



**GENERAL SERVICES ADMINISTRATION (GSA)  
FEDERAL SYSTEMS INTEGRATION AND MANAGEMENT CENTER (FEDSIM)  
REQUEST FOR INFORMATION (RFI)  
TO  
ALL INTERESTED INDUSTRY PARTNERS**

**I. Introduction**

The General Services Administration (GSA) Federal Systems Integration and Management Center (FEDSIM) is releasing this Request for Information (RFI) on behalf of the Department of Defense (DoD) Joint Artificial Intelligence Center (JAIC), Humanitarian Assistance and Disaster Relief (HADR) National Mission Initiative (NMI). The purpose of this RFI is to assist the Government in conducting market research, identify industry partners with emerging and promising technologies, and support the HADR Search and Rescue (SAR) drone platforms, sensors, edge Artificial Intelligence (AI) processing, and detection algorithms/models. This information will be used for market research only. The Government is not obligated to release a future solicitation and is not responsible for any cost incurred in preparing a response.

**II. Background**

JAIC was chartered by the Secretary of Defense to accelerate the DoD's pursuit of AI capabilities, scale a department-wide impact of AI, and synchronize DoD AI activities to expand Joint Force advantages. JAIC has established four NMIs that include predictive maintenance, humanitarian aid and disaster relief, and cyberspace and robotic process automation. The focus of this RFI is the HADR NMI, to provide mission partners with AI-enabled capabilities that enable disaster response operations.

The Government requests that industry partners fill out the corporate overview and corporate experience tables and provide a whitepaper to identify existing technology that could support the capability to rapidly deploy drone swarms for SAR operations. JAIC HADR is primarily interested in industry solutions that deal with drone platforms, sensors, edge AI processing, and detection algorithms/models as well as the training data and pipelines that together could provide the capability to fly to a pre-determined location/area, find people and manmade objects (through onboard edge processing), and cue analysts to look at detections sent via a datalink to a control station. The Government desires an end-state environment where human-resources are not required to constantly watch the sensor, but they can be cued to respond when something of interest is identified.

**III. Desired Operating Constraints**

JAIC HADR seeks information from industry about approaches to provide industry solutions for AI capabilities to expand Joint Force advantages that address the following desired operating constraints.

**HADR SAR Drone Platforms**

To support the HADR SAR drone platforms, drones must be:

- a. Launched from air, sea, and ground.
- b. Capable of sustaining operation for at least two hours of endurance at a minimum of 50

- knots airspeed.
- c. Air droppable from another/larger aircraft in flight.
- d. Launched and fly to a pre-determined search area and follow a pre-determined pattern.
- e. Capable of searching a geo-fenced area.

### **Onboard Edge Processing**

Drones must utilize onboard edge processing to detect humans and manmade objects and cue an analyst to look at an image that is relayed back to the analyst. This onboard edge processing should include an image that would contain the latitude and longitude, Military Grid Reference System (MGRS) location, and altitude of the center of the image that should be covered by an aimpoint. This onboard edge processing should also be able to detect people and manmade objects on land and/or at sea.

### **Sensors**

The drone must have sensors enabling it to cover at least 100 square nautical miles for a minimum two-hour flight time. Sensors shall be able to stream full motion video to an analyst station during the day or night; though, the system will not normally be streaming as the AI will be monitoring the imagery instead of a person.

An analyst station is needed that can receive alerts and imagery from and control the drone. The analyst station should be able to:

- a. Receive all detections, along with their coordinates and associated footage.
- b. Turn on full-motion video from the drone through a datalink, if needed.
- c. Command the drone to continue observation of and follow detected people and objects.

The system requires a datalink that enables the drone to continually communicate with the ground station either directly or through relays located on the launch platform.

### **Drone and AI/Software Companies**

JAIC HADR is interested in drone manufacturers and AI/software companies joining forces to develop a drone that is capable of edge processing to detect humans and manmade objects at sea or on land and sending this information to analysts. Humans and manmade objects will need to be labeled through multiple visual conditions including haze, clouds, salinity, various temperatures, worldwide climates (maritime to desert), fire, and other obstacles.

