

# Making Citizen Science Data Fit for Use

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## DLR Institute of Data Science

The institute's focus is on data related research such as big data management and analysis, digital production platforms, and software and IT security. One of the workgroups is dedicated to **Citizen Science** related scientific questions. Cooperation with local and regional research institutes such as the Friedrich-Schiller-University Jena and the Bauhaus University in Weimar foster academic exchange.

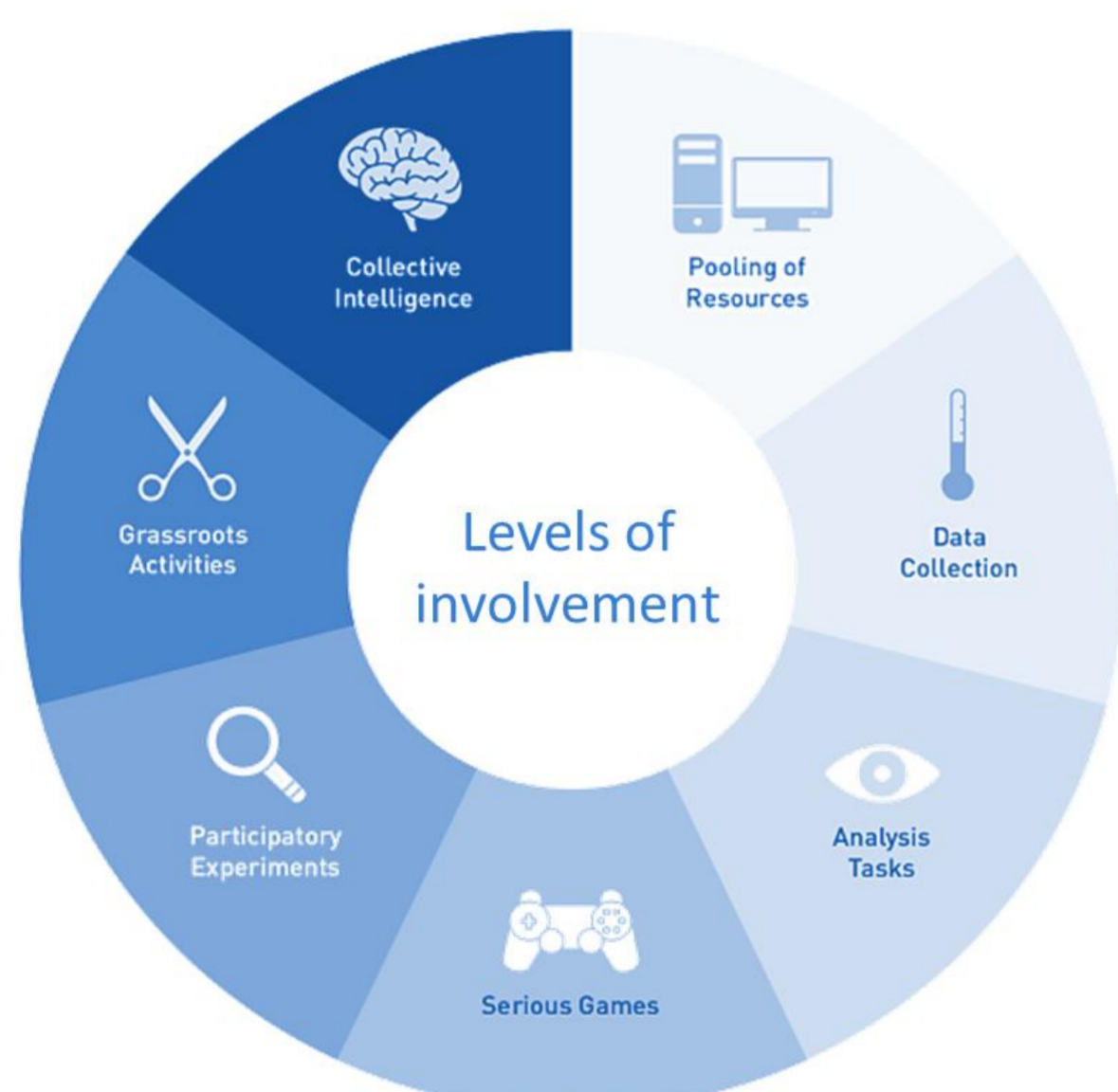


The DLR Institute of Data Science is located in the IT-Paradies building, Mälzerstraße 3, 07751 Jena, Germany.

