Preparing a requirement's database for in-situ data as part of the Global Earth Observations System of Systems

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Joan Maso[1], Alba Brobia[1], Marie-Francoise Voldrot[2], Sara Seedi[2], José Miguel Rubio Iglesias[3]

joan.maso@uab.cat

[1]CREAF, Campus UAB 08193 Barcelona, Spain [2]OGC Europe, [3]EEA, Copenhaguen, Denmark

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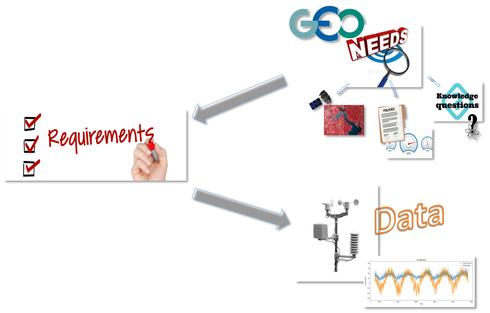
Abstract and Scope

G-reqs is a geospatial in-situ data requirements database designed by the InCASE project, in support to the EEA as a contribution to the Group on Earth Observations (GEO). G-reqs provides a methodology for formally collecting and managing concrete in-situ data requirements based on the needs of the GEO Work Programme. With the G-reqs approach, the different potential usages of in-situ data can be identified, and, as a consequence, gaps and opportunities for fit-for-purpose datasets detected. This work is inspired by the Copernicus In Situ Component Information system (CIS²) of requirements. While the CIS² in-situ database targets the needs of the Copernicus Services, G-reqs has a broader scope. Needs for in-situ data can emerge from: Remote sensing Cal/Val, model input, scientific research, enrich data service, commercial service, policy indicator elaboration or decision making support.

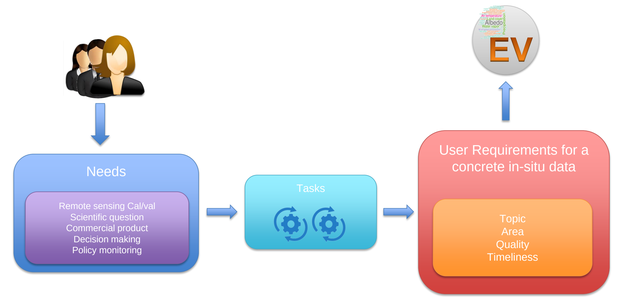


All in all, it will improve the current situation of in situ data fragmentation and foster a better coordination of in-situ Earth Observation monitoring at global scale.

Capturing requirements in a formal way

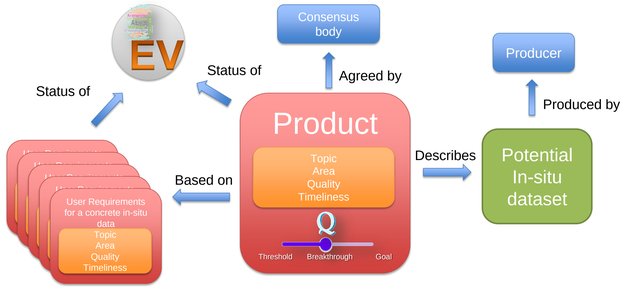
User driven

G-reqs is a geospatial database for the collection of standardized and quality checked in-situ Earth Observation data user requirements.



Consensus process

Product requirements based on in-situ user requirements defined by parameters that future datasets (measuring Essential Variables) should fulfil (e.g., specific temporal and spatial details).



Participating in G-reqs

If you have requirements for in-situ data, please add them in a structured way in G-reqs:

G-reqs is at an early stage and it will evolve based on lessons learned from the GEO community. Your contributions will be very useful to calibrate the model and feed the geospatial in-situ requirements database.

The suitability of G-reqs

The suitability of the G-reqs model lies in its capability to **collect**, **share** and **analyse** requirements, **detect** gaps, as well as help to make **recommendations** to data providers, thus promoting the discovery of fit-for-purpose in-situ datasets.

Collect	Share	Analyse	Detect	Recommend
G-reqs allows capturing requirements in a systematic and standardized way. Through a user-driven approach, it facilitates the definition of users' needs and its translation into **parameterized requirements**.	G-reqs is designed to be an open and accessible database for all by following FAIR and **GEO data management principles**.	G-reqs includes a predefined set of reports to **analyse** and statistically **summarize** the content of the database.	G-reqs reports can be used to detect potential in-situ usages and **gaps** that could constitute new **opportunities** for further Earth Observation monitoring.	G-reqs **consensus** process can result in agreement on recommendations to data providers for producing products that cover **emerging needs** of the Earth Observation users community.