Open Two-Step Advanced Research Announcement (ARA)

Amendment 02

28 Nov 2022

Overview Information

NAICS Code: The NAICS Code for this acquisition is **541715** and the small business size standard is **1,000** employees.

Federal Agency Name: Air Force Research Laboratory (AFRL) - Air Force Strategic Development Planning & Experimentation (SDPE)

ARA Title: Defense Experimentation Using Commercial Space Internet (DEUCSI)

ARA Type: This is the Initial Announcement

ARA Number: FA8650-17-S-9300

THIS WILL BE A TWO-STEP SOLICITATION:

First Step: WHITE PAPER DUE DATE AND TIME: This ARA is open and effective from **1 February 2018** until **15 December 2023**. White papers will be considered if received any time prior to **15 August 2023** at 5:00PM Wright-Patterson AFB, OH local time. **Please do not send white papers prior to 1 February 2018.**

Second Step: PROPOSAL DUE DATE AND TIME: To be provided in the Requests for Proposals sent to offerors that submit White Papers considered to meet the needs of the Air Force.

NOTE: Any white paper or proposal received at the Government Office designated in this ARA after the exact time specified for receipt of offers is "late" and will not be considered except at the Contracting Point of Contract's discretion. It should be noted that this installation observes strict security procedures to enter the facility. These security procedures are NOT considered an interruption of normal Government processes, and proposals received after the above stated date and time as a result of security delays will be considered "late." Furthermore, note that if offerors utilize commercial carriers in the delivery of proposals, they may not honor time-of-day delivery guarantees on military installations. Early white paper and proposal submissions are encouraged.

Submission: *White Papers must be submitted to the Contracting Point of Contact (POC): Mr. Doug McCreary, Contracting Officer, AFRL/PZLDB, via email at douglas.mccreary.1@us.af.mil.* If it is determined that a classified white paper is

required, please DO NOT deliver any classified portion of the proposal to the email address listed above, but rather contact the POCs listed in this ARA for specific delivery instructions.

Solicitation Request: Air Force Strategic Development Planning & Experimentation, SDPE, Wright-Patterson Air Force Base is soliciting white papers on the research effort described below pursuant to the authority of 10 U.S.C. 2373 Procurement for Experimental Purposes.
NOTE: This Open Two-Step ARA will be released in addition to a separate ARA with Calls. Both of these ARA's will be released in parallel and both fall under the Defense Experimentation Using Commercial Space Internet (DEUCSI) program. Both ARA's share the same budget ceiling, the same announcement numbers and the same overarching objectives. The Open Two-Step ARA provides agility to quickly take advantage of innovative approaches from industry and allows timing flexibility as various commercial space internet providers develop capabilities at potentially different paces. The ARA with Calls ensures equal access to information among various potential offerors for the areas of interest that are fundamental to the Government's successful use of commercial space internet and which are not specific to a vendor's particular technical approach.

Type of Contract/Instrument: The Air Force intends to award Contract(s) and/or Other Transaction(s) Pursuant to 10 U.S.C. 2373, based on the instrument deemed most appropriate. It is anticipated that Contract awards under this ARA will generally be Cost Reimbursement or Firm Fixed Price (FFP). REMINDER: Cost reimbursement contracts require successful offerors to have an accounting system considered adequate for tracking costs applicable to the contract.
NOTE: If proposing a Federal Acquisition Regulation (FAR) based contract, the FAR clause references in this ARA shall apply. This announcement incorporates FAR and supplement provisions and clauses by reference. The full text of these provisions and clauses can be found at http://farsite.hill.af.mil.
If proposing an Other Transaction (OT) Pursuant to 10 U.S.C. 2373, these FAR references and clauses would not apply. The terms and conditions of an OT agreement should be developed and negotiated on a case-by-case basis.

Estimated Program Cost: The total estimated program value is $500,000,000 with multiple awards ranging from $50,000 to $50,000,000 (the Government reserves the right to exceed this amount if necessary).

Anticipated Number of Awards: The Air Force anticipates awarding multiple awards for this announcement. However, the Air Force reserves the right to award zero, one, or more agreements and/or contracts, for all, some or none of the solicited effort based on the offeror's ability to perform desired work and funding

fluctuations. There is no limit on the number of agreements or contracts that may be awarded to an individual offeror.

Brief Program Summary: Future military operations will be multi-domain and will be conducted with unprecedented speed.[1] Establishing and maintaining dominance in such a scenario requires the ability to distribute information from, to, and through all domains and make decisions at a speed our adversaries cannot match. To this end, the "Defense Experimentation Using Commercial Space Internet" program seeks to establish and experiment with the capability to seamlessly move and share data among a wide variety of fixed and mobile operating locations using constantly available, high-bandwidth, beyond-line-of-sight communications. We refer to this desired end state as "path agnostic communications" because users will be able to reliably communicate to any location on the globe without explicitly specifying which nodes of a communication network to use.

The vision for path agnostic communications is becoming possible due to the burgeoning commercial space internet. Multiple commercial entities have announced plans to establish space internet constellations consisting of hundreds to thousands of satellites each in order to create global internet services that will compete with and, eventually, outperform localized terrestrial internet.

This program seeks to establish resilient, high-bandwidth, high-availability Air Force communications and data sharing capabilities by leveraging the developing commercial space internet networks. This approach differs radically from traditional military satellite communications programs where the government typically dictates, and pays for, every aspect of the program. By taking advantage of the commercial space internet, we plan to concentrate government efforts and resources on the few areas that are unique to Air Force applications. Development and experimentation are necessary to effectively use this new global utility for military operations.

Communication Between Prospective Offerors and Government Representatives: Dialogue between prospective offerors and Government representatives is encouraged until submission of proposals. Discussions with any of the points of contact shall not constitute a commitment by the Government to subsequently fund or award any proposed effort. No guidance related to technical approach will be given. However, questions related to the objectives of the effort or prior similar efforts may be answered. Only Contracting Officers are legally authorized to commit the Government. If there is any doubt as to whether a response provides a competitive advantage, the answer will be posted publicly via an amendment to this ARA on FedBizOpps for all contractors to review.

