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der Länder der Bundesrepublik Deutschland



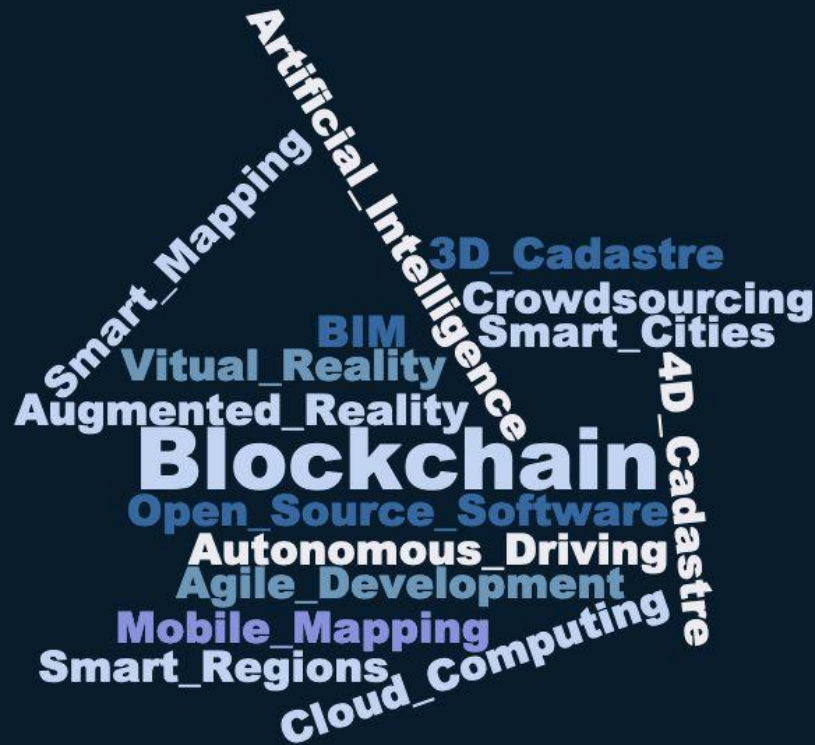
## AAA – Future Trends in the Cadastre

**Markus Seifert**

Conference and Plenary Meeting of the Permanent Committee on  
Cadastre in the European Union (PCC)



## Land Administration traditionally deals with modern technology



Land Administration has to analyze trends and technologies in order to decide whether they can be sufficiently adapted or not

This presentation is mainly about one mega trend: cadastre digitalization and data integration