### **Limitations and Security Requirements**

All AI training data is Government-owned and classified For Official Use Only (FOUO). Any proposed solutions should take into account that training data will be kept on a Government-owned, FOUO network and that AI development will need to be accomplished within that network. The network is the Joint Common Foundation (JCF), which includes the United States (U.S.) Army Engineer Research and Development Center (ERDC) High Performance Computing (HPC).

Respondents should be aware of the following standard cybersecurity regulations:

- a. DoD Instruction (DoDI) 8500.01 (March 14, 2014)

- b. DoDI 8510.01(March 12, 2014)
- c. DoDI 8115.01 (October 10, 2005)
- d. National Institute of Standards and Technology Special Publication 800-53 (April 2013)
- e. Defense Information Systems Agency Application and Development Security Technical Implementation Guide (Version 4, October 27, 2017) Defense Information Systems Agency Cloud Security Requirements Guide (Version 1 Release 3, March 6, 2017)

Respondents should also be familiar with Joint Publication 3-20 (May 23, 2017) DoD Security Cooperation.

### **Security Clearance**

Contractor employees and subcontractors must be U.S. citizens. Data and proposed solutions will be FOUO, must comply with International Traffic in Arms Regulations (ITAR), and can go up to the Top Secret level.

### **IV. RFI Response Instructions**

Interested parties should respond to all aspects of the RFI by completing the following tables and describing corporate capabilities in the form of a whitepaper addressing one or more of the areas outlined in Section III. Industry partners may respond individually or partner with multiple-vendors to provide a joint response.

Complete the following as outlined below:

- a. Responses should be submitted electronically by email only to Aaron Matzkin (aaron.matzkin@gsa.gov) and Andrew Price-Gibson (andrew.price-gibson@gsa.gov). Use the table templates to provide the requested information (no substitutions, additions, or deletions).
  - 1. Table 1: Corporate Overview shall be no longer than one page per industry partner in length.
  - 2. Table 2: Materials and Equipment with Cost Drivers (not included in the page count for the whitepaper) shall provide a list of probable material and equipment broken down by specific factors that will drive the total cost (e.g., Commercial Off-the-Shelf (COTS) software cost, licensing, Contract Data Requirements List preparation, integration code development, cloud service provider, etc.). **DO NOT INCLUDE ANY PRICING INFORMATION.**
- b. All responses must maintain one inch margins, 12 point Times New Roman font, and be single spaced.
- c. All information submitted shall be UNCLASSIFIED. Any proprietary information shall be marked accordingly. As noted in the disclaimer, it is recommended that industry not provide proprietary information.
- d. Whitepaper on Corporate Capabilities and Approaches shall be no longer than ten pages. Include the following in the whitepaper response:
  - 1. Describe your organization’s level of knowledge of existing capabilities and machine learning pipelines that are used to train models for their platform.
  - 2. Describe the approach in determining if capabilities are in-house/organic or would have to be installed as platforms on Government infrastructure.

3. Describe the approach for how training imagery can be collected and then labeled. Is this something the company would rely on the Government for?
    - i. If no, what are the operational extents and diversity of the existing data sets?
    - ii. Are the data sets already labeled to cover people and man-made objects?
    - iii. Are the data rights owned by the company, Government, or another party?
  4. Explain any existing detection algorithms/models the company has that could be directly used for providing such a capability.
    - i. Explain the operational parameters, accuracy, and performance of any existing algorithms.
    - ii. Is the Internet Protocol owned by the company, Government, or another party?
  5. If the drone is sea and ground launchable and capable of all of the needed parameters, JAIC HADR would be interested in hearing about this capability.
  6. If the drone already has an airworthiness certificate, please send that information.
  7. Describe your organization's ability to meet the Desired Operating Constraints identified in the RFI. Do not restate the technical requirements in your response.
  8. Please identify any areas that would require subcontracting or a teaming arrangement. Clearly describe, with reference to the technical requirements, the division of effort between the primary performer and anticipated team members.
  9. Describe the experience and qualifications of personnel and other organizational resources that would be used to meet the technical requirements. Provide information describing the level of knowledge and capabilities in the applicable domain.
  10. Describe the potential solution and how it will leverage existing, available software, cloud platforms and technologies, and products to provide a cost-effective and technologically mature solution.
  11. Describe the anticipated intellectual property rights (e.g., Government ownership, shared ownership, access to code/models, licensing, etc.).
  12. Indicate if your organization is considered a traditional or non-traditional Government contractor according to Section D1.11 of the DoD Other Transactions Guide for Prototype Projects dated January 2017. If proposing as a traditional Government contractor, please indicate if the organization will be proposing significant involvement from a non-traditional contractor or a one-third cost share as outlined in Section C1.2 of the DoD Other Transactions Guide for Prototype Projects dated January 2017.
- e. Responses are due no later than 11:00 a.m. Eastern Time on January 20, 2020.
- f. Send questions in writing by email to Aaron Matzkin (aaron.matzkin@gsa.gov) and Andrew Price-Gibson (andrew.price-gibson@gsa.gov).

