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Towards a multidisciplinary e-infrastructure for the Mediterranean Supersite Volcanoes (MED-SUV) project

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The MED-SUV European project (http://med-suv.eu/) aims to design and implement a multidisciplinary infrastructure for the volcanic risk management life-cycle in southern Italy.
The MED-SUV infrastructure will rely upon the improvements of the understanding of geophysical processes underlying the volcanic systems of Vesuvius / Campi Flegrei and Mt. Etna. It will also achieve the integration of existing components, such as monitoring systems and data bases, novel sensors for the measurements of volcanic parameters, and tools for data analysis and process modelling.
This effort will contribute to GEOSS (Global Earth Observation System of Systems - http://www.earthobservations.org/geoss.shtml) as one the volcano Supersite recognized by GEO (Group on Earth Observation) –see http://supersites.earthobservations.org/.
To achieve its goals, MED-SUV needs an advanced e-infrastructure allowing: (a) heterogeneous data and processing systems to provide and share their resources, and (b) supersite Users to run their workflows and generate significant products.
This presentation discusses the general interoperability approach and architecture characterizing the MED-SUV e-infrastructure. The MED-SUV e-infrastructure considered the concepts and solutions adopted by the GEOSS Common Infrastructure (GCI). The architecture requirements and system technologies builds on the experience done by relevant European projects in the framework of GEOSS and ESFRI (e.g. EuroGEOSS, GENESI, GEOWOW).
MED-SUV e-infrastructure adopts three-tiers approach distinguishing among: (a) local and distributed Data/Information Providers; (b) the MED-SUV Brokering framework for harmonization and interoperability; (c) the MED-SUV e-collaboration environment for the generation and publication of advanced products.
MED-SUV e-infrastructure development considers interoperability with the other two FP7 supersite projects: MARSITE and FUTUREVOLC, as well as EPOS.