

DEPARTMENT OF THE AIR FORCE (DAF)
SMALL BUSINESS TECHNOLOGY TRANSFER (STTR)
X21.A COMMERCIAL SOLUTIONS OPENING (CSO)
AF21A-TCSO1 PHASE II PROPOSAL INSTRUCTIONS
12 October 2021

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I. INTRODUCTION

All Phase II proposals must be prepared and submitted through the Department of Defense SBIR/STTR Innovation Portal (DSIP), <https://www.dodsbirsttr.mil/>. Ensure the proposal email address is accurate. DAF is not responsible for missed notifications due to firms changing mailing address/email address/company contacts after submission without notifying the DAF. Addresses must be consistent between the proposal and System for Award Management (SAM) at award. Deadline for ALL AF21A-CSO1 Phase II proposal submissions is **16 November 2021, no later than 12:00 p.m. Eastern Time.**

The DAF 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.

Proposals submitted after the stated deadline will NOT be considered. This includes incomplete submissions due to system issues encountered during upload. Proposals not submitted to the correct command, i.e., AFWERX, will also not be considered. Proposals including classified information or data will not be accepted.

These instructions take precedence over information in other STTR solicitations and instructions. However, for items not covered in these instructions, information contained in the AF X21.A STTR CSO and Small Business Administration (SBA) SBIR/STTR Policy Directive still applies.

For AF SBIR/STTR questions, contact the AF Help Desk, usaf.team@afsbirsttr.us. Contact the DoD SBIR/STTR Help Desk, DoDSBIRSupport@reisystems.com, with proposal submission issues.

The maximum Air Force STTR funding for awards under this solicitation is \$750,000, regardless of second phase funding commitments (see Section VI.25). The performance period shall not exceed 15 months, including 12 months technical performance and three months for reporting.

The award execution activities for selected proposals are anticipated to take place mid-January 2021.

Phase II awards are executed as firm-fixed-price purchase orders or Other Transactions for Prototype (see Section VI.24). The SBA SBIR/STTR Policy Directive states, “Except as expressly excluded or limited by statute, awarding agencies must provide for a reasonable fee or profit on SBIR/STTR Funding Agreements, consistent with normal profit margins provided to profit-making firms for R/R&D work.” **Therefore, zero dollar profit proposals cannot be accepted.** Awards may be negotiated; award type is at the Contracting Officer’s discretion.

NOTE: The DAF does not utilize Technical and Business Assistance (TABAs).

II. PHASE II PROPOSAL FUNDAMENTALS

Phase I firms must qualify as small business concerns in accordance with 13 C.F.R. §§ 701-705 at Phase II award. Firms are highly encouraged to revisit the X21.A STTR CSO to review the requirements and elements common to Phase I and II awards. The Government reserves the right to award all, some, or none of the proposals received. The Government is not responsible for

expenditures incurred by offerors prior to Phase II award. All awards are subject to funds availability, successful negotiations, and continued programmatic need.

II.1. Offeror Eligibility and Performance Requirements

- II.1.1. Each proposer must qualify as a small business concern IAW 13 C.F.R §§ 701-705 at time of award and certify to this on the Proposal Coversheet. SBIR/STTR eligibility requirements are unique and do not correspond to other small business programs (see Section VI.15 of these instructions. Proposers must meet eligibility requirements for Small Business Ownership and Control IAW 13 CFR § 121.702 and Section III.2.7 of these instructions.
- II.1.2. Each STTR project must be conducted a minimum of 40% by the small business concern and a single research institution must accomplish a minimum of 30% of the effort. This applies to the STTR-funded portion of the effort ONLY. The percentage is measured by direct and indirect costs after removal of the SBC's proposed profit. As this requirement is codified in statute, the Government CO cannot waive it. STTR efforts may include subcontracts with Federal Laboratories and Federally Funded Research and Development Centers (FFRDCs). Not all Federal Laboratories or FFRDCs qualify as research institutions IAW the definition found in item G below.
- II.1.3. For Phase I and II, the principal investigator must primarily be employed with the small business firm OR research institution. At Phase I or Phase II contract award, the small business concern must employ at least one employee in a management position whose primary employment is with the small business, not with the research institution. Primary employment means more than 50% of the employee's time is spent with the small business. Primary employment with the small business concern precludes full-time employment at another organization.
- II.1.4. Allocation of Rights: Small business concerns (SBCs) must negotiate written agreements with the research institution allocating intellectual property rights and rights to carry out follow-on research, development, or commercialization. The SBC must submit this agreement to the awarding agency with the proposal. The SBC must certify in all proposals that the agreement is satisfactory to the SBC. Proposals that do not contain an allocation of rights agreement will not be considered for award.
- II.1.5. Management of the STTR Project: The small business concern (SBC), and not its partnering Research Institution(s), is to provide satisfactory evidence that it will exercise management direction and control of STTR Funding Agreement performance. Regardless of the proportion of the work or funding allocated to each of the performers under the Funding Agreement, the SBC is to be the primary party with overall responsibility for performance of the project. All agreements between the SBC and the Research Institution cooperating in the STTR Funding Agreement, or any business plans reflecting agreements and responsibilities between the parties during performance of STTR Phase I or Phase II Funding Agreement, or for the Commercialization of the resulting technology, should reflect the controlling position of the SBC.
- II.1.6. Phase II R/R&D work must be performed by the small business concern and its subcontractors in the United States.

II.2. Benchmarks

Proposers 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 each year.

II.2.1. For all proposers with greater than 20 Phase I awards over the past five fiscal years, excluding the most recent year (currently FY 2016-2020), the ratio of Phase II awards to Phase I awards must be at least 0.25.

II.2.2 For all proposers with greater than 15 Phase II awards over the last ten fiscal years excluding the last two years (currently FY 2010-2020), the proposer must have received, to date, an average of > \$100,000 in sales and/or investments per Phase II award received or have obtained a number of patents from SBIR/STTR efforts > 15% of the Phase II awards received during the period.

II.2.3 Consequences of failure to meet benchmarks

SBA will identify and provide agencies annually on 1 June a list of companies failing to meet minimum performance requirements. These companies will not be eligible to submit Phase I proposals for one year. This requirement affects a company's eligibility for new Phase I awards only. Companies failing to meet minimum performance requirements may continue work on active 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 advanced warning, the SBA notifies companies on 1 April when they are failing to meet the benchmarks. If a company believes the information is not complete or accurate, it may provide the SBA Company Registry feedback at www.sbir.gov.

The SBA has also provided a Guide to SBIR/STTR Program Eligibility to help small businesses understand program eligibility requirements, determine eligibility, and accurately complete required certifications.

Companies' benchmark information is not available to the public.

II.3. 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. § 121.702(a)(1)(i).

II.4. Investment and Majority Ownership

Small businesses owned in majority part by multiple venture capital operating companies (VCOs), hedge funds, or private equity firms, are ineligible to submit proposals under this solicitation. This solicitation is not utilizing the Domestic Investment Pilot Program authority of the FY2020 NDAA Section 884.

II.5. Conflicts of Interest

Contract awards to firms owned by or employing current or previous Federal Government employees may constitute conflicts of interest in violation of Federal law. Proposing firms should contact the employee's Government agency Ethics Counselor for further guidance.

II.6. Classified Proposals

Classified proposals are not accepted under this solicitation. If Phase II performance will require classified work, the proposing firm must have or be able to obtain facility clearance. Additional information on facility and personnel clearance procedures and requirements is available at the Defense Security Service site, <http://www.dss.mil/index.html>.

II.7. Research Involving Human Subjects

Research involving human subjects, to include human biological specimens and human data, shall comply with applicable Federal and state laws and agency policy/guidelines for human subject protection.

Institutions selected for funding for research involving human subjects must provide current Federal Assurance of Compliance with Federal regulations documents for human subject protection. For example, the offeror may provide a Department of Health and Human Services, Office for Human Research Protections Federal Wide Assurance (<http://www.hhs.gov/ohrp>).

If selected, institutions must also provide Institutional Review Board (IRB) approval documents or an appropriate institution official's determination the work meets an exemption found in 32 C.F.R. 219. Awards determined to include Research involving Human Subjects will include and be subject to DFARS 252.235-7004 Protection of Human Subjects. **No funding can be applied to human subject research until all approvals are granted (see Section VI.12 of these instructions for additional details).**

II.8. Research Involving Animal Subjects

All animal research, development, testing, experimentation, education, and/or training shall comply with applicable DoD and DAF rules on animal acquisition, transport, care, handling, and use. For submissions requiring animal use, briefly describe plans for Institutional Animal Care and Use Committee (IACUC) review and approval.

All offerors must receive IACUC approval, plus secondary or headquarters-level approval by a DoD veterinarian trained or experienced in laboratory animal medicine and science. Awards determined to include Research Involving Animal Subjects will include and be subject to DFARS 252.235-7002 Animal Welfare. **No DoD-funded animal research may be conducted until all appropriate approvals are obtained. See Section VI.11 for additional information.**

II.9. Research Involving Recombinant DNA Molecules

All recombinant DNA molecule research shall comply with applicable Federal and state laws and regulations, as well as additional agency guidance. Research shall be approved by an Institutional Biosafety Committee. See Section VI.14 for additional information.

