

**DEPARTMENT OF THE AIR FORCE (DAF)
SMALL BUSINESS INNOVATION RESEARCH PROGRAM
COMMERCIAL SOLUTIONS OPENING
DIRECT-TO-PHASE-II (D2P2) x23.6
6 April 2023**

This Amendment modifies the CSO solicitation in the following manner:

1. The Topic Number is changed from ~~AFX236-PDCSO1~~ to **AFX236-DPCSO1**.
2. The following text is deleted from Section 3(b)(i):

Note that companies may submit multiple proposals, and receive multiple awards, to topics under this solicitation, so long as the proposed work is not essentially equivalent in nature.

All other terms and provisions of the solicitation remain unchanged as a result of this Amendment.

**DEPARTMENT OF THE AIR FORCE (DAF)
SMALL BUSINESS INNOVATION RESEARCH PROGRAM
COMMERCIAL SOLUTIONS OPENING (CSO)
DIRECT-TO-PHASE-II (D2P2) X23.6**

Proposal Submission Timelines

- **5 April 2023:** DAF begins accepting proposals
- **4 May 2023:** Full proposals due **no later than 12:00 p.m. ET**
- **Deadline for Receipt:** No exceptions will be made to the above submission deadline. DAF recommends early submission, as computer traffic intensifies near announcement closing. **Do not wait until the end of the submission period to submit proposal materials.** DAF is not responsible for missed proposal submission due to system lag or inaccessibility.

Proposal Submission Overview

- **A small business concern may only submit one (1) proposal in response to each open topic.** Refer to Table 1 below for more details.
- All proposals must be prepared and submitted through the Department of Defense (DOD) SBIR/STTR Innovation Portal (DSIP), <https://www.dodsbirsttr.mil/>.
- Ensure applicant email address is accurate. DAF is not responsible for missed notifications due to applicants changing mailing addresses/email addresses/company points of contact after submission without notifying the DAF.
- DSIP is the official portal for DoD SBIR/STTR proposal submission. Applicants are required to submit proposals via DSIP; proposals submitted by any other means will be disregarded. Applicants submitting through this site for the first time will be asked to register. Applicants are required to register for a Login.gov account and link it to their DSIP account.
- **Classified proposals are NOT accepted.**

SBIR/STTR Help Desk: For AF SBIR/STTR Program questions, contact the USAF SBIR/STTR One Help Desk at 1-855-855- 5360 or usaf.team@afsbirsttr.us.

DSIP Support Desk:

- Refer to the DSIP [Customer Support Document](#) for general information regarding the DoD SBIR/STTR process in DSIP. For additional assistance with the DSIP application, please visit the Learning & Support section of the DSIP at <https://www.dodsbirsttr.mil/submissions/learning-support/>.
- Email DSIP Support at DoDSBIRSupport@reisystems.com only for further assistance with issues pertaining directly to the DSIP application. Questions submitted to DSIP Support will be addressed in the order received during normal operating hours (Monday through Friday, 9:00 a.m. to 5:00 p.m. ET).
- Applicants are responsible for following ALL troubleshooting guidance provided by DSIP Support. Applicants are responsible for reengaging with DSIP Support if provided troubleshooting tips do not resolve applicant proposal submission issues. Applicant proposal submission failure is virtually never attributable to DSIP performance issues.

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Table 1: CSO Information at a Glance	
Solicitation Topic Number	AFX236-DPCSO1
Solicitation Topic Name	Direct-to-Phase-II Call for Innovative Defense-Related Dual- Purpose Technologies/Solutions with a Clear DAF Stakeholder Need
CSO Submission Deadline	4 May 2023 at 12:00pm (noon) ET; proposals submitted after this date will not be considered for award.
Maximum Period of Performance	Twenty-one (21) Months; proposals that exceed this duration will not be considered for award.
Maximum SBIR Funding Amount	\$1,250,000.00; proposals that exceed this amount will not be considered for award.
Technical Volume Page Limit	15 pages; include page numbers. Pages in excess of 15 will not be reviewed.
Technical Volume Format	White Paper
Minimum Performance of Work Requirement	A minimum of one-half (50%) of the research and/or analytical work must be performed by the proposing firm. The percentage of work is measured by both direct and indirect costs, not including profit.
Anticipated Number of Awards	The Government currently anticipates making approximately 110 awards under this CSO. The Government reserves the right to make no awards under this solicitation. The Government is not responsible for costs incurred before award receipt.
Limitations on Proposal Submission and Program on Innovation Open Topics	<p>Section 7 of the SBIR and STTR Extension Act of 2022 requires the DoD to establish innovation open topic activities in order to</p> <ul style="list-style-type: none"> (A) Increase the transition of commercial technology to the DoD; (B) Expand the small business nontraditional industrial base; (C) Increase commercialization derived from investments of the DoD; and (D) Expand the ability for qualifying small business concerns to propose technology solutions to meet the needs of the DoD.

	<p>Unlike conventional topics, which specify the desired technical objective and output, open topics can use generalized mission requirements or specific technology areas to adapt commercial products or solutions to close capability gaps, improve performance, or provide technological advancements in existing capabilities.</p> <p>A small business concern may only submit one (1) proposal to each open topic. If more than one proposal from a small business concern is received for a single open topic, only the most recent proposal to be certified and submitted prior to the submission deadline will receive an evaluation. All prior proposals submitted by the small business concern for the same open topic will be marked as nonresponsive and will not receive an evaluation.</p>
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1. Program Description

The Department of the Air Force (DAF) invites small business firms to submit proposals under this CSO for the Small Business Innovation Research (SBIR) Program. The DAF encourages firms with the capability to conduct research and development (R&D) and to commercialize results in accordance with the DAF-related topics described in Section 13 to apply to this solicitation.

The 2014 Quadrennial Defense Review (QDR) established innovation as a central line of effort in the United States' (US') national Defense strategy. The US' decisive military advantage over its adversaries and peer competitors is steadily eroding. Consequently, under section 803 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2022 (Pub. L. 117-81) Contracting Officers may acquire innovative commercial items, technologies, or services using a competitive procedure called a Commercial Solutions Opening (CSO) using DoD Class Deviation 2022-O00007. Under a CSO, DoD may competitively select proposals received in response to a general solicitation, similar to a Broad Agency Announcement, based on proposal review by Government scientific, technological, or other subject-matter experts. CSO use in accordance with the Class Deviation is considered competitive for the purposes of 10 U.S.C. chapter 127 and FAR 6.102. Contracting officers shall treat items, technologies, and services acquired under a CSO as commercial items. The full definition of commercial items, i.e., products and services, under FAR 2.101 applies. This CSO includes no requirement for a commercial product or service to be an already-developed, off-the-shelf item.

This CSO seeks innovative commercial technologies proposed to create new DAF solutions or potential new capabilities that fulfill requirements, close capability gaps, and provide potential technological advancements. This CSO may result in the award of prototype projects, which include not only commercially available technologies fueled by commercial or strategic investment, but also concept demonstrations, pilots, and agile development activities improving commercial technologies, existing Government-owned capabilities, or concepts for broad Defense application(s). The Government reserves the right to award a contract or an Other Transaction for any purpose, to include a prototype, under this CSO. The DAF also reserves the right to award all, part, or none of the proposals received. The Federal Government is not responsible for any monies expended by the applicant before award. The SBIR/STTR Programs are not substitutes for existing unsolicited proposal mechanisms. Unsolicited proposals are not accepted under the AF SBIR/STTR Programs for Phases I or II.

Information related to the AF Small Business Program is found at <http://www.airforcesmallbiz.af.mil/>. The site contains contracting opportunities within the DAF, as well as business information and upcoming outreach/conference events. Other informative sites include the Small Business Administration (SBA), www.sba.gov, the DoD Office of Small Business Programs, <https://business.defense.gov/>, and Procurement Technical Assistance Centers, <http://www.aptac-us.us.org>. These centers provide Government contracting assistance and guidance to small businesses, typically at no cost.

a. Objectives

The DAF SBIR Program's objectives include stimulating technological innovation, strengthening the small business role in meeting DoD research, development, test, and evaluation (RDT&E) needs, fostering and encouraging minority and disadvantaged persons-owned small businesses in technological innovation, and increasing commercial application of DoD-supported RDT&E results.

The DAF has identified 6 Strategic Capabilities: Air Superiority; Intelligence, Surveillance, and Reconnaissance; Rapid Global Strike; Command and Control; Responsibilities to organize, train, and equip Airmen; Air Force *Blue Sky.

The United States Space Force has identified six Strategic Capabilities: Space Security; Combat Power Projection; Space Mobility and Logistics; Information Mobility; Space Domain Awareness; Responsibilities to organize, train, and equip Guardians; Space Force *Blue Sky.

*Additionally, it is possible for a solution to provide a strategic capability in a previously unconsidered area. Therefore, if an applicant feels its solution does not fit within one of the listed capabilities, it can reference the “BLUE SKY” category, including an explanation of the solution’s ability to provide increased strategic capability within the context of Air Force, Space Force, national, and global constraints.

As applicable, the applicant should address the category(ies) to which the solution aligns in the Technical Volume.

US Air Force S&T Strategy:

<https://www.af.mil/Portals/1/documents/2019%20SAF%20story%20attachments/Air%20Force%20Science%20and%20Technology%20Strategy.pdf>

USSF Long-Term Science and Technology Challenges:

https://media.defense.gov/2021/Dec/16/2002910798/1/1/S&T%20CHALLENGES%20MEMO_20210924114716.PDF

The AF SBIR Program follows the policies and practices of the Small Business Administration (SBA) SBIR/STTR Policy Directive (1 Oct 20),

https://www.sbir.gov/sites/default/files/SBA_SBIR_STTR_POLICY_DIRECTIVE_OCT_2020_0.pdf.

This CSO incorporates and makes use of Policy Directive flexibilities to encourage proposals based on scientific and technical approaches most likely to yield important results for the DAF and private sector.

b. Three Phase Program

i. Phase I

The purpose of Phase I is to determine, to the extent possible, the scientific, technical, and commercial merit and feasibility of ideas submitted under the SBIR Program. Phase I awards are made in accordance with the SBA Policy Directive guidelines, current version. The period of performance is generally between six to twelve months with twelve months being the maximum period allowable. Proposals should concentrate on research or research and development which will significantly contribute to proving the scientific and technical feasibility, and commercialization potential of the proposed effort, the successful completion of which is a prerequisite for further DoD support in Phase II. Proposers are encouraged to consider whether the research or research and development being proposed to DoD Components also has private sector potential, either for the proposed application or as a base for other applications.

ii. Phase II

Phase II awards are made in accordance with the SBA Policy Directive guidelines, current version. The period of performance is generally 24 months. Phase II is the principal research or research and development effort and is expected to produce a well-defined deliverable prototype. A Phase II contractor may receive up to one additional, sequential Phase II award for continued work on the project.

iii. Phase III

Under Phase III, the Proposer is required to obtain funding from either the private sector, a non-SBIR Government source, or both, to develop the prototype into a viable product or non-R&D service for sale in military or private sector markets. SBIR Phase III refers to work that derives from, extends, or completes an effort made under prior SBIR funding agreements, but is funded by sources other than the

SBIR Program. Phase III work is typically oriented towards commercialization of SBIR research or technology.

c. Eligibility

Each applicant must qualify as a small business concern as defined by 13 C.F.R §§ 701-705 at time of award and is required to certify to this in the Cover Sheet section of the proposal. The eligibility requirements for the SBIR/STTR programs are unique and do not correspond to those of other small business programs.

For Phase II, a minimum of one-half (50%) of the research and/or analytical work must be performed by the proposing firm. The percentage of work is measured by both direct and indirect costs, not including profit.

The primary employment of the principal investigator must be with the small business firm at the time of the award and during the conduct of the proposed effort. Primary employment means that more than one-half of the principal investigator's time is spent with the small business. Primary employment with a small business concern precludes full-time employment at another organization.

All research or research and development work typically must be performed by the small business concern and its subcontractors in the United States. However, based on a rare and unique circumstance, the DAF may approve a particular portion of the R/R&D work to be performed or obtained in a country outside of the United States, for example, if a supply or material or other item or project requirement is not available in the United States.

Joint Ventures

Joint ventures and limited partnerships are permitted, provided the entity created qualifies as a small business in accordance with the Small Business Act, 13 U.S.C. § 121.701. Applicants must disclose joint ventures with existing (or planned) relationships/partnerships with any foreign entity or any foreign government- controlled companies.

d. Performance Benchmarks

Applicants with prior SBIR/STTR awards must meet two benchmark requirements for progress toward commercialization as determined by the Small Business Administration (SBA) on 1 June of each year.

- i. For all applicants with greater than 20 Phase I awards over the past five fiscal years, excluding the most recent year (currently FY 2017-2021), the ratio of Phase II awards to Phase I awards must be at least 0.25.
- ii. For all applicants with greater than 15 Phase II awards over the last ten fiscal years excluding the last two years (currently FY 2012-2021), the proposer must have received, to date, an average of at least \$100,000 of sales and/or investments per Phase II award received or have received a number of patents resulting from the SBIR work equal to or greater than 15% of the number of Phase II awards received during the period.

Consequence of failure to meet the benchmarks:

SBA will identify and provide Agencies annually on 1 June the list of companies failing to meet minimum performance requirements. These companies will not be eligible to submit Phase I proposals for one year from that date. This requirement only affects a company's eligibility for new Phase I awards. Companies failing to meet minimum performance requirements may continue work on current, ongoing

SBIR/STTR awards. They may also apply for and receive new Phase II awards. Likewise, they are not prohibited from receiving Phase III awards.

To provide advance warning, SBA notifies companies on 1 April if they are failing the benchmarks. If a company believes the information used was not complete or accurate, it may provide feedback through the SBA Company Registry at www.sbir.gov.

In addition, SBA has posted a Guide to SBIR/STTR Program Eligibility to help small businesses understand program eligibility requirements, determine if they will be eligible at award, and accurately complete necessary certifications.

Companies' benchmark information is not available to the public.

e. Definitions

Certified HUBZone Small Business Concern

An SBC that has been certified by SBA under the Historically Underutilized Business Zones (HUBZone) Program (13 C.F.R. § 126) as a HUBZone firm listed in the Dynamic Small Business Search (DSBS).

Commercialization

The process of developing products, processes, technologies, or services and the production and delivery (whether by the originating party or others) of the products, processes, technologies, or services for sale to or use by the Federal government or commercial markets.

Cooperative Research and Development

Research and development conducted jointly by a small business concern and a research institution. For purposes of the STTR Program, 40% of the work is performed by the small business concern, and not less than 30% of the work is performed by the single research institution. For purposes of the SBIR Program, this refers to work conducted by a research institution as a subcontractor to the small business concern.

Covered Individual

An individual who contributes in a substantive, meaningful way to the scientific development or execution of a research and development project proposed to be carried out with a research and development award from a Federal research agency and is designed as a covered individual by the Federal research agency concerned.

Essentially Equivalent Work

Work that is substantially the same research, which is proposed for funding in more than one contract proposal or grant application submitted to the same Federal agency or submitted to two or more different Federal agencies for review and funding consideration; or work where a specific research objective and the research design for accomplishing the objective are the same or closely related to another proposal or award, regardless of the funding source.

Export Control

The International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, will apply to all projects with military or dual-use applications that develop beyond fundamental research, which is basic and applied research ordinarily published and shared broadly within the scientific community. More information is available at https://www.pmddtc.state.gov/ddtc_public.

NOTE: Export control compliance statements found in this document are not meant to be all inclusive. They do not remove any liability from the applicant to comply with applicable ITAR or EAR export control restrictions or from informing the Government of any potential export restriction as fundamental research and development efforts proceed.

Federal Laboratory

As defined in 15 U.S.C. §3703, means any laboratory, any federally funded research and development center (FFRDC), or any center established under 15 U.S.C. §§ 3705 & 3707 that is owned, leased, or otherwise used by a Federal agency and funded by the Federal Government, whether operated by the Government or by a contractor.

Foreign Affiliation

A funded or unfunded academic, professional, or institutional appointment or position with a foreign government or government-owned entity, whether full-time, part-time, or voluntary (including adjunct, visiting, or honorary).

Foreign Country of Concern

The People's Republic of China, the Democratic People's Republic of Korea, the Russian Federation, the Islamic Republic of Iran, or any other country determined to be a country of concern by the Secretary of State.

Foreign Entity

Foreign entity means any branch, partnership, group or sub-group, association, estate, trust, corporation or division of a corporation, non-profit, academic institution, research center, or organization established, directed, or controlled by foreign owners, foreign investors, foreign management, or a foreign government.

Foreign Government

Foreign government means any government or governmental body, organization, or instrumentality, including government owned-corporations, other than the United States Government or United States state, territorial, tribal, or jurisdictional governments or governmental bodies. The term includes, but is not limited to, non-United States national and subnational governments, including their respective departments, agencies, and instrumentalities.

Foreign Nationals

Foreign Nationals (also known as Foreign Persons) as defined by 22 CFR 120.16 means any natural person who is not a lawful permanent resident as defined by 8 U.S.C. § 1101(a)(20) or who is not a protected individual as defined by 8 U.S.C. § 1324b(a)(3). It also means any foreign corporation, business association, partnership, trust, society or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments and any agency or subdivision of foreign governments (e.g., diplomatic missions).

"Lawfully admitted for permanent residence" means the status of having been lawfully accorded the privilege of residing permanently in the United States as an immigrant in accordance with the immigration laws, such status not having changed.

"Protected individual" means an individual who (A) is a citizen or national of the United States, or (B) is an alien who is lawfully admitted for permanent residence, is granted the status of an alien lawfully admitted for temporary residence under 8 U.S.C. § 1160(a) or 8 U.S.C. § 1255a(a)(1), is admitted as a refugee under 8 U.S.C. § 1157, or is granted asylum under Section 8 U.S.C. § 1158; but does not include

- (i) an alien who fails to apply for naturalization within six months of the date the alien first becomes eligible (by virtue of period of lawful permanent residence) to apply for naturalization or, if later, within six months after November 6, 1986, and
- (ii) an alien who has applied on a timely basis, but has not been naturalized as a citizen within 2 years after the date of the application, unless the alien can establish that the alien is actively pursuing naturalization, except that time consumed in the Service's processing the application shall not be counted toward the 2-year period.

Fraud, Waste and Abuse

Fraud includes any false representation about a material fact or any intentional deception designed to deprive the United States unlawfully of something of value or to secure from the United States a benefit, privilege, allowance, or consideration to which an individual or business is not entitled.

Waste includes extravagant, careless or needless expenditure of Government funds, or the consumption of Government property, that results from deficient practices, systems, controls, or decisions.

Abuse includes any intentional or improper use of Government resources, such as misuse of rank, position, or authority or resources.

The SBIR Program training related to Fraud, Waste and Abuse is available at:
<https://www.sbir.gov/tutorials/fraud-waste-abuse/tutorial-1>.

Funding Agreement

Any contract, grant, or cooperative agreement entered into between any Federal Agency and any small business concern for the performance of experimental, developmental, or research work, including products or services, funded in whole or in part by the Federal Government. Only the contract method will be used by DoD Components for all SBIR awards.

Historically Black Colleges and Universities and Minority Institutions (HBCU/MI)

Listings for the Historically Black Colleges and Universities (HBCU) and Minority Institutions (MI) are available through the Department of Education Web site,
<http://www.ed.gov/about/offices/list/ocr/edliteminorityinst.html>.

Malign Foreign Talent Recruitment Program

(A) any program, position, or activity that includes compensation in the form of cash, in-kind compensation, including research funding, promised future compensation, complimentary foreign travel, things of non de minimis value, honorific titles, career advancement opportunities, or other types of remuneration or consideration directly provided by a foreign country at any level (national, provincial, or local) or their designee, or an entity based in, funded by, or affiliated with a foreign country, whether or not directly sponsored by the foreign country, to the targeted individual, whether directly or indirectly stated in the arrangement, contract, or other documentation at issue, in exchange for the individual—

- (i) engaging in the unauthorized transfer of intellectual property, materials, data products, or other nonpublic information owned by a United States entity or developed with a Federal research and development award to the government of a foreign country or an entity based in, funded by, or affiliated with a foreign country regardless of whether that government or entity provided support for the development of the intellectual property, materials, or data products;
- (ii) being required to recruit trainees or researchers to enroll in such program, position, or activity;
- (iii) establishing a laboratory or company, accepting a faculty position, or undertaking any other employment or appointment in a foreign country or with an entity based in, funded by, or affiliated with a

foreign country if such activities are in violation of the standard terms and conditions of a Federal research and development award;

- (iv) being unable to terminate the foreign talent recruitment program contract or agreement except in extraordinary circumstances;
- (v) through funding or effort related to the foreign talent recruitment program, being limited in the capacity to carry out a research and development award or required to engage in work that would result in substantial overlap or duplication with a Federal research and development award;
- (vi) being required to apply for and successfully receive funding from the sponsoring foreign government's funding agencies with the sponsoring foreign organization as the recipient;
- (vii) being required to omit acknowledgment of the recipient institution with which the individual is affiliated, or the Federal research agency sponsoring the research and development award, contrary to the institutional policies or standard terms and conditions of the Federal research and development award;
- (viii) being required to not disclose to the Federal research agency or employing institution the participation of such individual in such program, position, or activity; or
- (ix) having a conflict of interest or conflict of commitment contrary to the standard terms and conditions of the Federal research and development award; and

(B) a program that is sponsored by—

- (i) a foreign country of concern or an entity based in a foreign country of concern, whether or not directly sponsored by the foreign country of concern;
- (ii) an academic institution on the list developed under section 1286(c)(8) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. 2358 note; Public Law 115–232); or
- (iii) a foreign talent recruitment program on the list developed under section 1286(c)(9) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. 2358 note; Public Law 115–232).

Performance Benchmark Requirements for Phase I and Direct-to-Phase-II

Companies with multiple SBIR/STTR awards must meet minimum performance requirements to be eligible to apply for a new Phase I or Direct-to-Phase II award. The purpose of these requirements is to ensure that Phase I applicants that have won multiple prior SBIR/STTR awards are making progress towards commercializing the work done under those awards. The Phase I to Phase II Transition Rate addresses the extent to which an awardee progresses a project from Phase I to Phase II. The Commercialization Benchmark addresses the extent to which an awardee has moved past Phase II work towards commercialization. Additional information on performance benchmarking for Phase I applicants can be found at <https://www.sbir.gov/performance-benchmarks>.

Principal Investigator

The principal investigator/project manager is the one individual designated by the applicant to provide the scientific and technical direction to a project supported by the funding agreement.