## **V. Disclaimer**

This RFI does NOT constitute a Request for Proposal. The Government will not accept unsolicited proposals and this RFI is not to be construed as a commitment, implied or otherwise, by the Government that a procurement action will be issued. Response to this notice is not a request to be added to a bidders list or to receive a copy of a solicitation. No entitlement to payment of direct or indirect costs or charges by the Government will arise as a result of the

submission of the requested information. No reimbursement will be made for any costs associated with providing information in response to this announcement and any follow-up information requests. Responses to this RFI may be considered in the future determination of an appropriate acquisition strategy for the program. The Government may not respond to any specific questions or comments submitted in response to this RFI or information provided as a result of this request. Any information submitted by respondents as a result of this notice is strictly voluntary. Not responding to this RFI does not preclude participation in any future solicitations if any are issued.

The purpose of the RFI is to provide an opportunity for industry to enhance the success of any future procurement to meet this requirement. Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for program planning and acquisition strategy development. As such, to the extent that any information submitted in response to this RFI is marked as or construed to be proprietary or business-sensitive, submitters are hereby notified (a) about the potentiality that such information may be disclosed to third parties and (b) that submission of information in response to this RFI constitutes consent to such handling and disclosure of submitted information. Responses to this notice are not considered offers and cannot be accepted by the Government to form a binding contract.

FEDSIM and JAIC representatives may or may not choose to meet with respondents. Such meetings would only be intended to get further clarification of potential capability to meet the Government's requirements, especially regarding any development and certification risks.

**Table 1: Corporate Overview**

Name of Company	
Name of Business Unit Responding to the RFI (if applicable)	
DUNS Number	
CAGE Code	
Corporate Address	
Total Number of Full Time Employees	
Website URL	
Provide NAICS Code(s) applicable to this RFI	
Type of Small Business, if applicable (e.g., Woman-Owned, Service Disabled Veteran Owned, 8(a), HUBZone)	
Provide the name, phone number, and email address of one Point of Contact (POC).	Name: Phone #: Email:
ISO 9001 QMS	<input type="checkbox"/> YES <input type="checkbox"/> NO
ISO 20001 ITSMS	<input type="checkbox"/> YES <input type="checkbox"/> NO
ISO/IEC 27001 ISMS	<input type="checkbox"/> YES <input type="checkbox"/> NO
Other, please specify (fill-in if applicable).	

**Table 2: Materials and Equipment with Cost Drivers**

Provide a list of probable materials and equipment broken down by specific factors that will drive total cost (e.g., COTS software cost, licensing, CDRL preparation, integration code development, cloud service provider, etc.). The Government seeks to understand the various cost drivers associated with the materials and equipment to improve its estimate for total solution costs. **DO NOT INCLUDE ANY PRICING INFORMATION.**

<b>Materials and Equipment Name/Description</b>	<b>How it relates to the desired operating constraints</b>	<b>Cost Drivers (e.g., COTS software cost, licensing, CDRL preparation, integration code development, cloud service provider, etc.)</b>