II.10. Use of Unmanned Aircraft Systems (UAS)

All proposed UAS are subject to Class Deviation 2020-O0015 252.225-7973 Prohibition on the Procurement of Foreign-Made Unmanned Aircraft Systems – Representation. Awards involving UAS will include and be subject to the clause Class Deviation 2020-O0015 252.225-7972 Prohibition on the Procurement of Foreign-Made Unmanned Aircraft Systems. Proposed UAS which are determined to be noncompliant with the aforementioned provision and clause will not be eligible for award.

All activities involving UAS operation shall be conducted IAW DoD memos “Guidance for the Domestic Use of Unmanned Aircraft Systems in the U.S. National Airspace”, 18 August 2018, and “Delegation Authority to Approve Exemptions for Using Commercial-Off-The-Shelf Unmanned Aerial Systems in Support of Urgent Needs”, 16 November 2018. Contractor personnel operating DoD or DoD-contracted UAS in US National Airspace, whether domestic use is related to an intelligence activity or not, will comply with all UAS operation in US National Airspace laws, regulations, and guidance. Specific programs utilizing UAS shall obtain a UAS operational use exemption. Therefore, the DAF may request additional documentation to support an exemption request. The DoD exemption approval process can last up to three months. **No funding can be used for contracted-UAS operations until ALL approvals are granted. See Section VIII.5.3 for additional information.**

II.11. Cyber Security

Is the proposed technology considered information technology? (Do you intend to provide an application, software and/or hardware to the DAF that will need to be: connected to the AF Network; need access to information on the DAF Network; provide information to the DAF Network?)

IAW with DFARS 204.7304, the following provisions are required for use in this solicitation; corresponding clauses will apply to all resulting contracts.

- DFARS 252.204-7008 COMPLIANCE WITH SAFEGUARDING COVERED DEFENSE INFORMATION CONTROLS (OCT 2016)
- DFARS 252.204-7009 LIMITATIONS ON THE USE OR DISCLOSURE OF THIRD PARTY CONTRACTOR REPORTED CYBER INCIDENT INFORMATION (OCT 2016)
- DFARS 252.204-7012 - SAFEGUARDING COVERED DEFENSE INFORMATION AND CYBER INCIDENT REPORTING (DEC 2019)
- DFARS 252.204-7019 NOTICE OF NIST SP 800-171 DOD ASSESSMENT REQUIREMENTS (NOV 2020)
- DFARS 252.204-7020 NOTICE OF NIST SP 800-171 DOD ASSESSMENT REQUIREMENTS (NOV 2020)

Links to full text versions may be found at:

[https://www.acquisition.gov/dfars/204.7304-solicitation-provision-and-contract-clauses.#:~:text=a\)%20Use%20the%20provision%20at%20252.204-7008%20%2C%20Compliance,are%20solely%20for%20the%20acquisition%20of%20COTS%20items](https://www.acquisition.gov/dfars/204.7304-solicitation-provision-and-contract-clauses.#:~:text=a)%20Use%20the%20provision%20at%20252.204-7008%20%2C%20Compliance,are%20solely%20for%20the%20acquisition%20of%20COTS%20items)

Note: Every Information Technology (IT) needs a Risk Management Framework (RMF) assessment and/or an Authority To Operate (ATO) within the Air Force. The RMF assessment ascertains the data security requirement of the IT and assigns an Impact Level (IL) of cloud security for the IT (e.g. IL-2 through IL-5). The second key is to establish DevSecOps in a secure Cloud environment, which meets the business’s needs. Fundamental cybersecurity control requirements for businesses are outlined in NIST SP 800-171 Rev 1 and DFAR PGI 239.76-CLOUD COMPUTING and serve as the backbone to Air Force cybersecurity and data security. Cybersecurity Maturity Model Certification is another measure of cybersecurity and preparation for this future requirement is fulfilled by the steps above. AFVentures does not

grant the ATO.

II.12. Proposal Status and Feedback

The Principal Investigator (PI) and Corporate Official (CO) identified on the Proposal Coversheet (Volume 1) are notified of proposal evaluation outcome via email. The SBC receives a separate notification for each proposal submitted. Please read carefully and note the proposal number referenced. If changes occur to the company mail/email address(es) or contacts after proposal submission, the information must be provided to the DAF at usaf.team@afsbirsttr.us. The message shall include the subject line, "AF X21.A Phase II Address Change".

Feedback requests will be accommodated for companies with proposals determined "Not Selectable" ONLY. Instructions for those companies to request feedback will be included in the post-selection notification. Feedback requests received more than 30 calendar days after non-selection notification receipt will not be fulfilled. Unsuccessful offerors are entitled to no more than one feedback response for each proposal. NOTE: Feedback is not the same as a FAR Part 15 debriefing. Acquisitions under this solicitation are awarded via "other competitive procedures." Therefore, offerors are neither entitled to nor will they be provided FAR Part 15 debriefs.

It is anticipated 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 solicitation Contracting Officer for proposal status before that time.

II.13. Phase II Award Information

II.13.1. Number of Awards: 30 awards are anticipated, though it could be more or less. The Government reserves the right to make no awards under this solicitation. The DAF is not responsible for costs incurred before award receipt.

II.13.2. Type of Funding Agreement: Selected Phase II proposals will be awarded as firm fixed price contracts or Other Transactions for Prototype, including reasonable profit consistent with private R/R&D firms.

II.13.3. Average Dollar Value: The maximum Phase II contract or agreement value is \$750,000.

II.13.4. Timing: It is intended peer review, proposal selection, negotiations, and award will be complete within 180 calendar days of proposal receipt.

II.14. Registrations and Certifications

Firms must be registered in DSIP to prepare and submit proposals. Firms shall also register in the System for Award Management (SAM), <https://sam.gov/content/home>, to be eligible for proposal acceptance. Follow instructions therein to obtain a Commercial and Government Entity (CAGE) code and Dunn and Bradstreet (DUNS) number. Firms shall also verify "Purpose of Registration" is set to "I want to be able to bid on federal contracts or other procurement opportunities. I also want to be able to apply for grants, loans, and other financial assistance programs", NOT "I only want to apply for federal assistance opportunities like grants, loans, and other financial assistance programs." Firms registered to compete for

federal assistance opportunities only at the time of proposal submission will not be considered for award. Addresses must be consistent between the proposal and SAM at award. Previously registered firms are advised to access SAM to ensure all company data is current before proposal submission.

In addition to the standard Federal and DoD procurement certifications, the SBA SBIR/STTR Policy Directive requires certain information be collected from firms at award and during the award life cycle. Each firm must provide this information with the proposal (Attachment 3), prior to receiving 50% of the total award amount, and prior to final payment.

II.15. 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 the Inspector General (IG) Hotline is an important avenue for reporting fraud, waste, abuse, and mismanagement within the DoD. The DoD IG operates a hotline to receive and investigate complaints or information from contractor employees, DoD civilians, military service call (800) 424- 9098 Monday through Friday, 8:00 a.m. at 5:00 p.m. Eastern Time, or use hotline@dodig.mil.

II.16. Innovation in Manufacturing

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

III. PROPOSAL PREPARATION AND SUBMISSION

Phase II proposals require a comprehensive, detailed effort description. Proposals should demonstrate sufficient Phase I technical progress in solving an important DAF problem to warrant more extensive R/R&D. Developing technology commercial and military potential is extremely important. Particularly, the Air Force seeks proposals emphasizing technologies with dual-use applications and commerciality/commercial exploitation.

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 protected to the extent permitted by law. Awards for selected proposals will incorporate the Work Plan by reference or as an attachment. **DO NOT INCLUDE PROPRIETARY INFORMATION IN THE WORK PLAN.** See Section VI.9 for the definition of Proprietary Information and Section VIII.5.2 for Proprietary Information marking.

General Content. Proposals should be direct, concise, and informative. Type shall be no smaller than 12- pitch or 11-point on standard 8 1/2" X 11" paper, with one-inch margins and pages consecutively numbered. Offerors are discouraged from including promotional and non-programmatic items.