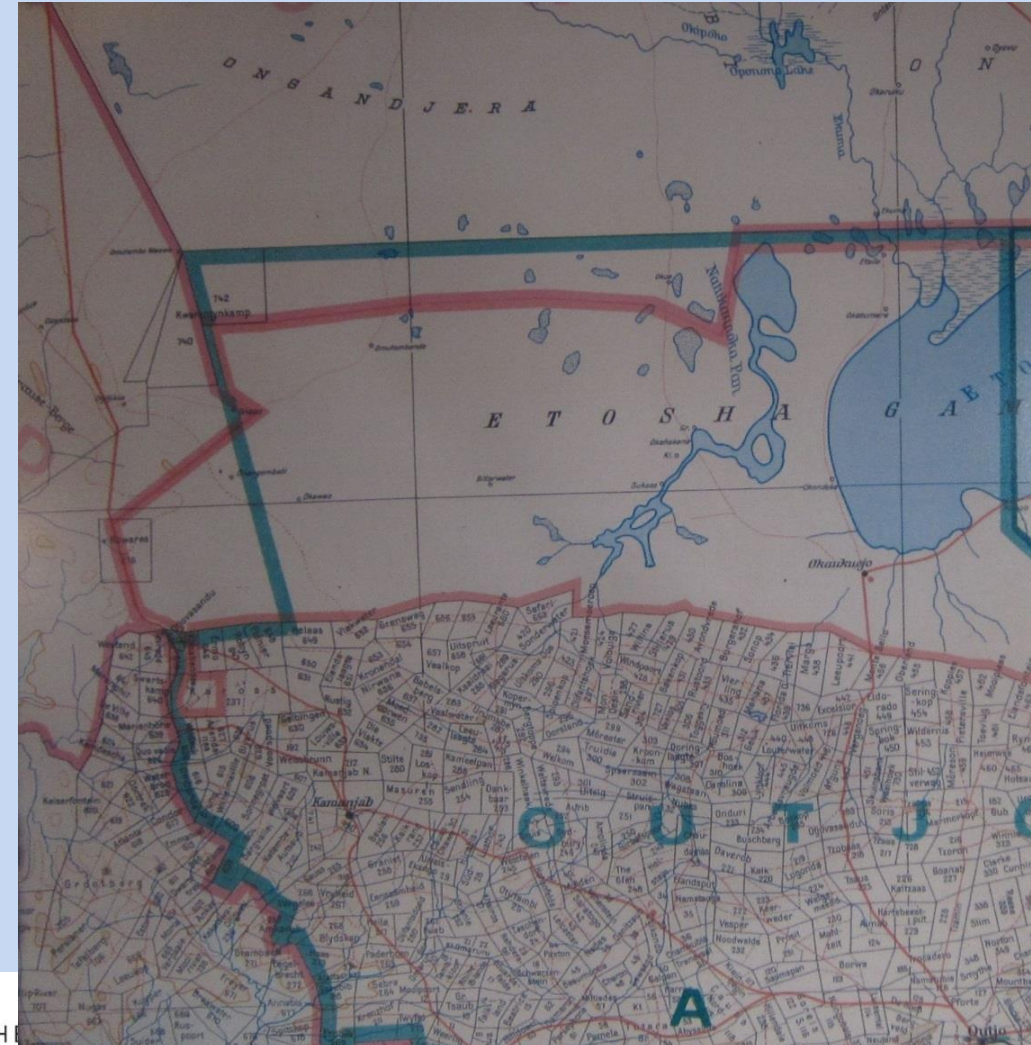
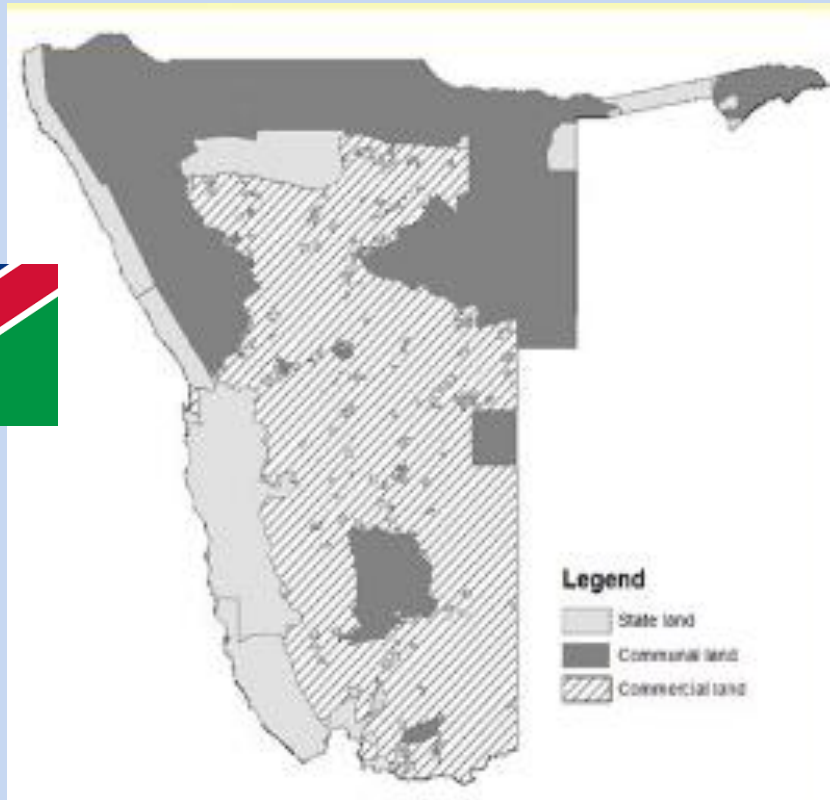
**THINK GLOBALLY, ACT LOCALLY**



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# Mega Trend: Digitalization of Cadastre

World Bank: 2/3 of the global population live on unregistered land





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## Commonly owned land (Communal Land)