Address technical questions to the Technical POCs:

Dr. Brian Beal, AFRL/RQ, (937) 904-4004, Brian.Beal.1@us.af.mil

[1] Goldfein, David, Chief of Staff, United States Air Force, "Enhancing Multi-domain Command and Control… Tying It All Together," White Paper, 10 March 2017.

Address contracting questions to the Contracting POCs:

Mr. Doug MCreary, Contracting Officer, AFRL/PZLDB, (937) 713-9974, douglas.mccreary.1@us.af.mil;

System for Award Management (SAM) Registration: SAM is the primary Government repository for prospective federal awardee information and the centralized Government system for awards. It replaces CCR/FedReg, On-line Representations and Certifications (ORCA) and the Excluded Parties Lists System (EPLS). Offerors shall be registered in the SAM database prior to submitting an invoice and through final payment of any award resulting from this ARA. Offerors may obtain information on registration and annual confirmation requirements via the SAM accessed through https://www.acquisition.gov or by calling 866-606-8220.

Communication Between Prospective Offerors and Government Representatives:

Verbal discussions with the Technical and Contracting POCs are permissible and encouraged. In addition, questions after the ARA release can also be addressed in writing to the Technical POCs and Contracting POCs listed above. After ARA release, questions and answers may be posted if warranted.

Discussions with any of the points of contact shall not constitute a commitment by the Government to subsequently fund or award any proposed effort. Only Contracting/Agreements Officers are legally authorized to commit the Government.

Full Text Announcement

I. Program Description: Air Force Strategic Development Planning & Experimentation, SDPE, is soliciting white papers (and later technical and cost proposals) on the following research effort: Defense Experimentation Using Commercial Space Internet.

1. **Statement of Objective/Description of Technical Area(s)**:

A. Background

Future military operations will be multi-domain and will be conducted with unprecedented speed.[2] Establishing and maintaining dominance in such a scenario requires the ability to distribute information from, to, and through all domains and make decisions at a speed our adversaries cannot match. To this end, the "Defense Experimentation Using Commercial Space Internet" program seeks to establish and experiment with the capability to seamlessly move and share data among a wide variety of fixed and mobile operating locations using constantly available, high-bandwidth, beyond-line-of-sight communications. We refer to this desired end state as "path agnostic communications" because users will be able to reliably communicate to any location on the globe without explicitly specifying which nodes of a communication network to use.

The vision for path agnostic communications is becoming possible due to the burgeoning commercial space internet. Multiple commercial entities have announced plans to establish space internet constellations consisting of hundreds to thousands of satellites each in order to create global internet services that will compete with and, eventually, outperform localized terrestrial internet.

This program seeks to establish resilient, high-bandwidth, high-availability Air Force communications and data sharing capabilities by leveraging the developing commercial space internet networks. This approach differs radically from traditional military satellite communications programs where the government typically dictates, and pays for, every aspect of the program. By taking advantage of the commercial space internet, we plan to concentrate government efforts and resources on the few areas that are unique to Air Force applications. Development and experimentation are necessary to effectively use this new global utility for military operations.

We expect to achieve the overarching goals discussed above in three logically distinct phases, although the time phasing of efforts in these areas may overlap:

[2] Goldfein, David, Chief of Staff, United States Air Force, "Enhancing Multi-domain Command and Control… Tying It All Together," White Paper, 10 March 2017.

Phase I: Establish connectivity

In Phase I, experiments will be performed to establish connectivity between multiple Air Force sites and assets using the preliminary technology demonstration satellites and user terminals that we anticipate commercial space internet offerors will develop early in the deployment of their commercial offerings. This will require experimentation with commercial user terminals to resolve interface issues that are likely to arise. It may also require modification or development of specialized user terminals to allow them to operate from AF-unique platforms. Technical challenges to be addressed include, but are not limited to:

- Adaptation or development of terminals for use on moving platforms, including aircraft
- Establishing interoperability with government security protocols and hardware
- Measurement of key technical performance attributes including bandwidth, latency, etc.
- Exploration and experimentation to determine novel uses of the commercial space internet to enhance the national defense.
- Retirement of unanticipated challenges. Given the rapidly evolving nature of the commercial space internet, and the unprecedented intent to communicate with it from Air Force platforms, it is reasonable to expect that unforeseen challenges may arise. It is therefore critical to perform experimentation on a manageable scale in Phase I before embarking on the larger scale endeavors of Phases II and III.

Phase II: Operational Experimentation

In Phase II, connectivity will be expanded to a large number of diverse Air Force assets to conduct the enterprise-level experimentation for which the Strategic Development Planning and Experimentation (SDPE) office was created. This will involve proliferation of user terminals to multiple locations and vehicle types. These assets will then communicate through commercial space internet networks, which we anticipate will have achieved initial operating capability near the start of this phase. A critical attribute of this phase is that it will involve NO government-specified modification of commercial spacecraft. Technical challenges to be addressed include:

- Establishing network flexibility, which includes the ability for the Air Force to switch between commercial space internets to avoid vendor lock-in while maintaining seamless communication capabilities.
- Scaling path agnostic communications to verify acceptable bandwidth, latency, and availability while managing large volumes of data from multiple sources.

- Quantitatively determining technical limitations that may influence the ability of the Department of Defense to use the commercial space internet in operational scenarios, including limitations in number of users in a given geographic area, data transfer rates, bit error rates as a function of experimental scenarios, etc.
- Demonstrating rapid node addition to verify the ability to rapidly connect new Air Force assets to the commercial space internet
- Quantifying robustness in contested environments
- Verifying security of government data in transit over commercial space internet networks

Phase III: Special Purpose Experimentation

In Phase III, special purpose experimentation will be conducted to address military-unique requirements that may not be otherwise met by commercial space internet vendors. This is expected to require modifications to commercial spacecraft. We expect to accomplish this effectively and affordably by purchasing, or otherwise obtaining access to, commercial spacecraft directly off the high-volume satellite production lines that vendors will establish to support the commercial space internet market. These satellites will then be modified by removing any unnecessary equipment and adding military-unique hardware (e.g. special radios), which may be provided as GFE or procured via contracts resulting from this solicitation. A key goal of this phase will be to incorporate the military-unique hardware while still taking advantage of the services inherent in the commercial space internet such as versatile network links, high-bandwidth throughput, and low latency. Technical challenges to be addressed include:

- Establishing compatibility between military-unique hardware and commercial spacecraft
- Evaluating the ability to use commercial space internet backbones with specially modified spacecraft
- Rapidly and responsively modifying and testing spacecraft from a high-volume production line

B. **Objective**

The objective of this effort is to conduct development and experimentation in the areas of establishing connectivity, operational experimentation, and special purpose experimentation using the commercial space internet.

