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Planning

Expression of Interest (EOI) for the supply of a CAD Model for a payload for Environmental and Climate Observation Satellite Mission

UK Space Agency

UK2: Preliminary market engagement notice - Procurement Act 2023 - [view information about notice types](#)

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Scope

Reference

UKSAC25_0048

Description

1. Introduction

The UK Space Agency (UKSA) is exploring the possibility of participating in a Satellite Mission for Environment and Climate Observation, led by a third-party national space agency. The UK's involvement could initially take the form of contributing an Earth observation payload capable of measuring relevant environmental or climate variables, potentially supported by some form of data processing/exploitation activity.

To enable the third-party national space agency to conduct a spacecraft accommodation/housing options assessment ahead of confirming UKSA as a participating

mission payload contributor, we are inviting potential suppliers to submit a Computer Aided Design (CAD) model as part of a short timescale expression of interest to support UKSA in building participation options for the mission. As no final decision has been made by either the UKSA or the mission lead, there is no UKSA commitment to mission participation or award of contract for the supply of any instrument at this stage.

2. Mission Context

The mission is intended to deliver a collaborative satellite platform for observing environmental and climate variables, targeting a launch in early 2027 into a Sun-synchronous low Earth orbit (LEO) at approximately 800 km altitude. The mission aims to share data on a free and open basis to help address global scientific and public needs. The total mass budget available is up to 8kg.

The mission timeline is ambitious, therefore we have a low risk appetite for any UKSA contribution to this mission, so are only considering an 'off the shelf' instrument with previous flight heritage and from a supplier with prior experience of export, which could make a contribution to the mission while being deliverable within 12-months (by no later than August 2026) and with a ROM cost of £2m or less.

Any instrument contribution must be complementary to the four primary payloads already being planned for the mission, which will enable observations of:

- Atmospheric aerosols (proxy to PM2.5) using a wide-field, multi-angle, multi-spectral, and multi-polarization sensor.
- Greenhouse Gases (CO₂ & CH₄) and pollutant gas monitoring on a global scale using an ultra-high spectral resolution imaging sensor.
- High resolution active forest fire observations using a multi-spectral sensor for whiskbroom scanning.
- Observation, modelling and prediction of extreme weather events and climate change monitoring by capturing detailed spectral data at O₂ (50-60GHz) and H₂O (183GHz) microwave absorption bands

3. Aims and Strategic Objectives

The goal of this exercise is to gather Expressions of Interest that will allow the UK Space Agency to share with the third-party national space agency the CAD Model(s) of potential market participants, whose instrument (or proposed instrument) could meet the mission lead's strict technical mission requirements. Any respondents must support the following Aims and Strategic objectives of this Expression of Interest exercise to:

- Support UK Space Agency in building participation options for the mission. Initially through supply of a CAD Model for supply to the mission lead (based outside Europe and North America) for the purpose of UKSA mission participation assessment.
- Provide technical evidence that their instrument meets Mandatory Mission Requirements.
- Strengthen UK relations with the mission lead nation and enhance the UK's role in multilateral space collaboration.
- Provide scientifically valuable data aligned with the mission's objectives.

4. CAD Model Requirements

- Format: Models must be provided in .stp or .igs format.
- Content: The model should represent the payload's spatial dimensions without detailed thermal or material properties.
- Purpose: Models will be used by the third-party national space agency to conduct an accommodation and mounting assessment. Please note: This assessment won't itself determine the instrument to be selected for any UKSA possible mission participation. See paragraph 7 below for further information.
- Non-Disclosure Agreement: To enable sharing of CAD Model information with the third-party national space agency. The respondent(s) must be willing to sign up to an NDA agreed by UKSA. Final form to be agreed in consultation with the third-party national space agency, but the form of the NDA will be aligned to Non-Disclosure Agreement Tripartite template which is available upon request to the email below.

5. Mandatory Mission Requirements

- Instrument Type: Earth observation payload capable of capturing raw data that facilitate the measurement of relevant environmental or climate variables, complementary to the four primary payloads already being planned for the mission.
- Orbital Compatibility: Functionality in a Sun-synchronous LEO at ~800 km altitude.
- Previous Flight Heritage: Demonstrated successful operation in LEO environment.
- Operational Life: Minimum of 5 years post-launch.
- Delivery Timeline: Models to be delivered promptly within the short timescale expression period of circa 12 months.