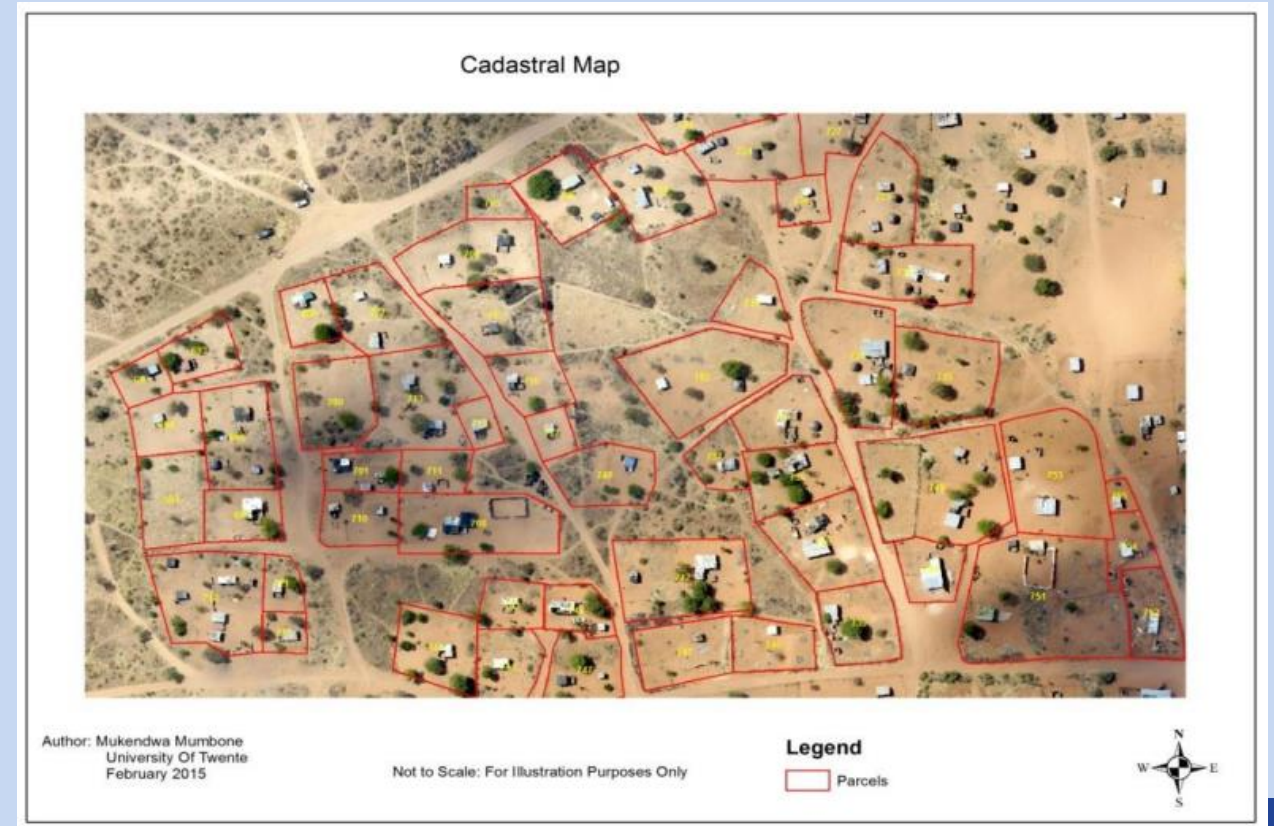


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# Villages in the Communal Land

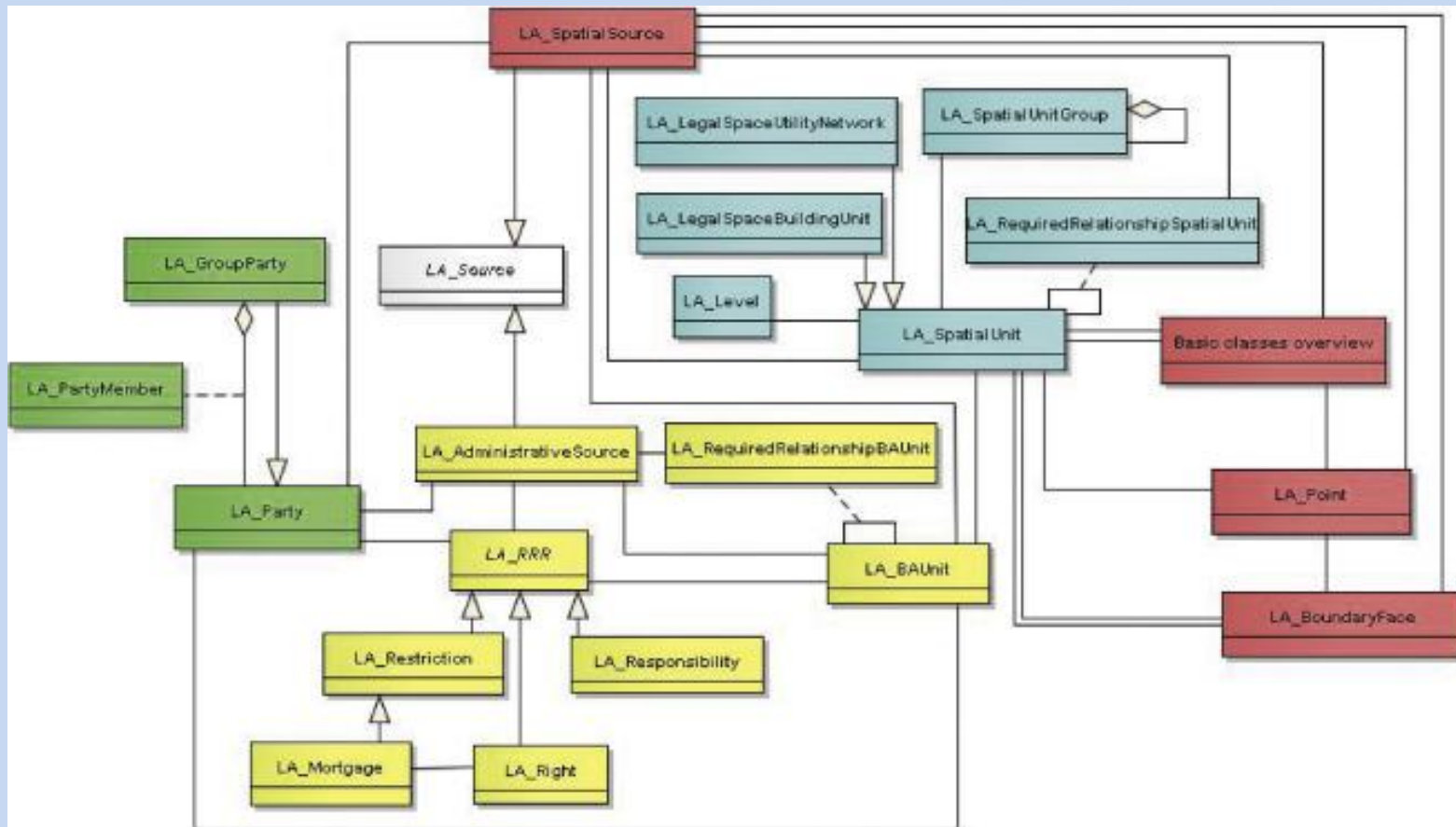
The aim:





