Finalists for International Space Pitch Day revealed

The finalists of the first [International Space Pitch Day](#) innovation competition were today announced.

Fifteen tech start-ups and innovative companies from across the world have won the opportunity to pitch their novel solutions to a panel of top military figures with the aim of winning a share of £800,000 ($1M).

They will now pitch their ideas to the panel and a global audience with International Space Pitch Day taking place during Day 1 of the virtual [Defence Space Conference 2020](#) hosted from London on 17 November.

If successful in persuading the judges, contracts worth up to £53,000 ($66,000) to fast-track the development of their innovations will be awarded the same day.

More than 100 firms registered interest in the competition.

Announcing the finalists at [SpaceCom Conference & Exposition](#) today, UK MOD Head of Space Capability, Air Commodore Julian Ball OBE said:

> We are delighted to have 15 fantastic proposals make the final of International Space Pitch Day – representing the best of global space innovation.
>
> There was a terrific response to this innovative and collaborative initiative and I congratulate those making it through to Pitch Day.
>
> All eyes are now on London and 17 November when those winning contracts to accelerate their innovations will be chosen.

[Air Commodore Julian Ball congratulates finalists of International Space Pitch Day](#)

Six of the finalists are from the United Kingdom, six from the United States, and one each from Australia, Canada and India.

The finalists:

* 114 AI Innovation LLP (India)

Title: Spacewise

Exploitation toolset to visualise, access and analyse multiple input streams of data for advanced Space Command and Control using Cognitive AI. This toolset enables space operations with allies and commercial partners by allowing visualization and analysis of multiple different sources of data in

real time.

- Clearbox Systems Pty Ltd (Australia)

Title: AI-enabled decision support for satellite service selection

To enhance a distributed satellite spectrum monitoring tool to incorporate AI-enabled decision support for satellite service selection. Applying AI techniques to the data and decision space can assist in improving prioritisation and selection of satellite services based on the Radio Frequency (RF) environment.

- Clutch Space Systems Limited (United Kingdom)

Title: Space Resources Operational Availability Tool (SROAT)

The tool will be provided to operators to enable efficient and autonomous utilisation and assessment of the space assets for planning, and during operations. A prototype will include weather forecast interfaces, and orbit propagation, provide the satellite and payload simulations, automated mission planning code to support advanced queries, and provide the visualisation and AI modules.

- Cognitive Space, Inc. (United States)

Title: Multi-level security through partitioned blockchain

Extending an AI-driven cloud satellite mission planning solution to include segregated access for multi-level security through the use of blockchain technology. This solution will provide a common operational picture of space assets across multiple security levels while providing means of filtering accessible data and actions based on security clearance and need to know basis.

- Consortium of L3Harris, NORSS and Intelligence Fusion (United Kingdom)

Title: Space Domain Awareness (SDA) blockchain platform

Using blockchain technology to gather, verify and present multiple, varied sources of terrestrial and SDA data to produce a single space picture dashboard of events occurring in near earth orbit. The results will enable simple event visualisation for at-a-glance decision making in the Space environment.

- KISPE Space Systems Limited (United Kingdom)

Title: Interactive app prototype for a decisional Space Domain Awareness (SDA) Tool

An interactive prototype app of a decisional SDA tool for use by military stakeholders in diverse settings, with the capability to deliver operational Blue, Red and Grey knowledge and tasking capability for space-based assets at operationally-relevant timescales. This tool is important to allow operators

in the field to develop and plan tactical operations; analysts to understand satellite patterns of life; and commanders to make prioritisation and strategic decisions based on tailored and appropriate information.

- NorthStar Earth & Space (Canada)

Title: Space Domain Awareness (SDA) warfighter training simulator

NorthStar Earth & Space will deliver a sophisticated space environment simulator to support the analysis of NorthStar's constellation as part of a combined operation training exercises. The baseline tool will help fulfil the challenge of providing training against realistic threats and opportunities, incorporating live data, and integrating space across multiple domains.

- precursor SPC (United States)

Title: 4D space weather impact tool

A space weather impact tool that delivers high-fidelity visualization of current, near-real time space weather conditions and forecasts of space weather conditions utilizing beacon satellites, multiple data sources, and ionospheric calibration systems to add the time dimension to space weather observations with an AI platform for forecasting. This novel approach improves ionospheric observation granularity by +10X while enabling space weather forecasting, and, delivering asset availability and management knowledge for mission readiness.

