Beyond Data and Quality - Unlocking the Value of Citizen Contributions

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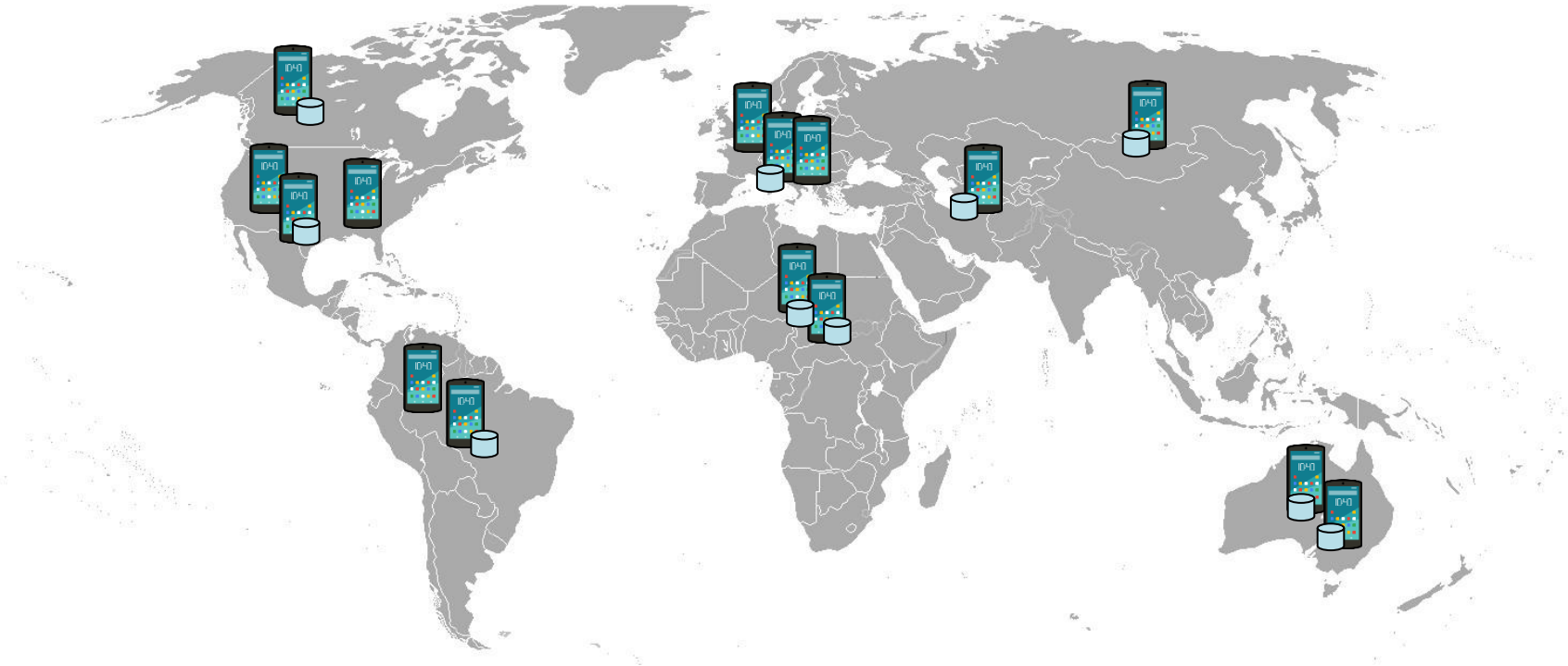
Citizen Science Group, DLR Institute of Data Science, Jena

