

**NAME OF THE PROJECT:** Economy bY space

**SHORT NAME:** EYE

**PROGRAM:** H2020-MSCA-RISE-2020

**DURATION:** 48 MONTHS

**STARTED AT:** 01/07/2021

**WEBSITE:** <https://www.economy-by-space.eu/>



**SUMMARY:** Space technology connected with Artificial Intelligence and machine learning techniques is one of the most rapidly developing field of science and also play a key role to control disaster by space like Covid-19 outbreak. While space technologies have been successfully applied to a small number of macroeconomy and health care related matters over the last decade, there is neither a significant utilization of space elements nor a systematic analysis of needs for space assets in this sector yet. There are a significant number of indirect parameters observable from space that can be correlated to the impact on the economy of natural, health (including epidemic) and man-made disasters. Classical environment parameters (geographical, climatological and hydrogeological) and man induced impact on the environment (pollution, heat) can be combined with economic parameters of human activities impacted by the epidemic including transportation, industry, and commerce. Specific human activities can be directly correlated with the progression of the diseases i.e. increase of heat delivered by crematorium in the affected areas as well as in the dwelling areas due to lock-down restrictions. All these “observed parameters” need to be correlated to macro parameters related to the progress of the epidemic and its impact of the of the infection to the economy at different scales. At medium- and long-term time scale, this methodology enables the near real-time monitoring of macroeconomic parameters during the recovery phase following the end of the emergency outbreak. The **project EYE** intends to propose a prototype service based on Copernicus data, automatic image processing supported by artificial intelligence integrated with modelling and statistic and geospatial data into an IT platform able to provide econometric and epidemiologic nowcasting and forecasting data.

**GSH – GeoSystems Hellas** is responsible for the WebGIS design & implementation of the EYE platform, which will be based on Open Source software. EYE platform will support geospatial image processing that utilizes a centralized relational database to store geospatial information, making data visible and accessible to end users through data management solutions and the derived information exploitable by decision-makers. The architecture of the platform will follow a microservice-based approach, with many services running independently and each one providing a simple basic functionality. GSH will be involved in the final system Integration & test. GSH is also tasked with organizing one of the joint co-locations of the project in Greece.

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**CONSORTIUM:**



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