- Riskaware Limited and Telespazio Vega UK (United Kingdom)

Title: SpaceAware resilience

A comprehensive multi-tier modelling and visualisation tool aimed at supporting battlefield and business operations with risk and threat analysis to mission critical space assets and the impact on the operational theatre.

- Rocket Communications (United States)

Title: Space:ACME — 4D visualization solution for Space Awareness, Communication, and Manoeuvre Evaluation

SpaceACME will provide intuitive and visual system for operators to envision system status, orbits, and predicted events; easily create multiple manoeuvre options and view/compare them to help decision-makers quickly grasp implications and improve decisions. Standardised visual language/formats will enable communication of status/alternatives across operation centres.

- Slingshot Aerospace, Inc. (United States)

Title: Slingshot orbital ensemble catalogue

Slingshot Aerospace and its partner CGI Federal, propose to deliver an active data curation capability that uses machine learning to create an ensemble catalogue using all individual provider catalogues. This proposed solution

will enable space warfighters to build and maintain data trust for space safety and sustainability.

- Spire Global UK (United Kingdom)

Title: Space weather as a service

The ability to produce a space weather recognised environmental picture and to convert that into operational action requires an underpinning sensor/modelling capability and a well-defined machine-to-machine Application Programming Interface (API). This project will demonstrate a new ionospheric scintillation service targeted at Global Navigation Satellite System (GNSS), satcom and missile defence users.

- SQR Systems (United Kingdom)

Title: Secure collaboration platform across classification levels

This proposal outlines a Proof of Concept (PoC) to enable secure collaboration across networks operating at different classification levels. A new architecture will be developed for securely exchanging data between different classification levels in a seamless and instantaneous way.

- Swim.ai, Inc. (United States)

Title: Real-Time Orbital Situational Awareness Platform (ROSA)

ROSA will analyse multiple real-time and relational-data sources, create live digital twin models of all satellites, and provide real-time situational awareness including location, attributes, trajectories, and impact of space weather. Alerts will notify operators and commanders of threats of intercept, weather risks, changes in pattern of life, overflights, and resources available for battle-planning. Both will see results in real-time on a common operating picture, tailored for mission.

- Zoic Labs (United States)

Title: ZyncMatrix

ZyncMatrix is an innovative prototype software solution, informed by space operators, that will enhance space planning and execution situational awareness while filtering information across multiple security levels. ZyncMatrix is a web-based, comprehensive, self-aligning and self-resizing tool that will aid decision-quality planning and execution data while streamlining documentation and portion marking.

Notes to editors:

International Space Pitch Day is a joint UK-US initiative that aims to find, fund and fast-track innovation and technology that gives advantage to military personnel and operations in the space domain.

The competition was open to innovators and entrepreneurs from all over the

world delivered through the UK [Defence and Security Accelerator (DASA)](#), assisted by [Starburst Accelerator](#).

It is specifically designed to bolster tech start-ups and small and medium-sized enterprises (SMEs) and harness the power of their ingenuity and innovation.

The endeavour is jointly funded by the UK's [Defence Science and Technology Laboratory (Dstl)](#), [Royal Air Force](#) and the [US Air Force](#).

A grand coalition of Dstl, DASA, Royal Air Force, UK Strategic Command, the US Air Force, US Space Force, and the North Atlantic Treaty Organisation (NATO) has been assembled to find, fund, and fast-track the best ideas from start-up innovators to the front line.

Starburst Aerospace is acting as an industry partner to the International Space Pitch Day and carry out specialist training and mentoring on its behalf through an Allied Defence Accelerator.

The format is the first of its kind in an international collaboration between two international allies.

This competition focuses on commercial innovation that could give solutions to six challenges set by the UK and US Space teams:

1. Visualisation of key events and information for combined space operations with allies and commercial partners.
2. Understanding current satellite systems relevant to the operations of a particular commander.
3. Understanding the present and potential impact of space weather on users across all domains.
4. Provision of training against realistic threats and opportunities, incorporating live data, and integrating space across multiple domains.
5. Enabling common and user-defined operational pictures to support multi-national space domain awareness and command and control.
6. A verification and comparison tool for Space domain awareness, which can take orbital observation data from a variety of sources and in a variety of formats and produce a single, reliable operational picture.

About Defence Space Conference 2020

International Space Pitch Day is taking place as part of [Defence Space 2020](#).

Defence Space 2020 will explore the opportunities and disruptive possibilities for the future of military space on 17-18 November.

[For more information and to book tickets for the conference click here](#).

International Space Pitch Day pitches are also being broadcast for free but require separate registration. [To register click here.](#)