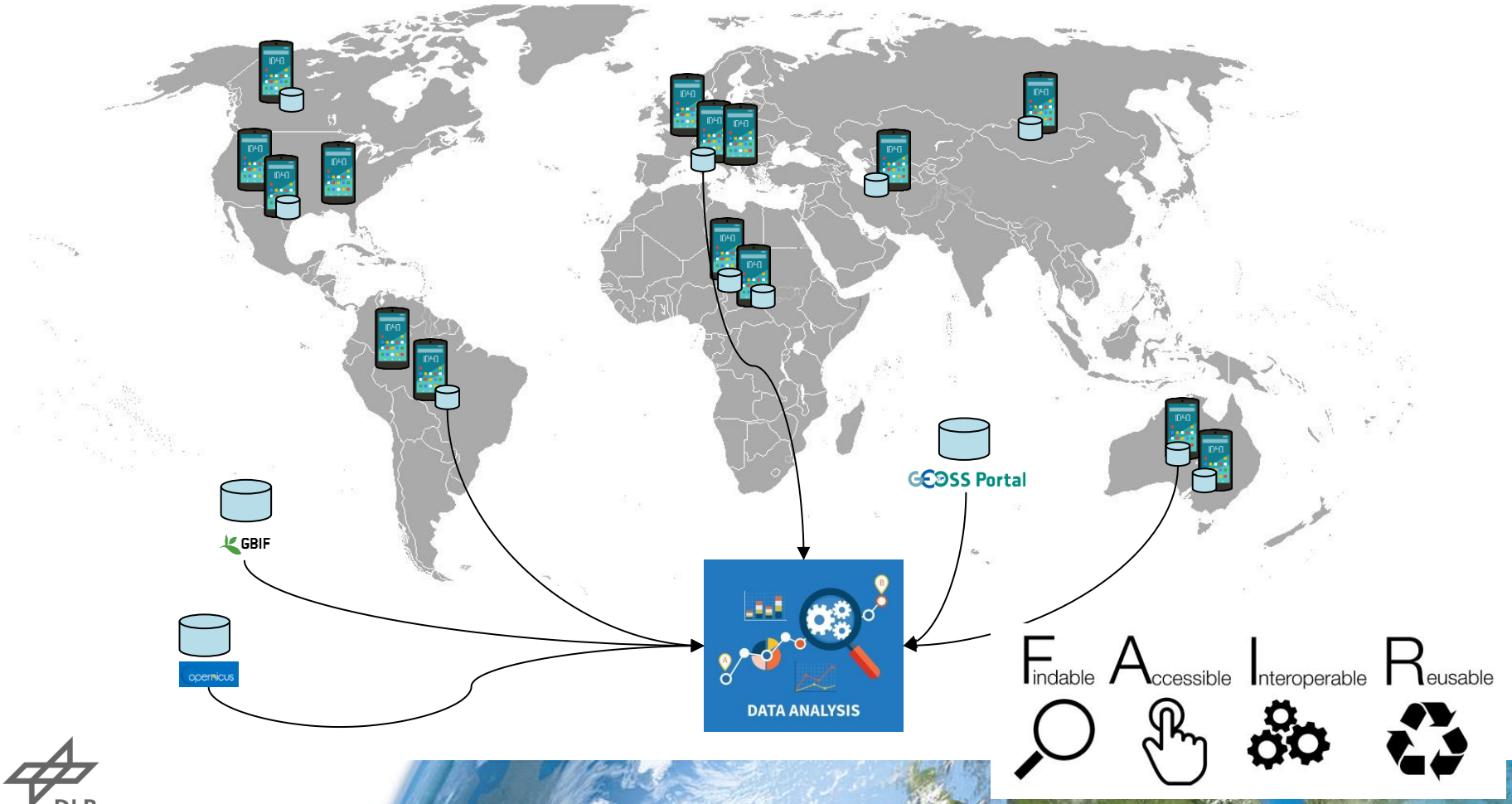
10th Intl. Conf. on Ecological Informatics
Session 3.2 Citizen Science
Jena, Sep 24th 2018