Proposal Checklist:

- Registration

- DUNS Number
- Commercial and Government Entity (CAGE) Code
- DoD SBIR/STTR ID

Volume 1: DoD Proposal Coversheet

- CAGE, DUNS
- Proposal Abstract
- Proposal Certification
- Contact Information

Volume 2: Technical Volume

- Proposal Coversheet
- Table of Contents
- Glossary
- Technical Summary
 - Commercialization Potential
 - Proposed Adaptation of Non-Defense Commercial Solution
- Phase I Feasibility Study Results
- Phase II Technical Objectives and Key Results
- Phase II Work Plan
 - Task Outline
 - Schedule of Milestones
 - Deliverables
 - Reports
- Key Personnel
 - Key Project Personnel
 - Investors and Partners
 - Non-U.S. Citizens
- Supply Chain Integrity

Volume 3: Cost Volume

- Direct Labor
- Overhead
- G&A
- Subcontractors/Consultants
- Other Direct Costs, e.g., materials, equipment, travel
- Cost Share or Match
- Profit Rate

Volume 4: Company Commercialization Report (CCR)

Volume 5: Supporting Documents

- Signed Customer Memorandum (mandatory template at Attachment 1)
- Allocation of Rights –
<https://www.afsbirsttr.af.mil/Portals/60/Pages/Phase%20I-Model%20agreement%20for%20the%20allocation%20of%20rig>

- [hts.pdf](#) (Required)
- SBC and Research Institution Teaming Agreement (Required)
- Letters of Support
- Coversheet Supplement
- Certification/Eligibility Check
- Prior, Current, or Pending Support of Similar Proposals or Awards
- Supplemental Cost Information
- Key Personnel Resumes
- DoD SBIR/STTR Programs Contractor Certification Regarding Provision of Prohibited Video Surveillance and Telecommunications Services and Equipment (mandatory form at Attachment 4)
- DoD Funding Agreement Certifications (signed)
- Lifecycle Certification (Attachment 3)
- SBIR/STTR Environment, Safety and Occupational Health (ESOH)
- One-page ‘Sales Pitch’ Summary

The following are as required:

- Technical Data Assertions
- Foreign Citizen Table
- Funds Matching Form (mandatory template at Attachment 2)
- Additional Fund Matching Documentation, e.g., private investor letter
- DoD SBIR/STTR Programs Disclosure of Offeror’s Ownership or Control by a Foreign Government (form at Attachment 5)
- Additional Facilities/Equipment Information
- Additional Subcontractor/Consultant Information
- Certified Military Critical Technical Data Agreement, DD Form 2345

Volume 6: Fraud, Waste, and Abuse Training

III.1. Volume 1 Instructions: DoD Proposal Coversheet

Prepare the Proposal Coversheet in DSIP, <https://www.dodsbirsttr.mil/>. It must include a technical abstract of no more than 200 words describing the proposed R/R&D project, anticipated benefits, and potential commercial applications. When the Proposal Coversheet is saved, DSIP will assign a proposal number. **RETAIN A COPY OF THIS NUMBER.** The coversheet may be revised as often as necessary until the Phase II solicitation period closes. Final certification is required before submission.

- III.1.1. Technical Abstract: The technical abstract should include a brief program objective and effort description. Technical abstracts are submitted to the Office of the Secretary of Defense (OSD) for publication. Therefore, it shall not contain proprietary or classified information. The term “Component” on the coversheet refers to the soliciting DAF organization, i.e., AFWERX.
- III.1.2. 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/STTR 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.

III.1.3. 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.

III.1.4. Prior/Current/Pending Support of Similar Proposals/Awards: With proper notification, offerors may submit identical proposals or those with significant amounts of essentially equivalent work under one or more Federal announcements. It is unlawful to enter into two or more contracts requiring essentially equivalent effort. Potential situations must be disclosed to the DAF at proposal submission and before award. Proposal submissions previously, currently, or in-process of being funded by DAF or other Federal agency shall be identified. **Companies may only submit one Phase II proposal for each Phase I award.**

On the Proposal Coversheet, answer ‘Yes’ to the following or similar question, “Has a proposal for essentially equivalent work been submitted to the DAF or other US Government agency?”

III.2. Volume 2 Instructions: Technical Volume

The technical volume shall be a white paper no longer than 15 pages. Include page numbers. Pages in excess of 15 will not be reviewed. Proposals without a complete technical volume will not be considered for award.

III.2.1. Table of Contents: Include a table of contents immediately following the coversheet (not included in 15 page count).

III.2.2. Glossary: Include a glossary of proposal acronyms and abbreviations (not included in 15 page count).

III.2.3. Technical Summary

III.2.3.1. Technical Summary of the Non-Defense Commercial Solution: Describe the specific problem/opportunity addressed in Phase I and its relationship to Phase II.

III.2.3.1.1. Non-Defense Commercial Solution: 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. Additionally, please address the following:

- Describe the scope and importance of the Technical Problem or

Opportunity.

- 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?
- Has the proposed item been (1) sold, leased, or licensed to the public; or (2) offered for sale, lease, or license to the public?
- Include, where applicable, revenue, unit sales, user adoption, pre-sales, and investments. Broad adoption and commercial success can be indicators of commercial potential and reduced technical risk but are not mandated.

NOTE: This is a R&D solicitation, not a commercial off-the-shelf (COTS) resale solicitation. See FAR 2.101 for a “commercial items” definition.

III.2.3.2. Commercialization Potential

III.2.3.2.1. Commercialization Plan: The SBA and DoD require a commercialization plan to be submitted with the Phase II proposal. The plan should briefly describe the award’s anticipated results and potential commercialization, as well as plans to exploit it in both the Defense and non-Defense markets. The plan must include:

- Company information. Focused objectives/core competencies; specialization area(s); products with significant sales; and previous Federal and non-Federal funding history (including foreign investments), regulatory experience, and commercialization.
- Customer and Competition. Clear key technology objective descriptions, current competition advantages compared to competing products or services; description of hurdles to innovation acceptance.
- Market. Milestones, target dates, market size analyses, and estimated market share after first year and five years’ sales; explanation of plan to obtain market share.
- Intellectual Property. Patent status, technology lead, trade secrets, or other demonstration of a plan to achieve sufficient protection to reach the commercialization stage and attain at least a temporal competitive advantage.
- Financing. Plans for securing necessary non-STTR Government funding to move to Phase III.
- Assistance and Mentoring. Plans to obtain needed technical or business assistance through mentoring, partnering, or State assistance programs, Small Business Development Centers, Federally-funded research and development centers, Manufacturing Extension Partnership centers, or other assistance providers.

Specifically address the following questions:

- What is the anticipated first product to incorporate the proposed technology?
- Who are the probable customers, and what is the estimated market size?
- How much money is required to bring the solution to market and how will it be raised?
- Does the firm have necessary marketing expertise and, if not, how will the firm compensate?
- Who are the probable competitors, and what price/quality advantage is anticipated by the firm?
- Are there private sector or non-SBIR/STTR funding sources demonstrating commitment to Phase II efforts/results? This includes both outside private investment such as venture capital, angel investors, State or local government programs, etc. and internal funding sources, e.g., from affiliates. Delineate past and potential future investments, e.g., currently raising a round, signed term sheets, etc. Also state whether commitments are conditioned upon Phase II award receipt.
- Note private investment funds from qualified third-party investors available for potential Phase II enhancements, e.g., matching funds wherein the investor and the SBIR/STTR Program provide additional funding for a Phase IIb or sequential Phase II award
- Note private or Government follow-on commitments available for Phase III.
- Note other indicators of commercial potential.
- Provide the past 12 months' total revenue from non-Defense commercial sales of the solution proposed for adaptation to meet a DAF need.
- State the proposed Phase II anticipated end results, specifically plans for Phase III transfer to a potential Government customer.
- Discuss the Phase II effort's significance as the basis for a Phase III effort.

III.2.3.2.2. Non-Defense Commercial Customer Discovery

- Past revenue from the proposed non-Defense commercial solution's customers: Clearly list non-Defense, commercial customers, including revenue resulting from the proposed solution's sales. This should not include other solutions the company may offer.
- 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, such as those in section 2.5.1, are strongly preferred to potential projects.

III.2.3.3. Technical Summary of the Proposed Adaptation of Non-Defense

Commercial Solution: Describe the specific problem/opportunity addressed in Phase I and its relationship to Phase II.

III.2.3.3.1. Proposed Adaptation of Non-Defense Commercial Solution: Describe the proposed R/R&D adaptations of the Non-Defense commercial solution to meet an Air Force end-user need. In this section, please answer the following questions:

- What's the scope and importance of the Technical Problem or Opportunity?
- How similar is the modified item to others sold to Non-Defense customers in the commercial marketplace?
- Does the supplier perform similar modifications for Non-Defense customers?
- Do the DAF-unique modifications change the product's essential use and purpose?
- Are there differences in the production/manufacturing/delivery process used to perform the Defense modification versus Non-Governmental customers?
- What are the quantitative benefits expected for identified Air Force end-users?

III.2.3.3.2. 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. It is likely the potential DoD customer and end-user are not the same person/organization. For example, the user may be an operational flying unit and the customer a system program office for the related aircraft.

III.2.4. Phase I Feasibility Study Results: The proposal shall detail the solution's ability to meet DAF end-user and customer needs through R/R&D. These results shall be framed in the context of DAF end-user and customer exploration previously performed.

III.2.4.1. Scientific or Technical R/R&D Effort: Include research questions, methods, results, and relevant literature.

III.2.4.2. DAF End-User and Customer Exploration Methods: Describe methods, both successful and unsuccessful, used for technical and scientific feasibility analysis, DAF customer and end-user exploration to adapt the non-Defense commercial solution to a specific DAF end-user needs. This should include

detailed documentation involving at least one in-depth interview with an DAF end-user AND customer.

III.2.4.3. Empowered and Committed DAF End-Users: List and describe specific DAF end-users, e.g., operators, willing to support further product solution R&D, test, evaluation, or trials in Phase II, e.g., through a signed Customer Memorandum (Attachment 1). Specifically explain how the proposed solution meets the need(s). Describe understanding of the DAF end-user's problem or benefit area in as much detail as possible.