# The technical solution: easy to use cadastral systems

ISO Standard 19152: Land Administration Domain Model (LADM), currently under revision



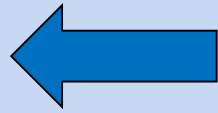
**Also for data presentation (maps) and data distribution (via internet) easy solutions are necessary!**



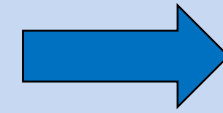
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# From the cadastral surveying to the topographical map



Data integration (semantical and scale issues)



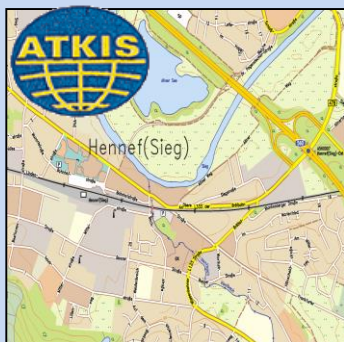
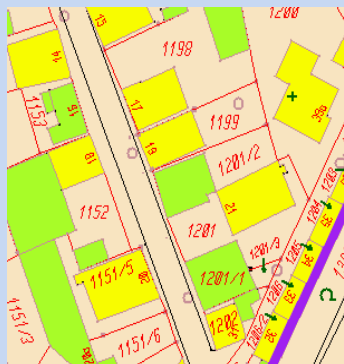


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# Data Harmonization – The AAA Data Model

## ALKIS

Official Cadastral Information System



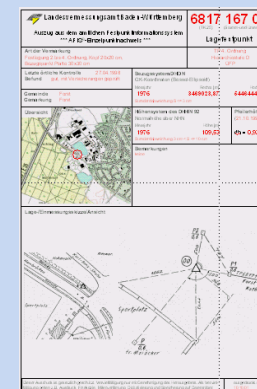
## ATKIS

Official Topographic and Cartographic Information System

**AFIS-ALKIS-ATKIS  
Application Schema**

## AFIS

Official Reference Point Information System







How should the (cadastral) map of the future look like? How do we want to provide official spatial data?

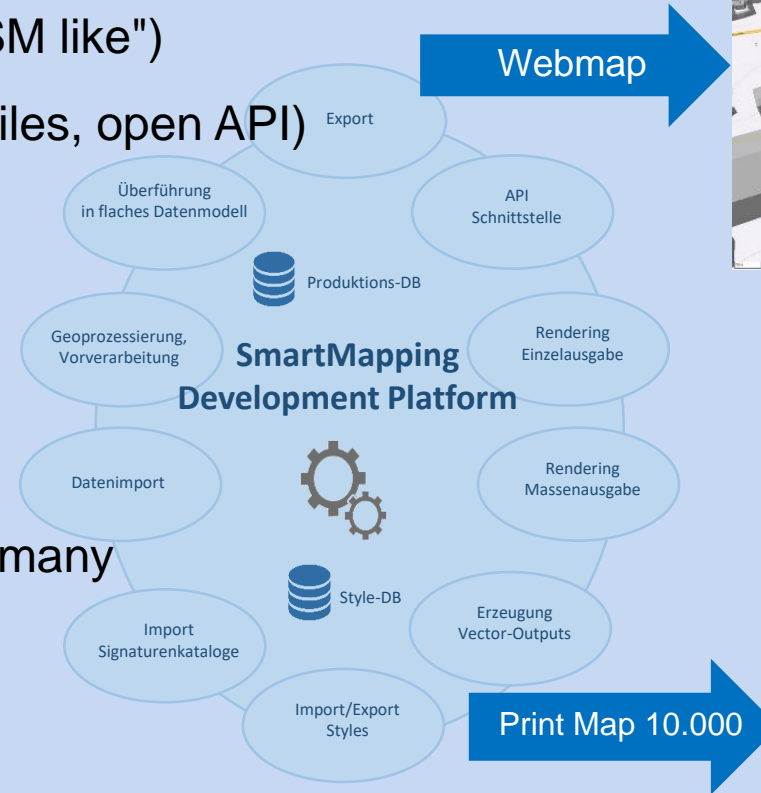
To answer this questions we launched a project two years ago, called "Smart Mapping"