DLR

Challenge 1: Data Islands



Challenge 1: Data Islands



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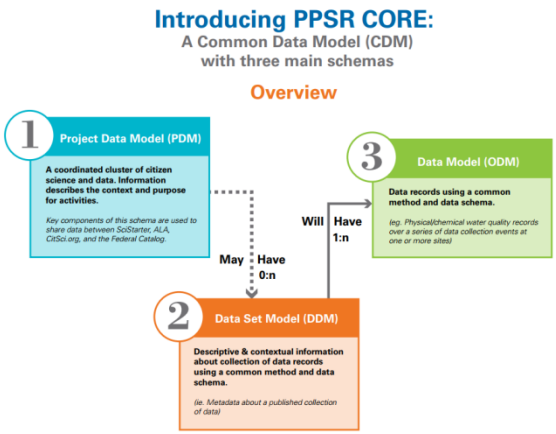
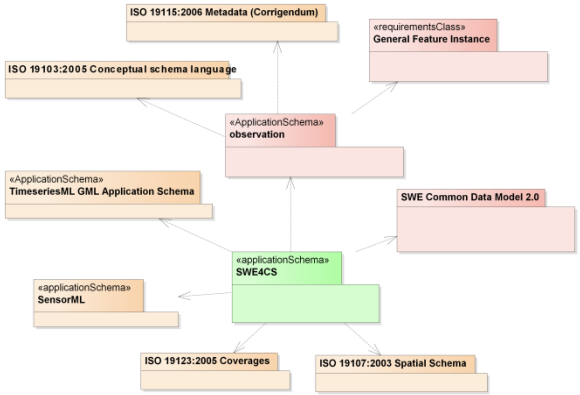
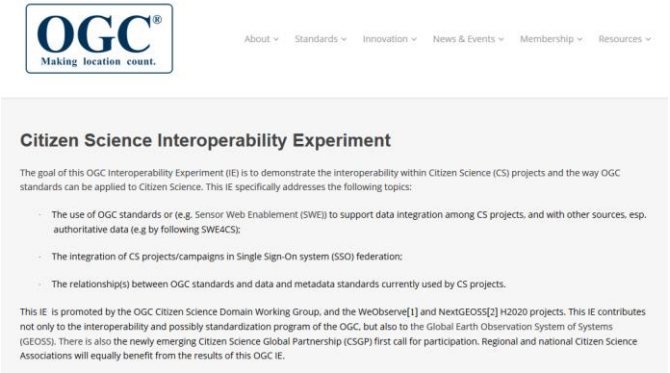
Standardization & Semantic Attribution of CS Data





Standardization of Citizen Science Data + Metadata



Biodiversity Information Standards (TDWG)

Australian Citizen Science Association

RDA Research Data Alliance

OGC Making location count.

W3C

European Citizen Science Association

Citizen Science Cost Action

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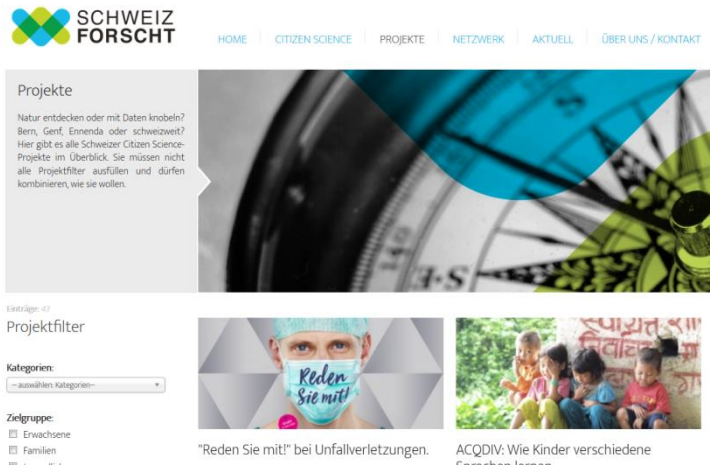
Challenge 2: Project Islands

