e-IRG Workshop –e-Infrastructures for Climate Change and Digital Transitions



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The Semantic Mapping Framework (SEMAF) initiative

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e-Infrastructure

Reflection Group

Science for a large part based on measuring and describing phenomena using schemas and concepts that are often discipline-specific. For Open Science, sharing and transparency these schemas and concept/vocabulary definitions need to be as FAIR (open registries) as the data itself. When integrating data from different communities –also mappings are required. Spending many resources & time on deep ontological work does not make sense. Mapping needs to be driven by concrete data cases and purposes only a pragmatic approach will help researchers already do this, but mappings are hidden in texts, software, spreadsheets, etc. thus, they are not explicit, reusable (not FAIR). Therefore a flexible Semantic Mapping Framework which should be FAIR and persistent (it includes part of our scientific knowledge to be captured).

Recommendations:

Flexible pragmatic Semantic Mapping is essential for semantic interoperability, within disciples and between disciplines. Semantic mappings are everywhere in data and metadata are part of our scientific knowledge, processes and key for reproducibility need to become FAIR and need to be stored, shared and managed.

SEMAF proposal essentials:

Invest in a framework with as basis an open registry specification, an API and a reference implementation to create interoperability

Invest in smart tools created by smart young developers that make use of specs and offer high usability SEMAF integrated in EOSC for sustainability and governance

SEMAF requirements and construction proposal available in the final report at http://doi.org/10.5281/zenodo.4651421

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