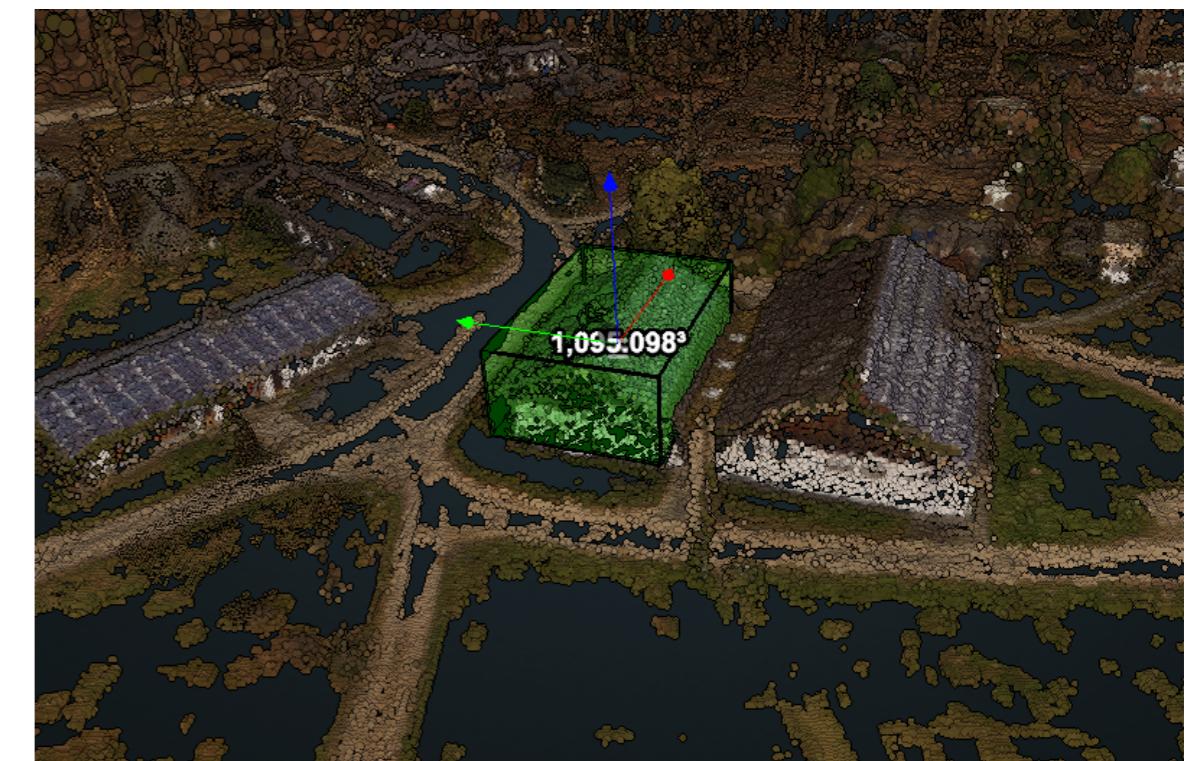
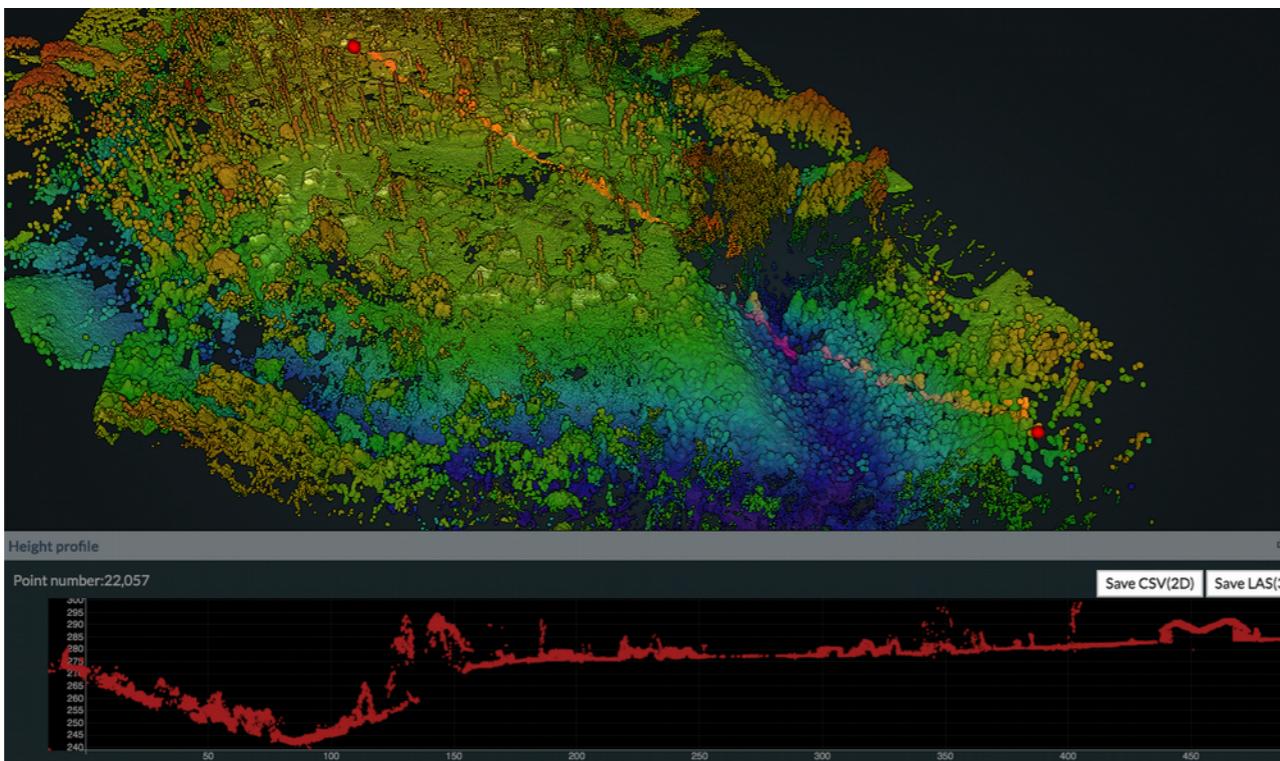
Mapbender