For both Phase I and Phase II, the primary employment of the principal investigator must be with the small business firm at the time of award and during the conduct of the proposed project. Primary employment means that more than one-half of the principal investigator's time is spent in the employ of the small business. This precludes full-time employment with another organization.

Occasionally, deviations from this requirement may occur, and must be approved in writing by the contracting officer after consultation with the agency SBIR/STTR Program Manager/Coordinator concurrent to proposal submission. Further, a small business firm may replace the principal investigator on a Phase II award, subject to approval in writing by the contracting officer.

Proprietary Information

Proprietary information is information that you provide which constitutes a trade secret, proprietary commercial or financial information, confidential personal information or data affecting the national security. Applicants are instructed to limit proprietary information to only that information that is absolutely essential to their proposals.

Research Institution

Any organization located in the United States that is:

- a. A university.
- b. A nonprofit institution as defined in Section 4(5) of the Stevenson-Wydler Technology Innovation Act of 1980.
- c. A contractor-operated federally funded research and development center, as identified by the National Science Foundation in accordance with the government-wide Federal Acquisition Regulation issued in accordance with Section 35(c)(1) of the Office of Federal Procurement Policy Act. A list of eligible FFRDCs is available at: <https://www.nsf.gov/statistics/ffrdclist/>.

Research or Research and Development

Any activity that is:

- a. A systematic, intensive study directed toward greater knowledge or understanding of the subject studied.
- b. A systematic study directed specifically toward applying new knowledge to meet a recognized need; or
- c. A systematic application of knowledge toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

Research Involving Animal Subjects

All activities involving animal subjects shall be conducted in accordance with DoDI 3216.01 "Use of Animals in DoD Programs," 9 C.F.R. parts 1-4 "Animal Welfare Regulations," National Academy of Sciences Publication "Guide for the Care & Use of Laboratory Animals," as amended, and the Department of Agriculture rules implementing the Animal Welfare Act (7 U.S.C. §§ 2131-2159), as well as other applicable federal and state law and regulation and DoD instructions.

"Animal use" protocols apply to all activities that meet any of the following criteria:

- a. Any research, development, test, evaluation or training, (including experimentation) involving an animal or animals.
- b. An animal is defined as any living or dead, vertebrate organism (non-human) that is being used or is intended for use in research, development, test, evaluation or training.
- c. A vertebrate is a member of the subphylum Vertebrata (within the phylum Chordata), including birds and cold-blooded animals.

See DoDI 3216.01 for definitions of these terms and more information about the applicability of DoDI 3216.01 to work involving animals.

Research Involving Human Subjects

All research involving human subjects shall be conducted in accordance with 32 C.F.R. § 219 "The Common Rule," 10 U.S.C. § 980 "Limitation on Use of Humans as Experimental Subjects," and DoDI 3216.02 "Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research," as well as other applicable federal and state law and regulations, and DoD component guidance. Proposers must be cognizant of and abide by the additional restrictions and limitations imposed on the DoD regarding research involving human subjects, specifically as they regard vulnerable populations (DoDI 3216.02), recruitment of military research subjects (DoDI 3216.02), and informed

consent and surrogate consent (10 U.S.C. § 980) and chemical and biological agent research (DoDI 3216.02). Food and Drug Administration regulation and policies may also apply.

“Human use” protocols apply to all research that meets any of the following criteria:

- a. Any research involving an intervention or an interaction with a living person that would not be occurring or would be occurring in some other fashion but for this research.
- b. Any research involving identifiable private information. This may include data/information/specimens collected originally from living individuals (broadcast video, webuse logs, tissue, blood, medical or personnel records, health data repositories, etc.) in which the identity of the subject is known, or the identity may be readily ascertained by the investigator or associated with the data/information/specimens.

See DoDI 3216.02 for definitions of these terms and more information about the applicability of DoDI 3216.02 to research involving human subjects.

Research Involving Recombinant DNA Molecules

Any recipient performing research involving recombinant DNA molecules and/or organisms and viruses containing recombinant DNA molecules shall comply with the National Institutes of Health Guidelines for Research Involving Recombinant DNA Molecules, dated January 2011, as amended. The guidelines can be found at: https://osp.od.nih.gov/wp-content/uploads/2016/05/NIH_Guidelines.pdf.

Recombinant DNA is defined as molecules that are constructed outside living cells by joining natural or synthetic DNA segments to DNA molecules that can replicate in living cells or molecules that result from the replication of those described above.

Service-Disabled Veteran-Owned Small Business (SDVOSB)

A small business concern owned and controlled by a Service-Disabled Veteran or Service-Disabled Veterans, as defined in Small Business Act 15 USC § 632(q)(2) and SBA’s implementing SDVOSB regulations (13 CFR 125).

Small Business Concern (SBC)

A concern that meets the requirements set forth in 13 C.F.R. § 121.702 (available here).

An SBC must satisfy the following conditions on the date of award:

- a. Is organized for profit, with a place of business located in the United States, which operates primarily within the United States or which makes a significant contribution to the United States economy through payment of taxes or use of American products, materials or labor;
- b. Is in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that if the concern is a joint venture, each entity to the venture must meet the requirements set forth in paragraph (c) below;
- c. Is more than 50% directly owned and controlled by one or more individuals (who are citizens or permanent resident aliens of the United States), other small business concerns (each of which is more than 50% directly owned and controlled by individuals who are citizens or permanent resident aliens of the United States), or any combination of these; and
- d. Has, including its affiliates, not more than 500 employees. (For explanation of affiliate, see www.sba.gov/size.)

Subcontract

A subcontract is any agreement, other than one involving an employer-employee relationship, entered into by an awardee of a funding agreement calling for supplies or services for the performance of the original funding agreement. This includes consultants.

Subcontractor

Subcontractor means any supplier, distributor, vendor, firm, academic institution, research center, or other person or entity that furnishes supplies or services pursuant to a subcontract, at any tier.

United States

Means the fifty states, the territories and possessions of the Federal Government, the Commonwealth of Puerto Rico, the Republic of the Marshall Islands, the Federated States of Micronesia, the Republic of Palau, and the District of Columbia.

Women-Owned Small Business Concern

An SBC that is at least 51% owned by one or more women, or in the case of any publicly owned business, at least 51% of the stock is owned by women, and women control the management and daily business operations.

2. Certifications

a. Defense SBIR/STTR Innovation Portal

Individuals from proposing firms must be registered in the Defense SBIR/STTR Innovation Portal (DSIP) in order to prepare and submit proposals. The DSIP application is only accessible from within the United States, which is defined as the fifty states, the territories and possessions of the Federal Government, the Commonwealth of Puerto Rico, the Republic of the Marshall Islands, the Federated States of Micronesia, the Republic of Palau, and the District of Columbia. All users are required to have an individual user account to access DSIP. As DSIP user accounts are authenticated by Login.gov, all users, who do not already have a Login.gov account, will be required to create one. If you already have a Login.gov account, you can link your existing Login.gov account with your DSIP account. Job Aids and Help Videos to walk you through the process are in the Learning & Support section of DSIP, can be accessed here: <https://www.dodsbirsttr.mil/submissions/learning-support/training-materials>.

Be advised that the sharing of accounts and passwords is a violation of the Terms of Use for Login.gov and DoD policy. The practice of sharing accounts and passwords is also likely to cause technical issues associated with proposal submission, and many difficulties applicants encounter are directly attributable to these practices.

Please note that the email address you use for Login.gov should match the email address associated with your existing DSIP account. If you do not recall the email address associated with your DSIP account, or if you already have an existing Login.gov account using a different email address, you will need your Firm's DUNS number and your Firm PIN in order to link your Login.gov account with your DSIP account. If the email address associated with your existing DSIP account has been used for multiple DSIP August 24, 2022 17 accounts within your Firm, you will also need your Firm's DUNS number and your Firm PIN in order to link your Login.gov account with your DSIP account. The Firm PIN can be obtained from your Firm Admin. You can view the Firm Admin's contact information by entering your Firm's DUNS number when prompted. If you are the Firm Admin, please ensure that you contact all DSIP users in your Firm and provide them with the Firm PIN.

Users should complete their account registrations as soon as possible to avoid any delays in proposal submissions.

b. SAM.gov

Before the DoD Components can award a contract, proposing firms must be registered in the System for Award Management (SAM). SAM allows firms interested in conducting business with the federal government to provide basic information on business structure and capabilities as well as financial and payment information. To register, visit www.sam.gov. Firms should login to SAM and ensure the firm's registration is active and representations and certifications are up-to-date to avoid delay in award.

On April 4, 2022, the DUNS Number was replaced by the Unique Entity ID (SAM). The Federal Government will use the UEI (SAM) to identify organizations doing business with the Government. The DUNS number will no longer be a valid identifier. If the firm has an entity registration in SAM.gov (even if the registration has expired), a UEI (SAM) has already been assigned. This can be found by signing into SAM.gov and selecting the Entity Management widget in the Workspace or by signing in and searching entity information. For firms with established Defense SBIR/STTR Innovation Portal (DSIP) accounts, update the firm profile with the UEI (SAM) as soon as possible.

For new firm registrations, follow instructions during SAM registration on how to obtain a Commercial and Government Entry (CAGE) code and be assigned the UEI (SAM). Once a CAGE code and UEI (SAM) are obtained, update the firm's profile on the DSIP at <https://www.dodsbirsttr.mil/submissions/>.

SAM.gov registration should reflect ALL AWARDS for Purpose of Registration. Firms registered to receive grants only will be ineligible.

3. Proposal Preparation Instructions and Requirements

The DAF is committed to reducing Phase I and II proposal-to-award lead times. To this end, processes and tools have been developed allowing for rapid, streamlined contracting via periodic expedited contracting events. Such speed dictates stringent administrative practices in the proposal submission process. The DAF reserves the right to disqualify proposals for failing to meet the requirements below.

a. Additional Reporting

In addition to the standard federal and DoD procurement certifications, the SBA SBIR Policy Directive requires the collection of certain information from firms at time of award and during the award life cycle. Each firm must provide this additional information at the time of the Phase I and Phase II award, prior to final payment on the Phase I award, prior to receiving 50% of the total award amount for a Phase II award, and prior to final payment on the Phase II award.

b. Administrative Proposal Matters

i. Prior, Current, or Pending Support of Similar Proposals or Awards

Applicants are permitted, with proper notification, to submit identical proposals or proposals containing a significant amount of essentially equivalent work for consideration under multiple Federal program solicitations. However, it is unlawful to enter into contracts, grants, cooperative agreements, Other Transactions, or other award types, requiring essentially equivalent effort.

Questions concerning prior, current, or pending support of similar proposals or awards shall be disclosed to the soliciting agency or agencies as early as possible. **DELETED Note that companies may submit multiple proposals, and receive multiple awards, to topics under this solicitation, so long as the proposed work is not essentially equivalent in nature. DELETED**

ii. Proprietary Information

Information constituting a trade secret, commercial or financial information, confidential personal information, or data affecting national security must be clearly marked. It shall be treated in confidence to the extent permitted by law. Awards for selected proposals will incorporate the Work Plan, in whole or part, by reference or as an attachment. Therefore, the Work Plan shall be Non- Proprietary and marked accordingly. Proprietary and/or classified information shall not be included in the Proposal Cover Sheet.

iii. Majority Ownership by VCOC, Hedge Fund, or Private Equity Funds

Small businesses owned in majority part by multiple venture capital operating companies (VCOCs), hedge funds, or private equity funds are eligible to submit proposals under this CSO. Any firm that is owned, in whole or in part, by any VCOC, hedge fund, and/or private equity fund must identify each foreign national, foreign entity, or foreign government holding or controlling greater than a 5% equity stake in the proposing small business concern, whether such equity stake is directly or indirectly held. The proposing small business concern must also identify any and all of its ultimate parent owner(s) and any other entities and/or individuals owning more than a 5% equity stake in its chain of ownership.

See evaluation criteria for additional information regarding SBCs owned in majority part by multiple VCOCs, hedge funds, or private equity firms.

iv. Personal Conflicts of Interest

Contract awards to firms owned by or employing current or previous Federal Government employees could create conflicts of interest for those employees which may be a violation of Federal law. Applicants should contact the cognizant Ethics Counselor from the employee's Government agency for further guidance if in this situation.

v. Organizational Conflicts of Interest

In accordance with FAR 9.5, proposing small business concerns are required to identify and disclose all facts relevant to potential OCIs involving the proposing small business concern's organization and any proposed team member (sub-awardee, consultant). Under this Section, the proposing small business concern is responsible for providing this disclosure with each proposal submitted to this CSO. The disclosure must include the proposing small business concern's, and as applicable, proposed team member's OCI mitigation plan. The OCI mitigation plan must include a description of the actions the proposing small business concern has taken, or intends to take, to prevent the existence of conflicting roles that might bias the proposing small business concern's judgment and to prevent the proposing small business concern from having unfair competitive advantage. The OCI mitigation plan will specifically discuss the disclosed OCI in the context of each of the OCI limitations outlined in FAR 9.505-1 through FAR 9.505-4.

vi. Classified Proposals

Classified proposals will not be accepted in response to this CSO. If efforts will require classified work during Phase II performance, the proposing firm must have or obtain a facility clearance.

Additional information on facility and personnel clearance procedures and requirements can be found at the Defense Security Service site, <http://www.dss.mil/index.html>.

vii. Research Involving Human Subjects

All research involving human subjects, to include use of human biological specimens and human data, shall comply with the applicable Federal and state laws and agency policy/guidelines for human subject protection (see Section 3.18).

Institutions to be awarded funding for research involving human subjects must provide documentation of a current Federal Assurance of Compliance with Federal regulations for human subject protection, for example a Department of Health and Human Services, Office for Human Research Protections Federal wide Assurance (<http://www.hhs.gov/ohrp>).

Additional Federal Assurance documentation may also be requested by the AF. All institutions engaged in human subject research, to include subcontractors, must also have a valid Assurance. In addition, personnel involved in human subject research must provide documentation of completing appropriate training for the protection of human subjects. Institutions proposing to conduct human subject research that meets one of the exemption criteria in 32 CFR 219.101 are not required to have a Federal Assurance of Compliance. If selected, institutions must also provide documentation of Institutional Review Board (IRB) approval or a determination from an appropriate official in the institution that the work meets one of the exemption criteria with 32 CFR 219. As part of the IRB review process, evidence of appropriate training for all investigators should accompany the protocol. The protocol, separate from the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection and data analysis.

The amount of time required for the IRB to review and approve the protocol will vary depending on such things as the IRB's procedures, the complexity of the research, the level of risk to study participants and

the responsiveness of the Investigator. The average IRB approval process can last between one and three months.

Once the IRB has approved the research, the AF will review the protocol and the IRB's determination to ensure that the research will be conducted in compliance with DoD and DoD Component policies. The DoD review process can last between three to six months. Ample time should be allotted to complete both the IRB and DoD approval processes prior to recruiting subjects. **No funding can be used toward human subject research until ALL approvals are granted.**

viii. Research Involving Animal Subjects

All research, development, testing, experimentation, education or training involving the use of animals shall comply with the applicable Federal and agency rules on animal acquisition, transport, care, handling, and use (see Section 3.17).

For submissions containing animal use, proposals should briefly describe plans for their Institutional Animal Care and Use Committee (IACUC) review and approval.

All Recipients must receive their IACUC's approval as well as secondary or headquarters-level approval by a DoD veterinarian who is trained or experienced in laboratory animal medicine and science. **No animal research may be conducted using DoD funding until all the appropriate DoD office(s) grant approval.**

ix. Research Involving Recombinant DNA Molecules

All research involving recombinant DNA molecules shall comply with the applicable Federal and state laws and regulations and any additional agency guidance. Research shall be approved by an Institutional Biosafety Committee.

x. Use of Unmanned Aircraft Systems (UAS)

All activities involving the operation of Unmanned Aerial Systems shall be conducted IAW Department of Defense Memo entitled "Guidance for the Domestic Use of Unmanned Aircraft Systems in the U.S. National Airspace, dated 18 August 2018 and DOD memo entitled, "Delegation Authority to Approve Exemptions for Using Commercial-Off-The-Shelf Unmanned Aerial Systems in Support of Urgent Needs, dated 16 November 2018. Contractor personnel operating DoD or DoD- contracted UAS in U.S. National Airspace, whether or not the domestic use is related to an intelligence activity, will comply with all laws, regulations, and guidance relating to the operation of UAS in U.S. National Airspace. Specific programs utilizing UAS are required to obtain an exemption for operational use of a UAS; therefore, additional documentation may be requested by the AF to support an exemption request. The DOD exemption approval process can require as long as two months. **No funding can be used for contracted-UAS operations until ALL approvals are granted.**

xi. Proposal Status and Feedback

The PI and Corporate Official indicated on the Proposal Cover Sheet will be notified by email regarding proposal selection or non-selection. The small business will receive one notification for each proposal submitted. Please note the referenced proposal number and read each notification carefully. If changes occur to the company mail or email addresses or points of contact after proposal submission, the information must be provided to the DAF via AF SBIR/STTR One Help Desk.

Feedback requests will be provided to applicants with proposals determined "Not Selected" and "Selectable/Not Funded". The notification letter will include instructions for submitting a feedback request. Applicants are entitled to no more than one feedback per proposal. The DAF anticipates fulfilling feedback requests using automated standardized language associated with peer review/technical

evaluation scores. As such, applicants will not be provided with selection decision documentation nor will feedback documents constitute selection documentation. NOTE: Feedback is not the same as a FAR Part 15 debriefing.

Acquisitions under this solicitation are awarded via “other competitive procedures.” Therefore, applicants are neither entitled to nor will they be provided FAR Part 15 debriefs.

As further prescribed in FAR 33.106(b), FAR 52.233-3, Protests after award should be submitted to: AF.SBIR.STTR.Workflow@us.af.mil with a courtesy copy to the Air Force SBIR/STTR Contracting and Agreements Officer Daniel J. Brewer, Daniel.Brewer.13@us.af.mil.

xii. Proposal Review Information.

The Air Force anticipates all proposal reviews will be complete, selection decisions made, and notification letters sent within approximately 90 calendar days of solicitation close. Please refrain from contacting the AF for proposal status before that time.

xiii. CSO, Selection, and Award Protests

Interested parties may have the right to protest this CSO by serving the Air Force SBIR/STTR Contracting and Agreements Officer, Mr. Daniel Brewer, Daniel.Brewer.13@us.af.mil with the protest, by filing with the Government Accountability Office (GAO), or by filing U.S. Court of Federal Claims. Protest of selections or awards should also be directed to Mr. Brewer filed with GAO, or filed with the U.S. Court of Federal Claims. If the protest is filed with GAO, a copy of the protest shall be received by the DAF Legal Operations Agency within one day of filing. Protests of a selected firm’s small business status should be directed to the SBA.

xiv. Questions About This CSO and CSO Topics

i. Air Force One SBIR/STTR Help Desk

The Help Desk is available to address general questions about this CSO and other program-related topics. The Help Desk can be reached at usaf.team@afsbirsttr.us.

ii. DSIP Support

Email DSIP Support at DoDSBIRSupport@reisystems.com only for assistance with using the DSIP application. Questions regarding DSIP can be emailed to DSIP Support and will be addressed in the order received, during normal operating hours (Monday through Friday, 9:00 a.m. to 5:00 p.m. ET). Please include information on your firm, a proposal number (if applicable), and screenshots of any pertinent errors or issues encountered.

DSIP Support cannot provide updates to proposal status after submission, such as proposal selection/non-selection status or contract award status. Do not attempt to directly submit proposal documents to the above email address. Such transmissions do not constitute proposal submission and such materials will be discarded.

iii. Topic Q&A

Once the DAF begins accepting proposals on 4 April 2023, no direct contact between applicants and topic authors is allowed. However, applicants may submit written questions through Topic Q&A at <https://www.dodsbirsttr.mil/submissions/login>. In Topic Q&A, all questions and answers are posted electronically for general viewing. Identifying information for the questioner and respondent is not posted.

Questions submitted through the Topic Q&A are limited to technical information related to improving the understanding of a topic’s requirements. Any other questions, such as those asking for advice or guidance

on solution approach, or administrative questions, such as SBIR or STTR program eligibility, technical proposal/cost proposal structure and page count, budget and duration limitations, or proposal due date WILL NOT receive a response.

The Topic Q&A for this CSO opens on 4 April 2023 and closes to new questions on 21 April 2024 at 12:00 PM ET. Once the CSO closes to proposal submission, no communication of any kind with the topic author or through Topic Q&A regarding your submitted proposal is allowed.

iv. DAF SBIR/STTR Open Topic Updates and Notices

To receive notifications about AF Ventures and other DAF innovation opportunities, please visit <https://afwerx.com/afventures-overview/>.

xv. Identifying RDT&E in SBIR/STTR Proposals

Subject to programmatic phase conditions, SBIR/STTR awards are made for research, development, test and evaluation (RDT&E) efforts. The definitions and criteria below govern SBIR/STTR as Research, Development, Test, and Evaluation (RDT&E) programs. These definitions and criteria implement 15 USC 638, the SBA SBIR/STTR Policy Directive (1 Oct 2020), and DoD Financial Management Regulation (FMR), Vol. 2A, Chapter 1, Section 0102, Funding Policies (June 2004, as amended).

Phase II Conditions:

Consistent with 15 U.S.C. 638 and the SBA SBIR/STTR Policy Directive (2020), both Phase I and II awards are aimed at furthering “scientific and technical merit and feasibility” of ideas in the proposals. The object of Phase II is to continue the R&D effort from the completed Phase I (or from prior non-SBIR/STTR research in case of Direct to Phase II award aka a “Phase I-like effort”). Phase II also includes a Special Phase II Testing and Evaluation authority.

Scientific and Technical Feasibility Determination IAW 15 USC 638(cc):

Direct to Phase II awards are conditioned upon the awarding agency’s determination the applicant’s idea has sufficient scientific and technical feasibility and merit despite the lack of Phase I award.

xvi. Treatment of Commercial Off-the-Shelf (COTS) and Non-Developmental Items (NDIs)

COTS/NDIs: Items purchased directly from a commercial source that can be utilized without alteration through design and development, or without modification, are classified as COTS or NDI. This includes, for example, ready-to-use products, training services, and software licenses for ready-to-use software to satisfy service needs (including Software as a Service (SaaS)).

Purchases of COTS and NDIs for use, including the first article and associated first article acceptance testing and related minor adjustments are not suitable for SBIR/STTR funding. The acquisition of commercial items or NDIs for testing and operational evaluation that do not require RDT&E engineering, design or integration effort will not be funded by SBIR/STTR funds. However, if an end item requires design and development in order to accept the COTS or NDI, funding for design and development effort could be funded by SBIR/STTR funds. If a COTS or NDI is required for RDT&E test purposes, the cost could be funded by SBIR/STTR funds.