III.2.4.4. Empowered and Committed AF Customers: List and describe the specific AF customer, e.g., as a Program Manager at a system program office, willing to assist the proposed solution's transition during Phase II and potentially into Phase III, e.g., through a Customer Memorandum. Specifically explain the proposed solution's integration with the existing systems.

III.2.4.5. Empowered and Committed US non-AF Government End-Users: List firm commitments, e.g., through a Customer Memorandum, from additional US Government end-users directly related to the proposed solution. Customer Memoranda must be uploaded to the 'Letters of Support' section in Volume 5, Supporting Documents.

NOTE: Proposals without a Customer Memorandum, created using the mandatory template (Attachment 1) and signed by a DAF Customer AND End-

User (if both are the same person, signatory must sign twice) will not be considered for award.

Offerors may add relevant supporting data such as journal articles, literature, and Government publications to or referenced in the proposal. **However, these documents will count toward the page limit.**

III.2.5. Phase II Technical Objectives and Key Results.

III.2.5.1. Describe clearly three to five Phase II R/R&D effort and trial objectives. These objectives shall be tied to specific tasks in the Phase II trial. These objectives shall be qualitative, but specific to the participating DAF end-users. The objectives shall be tied to specific time-periods, tangible, and unambiguous about anticipated results. These objectives shall describe end-state outcomes rather than processes or activities. Each objective shall be accompanied by three to five specific 'key results' measurable throughout Phase II performance. These will likely be quantitative in nature, e.g., deliver X widgets to DAF end-user. Non-quantitative key results shall be clearly measurable.

III.2.5.2. List anticipated interactions with stakeholders necessary to accomplish a Phase II trial. Such stakeholders may include program managers, lawyers, small business professionals, test range officials, information assurance officials, system program office engineers, etc. Clearly describe Phase II trial completion requirements not within the offeror's control, as well as plans to

work within those constraints. NOTE: This includes clearances, e.g., DD Form 254, Contract Security Classification Specification, UAS waiver, etc.

III.2.5.3. Compliance and Regulatory Activities: Please indicate whether or not the proposed effort includes any of the following activities:

- Will there be flight testing? (Indoor/outdoor/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 Mil-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?
- Does this activity use a directed 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 materials, or recombinant DNA?
- Does this project involve interaction or intervention w/ humans?
- Does this project involve the access to, collection, use, analysis or sharing of human data or human bio specimens?

III.2.5.4. Phase II Work Plan: A Work Plan, not a Statement of Work, is required. The Work Plan shall include work outcomes or results, rather than performance methods, and measurable performance standards, including assessment methods. Phase II efforts shall attempt to demonstrate the Phase I effort's technical feasibility, including private sector or Government customer transition results. List the major requirements and specifications for the effort to indicate the project's scope. Work plan should explicitly accommodate the appropriate regulatory and compliance processes necessary to fulfill the desired objectives, detailing submission of documentation, waivers, or other materials as required by the respective process(es).

III.2.5.5. Task Outline: Provide an outline of work to be accomplished throughout the

effort. Payments will be based on negotiated milestones with corresponding deliverables and funding.

III.2.5.6. Milestone Progress and Funding Schedule: The maximum period of performance will be 15 months, including 12 months technical performance and three months for reporting. Include a concise program schedule with all key milestones identified. For each milestone provide:

- An expected delivery date, represented in number of months after contract award (CA), e.g., widget delivered at CA + 6 months;
- A deliverable of value; and
- Clear acceptance criteria to validate milestone achievement.

Proposals shall not include more than 15 milestones/deliverables, including a final technical report and intervening milestones/deliverables at offerors' discretion. Upload suggested payment amounts/rationale/supporting information in "Additional Cost Information", Volume 5, Supporting Information (see Section III.5 for additional details).

NOTE: If proposing to work with multiple DAF end-users, consolidate all Customer Memoranda into a single, coherent, mutually agreed-upon Schedule of Milestones, meeting all proposed DAF end-users' approval.

Below is a Schedule of Milestones example. Each milestone marks a required deliverable's completion, e.g., baseline execution plan, prototype component, test plan, prototype production, final report submission, etc. Status reports alone cannot be milestones but shall be included as deliverables. Describe criteria to verify milestones' completion. Associated milestone payments shall reflect justifiable costs. Include supporting rationale with Supporting Documents.

<u>MILESTONE</u>	<u>EXPECTED DELIVERY (MONTHS AFTER CA)</u>	<u>DELIVERABLE</u>	<u>ACCEPTANCE CRITERIA</u>	<u>PAYMENT AMOUNT</u>
EXAMPLE: 02 - Deliver three adapted commercial widgets	CA + 4 months	Three adapted widgets meeting specs in Task 1 delivered to DAF end- user.	DAF end-user will physically accept adapted widgets	\$250,000 Evidence: 2019 commercial widget sales data.

EXAMPLE: 03 – Widget test support.	CA + 15 months	Solution provider supports test, produces report re: adapted widget performance in solving DAF users’ needs as described in task 01.	Report of test results confirmed by DAF end-users.	\$100,000 Evidence: Non- Defense Customer B pilot program invoice.
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NOTE: Non-Defense commercial customers’ pricing data is likely proprietary and should be marked as such. See Section VI.9 of these instructions for the definition of Proprietary Information and Section VIII.5.3 for guidance regarding proprietary markings.

III.2.5.7. Deliverables: Include a section clearly describing the specific sample/prototype/ hardware/software to be delivered, as well as data deliverables, schedules, and quantities.

III.2.5.8. Unique Item Identification: IAW DFARS 252.211-7003, Item Identification and Valuation, may be required. Information regarding hardware may be found at:

<https://www.acq.osd.mil/dpap/dars/dfars/html/current/252211.htm#252.211-7003>

III.2.5.8.1. Safety Related Deliverables: Safety requirements shall be followed in the proposed program’s design and performance. The Work Plan must contain separate sections specifically addressing:

Preliminary Hazard Analysis [Hardware Only]: If hardware is developed, include at least a preliminary hazard analysis.

Preliminary Hazardous Material Report [Hardware Only]: If hazardous materials use is anticipated, provide:

- Materials identification;
- Materials purpose; and
- Possible risk minimizing alternatives/procedures/safeguards.\

III.2.5.9. Required Reports: At a minimum, the following reports shall be deliverables under all Phase II contracts and Other Transactions for Prototype and must be included in the Work Plan. All are considered to be scientific and technical reports.

III.2.5.9.1. Final Report: Draft is due 30 days after Phase II technical effort completion. The final report’s first page will be a single-page summary identifying the work’s purpose, providing a brief description of effort accomplished, and listing potential results applications. The summary may be published by DoD and, therefore, shall not contain proprietary information. It shall also detail project objectives met, work completed,

results obtained, and technical feasibility estimates.

III.2.5.9.2. Status Reports: Due quarterly at a minimum. These concise documents shall describe progress in meeting selected DAF end-users' needs. Each shall be 15 slides or less. Status reports shall progress toward Phase II objectives and key results, as well as quantitative measure between 0 and 1 of progress toward each.

III.2.5.9.3. Technical Interchange Meetings: Awardees will be required to conduct technical interchange meetings with Government technical personnel at least quarterly. To limit associated costs, these meetings will be held using a virtual app, e.g., Zoom, Microsoft Teams, etc.

III.2.5.9.4. Phase II Summary Report: Due at technical effort completion, it shall be submitted via email to the government Program Manager. Reports shall not exceed 700 words and must include a technology description and anticipated applications/benefits for the government and/or private sector use.

III.2.5.10. Additional Reporting: The DAF end-user or customer may require, as applicable, other reports or documentation including, but not limited to:

- Software documentation and user manuals;
- Engineering drawings;
- Operation and maintenance documentation;
- Updated commercialization results;
- Safety hazard analysis when the project results in partial or total hardware development/delivery

III.2.6. Key Personnel: Identify key project personnel, including subcontractors and consultants. Include information regarding education, experience, and citizenship. A

technical resume for the Principal Investigator, including publications, if any, shall be included.

III.2.6.1. Investors and Partners: Identify company investors, shareholders, lenders, technology licensors/licensees, or strategic advisors making significant contributions to support the Phase II effort. Describe their past experience or track record as it will support the technical or commercialization effort, e.g., leveraging other entities in company investors' portfolios or accessing other capital sources.

III.2.6.2. 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. Include reviewers' comments regarding the offeror's knowledge of the state-of-the-art in the specific approach proposed. Specify related Government efforts, SBIR/STTR or otherwise, awarded, previously proposed, or intended for the proposal.

III.2.6.3. Non-U.S. Citizens: Identity all proposed non-U.S. citizens and dual citizens as direct employees, subcontractors, funding or resource providers, technology licensees or licensors, or consultants. For these individuals, in addition to technical resumes, provide countries of origin, type of visas or work permits held, and explanation of their anticipated involvement level in the project.