100



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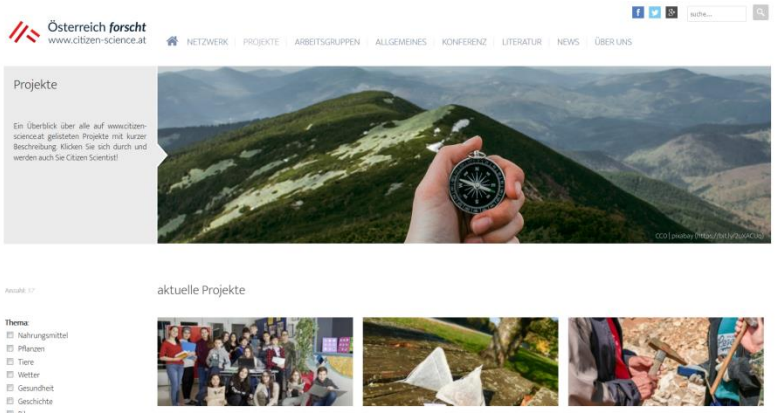

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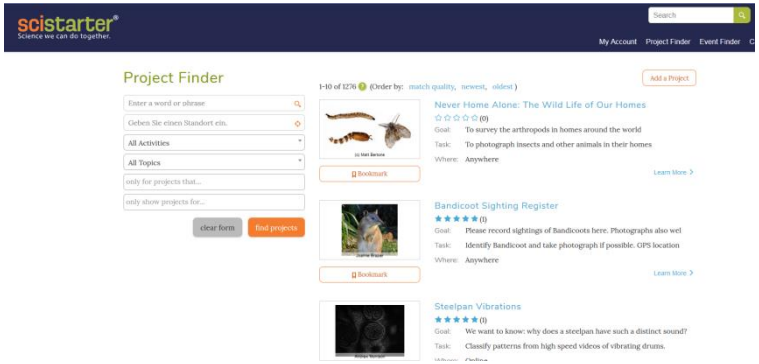

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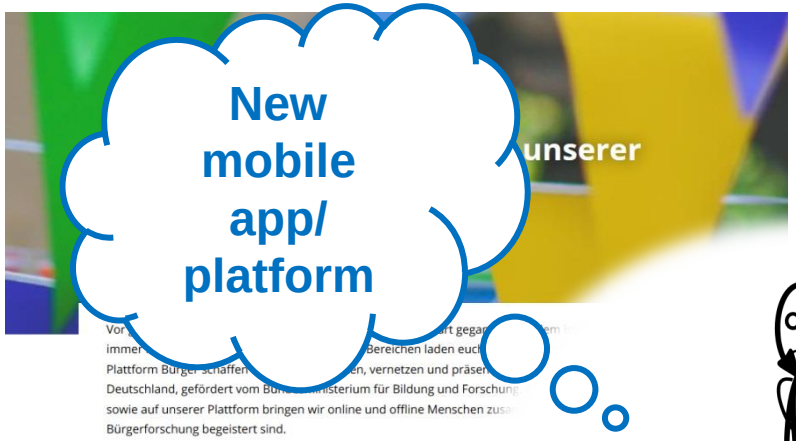
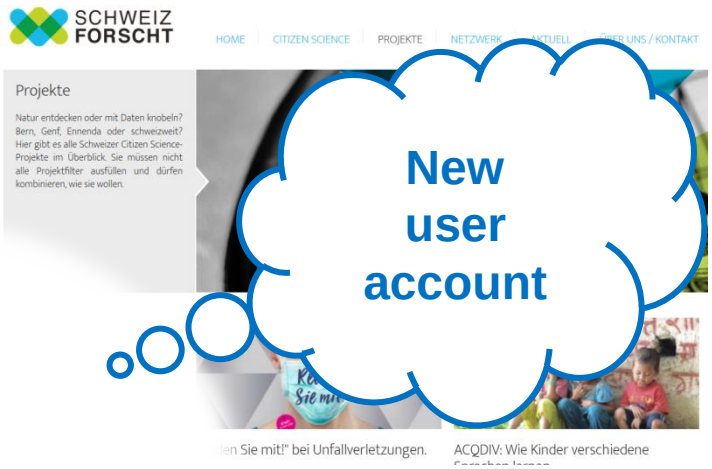
Challenge 2: Project Islands