Modified COTS/Modified NDIs: Commercially available items that must be modified to satisfy user requirements are classified as "modified COTS" or "modified NDI" articles. In this instance, the first article, modification of the first article, and first article testing could be funded by SBIR/STTR funds. Follow-on purchases will not be funded by SBIR/STTR funds. The number of “modified” first articles

bought with SBIR/STTR funds will not exceed the quantity needed to conduct the RDT&E acceptance tests. Modification is technology refreshment significantly changing the end item's performance envelope. If the commercially available item is modified and requires testing prior to approval for service use or inventory, it may be funded by SBIR/STTR funds, as all developmental items. In contrast to modification, continuous technology refreshment is the intentional insertion of newer technology to improve reliability, improve maintainability, reduce cost, and/or add minor performance enhancement, typically in conjunction with depot or field level maintenance. The insertion of such technology into end items as part of maintenance is not funded by SBIR/STTR funds.

xvii. Technical Baseline

As RDT&E programs, SBIR/STTR efforts are subject to scientific and technical literature searches in order to establish technical baseline, avoid duplication, and justify funding IAW AFI 61-201, Management of Scientific and Technical Information (STINFO) (29 January 2019) and AFRL/CA guidance, Streamlined and Waivered SBIR/STTR Specified Requirements (05 Aug 2019).

xviii. Promotional Material

Promotional and non-project related proposal content is discouraged. Additional information provided via website or other communication medium, except where explicitly requested, will not be considered.

xix. Fraud and False Statements

Knowingly and willfully making false, fictitious, or fraudulent statements or representations may be a felony under the Federal Criminal False Statement Act (18 USC Sec 1001), punishable by a fine of up to \$10,000, imprisonment up to five years, or both.

The DoD Office of Inspector General (IG) Hotline is an important avenue for reporting fraud, waste, abuse, and mismanagement within the DoD. The DoD IG operates this hotline to receive and investigate complaints or information from contractor employees, DoD civilians, military service members, and public citizens. Individuals who wish to report fraud, waste or abuse may contact the Hotline at (800) 424-9098 between 8:00 a.m. and 5:00 p.m. Eastern Time or visit <http://www.dodig.mil/Components/Administrative-Investigations/DoD-Hotline/Hotline-Complaint/>. Written correspondence should be addressed to the Defense Hotline, The Pentagon, Washington DC, 20301-1900. Email reporting is available at hotline@dodig.mil.

xx. State and Other Assistance Available

Many states have established programs to provide services to small business firms wishing to participate in the Federal SBIR Program. These services vary from state to state, but may include:

- Information and technical assistance;
- Matching funds to SBIR award recipients;
- Assistance in obtaining Phase III funding.

Contact the state SBIR/STTR Support office at https://www.sbir.gov/state_services?state=105813# for further information.

xxi. Use of Support Contractors for the AF SBIR Program

Proposals may be handled for administrative purposes only by support contractors, including APEX, Oasis Systems, Riverside Research, Peerless Technologies, HPC- COM, Mile Two, Wright Brothers Institute, Parallax, TEC Solutions, Inc. and MacB (an Alion Company). In addition, only Government employees and technical personnel from Federally Funded Research and Development Centers (FFRDCs) MITRE and Aerospace Corporations working under contract to provide technical support to AF Life Cycle Management Center and Space and Missiles Centers may evaluate proposals. All support contractors are bound by appropriate non-disclosure agreements. Contact the Air Force SBIR/STTR

Contracting and Agreements Officer (Daniel.Brewer.13@us.af.mil) with concerns regarding the listed contractors.

xxii. Innovation in Manufacturing

Pursuant to EO 13329, high priority is accorded to proposals advancing innovation in U.S. small business manufacturing.

xxiii. Renewable Energy

The Energy Independence and Security Act of 2007 (Act), 19 December 2007, P.L. 110-140, requires SBIR/STTR agencies to give high priority to energy efficiency or renewable energy system R&D projects. The Act encourages eligible US-owned SBCs accomplishing biomedical research in the areas of energy efficiency or renewable energy systems to submit proposals.

xxiv. Requirement for Standard Form 424 (SF424), Research and Related Senior/Key Person Profile (Expanded) Form

If selected for award, applicants shall submit a completed Standard Form (SF 424), Research and Related Senior/Key Person Profile (Expanded) Form for all Senior/Key Personnel proposed in support of the requirement (Attachment 7). Additionally, the applicant shall submit a completed Security Program Questionnaire found at Attachment 6. Applicants may also be asked to provide a mitigation plan for any identified S&T Protection risks. The Government reserves the right not to award if the submitted SF 424 and Security Program Questionnaire are not acceptable to the Government.

c. Direct-to-Phase-II Proposal

i. See Appendix A, Table 3: Proposal Volume Contents (All Volumes)

ii. Authority and Feasibility Requirements

15 U.S.C. §638(cc), as amended by NDAA FY12, Sec. 5106, and further amended by NDAA FY19, Sec. 854, PILOT TO ALLOW PHASE FLEXIBILITY, allows the AF to make SBIR Phase II awards to Small Business Concerns without regard to whether the Small Business Concerns were provided awards under Phase I of the program for the same proposed project. The DAF is implementing D2P2 CSO opportunities under this authority. This does not guarantee future D2P2 opportunities will be offered. Proposals under this CSO must include documentation to determine Phase I feasibility has been met.

Awards will provide funds to conduct further RDT&E for non-Defense commercial solutions to meet specific DAF end-users' and customers' needs. These Phase II awards are intended to provide a commercialization path, and are not the proposed solutions' final step. Second phase commitments from non-SBIR Federal and non-Federal sources are not mandatory. Cost-share is also not required. However, second phase commitments serve as commercial potential evidence in accordance with 15 USC 638(e)(4)(B)(ii).

Applicants must adequately document completion of the Phase I feasibility requirement*. Applicants must demonstrate completion of R/R&D through means not solely based on previous efforts under the SBIR/STTR Programs to establish Phase II proposal feasibility based on criteria provided in the D2P2 topic descriptions. Phase II proposals require a comprehensive, detailed effort description. Proposals should demonstrate sufficient technical progress or problem-solving results to warrant more extensive RDT&E. Developing technologies with commercial and military potential is extremely important. Particularly, DAF is seeking proposals emphasizing technologies' dual-use applications and commercialization.

*NOTE: The applicant shall provide information to enable the agency to make the 15 U.S.C. 638(cc) determination of scientific and technical feasibility and merit. Applicants are required to provide information demonstrating scientific and technical merit and feasibility has been established as part of the Technical Volume described in Section 9.4.2. The DAF will not review the Phase II proposals if it is determined the applicant 1) fails to demonstrate technical merit and feasibility are established or 2) the feasibility documentation does not support substantial performance by the applicant and/or the PI. Refer to the description within the topic to review the minimum requirements needed to demonstrate scientific and technical feasibility. **Feasibility documentation MUST NOT be solely based on work performed under prior or ongoing Federally-funded SBIR or STTR work.**

iii. Governmental and Private Funding Commitments

Applicants wishing to include Phase II funding commitments, Government or private, in their proposals must submit the information via a completed mandatory D2P2 Funding Commitment form (Attachment 11), as described in this section.

For Governmental second phase commitments that are to be applied directly to the contract, DRAFT funding documents (Form 9s/MIPRs) are due within 45 days of the solicitation closing. Once selection letters are sent, CERTIFIED funding documents are due five business days later. If certified funding documents are not provided [by the solicitation close date +45 days], the effort will move forward without the second phase funding commitment considered. To initiate governmental funding transfer, the interested government organization should send an email to the AFRL/RGF Incoming Documents mailbox, AFRL.SBIR.STTR@us.af.mil. The sender will receive an auto-response with guidance regarding incoming funds submission and associated information required. RGF requests a draft MIPR/Form 9 be submitted to the same inbox before certification to ensure the document is complete and accurate.

NOTE 1: If sending funding via MIPR, RGF requires a signed MOA with the submitting Government organization.

NOTE 2: If providing other than RDT&E 3600 funds, the corresponding proposal milestones must clearly delineate deliverables for which the non-RDT&E funds will be used. Additionally, the submitting and receiving Comptrollers must agree to the funds propriety for the specified deliverables.

*The government organization must initiate communication with AFRL/RGF, not the small business.

iv. Proposal Cover Sheet (Volume 1)

See Appendix A, Table 4: Proposal Cover Sheet Contents (Volume 1)

v. Technical Volume (Volume 2)

See Appendix A, Table 5: Technical Volume Content Description (Volume 2)

See Appendix A, Table 6: Non-Proprietary Phase II Work Plan Outline (Included in Volume 2)

See Appendix A, Table 7: Commercialization Plan Outline (Included in Volume 2)

vi. Cost Volume (Volume 3)

See Appendix A, Table 8: Cost Volume Description (Volume 3)

vii. Company Commercialization Report (Volume 4)

The Company Commercialization Report (CCR) allows companies to report funding outcomes resulting from prior SBIR and STTR awards. SBIR and STTR awardees are required by SBA to update and maintain their organization's CCR on SBIR.gov. Commercialization information is required upon completion of the last deliverable under the funding agreement. Thereafter, SBIR and STTR awardees are requested to voluntarily update the information in the database annually for a minimum period of five years.

If the proposing firm has prior DoD and/or non-DoD Phase I and/or Phase II SBIR/STTR awards, regardless of whether the project has any commercialization to date, a PDF of the CCR must be downloaded from SBIR.gov and uploaded to the Firm Forms section of DSIP by the Firm Admin. Firm Forms are completed by the DSIP Firm Admin and are applied across all proposals the firm submits. The DSIP CCR requirement is fulfilled by completing the following:

1. Log into the firm account at <https://www.sbir.gov/>.
2. Navigate to My Dashboard > My Documents to view or print the information currently contained in the Company Registry Commercialization Report.
3. Create or update the commercialization record, from the company dashboard, by scrolling to the "My Commercialization" section, and clicking the create/update Commercialization tab under "Current Report Version". Please refer to the "Instructions" and "Guide" documents contained in this section of the Dashboard for more detail on completing and updating the CCR. Ensure the report is certified and submitted.
4. Click the "Company Commercialization Report" PDF under the My Documents section of the dashboard to download a PDF of the CCR.
5. Upload the PDF of the CCR (downloaded from SBIR.gov in the previous step) to the Company Commercialization Report in the Firm Forms section of DSIP. This upload action must be completed by the Firm Admin.

This version of the CCR, uploaded to DSIP from SBIR.gov, is inserted into all proposal submissions as Volume 4.

During proposal submission, the proposer will be prompted with the question: "Do you have a new or revised Company Commercialization Report to upload?". There are three possible courses of action:

1. If the proposing firm has prior DoD and/or non-DoD Phase I and/or Phase II SBIR/STTR awards, and DOES have a new or revised CCR from SBIR.gov to upload to DSIP, select YES.
 - a. If the user is the Firm Admin, they can upload the PDF of the CCR from SBIR.gov directly on this page. It will also be updated in the Firm Forms and be associated with all new or in-progress proposals submitted by the firm. If the user is not the Firm Admin, they will receive a message that they do not have access and must contact the Firm Admin to complete this action.
 - b. WARNING: Uploading a new CCR under the Firm Forms section of DSIP or clicking "Save" or "Submit" in Volume 4 of one proposal submission is considered a change for ALL proposals under any open BAAs or CSOs. If a proposing firm has previously certified and submitted any Phase I or Direct to Phase II proposals under any BAA or CSO that is still open, those proposals will be automatically

reopened. Proposing firms will have to recertify and resubmit such proposals. If a proposing firm does not recertify or resubmit such proposals, they will not be considered fully submitted and will not be evaluated.

2. If the proposing firm has NO prior DoD and/or non-DoD Phase I and/or Phase II SBIR/STTR awards, the upload of the CCR from SBIR.gov is not required and firm will select NO. The CCR section of the proposal will be marked complete.
3. If the proposing firm has prior DoD and/or non-DoD Phase I and/or Phase II SBIR/STTR awards, and DOES NOT have a new or revised CCR from SBIR.gov to upload to DSIP, select NO.
 - a. If a prior CCR was uploaded to the Firm Forms, the proposer will see a file dialog box at the bottom of the page and can view the previously uploaded CCR. This read-only access allows the proposer to confirm that the CCR has been uploaded by the Firm Admin.
 - b. If no file dialog box is present at the bottom of the page that is an indication that there is no previously uploaded CCR in the DSIP Firm Forms. To fulfill the DSIP CCR requirement the Firm Admin must follow steps 1-5 listed above to download a PDF of the CCR from SBIR.gov and upload it to the DSIP Firm Forms to be included with all proposal submissions.

While all proposing firms with prior DoD and/or non-DoD Phase I and/or Phase II SBIR/STTR awards must report funding outcomes resulting from these awards through the CCR from SBIR.gov and upload a copy of this report to their Firm Forms in DSIP. **The Air Force will not consider the CCR during proposal evaluations.**

viii. Supporting Documents (Volume 5)

See Appendix A, Table 9: Supporting Documents (Volume 5)

ix. Fraud, Waste, and Abuse Training (Volume 6)

The Fraud, Waste and Abuse (FWA) training is required for Phase I and Direct to Phase II proposals. FWA training provides information on what represents FWA in the SBIR/STTR program, the most common mistakes that lead to FWA, as well as the penalties and ways to prevent FWA in your firm. This training material can be found in the Volume 6 section of the proposal submission module in DSIP and must be thoroughly reviewed once per year. Plan ahead and leave ample time to complete this training based on the proposal submission deadline. FWA training must be completed by one DSIP firm user with read/write access (Proposal Owner, Corporate Official or Firm Admin) on behalf of the firm.

x. Direct-to-Phase-II Proposal Standard

A Phase II proposal should provide sufficient information to persuade the DAF the proposed effort represents an innovative solution worthy of support under the stated evaluation criteria.

xi. Common Disqualifiers:

The following are common reasons for which proposals are disqualified. It is not a comprehensive list of potential reasons for disqualification, but is meant to be instructive. Applicants shall read ALL solicitation instructions to ensure compliance.

- System for Award Management is not properly updated to include eligibility for ALL AWARDS.
- Customer Memorandum missing required number of signatures and/or content. See note in “Attachments” table.
- Minimum Performance Percentage of Work is not allocated properly.
- Work as proposed does not meet the definition of R/R&D required for funding.
- Proposal submitted beyond deadline. In the event of technical difficulty contact DSIP Help Desk immediately.
- Proposal submitted exceeds the maximum SBIR funding amount (\$1,250,000.00)
- Proposal submitted exceeds the maximum specified duration (21 months).
- Proposal claims data rights assertions without including a Data Rights Assertions table (as found in [DFARS 252.227-7017](#)) in Volume 5 of the proposal.

The following items are extremely helpful in expediting award timelines; however, are not required at the time of proposal submission.

- Completion of NIST SP-800 171 assessment and submission to SPRS
<https://csrc.nist.gov/publications/detail/sp/800-171/rev-2/final>
 - Familiarization with definitions and procedures required for research determined to include Human Subject Testing
 - Familiarization with definitions and procedures required for research determined to include Flight Testing or UAS (See Attachment 1; See Appendix A, Table 5)
 - Coordination and familiarization with data/information required for project completion and potential handling requirements End-User and Customer
- Resources: <https://www.dcsa.mil/mc/ctp/cui/> <https://www.dcsa.mil/mc/ctp/tools/>

4. Method of Selection and Evaluation Criteria

a. Table 2: Technical Evaluation Criteria
<p>All Phase II proposals will be evaluated on a competitive basis. Proposals will initially be screened to determine responsiveness. Proposals passing this initial screening will be peer reviewed by engineers or scientists to determine the most promising technical and scientific approaches. Each proposal will be judged on its own merits. The DAF is under no obligation to fund a specific number of proposals and may elect to award none. Proposals will be peer reviewed based on the criteria below. Selections will represent best value to the Government considering the following factors of equal importance.</p>
<p>CRITERIA A</p> <p>The potential for Government or private sector commercialization and benefits expected to accrue from commercialization.</p> <ul style="list-style-type: none"> • The SBC's record of commercializing SBIR or other research, as indicated by pre-sales, pilots, sales, revenue, active users, subscriptions, downloads, and/or other forms of traction/adoption. • The existence of Phase II follow-on commitments for the subject research, and funding commitments related to the subject effort, whether from Government sources, as documented in the Air Force Customer Memorandum, or private sources, as documented through a letter of commitment, are evidence of commercialization potential. • A sound transition strategy in the Air Force Customer Memorandum is also evidence of commercialization potential.
<p>CRITERIA B</p> <p>The appropriateness, relevance, and specificity of an identified Defense Need. A complete and compelling Customer Memorandum using the mandatory template, signed by an appropriate end-user and customer, indicates the appropriateness, relevance, and specificity of an identified Defense Need. While not required, signed letters of support from other Government personnel may be indicators of the appropriateness, relevance, and specificity of an identified Defense Need. Adequacy of the proposed effort and its relationship to fulfilling the identified Defense Need.</p>
<p>CRITERIA C</p> <p>The technical approach, soundness, technical merit, and innovation of the proposed technical approach, as well as its differentiation from current customer alternatives. Includes the proposed Principal Investigators'/Project Managers', supporting staff, and consultants' qualifications to execute the proposed approach.</p>
<p>All evaluation criteria other than cost or price, when combined, are significantly more important than cost or price. Where technical evaluations are essentially equal in merit, cost and/or price will be considered in determining the successful offeror(s).</p> <p>The Department of the Air Force will accept proposals from Small Business Concerns (SBCs) that are owned in majority by multiple venture capital operating companies, hedge funds, or private equity firms in response to this solicitation. In accordance with 15 U.S.C. 638(dd), the Air Force is prohibited from awarding more than 15% of its SBIR budget to SBCs with the previously-mentioned ownership structures. In addition to the criteria above, once the value of Selected proposals from such SBCs reaches 15% of the Government's SBIR budget, proposals from such SBCs will no longer be considered for award.</p> <p>Price reasonableness and realism will be considered to the extent appropriate. IAW 15 USC 638(dd)(7), investment by venture capital, private equity firms, or hedge funds shall not be used as an award criterion.</p> <p>Peer reviewers will base their conclusions only on information contained in the proposals. It</p>

cannot be assumed reviewers are acquainted with the firm, key individuals, or referenced experiments.

Other Factors Considered During the Selection Process:

- o National security concerns.
- o Pursuant to EO 13329, high priority is accorded to proposals advancing innovation in U.S. small business manufacturing.
- o The Energy Independence and Security Act of 2007 (Act), 19 December 2007, P.L. 110-140, requires SBIR/STTR agencies to give high priority to energy efficiency or renewable energy system R&D projects. The Act encourages eligible US-owned SBCs accomplishing biomedical research in the areas of energy efficiency or renewable energy systems to submit proposals.

Note About Funding Methodology

Since the Air Force Research Laboratory is one lab supporting two services, DAF has combined both Air Force and Space Force Open Topics in to one open topic, under which both Air Force and Space Force proposals will be accepted. Applicants shall identify whether their proposal is anticipated to meet an Air Force only need, Space Force only need, or both. DAF subject matter experts will make final categorization determinations based upon Air Force and Space Force mission sets and fiscal law. All selections will still be made in accordance with the specified evaluation criteria and the decision to combine topics does not decrease the anticipated number of awards.

5. Considerations

a. Number of Awards.

The Government currently anticipates making approximately 110 awards under this CSO. The Government reserves the right to make no awards under this solicitation, and is not responsible for costs incurred before award receipt.

b. Type of Funding Agreement.

Awards are executed as firm-fixed-price contracts or Other Transactions Authority (OTA) under 10 USC 4021 (Research Projects), 10 USC 4022 (Prototype), or 10 USC 4023 (Procurement for Experimental Purposes). Follow-on production OTs are possible as a result of OT awards made under this solicitation.

c. Fee or Profit

The DAF is required to provide reasonable fee or profit, consistent with normal profit margins provided to profit-making firms for R/R&D work. As such, the Government reserves the right to reject any proposals that fail to account for reasonable profit or fee.

d. Approximate Dollar Value of Awards

The SBIR funding maximum for awards made under this solicitation is \$1,250,000.00. Proposals that exceed this amount will not be considered for award.

e. Payment Schedule

The frequency of payments under resulting awards will be determined by the agreed-upon milestone schedules incorporated into the award document. See Attachment 1 for a sample milestone schedule. Award schedules are subject to negotiation and approval by the Government.

f. Proprietary Information in Proposals

The DAF assumes no liability for disclosure or use of unmarked data and may use or disclose such data for any purpose. Restrictive notices notwithstanding, proposals and final reports submitted through DSIP may be handled, for administrative purposes only, by support contractors. All support contractors are bound by appropriate non-disclosure agreements.

Information contained in unsuccessful proposals will remain the property of the Applicant. The Federal Government may, however, retain copies of all proposals. Public release of information in any proposal submitted will be subject to existing statutory and regulatory requirements. If proprietary information is provided by an Applicant in a proposal, which constitutes a trade secret, commercial or financial information, it will be treated in confidence, to the extent permitted by law, provided that the proposal is clearly marked by the applicant as indicated in Appendix A, Table 5.

g. Technical Data Rights

Rights in technical data, including software, developed under the award terms resulting from proposals submitted under this CSO, generally remain with the awardee, except that the Government obtains a royalty-free license to use such technical data only for Government purposes during the period commencing with contract award and ending twenty years after completion of the project under which the data were generated.

As detailed in DFARS 252.227-7018(b)(1), the Government shall have unlimited rights in specific technical data or computer software generated under SBIR/STTR contracts, to include form, fit, and function data and data necessary for installation, operation, maintenance, and training purposes. Aside

from the unlimited rights afforded under DFARS 252.227-7018(b)(1), the Government shall have SBIR data rights in all other technical data or computer software generated under this contract for a period of 20 years, commencing upon contract award. This data should be marked with the restrictive legend specified in DFARS 252.227-7018 Class Deviation 2020-O0007. Upon expiration of the 20 year restrictive license, the Government has Government Purpose Rights in the SBIR data.

During the license period, the Government may not release or disclose SBIR data to any entity other than its support services contractors except (1) for evaluation purposes; (2) as expressly permitted by the contractor; or (3) use, release, or disclosure is necessary for emergency repair or overhaul of Government-operated items. See DFARS clause 252.227-7018, "Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program" located [here](#).