## Citizen Science

*"Citizen science is the involvement of the public in scientific research – whether community-driven research or global investigations."*

[citizenscience.org]



Source: [http://www.citizen-science.at/images/White\\_Paper-Final-Print.pdf](http://www.citizen-science.at/images/White_Paper-Final-Print.pdf)

Citizen Science activities

### ... for Science

- new viewpoints and research questions
- access to data, expertise and knowledge
- better understanding of societal relevant topics
- increased acceptance/visibility of science

### ... for Citizens

- appreciation, fun
- access to data, expertise and knowledge
- solutions for local problems

### ... for Society

- better transformation of results into practice
- empowerment of citizens and the public
- increased awareness of societal and environmental issues

Citizens & Science – a beneficial partnership

## Central Research Themes of the Group

The potential of citizen science has been recognized, but particularly data science issues lack thorough and systematic research. The citizen science workgroup will undertake dedicated research on the mentioned topics.

### Engaging people

The group explores novel strategies for engaging and motivating people to take part in Citizen Science projects and develops new forms of collaboration between science and the public.

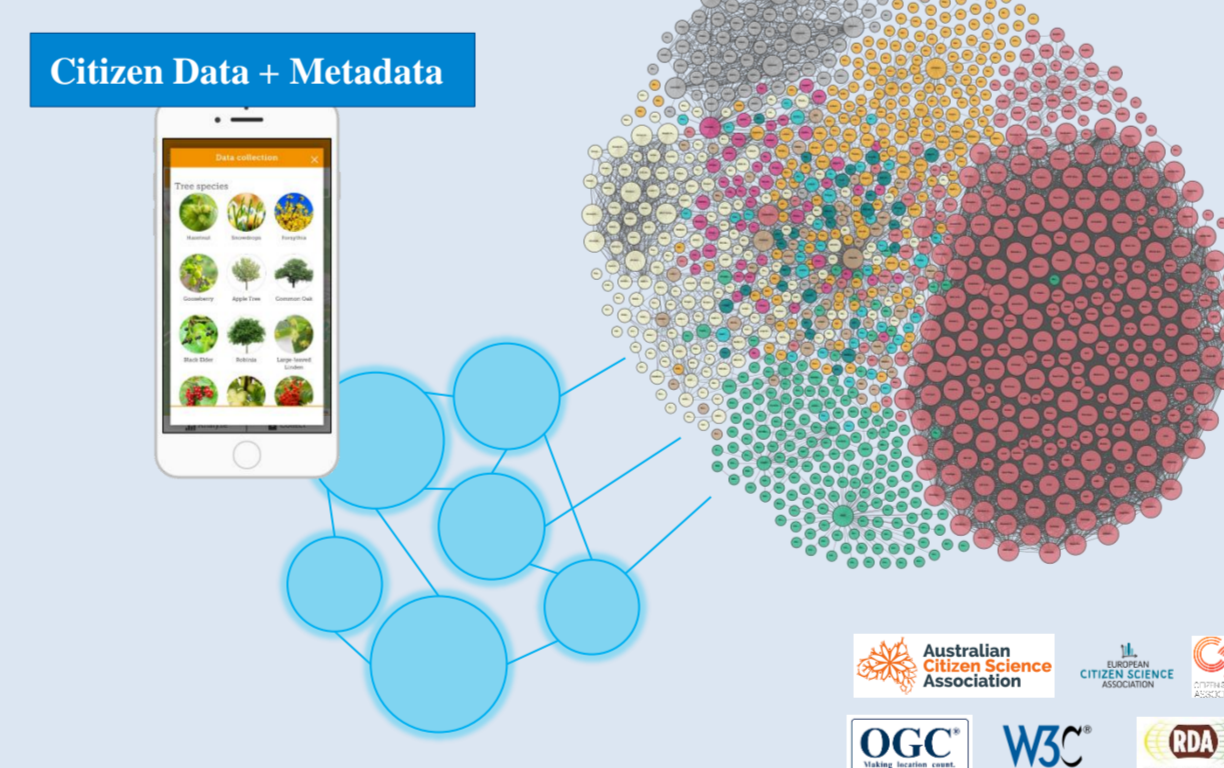


The activities will benefit from a **permanent citizen science** lab acting as contact point for interested citizens, providing tools and infrastructure to support citizen projects, and hosting capacity building and education activities.

### Making Data Fit for (Re-)Use

Embedded in international efforts, the group develops

- data and metadata standards for Citizen Science data as well as
- software tools that support the provision of findable, accessible, interoperable and reusable citizen science data.



The Citizen Science Group develops methods and software tools that facilitate the collection of credible, meaningful Citizen Science data.



