

## EO Market Is a-Changin'

Historically, if you wanted satellite Earth Observation (EO) data your first port of call was usually NASA, or NOAA for meteorological data, and more recently you'd look at the European Union's Copernicus programme. Data from commercial operators were often only sought if the free-to-access data from these suppliers did not meet your needs.

However, to quote Bob Dylan, *The Times They Are a-Changin'*. NASA, NOAA and Copernicus are buying, or intending to buy, data from commercial operators.

However, as with many activities there are often precedents. For example, the SeaWiFS mission was built to NASA's specifications and launched in 1997. It was owned by the commercial organisation Orbital Sciences Corporation and NASA conducted a 'data-buy'. They've moved back in this direction last month as NASA issued a [Request for Information](#) for US companies interested in participating in the Earth Observations from Private Sector Small Satellite Constellations Pilot. The aim of this programme is to identify commercial organisations collecting EO data relating to Essential Climate Variables (ECV), and then to evaluate whether this would be a cost effective approach to gathering data rather than, or alongside, launching their own satellites.

To interest NASA the companies need to have a constellation of at least three satellites in a non-geostationary orbits, and the ECV dataset will need to include details of both instrument calibration and processing techniques used. Initially, NASA plans to provide this data to researchers to undertake the evaluation. [According to Space News](#), 11 responses to the request had been received. Discussions will take place with responding companies over the next month and it's anticipated orders will be placed in March 2018.

NOAA is another US agency looking to the private small satellite sector through their [Commercial Weather Data pilot programme](#). To supplement their own data collections they've already purchased GPS radio occupation data and are planning to buy both microwave sounding and radiometry data.

Not everyone is aware that the Copernicus Programme also purchases data from commercial sources as part of its [Contributing Missions Programme](#). Essentially, if data is not available for any reason from the Sentinel satellites, then the equivalent data is sought from one of [30 current contributing missions](#) which include other international partners such as NASA, but also commercial providers.

Whilst part of the drive behind this approach is to ensure data continuity, in the US the backdrop has a more long term concern with President Trump's intention to move NASA away from EO to focus efforts on deep space exploration. It's not been fully confirmed yet, but there is due to be a [Congress budget discussion](#) later this week and if approved it could mean the loss of the following four NASA missions:

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- Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) satellite
- Orbiting Carbon Observatory-3 (OCO-3)
- Climate Absolute Radiance and Refractivity Observatory (CLARREO) Pathfinder
- Deep Space Climate Observatory (DSCOVR)

Whilst buying data from commercial providers may offer opportunities, it also has a number of challenges including how to buy this whilst maintaining their commitment to free-to-access data, and with the shorter lifespans of small satellites the increased pressure on calibration and validation work.

It's clear that things are evolving in the EO market and the private sector is coming much more to the fore as a primary data supplier to researchers, national and international bodies.