

## **OutcropWizard: a virtual geoheritage tool**

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OutcropWizard is a smartphone application that grants access to a database with points of geological interest. The aim is to make this data available to expert and laymen alike. The approach is crowdsourced. Hence, we focus especially on involving geoscience students to fill in relevant information. However, OutcropWizard has multiple target groups. In university education the app is a link between theoretical classroom-based knowledge transfer and practical fieldwork. The students are able to go on self-directed fieldtrips, find relevant outcrops and access site-specific content. The second target group is the general public. OutcropWizard is a tool that is used for public outreach, especially in geoparks where the use of geological heritage in a sustainable way is promoted. In geoparks, scientific information for the public is already available and can easily be integrated into the app. The advantage is in line with the visions and missions of the geoparks, since smartphone-based knowledge transfer is a possibility to extend the target group. Evidently, smartphones are the primary access to information for the younger generation. OutcropWizard is, therefore, an important tool in environmental education both on a national as well as international level.

Until now (June 2020) over 3000 sites can be reached using the route planner for streets and hiking trails, with site-specific content being texts, pictures, videos, 3D models and a ranking system. Information is exportable as PDF, a function especially interesting to students compiling field reports. Teachers and field instructors can upload site-relevant data like literature and work sheets directly.

In contrast to books and information boards, the database can be easily updated, is even multilingual and interdisciplinary, and is not prone to vandalism.

We signed a memorandum of understanding with the UNESCO 'Nature and Geopark Vulkaneifel' and are recognised by the German Geological Association. In 2019, the app received the 'Digital Innovation Award' by the University of Bonn and the 'Exploratory Teaching Space Award' by the RWTH Aachen University. Further financial support was granted by the Klaus-Tschira Foundation and the ABC/J Geonetwork.