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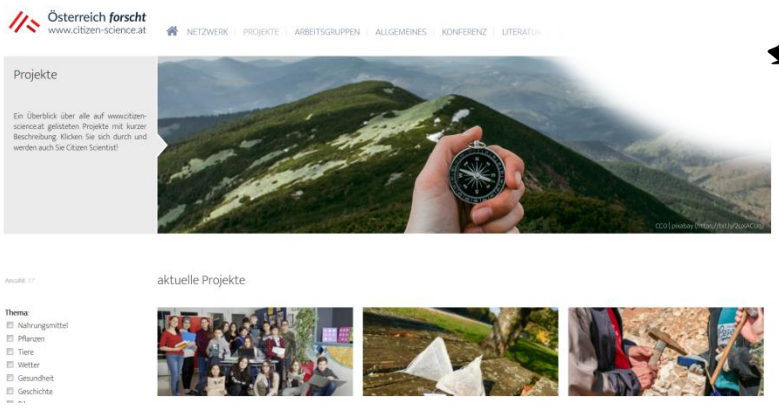

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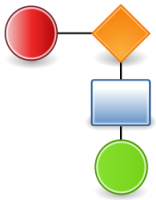
Challenge 3: Ressource & Knowledge Islands

Mobile app/ Platform



Sampling Protocol

Educational Material

Citizen Science Project

Best Practices

Data Policy

Reusable Software (Components) & Best Practices

saves time
and money

preserves knowledge
and experiences made

fosters interoperability

Reusable Software (Components) & Best Practices

Atlas of Living Australia
ala.org.au

BioCollect

Advanced data collection for biodiversity projects

What is 'BioCollect'?

BioCollect is a sophisticated, yet simple to use tool developed by the Atlas of Living Australia (ALA) in collaboration with over 100 organisations which are actively involved in field data capture. It has been developed to support the needs of scientists, ecologists, citizen scientists and natural resource managers in the field-collection and management of biodiversity, ecological and natural resource management (NRM) data. The tool is developed and hosted by the ALA and is **free for public use**.

Open Data Kit

Community Software Help

The standard for mobile data collection

The Open Data Kit community produces free and open-source software for collecting, managing, and using data in resource-constrained environments.

SPOTTERON

EpiCollect.net

Home Instructions Create Project Handsets FAQ Developers About us

Mobile / Web Application for Smartphone data collection

EpiCollect.net provides a web and mobile app for the generation of forms (questionnaires) and freely hosted project websites for data collection. Data are collected (including GPS and media) using multiple phones and all data can be viewed centrally (using Google Maps / tables / charts).

EpiCollect
For simple projects:

Features:
- Drag and Drop form Builder
- Define a single form for survey
- Any number of text questions
- Add a single GPS location + photo

EpiCollect+ BETA
For complex projects:

Features:
- Drag and Drop form Builder
- Define multiple linked form(s)
- Any number of text questions
- Any number of media fields:

Defining principles for mobile apps and platforms development in citizen science

Ulrike Sturm, Sven Schade, Luigi Ceccaroni, Margaret Gold, Christopher C. M. Kyba, Bernat Claramunt, Muki Haklay, Dick Kasperowski, Alexandra Albert, Jaume Piera, Jonathan Brier, Christopher Kullenberg, Soledad Luna

Forum Citizen Science 2018

Workshop: Re-Use vs. Redundanz - Aussichten und Rahmenbedingungen für die Wiederverwendung von Software in bürgerwissenschaftlichen Projekten