If an applicant plans to submit assertions IAW DFARS 252.227-7017, DFARS 252.227-7018 Class Deviation 2020-O0007 or similar award term, see instructions in Attachment 10 and Appendix A, Table 9.

h. Copyrights

With the CO/AO's prior written permission, the awardee may copyright (consistent with appropriate national security considerations, if any) material developed with DoD support. DoD receives a royalty-free license for the Federal Government and requires each publication to contain an appropriate acknowledgment and disclaimer statement.

i. Patents

Awardees normally retain the principal worldwide patent rights to Government-funded inventions. The Government receives a royalty-free license, reserves the right to require the patent holder to license others in certain limited circumstances, and requires anyone exclusively licensed to sell the invention in the United States to manufacture it domestically. As authorized by 35 USC 205, the Government will not publicly disclose a Government-supported invention for a period of five years to allow the awardee to pursue a patent.

j. Invention Reporting

SBIR awardees must report inventions to the Component within two months of the inventor's report to the awardee. The inventions report may be accomplished by submitting paper documentation.

k. Final Technical Reports

- i. Content: A final report is required for each award. The reports must contain detail regarding the project objectives, work performed, results obtained, and estimates of technical feasibility. A completed SF 298, "Report Documentation Page," will be used as the report's first page. The Report Documentation Page may be prepared and printed from Defense Technical Information Center's (DTIC's) site at http://www.dtic.mil/dtic/submit/guidance_on_submitting_docs_to_dtic.html. Additionally, the final technical report shall contain a completed DD Form 882, "Report of Inventions and Subcontracts."

ii. SF 298 Form "Report Documentation Page" Preparation:

- i. For unclassified reports, the submitting company should fill in Block 12 (Distribution/Availability Statement) of the SF 298, "Report Documentation Page," with the following statement: "Distribution authorized to U.S. Government only; Proprietary Information, (Date of

Determination). Other requests for this document shall be referred to the Component SBIR Program Office.” Note: Data developed under SBIR/STTR awards is subject to DFARS 252.227-7018 or similar protection. AF will review the awardee's Block 12 information and assign the final distribution statement.

- ii. For additional distribution statement guidance, visit the DTIC site: http://www.dtic.mil/dtic/pdf/distribution_statements_and_reasons.pdf

Block 14 (Abstract), "Report Documentation Page" must include as the first sentence, "Report developed under SBIR/STTR contract (or OT) for topic [insert topic number]. [Follow with the topic title, if possible.]" The abstract must identify the work's purpose and briefly describe that conducted, the findings/results, and potential applications. The abstract will be published by the DoD. Therefore, it shall not contain proprietary or classified data.
Type "UU" in Block 17.

Block 15 (Subject Terms) 298 must include the term "SBIRReport".

Submission: All final reports are submitted to the awarding AF organization IAW the award document. Companies shall not submit Final Reports directly to DTIC. Delivery is normally required within 30 calendar days after technical program completion. Requirements regarding other deliverables' submission will be defined in Sections Band C of contract, and Appendix A of Other Transaction for Prototype, award documents. Special submission instructions for CLASSIFIED reports will be defined in the award's delivery schedule. DO NOT E-MAIL classified or controlled unclassified reports, or reports containing SBIR/STTR Data Rights protected under DFARS 252.227-7018.

I. Research and Analytical Work

For Phase II awards, a minimum of one-half (50%) of the research and/or analytical effort must be performed by the proposing Small Business Concern unless otherwise approved in writing by the Funding Agreement officer after consultation with the agency SBIR program manager/coordinator. Such deviation requests must be made with the initial proposal submission. The DAF will not consider such requests in advance of an applicant's initial proposal submission.

m. Other Contractual Requirements

Awardees will be required to make certain legal commitments through acceptance of Government contract clauses or OT articles. The following outline is illustrative of provisions required by the FAR or statute for inclusion in Phase II awards. This is not a complete list, nor does it contain specific clause/article wording. Questions regarding the complete terms and conditions must be directed to the Air Force SBIR/STTR Contracting and Agreements Officer, Daniel.Brewer.13@us.af.mil.

i. Standards of Work

Work performed under the award must conform to professional standards.

ii. Inspection

Work performed under the award is subject to Government inspection and evaluation at all reasonable times.

iii. Examination of Records

The Comptroller General (or a fully authorized representative) shall have the right to examine any directly pertinent awardee records involving award transactions.

iv. Termination For Cause

The Government may terminate the award for failure to perform the negotiated effort.

v. Termination for Convenience

The Government may terminate the award at any time if it deems termination in its best interest. The firm will be compensated for work performed and reasonable termination costs.

vi. Disputes

Any award dispute not resolved by agreement shall be decided by the Contracting or Agreements Officer with right of appeal.

vii. Contract/OT Work Hours

The awardee may not require an employee to work more than eight hours a day or forty hours a week unless compensated accordingly through overtime pay.

viii. Equal Opportunity

The firm will not discriminate against any employee or employee applicant because of race, color, religion, sex, or national origin.

ix. Affirmative Action for Veterans

The awardee will not discriminate against any employee or applicant for employment because he or she is a disabled veteran.

x. Affirmative Action for Handicapped Individuals

The awardee will not discriminate against any employee or applicant for employment because he or she is physically or mentally handicapped.

xi. Officials Not to Benefit

No Federal Government official may benefit personally from the SBIR/STTR funding agreement.

xii. Covenant Against Contingent Fees

No person or agency has been employed to solicit or secure the award upon an understanding for compensation except bona fide employees or commercial agencies maintained by the awardee for the purpose of securing business.

xiii. Gratuities

The Government may terminate the award if gratuities have been offered to any Government representative to secure the award.

xiv. Patent Infringement

The awardee shall report each notice or patent infringement claim based on contract performance.

xv. Military Security Requirements

The awardee shall safeguard classified information associated with the contracted work IAW applicable regulations.

xvi. American Made Equipment and Products

The awardee will purchase equipment and/or products in support of the SBIR award from U.S.-based sources whenever possible.

xvii. Unique Identification (UID)

If hardware will be delivered to the Government under the award, there is potential unique item identification will be required IAW DFARS 252.211-7003 or similar verbiage.

xviii. Publication Approval/Disclosure of Information

Government review and approval will be required prior to dissemination or publication, except within and between the awardee and its subcontractors (if any), of classified and non- fundamental information developed under this award or contained in reports to be furnished pursuant to this award.

xix. Animal Welfare

Awards involving research, development, test, evaluation, or training on vertebrate animals will incorporate DFARS clause 252.235-7002 or similar verbiage.

xx. Protection of Human Subjects

Effective 29 July 2009, awards including or potentially including research involving human subjects IAW 32 CFR Part 219, DoD Directive 3216.02, and 10 U.S.C. 980, including research meeting exemption criteria under 32 CFR 219.101(b), will incorporate DFARS clause 252.235-7004 or similar verbiage.

xxi. E-Verify

Contracts exceeding the simplified acquisition threshold may include the FAR clause 52.222- 54 “Employment Eligibility Verification” unless exempted by the conditions listed at FAR 22.1803.

xxii. Similar verbiage will be included in OT awards unless determined exempt through comparable determination.

xxiii. ITAR

IAW DFARS 225.7901-4, Export Control Contract Clauses, the clause found at DFARS 252.225- 7048, Export-Controlled Items (June 2013), must be included in all solicitations and contracts; therefore, all awards resulting from this CSO will include DFARS 252.225-7048 or similar verbiage. Full text:

<https://www.acquisition.gov/dfars/part-252-clauses#DFARS-252.227-7018>.

See Appendix A, Table 9 for a discussion of DD Forms 2345 for Restricted proposals.

xxiv. Cybersecurity

Awardees are required to provide adequate security on all covered business information systems. Specific security requirements are listed in DFARS 252.204.7012, and compliance is mandatory. Note, DFARS clauses 252.204-7019 and 252.204-7020 also apply to this solicitation.

xxv. Safeguarding Covered Defense Information Control

As prescribed in DFARS 252.204- 7008, for covered contractor information systems that are not part of an information technology service or system operated on behalf of the Government, the SBC represents that it will implement the security requirements specified by National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171, “Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations”.

xxvi. Limitations on the Use or Disclosure of Third- Party Contractor Reported Cyber Incident Information

As required in DFARS 252.204-7009, the Contractor must agree that certain conditions apply to any information it receives or creates in the performance of a resulting contract that is information obtained from a third-party's reporting of a cyber incident pursuant to DFARS clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting (or derived from such information obtained under that clause).

xxvii. Notice of NIST SP 800-171 DoD Assessment Requirements

As prescribed by DFARS 252.204-7019, in order to be considered for award, the SBC is required to implement NIST SP 800-171. The SBC shall have a current assessment (see 252.204-7020) for each covered contractor information system that is relevant to the offer, contract, task order, or delivery order. The Basic, Medium, and High NIST SP 800-171 DoD Assessments are described in the NIST SP 800-171 DoD Assessment Methodology located at https://www.acq.osd.mil/dpap/pdi/cyber/strategically_assessing_contractor_implementation_of_NIST_SP_800-171.html. In accordance with DFARS 252.204-7020, the SBC shall provide access to its facilities, systems, and personnel necessary for the Government to conduct a Medium or High NIST SP 800-171 DoD Assessment, as described in NIST SP 800-171 DoD Assessment Methodology, linked above.

xxviii. Contractor Certification Regarding Provision of Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment

In accordance with DFARS Subpart 204.21, DFARS provisions 252.204-7016, 252.204-7017, and clause 252.204- 7018 are incorporated into this solicitation. This subpart implements section 1656 of the National Defense Authorization Act for Fiscal Year 2018 (Pub. L. 115-91) and section 889(a)(1)(A) of the National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232). Full text of the provisions and clause and required offeror representations can be found in Attachment 4 of this CSO.

xxix. Disclosure of Ownership or Control by a Foreign Government

DFARS 252.209-7002, Disclosure of Ownership or Control by a Foreign Government (JUN 2010), is incorporated into this solicitation. In accordance with DFARS 252.209-7002, any SBC submitting a proposal in response to this CSO is required to disclose, by completing Attachment 5 to this solicitation, Foreign Ownership or Control Disclosure, any interest a foreign government has in the SBC when that interest constitutes control by a foreign government, as defined in DFARS provision 252.209-7002. If the SBC is a subsidiary, it is also required to disclose any reportable interest a foreign government has in any entity that owns or controls the subsidiary, including reportable interest concerning the SBC's immediate parent, intermediate parents, and the ultimate parent.

xxx. Basic Safeguarding of Covered Contractor Information Systems

FAR 52.204-21, Basic Safeguarding of Covered Contractor Information Systems, is incorporated into this solicitation. In accordance with FAR 52.204-21, the contractor shall apply basic safeguarding requirements and procedures when the contractor or a subcontractor at any tier may have Federal contract information residing in or transiting through its information system.

xxxi. Prohibition on Contracting with Persons Who Have Business Operations with the Maduro Regime

DFARS 252.225-7055, Representation Regarding Business Operations with the Maduro Regime, is incorporated into this solicitation. In accordance with section 890 of the National Defense Authorization Act for Fiscal Year 2020 (Pub. L. 116-92), DoD is prohibited from entering into a contract for the procurement of products or services with any person that has business operations with an authority of the

government of Venezuela that is not recognized as the legitimate government of Venezuela by the United States Government, unless the person has a valid license to operate in Venezuela issued by the Office of Foreign Assets Control of the Department of the Treasury.

n. Commercialization Updates in Phase II

After Phase II award, the awardee shall be required to periodically update the following Phase II commercialization results at <https://www.dodsbirsttr.mil/submissions>.

- xxxii. Sales revenue from Phase II-developed products and non-R&D services;
- xxxiii. Additional investment from non-Federal SBIR/STTR Program in activities furthering Phase II technology development and/or commercialization;
- xxxiv. Phase II technology used in a fielded DoD system or acquisition program and, if any, which system or program;
- xxxv. The number of patents resulting from SBIR/STTR Program awards;
- xxxvi. Growth in number of firm employees; and
- xxxvii. Completion of an initial public offering of stock (IPO), if any, resulting all or in part from the Phase II project.

Project updates will be required at Phase II completion, and when the firm submits a new SBIR or STTR proposal to DoD. Firms not submitting new proposals to DoD will update annually after Phase II completion.

o. Additional Information

- xxxviii. This program solicitation is intended for informational purposes and reflects current planning. If there is any inconsistency between the information contained herein and the terms of any resulting SBIR/STTR Funding Agreement, the terms of the Funding Agreement control.
- xxxix. Before the award of a funding agreement, the DAF may request the Applicant to submit certain organizational, management, personnel, and financial information to assure responsibility of the Applicant.
- xl. The DAF is not responsible for any monies expended by the Applicant prior to award.
- xli. This solicitation is not an offer by the DAF and does not obligate the Government to make any specific number of awards. All awards are contingent upon the availability of funds.
- xl.ii. The DAF SBIR Program is not a substitute for existing unsolicited proposal mechanisms. As such, the DAF will not consider non-responsive proposals for any reason.
- xl.iii. If an award is made pursuant to this solicitation, a representative of the contractor or grantee or party to a cooperative agreement will be required to certify that the

concern has not previously been, nor is currently being, paid for Essentially Equivalent Work by any Federal Agency.

b. Voluntary Phase II Funding Commitment Guidance (see D2P2 Funding Commitment Form, Attachment 11)

i. Examples of Voluntary Phase II Funding Commitments

Investment from outside sources, which includes other companies, state or local Governments, venture capital firms, individual “angel” investors, non-SBIR/non-STTR Federal Government programs, or any combination thereof, is considered such a commitment. This does not include the small business’s owner, family members, and/or “affiliates” of the small business, as defined in 13 CFR Section 121.103, as highlighted below:

ii. Affiliates

Concerns are affiliates when one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

iii. Affiliation Determinations

Factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships are considered in making affiliation determinations.

iv. Treatment as One Party

Individuals or firms with identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms economically dependent through contractual or other relationships, may be treated as one party with such interests aggregated. While the proposal must state whether funding is from external or internal sources, the CO and the SBA have the discretion to designate an entity as an “outside investor,” regardless of the designation in the proposal.

v. Commitment Arrangements

Such a commitment may also be an arrangement by which the outside party provides cash to the small company in return for such items as equity; a share of royalties; rights in the technology; a percentage of profit; an advance purchase order for products resulting from the technology; Federal funds transferred to AFWERX Financial Management (AFRL/RGF) via Military Interdepartmental Purchase Request (MIPR); or any combination thereof.

vi. The DAF reserves the right to adjust these guidelines at any time. Any changes to these guidelines will be sent to the eligible companies and posted online via amendment to this solicitation.

vii. *Can Entity E's investment in Small Company S during the first month of S's Phase I SBIR performance qualify as a second state commitment?*

Yes, provided E is an outside investor and the other Voluntary Second Stage Commitment conditions are met. The investment can occur at any time after the start of Phase I performance.

viii. *Small Company A, which won a Phase I award, spins off Small Company B to commercialize the SBIR technology. A then convinces Angel Investor I to invest funds in B. Is I's investment in B considered a second stage commitment?*

For Angel Investor I's investment in Small Company B to qualify Small Company A for such a commitment, AF must determine if A and B are substantially the same entity as evidenced, for example, by meeting the

“affiliates” definition " in 13 C.F.R. Sec.121.103. If AF determines A and B are substantially the same entity, I's investment in B could qualify A as a second stage commitment. Of course, the parties must also meet the other conditions, e.g., I must be an outside investor.

- ix. ***Can Entity E's investment in Small Company S before the submission of S's Direct to Phase II SBIR proposal qualify as a Phase II funding commitment?***
- x. Yes, provided E is an outside investor and the other second stage commitment conditions are met. The investment can occur at any time after the pre-release date of Phase II proposal instructions, and no later than 90 calendar days after award.

6. D2P2 Topic

Topic Number	AFX236-DPCSO1
Title	Direct-to-Phase-II Call for Innovative Defense-Related Dual- Purpose Technologies/Solutions with a Clear Air Force Stakeholder Need
OUSD(R&E) Critical Technology Areas	FutureG; Trusted AI and Autonomy; Biotechnology; Advanced Computing and Software; Integrated Sensing and Cyber; Directed Energy (DE); Hypersonics; Microelectronics; Integrated Network Systems-of-Systems; Quantum Science; Space Technology; Renewable Energy Generation and Storage; Advanced Materials; Human-Machine Interfaces; Advanced Infrastructure & Advanced Manufacturing; Combat Casualty Care; Emerging Threat Reduction; Military Infectious Diseases; Military Operational Medicine; Mission Readiness & Disaster Preparedness; Nuclear; Sustainment & Logistics
Objective	<p>This Department of the Air Force (DAF) topic is seeking technologies for transition into the United States Air Force (USAF) and/or United States Space Force (USSF). This topic is in partnership with AFWERX and SpaceWERX.</p> <p>Primary objectives of this topic include exploring innovative technology solutions applicable to both defense and non-defense markets, scaling capability, and growing the industrial base for defense. This topic seeks companies with capability to prototype validated concepts under an accelerated Phase II schedule. This topic is aimed at applied research and development efforts rather than “front-end” or basic Research (R)/Research & Development (R&D).</p>
Description	<p>The DAF is a large and complex organization consisting of many functions, a vast majority of which have similar counterparts in the commercial sector. It is important that potential solutions have a high probability of keeping pace with technological change. Thus, they should be closely tied to commercial technologies and solutions supporting the proposed development. This topic is meant for non-defense commercial solutions to be adapted to meet DAF stakeholders' needs.</p> <p>Proposed technical solutions should focus on the characteristics outlined in the Evaluation Criteria section of this solicitation.</p> <p>The topic is truly 'open' (agnostic of industry, technology, and problem area), but proposals for this topic should demonstrate a high probability of identifying a product-mission fit between a DAF (Air Force and/or Space Force) stakeholder and the proposed adaptation of the non-defense commercial solution. This is accomplished most effectively through a proposal with a mature non-Defense technical solution and a clear understanding of its adaptation to meet a DAF customer's specific need, supported by documentation from a specific motivated, empowered DAF end-user and customer ready and willing to participate in the proposed prototype solution's trial.</p> <p>The USAF has identified (6) Strategic Capabilities; Air Superiority; Intelligence, Surveillance, and Reconnaissance; Rapid Global Mobility; Global Strike; Command and Control; Responsibilities to organize, train, and equip Airmen; *Space Force Blue Sky.</p>

	<p>The USSF has identified (6) Strategic Capabilities; Space Security; Combat Power Projection; Space Mobility and Logistics; Information Mobility; Space Domain Awareness; Responsibilities to organize, train, and equip Guardians; *Air Force Blue Sky.</p> <p>BLUE SKY* While only twelve (12) strategic capabilities are listed, it is possible for a solution to provide a strategic capability(s) in a previously unconsidered area. Therefore, if the applicant feels the proposed solution does not fit within one of those listed, include an explanation of the solution's ability to provide increased strategic capability(s) within the context of DAF, national, and global constraints.</p> <p>Applicants should identify which Strategic Capability(s) the proposed solution addresses. The alignment between a proposal and a Strategic Capability(s) can strengthen an application. However, this does not change the requirement to demonstrate the Defense Need, but may complement it.</p> <p>This also does not preclude companies looking to solve other problems not listed. It is simply intended to give indications of DAF special emphasis areas at this time.</p> <p>S&T Strategy. *NOTE: While the S&T strategy document contains only five capabilities, it is possible for a solution to provide a strategic capability in a previously unconsidered area. Therefore, if the offeror feels the proposed solution does not fit within one of the listed capabilities, reference "BLUE SKY", including an explanation of the solution's ability to provide increased strategic capability within the context of AF, national, and global constraints. The alignment between a proposal and an S&T Strategic Capability can strengthen an application. Note, this does not change the requirement to demonstrate the Defense need, but may complement it. This also does not preclude companies looking to solve other problems not listed in the S&T Strategic Capabilities. It is simply intended to give indications of AF special emphasis areas at this time.</p>
Phase I	<p>This topic is intended for technology proven ready to move directly into Phase II. Therefore, Phase I awards will not be made for this topic. The applicant is required to provide detail and documentation in the D2P2 proposal which demonstrates accomplishment of a "Phase I-type" effort, including a feasibility study. This includes determining, insofar as possible, the scientific and technical merit and feasibility of ideas appearing to have commercial potential. It must have validated the product-mission fit between the proposed solution and a potential Air Force and/or Space Force stakeholder. The offeror should have defined a clear, immediately actionable plan with the proposed solution and the DAF customer and end-user.</p> <p>The feasibility study should have:</p> <ol style="list-style-type: none"> 1. Clearly identified the potential stakeholders of the adapted solution for solving the Air Force and/or Space Force need(s). 2. Described the pathway to integrating with DAF operations, to include how the offeror plans to accomplish core technology development, navigate applicable regulatory processes, and integrate with other relevant systems

	and/or processes. 3. Describe if and how the solution can be used by other DoD or Governmental customers.
Phase II	<p>Proposals should include development, installation, integration, demonstration and/or test and evaluation of the proposed solution prototype system.</p> <p>These activities should focus specifically on:</p> <ol style="list-style-type: none"> 1. Evaluating the adapted solution against the proposed objectives and measurable key results. 2. Describing in detail how the installed solution differs from the non-defense commercial offering to solve the Air Force and/or Space Force need(s), as well as how it can be scaled for wide adoption, i.e., modified for scale. 3. Identifying the proposed solution's clear transition path, taking into account input from affected stakeholders, including but not limited to, end users, engineering, sustainment, contracting, finance, legal, and cyber security. 4. Specifying the solution's integration with other current and potential future solutions. 5. Describing the solution's sustainability, i.e., supportability. Identifying other specific DoD or Governmental customers for the solution.
Phase III Dual-Use	Some solutions may go from Phase II to Phase III as soon as the product-market fit is verified. Potential Phase III awardees will transition to the adapted non-Defense commercial solution to provide expanded mission capability for a broad range of potential Governmental and civilian users and alternate mission applications.
Notes	Due to heavy interest in this topic, the DAF will not answer questions via email, except in rare cases. Webinars will be held to address all questions.
References	<ol style="list-style-type: none"> 1. FitzGerald, B., Sander, A.; Parziale, J. (2016). Future Foundry: A New Strategic Approach to Military- Technical Advantage. 2. Blank, S. (2016). The Mission Model Canvas - An Adapted Business Model Canvas for Mission-Driven Organizations. 3. US Department of Defense. (2018). 2018 National Defense Strategy of the United States Summary. 4. Chaplain, C. T. (2016). Space Acquisitions: Challenges Facing DOD as it Changes Approaches to Space Acquisitions. US Government Accountability Office Washington United States. 5. Space Capstone Publication, Spacepower (SCP). (2020)
Keywords	Open; Other; Disruptive; Radical; Dual-Use; Commercial

7. Attachments

Attachment 1: Customer Memorandum (Required)

Note 1: Applicants must use the latest version of the template in order to fulfill this requirement. Previous versions of the Customer Memorandum, documents purporting to be Customer Memoranda that are not completed using the mandatory template, or documents lacking the mandatory fields will not be considered for award. Do not presume that any previous versions are identical, as they are not. Documents that are substantively or substantially similar and/or identical to the Customer Memorandum, but authored without the use of the mandatory template, will not be accepted by the Government.