C. **Tasks and Technical Requirements**

a. **Establish Connectivity:** Defense experimentation using the commercial space internet will require establishing connectivity between initial commercial space internet satellites and Air Force platforms. The technical performance of these connections will need to be quantified and evaluated.

i. **Develop user terminals:** Areas of interest include modification of commercial user terminals for use on aircraft and development of new user terminals for use on Air Force platforms.
ii. **Performance characterization and optimization:** Areas of interest include measurement of commercial space internet performance parameters such as latency, data rate, bit error rate, etc. for communications between various combinations of AF ground and air platforms, methods to enhance performance of AF communications via initial commercial space internet satellites, and development and experimentation to optimize the performance of AF communications over anticipated commercial space internet constellations.
iii. **Security enhancement:** Areas of interest include experimentation to explore integration of government-approved security hardware and methods with commercial space internet applications and innovative development and experimentation to enhance the ability to communicate securely over the commercial space internet.
iv. **Experiment design:** Areas of interest include experimentation and analysis to explore novel concepts for the use of commercial space internet capabilities to enhance the national defense, to include the use of commercial space internet with other defense capabilities, programs, and technologies.

b. **Operational Experimentation:** Experimentation is needed to quantify and assess the ability to use the operational commercial space internet for Air Force communications to and from a wide variety of platforms.
i. **Scaling operations over commercial space internet:** Areas of interest include experimentation to determine limiting factors influencing the ability to perform Air Force communications over the commercial space internet, research, development, and experimentation to enable path agnostic communications between Department of Defense assets in any domain, expansion of the number of Air Force assets able to communicate over commercial space internet, and improvement in technical performance parameters including latency, data rate, link margin, etc.
ii. **Operational agility:** Areas of interest include innovative techniques to provide simultaneous operation over commercial space internet services from multiple vendors, enable rapid and cost effective transition from one vendor to another, and provide for rapid implementation of commercial space internet capabilities to new Air Force platforms and nodes.
iii. **Robustness improvement:** Areas of interest include enhancement of communications in contested environments and

reduction of vulnerabilities associated with the Air Force use of the commercial space internet for sensitive communications.

c. **Special Purpose Experimentation:** Development and experimentation is required to allow agile and cost effective special purpose experimentation using modified commercial space internet spacecraft.
    i. **Hosted payloads:** Areas of interest include methods to quickly and cost effectively integrate unique payloads on commercial space internet spacecraft, identification and simplification of interfaces to enable hosted payloads on commercial space internet spacecraft, experimentation to identify challenges in using commercial space internet spacecraft links in conjunction with hosted payloads, and innovative practices to quickly implement, deploy, and operate unique hosted payloads.
    ii. **Satellite enhancement:** Areas of interest include methods and technologies to enable agile and cost effective modifications to commercial space internet satellites to meet DoD requirements, techniques to test and deploy modified commercial space internet spacecraft, and development and experimentation to establish or enhance interoperability of modified spacecraft with commercial space internet constellations.

D. **Management**

The contractor shall exercise program, administrative, and financial management functions including establishing activities and milestones; tracking performance, cost, and schedule; overseeing quality performance; planning, forecasting, and reporting funding and funding changes; and preparing appropriate documentation.

E. **Deliverables**

Data shall be delivered as applicable. Specific hardware/software deliverables as well as residual hardware that are procured or developed under this effort shall be delivered as applicable.

F. **Security**

The contractor shall coordinate security requirements in accordance with the DD254, if applicable. General OPSEC procedures, policies and awareness are required in an effort to reduce program vulnerability from successful adversary collection and exploitation of critical information. OPSEC will be applied throughout the lifecycle of any award.

G. **Safety**

The following safety requirements will be incorporated into the award, as applicable: Must comply with all Air Force, federal, state, and local safety and environmental regulations; Must comply with system safety requirements contained in MIL-STD 882E, Section 4 "Other Requirements" for any deliverable systems or hardware.

Within Scope Modifications: Potential offerors are advised that due to the inherent uncertainty of the requirements, awards resulting from this announcement may be modified during performance to make within scope changes.

2. Deliverable Items

a. Data Items: DD Form 1423-1 CDRLs will be utilized on contract awards. Other Transactions will specify data items on a case-by-case basis.

b. Software: Software deliverables to be determined (TBD) based on proposal, if applicable.
c. Hardware: Hardware deliverables to be determined (TBD) based on proposal, if applicable.

3. Schedule:

a. Overall effort: Approximately 6-36 months period of performance per award for technical performance and 3 additional months for preparation of the final technical report.

b. Data Items: Specified on individual CDRL(s) in any resultant contract or in Other Transaction article.

c. Software: If applicable, will be specified on individual CLIN(s) in any resultant contract or in Other Transaction article.

d. Hardware: If applicable, will be specified on individual CLIN(s) in any resultant contract or in Other Transaction article.

