

Commercial Solutions Opening (CSO)

Launch Conjunction Assessment CSO

47QFCA22R0007

1 General Information.

1.1 Background.

1.1.1 This is a procurement action using the commercial solutions opening (CSO) procedure in accordance with section 880 of the 2017 National Defense Authorization Act and is subject to the limitations outlined in the General Services Acquisition Manual (GSAM) Part 571 and associated GSA Procurement Innovation Resource Center (PIRC) CSO Guide. This procurement is part of the GSA PIRC CSO pilot program and is being used to competitively procure with the CSO procedure innovative commercial products currently in the production/commercialization phase as well as new adaptations of existing commercial products.

1.1.2 GSA has developed this program to be implemented outside the normal Federal Acquisition Regulations (FAR) requirements to engage traditional and non-traditional Government contractors, including start-up companies. This pilot program is intended to promote competition in accordance with the Competition in Contracting Act (CICA) with a streamlined approach to address specific needs for innovative commercial items. This pilot program offers a range of advantages to open up the field of competition so that the Government and taxpayers benefit from a large pool of solutions at a better cost and performance, including:

- Streamlined solicitation requiring only minimal corporate and technical information;
- Fast track vendor selection timelines;
- Simplified contract administration procedures and requirements; and
- Preference for the vendor retaining core intellectual property.

1.2 NAICS. The North American Industry Classification System (NAICS) code for this announcement is 927110-Space Research and Technology.

2 Project Description.

The Department of the Air Force, United States Space Force (USSF), Space Systems Command (SSC), Special Programs Directorate (ECZ), Space Domain Awareness Division (ECZG) has a requirement for a commercial software application that provides Launch Conjunction Assessment (CA) screening results to required launch providers and partners in accordance with (IAW) Air Force Instruction (AFI) 91-217, Space Safety and Mishap Prevention Program.

The USSF intends to outsource the non-warfighting Space Domain Awareness (SDA) Launch Conjunction Assessment (CA) mission in the area known as Space Traffic Management (STM) from the 18th Space Control Squadron (SPCS) and 19th Space Defense Squadron (SDS) to commercial partners for hosting and operations. The ultimate deliverable from this acquisition will be a commercially hosted software application that automates the launch screening process. Operationally, the application will be required to automatically screen launch requests and file necessary launch notifications.

Launch CA identifies potential conjunctions that may result in collisions between launching and on-orbit objects. Using information provided by the launch requester prior to launch, via the 18th SPCS Launch Conjunction Assessment Request Form 22, the contractor's application will be required to screen the launch vehicle against the space catalog and provide conjunction information for each associated launch time. Screening will be required to begin at an altitude of 150km or greater and continue through the duration of the launch trajectory provided by the launch requester. The Launch CA screening results will be required to identify periods during the launch window which may put the rocket and payload at increased risk for collision.

Anticipated workflow:

- 1) The launch requester sends a Form 22 and launch profile data to the 18th SPCS via Space-Track.org and organizational inboxes.
- 2) The contractor's application retrieves the Form 22 and notifies the 18th SPCS/19th SDS that they have received/picked up the newest files.
- 3) The contractor's application performs Launch CAs IAW Form 22 and applicable standards.
- 4) The contractor's application should transmit or post their results files IAW current processes outlined in the LCOLA Handbook dated Dec 2018 for unclassified customers via Space-Track.org, and by direction of DoD operations for classified customers and screening results. Confirmation of completion to the 18th SPCS can be accomplished via email or user interface as provided by the contractor.

2.1 Project Objectives:

The successful contractor will provide an automated, hosted solution for Launch CA, which can be used by Government entities and partners to request launch conjunction assessments. This solution may require software development in order to meet agency specific security requirements to automate and host the commercial product and implement workflow processes for disseminating information.

The Government is seeking innovative solutions with the following required capabilities and characteristics:

- Ability to use launch operator provided information and Department of Defense (DoD)-provided High Accuracy Catalog (HAC) and DoD provided Special Perturbation (SP) Propagation method to screen the launch vehicle trajectory against the HAC and identify periods during the launch window that violate pre-determined screening volumes or probability thresholds of Resident Space Objects (RSO).

