



Space Accelerator Program

Advancing Mutual Capabilities and
Improving Access to Space-Based Assets

9 September 2019



Jacob Singleton, Capt, USAF
AFRL | AFWERX | Dstl
International Space R&D



The Challenge to Innovate & Partner



FRONT, AIR, Army CD&E, Maritime Innovation Cluster, DMO

Defense Innovation Greenhouse

NATO Allied Transformation Command

DASA, RAF RCO, DIU, JHub, DARE

**Innovators and
ating Results**

DGA Lab, Evreux Smart Base, CEAM

German Cyber Innovation Hub

Canadian Air Force CD&E



What do we know?

- Technologies are emerging in the commercial market independent of any request from the government
- There is significant venture capital and funding resources pouring into these tech areas, outspending the DoD 3 to 1 and with a focus in early stage business
- There is a large overlap between these commercial solutions and current military needs- Space technologies being the perfect example.
- The DoD has a limited relationship with this community that functions with innovation, efficiency and agility that we need to remain ahead of adversary technology development

The DoD and our international partners need to better partner with our world's entrepreneurs to leverage the efficiency and cost point of innovation in the commercial market that directly brings values to today's space mission



Accelerator Programs



Select compelling **Dual-Use Problem Area**

Build coalition of DoD partners along the way – PNT, SSA, COMM, Weather



Reach out to **entrepreneurial networks**

Broad problem statement – cast a broad net



Receive **Applications** from Innovative Co's

Data from 6 points: hundreds of applications



Down-select to best **10 Companies**

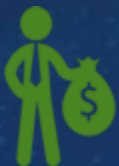
Operationally useful, technologically viable, financially sustainable



x3

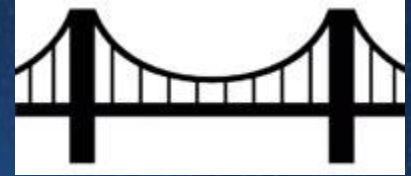
Companies work for **3 months**

Receive intense mentorship and iterative feedback, validate defense utility



'Demo Day' with Private Investors & Customers

Investment ready with validated use case for Defense customers



Desired Outcomes

Private Investment

Prototype OT

2373 Procurement

SBIR phase I/II

Prime Integration

AVCI/IQT Investment

CRADA/testing



Accelerating Space



Overview

Total Funding Amount **\$4.7M**CB Rank (Company) **12,907**

Orbital Sidekick

Establishing a space-based infrastructure of hyperspectral sensors to provide monitoring services to the energy sector and beyond.

[San Francisco, California, United States](#)

Categories

Headquarters Regions

Founded Date

Founders

Operating Status

Funding Status

Last Funding Type

Number of Employees

Also Known As

Orbital Micro Systems to Provide Payload for UK Launch

By Annamarie Nyirady | July 17, 2018

Europe Government Launch



Artist rendition of Orbital Micro Systems Microwave Sensor Satellite. Photo: Orbital Micro Systems

US firm picks UK for weather satellites

By Jonathan Amos
BBC Science Correspondent

7 December 2017

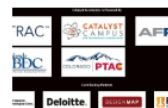
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SaraniaSat wins \$5M NASA InVEST contract for hyperspectral thermal imager

2018-08-01 COURTNEY E. HOWARD

Member of Colorado Springs' Catalyst Accelerator inaugural cohort is first to win government contract.



[View gallery »](#)

SaraniaSat, an aerospace start-up in Los Angeles, won a \$5 million contract from NASA's Earth Science Technologies (InVEST) contract to test a Hyperspectral Thermal Imager (HyTI), being touted as a unique, disruptive technology also known as imaging spectroscopy used to detect and identify materials.

SaraniaSat's HyTI is one of three proposals selected for NASA's solicitation for the In-Space Validation of Earth Science Technologies (InVEST) A.49 of ROSES (Research Opportunities in Space and Earth Science) Division (Solicitation NNN17ZDA001N). [Read more: NASA's Earth Science Technologies \(InVEST\) A.49 of ROSES](#) on CubeSat platform

“Catalyst was literally a catalyst, because without them we would never have been able to submit this proposal.” – Dr. Tom George, SaraniaSat CEO/co-founder and former NASA scientist



Orbital Micro Systems



New Colorado company established in US to enable real-time use of space based weather data



Innovate UK



Selected for In Orbit Demonstration (IOD) managed by Satellite Applications Catapult



AFWERX



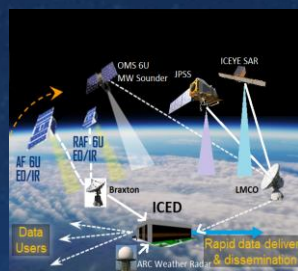
Validate military Utility for USAF with AFRL/AFWERX Space Accelerator Program Receive \$2.6M



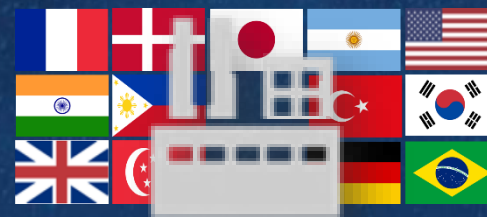
Establish commercial market and expand to UK with satellite hardware partners, Clyde Space.



**Launch of IOD-1 GEMS satellite on NASA NG-11
6 More satellites planned to follow in 2020**



Assess quality and temporal resolution of weather data in USAF/RAF operational demo



Data access for commercial and governmental through International Center for Earth Data (ICED)



New space capability accelerated to commercial market with international defense as early adopters

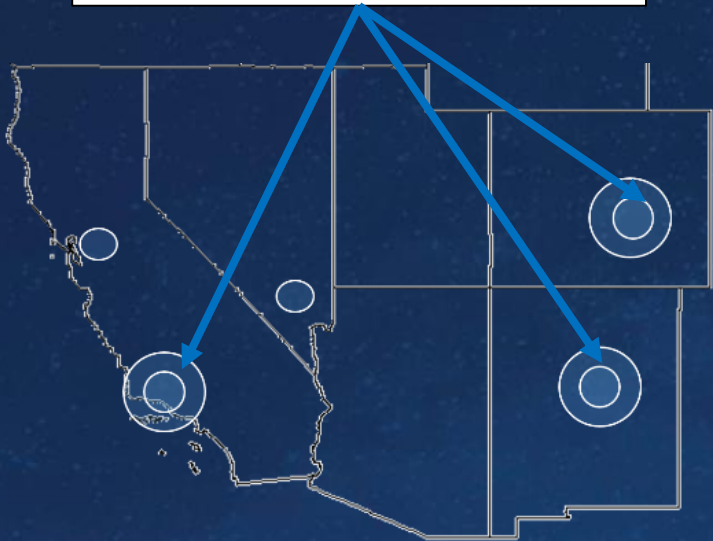


Space Accelerator Tomorrow

- **A New Space Paradigm**

- Bolsters an ecosystem of agile and efficient entrepreneurs with whom the DoD can form nontraditional partnerships for rapid innovation of dual-use space technologies

Space Technology Accelerator



Programs currently running in LA, Colorado Springs, Albuquerque.

Satellite Communications

PNT

Space Situational Awareness

ISR

Terrestrial Weather

Autonomy/AI



Partnering to Accelerate and Access Global Innovation for Defense Space!



Questions