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Design and Development of Interoperable Cloud Sensor Services to Support Citizen Science Projects

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- Citizen Observatories → more and more popular source of information
- Examples:
 - Biodiversity (e.g. counts of specific species in an area of interest)
 - Air quality monitoring (e.g. low-cost sensor boxes)
 - Traffic flow analysis (e.g. apps collecting floating car data)
- Projects often develop isolated solutions
 - Overheads for developing the necessary infrastructure
 - Results in disconnected information silos
- Important goals:
 - Provide re-usable services for setting up Citizen Observatories
 - Make use of the European Open Science (EOS) Cloud
 - Promote Interoperability

- **Interoperability**
 - User interoperability standards, such as
 - OGC Sensor Observation Service (SOS)
 - OGC SensorThings API
 - ISO/OGC Observations and Measurements (O&M)
 - Perform interoperability experiments (see EGU2020-18531)
- **Facilitate the collection of Citizen Observatory data**
 - Set-up a cloud-based IT infrastructure
 - Re-usable developments
- **Enable integration with other authoritative data sources**
- **Current status:**
 - Project has started in November 2019
 - Refinement of architecture is in progress