- Provide adjustable time increments down to a minimum of one-second intervals for results and up to seven days in advance of the time of launch.
- Provide screening results to launch providers for primary, backup, and secondary backup dates for launch on a schedule as directed by AFI 91-202, US Air Force Mishap Prevention Program, Incorporating Change 1, 25 January 2017; certified current 16 May 2017 and by customer needs.
- Ability to provide real-time status verification of in-progress and completed requests and processing to 18th SPCS/19th SDS operations centers.
- Ability to decompose propagation and comparison processes for analysis of results.
- Ability to perform comparison of propagated ephemeris with defined standoff radii measures.
- Ability to perform comparison of propagated ephemeris with defined Probability of Collision measures.
- Relevant experience in propagation of high accuracy positional information.
- Relevant experience in conjunction results and presentation of information to meet different customer requirements.
 - Reference Annex A of *Spaceflight Safety Handbook* for how the 18th SPCS calculates probability of collision. Link: https://www.space-track.org/documents/Spaceflight_Safety_Handbook_for_Operators.pdf
- Knowledge of and capability to execute current DoD security policies and requirements.
- Ability to perform classified work up to the Secret level.
- Ingest data in formats provided by DoD and produce results in formats required by DoD.
- Implement the DoD's Risk Management Framework to obtain an Authority to Operate (ATO).

3 Solution Brief Submission Requirements.

3.1 Submission Requirements.

Written solution briefs as described in **Section 3.2** must be received by email submission on December 10, 2021, by 11:00 AM Eastern Standard Time to the Federal Systems Integration and Management Center (FEDSIM) Contract Specialist (CS) Theodore Williamson at Launch.CA.CSO@GSA.gov. Please include "USSF LAUNCH CONJUNCTION SOLUTION BRIEF- [Company Name]" in the subject line. Any questions regarding the solution brief submission may be directed to the FEDSIM Contracting Officer (CO) Justin Zerbato and the FEDSIM CS at Launch.CA.CSO@GSA.gov. Questions must be received no later than 11:00 AM EST on December 06, 2021.

For informational purposes only, email size restrictions are limited to 25MB. It is recommended to compress files larger than 25MB to ensure complete submission.

Solution briefs received after the specified due date and time will not be evaluated by the Government.

Supplemental information may be requested to support the written solution brief before potential award. Any supplemental information requested will be coordinated with the offeror and may be conducted by video conference.

3.2 Written Solution Brief Requirements.

3.2.1 Content of Solution Brief.

The written solution brief shall be less than or equal to 10 slides and submitted as a PowerPoint presentation with a minimum font size of 14. Charts/Graphics/Tables embedded into the solution brief must maintain a minimum font size of 10, and be devoid of embedded video or additional external links (except pricing information). Charts/Graphics/Tables embedded in the solution brief will count toward page limitations. **Any pages or slides submitted beyond this limitation will be removed and not evaluated.**

Note: The Solution Brief should be devoid of embedded video or links to additional information. The only allowable link is to the offeror's published commercial price list or published pricing catalog as described below in **Paragraph 2(d)**.

The written solution brief shall include/address the following:

1. Title page:

- a. At a minimum, the title slide should include:
 - Company name
 - Cage Code
 - DUNS number
 - Solution name
 - Solicitation number
 - Date of submission
 - Point of contact name
 - Email address
 - Phone number
 - Company address
 - Space-Track.org username(s)
- b. The title slide does not count toward the slide limitation.

2. Solution Concept:

- a. Describe your product/solution and its potential relevance to the project description outlined in **Section 2**.
- b. Address the potential of the product/solution to meet the objectives described in **Section 2.1**.

- c. Describe ways in which the solution pushes the state-of-the-art in its respective industry/category and represents a world class product/solution.
- d. Provide your commercial price list, or a link to your published pricing catalog for this proposed product/solution.

3. Company Viability:

- a. Describe your customer base and provide no more than three examples of similar type projects currently or previously performed. Ensure your description includes a breakdown of the percentage of the current customer base that is Federal versus private sector.
- b. Describe your company--(e.g., company age, location(s), headquarters, number of employees, business size, i.e. small, large, and capabilities for working outside the headquarters location).
- c. Describe the project team that will perform the solution proposed (e.g., positions, background, history).
- d. Include other relevant partnerships or subcontract information as applicable/required to fulfill this solution.
- e. State if your company has a NIST Assessment in the Supplier Performance Risk System (SPRS).

