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# De-risking ideas in space

Demonstrating proof of concept is a major barrier for those looking to exploit a new space technology or enable a new service from space. Terri Freemantle looks at an initiative that will help lower that barrier

The shift from laboratory to mission is challenging and, due to the associated time, cost and risk implications, in-orbit testing has not been accessible to many. Yet space-flight heritage remains central to proving the commercial potential of your idea.

The UK is now driving innovation in this area with a programme that will act as a springboard for new commercial space services. The initiative will offer a low-cost space test-bed that builds on the UK's existing proven space-flight heritage in UKube-1 and TDS-1.

## £1.5 million investment

The In-Orbit Demonstration programme (IOD) has been developed by Innovate UK and is managed by the Satellite Applications Catapult. The programme is supported by a £1.5 million investment that provides four separate CubeSat platforms. These will be launched by NanoRacks from the International Space Station via its Space Act Agreement with NASA's US National Lab.

The four missions are designed to enable any company with a clear commercial proposition and a route to market for their service, to be able to test their service concept on a 3U CubeSat platform from Clyde Space.

IOD is about demonstrating services in areas such as, but not limited to; maritime surveillance, climate applications, agriculture, natural resource management, the Internet of Things, exploitation of Galileo PRS, transport, smart cities and location-based services.

## Creating the right ecosystem

The support from the Catapult to deliver the mission means that we can create the right ecosystem: helping technology providers, service providers and customers to partner and solve genuine business needs. IOD is as much about providing the operational and business support to develop the service as it is about enabling access to space.

The IOD programme is open now, and while the four missions have flexible dates, the team is looking to select the first mission by April

The first step is to contact the IOD team to register your interest and to discuss your idea. The team will then work with you to identify the level of support you may need to design, develop and operate the mission.

## Keen to help

The team is keen to help connect companies or research-based institutions that can bring different capabilities together to form a mission. It means that even if you have one element, from the instrument to the customer, do contact the team to see how it might be able to match you with relevant partners.

Each mission will have its own costs according to the scope and

scale of support required by the Satellite Applications Catapult, but the team is also able to help identify potential funding.

If IOD is not quite the right programme for your idea, the Catapult can also put you in touch with other in-orbit demonstration opportunities that can help find the right vehicle to suit your needs.

**To find out more about the programme, contact the IOD team at [iod@sa.catapult.org.uk](mailto:iod@sa.catapult.org.uk) or visit <http://sa.catapult.org.uk/iod/>.**



As part of the collaboration, the IOD programme offers a CubeSat platform from Clyde Space (UKube-1 pictured) plus a launch by NanoRacks from the ISS. Photo: Clyde Space