4. Other Requirements:

a. Program Security Classification: Depending on the nature of individual awards under this solicitation, work may range from Unclassified to Top Secret. Accordingly, some awards under this effort may require a TOP SECRET facility clearance and TOP SECRET safeguarding capability. If a DD-254 is required, offerors must verify their Cognizant Security Office information is current with Defense Security Service (DSS) at www.dss.mil.

b. OPSEC: See above SOO for OPSEC guidance.

c. Export Control: Information involved in this research effort is subject to Export Control (International Traffic in Arms Regulation (ITAR) 22 CFR 120-131, or Export

Administration Regulations (EAR) 15 CFR 710-774). A Certified DD Form 2345, Militarily Critical Technical Data Agreement, will be required to be submitted with proposal.

d. Export-Controlled Items: As prescribed by DFARS 225.7901-4, DFARS 252.225-7048, "Export-Controlled Item (JUN 2013)" will be contained in ALL resulting contract awards.

f. Science and Technology (S&T) Protection: In accordance with Air Force Research Laboratory Instruction (AFRLI) 61-113, "Science and Technology (S&T) Protection for the Air Force Research Laboratory", offerors are required to submit the following as part of their proposal:

1) A completed initial Standard Form (SF) 424, Research and Related Senior/Key Person Profile (Expanded) Form, (Attachment 1) for all Senior/Key Personnel proposed in support of the AFRLI 61-113 Personnel Risk Assessment requirement.

2) Documentation of a Security Program Plan in support of the AFRLI 61-113 Initial Institution S&T Protection Program Review requirement. This must include, at a minimum, a completed Security Program Questionnaire (Attachment 2). Submittal may also include a pre-existing plan that that the offeror uses as a matter of course or plan developed specifically for this acquisition. The purpose of requesting the plan is to assess the offeror's capacity for protection of the Government's S&T. Failure to demonstrate a plan adequate to meet the needs of the requirements, as determined by the Government in its sole discretion, may be grounds for considering the proposal unawardable.

Government Procedures

The Government will review the submitted S&T protection documentation only for those proposals categorized as Selectable and selected for funding and negotiations.

S&T Protection Initial Risk Review:

- Personnel Risk Assessment: The Government will review non-government research key/senior performers identified by the offeror on the initial SF 424 for workload conflicts and conflicts of interest.
- Initial Institution S&T Protection Program Review: The Government will review the offeror's security program information submitted in accordance with paragraph 2 of this section (above) to identify any potential risks and ensure appropriate measures are in place to protect S&T information.

The Government may require the offeror to submit additional information and/or a mitigation plan for any identified S&T protection risks. If the Government determines the offeror failed to provide adequate additional information; or an acceptable mitigation plan; or it is determined the offeror's S&T protection approach is high risk and does not provide adequate protection of S&T information, the Government may reject the proposal and withdraw it from consideration for award.

S&T Protection Annual Risk Review

The Contractor shall be required to provide an SF 424 with the following information: 1) an initial report of all Senior/Key Personnel at the time of award; 2) an annual report of all Senior/Key Personnel providing support; and 3) a report for any new Senior/Key Personnel who join the contract, agreement, grant, or OT. Any updated SF 424s for new Senior/Key Personnel supporting the award require coordination from the Government prior to the contractor employee receiving access to S&T information. The purpose of this report is oversight and should not be construed as relieving the contractor/recipient of any S&T Protection requirements within the contract, grant, agreement, or OT.

5. Other Information:

a. Government Furnished Property (GFP) Availability:
Access to appropriate government facilities and platforms, such as ground stations and test aircraft, will be provided by the government as appropriate and necessary to conduct experimentation. Additional GFP use may be considered if proposed and found to be in best interest of the Government.

b. Base Support/Network Access: Base Support/Network access is not anticipated. If contractor determines use of available base support to be in their best interest, it *must* be included as such in the white paper and proposal. Use of available base support will not be assumed during technical evaluation unless proposed. If it is determined to apply, language will be in the SOW Supplemental Requirements Document.

c. Data Rights Desired: The government desires Unlimited Rights for all technical data, non-commercial software (NCS), and NCS documentation developed using government funds, however due to the desired use of commercially-developed space internet technologies in this program more restrictive data rights are anticipated and will be considered where appropriate.

The Air Force Research Laboratory is engaged in the discovery, development, and integration of warfighting technologies for our air, space, and cyberspace forces. As such, rights in technical data and NCS developed or delivered under this contract are of significant concern to the Government. The Government will therefore

carefully consider any restrictions on the use of technical data, NCS, and NCS documentation which could result in transition difficulty or less-than full and open competition for subsequent development of this technology.

In exchange for paying for development of the data, the Government expects technical data, NCS, and NCS documentation developed entirely at Government expense to be delivered with Unlimited Rights.

Technical data, NCS, and NCS documentation developed with mixed funding are expected to be delivered with at least Government Purpose Rights. Offers that propose delivery of technical data, NCS, or NCS documentation subject to Government Purpose Rights should fully explain how the data was developed at private expense. Specifically, offers must explain what technical data, NCS, or NCS documentation developed with costs charged to indirect cost pools and/or costs not allocated to a Government contract will be incorporated, how the incorporation will benefit the program, and address whether those portions or processes are segregable.

Offerors that propose delivery of technical data, NCS, or NCS documentation subject to Limited Rights, Restricted Rights, or Specifically Negotiated License Rights will be considered. Proposals should fully explain what technical data, NCS, or NCS documentation developed with costs charged to indirect cost pools and/or costs not allocated to a Government contract will be incorporated and how the incorporation will benefit the program and whether those portions or processes are segregable.

Offerors shall include the data rights assertions as required by DFARS 252.227-7017*,* Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software. The assertions are due at time of proposal submission. Assertions must be completed with specificity. Each assertion must identify both the data and each such item, component, or process listed. Nonconforming assertions lists will be rejected.
Terms used in this section are defined in the clauses at 252.227-7013, Rights in Technical Data-Noncommercial Items, and 252.227-7014, Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation.

THIRD PARTY SOFTWARE (COMMERCIAL AND NONCOMMERCIAL):
DFARS 252.227-7014(d) describes requirements for incorporation of third party computer software. Any third party software (commercial and noncommercial) to be incorporated into a deliverable must be clearly identified in the proposal. Prior to delivery of any third party software, the contractor will obtain an appropriate license for the Government, and the written approval of the contracting officer. Any third party software to be delivered to the Government that are not reasonably identifiable at proposal submission, must still be approved by the contracting officer prior to incorporation into a system deliverable. This obligation to obtain pre-approval by the contracting officer, as described above, continues throughout contract administration.

