

GIS Concept (EULE III.1)



Development of a GIS infrastructure for the Project EULE III.1

Project Partners	regionalwerke GmbH & Co. KG CAS Software AG PSU Prof. Schaller UmweltConsult GmbH
Funded By	Deutsche Bundesstiftung Umwelt (DBU)
Duration	2021-2022
Services	<ul style="list-style-type: none"> GIS Data preparation and integration Design of a geo-database Development of GIS applications

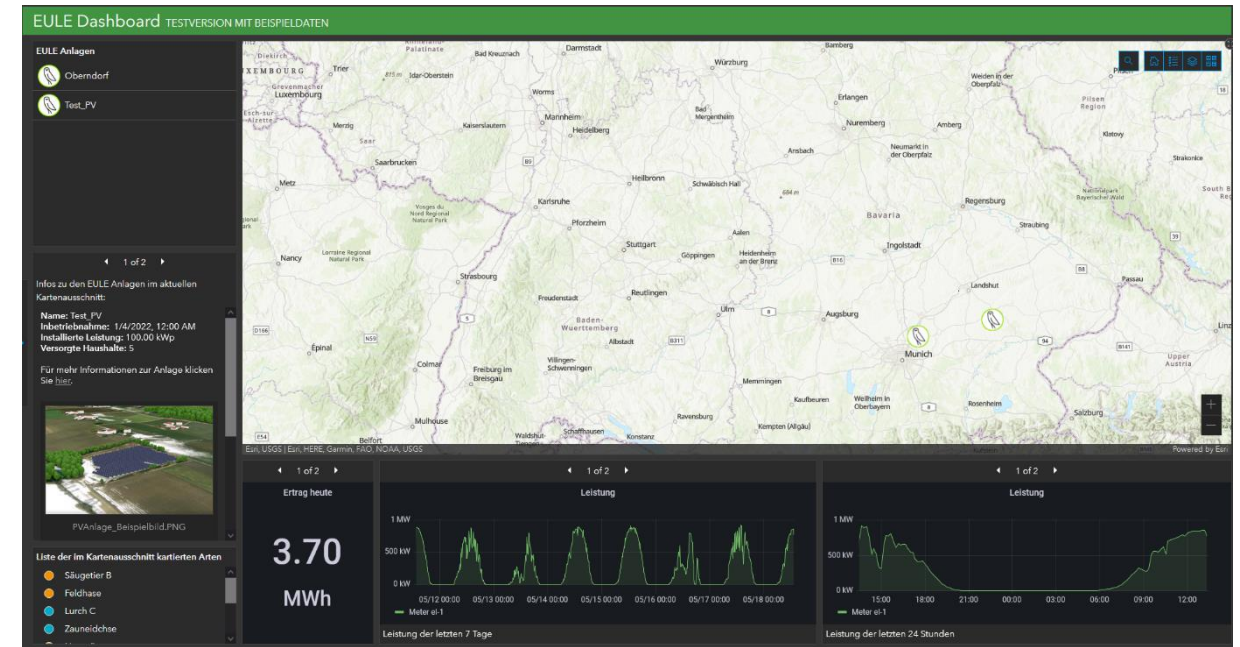
In the EULE research project - Evaluation System for an Environmentally Friendly and Landscape Compatible Energy Transition - a ready-to-use audit system for photovoltaic power stations (solar parks) was developed in order to evaluate the nature and landscape compatibility of solar parks and to be able to increase this by means of site-specific measures.

The EULE III.1 project involved the development of the software environment for the implementation of the EULE audit system. PSU's work packages included the development of a GIS database structure, the development of GIS standards and the creation of web applications and dashboards. Interfaces to the CMS system of the project partner CAS Software AG also played a role here. A further work package dealt with considerations regarding server solutions for the GIS applications.

In a first step, the structure for a GIS database was developed, which contains all geodata relevant to EULE in a structured manner. The data managed in this database forms the basis for the creation of the EULE report for the solar parks and ultimately serves the entire report and auditing process.

This data consists of existing geodata and data collected during the audit process (e.g. mapping or measures). A web application was created using the ArcGIS® Web AppBuilder to collect this data.