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# Smart Mapping produces high actual products out of one central process

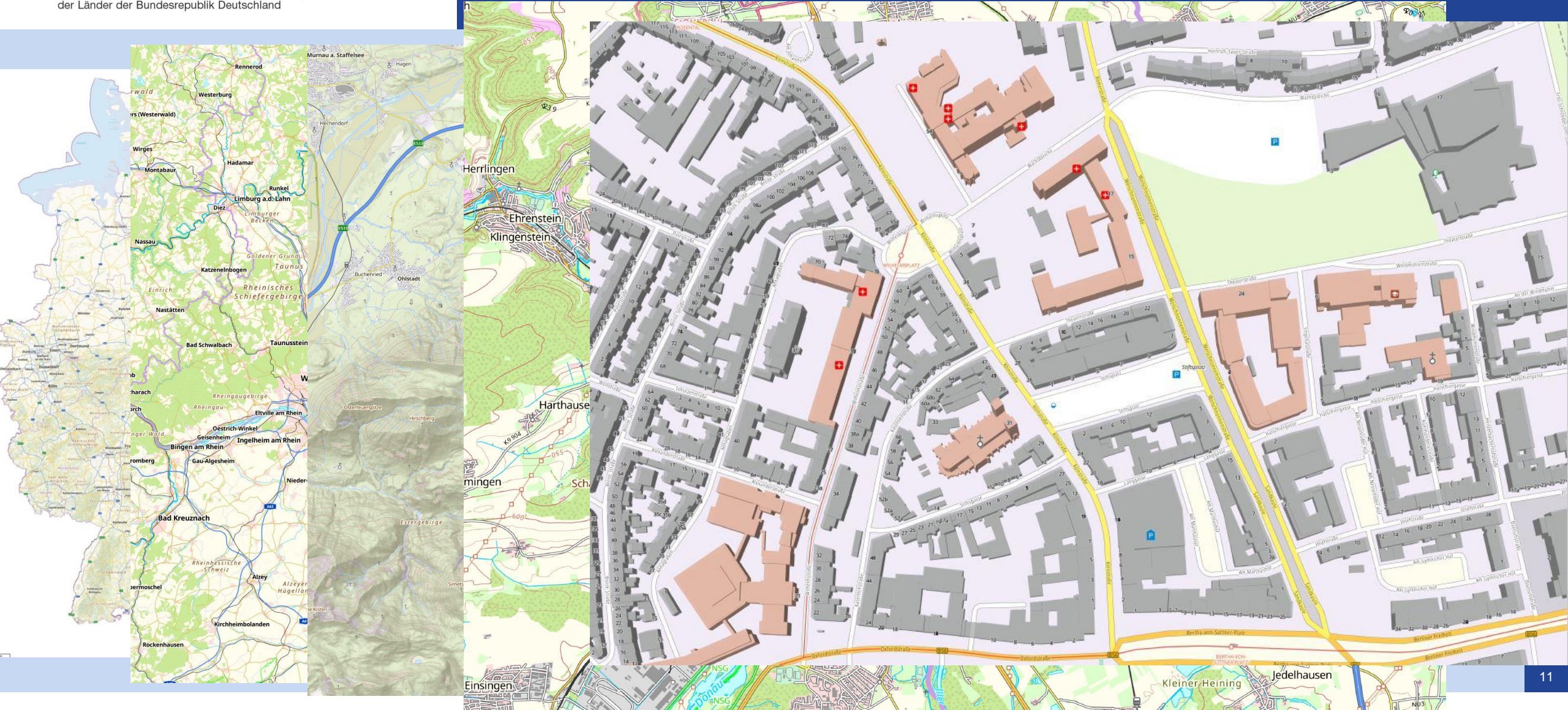
- Application of an easy to use data models ("OSM like")
- Implementation of modern technology (VectorTiles, open API)
- Smart content (vector data)
- Mobile first, high performance
- Open source first
- High actuality of the web map (2 weekly)
- Developed by own experts located all over Germany
- Agile software development
- Use of cloud technologies
- Production of web maps (vector, raster) as well as printed maps