The Government will neither accept nor execute a DD Form 250 for the software deliverables until the Contractor obtains from all third party software suppliers and/or vendors (Licensor) licenses that comply with the following terms and conditions for the Government (Licensee):

1. The license shall not subject the Government to liability that is indefinite or indeterminate, such as an indemnification clause, as it would constitute an obligation in advance or in excess of an appropriation and violate the Anti-Deficiency Act.

2. The license shall not create a contingent liability for the Government. This includes, but is not limited to: unilateral price increases, automatic assessment of charges, and automatic renewal of the license.

3. The license shall be governed by Federal Statutes, Case Law, and Federal Regulations, and shall not be subject to the laws or jurisdiction of any municipality, state, or foreign country.

4. The license shall not include non-substitution language that would preclude or limit the Government from using another vendor/reseller and/or product to fulfill Government requirements.

5. The license shall not comment on entitlement to attorney fees.

6. The Licensor shall not have the authority to unilaterally terminate the license. All remedies available shall be consistent with the Disputes Clause in the underlying basic contract.

7. The Licensor shall not have the right to enter the premise or monitor the networks of Licensee for the purpose of auditing the use of the license.

8. The Licensor shall not use any injunctive relief clauses as the Licensor cannot prevent the Licensee from performing mission operations.

9. The Licensor shall not have the authority to control any litigation between a third party and the Licensee.

10. The Licensor shall not use the fact that the Licensee is using the Licensor's products in any notification to the public (e.g., no publicity rights permitted).

II. Award Information

1. **Anticipated Award Date:** Award dates will vary. White papers will be accepted for review through **15 August 2023.**

2. **Anticipated funding** for the program (not per agreement/contract):

FY18	FY19	FY20	FY21	FY22	FY23	FY24
$2-10M	$12-22M	$20-45M	$39-74M	$60-85M	$25-50M	$25-50M

This funding profile is an estimate only and not a contractual obligation for funding. All funding is subject to change due to Government discretion and availability. Potential offerors should be aware that due to unanticipated budget fluctuations funding in any or all areas may change with little or no notice.

III. Eligibility Information

1. **Eligible Offeror**: This is an unrestricted solicitation. Businesses of all sizes are encouraged to propose.

2. **Cost Sharing or Matching**: Cost Sharing is not required.

3. **Federally Funded Research and Development Centers**: The following guidance is provided for Federally Funded Research and Development Centers (FFRDCs) contemplating submitting a proposal, as either a prime or subcontractor. FAR 35.017-1(c)(4) prohibits an FFRDC's from competing with any non-FFRDC concern in response to a Federal agency request for proposal for other than the operation of an FFRDC. (with exceptions stated in DFARS 235.017-1(c)(4)). There is no regulation prohibiting an FFRDC from responding to a solicitation. However, the FFRDC's sponsoring agency must first make a determination that the effort being proposed falls within the purpose, mission, general scope of effort, or special competency of the FFRDC, and that determination must be included in the FFRDC's proposal. In addition, SDPE must make a determination that the work proposed would not place the FFRDC in direct competition with domestic private industry. Only after these determinations are made, would a determination be made concerning the FFRDC's eligibility to receive an award.

4. **Government Agencies**: If a Government agency is interested in performing work, contact the Technical POC identified in the Open ARA. If those discussions result in a mutual interest to pursue your agency's participation, the effort will be pursued independent of this announcement.

5. **Other**:

a. Foreign Participation: Foreign participation is not authorized. Foreign Nationals (FNs) can be employed by the US Prime Contractor or Sub-Contractor; however, FNs will be limited to Public Domain information unless the contractor has obtained the proper License or Technical Assistance Agreement that authorizes disclosure of CMI and/or CUI to foreign entities pursuant to the Department of State's ITAR or Department of Commerce's EAR. Public Domain information is defined as information that is releasable to the general public and sometimes referred to as open source material. Examples include but are not limited to newspapers, magazines and information posted on the internet. Any proprietary information will have to be appropriately protected.

b. This acquisition involves data that are subject to export control laws and regulations. Only contractors who are registered and certified with the Defense Logistics Services Center (DLSC) and have a legitimate business purpose may participate in this solicitation. Contact the Defense Logistics Services Center, 74 Washington Avenue N., Battle Creek, Michigan 40917-3084 (1-800-352-3572) for

further information on the certification process. You must submit a copy of your approved DD Form 2345, Militarily Critical Technical Data Agreement, with your proposal.

c. There are no limits on the number of white papers/proposals an offeror may submit.

d. You may be ineligible for award if all requirements of this solicitation are not met on the white paper (and later proposal) due date as identified above.

IV. White Paper / Proposal and Submission Information

1. **Overview**: This Announcement consists of a Two-Step Process described in detail below. White Papers/Proposals submitted shall be in accordance with this announcement. The Government intends to evaluate white papers/proposals and award some, all, or none of the proposals received without negotiation/discussion; however, the Government reserves the right to negotiate with those offeror(s) whose proposal is selected for funding.

ONLY WHITE PAPERS ARE BEING SOLICITED INITIALLY. WHITE PAPERS WILL BE ACCEPTED FROM 1 FEBRUARY 2018 THROUGH 15 AUGUST 2023.

Offerors should be alert for any Open ARA amendments that may permit extensions to the white paper submission date.

