**Potential of small satellites**

Small satellites offer a new paradigm for space compared with the historical one. They enable the use of faster innovation cycles (3 years vs 15 years lifetime for Geostationary satellites), mass production (100+ vs 20 Geostationary satellites per year) allowing for economies of scale and redundancy at satellite level rather than subsystem level. The potential impact of a mature small satellite sector would be more affordable, frequent and diverse data enabling new services currently not exploited by bigger satellites. This potential is hampered by challenges that can be summarised under two main categories. Firstly, a high entry cost and length of time to demonstrate the technology in space, secondly a complex value chain to demonstrate the service enabled by the technology.

**A one-stop-shop for the demonstration of space services**

The purpose of a one-stop-shop is to support business ideas aiming at demonstrating services using new space assets. This will help explore which services are enabled by small satellites. As such it is mainly addressed at SMEs with a business opportunity that an application will fulfil. This model would enable SMEs to focus on their unique selling point.

**The In-Orbit demonstration programme from Innovate UK and Catapult**

A reduced instance of this model is being tested, where Innovate UK (the UK Innovation Agency) provided funding for 4 launches by Nanoracks and 4 ISU platform provided by Clyde Space. The Satellite Applications Catapult manages the programme.

The organisation (typically a start-up) contributes with a payload, collaboration on the satellite integration and operations, and leads the exploitation of the satellite capability. The mission is delivered by the Satellite Applications Catapult running the satellite operations.

**The Satellite Applications Catapult**

The Catapult is an independent, non-for-profit, innovation and technology company, created to foster growth across the economy through the exploitation of space. The Catapult helps organisations make use of and benefit from satellite technologies, and brings together multi-disciplinary teams to generate ideas and solutions in an open innovation environment.

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