Ulrike Sturm, Friederike Klan

DLR

Challenge 4: Data Fitness for Use

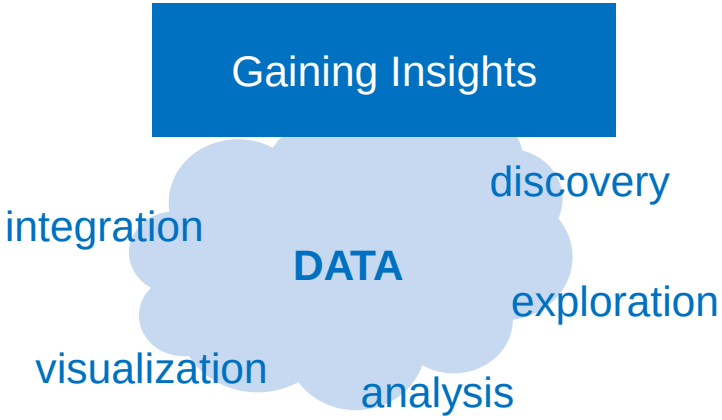
Challenge 4: Data Fitness for Use

supporting software

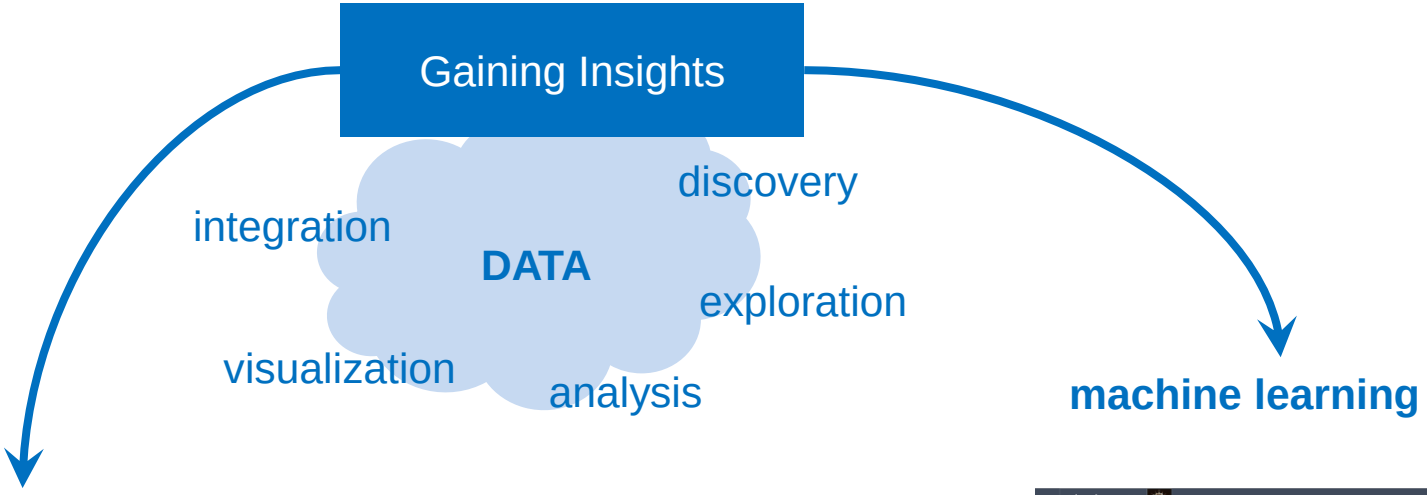
enabling learning

proper project design

Challenge 5: From Data to Insights



Challenge 5: From Data to Insights



S1.6 Semantics for Biodiversity and Ecosystem Research
Sep 27th, 2018
start 10:30 am in lecture hall 4

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DLR Institute of Data Science, Jena

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Image Sources

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  - SWE4CS: https://github.com/opengeospatial/swe4citizenscience/blob/master/ER/images/clause-7-models-7519f.png
  - **PPSR_Core: Citizen Science Association Data & Metadata Working Group:** Report from CSA 2017 and Future Outlook by Anne Bowser, Peter Brenton, Rob Stevenson, Greg Newman, Sven Schade, Lucy Bastin, Alison Parker, Jessie Oliver, 2017
  - OGC Interoperability Experiment: http://www.opengeospatial.org/projects/initiatives/citsci-ie
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  - https://www.ala.org.au/biocollect/#BioCollect_Apps
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  - Sturm U, Schade S, Ceccaroni L, Gold M, Kyba C, Claramunt B, Haklay M, Kasperowski D, Albert A, Piera J, Brier J, Kullenberg C, Luna S (2017) Defining principles for mobile apps and platforms development in citizen science. Research Ideas and Outcomes 3: e21283. https://doi.org/10.3897/rio.3.e21283
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