First Step (White Paper) Instructions:
a. General: The *FIRST STEP* requests a white paper and a rough order of magnitude (ROM) cost. The white paper shall include a discussion of the nature and scope of the effort and the offeror's proposed technical approach. The Government will evaluate the white papers in accordance with the FIRST STEP evaluation criteria, set forth in Section V below. Based on this evaluation, the Government will determine which of the white papers have the potential to best meet the Air Force's needs. Offerors will be notified of the disposition of their white paper. It is anticipated that Government review of the white papers submitted will take 15 working days. Those offerors submitting white papers assessed as meeting Air Force needs will be asked to submit a technical and cost proposal. Those offerors not requested to submit a technical and cost proposal will be notified via email. An offeror submitting a proposal without first submitting a white paper **will not** be eligible for an award. The cost of preparing white papers in response to this Solicitation is not considered an allowable direct charge to any resulting or any other contract; however, it may be an allowable expense to the normal bid and proposal indirect cost as specified in FAR 31.205-18.

b. Page Limitation: The White Paper shall be limited to **6** pages, prepared and submitted in Word format. Font shall be standard 10-point business font Arial. Character spacing must be "normal," not condensed in any manner. Pages shall be double-spaced (must use standard double-space function in Microsoft Word), double-sided (each side counts as one page), 8.5 by 11 inches, with at least one-inch margins on both sides, top and bottom. All text, including text in tables and

charts, must adhere to all font size and line spacing requirements listed herein. Font and line spacing requirements do not have to be followed for illustrations, flowcharts, drawings, and diagrams. These exceptions shall not be used to circumvent formatting requirements and page count limitations by including lengthy narratives in such items. Pages shall be numbered starting with the cover page being Page 1, and the last page being no greater than Page 6. The page limitation covers all information including indices, photographs, foldouts (counted as 1 page for each 8.5 by 11 portion) tables, charts, appendices, attachments, resumes, etc. The Government may not consider pages in excess of these limitations. Offerors should submit their white paper via email in WORD format to Contracting POC.

c. Format: The white paper will be formatted as follows:

(1) Section A: ARA Number (FA8650-17-S-9300), Title of Program (Defense Experimentation Using Commercial Space Internet), Name of Company, Business Size, Company's Commercial and Government Entity (CAGE) number, Dun & Bradstreet (D&B) Data Universal Numbering System (DUNS) number, Contracting POC and Technical POC with appropriate telephone numbers, fax numbers, and email addresses for the POCs. Classified level at which company is cleared, contractor address for forwarding classified material (name, address, zip code), cognizant security office (name, address, zip code), and offeror's security officer's name and telephone number.
(2) Section B: Period of Performance and Task Objectives;
(3) Section C: Technical Summary and Proposed Deliverables; and
(4) Section D: Cost of Task (Rough Order of Magnitude (ROM)).

d. Technical Portion: The technical portion of the white paper shall include a discussion of the nature and scope of the effort and the offeror's proposed technical approach/solution. It may also include any proposed deliverables. Resumes, descriptions of facilities and equipment, a proposed Statement of Work are not required at this point.

e. Cost Portion: The cost portion of the white paper shall include a ROM cost estimate. No detailed price or cost support information should be forwarded; only a time-phased bottom line figure should be provided.

f. Other Information: Multiple white papers within the purview of this announcement may be submitted by each offeror. If the offeror wishes to restrict its white papers, they must be marked with the restrictive language stated in FAR 52.215-1(e).

g. White Paper/Proposal Content Summary: You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.

Second Step (Proposal) Instructions:

a. **General Instructions**:

(1) The *SECOND STEP* consists of offerors submitting a technical and cost proposal within approximately 30 working days of the proposal request. After receipt, proposals will be evaluated in accordance with the award criteria in Section V. below. Proposals will be categorized and subsequently selected for negotiations.

(2) Technical/management and cost/business volumes should be submitted in separate volumes and must be valid for 180 days.

(3) Proposals must reference the announcement number FA8650-17-S-9300.

(4) Offerors must submit one electronic copy of their proposal to the Contracting POC.

(5) Offerors must include the cost file(s) spreadsheets in Microsoft Excel and include the formulas for calculating cost element bases (i.e., G&A, O/H, etc.)

(6) Offerors are advised that only Contracting Officers are legally authorized to contractually bind or otherwise commit the Government.

(7) The cost of preparing proposals in response to this Open ARA is not considered an allowable direct charge to any resulting or any other contract; however, it may be an allowable expense to the normal bid and proposal indirect cost as specified in FAR 31.205-18.

(8) Offerors are encouraged to keep all elements of the proposal package unclassified. In cases where an offeror has a need to submit a classified appendix, please contact the technical POC for delivery instructions.

Technical/Management Proposal:

(1) Page Limitations: The following describes proposal page limitations:

a) The Technical/Management Proposal shall be limited to 35 pages. Technical/Management proposals and Statements of Work must be provided in Microsoft Word. Signed pages may be submitted in Adobe.

b) Font shall be standard 10-point business font Arial.

c) Character spacing must be "normal," not condensed in any manner.

d) Pages shall be double-spaced (must use standard double-space function in Microsoft Word), double sided (each side counts as one page), 8.5 by 11 inches, with at least one-inch margins on both sides, top and bottom.

e) All text, including text in tables and charts, must adhere to all font size and line spacing requirements listed herein. Font and line spacing requirements do not have to be followed for illustrations, flowcharts, drawings, and diagrams. These exceptions shall not be used to circumvent formatting requirements and page count limitations by including lengthy narratives in such items.

f) Pages shall be numbered starting with the cover page being Page 1, and the last page being no greater than Page 35. The page limitation covers all information including indices, photographs, foldouts (counted as 1 page for each 8.5 by 11 portion) tables, charts, appendices, attachments, resumes, etc.

g) The proposal page limit does not include the offeror's proposed Statement of Work (SOW); however, the same formatting rules apply to the SOW, which is limited to 10 pages.

h) **Please Note: The Government will check the proposal and SOW for conformance to the stated requirements. Any pages in excess of the stated page limitation after the format check may not be considered for evaluation purposes.**

(2) The Technical/Management proposal(s) shall include a discussion of the nature and scope of the research and the technical approach. Additional information on prior work in this area, descriptions of available equipment, use of base support (if desired), data and facilities and resumes of personnel who will be participating in this effort should also be included as attachments to the technical proposal. This volume(s) shall include a SOW(s) detailing the technical tasks proposed to be accomplished under the proposed effort and suitable for contract incorporation. ***Do not include any proprietary information in the SOW.*** In addition to the contractor proposed SOW, a Government generated SOW Supplemental attachment containing additional contracting requirements will be included in any resulting contracts.
(3) Any questions concerning the technical proposal or SOW preparation shall be referred to the Technical POC.