3.2.2 Proprietary Markings.

Vendors must mark any pages of written solution briefs that contain business plans, technical information, pricing or other business sensitive information as proprietary information, which the Government agrees to safeguard.

To ensure that sensitive data is appropriately marked by the offeror, include the following sentences on the cover page: "This solution brief includes data that shall not be disclosed outside the Government, except to non-Government personnel for evaluation purposes, and shall not be duplicated, used, or disclosed -- in whole or in part -- for any purpose other than to evaluate this submission. If, however, an agreement is awarded to this Company as a result of -- or in connection with -- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent agreed upon by both parties in the resulting agreement. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]."

Each restricted data sheet must be marked as follows: "Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this solution brief."

3.3 Demonstration Requirements.

3.3.1 Demonstration Procedure.

Based on the Government's evaluation of the solution brief slide deck, the Government may invite one or more vendors to demonstrate their product/solution live in a virtual meeting space. Only vendors requested by the Government to participate in a product demonstration will be eligible to demonstrate their solution. If selected to demonstrate their product/solution, the Government will work with the respective vendor to schedule the live demonstration at an agreed to date and time. The vendor will be provided additional instructions prior to the virtual demonstration.

The format for the product demonstrations will consist of a calibration period and a live demonstration period. The Government anticipates the following schedule:

- 1) The calibration period will begin four weeks prior to the live demonstration period. For calibration, the Vendors will each be provided the same three historical launch scenarios with corresponding DoD results files, corresponding catalog data, launch request information, and the DoD SP Propagation method. This will allow each vendor to calibrate their solution.
- 2) At the end of the four-week calibration period, the vendor will submit the results files from the tuning scenarios to the government.
- 3) One business day prior to the live demonstration time, the Government will provide two additional historical launch scenarios with launch information and high accuracy catalog data for a live demonstration - but without the DoD generated results files.
- 4) At the live product demonstration, one of the launch scenarios will be demonstrated for the Government's evaluation team. The specifics of the demonstration scenario will be provided with the invitation to participate. The Government will provide the collaboration tool and an environment (ZoomGov) to demonstrate their solution.
- 5) The vendor's results from the demonstration scenarios, in the provided format, will be submitted to the Government for technical evaluation no later than 1800 EST on the day of the demonstration.

4 Evaluation of Solution Briefs.

4.1 General.

Both the written solution brief and/or supplemental information, if applicable, will be evaluated against the solicitation criteria. Each solution brief submitted may be evaluated against the evaluation criteria separately and may be evaluated against other solution briefs. More than one solution brief may be accepted. The Government reserves the right to request supplemental clarifying information, or additional written information, if applicable, from one or more vendors.

4.2 Evaluation Criteria.

The following evaluation criteria (Criterion I, II, and III) will be used to evaluate the written solution brief and/or supplemental information. An additional criterion, Criterion IV: Technical Merit, will be used to evaluate the virtual demonstrations of the solution. Following the invitation to submit, and receipt of a proposal (as described in Section 5),

the evaluators shall determine whether the proposal meets the criteria as described in the solicitation, and shall make a final determination that the solution meets the criteria for use of the CSO authority. Criteria I, II, and III are listed in order of importance from top to bottom:

- **Criterion I: Responsiveness and relevance of the solution to the project.**

- The solution brief is responsive to the requirements of the solicitation.
- The solution brief and proposed product/solution is relevant to the description and objectives in **Section 2** of the solicitation.

- **Criterion II: Transition Approach.**

The transition approach considers or includes the following:

- Outlined ability and plan to successfully deploy and perform duties using product/solution that can meet the user community requirements.
- Outlined ability and plan to establish the hosting environment required to transition the solution. Cloud hosting or off-premise hosting is preferred.
- Addressed ability to plan for and outline a plan to achieve compliance with the Risk Management Framework.

- **Criterion III: Capabilities and Related Experience.**

- The solution brief clearly addresses corporate viability requirements specified in the solicitation.
- The solution brief clearly addresses past experience (Government and/or non-Government) delivering products that are similar in scope and complexity to the proposed technical performance.
- The solution brief clearly addresses past experience in propagation and interpolation of high accuracy positional information.
- The solution brief clearly addresses past experience in conjunction results and presentation of information to meet different customer requirements.

