Citizen OBservatory WEB (COBWEB): A Generic Infrastructure Platform to Facilitate the Collection of Citizen Science data for Environmental Monitoring

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Conceptually, what is COBWEB?

- Sensors in the environment
- Authoritative data
  - Validated
  - Quality approved
  - Compliant

Data client
- Commercial
- Government
- Community

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Demonstrators

Three subject areas:

1. Validating Earth observation;
2. Biological monitoring;
3. Flooding.
Bottom up approach to design

Co-design allows us build interactively

- Validated
- Quality approved
- Compliant

COBWEB Citizen Observatory Web

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GeoNetwork as CitizenScience Portal

Join a project to participate in surveys
Find observations contributed by citizens
Find datasets to use in experiments

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Fieldtrip Open Survey platform

Coordinator creates a survey online

Participate by downloading the survey to the phone
Quality Assurance and Conflation Framework

Based on BPMN and WPS
Use GEOSS and INSPIRE data as authoritative sources
Download or combine the results on a map

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Privacy aspects of Citizen Science

- Spatial Citizen (meta)data is in the heart of the privacy discussion
- Follow privacy by design best practices
Authentication

Access federation based on SAML

Social bridge for citizen

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Step 9:

The open data-standards (swe4citizenscience) delivers best practices for citizen science data.

Using standards
Profile for OGC SWE standards
INSPIRE ready; iso19139 &
WMS/WFS
Semantically enabled (json-ld)
Search engine friendly (schema.org)
Step 10: Discover the observations in the GEOSS portal.
COBWEB & INSPIRE

• Expose citizen science contributions using INSPIRE practices
• INSPIRE data as authoritative source for quality assurance of citizen observations
• Citizen science to evaluate data quality of INSPIRE data
Software resources

- https://github.com/opengeospatial/swe4citizenscience
- http://geonetwork-opensource.org
- http://fieldtripgb.edina.ac.uk
- https://github.com/edina
- https://github.com/cobweb-eu
- https://github.com/GeoinformationSystems/SpatialDataFusion
- http://sixth.ucd.ie
Thank you

Penparcau ‘Bee Involved’

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