c. **Cost/Business Proposal**:
(1) Separate the proposal into a business section and cost section.
a) The business section should contain all business aspects to the proposed contract, such as type of contract, any exceptions to terms and conditions of the announcement, any information not technically related, etc. Provide rationale for exceptions.
b) Identify any technical data that will be delivered with less than unlimited rights.
c) Subcontracting Plans: For efforts to exceed $700,000, Subcontracting Plans shall be submitted in the cost/business proposal. Reference FAR 19.704, DFARS 219.704, and AFFARS 5319.704(a)(1) for subcontracting plan requirements. Small business concerns are exempt from this requirement.
d) Limitations on Pass-Through Charges: As prescribed in FAR 15.408(n)(1) & 15.408(n)(2), provisions 52.215-22, "Limitations on Pass Through Charges-Identification of Subcontract Effort (Oct 2009)," apply.
e) Completed Certifications and Representations are due with the proposal. Offerors may also be required to submit updated or supplemental Certifications and Representations based on the specifics of their proposal.
f) If an offeror proposes the use of Government Furnished Property (GFP), the offer must specifically identify each piece of GFP in the Cost/Business Proposal and propose and substantiate a rental cost for evaluation proposes in accordance with FAR 45.202. Include the following information in the proposal:

(i) A list describing all Government property that the offeror or its subcontractors propose to use on a rent-free basis. The list shall identify the accountable contract under which the property is held and the authorization for its use (from the contracting officer having cognizance of the property);

(ii) The dates during which the property will be used and, for any property that will be used concurrently in performing two or more contracts, the amounts of the respective uses in sufficient detail to support prorating the rent;
(iii) The amount of rent that would otherwise be charged in accordance with FAR 52.245-9, Use and Charges; and
(iv) The voluntary consensus standard or industry leading practices and standards to be used in the management of Government property, or existing property management plans, methods, practices, or procedures for accounting for property.

(2) **Cost Element Breakdown:** Clear, concise, and accurate cost proposals reflect the offeror's financial plan for accomplishing the effort contained in the technical proposal. As a part of its cost proposal, the offeror shall submit the information outlined below, together with supporting breakdowns. All direct costs (labor, material, travel, computer, etc.) as well as labor and overhead rates should be provided by contractor fiscal year (CFY). Detailed cost element breakdowns by Government Fiscal Year or calendar year are not required. The supporting schedules may include summary level estimating rationale used to generate the proposed costs. The cost element breakdown(s) should include the following if applicable.

a) **Direct Labor**: Direct labor should be detailed by number of labor hours by category of labor.

b) **Labor and Overhead Rates**: Direct labor hours, with their applicable rates, must be broken out and the bases used clearly identified. The source of labor and overhead rates and all pricing factors should be identified. For instance, if a Forward Pricing Rate Agreement (FPRA) is in existence, that should be noted, along with the Administrative Contracting Officer’s (ACO's) name and telephone number. If the rates are based on current experience in your organization, provide the historical base used and clearly identify all escalation, by year, applied to derive the proposed rates. If computer usage is determined by a rate, identify the basis used and rationale used to derive the rate.

c) **Material/Equipment:** List all material/equipment items by type and kind with associated costs and advise if the costs are based on vendor quotes, data and/or engineering estimates; provide copies of vendor quotes and/or catalog pricing data.

d) **Subcontractor Costs**: Submit all subcontractor proposals and analyses with your cost proposal). If the subcontractor will not submit cost and pricing information to the offeror, this information must be submitted directly to the Government for analysis. On all subcontracts and interdivisional transfers, provide the method of selection used to determine the subcontractor and the proposed contract type of each subcontract. An explanation shall be provided if the offeror proposes a different amount than that quoted by the subcontractor. The offeror’s proposal must:

(i) Identify principal items/services to be subcontracted.

(ii) Identify prospective subcontractors and the basis on which they were selected. If non-competitive, provide selected source justification.

(iii) Identify the type of contractual business arrangement contemplated for the subcontract and provide rationale
(iv) Identify the basis for the subcontract costs (e.g., firm quote or engineering estimate, etc.).
(v) Identify the cost or pricing data submitted by the subcontractor.
(vi) Provide an analysis of the proposed subcontract in accordance with FAR 15.404-3(b). Provide an analysis concerning the reasonableness, realism and completeness of each subcontractor's proposal. If the analysis is based on comparison with prior prices, identify the basis on which the prior prices were determined to be reasonable. The analysis should include, but not be limited to, an analysis of: materials, labor, travel, other direct costs and proposed profit or fee rates.

e) **Special Tooling or Test Equipment:** When special tooling, and/or test equipment is proposed, attach a brief description of items and indicate if they are solely for the performance of this particular contract or project and if they are or are not already available in the offeror's existing facilities. Indicate quantities, unit prices, whether items are to be purchased or fabricated, whether items are of a severable nature and the basis of the price. These items may be included under Direct Material in the summary format.

f) **Consultants:** When consultants are proposed to be used in the performance of the effort, indicate the specific project or area in which such services are to be used. Identify each consultant, number of hours or days to be used and the consultant's rate per hour or day. State the basis of said rate and give your analysis of the acceptability of the consultant's rate.

g) **Travel:** Travel costs must be justified and related to the needs of the project. Identify the number of trips, the destination and purpose. Travel costs should be broken out by trip with number of travelers, airfare, per diem, lodging, etc.

h) **Computer Use:** Detail the amount and kind of computer usage, the cost, and how the costs were derived.

i) **Facilities Capital Cost of Money:** If Facilities Capital Cost of Money is proposed, a properly executed DD Form 1861 is required.

j) **Project Funding Profile:** Offerors should include a project funding profile by Government Fiscal Year (GFY) (1 Oct through 30 Sept) for budgetary purposes. This will enable the Government to easily identify program funding needs by GFY.

k) If an offeror takes exceptions to the requirements called out in the announcement, the exceptions should be clearly stated in the cost proposal.

l) **Forward Pricing Rate Agreements:** Offerors who have forward pricing rate agreements (FPRA's) and forward pricing rate recommendations (FPRR's) should submit them with their proposal.

m) Cost/Business proposals have no page limitations.

d. **Proposal Content Summary**: You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.