- **Criterion IV: Technical Merit**

Live Product Demonstration:

The live product demonstration clearly shows the ability to satisfy the objectives relevant to the software described in paragraph 2.1 above.

Comparative Analysis of Results:

The product demonstration results, and the results files from the calibration scenarios and two additional provided scenarios, aligns with the Government

results, and clearly shows the ability to satisfy the objectives relevant to the software described in paragraph 2.1 above.

4.3 Evaluation Panel.

An evaluation panel will be used to evaluate the solution briefs submitted in response to this solicitation. The evaluation panel will consist of U.S. Government employees.

4.4 Solution Brief Evaluation and Notification to Vendors.

Solution briefs will be evaluated in accordance with the evaluation criteria. After evaluating the vendor's written solution briefs, GSA will notify the vendor, via email, whether their solution brief is being considered for a virtual demonstration and/or potential award, or if other supplemental clarifying information is required, or if their solution brief was not selected for a virtual demonstration or award.

Virtual demonstrations will be evaluated in accordance with evaluation criteria. After evaluating the vendor's demonstration, GSA will notify the vendor whether a technical solution proposal is being requested or not. Vendors not selected to submit a technical solution proposal (as described in **Section 5.2**) will receive a non-selection letter from the Contracting Officer, which will provide the Government's feedback and technical review findings of the submitted solution brief and demonstration. After award, vendors may request a follow up virtual meeting or phone conference to discuss the GSA CSO process and authority, what we look for, and answer any non-specific questions to this particular project.

4.5 Protests To GSA.

An offeror may file a protest to the agency in accordance with the procedures in GSAM 533.103.

5 Proposal Submission.

5.1 General.

Upon conclusion of the evaluation of the written solution briefs and/or supplemental clarifying information (if applicable); in accordance with **Section 4.4**, the Government may invite one or more vendors to develop and submit a proposal in accordance with **Section 5** herein. Vendors may discuss ideas and details of the proposal with the Government prior to submission. Each proposal submitted shall consist of two parts:

- Section 1: Technical Solution Proposal
- Section 2: Price Information

The cost of preparing proposals in response to this Request is not considered a direct charge to any resulting CSO award or any other contract. Proposal preparation costs are not recoverable.

5.2 Technical Solution Proposal

The offeror must submit a Technical Solution Proposal as part of their final proposal that identifies the work to be performed and associated deliverables. The offeror must submit a detailed project schedule that outlines the various phases of work to be accomplished within the proposed period of performance. The offeror will be provided the CSO Proposal Solution Template, which may include the following sections:

- Section 1 - Background
- Section 2 - Technical Requirements
- Section 3 - Project Schedule
- Section 4 - Performance Based Payment Schedule
- Section 5 - Period of Performance
- Section 6 - Place of Performance
- Section 7 - Government Furnished Equipment/Information
- Section 8 - Security

The Technical Solution Proposal may include the background and objectives of the proposed work and nature/extent of the anticipated results. The Technical Solution Proposal should discuss any risks and proposed mitigation strategies. The solution should also discuss operational issues such as partnerships, subcontracting, protocols, financing, and non-standard business methodologies utilized. The offeror should identify any requests for assistance from the Government (e.g., facilities, equipment, data). A Performance Based Payment schedule may be included which clearly indicates the completion of the priced tasks and/or priced deliverables that are required to meet each milestone.

Note: The proposal must identify any proprietary information or associated intellectual property. The proposal should discuss data rights associated with each of them.

5.3 Price Information.

The offeror must submit the total price to complete the project and shall provide any other data or supporting information that the parties agree is necessary for the determination of a fair and reasonable price. Examples of supporting information includes, but is not limited to, a published or established commercial price list and previous or historical contract prices. A performance based payment schedule shall be included which clearly indicates the completion of the priced tasks and/or priced deliverables that are required to meet each of the milestones. For Firm-Fixed-Price agreements, the performance based payment schedule will serve as a payment schedule for any subsequent award.

5.4 Notification to Offeror.

GSA will notify the offeror whether their proposal has been accepted for award, further negotiation is requested, or the proposal is not accepted for award. The Government reserves the right to make multiple awards under this solicitation and will not conduct pre/post award debriefs.