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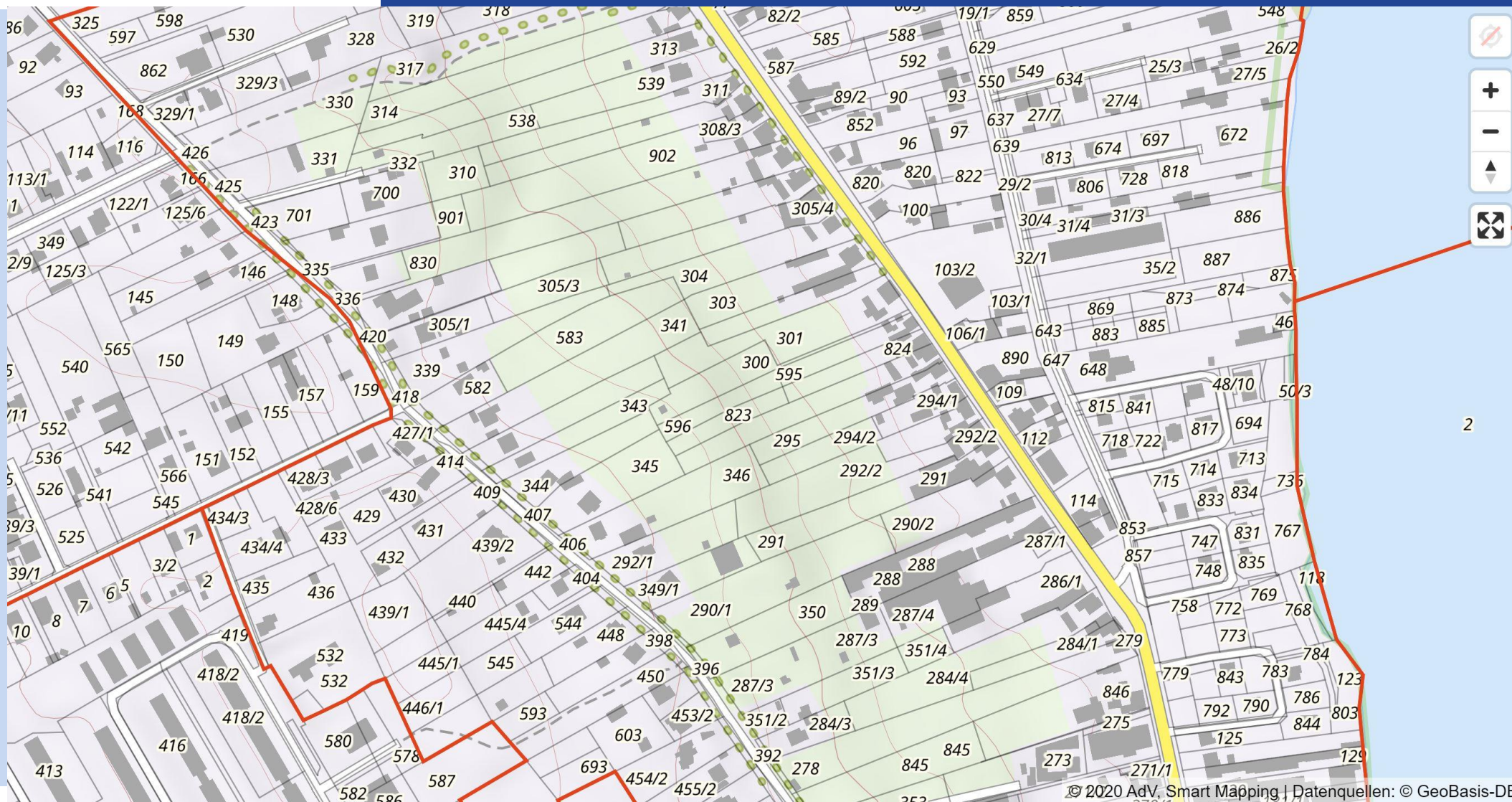
# New presentation options





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# Cadastral map combined with topographical map in a webmap