V. White Paper / Proposal Review Information

1. **FIRST STEP – White Paper Peer or Scientific Review Criteria:** The Government will review White Papers to determine which of them have the

potential to best meet the Air Force's needs based on the following criteria, which are listed in equal order of importance:

a. Soundness of the offeror's technical approach, including the offeror's understanding of the commercial space internet marketplace, technologies, and trends influencing the viability of the proposed approach
b. Relevance and impact of the proposed technical effort to the overall goals of the ARA.
c. The offeror's understanding of the scope of the technical effort.
d. Affordability (Proposed ROM Cost Estimate).

2. **SECOND STEP – Proposal Peer or Scientific Review Criteria**: Proposals will be reviewed against the criteria listed below. The technical aspect, which is ranked as the first order of priority, shall be reviewed based on the following criteria that are of equal importance.

a. **Technical**:

(1) Soundness of the offeror's technical approach including whether the proposal identifies major technical risks, clearly defines feasible mitigation efforts, and demonstrates related experience and qualifications of technical personnel. Soundness of the offeror's technical approach includes the offeror's understanding of the commercial space internet marketplace, technologies, and trends influencing the viability of the proposed approach.
(2) Relevance and impact of the proposed technical effort on the overall goals and objectives stated in this ARA.
(3) The offeror's understanding of the scope of the technical effort.
(4) The potential to transition the results of the technical effort to future Government needs.

b. **Cost/Price**: The cost evaluation includes the realism of the proposed cost. Cost/Price is a substantial factor, but ranked as the second order of priority. (If an offeror proposes the use of GFP other than any GFP identified in this Open ARA, and that proposed GFP provides the offeror an unfair competitive advantage, then FAR 45.202 requires rental equivalent be applied to the Cost Factor for evaluation purposes only).

3. **SECOND STEP / PROPOSAL - Review and Selection Process**

a. **Categories**: Based on the evaluation, proposals will be categorized as Selectable, or Not Selectable (see definitions below). The selection of one or more sources for award will be based on the evaluation, as well as importance to agency programs and funding availability.

(1) **Selectable:** Proposals are recommended for acceptance if sufficient funding is available. May require additional development.

(2) **Not Selectable:** Even if sufficient funding existed, the proposal should not be funded.

Note: The Government reserves the right to award some, all, or none of proposals. When the Government elects to award only a part of a proposal, the selected part may be categorized as Selectable, though the proposal as a whole may not merit such a categorization.

b. No other evaluation criteria will be used.

c. Prior to award of a potentially successful offer, the Contracting Officer will make a determination regarding price reasonableness.

d. As indicated in Section I.4.f above, the Government will conduct a S&T Protection Initial Risk Review only for those proposals categorized as Selectable and selected for funding and negotiations.

VI. Award Administration Information

1. **Award Notices**: Offerors will be notified whether their proposal is recommended for award on or about 30 working days from date of proposal submission. The notification is not to be construed to mean the award of an agreement and/or contract is assured, as availability of funds and successful negotiations are prerequisites to any award.

2. **Administrative and National Policy Requirements**: Refer to Section I.

3. **Reporting:** For reporting requirements and frequency, refer to Section I.

VII. Other Information

1. **Support Contractors:** Only Government employees will evaluate proposals for selection. Offerors are advised that employees of commercial firms under contract to the Government may be used to administratively process proposals, monitor contract performance, or perform other administrative duties requiring access to other contractors' proprietary information. These support contracts include nondisclosure agreements prohibiting their contractor employees from disclosing any information submitted by other contractors or using such information for any purpose other than that for which it was furnished.

2. **Informal Feedback Sessions**: When requested, an informal feedback session will be provided. The process will follow the time guidelines outlined in the notification letter.

3. **Pre-Award Clearance:** Pursuant to FAR 22.805, a preaward clearance must be obtained from the U.S. Department Of Labor, Employment Standards Administration, Office Of Federal Contract Compliance Program's (OFCCP) prior to award of a contract (or subcontract) of $10,000,000 or more unless the contractor is listed in OFCCP's National Preaward Registry http://www.dol-esa.gov/preaward. Award may be delayed if you are not currently listed in the registry and the

contracting officer must request a preaward clearance from the OFCCP.

4. **Updates of Publicly Available Information Regarding Responsibility Matters:** Any contract or assistance award that exceeds $550,000; and when offeror checked "has" in paragraph (b) of the provision FAR 52.209-7, shall contain the clause/article, FAR 52.209-9 "Updates of Publicly Available Information Regarding Responsibility Matters (OCT 2018)."

5. **White Paper / Proposal Reminders**: You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.

a. ***Step One***: White Papers are due to the Contracting POC.

b. ***Step One***: White Papers are due no later than the due date and time specified in this announcement.

c. ***Step One and Step Two***: White Paper and Proposal page limits are strictly enforced.

d. ***Step One and Step Two***: White Papers and Proposals must be submitted in the format specified.

e. ***Step Two****:* Proposals are due to the Contracting POC.

f. ***Step Two****:* The Cost/Business Proposal must contain all information described in the Cost/Business Proposal Submission Section.

g. ***Step Two****:* Offerors other than small businesses must include a subcontracting plan.

h. ***Step Two****:* Offerors who have Forward Pricing Rate Agreements (FPRA's) or Forward Pricing Rate Recommendations (FPRR's) should submit them with their proposal.

i. ***Step Two****:* If a DD254 is applicable, offerors must verify their Cognizant Security Office information is current with Defense Security Service (DSS) at www.dss.mil.

j. ***Step Two****:* Due to this effort being subject to export control, offerors must submit a Certified DD Form 2345, Militarily Critical Technical Data Agreement, with proposal.

Attachment(s)

1. Standard Form (SF) 424, Research and Related Senior/Key Person Profile (Expanded) Form

2. Security Program Questionnaire