Note: For selected proposals determined subject to export-control, International Traffic in Arms Regulations (ITAR), and/or Export Administration Regulations (EAR), 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 prevents 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. The requested information regarding non-U.S. citizens should be captured in this table or similar:

Full Name	Foreign National (Y/ N)	Country of Origin	Visa/Work Permit	Description of Involvement (specific work plan task(s))
(LIST)	(LIST)	(LIST)	(LIST)	(LIST)

III.2.7. Supply Chain Integrity

III.2.7.1. Involvement in joint ventures, partnerships, joint technology development agreements, teaming arrangements, or technical assistance or collaborative technology agreements, including associated entities or person.

III.2.7.2. The firm's main component, software, or other suppliers. Discuss others' licensed intellectual property used as material inputs for the firm's products or services.

III.2.7.3. Entities utilizing the firm's Intellectual Property.

III.2.7.4. Significant non-US customer or investment base, including country(ies) and major customers or investors, i.e., >5% of revenue. Also discuss current or prospective foreign sovereign wealth funds or other foreign government instrumentalities as customers or investors.

III.2.7.5. Foreign interests or persons with power, by contractual arrangements or other, to direct or decide matters affecting company management, intellectual property, or operations. Can be direct or indirect, exercised or not, and exercisable or not through ownership of the US company's securities. If yes, state the firm's Foreign Ownership, Control, and Influence (FOCI) mitigation measures.

III.2.7.6. Identify needed classified information, if any, and identify the Federal agency approving the firm's classified information handling. If the firm does not currently have approval, describe the intended method to obtain it.

III.2.7.7. Verify the firm's owners, investors, and principal investigators meet all

applicable U.S. citizenship, residency, and operation requirements under 13 CFR § 121.701-705 and the SBA SBIR/STTR Policy Directive.

III.2.7.8. Verify the firm shall comply with DFARS 252.225-7048, Export-Controlled Items (June 2013), during Phase II performance.

III.2.7.9. Discuss, if appropriate, the firm's mandatory or voluntary reviews of the Committee on Foreign Investment in the United States (CFIUS) under the Critical Technology review program IAW 31 CFR Part 801, or other CFIUS review. If not, discuss company's subject to, or eligible for, CFIUS Critical Technology or other mandatory or voluntary reviews. Detail the firm's technology manufacture/ production considered to be emerging/foundational, regardless of export control or definition as critical technology under CFIUS. Describe the firm's consulting, scientific, or engineering services relating to emerging or foundational technology, if any, e.g., quantum information and computing, artificial intelligence, machine learning, advanced sensors and networks, etc.

III.2.7.10. Verify the firm shall comply with the Bayh-Dole Act US technology commercialization and manufacturing requirements, codified at 35 USC § 204.

III.3. Volume 3 Instructions: Cost Volume

Use the format provided in the Cost Breakdown Guidance for the DSIP online cost volume form. Some items may not apply to the specific project and, therefore, do not require input. The Government needs sufficient information to allow understanding of proposed funds expenditure, if selected for award. The Cost Volume must be adequate to enable DAF personnel to determine the overall price's purpose, necessity, and reasonableness. The cost volume will cover up to 15 months, including 12 months technical effort and three months for reporting.

The online Cost Volume and Itemized Cost Volume Information are not included in any page limits. The itemized listing may be placed in the Explanatory Material section of the online Cost Volume or in Volume 5 (see Section III.5), Supporting Documents, under the "Other" drop-down options. Note: Only one file can be uploaded to DSIP. Ensure this file includes the complete Technical Volume and the information below.

The maximum amount of Air Force SBIR/STTR funds obligated to Phase II awards will be \$750,000, regardless of the presence of second phase funding commitments. Fixed price payments shall be tied to measurable milestones and deliverables, as agreed upon with the Government.

Price analysis, including reasonableness, is required and will be subject to U.S. Government and DoD standards. If using comparison with prior efforts, identify the basis upon which the prior prices were determined reasonable. If price analysis techniques are inadequate, provide a cost analysis IAW FAR 15.404-1(c). Cost analysis includes, but is not limited to, consideration of materials, labor, travel, other direct costs, and proposed profit rates.

Direct cost items require substantiation as reasonable and realistic. Unsubstantiated costs must be detailed through cost estimating. Information should be included in the 'Additional Cost Information' section of Volume 5, Supporting Documents.

If selected for award, the Contracting Officer (CO) may require further information in areas such as equipment, materials, consultants, subcontractors, etc. Additional cost volume and accounting standard information is available in the DCAA publication titled “Audit Process Overview –Information for Contractors” at <http://www.dcaa.mil>.

Information included in the outline Cost Volume form includes, but is not limited to:

- Direct Labor Costs: Identify key personnel by name and/or labor category. Individuals’ hours, labor category, labor overhead and/or fringe benefits, and actual hourly rates are required.
- Direct Material Costs: Justify materials, parts, and supply costs with an itemized list containing types, quantities, price, and, where appropriate, purpose. If proposing direct material costs, justifying information, e.g., vendor quotes, historical costs, etc., can be included as “Supplemental Cost Information” in Volume 5, Other Supporting Documents.
- Other Direct Costs: This cost category includes specialized services such as machining or milling, special testing or analysis, and costs incurred for temporary specialized equipment use. Proposals including 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.
- Travel: Include travel costs in “Other Direct Costs.” Must relate to project needs, broken out by trip, destination, purpose, number of travelers, airfare, per diem, lodging, ground transportation, etc. Recommend budgeting at least one trip to the DAF technical point of contact’s (TPOC’s) location. While actual travel costs may differ from proposed travel costs, the proposal information allows the Air Force CO to determine whether travel costs are reasonable.
- Subcontracts: Include subcontract costs in “Other Direct Costs.” Include copies of subcontract agreements to support costs. Subcontract agreements must adequately describe intended performance.
- At a minimum, include a Statement of Work (SOW) with a corresponding detailed Cost Volume for each planned subcontract.
- Consultants: Include consultant costs in “Other Direct Costs”. Provide a separate agreement letter for each consultant, briefly stating tasks to be performed, number of hours, and hourly rate.

NOTE: The total consultant fees, facility lease or usage fees, and other subcontract or purchase agreements costs may not exceed one-third of the total contract price, unless otherwise approved in writing by the CO.

- Special Tooling/Test Equipment/Material: Proposed equipment and materials will be carefully reviewed for appropriateness to the proposed effort. Special tooling and test equipment purchases must, in the CO’s opinion, be advantageous to the Government and relate directly to the specific effort. It may include such items as innovative instrumentation and/or automatic test equipment. Title to Government Furnished Property or property acquired with Government funds will be vested with the DAF, unless it is determined title transfer to the contractor is more cost effective than DAF recovery.

PLEASE ROUND ALL COSTS TO THE NEAREST DOLLAR!

NOTE: If no exceptions are taken to an offeror's proposal, the Government may award a contract without negotiations. Therefore, the offeror's initial proposal should contain its best terms from the technical and price standpoint. The Government reserves the right to award Phase IIs as FAR-based firm fixed price contracts or Other Transactions for Prototype. Contact the CO identified in the selection notification with award type questions. The Government reserves the right to reopen negotiations if the CO later determines it necessary.

III.4. Volume 4 Instructions: Company Commercialization Report

The Company Commercialization Report (CCR) allows companies to report funding outcomes resulting from prior SBIR/STTR awards. SBIR/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/STTR awardees are requested to voluntarily update the information in the database annually for a minimum period of 5 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 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 required for 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:

- a. 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.
 - 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 they do not have access and must contact the Firm Admin to complete this action.
 - **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 *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.
- b. 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.
 - 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 the CCR has been uploaded by the Firm Admin.
 - No file dialog box present at the bottom of the page is an indication **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.
- c. If the proposing firm has **NO** prior DoD and/or non-DoD Phase I and/or Phase II SBIR/STTR awards, the CCR upload from SBIR.gov is not required and firm will select NO. The proposal’s CCR section will be marked complete.

III.5. Volume 5 Instructions: Supporting Documents

Volume 5 is **NOT** optional. It allows small businesses to submit additional Technical and Cost Volume supporting documentation. Documents acceptable for inclusion in Volume 5 are found in Section III: Proposal Checklist.

III.5.1 Allocation of Rights – <https://www.afsbirsttr.af.mil/Portals/60/Pages/Phase%20I-II/Model%20agreement%20for%20the%20allocation%20of%20rights.pdf> (REQUIRED)

III.5.2 SBC and Research Institution Teaming Agreement (REQUIRED) – Under Federal Acquisition Regulation (FAR) 9.6, a contractor teaming agreement is an agreement between a potential prime contractor agrees with one or more companies to have them act as its subcontractors under a specified Government contract or acquisition program.

III.5.3 Customer Memoranda and Letters of Support: Include signed Customer Memoranda from DAF end-users and/or customers. **Inclusion of a Customer Memorandum using the template at Attachment 1 and signed by a DAF Customer AND End-User is mandatory.** The Customer Memorandum formally captures interest from empowered and committed DAF end-users/customers as described above. Proposals without a signed Customer Memorandum or which do not follow the mandatory template will be disqualified as non-responsive to the solicitation. Joint organizations may be the End-Users/Customers but the Customer Memorandum must clearly articulate how the requirement represents a valid DAF need. In these cases, the primary Technical Point of Contact (TPOC) must be a DAF individual. Commitments from U.S. Government non-DAF End-Users/Customers will also be considered. However, there MUST be at least one DAF/Joint organization End-User and Customer as described above.