Note 2: Document must contain the term “Customer Memorandum” somewhere in the filename.

Attachment 2: SBIR/STTR Lifecycle Certification (Required)

Attachment 3: SBIR/STTR Environment, Safety and Occupational Health (ESOH) Questionnaire (Required)

Attachment 4: SBIR/STTR Program Contractor Certification Regarding Provision of Prohibited Video Surveillance and Telecommunications Services and Equipment (Required)

Attachment 5: SBIR/STTR Program Disclosure of Offeror’s Ownership or Control by a Foreign Government (Required)

Attachment 6: AF Security Program Questionnaire (Required)

Attachment 7: Research & Related Senior/Key Person Profile (Required)

Attachment 8: Verification of Eligibility of Small Business Joint Ventures (Required if Applicable)

Attachment 9: SBIR/STTR Funding Agreement Certification (Encouraged at proposal submission, required prior to award)

Attachment 10: Certification Questions and Coversheet Supplement (Required)

Attachment 11: D2P2 Funding Commitment Form (Required if Applicable)

Appendix A: Proposal Volume Documentation Requirements



DEPARTMENT OF THE AIR FORCE

DATE

OPEN TOPIC CUSTOMER MEMORANDUM See page 10 for Form Instructions

References:

- a. 15 U.S.C. §638
- b. Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Policy Directive (Oct 2020)
- c. 5 C.F.R. §2635.702(c), Exception (1)

FROM: (DAF ORGANIZATION)

SUBJECT: AFRL/RGV Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Phase II – DAF Organization Defense Need and Participation Interest in the SBIR/STTR Program under (TOPIC*) with (SBIR/STTR COMPANY)

1. PURPOSE

This memorandum is executed in furtherance of references (a) and (b) and the applicable Air Force SBIR/STTR solicitation, which constitute authority to promote products, services, and enterprises within the meaning of reference (c). The purpose of this memorandum is to document interest from a Department of the Air Force organization(s) in working with AFWERX and an open topic SBIR/STTR Phase II awardee on a proposed Phase II effort.



2. DEFENSE MISSION NEED

(DAF ORGANIZATION)

area of (AREA OF INTEREST)

has a national Defense-related mission need in the
, specifically (DESCRIBE MISSION NEED)



2. DEFENSE MISSION NEED (CONTINUED)

Indicate how your firm believes the technology development under this effort could contribute to future mission-need fulfillment. Describe the mission impact of this project on the DAF and DoD below.

(NOTE: fill in just the US Air Force section, just the US Space Force section, or both, depending on which is appropriate. If BOTH are appropriate, then a separate justification is needed for each. This is critical in determining which funding appropriation may be allowable).

US Air Force mission-need fulfillment: [\(IMPACT STATEMENTS\)](#)

We believe the technology development under this effort could contribute to future mission-need fulfillment. Describe the mission impact of this project on the DAF and DoD below. **(NOTE: fill in just the US Air Force section, just the US Space Force section, or both, depending on which is appropriate. If BOTH are appropriate, then a separate justification is needed for each. This is critical in determining which funding appropriation may be allowable).**

US Space Force mission-need fulfillment: [\(IMPACT STATEMENTS\)](#)



2. DEFENSE MISSION NEED (CONTINUED)

The main goals of our involvement in this project are: **(NOTE: Describe only as many measurable goals as are required. If you wish to describe more than five measurable goals, please continue on a separate document and submit it with this memorandum. If applicant believes Defense Mission Need is applicable to both AF and SF, indicate as such so that the Government may determine the appropriate appropriation to fund.)**

(MEASURABLE GOAL 1)

(MEASURABLE GOAL 2)



(MEASURABLE GOAL 3)

(MEASURABLE GOAL 4)

(MEASURABLE GOAL 5)



3. PROJECT TIMELINE

If this SBIR/STTR Phase II proposal is selected and awarded, we expect this project to be executed from _____ to _____. **(NOTE: Review the solicitation to identify your start date and designated period of performance. Identify whether you intend your project to be completed in a shorter timeframe than specified in the solicitation.)**

4. ²PHASE II FUNDING COMMITMENT

Has non-SBIR/STTR Government funding been secured?

No (If **No** is selected, please enter N/A into the next five fields.)

Yes (If **Yes**, complete the following fields. This commitment does not constitute an obligation and is subject to funds availability at the time of contract execution.)

³Phase II Funding Commitment from (DAF PARTNER) _____.

If a Phase II award is executed, (DOD/DAF PARTNER)

will provide (AMOUNT AND TYPE OF FUNDS)

non-SBIR/STTR Government funds.

(DAF PARTNER FINANCE OFFICE SYMBOL)

concur with this funding type's use

and verifies funds availability. This commitment does not constitute an obligation and is subject to funds availability at the time of contract execution.

(DAF PARTNER)

will submit DRAFT funding documents

(Form 9s/MIPRs) within 45 days of the solicitation closing. If the Phase I company is not selected for Phase II award, the funds will be returned to the providing DAF organization. Once selection letters have been sent, CERTIFIED funding documents from the partner organization are due within five business days. If certified funding documents are not provided by the due date, the effort will move forward without consideration of the Phase II funding commitment..

5. ADDITIONAL AGREEMENT

Prior to and/or following award, if necessary for project success, (DAF ORGANIZATION)

will consult with Air Force SBIR/STTR Legal, Contracting, and Program Office personnel to formalize cooperation in the manner protecting the Government's interests.

1. Prior to award, determine if the proposed effort will require specific clauses or other special features to accommodate the work to be performed. This could include program elements such as Government-Furnished Equipment/Information (GFE/I), use of Government facilities for testing or demonstration, use of Government-provided licenses, environment considerations, etc.



2. After award, if assistance is necessary, request guidance to award a Phase III contract or other appropriate agreement for transition to an identified Defense mission need.

6. PHASE III INTEREST

Further, if the Phase II project is successful and the DAF determines it has an interest in work that furthers, extends, or completes the work under the Phase I or Phase II, the partner will consider transitioning the resulting innovations to Phase III contracts, subcontracts, or other instruments with other DAF and/or Federal customers. The transition effort will give due regard to the Phase III transition preference for SBIR/STTR funded technologies set forth in references (a) and (b). Phase IIIs are subject to Government organizations' acquisition planning, funds availability, security assessments, and Small Business/Legal/Contracting/other review requirements. This paragraph in no way obligates the DAF to commit funding for a Phase III effort.

7. MILESTONES

The milestones found in Attachment 1.1, Schedule of Milestones, will provide value to the End-Users and/or Customers of the proposed solution.

8. STAKEHOLDERS

It is understood the successful transition of innovative solutions requires multiple engaged and empowered stakeholders. Responsibilities have been assigned to, and concurrence received from, the following stakeholders relative to the proposed project. Stakeholders' cognizant support functionals (e.g. contracting, small business office, legal counsel, engineering, PA, etc.) will also provide staff functions.

⁴Primary End-User Organization: (DAF END-USER ORGANIZATION)

Primary End-User Point of Contact:

(NAME)

(RANK/GRADE)

(DUTY TITLE)

(EMAIL)

⁵Primary Customer Organization: (DAF CUSTOMER ORGANIZATION)

Primary Customer Point of Contact:

(NAME)

(RANK/GRADE)

(DUTY TITLE)

(EMAIL)



8. STAKEHOLDERS (CONTINUED)

⁶PRIMARY Phase II Technical Point of Contact (TPOC): Primary TPOC must be a DAF civilian or military member, or the Customer Memorandum will not be accepted.

(NAME)

(RANK/GRADE)

(ORGANIZATION)

(EMAIL)

(DUTY PHONE)

⁶ALTERNATE Phase II Technical Point of Contact (TPOC):

(NAME)

(RANK/GRADE)

(ORGANIZATION)

(EMAIL)

(DUTY PHONE)

⁷TPOCs will work closely with the company during Phase II performance to achieve project success. This includes but is not limited to receiving and accepting/rejecting deliverables; providing performance and progress feedback to the company; working to overcome tactical execution barriers (e.g., base access, waivers/certifications, etc.); and driving the effort towards Phase III transition if successful. Please see the TPOC Designation Letter (Attachment 1.3) as it will need to be signed if the proposal is selected for potential award.

⁸Strategic Stakeholders (Both fields are required, if applicable.)

Name of MAJCOM or HQ function this proposal most directly impacts:

(NAME)

Name of PEO or Center this proposal most directly impacts:

(NAME)

Staff Functions (as applicable) Providing Concurrence:

(⁹SECURITY OFFICE NAME)

(¹⁰INFORMATION ASSURANCE/CYBERSECURITY NAME)

(¹¹FINANCE NAME)

(CONTRACTING NAME)

(STRATEGY, INTEGRATION, AND REQUIREMENTS NAME)



8. STAKEHOLDERS (CONTINUED)

(SMALL BUSINESS OFFICE NAME)

(COMMANDER NAME)

(LEGAL COUNSEL NAME)

(ENGINEERING/SPO/TEST NAME)

(PUBLIC AFFAIRS NAME)

(SMALL BUSINESS OFFICE NAME POC)

(ADDITIONAL STAKEHOLDERS: IF APPLICABLE OR ENTER N/A IF NOT APPLICABLE)

9. ¹²PHASE III TRANSITION STRATEGY

One of the SBIR/STTR Program's core objectives is increasing the likelihood of transition of small business innovations to Phase III. Visit afwerx.com for transition strategy resources and tailor a transition strategy narrative to the specific organization and solution here. (DESCRIPTION)



9. ¹² PHASE III TRANSITION STRATEGY (CONTINUED)

If more space is needed for your Transition Strategy please enter below or enter N/A.

10. SECURITY

The SBIR/STTR Company (WILL / WILL NOT) require access to military installations and facilities to perform the proposed work under Phase II. (If **will** is selected, please complete the next three fields. If **will not** is selected, please enter N/A into the next three fields.)

(CUSTOMER, TPOC OR N/A) confirms if a Phase II is awarded, TPOC will work with applicable visitor centers or security offices to sponsor the individuals onto the installation when required.



10. SECURITY (CONTINUED)

The SBIR/STTR Company (WILL / WILL NOT) require Common Access Cards (CACs) to access DoD networks to perform the proposed work under Phase II. (If will is selected, please complete the next field. If will not is selected, please enter N/A into the next field.)

(SECURITY OFFICE, TRUSTED AGENT OR N/A)

confirms if a Phase II is awarded, it will process the documentation required to issue the required CACs.

The SBIR/STTR Company (WILL / WILL NOT) require classified accesses documented via a DD254 to perform the proposed work under Phase II. (If will is selected, please complete the next field. If will not is selected, please enter N/A into the next field.)

(SECURITY OFFICE OR N/A)

will work with the TPOC and the appropriate DAF Customer/User to draft a DD254, and work with the company to obtain required classified accesses if a Phase II is awarded.¹³

11. ¹⁴CYBERSECURITY

The proposed solution (DOES/DOES NOT) involve software or IT that will connect to DoD networks/systems or utilize CUI data. (If does is selected, please fill out the following fields. If does not, please enter N/A into the next three fields.)

(INFORMATION ASSURANCE/CYBERSECURITY OFFICE)

will work with (SBIR/STTR COMPANY)

and (APPLICABLE AUTHORIZING OFFICIAL OR PLATFORM ONE)

to determine whether an ATO or IATT is required, submit required paperwork, and ensure cybersecurity requirements are met.

12. ¹⁵FLIGHT TESTING OR UTILIZATION OF UNMANNED AERIAL SYSTEMS (UAS)

The SBIR/STTR Company (WILL / WILL NOT) require flight testing or UAS utilization to accomplish the proposed Phase II work. (If will is selected, please adhere to the following:)

The SBIR/STTR company will immediately after contract award, start coordination with the TPOC, AFRL/DO and applicable AFWERX Test Personnel to prepare flight test planning documents in accordance with AFRL/DO instructions.



13. ¹⁶SIGNATORIES

Please contact the individuals below with questions or concerns.

a. ¹⁷Suitability of DAF End-User Signatory. (DESCRIPTION)

b. ¹⁸Suitability of DAF Customer Signatory. (DESCRIPTION)

¹⁹DAF or Joint Customer (FIRST MI LAST, RANK/GRADE, USAF) ²⁰DAF or Joint End-User (FIRST MI LAST, RANK/GRADE, USAF)

↓ **NOTE:** A CAC-enabled, digital signature is required here AND in the field to the right.

↓ **NOTE:** A CAC-enabled, digital signature is required here AND in the field to the left.

Attachment 1.1: Schedule of Milestones (required)

Attachment 1.2: Non-Proprietary Work Plan (required)

Attachment 1.3: TPOC Designation Letter (informational; do not include in the signed memo)

Attachment 1.4: SBIR/STTR Definitions and Suitability Resources (do not include in signed memo)



FORM INSTRUCTIONS FOR SBIR/STTR PHASE II CUSTOMER MEMORANDUM

NOTE – The use of the Customer Memorandum template is **MANDATORY**; all elements **MUST** be present and complete. To avoid disqualification, all fields must be filled in. If a question is not applicable to your solution, please indicate N/A. Proposals without a completed and signed memoranda accomplished in accordance with this template will be determined **non-responsive to the solicitation and will not be considered for award**.

R/R&D/RDT&E SUITABILITY – To ensure efforts submitted are appropriate for the SBIR/STTR Program, please see the applicable solicitation for general definitions and R/R&D/RDT&E suitability language. This language is not exhaustive but meant only for reference.

To learn more about the AFVentures SBIR/STTR Open Topic program and access additional resources including videos, sample applications, and more, visit <https://afwerx.com/afventures-overview/>.

1 Subject; Topic Number

Topic numbers can be found in the Consolidated Topic Information Table in the solicitation.

2 Section 4; Phase II Funding Commitment; Paragraph 1

Phase II Funding Commitment from DAF Organization: DAF Customer's Government funding commitments are not required for Phase II SBIR/STTR awards. However, a DAF Customer may wish to provide its own funds to supplement SBIR/STTR program funds in order to increase project scope according to Reference (b), (Appendix I)(e.)§4(b)(1)(v)(B).

Pursuant to Reference (b), DAF Customer may expend its non-SBIR/STTR funds as supplements to the Phase II award. Additionally, non-SBIR/STTR Federal matching, as well as non-Federal (in certain circumstances found in Reference b) funding, may be used for Phase II.

In order to be included in the contract award, if selected, funding documents (Form 9s/MIPRs) must be provided to AFRL/RGF within 45 calendar days after the corresponding solicitation's closing date. Once selection letters have been sent, CERTIFIED funding documents are due five business days later. If certified funding documents are not provided [by the solicitation close date +45 days], the effort will move forward without the second phase funding commitment considered. To initiate the funds transfer process, email AFRL.SBIR.STTR@us.af.mil. An automated response including the funds transfer request template and further guidance will be received.

NEW UPDATE: *DRAFT funding documents (Form 9s/MIPRs) are due within 45 days of the solicitation closing. Once selection letters have been sent, CERTIFIED funding documents are due five business days later. If certified funding documents are not provided [by the solicitation close date +45 days], the effort will move forward without the second phase funding commitment considered.*



3 Section 4; Phase II Funding Commitment; Paragraph 2

If non-SBIR/STTR Federal funding commitments are planned, include this language.

4 Section 8; Stakeholders; Primary End-User Organization

Primary End-User Organization is the organization that will use the developed solution, or who will primarily benefit from the solution.

5 Section 8; Stakeholders; Primary Customer Organization

Primary Customer Organization is the organization that will manage the future procurement or sustainment of the solution, and who will manage the funding, contracting, and logistics needs for Phase III awards, as appropriate.

6 Section 8; Stakeholders; Phase II Technical Points of Contact (TPOCs)

TPOCs must be notified of their duties prior to Memo signature; maintain the format of Name; Rank/Grade; Organization; Email; Phone.

7 Section 8; Stakeholders; TPOCs Paragraph

TPOCs are not required to be in the End-User or Customer organization. Another organization may provide a TPOC with expertise in the technology area. TPOCs MUST be Government personnel; support contractors, including SETA contractors, may not be TPOCs. Primary TPOCs MUST be DAF military (Active, Guard, or Reserve) or civilian personnel.

8 Section 8; Stakeholders; Strategic Stakeholders

These fields are for data collection purposes. If you are unsure, select the MAJCOM and PEO/Center that you think benefits most from this proposal.

9 Section 8; Stakeholders; Staff Functions; Security Office

Required for base access/CACs/classified accesses; see Section 10.

10 Section 8; Stakeholders; Staff Functions; Information Assurance

Required for software and IT solutions; see Section 11.

11 Section 8; Stakeholders; Staff Functions; Finance

Required for Phase II Government Funding Commitments, if applicable; see Section 4.

12 Section 9; Phase III Transition Strategy

The program's core objective is transition of SBIR/STTR-funded small business innovations to Phase III. Describe this effort's tentative transition strategy, assuming the proposed Phase II is successful and meets your organization's needs. At a minimum, address Phase III funding strategy, requirements personnel role (if applicable), contract vehicle, and integration plan.



The DAF Customer's Small Business Office should advise the Customer regarding potential contracting, subcontracting, or other opportunities suitable for the SBIR/STTR company.

Additional ideas/resources available in the attachments. Do not use boilerplate attachment language in this section. Tailor the Transition Strategy narrative to the specific organization and solution.

13 Section 10; Security; Security Office

AFVentures does not manage security processes. The customer and TPOC are responsible for this.

14 Section 11; Cybersecurity

If the proposed solution involves software or information technology and will connect to DoD networks/ systems or utilize CUI data, it will likely require an Authorization to Operate (ATO) or Interim Authorization To Test (IATT) granted by an Authorizing Official (AO), or utilize established DevSecOps environments within Platform One. The Air Force Customer or TPOC must consult with the applicable wing-level Cybersecurity or Information Assurance office to begin this process. Fundamental cybersecurity control requirements are outlined in NIST SP 800-171 Rev 1 and DFARS PGI 239.76 - Cloud Computing, serving as the backbone to Air Force cyber and data security. More information can be found at <https://www.safcn.af.mil/Organizations/CISO-Homepage/Small-Business-Cybersecurity-Information/> (AFVentures does not manage ATO or cybersecurity processes, the customer/TPOC are responsible)

15 Section 12; Flight Testing/UAS

Flight testing is any set of related events where a vehicle moves through the air making use of the physics of controlled or maneuvering aerial transport. It includes balloon flight, attributable aircraft, manned or unmanned aircraft, air taxis, aircraft ground test, cockpit evaluations, and other similar activities. It does not include activities where the flight path is solely ballistic in nature.

For Flight Testing or Utilization of unmanned Aerial Systems (UAS), there is a blanket waiver for AFRL/DO to "procure Commercial-Off-The-Shelf Unmanned Aerial Systems for the purposes of conducting cyber analysis, signature, system check out, or profile data in a benign or controlled RF environment." However, contractors proposing UAS purchases will need to work with the Government TPOC to also pursue a "use waiver." Contract execution is not dependent on use waiver completion. However, it is important to start the process as early as possible, as completion could impact efforts' milestone schedules.

16 Section 13; Signatories

Certain ranks/grades for signatories are not required to sign. However, the individuals should be in positions to speak for their organizations, i.e., individuals must understand and exert influence over operational needs, formal requirements, or funding. The DAF Customer and the DAF End-User cannot be the same person. A Customer Memorandum without two CAC-enabled digital signatures will NOT be accepted.



17 Section 13; Signatories; Air Force End-User Suitability

Briefly describe the DAF End-User signatory's appropriateness for this effort.

18 Section 13; Signatories; Air Force Customer Suitability

Briefly describe the DAF Customer signatory's appropriateness for this effort.

19 Section 13; Signatories; DAF Customer

A CAC-enabled, digital signature is required. The DAF Customer and the DAF End-User cannot be the same person. **IMPORTANT:** A Customer Memorandum without two signatures will **NOT** be accepted.

20 Section 13; Signatories; DAF End-User

A CAC-enabled, digital signature is required. The DAF Customer and the DAF End-User cannot be the same person. **IMPORTANT:** A Customer Memorandum without two signatures will **NOT** be accepted.

SBIR/STTR FUNDING AGREEMENT CERTIFICATION LIFECYCLE CERTIFICATION (Attachment 2)

All SBIR/STTR Phase I and Phase II Awardees must complete this certification at all times set forth in the Funding Agreement (see § 8(j) of the SBIR/STTR Policy Directive). This includes checking all of the boxes (unless otherwise directed) and having an authorized officer of the Awardee sign and date the certification each time it is requested.

Please read carefully the following certification statements. The Federal Government relies on the information to ensure compliance with specific program requirements during the life of the Funding Agreement. The definitions for the terms used in this certification are set forth in the Small Business Act, the SBIR/STTR Policy Directive, and also any statutory and regulatory provisions referenced in those authorities.

If the Funding Agreement officer believes that the business is not meeting certain Funding Agreement requirements, the agency may request further clarification and supporting documentation in order to assist in the verification of any of the information provided.

Even if correct information has been included in other materials submitted to the Federal Government, any action taken with respect to this certification does not affect the Government's right to pursue criminal, civil or administrative remedies for incorrect or incomplete information given in the certification. Each person signing this certification may be prosecuted if they have provided false information.

The undersigned has reviewed, verified and certifies that (all boxes must be checked except where otherwise directed):

- (1) The Principal Investigator/Project Manager will spend more than one half of his/her time (based on a 40 hour workweek) as an employee of the Awardee (or Research Institution – STTR only) or the Awardee has requested and received a written deviation from this requirement from the Funding Agreement officer.

☐ Yes ☐ No ☐ Deviation approved in writing by Funding Agreement officer: _____%

- (2) All Essentially Equivalent Work, or a portion of the work, performed under this project (check the applicable line):

☐ Has not been submitted for funding to this Agency or another Federal Agency.

☐ Has been submitted for funding to this Agency or another Federal agency but has not been funded under any other grant, contract, subcontract or other transaction.

☐ A portion has been funded by another grant, contract, or subcontract as described in detail in the proposal and approved in writing by the Funding Agreement officer.

- (3) Upon completion of the award, the Awardee will have performed the applicable percentage of work, unless a deviation from this requirement is approved in writing by the Funding Agreement officer (check the applicable line and fill in if needed):

☐ SBIR Phase I: at least two-thirds (66 2/3%) of the research.

