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Not applicable

Project JUNO

Ministry of Defence

F14: Notice for changes or additional information

Notice identifier: 2023/S 000-012088

Procurement identifier (OCID): ocds-h6vhtk-03c481

Published 27 April 2023, 10:05am

Section I: Contracting authority/entity

I.1) Name and addresses

Ministry of Defence

MOD Abbeywood

BRISTOL

BS34 8JH

Email

douglas.kershaw102@mod.gov.uk

Country

United Kingdom

Region code

UK - United Kingdom

Internet address(es)

Main address

https://des.mod.uk/

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Project JUNO

II.1.2) Main CPV code

- 34712000 - Spacecraft, satellites and launch vehicles

II.1.3) Type of contract

Supplies

II.1.4) Short description

The JUNO mission is one of the space missions of the MINERVA programme. The Authority expects the JUNO R&D satellite to enable MOD to advance UK MOD-owned space-based ISR (SBISR) capability, providing electro-optical imagery to UK and allied researchers, to enhance UK SBISR expertise, credibility and interoperability.

Section VI. Complementary information

VI.6) Original notice reference

Notice number: 2023/S 000-012051

Section VII. Changes

VII.1.2) Text to be corrected in the original notice

Section number

IV.2.2

Instead of

Date

29 May 2023

Local time

5:00pm

Read

Date

30 May 2023

Local time

5:00pm

Section number

II.1.5

Instead of

Text

40000000

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Text

32000000

Section number

II.2.4

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Text

Background: In support of the UK Defence Space Strategy, the Integrated Space Game Changer (ISGC) outlines the need for the UK to have “a secure, robust, resilient, integrated Space domain information architecture to operate within and utilise information from the Space domain to maximise the utility of the Space domain and protect it and our information from the adversary”.

The foundations of this ISGC architecture will be developed and delivered under the MINERVA Programme. The MINERVA Research and Development (R&D) programme will demonstrate Tasking, Collection, Processing and Dissemination of Intelligence, Surveillance and Reconnaissance (ISR) data from space through the development, delivery and operation of satellites.

The JUNO mission is one of the space missions of the MINERVA programme. The Authority expects the JUNO R&D satellite to enable MOD to advance UK MOD-owned space-based ISR (SBISR) capability, providing electro-optical imagery to UK and allied researchers, to enhance UK SBISR expertise, credibility and interoperability.

The JUNO satellite will include a high resolution electro-optical imager to deliver SBISR to support Defence activities. The JUNO satellite will be capable of demonstrating the ability to be integrated into MOD’s ISTARI ground architecture and to be capable of demonstrating interoperability with Allied ground assets. The JUNO satellite will investigate and demonstrate the ability to conduct multiple mission sets within the bounds of the satellite capabilities and without compromising the SBISR mission. The JUNO satellite could enable greater data delivery and processing through Inter-Satellite links and On-Board Processors. The JUNO satellite provides an opportunity to establish use cases in support of the Defence Space Strategy’s SDA direction towards detection, tracking, characterisation and attribution of Resident Space Objects (RSO’s) to provide an increased understanding of the domain and threats to UK critical systems. The JUNO high resolution electro-optical imaging satellite has the potential to be utilised for multiple space missions including a secondary Space Domain Awareness (SDA) mission to provide resolved space-to-space imagery to demonstrate characterization capabilities against other RSO’s in different orbital regimes. Hosted SDA payloads on-board the JUNO satellite could enable development of the UK’s SDA capability.

Aims: The JUNO System aims are expressed as four high level goals:

• Goal 1: Develop, launch and operate a UK-MOD owned electro-optical satellite within budget and schedule constraints.

• Goal 2: Demonstrate collaborative Space ISR development and operation with allies.

• Goal 3: Enable UK access and utilisation of Allied space systems ground architectures as a demonstrator for military operations.

• Goal 4: Investigate the ability to utilize hosted payloads that would expand the mission set that the satellite could be used for.