Letters of support demonstrate the proposed innovation, if developed, would solve a valid market need. More generally, letters of support help validate proposal commercial impact claims. Therefore, letters from potential technology end-users, i.e., customers, and corporate partners/collaborators are appropriate, as well as letters from actual or potential investors.

Organize all memoranda/letters logically, e.g., DAF Customer Memoranda in one section, US Government non-DAF Customer Memoranda in another, letters of support from non-Defense commercial customers in another, etc., and uploaded in a single .pdf.

NOTE: If proposing to work with more than one DAF End-User/Customer, all signed Customer Memoranda must be consolidated into a single, coherent memorandum reflecting the consolidated work plan milestones and signed by the lead DAF Phase II Program Manager.

III.5.4 Lifecycle Certification: All SBIR/STTR Phase II awardees must complete certification documents for submission with the proposal, prior to receipt of more than half the total contract amount, AND before final payment receipt. All questions must be answered and an authorized company officer must sign and date prior to submission. Completion is part of Phase II performance requirements. Certifications found at <https://www.afsbirsttr.af.mil/Portals/60/documents/SBIR%20Funding%20Certification%20-%20Life%20Cycle%20-%20May%202021%20JPM.pdf>

III.5.5 Prior, Current, or Pending Support of Similar Proposals or Awards. Identify proposals for essentially equivalent work submitted to other US Government agencies or DoD components as described in 2.7.2 above:

Federal Agency to which Proposal was Submitted	Date of Submission	Proposal Title and, if SBIR/STTR. Number	Principal Investigator's Name	If Awarded, include Contract Number
(LIST)	(LIST)	(LIST)	(LIST)	(LIST)

NOTE 1: If this DOES NOT apply, include a single-page document stating, “No prior, current, or pending US Government support for proposed work.”

NOTE 2: The identification of similar proposals or awards is particularly important for the special topics, as they are broader in nature than most traditional SBIR topics.

III.5.6 Foreign Citizens Table. For further information, see Section III.2.6.3, and Section VI.5. If subject to ITAR/EAR, involvement of foreign nationals may be restricted. “Foreign National” is defined in 22 CFR 120.16 as a person who is neither a lawful permanent resident (8 USC §1101(a)(20)), nor a protected individual (8 USC § 1324b(a)(3)) of the U.S. It also includes foreign corporations, business associations, partnerships, trusts, societies, other entities/groups not incorporated/organized to do business in the United States, international organizations, foreign governments, and their agencies/subdivisions. Offerors must identify foreign national team members and provide their countries of origin, visa/work permits possessed, and assigned Work Plan tasks. Additional information may be required during negotiations to verify eligibility. Even if eligible, participation may be restricted due to U.S. export control laws.

NOTE: Export control compliance statements are not all-inclusive and do not remove submitters’ liability to comply with applicable ITAR/EAR export control restrictions or inform the Government of potential export restrictions as efforts proceed (see Section VI.4).

III.5.7 Supplemental Cost Information. A detailed cost proposal must be submitted and uploaded as Additional Cost Information in Section III.5, Volume 5. Cost proposal information will be treated as proprietary. Include direct cost substantiating information, e.g., non-Defense solution sales figures, based upon price analysis in the Cost Volume. Proposed costs must be provided by individual cost element and contractor fiscal year (FY) in sufficient detail to support estimates’ bases, as well as the purpose, necessity, and reasonableness of each. This

information will expedite contract execution if selected for award. For further detail, see section III.3, Volume 3: Cost Volume.

III.5.8 Technical Data Rights (Assertions). Rights in technical data, including software, developed under the terms of contracts awarded under this solicitation generally remain with the contractor. The Government obtains SBIR/STTR data rights in such technical data, beginning at contract award and ending 20 years after time of award. This data shall be marked with the CD 2020-O0007 DFARS 252.227-7018, Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program, restrictive legend. Upon expiration of the 20 year protection period, 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 persons other than its support services contractors except (1) for peer review purposes; (2) as expressly permitted by the contractor; or (3) a use, release, or disclosure is necessary for Government-operated items’ emergency repair or overhaul. Proposing firms asserting data rights should include the following table in the proposal:

Technical Data/ Computer Software to be Furnished With Restrictions	Basis for Assertion <ul style="list-style-type: none"> • None • Developed exclusively at private expense • Developed partially at private expense 	Asserted Rights Category <ul style="list-style-type: none"> • None • Govt Purpose • Limited (Tech Data) • Restricted Rights (Software) • Specifically Negotiated License 	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

If a proposer plans to submit assertions CD 2020-O0007 DFARS 252.227-7018, Identification and Assertion of Use, Release, or Disclosure Restrictions, those assertions must be identified. Further, assertion of use, release, or disclosure restrictions MUST be included in this section. A contract cannot be awarded until assertions have been approved.

III.5.9 Funding Agreement Certification (signed). Firms selected for award must complete the certificate at proposal submission and include the information in Section III.5.

III.5.10. SBIR/STTR Environment, Safety and Occupational Health (ESOH) Questionnaire: Include a completed version of the SBIR/STTR Environment, Safety and Occupational Health (ESOH) Questionnaire. (Link found at Attachment 4.)

III.5.11 One-Page ‘Sales Pitch’ Summary Document: Include a visually appealing, 1-page company ‘sales pitch’ and the proposed non-Defense commercial solution adaptation to meet a DAF need. The document may be circulated publicly and, therefore, shall contain no confidential or Personally Identifiable Information, e.g., names, contact information, etc., for DAF employees.

III.5.12 Phase II Milestones and Funding Document Chart and Second Phase Funding Commitment Documentation: Include the following information to establish proposed milestones and payment schedule.

III.5.12.1 Provide a completed Milestones Progress and Funding Schedule form (Section III.2.5.6), including the proposed project milestones, funding expenditure/payment schedule, and second phase funding commitments, as appropriate.

III.5.12.2 If second phase funding commitments are included in the proposal, provide a letter from the outside investor and/or affiliated funder to the offeror, uploaded to Volume 5, Other, containing:

- A commitment to provide funding in cash, contingent on award selection and fulfilling specified project milestones. Milestones must be structured to avoid front-loading and/or unbalanced SBIR funds expenditure. Specifically, second phase funding commitments cannot

- be conditioned on majority or total SBIR funds expenditure before private investor/non-SBIR Government funding is expended.
- A brief, i.e., \leq one page description of investment-funded tasks. Invested funds may pay for additional project-related R&D or other non-Work Plan activities, provided they further the technology's development and/or commercialization, e.g., marketing.
- A brief, i.e., \leq one page, statement describing the investor's (i) experience evaluating companies' technology commercialization ability and (ii) technology market assessment, including the company's ability to bring it to market.

For Governmental second phase commitments, or if the funds are to be applied directly to the contract, the funds must be received by AFRL/RGF within 30 days of solicitation closing. 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.

III.5.13 Additional Equipment/Facilities Information: Describe instrumentation and/or physical and digital facilities necessary and available to carry out the Phase II effort. Justify equipment to be purchased and include in 'Additional Cost Information', as necessary. State whether proposed performance locations meet Federal, state, and local Governments environmental laws and regulations for, but not limited to, airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid/bulk waste disposal practices, and toxic/hazardous material handling/storage.

III.5.14 Additional Subcontractor/Consultant Information: List private companies, consultants, universities or Federal Laboratories potentially formally involved in the project. All should be described in detail and included in the cost proposal as necessary. Copies of signed consultant and subcontract or letters of intent must be attached to the proposal. These letters should briefly state the contribution or expertise provided. Include information regarding consultant or subcontractor unique qualifications.

III.5.15 Contractor Certification Regarding Provision of Prohibited Video Surveillance and Telecommunications Services and Equipment. The DoD must comply with Section 889(a)(1)(B) of the National Defense Authorization Act (NDAA) for Fiscal Year 2019, and is working to reduce or eliminate contracts with entities that use any equipment,

system, or service that uses covered telecommunications equipment or services (as defined in Attachment 3) as a substantial or essential component of any system, or as critical technology as part of any system.

All proposals must include the certifications found in Federal Acquisition Regulation clauses 52.204-24, 52-204-25, and 52-204-26, executed by the proposer's authorized company representative. These Federal Acquisition Regulation clauses may be found at Attachment 3.

These certifications must be signed by the authorized company representative and uploaded as a separate PDF file in Volume 5 for all proposal submissions.

Completion of the required certification clauses requires due diligence for contractors proposed as a part of the submission, including research partners and suppliers.

Therefore, proposers are strongly encouraged to review certification requirements early in the proposal development process. Failure to complete and/or submit the required certifications with the proposal may be cause for rejection without evaluation.

III.5.16 Foreign Disclosure Addendum. Proposers must review Attachment 4, Foreign Ownership or Control Disclosure, to determine applicability. If applicable, an authorized firm representative must complete and sign the document. The completed and signed disclosure must be uploaded to proposal Volume 5.