☐ SBIR Phase II: at least half (50%) of the research.

☐ STTR Phase I or Phase II: at least forty percent (40%) of the research.

☐ Deviation approved in writing by the Funding Agreement officer (SBIR ONLY): _____%

- (4) The work is completed and the small business Awardee has performed the applicable percentage of work, unless a deviation from this requirement is approved in writing by the Funding Agreement officer (check the applicable line and fill in if needed):

☐ SBIR Phase I: at least two-thirds (66 2/3%) of the research.

☐ SBIR Phase II: at least half (50%) of the research.

☐ STTR Phase I or Phase II: at least forty percent (40%) of the research.

☐ Deviation approved in writing by the Funding Agreement officer: _____%

☐ N/A because work is not completed

- (5) **[For STTR only]** The Small Business Concern, and not a partnering Research Institution, is exercising management direction and control of the performance of the STTR Funding Agreement.

☐ Yes

☐ No

- (6) The R/R&D is performed in the United States unless a deviation is approved in writing by the Funding Agreement officer.

☐ Yes

☐ No

☐ Waiver has been granted

- (7) The R/R&D is performed at the Awardee's facilities by the Awardee's employees, except as otherwise indicated in the SBIR/STTR application and approved in the Funding Agreement.

☐ Yes

☐ No

- (8) ☐ I will notify this Agency immediately if all or a portion of the work authorized and funded under this award is subsequently funded by another Federal Agency.

(9) ☐ I understand that the information submitted may be given to Federal, State, and local agencies for determining violations of law and other purposes

(10) ☐ I am an officer of the Awardee business concern authorized to represent it and sign this certification on its behalf. By signing this certification, I am representing on my own behalf, and on behalf of the business concern, that the information provided in this certification, the application, and all other information submitted in connection with the award, is true and correct as of the date of submission. I acknowledge that any intentional or negligent misrepresentation of the information contained in this certification may result in criminal, civil or administrative sanctions, including but not limited to: (1) fines, restitution and/or imprisonment under 18 U.S.C. 1001; (2) treble damages and civil penalties under the False Claims Act (31 U.S.C. 3729 et seq.); (3) double damages and civil penalties under the Program Fraud Civil Remedies Act (31 U.S.C. 3801 et seq.); (4) civil recovery of award funds, (5) suspension and/or debarment from all Federal procurement and nonprocurement transactions (FAR subpart 9.4 or 2 CFR part 180); and (6) other administrative penalties including termination of SBIR/STTR awards.

(11) ☐ If the information herein changes between proposal receipt and award (if selected), the company shall notify the awarding Contracting Officer.

Signature _____

Date: _____

Print Name: (First, Middle, Last) _____

Title: _____

Business Name: _____

SBIR/STTR Environment, Safety and Occupational Health (ESOH) Questionnaire
(Attachment 3)

Company Name:

Title:

1. Will hazardous materials (as defined by Federal Standard 313D, Material Safety Data, Transportation Data and Disposal Data for Hazardous Material Furnished to Government Activities and 40 CFR Part 260 – 279) be used in the contract?

Yes ☐ No ☐

If the answer is "yes," list materials:

2. Will explosives or ammunition be used in research? (See definitions listed below before answering.)

Yes ☐ No ☐

Explosives and ammunition mean:

- (a.) Liquid and solid propellants and explosives, pyrotechnics, incendiaries and smokes in the following:
- (i) Bulk;
 - (ii) Ammunition;
 - (iii) Rockets;
 - (iv) Missiles;
 - (v) Warheads;
 - (vi) Devices; and
 - (vii) Components of (i) through (vi), except for wholly inert items.
- (b.) This definition does not include the following, unless the contractor is using or incorporating these materials for initiation, propulsion, or detonation as an integral or component part of an explosive, an ammunition or explosive end item, or of a weapon system.
- (i) Inert components containing no explosives, propellants, or pyrotechnics;
 - (ii) Flammable liquids;
 - (iii) Acids;
 - (iv) Oxidizers;
 - (v) Powdered metals; or
 - (vi) Other materials having fire or explosive characteristics.

If the answer is "yes," list items:

3. Will any hazardous processes be performed under the contract? Examples include operation of heavy equipment or power tools, operation of lasers or radio frequency radiation emitters, use of high voltage (greater than 600 volts) equipment, or use of equipment operating at high pressure (greater than 60 psig) or high temperature (greater than 50°C).

Yes ☐ No ☐

If the answer is "yes," list processes:

4. Will this research be completed on a U.S. Air Force installation?

Yes ☐ No ☐

If the answer is "yes," list facilities:

5. Will the contract require the purchase, storage use or delivery of any chemicals or hazardous material to USAF facilities?

Yes ☐ No ☐

If the answer is “yes,” list chemicals or hazardous materials:

6. Will any hazardous chemical or waste be generated during the course of this research?

Yes ☐ No ☐

If the answer is “yes,” specify the hazardous chemical or waste to be generated:

7. Will any Class I ozone depleting substances (ODSs) be required in this research?

A list of Class I ODSs is located at the following website: <http://www.epa.gov/ozone/ods.html>

Yes ☐ No ☐

If the answer is “yes,” list substances:

8. Does this effort involve the purchase or use of any radioactive materials?

Yes ☐ No ☐

If the answer is “yes,” specify the radioactive materials:

9. Will this effort involve any asbestos, radiation, or chemical generating/using components that will be delivered to USAF facilities?

Yes ☐ No ☐

If the answer is “yes,” specify the components:

10. Are there any special atmospheric or water resource requirements?

Yes ☐ No ☐

If “yes” specify the requirements.

Revised: 18 September, 2013

DoD SBIR/STTR Contractor Certification Regarding Provision of Prohibited Video Surveillance and Telecommunications Services and Equipment (Attachment 4)

Contractor's Name	
Company Name	
Office Tel #	
Mobile #	
Email	

Name of person authorized to sign:

Signature of person authorized:

Date:

The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

DFARS Provisions Incorporated in Full Text:

DFARS 252.204-7016 COVERED DEFENSE TELECOMMUNICATIONS EQUIPMENT OR SERVICES—REPRESENTATION (DEC 2019)

(a) *Definitions.* As used in this provision, “covered defense telecommunications equipment or services” has the meaning provided in the clause [252.204-7018](#), Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services.

(b) *Procedures.* The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (<https://www.sam.gov/>) for entities excluded from receiving federal awards for “covered defense telecommunications equipment or services”.

(c) *Representation.* The Offeror represents that it [] does, [] does not provide covered defense telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument.

(End of provision)

DFARS 252.204-7017 PROHIBITION ON THE ACQUISITION OF COVERED DEFENSE TELECOMMUNICATIONS EQUIPMENT OR SERVICES—REPRESENTATION (MAY 2021)

The Offeror is not required to complete the representation in this provision if the Offeror has represented in the provision at [252.204-7016](#), Covered Defense Telecommunications Equipment or Services—Representation, that it “does not provide covered defense telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument.”

(a) *Definitions.* “Covered defense telecommunications equipment or services,” “covered mission,” “critical technology,” and “substantial or essential component,” as used in this provision, have the meanings given in the [252.204-7018](#) clause, Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services, of this solicitation.

(b) *Prohibition.* Section 1656 of the National Defense Authorization Act for Fiscal Year 2018 (Pub. L. 115-91) prohibits agencies from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service to carry out covered missions that uses covered defense telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

(c) *Procedures.* The Offeror shall review the list of excluded parties in the System for Award Management (SAM) at <https://www.sam.gov> for entities that are excluded when providing any equipment, system, or service to carry out covered missions that uses covered defense telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless a waiver is granted.

Representation. If in its annual representations and certifications in SAM the Offeror has represented in paragraph (c) of the provision at [252.204-7016](#), Covered Defense Telecommunications Equipment or Services—Representation, that it “does” provide covered defense telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument, then the Offeror shall complete the following additional representation:

The Offeror represents that it ☐ will ☐ will not provide covered defense telecommunications equipment or services as a part of its offered products or services to DoD in the performance of any award resulting from this solicitation.

(e) *Disclosures.* If the Offeror has represented in paragraph (d) of this provision that it “will provide covered defense telecommunications equipment or services,” the Offeror shall provide the following information as part of the offer:

(1) A description of all covered defense telecommunications equipment and services offered (include brand or manufacturer; product, such as model number, original equipment manufacturer (OEM) number, manufacturer part number, or wholesaler number; and item description, as applicable).

(2) An explanation of the proposed use of covered defense telecommunications equipment and services and any factors relevant to determining if such use would be permissible under the prohibition referenced in paragraph (b) of this provision.

(3) For services, the entity providing the covered defense telecommunications services (include entity name, unique entity identifier, and Commercial and Government Entity (CAGE) code, if known).

(4) For equipment, the entity that produced or provided the covered defense telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known).

(End of provision)

**DFARS 252.204-7018 PROHIBITION ON THE ACQUISITION OF COVERED DEFENSE
TELECOMMUNICATIONS EQUIPMENT OR SERVICES (JAN 2023)**

Definitions. As used in this clause—

“Covered defense telecommunications equipment or services” means—

- (1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation, or any subsidiary or affiliate of such entities;
- (2) Telecommunications services provided by such entities or using such equipment; or
- (3) Telecommunications equipment or services produced or provided by an entity that the Secretary of Defense reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

“Covered foreign country” means—

- (1) The People’s Republic of China; or
- (2) The Russian Federation.

“Covered missions” means—

- (1) The nuclear deterrence mission of DoD, including with respect to nuclear command, control, and communications, integrated tactical warning and attack assessment, and continuity of Government; or
- (2) The homeland defense mission of DoD, including with respect to ballistic missile defense.

“Critical technology” means—

- (1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations;
- (2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled—
 - (i) Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or
 - (ii) For reasons relating to regional stability or surreptitious listening;
- (3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);
- (4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);
- (5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or

(6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).

“Substantial or essential component” means any component necessary for the proper function or performance of a piece of equipment, system, or service.

(b) *Prohibition.* In accordance with section 1656 of the National Defense Authorization Act for Fiscal Year 2018 (Pub. L. 115-91), the contractor shall not provide to the Government any equipment, system, or service to carry out covered missions that uses covered defense telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless the covered defense telecommunication equipment or services are covered by a waiver described in Defense Federal Acquisition Regulation Supplement [204.2104](#).

(c) *Procedures.* The Contractor shall review the list of excluded parties in the System for Award Management (SAM) at <https://www.sam.gov> for entities that are excluded when providing any equipment, system, or service, to carry out covered missions, that uses covered defense telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless a waiver is granted.

(d) *Reporting.*

(1) In the event the Contractor identifies covered defense telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, the Contractor shall report at <https://dibnet.dod.mil> the information in paragraph (d)(2) of this clause.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause:

(i) Within 3 business days from the date of such identification or notification: the contract number; the order number(s), if applicable; supplier name; brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 30 business days of submitting the information in paragraph (d)(2)(i) of this clause: any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of a covered defense telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) *Subcontracts.* The Contractor shall insert the substance of this clause, including this paragraph (e), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial products or commercial services.

(End of clause)

DISCLOSURE OF OFFEROR'S OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT (Attachment 5)

In accordance with DFARS provision 252.209-7002, an offeror is required to disclose, by completing this form (and adding additional pages, as necessary), any interest a foreign government has in the offeror when that interest constitutes control by a foreign government, as defined in DFARS provision 252.209-7002. If the offeror is a subsidiary, it is also required to disclose any reportable interest a foreign government has in any entity that owns or controls the subsidiary, including reportable interest concerning the offeror's immediate parent, intermediate parents, and the ultimate parent.

DFARS 252.209-7002 DISCLOSURE OF OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT (DEC 2022)

(a) *Definitions.* As used in this provision—

(1) “Effectively owned or controlled” means that a foreign government or any entity controlled by a foreign government has the power, either directly or indirectly, whether exercised or exercisable, to control the election, appointment, or tenure of the Offeror's officers or a majority of the Offeror's board of directors by any means, e.g., ownership, contract, or operation of law (or equivalent power for unincorporated organizations).

(2) “Entity controlled by a foreign government”—

(i) Means—

(A) Any domestic or foreign organization or corporation that is effectively owned or controlled by a foreign government; or

(B) Any individual acting on behalf of a foreign government.

(ii) Does not include an organization or corporation that is owned, but is not controlled, either directly or indirectly, by a foreign government if the ownership of that organization or corporation by that foreign government was effective before October 23, 1992.

(3) “Foreign government” includes the state and the government of any country (other than the United States and its outlying areas) as well as any political subdivision, agency, or instrumentality thereof.

(4) “Proscribed information” means—

(i) Top Secret information;

(ii) Communications security (COMSEC) material, excluding controlled cryptographic items when unkeyed or utilized with unclassified keys;

(iii) Restricted Data as defined in the U.S. Atomic Energy Act of 1954, as amended;

(iv) Special Access Program (SAP) information; or

(v) Sensitive Compartmented Information (SCI).

(b) *Prohibition on award.* No contract under a national security program may be awarded to an entity controlled by a foreign government if that entity requires access to proscribed information to perform the contract, unless the Secretary of Defense or a designee has waived application of 10 U.S.C. 4874.

(c) *Disclosure.* The Offeror shall disclose any interest a foreign government has in the Offeror when that interest constitutes control by a foreign government as defined in this provision. If the Offeror is a subsidiary, it shall also disclose any reportable interest a foreign government has in any entity that owns or controls the subsidiary, including reportable interest concerning the Offeror's immediate parent, intermediate parents, and the ultimate parent. Use separate paper as needed, and provide the information in the following format:

DISCLOSURE		
Offeror's Point of Contact for Questions about Disclosure	Name:	
	Phone Number:	
Offeror	Name:	
	Address:	
Entity Controlled by a Foreign Government	Name:	
	Address:	
Description of Foreign Government's Interest In the Offeror		
Foreign Government's Ownership Percentage In Offeror		
Identification of Foreign Government(s) with Ownership or Control		

SECURITY PROGRAM QUESTIONNAIRE (Attachment 6)

Objective: This questionnaire is used to review the security program and practices of the institutions receiving research funding.

Intended Audience/User: Completed by Contractor/Recipient; reviewed by S&T Protection Lead.

Date Submitted:

Applicant Name:

Cage Code/SCL and level (if applicable):

Completed by Name:

Position/Title:

1. What are your physical security plans?
2. What information security processes are in place?
3. Where will information for this effort be stored? (examples: computers, cloud, file cabinets, etc.)
4. What procedures are in place for transmission/transportation of information for this effort?
5. What procedures are in place for disposal and destruction of information for this effort?
6. What procedures are in place for reproduction of information for this effort?
7. What safeguards are in place for personnel who can access information for this effort?
8. What is the plan for safeguarding GFE/GFI?
9. What procedures are in place for cybersecurity or network protection?
10. What operations security processes are in place to prevent adversaries' access to information for this effort or actions that would compromise your projects?
11. What processes are in place to deter, detect, and mitigate actions of insider threat?
12. What procedures are in place to handle if information for this effort is compromised?
13. Are you willing to provide AFRL S&T Protection training to all personnel with access annually?

Additional comments:

RESEARCH & RELATED SENIOR/KEY PERSON PROFILE (Attachment 7)

PROFILE - Project Director/Principal Investigator		
Prefix:	* First Name:	Middle Name:
* Last Name:	Suffix:	
Position/Title:		
Department:		
Organization Name:		
Division:		
* Street1:		
Street2:		
* City:	County/ Parish:	
* State:	Province:	
* Country: USA: UNITED STATES	* Zip / Postal Code:	
* Phone Number:	Fax Number:	
* E-Mail:		
Credential, e.g., agency login:		
<div style="display: flex; justify-content: space-between;"> * Project Role: PD/PI Other Project Role Category: </div>		
Degree Type:		
Degree Year:		
PROFILE – Additional Senior/Key Person(s) Description(s)		
Prefix:	* First Name:	Middle Name:
* Last Name:	Suffix:	
Position/Title:		
Department:		
Organization Name:		
Division:		
* Street1:		
Street2:		
* City:	County/ Parish:	
* State:	Province:	
* Country: USA: UNITED STATES	* Zip / Postal Code:	
* Phone Number:	Fax Number:	
* E-Mail:		
Credential, e.g., agency login:		
<div style="display: flex; justify-content: space-between;"> * Project Role: Other Project Role Category: </div>		
Degree Type:		
Degree Year:		

VERIFICATION OF ELIGIBILITY OF SMALL BUSINESS JOINT VENTURES

(Attachment 8)

A small business joint venture applicant must submit, with its offer, the representation required in paragraph (c) of FAR solicitation provision 52.212-3, Offeror Representations and Certifications-Commercial Products and Commercial Services, and paragraph (c) of FAR solicitation provision 52.219-1, Small Business Program Representations, in accordance with 52.204-8(d) and 52.212-3(b) for the following categories:

- (A) Small business;
- (B) Service-disabled veteran-owned small business;
- (C) Women-owned small business (WOSB) under the WOSB Program;
- (D) Economically disadvantaged women-owned small business under the WOSB Program; or
- (E) Historically underutilized business zone small business.

Contractor's Name	
Company Name	
Office Telephone #	
Mobile #	
Email	

SBIR/STTR FUNDING AGREEMENT CERTIFICATION (Attachment 9)

All small businesses that are selected for award of an SBIR/STTR Funding Agreement must complete this certification at the time of award and any other time set forth in the Funding Agreement that is prior to performance of work under this award. This includes checking all of the boxes and having an authorized officer of the Awardee sign and date the certification each time it is requested.

Please read carefully the following certification statements. The Federal Government relies on the information to determine whether the business is eligible for a Small Business Innovation Research (SBIR) program or Small Business Technology Transfer (STTR) program award. A similar certification will be used to ensure continued compliance with specific program requirements during the life of the Funding Agreement. The definitions for the terms used in this certification are set forth in the Small Business Act, SBA regulations (13 CFR part 121), the SBIR/STTR Policy Directive and also any statutory and regulatory provisions referenced in those authorities.

If the Funding Agreement officer believes that the business may not meet certain eligibility requirements at the time of award, they are required to file a size protest with the U.S. Small Business Administration (SBA), which will determine eligibility. At that time, SBA will request further clarification and supporting documentation in order to assist in the verification of any of the information provided as part of a protest. If the Funding Agreement officer believes, after award, that the business is not meeting certain Funding Agreement requirements, the agency may request further clarification and supporting documentation in order to assist in the verification of any of the information provided.

Even if correct information has been included in other materials submitted to the Federal Government, any action taken with respect to this certification does not affect the Government's right to pursue criminal, civil or administrative remedies for incorrect or incomplete information given in the certification. Each person signing this certification may be prosecuted if they have provided false information.

The undersigned has reviewed, verified and certifies that (all boxes must be checked unless otherwise directed):

- (1) ☐ The Awardee business concern meets the ownership and control requirements set forth in 13 CFR 121.702.
- (2) If a corporation – all corporate documents (namely: articles of incorporation and any amendments, articles of conversion, by-laws and amendments, shareholder meeting minutes showing director elections, shareholder meeting minutes showing officer elections, organizational meeting minutes, all issued stock certificates, stock ledger, buy-sell agreements, stock transfer agreements, voting agreements, and documents relating to stock options, including the right to convert non-voting stock or debentures into voting stock) must evidence that the corporation meets the ownership and control requirements set forth in 13 CFR 121.702.

(Check one box) ☐ Yes ☐ N/A

Explain why N/A:

- (3) If a partnership -- the partnership agreement evidences that it meets the ownership and control requirements set forth in 13 CFR 121.702.

(Check one box) ☐ Yes ☐ N/A

Explain why N/A:

- (4) If a limited liability company – the articles of organization and any amendments, and operating agreement and amendments, evidence that it meets the ownership and control requirements set forth in 13 CFR 121.702.

(Check one box) ☐ Yes ☐ N/A

Explain why N/A:

- (5) The birth certificates, naturalization papers, or passports show that any individuals it relies upon to meet the eligibility requirements are U.S. citizens or permanent resident aliens in the United States.

(Check one box) ☐ Yes ☐ N/A

Explain why N/A:

- (6) ☐ The Awardee business concern has no more than 500 employees, including the employees of its Affiliates.

- (7) ☐ SBA has not issued a size determination currently in effect finding that this business concern exceeds the 500 employee size standard.

- (8) During the performance of the award, the Principal Investigator/Project Manager will spend more than one half of his/her time (based on a 40 hour workweek) as an employee of the Awardee (or Research Institution – STTR only) or has requested and received a written deviation from this requirement from the Funding Agreement officer. (Check one box)

☐ Yes ☐ Deviation approved in writing by Funding Agreement officer: _____%

- (9) All Essentially Equivalent Work, or a portion of the work, proposed under this project (check applicable line):

☐ Has not been submitted for funding to this Agency or another Federal agency.

☐ Has been submitted for funding to this Agency or another Federal agency but has not been funded under any other grant, contract, subcontract or other transaction.

☐ A portion has been funded by another grant, contract, or subcontract as described in detail in the proposal and approved in writing by the Funding Agreement officer.

(10) During performance of award, the Awardee will perform the applicable percentage of work unless a deviation from this requirement is approved in writing by the Funding Agreement officer (check applicable line and fill in if needed):

☐ SBIR Phase I: at least two-thirds (66 2/3%) of the research.

☐ SBIR Phase II: at least half (50%) of the research.

☐ STTR Phase I or Phase II: at least forty percent (40%) of the research.

☐ Deviation approved in writing by the Funding Agreement officer (SBIR ONLY): _____%

(11) During performance of award, the R/R&D will be performed in the United States unless a deviation is approved in writing by the Funding Agreement officer. (Check one box)

☐ Yes

☐ Waiver has been granted

(12) ☐ During performance of award, the R/R&D will be performed at the Awardee's facilities by the Awardee's employees, except as otherwise indicated in the SBIR/STTR application and approved in the Funding Agreement.

(13) The SBIR Awardee has registered itself on SBA's database as majority-owned by venture capital operating companies, hedge funds or private equity firms. (Check one box)

☐ Yes

☐ No

☐ N/A Explain why N/A:

(14) The SBIR Awardee is a Covered Small Business Concern (a Small Business Concern that: (a) was not majority-owned by multiple venture capital operating companies (VCOs), hedge funds, or private equity firms on the date on which it submitted an application in response to an SBIR solicitation; and (b) on the date of the SBIR award, which is made more than 9 months after the closing date of the solicitation, is majority-owned by multiple venture capital operating companies, hedge funds, or private equity firms). (Check one box)

☐ Yes

☐ No

(15) ☒ I will notify this Agency immediately if all or a portion of the work authorized and funded under this award is subsequently funded by another Federal Agency.