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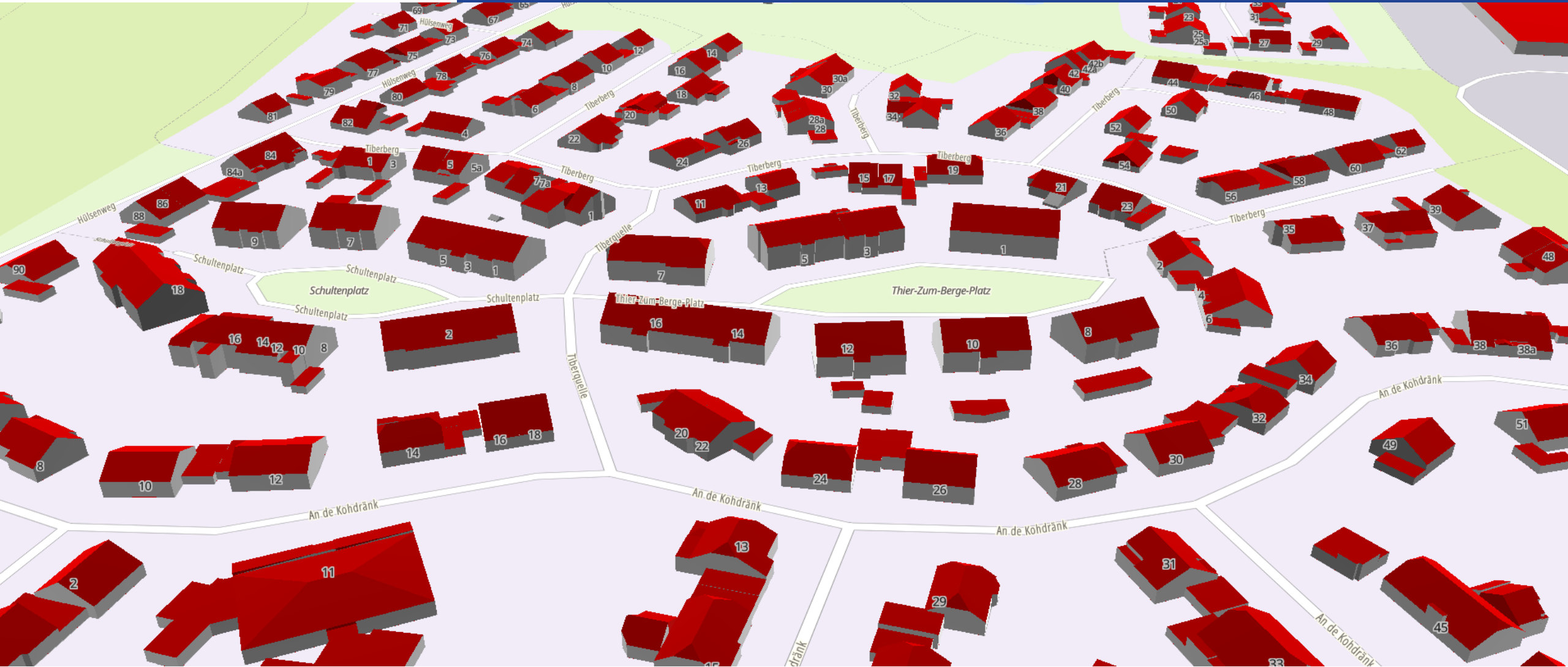
# Cadastral information in a web-based vector map





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# Supporting the Sustainable Development Goals Potential for solar panels on houses