III.6. Volume 6 Instructions: Fraud, Waste and Abuse Training

The Fraud, Waste and Abuse (FWA) training is **required** for Phase II proposals. The training provides information on what represents FWA in the SBIR/STTR Programs, the most common mistakes leading to FWA, and the penalties and ways to prevent FWA. 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.

IV. SELECTION METHOD AND REVIEW CRITERIA

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 and/or scientists to determine the most promising technical and scientific approaches. Each proposal will be judged on its own merits. Companies can submit NO MORE THAN one Phase II proposal per Phase I award. DAF is under no obligation to fund a specific number of Phase II 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 which are of equal importance:

A. The potential for Government or private sector commercialization and benefits expected to accrue from commercialization.

- 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 DAF Customer Memorandum, or private sources, as documented through a letter of commitment, are evidence of commercialization potential.
- A sound transition strategy in the DAF Customer Memorandum is also evidence of commercialization potential.

B. The appropriateness, relevance, and specificity of an identified Defense Need. A complete and compelling DAF Customer Memorandum (using the mandatory template provided at Attachment 1), signed by an appropriate DAF TPOC, indicates the appropriateness, relevance, and specificity of an identified Defense Need. While not required, signed letters of interest 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.

C. The soundness, technical merit, and innovation of the proposed technical approach, as well as its differentiation from current customer alternatives, and incremental progress toward fulfilling the identified Defense need. Includes the proposed Principal Investigators'/Project Managers', supporting staff, and consultants' qualifications to execute the proposed approach.

Price reasonableness 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. Peer reviewers will base conclusions solely on proposal content. It cannot be assumed reviewers are acquainted with the firm, key individuals, or referenced experiments.

Other Factors Considered During the Selection Process:

- National security concerns.
- IAW EO 13329, proposals advancing innovation in U.S. small business manufacturing are given high priority.
- The Energy Independence and Security Act of 2007 (Act), 19 December 2007, P.L. 110-140, prioritizes energy efficiency/renewable energy system R&D projects. Proposals from eligible US-owned SBCs accomplishing biomedical research in energy efficiency/renewable energy systems are encouraged.
- Directly related Phase II funding commitments from non-SBIR Government sources may be considered to determine the successful offeror when multiple proposals are determined equal in technical merit.

D. PROTESTS, FEEDBACK, AND RELEASE OF EVALUATIONS

This solicitation and resulting award decisions may be protested to the CO, the Government Accountability Office (GAO), or the U.S. Court of Federal Claims. Further, solicitations and award decisions involving Other Transactions for Prototype may be challenged in U.S. District Courts. Small business awardees' size or status may be protested to the SBA. Solicitation protests must be filed prior the submission deadline date/time.

Proposal feedback may be requested as instructed in the DAF SBIR/STTR system notification within 30 days after non-selection notification receipt. Requests received more than 30 days after non-selection notification receipt will not be fulfilled. Feedback will be provided to offerors with "Not Selectable" proposals ONLY. Unsuccessful offerors are entitled to no more than one feedback session per proposal. NOTE: Feedback is not the same as a FAR Part 15 debriefing. Acquisitions under this solicitation are awarded via "other competitive procedures." Therefore, offerors are neither entitled to nor will they be provided FAR Part 15 debriefs.

E. DEFINITIONS

The following definitions from the SBA SBIR/STTR Policy Directive, the Federal Acquisition Regulation (FAR) and 10 USC 2371b apply for the purpose of this solicitation:

- a. Certified HUBZone Small Business Concern: An SBC that has been certified by SBA under the Historically Underutilized Business Zones (HUBZone) Program (13 CFR § 126) as a HUBZone firm listed in the Dynamic Small Business Search (DSBS).
- b. 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.
- c. Commercial Applications (15 USC 638(e)): The term "commercial applications" shall not be construed to exclude testing and evaluation of products, services, or technologies for use in technical or weapons systems.
- d. Commercial Solutions Opening: A competitive procedure COs may use to acquire innovative commercial items, technologies, or services pursuant to FAR Class Deviation 2018-O0016.
- e. 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.
- f. 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 developing 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/?id+ddtc_kb_article_page&sys_id=24d528fddbfc930044f9ff621f961987.

- g. Federal Laboratory: As defined in 15 USC §3703, means any laboratory, any Federally funded research and development center (FFRDC), or any center established under 15 USC §§ 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.
- h. 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 USC § 1101(a)(20) or who is not a protected individual as defined by 8 USC § 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 is (A) a citizen or national of the US or (B) an alien lawfully admitted for permanent residence, granted alien status lawfully admitted for temporary residence IAW 8 USC §1160(a) or §1255a(a)(1), admitted as a refugee IAW 8 USC §1157, or granted asylum IAW Section 8 USC §1158. It does not include (i) an alien who fails to apply for naturalization within six months of the first eligibility date (by virtue of lawful permanent residence period) or, if later, within six months of November 6, 1986, and (ii) an alien applying on a timely basis but not naturalized as a citizen within 2 years of the application date, unless the alien can establish active naturalization pursuit, except time consumed in the Service's application processing shall not be counted toward the 2-year period.

- i. Fraud, Waste, and Abuse
 - i. 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.
 - ii. 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.
 - iii. Abuse includes any intentional or improper use of Government resources, such as misuse of rank, position, or authority or resources.
- j. 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. Other transactions under 10 USC 2371b may also be used, consistent with Other Transactions Guide (2018) from the Under Secretary of Defense for Acquisition & Sustainment. Only the contract method or the other transaction method will be used for DAF SBIR awards.

- k. Innovative: (1) Any new technology, process, or method, including research and development; or (2) any new application of an existing technology, process, or method.
- l. Other Transaction: Refers to the type of Other Transaction Agreement (OTA) that may be placed as a result of this solicitation. This type of OT is authorized by 10 U.S.C 2371b for prototype projects directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or material proposed to be acquired or developed by the DoD, or for the improvement of platforms, systems, components, or materials in use by the armed forces. This type of OTA is treated by DoD as an acquisition instruments, commonly referred to as an "other transaction" for a prototype or a Section 2371b "other transaction." The definition of a "prototype project" in the context of an OT is as follows: a prototype project addresses a proof of concept, model, reverse engineering to address obsolescence, pilot, novel application of commercial technologies for defense purposes, agile development activity, creation, design, development, demonstration of technical or operational utility, or combinations of the foregoing. A process, including a business process, may be the subject of a prototype project.
- m. Performance Benchmarks for Progress Toward Commercialization: In accordance with the SBA SBIR Policy Directive Sec 4.(a)(3), DoD established a threshold for the application of a benchmark where it is applied only to Phase I applicants that have received more than twenty (20) awards over the prior five (5) fiscal years as determined by the Small Business Administration. The ratio of Phase II awards received to Phase I awards received during this period must be at least 0.25. Additional information on performance benchmarking for Phase I applicants can be found at <https://www.sbir.gov/performance-benchmarks>.
- n. Principal Investigator: The principal investigator/project manager is the 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 II, the principal investigator's primary employment must be with either the SBC or the research institution at award and throughout Phase II performance. Primary employment means more than one-half of the principal investigator's time is spent in the SBC or research institution's employ. This precludes full-time employment with another organization. Occasionally, deviations from this requirement may occur, and must be approved in writing by the CO after consultation with the DAF SBIR Program Manager. Further, an SBC may replace the principal investigator on an SBIR Phase I or II, subject to approval in writing by the CO.
- o. Proprietary Information: Information constituting a trade secret or proprietary

commercial or financial information.

- p. Research or Research and Development (R/R&D): Any activity that is:
 - i. A systematic, intensive study directed toward greater knowledge or understanding of the subject studied;
 - ii. A systematic study directed specifically toward applying new knowledge to meet a recognized need; or
 - iii. 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.
- q. 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 CFR 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 USC §§ 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:
 - i. Any research, development, test, evaluation or training, (including experimentation) involving an animal or animals.
 - ii. 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.
 - iii. 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.

- r. Research Involving Human Subjects: All research involving human subjects shall be conducted in accordance with 32 CFR § 219 “The Common Rule,” 10 USC § 980 “Limitation on Use of Humans as Experimental Subjects,” and DoDD 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. Offerors 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 (DoDD 3216.02), recruitment of military research subjects (DoDD 3216.02), and informed consent and surrogate consent (10 USC § 980) and chemical and biological agent research (DoDD 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:

- i. 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.

- ii. Any research involving identifiable private information. This may include data/information/specimens collected originally from living individuals (broadcast video, web-use 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 DoDD 3216.02 for definitions of these terms and more information about the applicability of DoDI 3216.02 to research involving human subjects.

The DAF may request additional Federal Assurance documentation. All institutions engaged in human subject research, to include subcontractors, must have a valid Assurance and comply with the DFARs clause 252.235-7004 Protection of Human Subjects (July 2009). Institutions proposing to conduct human subject research meeting an exemption criteria in 32 CFR 219.101 are not required to provide a Federal Assurance of Compliance. See DFARs clause 252.235-7004 Protection of Human Subjects below.