6. Submission of your Expression of Interest

- **Timeline:** The expression of interest will be open for 5 working days commencing from the first working day after the start date of 15 July 2025 and closing 23:59 PM of 22 July 2025.
- **Expression of Interest:** The primary aim is to identify suppliers with interest and capability to deliver COTS (Commercial Off The Shelf) instrument(s) that meet the above Mandatory Mission Requirements AND with a readily available CAD Model to support the UKSA's proposal to the third party national space agency that its supply base could provide an instrument for any build phase should the UKSA proposal for inclusion in the mission be successful.
- **Form of Submission:** Suppliers MUST complete the MS Forms questionnaire to submit their interest in providing their CAD Model. After your submission, UKSA reserves the right to seek evidential confirmation of the respondent's technical ability to meet the Mandatory Mission Requirements prior to sending the CAD Model to the mission lead.
- **CAD Model Submission:** UKSA will reach out to respondents that submit their Expression of Interest to engage directly on the process of signing up to the Non-Disclosure Agreement and thereafter submission of their CAD Model.

7. Cost and Procurement Context

This EOI aims to gather responses from industry organisations that can provide a CAD Model and an instrument in line with the technical requirements in the Mandatory Mission Requirements.

Should the UKSA be confirmed as a participant on the mission a subsequent instrument build phase contract for building an instrument is expected to be subject to competitive appointment if this EOI demonstrates that to be a viable route to market.

Please ensure any submission can be qualified with technical reasons why your instrument could deliver against our top-level Mandatory Mission Requirements to support any decision to seek competitive bids or direct award.

UKSA may seek to place a delivery and mission integration phase work package to any instrument build phase contract or may seek to contract separately for that phase.

8. Submission Requirements

Interested suppliers must provide via the MS Forms Expression of Interest questionnaire the following:

- Company profile and relevant contact details.
- Confirmation of, and subsequently upon request, the readily available CAD model in the specified format that meets the Mandatory Mission Requirements.
- The CAD Model being available upon request for submission to UKSA and the mission lead subject to signing of the Non-Disclosure Agreement.
- Technical information demonstrating capability for instrumental manufacture in line with the Mandatory Mission Requirements.

9. Contact Information

For questions or more information, contact:

commercial@ukspaceagency.gov.uk

10. Format and Submission Method

Please send your submissions to the following MS Forms link:

<https://forms.microsoft.com/e/Cbi0QpcVzV>

Total value (estimated)

- £2,000,000 excluding VAT
- £2,400,000 including VAT

Above the relevant threshold

Contract dates (estimated)

- 15 August 2025 to 31 March 2027
- 1 year, 7 months, 17 days

Main procurement category

Goods

CPV classifications

- 34712200 - Satellites
- 34730000 - Parts for aircraft, spacecraft and helicopters
- 38100000 - Navigational and meteorological instruments
- 38300000 - Measuring instruments
- 38600000 - Optical instruments
- 71621000 - Technical analysis or consultancy services
- 72310000 - Data-processing services

Engagement

Engagement deadline

22 July 2025

Engagement process description

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The primary aim is to identify suppliers with interest and capability to deliver COTS (Commercial Off The Shelf) instrument(s) that meet the above Mandatory Mission Requirements AND with a readily available CAD Model to support the UKSA's proposal to the third party national space agency that its supply base could provide an instrument for

any build phase should the UKSA proposal for inclusion in the mission be successful.

Suppliers **MUST** complete the MS Forms questionnaire to submit their interest in providing their CAD Model. After your submission, UKSA reserves the right to seek evidential confirmation of the respondent's technical ability to meet the Mandatory Mission Requirements prior to sending the CAD Model to the mission lead.

UKSA will reach out to respondents that submit their Expression of Interest to engage directly on the process of signing up to the Non-Disclosure Agreement and thereafter submission of their CAD Model.

Contracting authority

UK Space Agency

- Public Procurement Organisation Number: PRTY-4245-MTJY

Quad Two Building 1st Floor, Rutherford Avenue, Harwell Science and Innovation Campus

Didcot

OX11 0DF

United Kingdom

Email: commercial@ukspaceagency.gov.uk

Region: UKJ14 - Oxfordshire

Organisation type: Public authority - central government