(16) **[STTR only]** The Small Business Concern, and not a partnering Research Institution, is exercising management direction and control of the performance of the STTR Funding Agreement.

☐ Yes

☐ No

(17) ☒ I understand that the information submitted may be given to Federal, State, and local agencies for determining violations of law and other purposes.

(18) ☒ I am an officer of the business concern authorized to represent it and sign this certification on its behalf. By signing this certification, I am representing on my own behalf, and on behalf of the business concern that the information provided in this certification, the application, and all other information submitted in connection with this application, is true and correct as of the date of submission. I acknowledge that any intentional or negligent misrepresentation of the information contained in this certification may result in criminal, civil or administrative sanctions, including but not limited to: (1) fines, restitution and/or imprisonment under 18 U.S.C. 1001; (2) treble damages and civil penalties under the False Claims Act (31 U.S.C. 3729 et seq.); (3) double damages and civil penalties under the Program Fraud Civil Remedies Act (31 U.S.C. 3801 et seq.); (4) civil recovery of award funds, (5) suspension and/or debarment from all Federal procurement and nonprocurement transactions (FAR subpart 9.4 or 2 CFR part 180); and (6) other administrative penalties including termination of SBIR/STTR awards.

Signature _____

Date: _____

Print Name: (First, Middle, Last) _____

Title: _____

Business Name: _____

Certification Questions and Coversheet Supplement (Attachment 10)

The online coversheet asks many questions and, depending on the answers, more information may be needed. The list of the questions is reflected below along with any additional information needed; required additional information should be provided in Volume 5, Supporting Documents. Consolidate all required items below (including the question that triggered the requirement) into a single .pdf file with the title “Coversheet Supplement”.

1. Do you allow for the release of contact information to Economic Development Organizations? Either answer is awardable.
2. Is your firm a small business as described in 13 CFR 121.702(c), with no more than 500 employees including affiliates?
If your firm is NOT an eligible small business, your proposal will be disqualified.
3. Does your business concern meet the ownership and control requirements in 13 CFR 121.702(b)?
If your firm does NOT meet the ownership and control requirements, your proposal will be disqualified.
4. Is 50% or more of your firm owned or managed by a corporate entity?
 - (If YES, additional information required in Volume 5) If YES, and the corporate entity is also a small business, please include in this section a description of the corporate relationship, including other affiliates of the owning corporate entity.
5. At a minimum, will 50% of the research and/or analytical work be carried out by your small business, as described in Section 1(c) of this CSO?
 - If your firm will NOT perform the prescribed percentage of the research and/or analytical work, your proposal will be disqualified.
6. Is primary employment of the principal investigator with your firm as described in section 1(c) of this CSO?
 - If the primary employment of the principal investigator is NOT with the proposing SBC, your proposal will be disqualified.
7. Has your firm been convicted of a fraud-related crime involving SBIR and/or STTR funds or found civilly liable for a fraud-related violation involving Federal funds?
 - If your firm has been convicted of a fraud-related crime involved SBIR and/or STTR funds, your proposal will be disqualified.
8. Has your firm’s Principal Investigator (PI) or Corporate Official (CO), or owner been convicted of a fraud-related crime involving SBIR and/or STTR funds or found civilly liable for a fraud-related violation involving Federal funds?
 - If the Principal Investigator or Corporate Official has been convicted of a fraud-related crime involved SBIR and/or STTR funds, your proposal will be disqualified.

9. Has your firm met the performance benchmarks in Section 1(d) of this CSO and listed by the SBA on their website as eligible to participate? Either answer is awardable.

10. Is your firm registered in the SBA's venture capital database as majority-owned by venture capital operating companies, hedge funds, or private equity firms?

- (If YES, additional information required in Volume 5) If YES, please state whether the VCOC, hedge fund, or private equity firm is also a small business as defined by the SBA. If so, then the VCOC, hedge fund, or private equity firm may count as an 'affiliate' and their employee numbers will need to be added to your employee total.

11. Is your firm more than 50% owned by a single Venture Capital Owned Company (VCOC), hedge fund, or private equity firm?

- (If YES, additional information required in Volume 5) If YES, please state whether the VCOC, hedge fund, or private equity firm is also a small business as defined by the SBA. If so, then the VCOC, hedge fund, or private equity firm may count as an 'affiliate' and their employee numbers will need to be added to your employee total.

NOTE (applies to questions 10, 11, and 12): If questions 10 or 11 are answered 'YES', then explain the ownership structure of the firm and its investors. If the VCs, hedge funds or PE firms owning equity in the company are themselves small businesses as defined by the SBA, the proposal may be still eligible for award.

12. Number of employees including all affiliates (average for preceding 12 months):

- If your firm and affiliates have employed, on average over the last 12 months, more than 500 employees, your proposal will be disqualified.

13. Is your firm affiliated as set forth in 13 CFR 121.103?

- (If YES, additional information required in Volume 5) If yes, then please detail your affiliations as described at <https://www.sba.gov/document/support--affiliation-guide-size-standards>.
- Note: This may include investors, i.e., VCs, hedge funds or PE firms, and their other controlled entities, if they own a controlling share of the company.

NOTE (applies to questions 13 and 14): A business that is wholly or substantially owned by investment companies or development companies licensed or qualified under the Small Business Investment Act of 1958 (SBIA), they are not considered affiliates of those investment companies or development companies.

14. As defined by SBA: All answers may be "yes" or "no" without impacting eligibility.

- a. Are you a socially or economically disadvantaged small business?
- b. Are you a Woman-Owned small business (WOSB)?
- c. Are you a certified HUBZone small business concern?
- d. Are you a Service-Disabled Veteran-Owned small business (SDVOSB)?

15. Has the Defense Contracting Audit Agency (DCAA) or other agreed upon agency, performed a review of the firm's accounts or records in connection with Government contracts or subcontracts within the past 12 months? Either answer is awardable.

16. Does the proposed cost include Technical and Business Assistance (TAB)?

- The AF does not allow for TAB.

17. Has a proposal for essentially equivalent work (Section 1(e) of this CSO) been submitted to other US government agencies or DOD components?

o (If YES, additional information required in Volume 5) If a proposal submitted in response to this CSO is substantially the same as another proposal that was funded, is now being funded, or is pending with another Federal Agency, or another or the same DoD Component, you must reveal this on the Proposal Cover Sheet (Volume 1) and provide the following information in the Coversheet Supplement:

Name of Federal Agency to which the Proposal was submitted, or from which an award is expected or has been received	Date of proposal submission or date of award	Title of Proposal (if SBIR/STTR, include Proposal Number and SBIR/STTR topic number)	Name and Title of Principal Investigator for each proposal submitted or award received	Was awarded? If so, include contract number
(LIST)	(LIST)	(LIST)	(LIST)	(LIST)

18. Has a contract been awarded for any of the proposals listed above?

- If your firm has been awarded a contract from the US Government for essentially equivalent work, your proposal will be disqualified.

19. Are you submitting assertions in accordance with DFARS 252.227-7017 "Identification and Assertions of Use, Release, or Disclosure Restrictions" or DFARS 252.227-7018 Class Deviation 2020-O0007?

- (If YES, additional information required in Volume 5) If you answered 'yes' to this question, you must include the table found in [DFARS 252.227-7017](#) or [DFARS 252.227-7018 Class Deviation 2020-O0007](#) in Volume 5 of your proposal.
- The contract cannot be awarded until assertions have been approved.
- o If claiming data rights assertions without including an appropriate Data Rights Assertions Table, the proposal will be disqualified.

NOTE - Rights in technical data, including software, developed under the terms of any contract resulting from proposals submitted in response to this CSO generally remain

with the contractor. As detailed in DFARS 252.227-7018(b)(1), the Government shall have unlimited rights in specific technical data or computer software generated under SBIR/STTR contracts, to include form, fit, and function data and data necessary for installation, operation, maintenance, and training purposes. Aside from the unlimited rights afforded under DFARS 252.227-7018(b)(1), the Government shall have SBIR data rights in all other technical data or computer software generated under this contract for a period of 20 years, commencing upon contract award. Upon expiration of the 20 year restrictive license, the Government has Government Purpose Rights in the SBIR data. During the license period, the Government may not release or disclose SBIR data to any person other than its support services contractors except: (1) For evaluation purposes; (2) As expressly permitted by the contractor; or (3) A use, release, or disclosure that is necessary for emergency repair or overhaul of items operated by the Government. See DFARS clause 252.227-7018, "Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program."

20. Is the firm proposing research utilizing human subjects (3(b)(vi.)), animal subjects (3(b)(vii)) or recombinant DNA (3(b)(vii)) as described in the solicitation?

- (If YES, additional information required in Volume 5) If the firm intends to perform research involving 1) human subjects, 2) animal subjects, or 3) recombinant DNA molecules, please include the following information (add attachments as needed):
 - For 1) please provide a current Federal Assurance of Compliance with Federal regulation for human subject protection and evidence of completed appropriate training in human subject protection for all involved personnel from your firm;
 - for 2) documentation verifying review and approval for the research from the Institutional Animal Care and Use Committee; and
 - for 3) evidence of approval by the Institutional Biosafety Committee.
 - Until such documents are provided, the firm cannot perform any work involving associated activities. This could lead to disqualification, depending on the effort's schedule.

21. Are teaming partners or subcontractors proposed?

- (If YES, additional information required in Volume 5) If yes, be sure to include this information in the proposal Coversheet (Volume 1), Cost Volume (Volume 3) and Supplemental Cost Information (Volume 5).

22. Is the firm proposing to use foreign nationals (1(e)) or non-U.S. citizens (Table 5) for work under the proposed effort?

a. (If YES, additional information required in Volume 5) If yes, identify any foreign citizens or individuals holding dual citizenship expected to be involved on this project as a direct employee, subcontractor, or consultant. For these individuals, please specify their countries of origin, the type of visas or work permits under which they are performing, and the tasks they are anticipated to perform for this project, if awarded. The firm may be asked to provide additional information during negotiations to verify the foreign citizen's eligibility to participate the SBIR effort. Supplemental information provided in response to this paragraph will be protected in accordance with the Privacy Act (5 U.S.C.

552a), if applicable, and the Freedom of Information Act (5 U.S.C. 552(b) (6)). Proposals including the involvement of foreign nationals should include this table:

Full Name	Foreign National (Yes or No)	Country of Origin	Type of Visa or Work Permit Held	Description of Involvement (specific task(s) in the work plan)
(LIST)	(LIST)	(LIST)	(LIST)	(LIST)

b. If the cognizant Government Program Manager does not concur with the individuals' involvement or the information is not received by the specified date/time, the proposal may be disqualified.

23. What percentage of the principal investigator's total time will be on the project?

a. Any non-zero answer is awardable.

b. (If less than 25%, additional information required in Volume 5.) If the answer is below 25%, please describe the principal investigator's other roles.

24. Is the principal investigator a woman? Either answer is awardable. This information is required for the SBA's Award Information Database.

25. Is the principal investigator socially/economically disadvantaged? Either answer is awardable. This information is required for the SBA's Award Information Database.

D2P2 FUNDING COMMITMENT FORM (Attachment 11) (required if applicable)

1. For Government funding:

Government Funding Organization	Government POC Name/E-mail	Amount of Funding	Year/Type Funding, e.g., R&D, O&M, etc.

2. For private investment:

Private Funding Organization	Private POC Name/ E- mail	Amount of Funding	Type of Funding, e.g., pre-sales

3. Total Government Funds Amount: \$ _____

4. Total Private Fund Amount: \$ _____

5. Total Requested SBIR Funding Amount: \$ _____

6. Government Funding Work Plan Summary:

[INSERT brief statement describing the project portion the Government sponsor will fund, i.e., how does it support the Phase II Work Plan, additional R&D, or marketing under the proposed SBIR project?]

7. Private Funding Work Plan Summary:

[INSERT brief statement describing the project portion the investor will fund, i.e., how does it support the Phase II Work Plan, additional R&D, or marketing under the proposed SBIR project?]

Appendix A- Proposal Volume Documentation Requirements

Table 3: Proposal Volume Contents (All Volumes)	
Registration	<ul style="list-style-type: none"> -UEI Number -Commercial or Government Entity (CAGE) Code -SBA Small Business Concern (SBC) ID
Volume 1: Proposal Cover Sheet	<ul style="list-style-type: none"> -CAGE, EID -Certification Questions -Business Information -Proposal Information -Contact Information
Volume 2: Technical Volume	-15-Page White Paper; pages in excess of this amount will not be considered in evaluations.
Volume 3: Cost Volume	<ul style="list-style-type: none"> -Direct Labor Costs -Direct Material Costs -Other Direct Costs -Second Phase Commitment and/or Cost Share (if applicable)
Volume 4: CCR	<ul style="list-style-type: none"> -Completed through DSIP. -Not considered during proposal evaluations.
Volume 5: Supporting Documents	<ul style="list-style-type: none"> -Signed Customer Memorandum (Attachment 1) (required) -Lifecycle Certification (Attachment 2) (Required) -SBIR/STTR Environment, Safety, and Occupational Health (ESOH) (Attachment 3) (Required) -D2P2 Funding Commitment Documentation (Attachment 11, required if applicable) -Contractor Certification Regarding Provision of Prohibited Video Surveillance and Telecommunications Services and Equipment (Attachment 4) (Required) -Foreign Ownership or Control Disclosure (Attachment 5) (Required) -DAF Security Program Questionnaire (Attachment 6) (Required) -Research & Related Senior/Key Person Profile (Attachment 7) (Required) -Verification of Eligibility of Small Business Joint Ventures (Attachment 8) (Required, if applicable) -SBIR/STTR Funding Agreement Certification (Attachment 9) (Encouraged at proposal submission, required prior to award) -Coversheet Supplement (Attachment 10) (Required) -Supplemental Cost Information Supporting Documentation -Subcontractor Agreements -Copies of Consultant Agreements

	<ul style="list-style-type: none"> -Additional Letters of Support -Resumes of Key Personnel -Non-Proprietary Work Plan (required) -DD Form 2345, Military Critical Technical Data Agreement (required if applicable) -Allocation of Rights (optional) -Data Rights Assertion Table (required, if applicable) -NIST SP-800 171 Assessment Documentation
Volume 6: Fraud, Waste, and Abuse Training	<p>All applicants must complete the fraud, waste, and abuse training (Volume 6) that is located on DSIP (https://www.dodsbirsttr.mil). Please follow guidance provided on DSIP to complete the required training.</p> <p>To Report Fraud, Waste, or Abuse, Please Contact: MDA Fraud, Waste & Abuse Hotline: (256) 313-9699 MDAH hotline@mda.mil Version 2 MDA - 10 DoD Inspector General (IG) Fraud, Waste & Abuse Hotline: (800) 424-9098 hotline@dodig.mil</p> <p>Plan ahead and leave ample time to complete this training based on the proposal submission deadline. FWA training must be completed by one DSIP firm user with read/write access (Proposal Owner, Corporate Official or Firm Admin) on behalf of the firm.</p>

Table 4: Proposal Cover Sheet Contents (Volume 1)	
Technical Abstract	The technical abstract should include a brief program objective/effort description. Technical abstracts are submitted to the Office of the Secretary of Defense (OSD) for public release. Therefore, they shall not contain proprietary or classified information. The term “Component” on the Cover Sheet refers to the soliciting AF organization, AFWERX or AFRL.
Anticipated Benefits/Potential Commercial Applications of R/R&D	The first line of the ‘Anticipated Benefits’ section should follow this format: We solved [DAF problem] by providing [advantage], to help [DAF end-user organization] accomplish [DAF end-user’s] goal. We will recognize profit by charging [non-Defense commercial customer organizations] to get [non-Defense commercial benefit]. Be very explicit regarding the proposed DAF end user and customer, if different, which is likely, and potential non-SBIR funding sources after successful Phase II completion. This list should also include non-proprietary, non-Defense commercial customers. Do not include specific DAF names or non-Defense customers, as this section will be publicly released.
List of maximum 8 Key Words or Phrases, separated by commas, Describing the Project	This section will be used to categorize the application. These keywords may also be used to identify Phase III transition partners within the Government. Therefore, consider more than technical key words. A potentially useful analogy is Search Engine Optimization (SEO) Keywords.

Table 5: Technical Volume Content Description (Volume 2)	
Item	Description
Type of File	<p>The Technical Volume must be a single Portable Document Format (.pdf) file, including graphics. Perform a virus check before uploading the Technical Volume file. If a virus is detected, it may cause rejection of the proposal. Do not lock or encrypt the uploaded file.</p> <p>Do not include or embed active graphics such as videos, moving pictures, or other similar media in the document.</p>
Length Limitation	The White Paper is limited to 15 pages; any pages in excess of 15 will not be considered.
Layout	Number all pages consecutively. Each page should contain the company name, topic number, and proposal number assigned by DSIP when the Cover Sheet was created. Use no smaller than 10-point font.
Proprietary Information in Proposals	<p>The following legend must appear on each page of the proposal that contains information the applicant wishes to protect:</p> <p><i>Use or disclosure of information contained on this sheet is subject to the restriction on the title page of this proposal.</i></p>
Content	
Table of Contents	<p>Include a table of contents immediately following the Proposal Cover Sheet. <u>Does not count against the 15 page limit.</u></p> <p>Proposing SBCs that include data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall mark the first page of the proposal submission with the following legend:</p> <p><i>This proposal contains information that shall not be disclosed outside the Federal Government and shall not be duplicated, used, or disclosed in whole or in part for any purpose other than evaluation of this proposal, unless authorized by 1a. The Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract if award is made as a result of the submission of this proposal. The information subject to these restrictions are contained on all pages of the proposal except for pages [insert page numbers or other identification of pages that contain no restricted information].</i></p>
Glossary	<p>Include a glossary of acronyms and abbreviations used in the proposal. <u>Does not count against the 15 page limit.</u></p>
Technical Summary	
Identification and Significance of the Problem or Opportunity	Briefly describe the specific problem/opportunity addressed in the feasibility study and its relationship to the Phase II effort.

Air Force Technology Strategic Capabilities AND/OR	Air Superiority; Intelligence, Surveillance, and Reconnaissance; Rapid Global Strike; Global Strike; Command and Control; Responsibilities to organize, train, and equip the force; Air Force Blue Sky.
Space Force Technology Strategic Capabilities	Space Superiority; Combat Power Projection; Space Mobility and Logistics; Information Mobility; Space Domain Awareness; Responsibilities to organize, train, and equip the force; Space Force Blue Sky.
Non-Defense Commercial Solution	<p>Describe the non-Defense commercial solution, including its use by non-Defense commercial customers. Describe its technical specifications as well as the qualitative and quantitative value it brings to the solution’s users. Relevant supporting data such as journal articles, literature, Government publications, etc., should be contained or referenced in the proposal and will count toward the page limit. Additionally, answer the following questions:</p> <p>Does the proposed solution represent an entirely novel standalone solution or does it modify/build upon an existing product or service?</p> <p>Has the proposed solution been (i) sold, leased, or licensed to the public; OR (ii) offered for sale, lease, or license to the public? Provide quantifiable data evidencing this sale, lease, or licensing.</p> <p>What is the non-defense market opportunity of your proposed solution? Can this be quantified or described?</p> <p>Is the proposed item “of a type”, i.e., similar to a commercial item, customarily used by the public or by non-Governmental entities for non- Governmental purposes?</p> <p>What are the end-user use cases for the proposed solution and how does the proposed solution fulfill these use cases?</p> <p>How is the proposed solution different from similar competitor solutions?</p> <p>What are the proposed solution’s technical risks and how are they mitigated?</p> <p>What is the proposed solution’s technical readiness level, and have any previous results shown the technology’s viability?</p> <p>Include, where applicable pre-sales, pilots, sales, revenue, active users, subscriptions, downloads, and/or other forms of traction/adoption for the proposed solution.</p> <p>Broad adoption and commercial success can be indicators of commercial potential and reduced technical risk, but are not mandated.</p>

	<p>Clearly delineate between the proposed solution’s commercial success and the overall company’s success.</p> <p>This is an RDT&E solicitation, not a Commercial-Off-the-Shelf resale solicitation. See FAR 2.101 for a full definition of commercial items.</p>
Proposed Adaptation of Non-Defense Commercial Solution	<p>Describe the proposed R/R&D adaptation of or the T&E (strictly for use in technical or weapons systems) to be performed on the non-Defense commercial solution to meet a US Government end-user need. In this section, answer the following questions:</p> <ul style="list-style-type: none"> • How similar is the modified item to others sold in the commercial marketplace to non-US Government customers? • Does the supplier perform similar modifications for non-US Government customers? • Do DAF unique modifications change the product’s essential use and purpose? • Are there differences in the production/manufacturing/delivery processes used to perform the modification for the Federal Government versus non-Government customers? • What are the quantitative benefits expected for identified DAF end-users? • When adapting the commercial solution, what is the intended Commercial- Off-the-Shelf (COTs) or commercial product/process modification? Explain. • If applicable, what Test & Evaluation will be performed on the solution, and what Technical or Weapons System will the solution be integrated into? What is the desired outcome of that T&E?
Phase I-Type “Feasibility Study” Results	<p>The Proposal shall detail the proposed solution’s ability to meet DAF End-Users’ and Customers’ needs. These results shall be framed in the context of DAF End-User and Customer Exploration previously performed for the effort.</p> <ul style="list-style-type: none"> · Scientific or Technical R/R&D effort, including research questions, methods, results, and relevant literature. · DAF End-User and Customer Exploration Methods: Describe methods, both successful and unsuccessful, used to perform technical and scientific feasibility analysis, as well as DAF Customer and End-User Exploration, for adapting the non-Defense commercial solution to a specific DAF end-user’s needs. This should include detailed reports of at least one in-depth interview with a DAF End-User and one in-depth interview with a DAF Customer.

