

Democratising Geodata and Geoservices Usage for R&D



The European Space Agency (ESA) has announced the opening of a new Earth observation (EO) data-processing facility. CloudEO, a Munich-based start-up company, is hosting and managing the service for ESA on the EOhopS portal. By making commercial and Sentinel data freely accessible for R&D users from academia and industries, this service will help to democratise geodata.

[ESA](#) is an intergovernmental organisation of 22 member states, dedicated to the exploration of space. It has long been supporting scientific users and developers of EO applications by providing access to its own mission data and so-called third-party mission data. Through this partnership, ESA, upon evaluating a project proposal, will make satellite acquisitions from ESA's partner agencies and from commercial data providers available

for free to the broad R&D community allowing scientists and R&D users from businesses to analyse commercial and Sentinel data in a powerful hosted-processing environment for their projects. Prof Dr Patrick Ole Noack, who teaches agricultural technology at Hochschule Weihenstephan-Triesdorf, is enthusiastic. It opens so many opportunities for research and development both by scientists and businesses ultimately benefiting the society, he said.

Geoservices

The EOhopS portal is indeed a very creative way to use geodata utilising diverse IT infrastructures, including ready-to-use geoanalytics in a complete package and on one platform: CloudEO's workbench.

The company is a pioneer of bringing the shared economy concept to the geoservices industry. With this project, it has opened processing tools hosted on CloudEO platform for R&D. This includes ENVI (geospatial software solution to process and analyse all types of imagery and data such as multispectral, hyperspectral, Lidar), IDL (trusted scientific programming language used across disciplines to extract meaningful visualisations out of complex numerical data) and the ESA Sentinel Application Platform (SNAP) toolbox. On the EOhopS platform a user can upload own content, like in-situ measurement data or scientific algorithms to the virtual workbench.

This is where the space data and the geoservices industry are heading – democratising geodata by making it broadly available, accessible and usable. With this project ESA is leading the way in opening up geodata for R&D, commented Dr Manfred Krischke, CloudEO's founder and CEO, who himself holds a PhD in aerospace engineering.

Flexibility

The payment on EOhopS Store will be processed by CloudEO through digital credits provided by ESA to users free of charge allowing them to flexibly spend them during the approved research project.

All EO data and software can be booked for the whole project as well as on a short-term basis. Staying within the same budget, users can develop and test their new algorithms on a larger variety of data sets and tools. This is a big advantage for creating reliable and competitive geoservices, said Dr Ursula Benz, CloudEO's COO and EOhopS project manager. To simplify the selection of various datasets for the user, the EOhopS has a unified data search tool for accessing data from multiple vendors, and a smooth interface for ordering selected EO data sets and 'Software as a Service'.

CloudEO is hosting the EOhopS portal on the CloudEO platform. Its most renowned providers include SI Imaging Services, DigitalGlobe, German Aerospace Center (DLR) and Harris Geospatial Solutions.