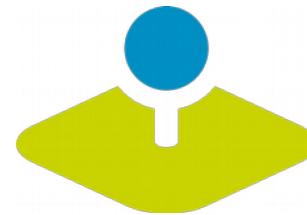


OpenDroneMap

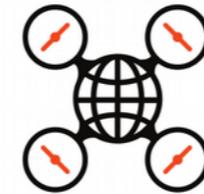


OpenDroneMap





Mapbender



OpenDroneMap

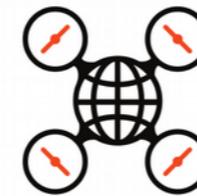
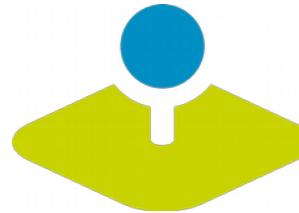


OpenDroneMap

Beispiel-Demo von ODM

<https://demo.webodm.org/dashboard/>





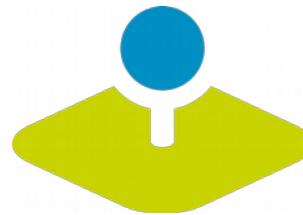
Ausblick

Warum ist das nicht in Mapbender?

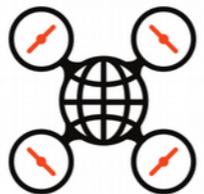
- Wir sind keine Fluggesellschaft
- Sehr früher Zustand
- Technische Einschränkungen: OpenLayers 2 → OpenLayers 5

- Neue Programmierung aller Elemente von Mapbender
- Zeit für Korrekturen und Bereinigungen
- Einfachere Handhabung von mobilen Anwendungen
- 3D-Implementierung





Mapbender



OpenDroneMap



Kontakt

**Vielen Dank für Ihre
Aufmerksamkeit!**

WhereGroup GmbH & Co. KG
Eifelstraße 7 | 53121 Bonn

Tel.: +49 (0)228 909038-0
Fax: +49 (0)228 909038-11



info@wheringroup.com



<http://www.wheringroup.com>



[@wheringroup_com](https://twitter.com/wheringroup)