	<ul style="list-style-type: none"> · Empower and Committed DAF End-Users: list and describe specific DAF End-Users (e.g., operators) willing to support further R&D, testing, evaluation, or trial for the proposed Phase II solution. · Specifically explain how the proposed solution meets the End-User's needs. Describe in as much detail as possible the firm's understanding of the DAF End-User's problem or benefit area. · Empowered and Committed DAF Customers: list and describe the specific DAF Customer (e.g., a Program Manager at a System Program Office) willing to assist with transitioning the proposed D2P2 solution to a Phase III. · Joint organizations may be the End-User or Customer, but the Customer Memorandum must clearly articulate how the Joint End-User/Customer represents a validated DAF need. In these cases, the Primary TPOC must be from the DAF. · Empowered and Committed US Non-DAF Government End-Users: commitments from US non-DAF Government end-users will also be considered. However, there MUST be at least one DAF/Joint End-User and Customer as described above. · Inclusion of a Customer Memorandum is mandatory for all proposals. Proposals without a signed Customer Memorandum or proposals that do not follow the mandatory template will not be considered for award. Customer Memoranda must be uploaded to the "Letters of Support" Section in Volume 5, Supporting Documents and must have "Customer Memorandum" in their document names.
Compliance and Regulatory Activities	<ul style="list-style-type: none"> ● Will there be flight testing? (indicate indoor/outdoor and manned/unmanned) ● If yes to flight testing please provide (if known) the test facility range name and/or location of where the flight test will be conducted. ● Will any hardware or software be delivered to the Government as part of the contract? Note, the contractor must submit a preliminary hazard list (per Mils Std-882e requirements) with the delivered item. ● Will any Government personnel, facilities, or Government-owned equipment be used during testing? Note: the contractor must complete a Government safety review and provide the documentation to AFWERX via email (send to: p2@afwerx.af.mil) before the GFE is used in testing. After AFWERX receives the safety documentation, a safety review process will be initiated (for project planning purposes the review will take approximately 4 weeks to complete). ● Will there be any weapons or munitions testing? ● Does this activity use explosives, propellants, deflagrating materials, or ammunition?

	<ul style="list-style-type: none"> • Does this activity use a direct energy device (including lasers) or radio frequency radiation? • Does this activity involve hazardous materials? • Will there be any animal testing? • Does any testing meet the definition of human subject research per 32 CFR 219? • Will testing include use of toxins, human-derived material, or recombinant DNA? • Does this project involve interaction or intervention with humans? • Does this project involve the access to, collection, use analysis, or sharing of human data or human biological specimens?
Phase II Technical Objectives and Key Results	<p>Clearly describe three to five objectives of the Phase II RDT&E effort. These objectives should be tied to specific proposed Phase II trial tasks. These objectives shall be qualitative and specific to the participating DAF end-user(s). The objectives shall be tied to specific time periods, tangible and unambiguous regarding anticipated results. These objectives shall describe end-state outcomes (i.e. what will be done), rather than processes or activities (i.e., how it will be done). Each objective shall be accompanied by three to five specific ‘key results’, measurable throughout Phase II performance. These key results will likely be quantitative in nature, e.g., deliver X widgets to DAF end- user. Non-quantitative key results shall be clearly measurable.</p> <p>Required Stakeholders Needed to Accomplish Phase II: List anticipated interactions with stakeholders necessary to accomplish the Phase II trial. Such stakeholders may include lawyers, test range officials, information assurance officials, system program office engineers, etc. Clearly describe Phase II trial completion requirements not within the applicant’s immediate control and plans to work within those constraints.</p>
Phase II Work Plan	Outline provided in Table 6.
Commercialization Strategy	Outline provided in Table 7.
Military Applications/DoD Customers	Briefly describe the proposed solution’s existing potential military requirement. Identify the DoD agency/organization most likely to become the solution’s customer. In many cases the potential DoD customer will be different from the end user. For example, the user may be in an operational flying unit and the customer in a System Program Office for the related aircraft. State whether a DoD agency has expressed interest in, or commitment to, a non-SBIR, Federally-funded Phase III effort or a Phase II enhancement with matching SBIR funds. If so, please include relevant details regarding funding availability, e.g., fiscal year, for solution transition, and other relevant funding details, such as funding type, e.g., RDT&E, Operations and

	Maintenance, etc. Include agency points of contact names, email addresses, and telephone numbers.
Non-US Citizens	Identify all non-U.S. citizens and dual citizens proposed as direct employees, subcontractors, or consultants. For these individuals, in addition to technical resumes, please provide countries of origin, type of visas or work permits held, and explanation of their anticipated involvement level in the project, i.e., tasks to be assigned. When the topic area is subject to export control, these individuals, if permitted to participate, are limited to work in the public domain. Further, tasks assigned must not be capable of assimilation into an understanding of the project's overall objectives. This precludes foreign citizens from acting in key positions such as Principal Investigator, Senior Engineer, etc. Additional information may be requested during negotiations to verify foreign citizens' eligibility.
Key Personnel	Identify key personnel involved in the project, including subcontractors and consultants. The applicant shall address qualifications for conducting RDT&E in addition to qualifications for commercialization. Include information regarding education, experience, and citizenship. A technical resume for the PI, including publications, if any, shall be included.
Non-Defense Commercial Customers	<p>Past revenue from commercial customers of the proposed non-Defense commercial solution. Clearly list non-Defense commercial customers, including revenue received as a result of the proposed solution's sales. Delineate between the proposed solution and related solutions revenue (listed below in "Related Work").</p> <p>Potential revenue-generating projects directly related to the proposed non-Defense commercial solution or adaptation thereof. Separately list potential revenue-generating projects with Defense or non-Defense customers directly related to the proposed solution(s). NOTE: On-going or completed projects/sales are strongly preferred to potential projects.</p>
Investors and Partners	Identify company investors, shareholders, or strategic advisors making significant contributions to support the Phase II effort. Explain how their past experiences or track record will support the technical or commercialization efforts. This could include leveraging other entities in company investors' portfolios or accessing other capital sources.
Related Work	Describe significant activities directly related to the proposed effort, including previous programs conducted by the Principal Investigator, proposing firm, consultants, or others, and their application to the proposed project. List reviewers providing comments regarding the applicant's knowledge of the state-of-the-art in the specific approach proposed. Specify related Government efforts, SBIR or otherwise, awarded, previously proposed, or intended for proposal.

Table 6: Non-Proprietary Phase II Work Plan Outline (Included in Volume 2)	
<p>Proposals including private investment cost match should include the tasks to be supported with those funds in the Work Plan. Tasks to be executed with private investment should be discernible from SBIR-funded tasks. If awarded, the SBIR-funded and private investment-funded tasks are included in different parts of the award document. The Work Plan should be structured around the effort's purpose and requirements set forth in clear, specific, and objective terms with measurable outcomes. The work plan has two mandatory features; (1) Work stated in terms of outcomes or results, rather than performance methods, and (2) measurable performance standards, including assessment methods for these standards. The plan should include the location and mechanics for accomplishing the proposed approach. Phase II projects shall attempt to demonstrate the Phase I-like effort's technical feasibility, including transition results to the private sector or Government customer.</p> <p>The DAF uses the work plan outline as the initial draft of the Phase II Statement of Work (SOW). Therefore, do not include proprietary information in the work plan outline.</p>	
Work Plan Item	
Scope	List the effort's major requirements and specifications.
Task Outline	Provide an outline of work to be accomplished throughout the effort. For proposals with government funding commitments (where the funds will be sent to AFRL/RGF to be included in the Phase II effort), clearly identify the tasks that will be funded by the SBIR program and the tasks that will be funded by the government organization that is committing funds.
Milestone Schedule	<p>Include the mutually agreed upon milestone schedule from your signed Customer Memorandum.</p> <p>Each milestone marks the completion of a required deliverable (e.g., prototype component, test plan, prototype production, final report submission, etc.). Status reports cannot be milestones but are deliverables as described below. Describe how the milestones will be identified as completed. Milestone payments shall reflect justifiable costs to achieve completion. Supporting rationale, e.g., invoices from non-Defense commercial customers, will be included in Volume 5, Supporting Documents.</p> <p>NOTE: Pricing information from non-Defense commercial customers is likely proprietary and should be marked as such.</p>
Deliverables	Include a section clearly describing the specific sample/prototype hardware/software to be delivered, as well as data deliverables, schedules, and quantities.
Unique Item Identification	IAW DFARS 252.211- 7003, Item Identification and Valuation, may be required. For hardware, more information may be found at https://www.acq.osd.mil/dpap/dars/dfars/html/current/25221.htm#252.211-7003

Required Reports	
At a minimum, the following reports are required for ALL Phase II awards and must be included in the Work Plan. All are considered scientific and technical reports.	
Final Report	The draft is due 30 calendar days after completion of the Phase II technical effort. The first page of the final report will include a single-page project summary, identifying the purpose of the work, providing a brief description of the effort accomplished, and listing potential results applications. The summary may be published by DoD. Therefore, it shall not contain proprietary information. It shall also contain project objectives met, work completed, results obtained, and technical feasibility estimates.
Status Reports	Status reports are due quarterly, at a minimum. These shall be concise documents describing progress in meeting the selected DAF end-user's needs. Each status report shall be no longer than 15 slides. The status reports shall include progress toward Phase II objectives and key results, as well as a quantitative measure between zero (0) and one (1) of progress toward each.
Phase II Summary Report	The Phase II summary report is due at technical effort completion. It shall be submitted via email to the cognizant AF CO/AO. Reports shall not exceed 700 words, including a description of the technology and anticipated applications/benefits for Government and/or private sector use.
Safety-Related Deliverables	<p>Safety requirements shall be followed in the proposed project's design and performance. The Work Plan must contain separate sections specifically addressing the following:</p> <ul style="list-style-type: none"> • Preliminary Hazard Analysis (Report, if applicable): If hardware is to be developed, the contract shall include at least a preliminary hazard analysis included in the deliverables. • Hazardous Material Report: If use of hazardous material is anticipated, the following are required: Materials identification; Materials purpose; and possible alternative/procedures/safeguards to minimize risk.
Additional Reporting	<p>The DAF end-user or customer may require additional reporting or documentation including:</p> <p>Software documentation and user manuals;</p> <p>Engineering drawings;</p> <p>Operation and Maintenance documentation;</p> <p>Safety hazard analysis when the project will result in partial or total development/delivery of hardware; and updated commercialization results.</p>

Funding Commitments Guidance	The final Phase II status report must include a brief accounting, in company format, regarding investor funds' expenditures to support the project.

Table 7: Commercialization Plan Outline (Included in Volume 2)	
The SBA and DoD require Phase II proposals include a commercialization plan. The plan should briefly describe the commercialization potential for the proposed project's anticipated results, as well as plans for exploitation in both the Defense and non-Defense markets. The plan must include the items below:	
Company Information	Focused objectives/core competencies; specialization area(s); products with significant sales; and history of previous Federal and non-Federal funding, regulatory experience, and subsequent commercialization.
Customer and Competition	Clear description of key technology objectives, current competition, and advantages compared to competing products or services; description of hurdles to innovation acceptance.
Market	Milestones, target dates, market size analysis, and estimated market share after first year and fifth year sales; plan to obtain market share.
Intellectual Property	Patent status, technology lead, trade secrets, or other demonstration of a plan to achieve sufficient protection to realize the commercialization stage and attain at least a temporal competitive advantage.
Financing	Plans for securing further necessary funding.
Assistance and Mentoring	<p>Plans for securing needed technical or business assistance through mentoring, partnering, or through arrangements with State assistance programs, Small Business Development Centers, FFRDCs, Manufacturing Extension Partnership centers, the DAF Mentor-Protégé Program, or other assistance providers.</p> <p>Specifically address the following questions:</p> <ul style="list-style-type: none"> • What is the first product into which the technology will be incorporated? • Who are the customers and what is the estimated market size? How much money is needed to bring the technology to market? How will the funding be raised? • Does the company possess marketing expertise? If not, how will it be obtained? • What companies are your competitors, and what is the firm's price and/or quality advantage over them? • Are there private sector or non-SBIR/STTR funding sources demonstrating commitment to Phase II results? This includes both outside private investment such as venture capital, angel investors, state or local government programs, etc., and internal funding sources, such as funding from affiliates. Please delineate past and potential future investments, e.g., currently

	<p>raising a round or have signed term sheets. Also note if commitments are conditional on receiving a Phase II award.</p> <ul style="list-style-type: none"> ● Has your company received or will it receive any foreign investment? If so, what is the source and the received or anticipated amount? ● Are there Phase III (Government or commercial) follow-on commitments for the proposed technology? ● Are there any other commercial potential indicators? Consider pre-sales, pilots, sales, revenue, active users, subscriptions, downloads, and/or other forms of traction/adoption and commercial signals of interest, demand, and faith in your team/solution. ● What is the last 12 months' total revenue from non-Defense commercial solution sales? ● State the proposed Phase II's anticipated end results, specifically plans to transition to a Phase III with a potential Government customer.
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Table 8: Cost Volume Description (Volume 3)

Complete the Cost Volume as shown in the Cost Breakdown Guidance. This is accomplished by using the online cost volume form in DSIP. Some items may not apply to the proposed project. If not, do not provide information for those items. Enough information shall be provided for DAF to understand the company's plan to utilize the requested funds, i.e., the purpose, necessity, and reasonableness of each expenditure.

Provide sufficient detail, as found below, regarding funds' use if the contract is awarded. The itemized listing may be placed in the "Explanatory Material" section of the on-line Cost Volume (if there is enough room) or submitted in Volume 5, Supporting Documents, under the "Other" dropdown option. Note: Only one file can be uploaded to DSIP.

ROUND ALL COSTS TO THE NEAREST DOLLAR!

NOTE: If no exceptions are taken to an applicant's proposal, the Government **may** award a contract with only clarifications. Therefore, the initial proposal should contain an applicant's best terms from a cost/ price and technical standpoint. For questions regarding the award document, contact the AF SBIR/STTR CO, Daniel Brewer, Daniel.Brewer.13@us.af.mil.

Measurable Milestones	Fixed price payments shall be tied to measurable milestones, as agreed to with the Government. For Phase II efforts including Government second phase funding commitments wherein RGK receives non-SBIR, Governmental funding for a Phase II effort, the cost proposal should clearly identify SBIR-funded tasks and non-SBIR-funded tasks. Government second phase funding commitments awarded as Phase IIIs and private investment should not be included in the Cost Volume.
Direct Labor Costs	For direct costs, include substantiating information such as vendor quotes, previous orders, historical data, etc. Costs without substantiating justification should be detailed through the cost estimating process. All substantiating evidence should be included in the 'Additional Cost Information' section of the Volume 5, Supporting Documents. If selected for award, the Government may require further documentation to substantiate costs. Identify key personnel by name, if possible, or by labor category if specific names are not available. The number of hours, labor overhead and/or fringe benefits, and actual hourly rates for each individual are required.
Direct Material Costs	<p>Provide an itemized list including types, quantities, price, and, when appropriate purpose, for materials, parts, and supplies.</p> <p>If proposing direct material, justification information, including vendor quotes, historical costs, etc., can be included as "Supplemental Cost Information" in Volume 5, Other Supporting Documents.</p>
Other Direct Costs	

<p>This category of costs includes specialized services such as machining or milling, special testing or analysis, and/or cost incurred in obtaining temporary use of specialized equipment. Proposals, which include leased hardware, must provide an adequate lease vs. purchase justification or rationale. If proposing other direct costs, additional information can be included as “Supplemental Cost Information” in Volume 5, Other Supporting Documents.</p>	
Travel	<p>Include travel costs in “Other Direct Costs.” Travel costs must relate to the needs of the project. Break out travel cost by trip, number of travelers, airfare, per diem, lodging, etc. The number of trips required, as well as the destination and purpose of each should be included. Recommend budgeting at least one (1) trip to the Air Force location managing the contract. Greater travel expectations will be required as noted in some topic statements and corresponding SBIR/STTR Interactive Topic Information System (SITIS) Q&A. Estimation of travel costs need not be an overly onerous exercise, and actual travel cost may differ from your proposed travel. This information allows the Government CO to ensure travel costs are not excessive.</p>
Subcontracts	<p>Subcontracts: Include subcontractor/consultant costs in “Other Direct Costs.” Involvement of university or other consultants in the planning and/or research stages of the project may be appropriate. If so, describe in detail and include information in the Cost Volume. The proposed total of all consultant fees, facility leases or usage fees, and other subcontract or purchase agreements may not exceed one-half the total contract price or cost, unless otherwise approved in writing by the Contracting Officer. Support subcontract costs with copies of the subcontract agreements. The supporting agreement documents must adequately describe the work to be performed. At a minimum, an applicant must include a Statement of Work (SOW) with a corresponding detailed Cost Volume for each planned subcontract.</p>
Consultants	<p>Provide a separate agreement letter for each consultant. The letter should briefly state what service or assistance will be provided, the number of hours required and hourly rate.</p>
Special Tooling/Test Equipment/Material	<p>The inclusion of equipment and materials will be carefully reviewed relative to need and appropriateness of the work proposed. The purchase of special tooling and test equipment must, in the opinion of the CO, be advantageous to the Government and relate directly to the specific effort. Such items may include such items as innovative instrumentation and/or automatic test equipment. Title to property furnished or funded by the Government will be vested with the AF, unless determined that title transfer to the contractor is more cost effective than equipment recovery by the Government.</p>

Table 9: Supporting Documents (Volume 5)	
This volume is used to submit additional documentation supporting the Technical Volume (Volume 2) and the Cost Volume (Volume 3).	
NOTE – when combining .pdf documents, ensure digital signatures are not stripped.	
Documents Required at Proposal Submission	
Customer Memorandum (Attachment 1)	
DoD SBIR/STTR Lifecycle Certification (Attachment 2)	
SBIR/STTR Environment, Safety, and Occupational Health (ESOH) Questionnaire (Attachment 3)	
Contractor Certification Regarding Provision of Prohibited Video Surveillance and Telecommunications Services and Equipment (Attachment 4)	
SBIR/STTR Program Disclosure of Offeror's Ownership or Control by a Foreign Government (Attachment 5)	
AF Security Program Questionnaire (Attachment 6)	
Research & Related Senior/Key Person Profile (Attachment 7)	
Certification Questions and Coversheet Supplement (Attachment 10)	
Required (If Applicable) Documents	
Verification of Eligibility of Small Business Joint Ventures (Attachment 8)	
D2P2 Funding Commitment Form (Attachment 11)	
Recommended at Proposal Submission	
SBIR/STTR Funding Agreement Certification (Attachment 9; required prior to award)	
NIST SP-800 171 Assessment Documentation	
Documents Acceptable for Inclusion in Volume 5	
Supplemental Cost Information	<p>This document is used to provide additional cost information to augment the Cost Volume (Volume 3) provided in the online form. The Supplemental Cost Information detail must be adequate to enable Department of the Air Force personnel to determine the purpose, necessity, and reasonableness of each cost element provided in the Cost Volume.</p> <p>For significant costs, e.g. large number of hours, very high hourly wages, substantial labor overhead/fringe rates, etc., provide justification. A helpful resource for determining average rates is https://www.bls.gov/oes/current/oes_nat.htm.</p>
Direct Material Costs Supporting Documentation	See Table 8.
Travel Included in Other Direct Costs	Include the sources of estimated costs for flights, lodging, meals, and ground transportation. A useful resource for this section is https://www.gsa.gov/travel-resources .
Special Tooling/ Test Equipment/Material Costs	See Table 8.

Subcontractor Agreements	If the applicant intends to utilize consultants, subcontractors, academia, etc., describe the relationship in detail, including information in the Cost Volume. The proposed total of all consultant fees, facility leases/usage fees, and/or other subcontract or purchase agreements, may not exceed one-half of the total contract price/cost, unless otherwise approved in writing by the Government CO. Provide copies of subcontract agreements. The supporting agreement documents must adequately describe the work to be performed. At a minimum, an applicant must include a Statement of Work (SOW) with a corresponding, detailed Cost Volume for each planned subcontract.
Copies of Consultant Agreements	Provide a separate agreement letter for each consultant. The letter should briefly state the tasks to be provided, hours required, and hourly rate. Some firms seek assistance from subcontractors or consultants to determine their solution's feasibility for a specific DoD customer. If working with a customer discovery firm like this, the associated agreement is required to be included in the proposal.
Facilities/Equipment	Describe instrumentation and/or physical/digital facilities necessary and available to carry out the proposed effort. Justify equipment to be purchased, including in 'Additional Cost Information,' as necessary. State whether proposed performance locations meet Federal, state, and local government environmental laws and regulations for airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid/bulk waste disposal practices, toxic/hazardous material handling/storage, and others as identified.
Indirect Costs	The proposal should identify the specific rates used and allocation bases to which they are applied. Provide proposed rates and applications per FY throughout the anticipated performance period. Do not propose composite rates.
Resumes of Key Personnel	Resumes of Key Personnel: Full resumes, including a publications list, for the Primary Investigator and other key technical personnel shall be included.
Non-Proprietary Work Plan	Provide a complete, non-proprietary work plan, free of proprietary markings. Attach as a stand-alone document, if possible, for inclusion in the contract document, if selected. Failure to provide this document will necessitate a request for revision and may delay contract award.
DD Form 2345	DD Form 2345 - ITAR/EAR Certification: For proposals whose solutions fall under export- controlled regulations (either International Traffic in Arms (ITAR) or Export Administration Regulations (EAR)), a copy of the certified DD Form 2345, Militarily Critical Technical Data Agreement, or evidence of application submission must be included. The form, instructions,

	and FAQs may be found at the United States/Canada Joint Certification Program website, http://www.dla.mil/HQ/InformationOperations/Offers/Products/LogisticsApplications/JCP/DD2345Instructions.aspx . Approval of the DD Form 2345 will be verified if the proposal is chosen for award.
Allocation of Rights	If subcontracting to a research institution or other organization, the firm may wish to complete an allocation of rights agreement. This is not required for SBIR awards but may be used at the company's discretion. Example: https://rt.cto.mil/wp-content/uploads/STTR-Model-Agreement-for-the-Allocation-of-Rights.pdf
Lifecycle Certification	All SBIR/STTR Phase II awardees must complete a certification document at award (Phase I and II and D2P2), prior to receipt of more than half the total contract award amount (Phase II and D2P2), and before final payment receipt (Phase I and II and D2P2). All questions must be answered and an authorized officer of the company must sign and date prior to submission.
Additional Letters of Support	Letters of support demonstrate that the proposed innovation, if developed, would solve a valid market need. More generally, letters of support can validate commercial impact claims made in the proposal. Therefore, letters from potential technology end users (e.g., customers and corporate partners/collaborators) are appropriate, as well as letters from actual or potential investors. All letters should be uploaded in a single .pdf file organized logically. NOTE: When combining .pdf documents, ensure digital signatures are not stripped.
Data Rights Assertions	If an applicant plans to submit assertions IAW DFARS 252.227-7017 Class Deviation 2020-O0007 or similar award term, those assertions must be identified and restrictions MUST be included in the proposal submission in Volume 5. Award cannot be executed until assertions are approved or mutually agreed-upon during negotiations. Any SBIR/STTR Data delivered by the Awardee, and in which the Awardee intends to limit the Federal Government's rights to SBIR/STTR Data Rights, must be delivered with restrictive markings. The Federal Government assumes no liability for the access, use, modification, reproduction, release, performance, display, disclosure, or distribution of SBIR/STTR Data without markings. The Awardee or its subcontractors shall conspicuously and legibly mark all such SBIR/STTR Data with the appropriate legend, placed on each page of the SBIR/STTR Data.