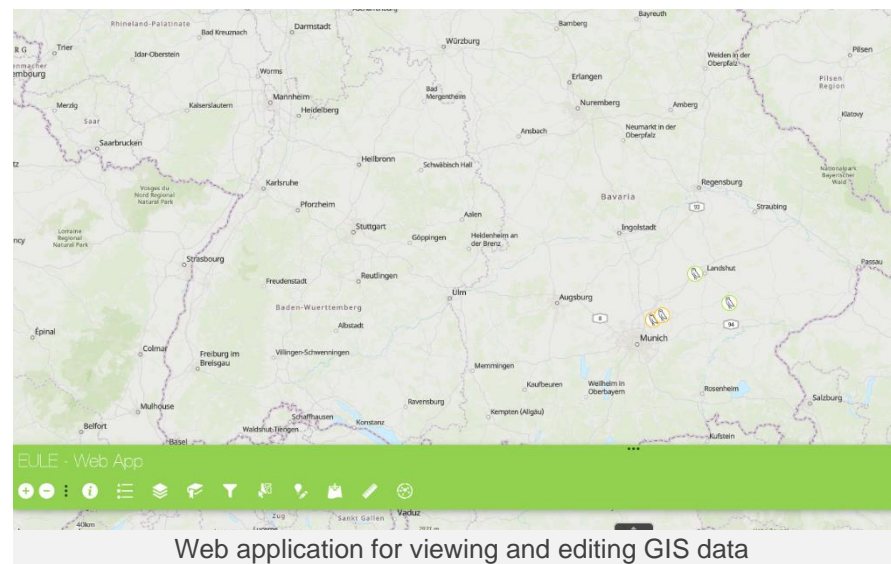
This web application allows all EULE auditors and EULE assessors to access the same GIS database, which ensures the timeliness and integrity of the data. The application is kept simple to ensure a certain independence from previous experience with different GIS software.



Dashboard for displaying all EULE-certified systems and additional information

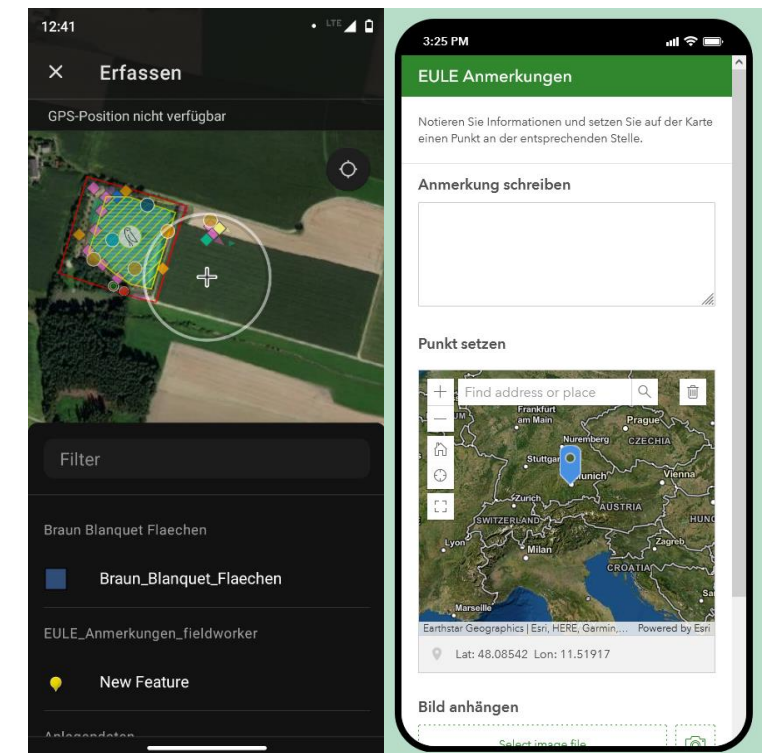
An interface to a Grafana dashboard can also be used to display the amount of electricity generated currently and in the last few days.

As the mapping and, in some cases, the development of the EULE measures take place in the field, it is also possible to feed data into the EULE geodatabase using mobile applications (ArcGIS® Field Maps or ArcGIS® Survey123).



Web application for viewing and editing GIS data

A dashboard was also created for customers and interested parties in the EULE project, which, unlike the web application, is publicly accessible. Here, all EULE-certified plants are displayed on a map. In addition, there is further information on the plant itself, the amount of electricity produced and interesting species mapped on site.



Mobile applications for capturing data in the field

