**NAME OF THE PROJECT:** STRUSTURAL STABILITY RISK ASSESSMENT

**SHORT NAME:** STABLE

**PROGRAM:** EXCELLENT SCIENCE – MARIE SKLODOWSKA – CURIE ACTIONS

**STARTED AT:** 1 NOVEMBER 2018

**DURATION:** 5 YEARS

**ALL ABOUT THE PROJECT:** https://www.stable-project.eu/

**SUMMARY: Europe's Cultural Heritage** is at risk, endangered by environmental processes enhanced by climate changes and anthropogenic pressure. The STABLE project is addressing **risk maps** of Cultural Heritage (CH) at a medium scale, such as a block of buildings and large structures, to derive similar damage maps, by collecting information before the event occurs and addressing damage forecast for seismic movements which have an impact on the structural stability of the CH. The introduction of a strategy and the selection of the most efficient methods and tools for harmonization of data, criteria, and indicators to be addressed for tracking the impact of environmental changes on tangible cultural heritage assets, buildings, and monuments, including structural deterioration processes at a city/village scale, will be achieved. This valuable information needs to be complemented, calibrated, and tested with ground data (e.g., geotechnical information), site scale monitoring (e.g., ground monitoring stations, laser scanners, etc.), and risk forecasting models (related to earthquakes) to derive end-user-driven products like deformation maps, vulnerability, and damage maps. The project focuses on the **design and development of an IT service platform,** combining advanced satellite technologies with existing ground-based data and risk forecasting modeling for the long term and continuing monitoring and updating of structural stability of the architectural heritage, particularly historical centers affected by geo-hazards. Three case studies have been selected to demonstrate and validate the Platform: the city center of Rieti in Italy, the old town of Nafplion in Greece, and Strovolos in Cyprus.

In the frame of STABLE, **Geosystems Hellas (GSH)** is responsible for the **InSAR data processing for monitoring of the ground and structural displacements**, and especially for the processing and analysis of the Interferometric EO processing chain, from which related coherence and velocity maps are developed for the selected case studies. Furthermore, GSH is responsible for the development of the detailed **design and interface control of the Thematic Platform Software Kit.** The ultimate scope of the thematic platform is the integration of all preprocessed data and results developed in earlier stages of the project while making use of sophisticated geospatial software and techniques. The **web portal is created for visualization and dissemination purposes**, and all primary and secondary data are intended to be included in a way that all users can easily comprehend the intermediate processing steps.

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**CONSORTIUM:**