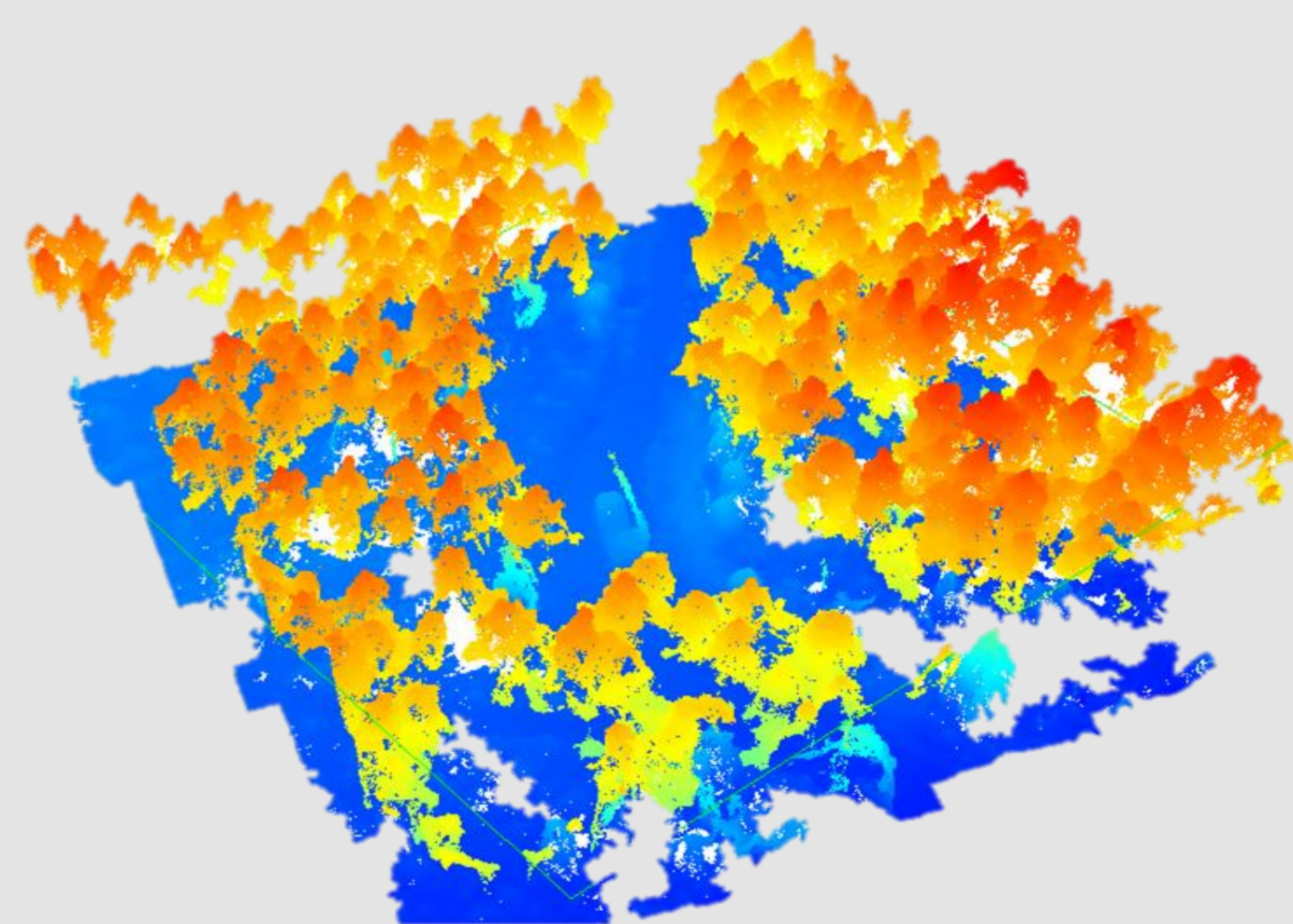
Software components for Citizen Observers: App-based localization and navigation in the field

### Generating Insights

Methods for the integrated analysis of Citizen Science data and related data sources to generate insights are at the core of our research. This includes e.g. techniques for knowledge discovery, automation, visualization, and the integration of heterogeneous data sources targeting both, scientists and the public. A focus is on the extraction of reliable information from public data.



## Thematic Fields



Method development to improve reference data generation for remote sensing based research and applications, e.g. enhancing satellite-based forest biomass estimation or crop monitoring by incorporating recent advancements in data acquisition and local expert knowledge



Crisis management using satellite images, social media data and volunteered geographic information