

# Advances in Geospatial and Space



As we head towards Brexit in 2019, satellites may be in the headlines for less than positive reasons at the moment. However, what's clear is the universal acceptance of the value, and critical need for this infrastructure to both our society and economy. Away from the headlines, a number of interesting events over the past month have allowed me to reflect on the relationship between space and traditional geospatial. For many years, the earth observation community has been on the fringes of mainstream geospatial, and in some cases, unfortunately, even viewed as a distinct entity.

Thankfully, space technology has now reached a level of maturity and accessibility which makes it easier and more common for the geospatial analyst to include remote sensing data and associated techniques into both their workflow and toolkit. Advances in the hardware (e.g. Sentinels and Cube Sats), along with that of processing and analysis techniques, have been of key importance. Thanks to reduced barriers to entry into the market to exploit this data, along with the wider availability of open data, there is now much more activity by small businesses in this field. And this rate of activity will only increase as we see bigger investment into new, more efficient methods for serving vast repositories of data. The industry can expect to see faster consumption, stronger utilisation of cloud computing, and greater use of emerging technologies, such as machine learning and AI.

So, what does this mean for the connection between space and in-situ (ground-based) sources of data? During May, I had the pleasure of hearing Barbara Ryan, Secretariat Director of the intergovernmental Group on Earth Observations (GEO), address an audience of data providers at the European Space Agency in Italy. Ryan emphasised the importance of informed and purposeful decision making for our planet. Her vision of a "global earth system" which brings together and co-ordinates the full scope of data is extremely motivating. Her speech also made it clear that initiatives such as the UN Sustainable Development Goals (SDGs) are vital to the success of bringing together a cohesive set of data from all available sources.

While many UK organisations are already embracing this vision in their own implementations, there are still many more collaboration opportunities available to maximise benefits of advances in geospatial and space. In recent weeks, I was delighted to attend a working dinner for UK leaders in Geospatial and Space, in order to explore how this can be achieved. The event, however, was not only about bringing communities together. Since the event was instigated by the National Centre for Geospatial Intelligence (NCGI), there was also a focus on developing a connection with UK defence capabilities.

Stuart Martin, CEO of the Satellite Applications Catapult, identified geospatial intelligence as a societal trend, with geospatial forming the link between the physical and the digital world in which we now spend much of our time. Meanwhile, Brigadier Ben Kite, Commander, Joint Forces Intelligence Group, shared details on the work of the NCGI in terms of delivering information, geospatial intelligence analysis and deployable operations. These three pillars of activity are now being brought together in the UK in a way which is unique in comparison to the rest of the world.

For me, it was really refreshing to hear from leaders about the opportunities to work together on a UK basis, as well to get a sense of the support for closer collaborations - not just in terms of improving day to day efficiencies, but also in terms of positioning the UK as a world leader in this field. The new connections with those of a shared interest, along with the strategic conversations and identification of tangible outcomes from the meeting leaves me with a lot of hope that this, and other initiatives, will play a role in bringing us closer together and allow us to make the most of these opportunities.

The continued message from the majority of those that I meet with is that there is significant opportunity for us right now. There is a real appetite in the UK to be ambitious about what can be delivered in a new and changing landscape – in terms of both technology advancements and policy developments. Will we see the new Geospatial Commission take a holistic view of geospatial in this way? Regardless of the answer to this question, we, as a community, must continue to work together to build these vital collaborations and take maximum value from these developments.

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