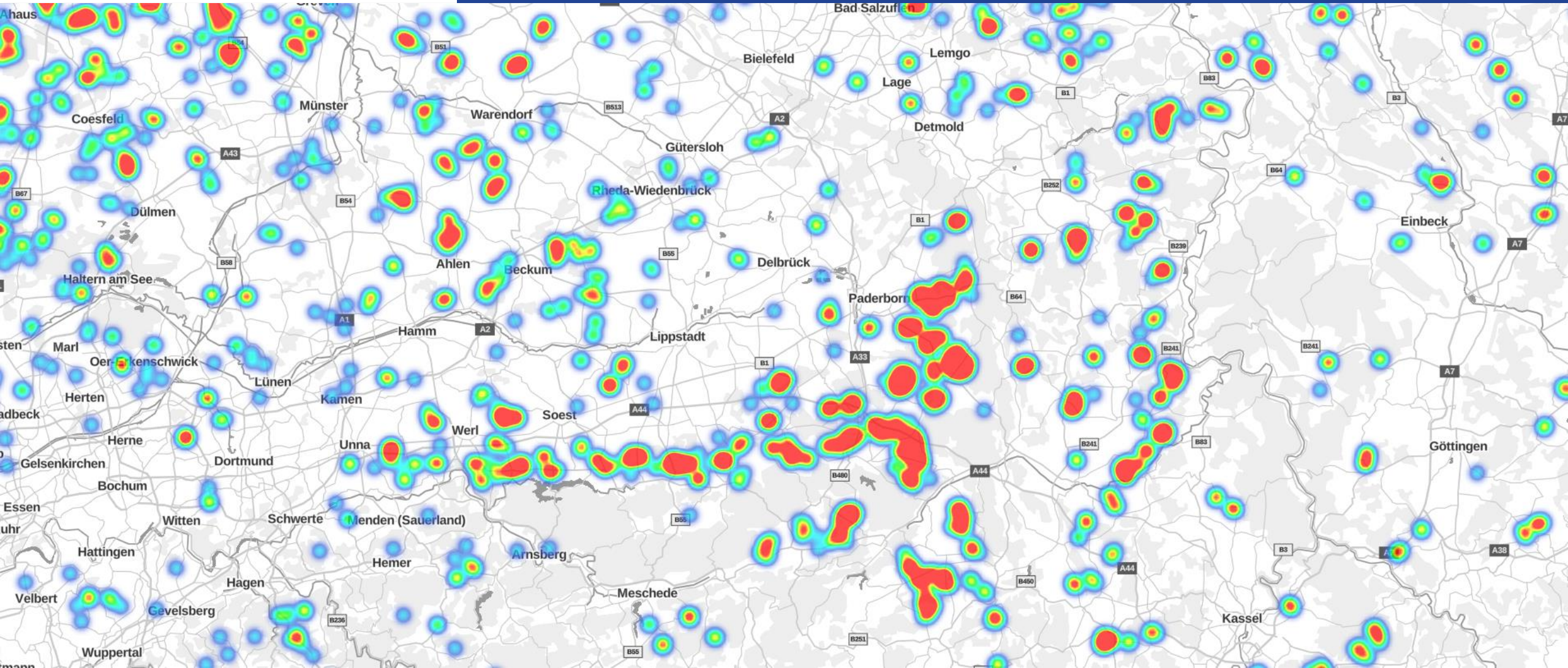




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# Supporting the Sustainable Development Goals

## Density of windmills in a heatmap





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# Supporting the Sustainable Development Goals Town Map combined with tree information





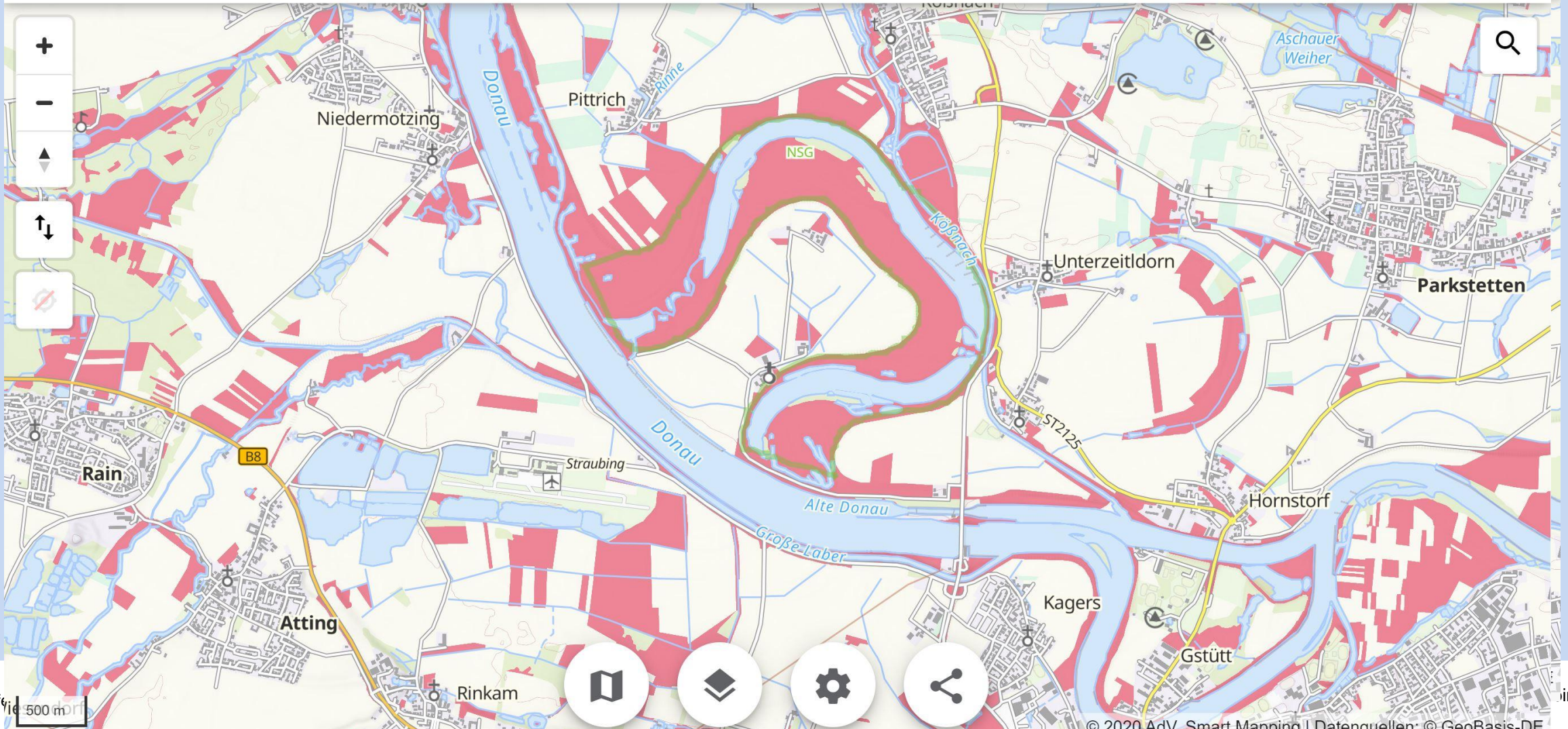


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# Supporting the Sustainable Development Goals Highlighting and evaluation of greenland, protected areas etc.



## AdV Smart Mapping





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For more information see [www.adv-smart.de](http://www.adv-smart.de) or contact

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