Within these goals a high priority for the JUNO system is the ability to collect panchromatic and multispectral data on an area of interest specified by Authority Users and to then process and deliver the data to the Authority to required standards with operational freedom of action. A second high priority for the system is its ability to perform R&D which will inform subsequent options analysis and future development.

Further options will include mission operations, training and support (per year) for a further 6 years; mission integration and implementation to the ground architecture; further details will be in the ITN.

For further information on the ISTARI Programme, see “Defence Space Strategy: Operationalising the Space Domain”,, UK Gov, Feb 22 , and “Press Release: UK cutting-edge space defence backed by £1.4 billion”, UK”, UK Gov, 1 Feb 22.

The JUNO procurement will be run at OFFICIAL SENSITIVE up to and including SECRET. The potential provider must have the ability to process, store and transmit classified information at OFFI

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Section number

VI.3

Instead of

Text

JUNO System:

• The Core Contract, constitutes a JUNO solution, envisioned as an Electro-Optical imaging satellite that the Supplier shall operate. To deliver the system, a full end-to-end solution, with adequate pan-Defence Lines of Development (DLOD) coverage, is required including inter alia; design, development, manufacture, assembly, integration, test, launch, commissioning, operations and, support to experimentation..

• Secondary Payload Options, constitutes the same JUNO solution with additional satellite payload opportunities that consider at least one of the following:

o Application of the Primary Electro-Optical Imaging Payload to Space Domain Awareness (SDA) collection taskings, such that the EO imager can be used for non-Earth pointing image collection tasks, whilst always maintaining primary payload integrity.

o Space Domain Awareness (SDA) hosted payloads, where additional sensors that provide SDA mission data could be incorporated onto the space-craft to enable the Juno satellite to conduct a multi-mission approach to data collection from space.

o RF Inter-satellite Links to GEO, where the Juno Core Contract solution is enhanced by the ability to link to the satellite via agreed Geostationary Orbit space based assets, to support Out Of Area satellite command and control, and payload data handling.

o On-Board Processing (OBP), providing enhanced high fidelity on-board image processing, with target oriented machine learning image exploitation, enabling in-situ processing of captured imagery, prior to image downlinking to the agreed ground station network.

• Maintained Operations Option, constitutes a time extension of the period where the Supplier operates the JUNO solution from the Core Contract and completes mission operations beyond the timeframe covered in the Core Contract.

• Concurrent Ground Segment Options, constitutes the same JUNO solution from the Core Contract but with the system integrated with the elements of the ISTARI MOD ground architecture that are sufficiently mature to be utilised together. During this phase, operation of the JUNO system will be by the Supplier until the ISTARI MOD ground architecture is capable of operating the system. Integration between the JUNO system and elements of ISTARI will occur within these phases with gradual, progressive functional transitions. The Supplier shall also support the transition through provision of Training to MOD.

• Support to MOD Operation Option, constitutes the same JUNO solution from the Core

Contract, but that is fully integrated with the MOD's ISTARI ground architecture and is operated by the MOD with support from the Supplier.

• Disposal Option, Disposal of the JUNO solution from the Core Contract at End of Life.

Read

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• Disposal Option, Disposal of the JUNO solution from the Core Contract at End of Life.

The JUNO procurement will be run at OFFICIAL SENSITIVE up to and including SECRET. The potential provider must have the ability to process, store and transmit classified information at OFFICIAL SENSITIVE up to and including SECRET or willing to obtain prior to contract award.

The Cyber Risk Level for this procurement is Low risk. The Risk Assessment Reference (RAR) is RAR-704402260

A full description of the Cyber Risk levels is available at DEFSTAN 05-138. Potential Providers should make themselves familiar with the requirements against the profile assessment for this risk Level

Section number

I.3

Place of text to be modified

(URL)

Instead of

Text

https://contracts.mod.uk/esop/guest/go/opportunity/detail?opportunityId=55334

Read

Text

https://contracts.mod.uk/esop/guest/go/opportunity/detail?opportunityId=56178