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Meet the jewel in the crown

Terri Freemantle gives readers a tour of the Operations Centre at the Satellite Applications Catapult in Harwell. The state-of-the-art facility gives the UK a sovereign capability, not least in Earth Observation



Britain's ability to manage and exploit EO data in tackling global issues such as climate change and food security has been reinforced with the establishment the Catapult Operations Centre. Photo: © Satellite Applications Catapult

The Satellite Applications Catapult aims to foster innovation in space technologies and support the creation of new satellite applications. This includes promoting the use of new technology and data visualisation techniques to the satellite community. We have numerous avenues for achieving this, including making advanced facilities available to use by the wider Space and Satellite community.

End-to-end facility

The jewel in the crown of the Catapult's unique set of facilities is our Operations Centre. It is designed to provide an end-to-end facility for cost-effective satellite flight operations, payload data processing, and exploitation services.

The Centre, which accommodates up to 18 people, can be used as a platform for the pre-operational trial phase of services and applications developed by organisations of all sizes, through to being a fully operational mission control centre supporting the likes of the TechDemoSat satellites, Disaster Monitoring Constellation and European and UK bilateral missions.

Recently, the centre has been used for hosting our award-winning 'Project Eyes on the Seas' live satellite monitoring service, which assists in the mission to tackle illegal, unregulated and unreported fishing using integrated satellite data from optical, Synthetic Aperture Radar (SAR) and Automatic Identification System.

Additionally, the Operations Centre can be used by anyone wanting to showcase their work, and is an ideal training and testing

environment for software testing or user acceptance testing. For example, the Catapult used the centre to run a training course on SAR data and use of the European Space Agency's Snap toolbox – a freely available software platform for processing optical and SAR Earth observation (EO) data.

Full mission simulation

The Operations Centre also integrates with the Catapult's Missions Lab, enabling full mission simulation of innovative platform and payload technologies. This presents a unique opportunity for demonstrating satellite applications and services.

Through these world-class facilities, the Catapult also provides the UK with its own ground control capability – a unique step in giving the UK a sovereign capability, especially in EO. This reinforces the UK's capabilities in the management and exploitation of EO data for tackling climate change and for the rapidly emerging field of security applications (including defence, environmental and food security, and security of space-based services).

As an extension of this, the Catapult connects with other UK operational, data-processing and storage sites, using high-capacity fibre optic links, as we move towards the creation of a UK collaborative ground segment, led by the UK Space Agency.

For more information on the Operations Centre, or any of our other facilities, please contact events@sa.catapult.org.uk.