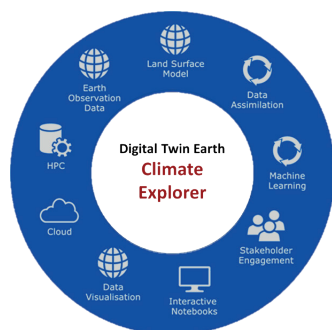


# DIGITAL TWIN EARTH – CLIMATE EXPLORER



## PROJECT OVERVIEW

Telespazio UK is supporting climate change monitoring with satellite Earth Observation (EO) data, artificial intelligence, machine learning and state-of-the-art data assimilation to produce soil moisture and drought metrics that influence agriculture in Africa.



The company is leading a Digital Twin Earth precursor contract to advance understanding of local impacts of global climate change. 'Digital Twin Earth' will be a high-resolution dynamic reconstruction of our planet and its complex processes.

The output will provide advanced science-based decision support capabilities, including enhanced predictive and simulation capacity, at resolutions

and accuracies necessary to respond to the urgent challenges and targets addressed by the EU's Green Deal.

The innovative Climate Explorer, developed by Telespazio UK and its partners, will use advanced Earth System Models, processed using High Performance Computing infrastructure and state-of-the-art data assimilation techniques with satellite EO data. Optimised model simulation outputs will be delivered via Machine Learning emulation to the end-user through a cloud-based Interactive Data Portal. As an example user case, this will include soil moisture and drought metrics that impact agriculture in Africa.



**CLIMATE  
IMPACT EXPLORER**  
DIGITAL TWIN EARTH PRECURSOR