(a) Definitions. As used in this clause

- (1) Assurance of compliance means a written assurance that an institution will comply with requirements of 32 CFR Part 219, as well as the terms of the assurance, which the Human Research Protection Official determines to be appropriate for the research supported by the Department of Defense (DoD) component (32 CFR 219.103).
- (2) Human Research Protection Official (HRPO) means the individual designated by the head of the applicable DoD component and identified in the component's Human Research Protection Management Plan as the official who is responsible for the oversight and execution of the requirements of this clause, although some DoD components may use a different title for this position.
- (3) Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains data through intervention or interaction with the individual, or identifiable private information (32 CFR 219.102(f)). For example, this could include the use of human organs, tissue, and body fluids from individually identifiable living human subjects as well as graphic, written, or recorded information derived from individually identifiable living human subjects.
- (4) Institution means any public or private entity or agency (32 CFR 219.102(b)).
- (5) Institutional Review Board (IRB) means a board established for the purposes expressed in 32 CFR Part 219 (32 CFR 219.102(g)).
- (6) IRB approval means the determination of the IRB that the research has been reviewed and may be conducted at an institution within the constraints set forth by the IRB and by other institutional and Federal requirements (32 CFR 219.102(h)).
- (7) Research means a systematic investigation, including research, development, testing, and evaluation, designed to develop or contribute to generalizable

knowledge. Activities that meet this definition constitute research for purposes of 32 CFR Part 219, whether or not they are conducted or supported under a program that is considered research for other purposes. For example, some demonstration and service programs may include research activities (32 CFR 219.102(d)).

- (b) The Contractor shall oversee the execution of the research to ensure compliance with this clause. The Contractor shall comply fully with 32 CFR Part 219 and DoD Directive 3216.02, applicable DoD component policies, 10 U.S.C. 980, and, when applicable, Food and Drug Administration policies and regulations.
- (c) The Contractor shall not commence performance of research involving human subjects that is covered under 32 CFR Part 219 or that meets exemption criteria under 32 CFR 219.101(b), or expend funding on such effort, until and unless the conditions of either the following paragraph (c)(1) or (c)(2) have been met:
 - (1) The Contractor furnishes to the HRPO, with a copy to the Contracting Officer, an assurance of compliance and IRB approval and receives notification from the Contracting Officer that the HRPO has approved the assurance as appropriate for the research under the Statement of Work and also that the HRPO has reviewed the protocol and accepted the IRB approval for compliance with the DoD component policies. The Contractor may furnish evidence of an existing assurance of compliance for acceptance by the HRPO, if an appropriate assurance has been approved in connection with previous research. The Contractor shall notify the Contracting Officer immediately of any suspensions or terminations of the assurance.
 - (2) The Contractor furnishes to the HRPO, with a copy to the Contracting Officer, a determination that the human research proposed meets exemption criteria in 32 CFR 219.101(b) and receives written notification from the Contracting Officer that the exemption is determined acceptable. The determination shall include citation of the exemption category under 32 CFR 219.101(b) and a rationale statement. In the event of a disagreement regarding the Contractor's furnished exemption determination, the HRPO retains final judgment on what research activities or classes of research are covered or are exempt under the contract.
- (d) DoD staff, consultants, and advisory groups may independently review and inspect the Contractor's research and research procedures involving human subjects and, based on such findings, DoD may prohibit research that presents unacceptable hazards or otherwise fails to comply with DoD procedures.
- (e) Failure of the Contractor to comply with the requirements of this clause will result in the issuance of a stop-work order under Federal Acquisition Regulation clause 52.242-15 to immediately suspend, in whole or in part, work and further payment under this contract, or will result in other issuance of suspension of work and further payment for as long as determined necessary at the discretion of the Contracting Officer.
- (f) The Contractor shall include the substance of this clause, including this paragraph (f), in all subcontracts that may include research involving human subjects in accordance with 32 CFR Part 219, DoD Directive 3216.02, and 10 U.S.C. 980, including research that

meets exemption criteria under 32 CFR 219.101(b). This clause does not apply to subcontracts that involve only the use of cadaver materials.

(End of clause) [74 FR 37648, July 29, 2009]

If selected, institutions must also provide Institutional Review Board (IRB) approval documents or an appropriate institution official's determination the work meets an exemption found in 32 CFR 219. As part of the IRB review process, appropriate training documents for all investigators must accompany the protocol. The protocol, separate from the proposal, must include a detailed research plan description, study population, study participation risks and benefits, recruitment and consent process, data collection, and data analysis.

The time required for the IRB's protocol review and approval will vary, depending on such things as procedures used, research complexity, the study participant risk level, and Principal Investigator responsiveness. The average process can last one to three months. Once approved, the DAF will review the protocol and the IRB's determination to ensure research will comply with DoD and DAF policies. The DoD review process can last three to six months. Ample time should be allotted to complete the IRB and DoD approval processes before recruiting subjects.

- s. 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/2013/06/NIH_Guidelines.pdf. Recombinant DNA is defined as (i) molecules that are constructed outside living cells by joining natural or synthetic DNA segments to DNA molecules that can replicate in living cells or (ii) molecules that result from the replication of those described in (i) above.
- t. Second Phase Funding Commitments: This section provides guidance regarding relationships between a small company and outside investors, as well as for recording funding contributions by the small company or its affiliates. Second phase funding commitments constitute evidence of commercial potential pursuant to 15 USC 638(e). There is no requirement for said commitments, and there is no preference for proposals which include them. There are no ratios attached to second phase funding commitment amounts. Each applicant's commercial potential is evaluated based on its own merits in accordance with stated evaluation criteria. For questions regarding specific situations' qualification, please contact the solicitation CO, Ms. Kris Croake, kristina.croake@us.af.mil, or Mr. James Helmick, james.helmick.2@us.af.mil.

Examples of Second Phase Funding Commitments:

- Money received from internal funds or small business affiliates for R/R&D is considered "cost share". The SBIR/STTR Policy Directive states cost share can be encouraged.
- Funding from outside investors, which includes other companies, State or local governments, venture capital firms, angel investors, non-SBIR/non-STTR Federal Government entities, or any combination thereof. Does not include the small business's owners, family members, and/or the small business's affiliates, as defined in 13 CFR Section 121.103, as highlighted below:

- Concerns are affiliates when one concern controls or has power to control the other, or a third party or parties controls or has power to control both.
 - Factors considered include ownership, management, previous relationships with or ties to another concern, and contractual relationships, to determine affiliation exists.
 - 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. Although the proposal must designate funding as provided by outside/external or internal/affiliated sources, the CO or the SBA may deem them to be otherwise external/outside or internal/affiliated.
- In contrast to internal/affiliated funding commitments, outside funding commitments must be an arrangement by which the outside party provides the small business cash in return for such items as equity or loans convertible to equity; a share of royalties; rights in the technology; a profit percentage; an advance purchase order for products resulting from the technology; Federal funds transferred to AFRL/RGF via Military Interdepartmental Purchase Request; or any combination thereof.
 - u. 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).
 - v. Small Business Concern (SBC): A concern that meets the requirements set forth in 13 CFR § 121.702 (available [here](#)). An SBC must satisfy the following conditions on the date of award:
 - i. 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;
 - ii. 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;
 - iii. 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
 - iv. Has, including its affiliates, not more than 500 employees. (For explanation of affiliate, see www.sba.gov/size.)

Joint Ventures and limited partnerships are eligible provided the entity created qualifies as a Small Business Concern as defined in this Program Solicitation.

- w. 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.

- x. United States: 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.
- y. 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.

Note: The solicitation CO reserves the right to adjust information currently in this section. If needed, changes will be sent to all eligible Phase I companies.

F. NOTICE OF OTHER CONTRACTUAL REQUIREMENTS

At contract award, firms shall make certain legal commitments through Government contract clause or article acceptance. The following outline illustrates required Federal Acquisition Regulations (FAR)-based or Other Transactions provisions. The list is not a complete, nor does it include full clause/article text. Complete general provision language is available by request prior to award.

- a. Standards of Work. Contract performed must conform to high professional standards.
- b. Inspection. Contract performance is subject to Government inspection and evaluation at all reasonable times.
- c. Examination of Records. The Comptroller General or a fully authorized representative shall have the right to examine any directly pertinent records of the contractor involving transactions related to this contract.
- d. Default. The Government may terminate the contract if the contractor fails to perform the work contracted.
- e. Termination for Convenience. The Government may terminate the contract at any time if it deems termination to be in its best interest, in which case the contractor will be compensated for work performed and for reasonable termination costs.
- f. Disputes. The CO with right of appeal shall decide any dispute concerning the contract which cannot be resolved by agreement.
- g. Contract Work Hours. The contractor may not require an employee to work more than eight hours a day or forty hours a week unless the employee is compensated accordingly (that is, receives overtime pay).
- h. Equal Opportunity. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.
- i. Affirmative Action for Veterans. The contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran.
- j. Affirmative Action for Handicapped. The contractor will not discriminate against any employee or applicant for employment because he or she is physically or mentally handicapped.
- k. Officials Not to Benefit. No Congressional member/delegate shall benefit from the contract.

- l. Covenant Against Contingent Fees. No person or agency is employed to solicit or secure the contract for compensation other than the firm's bona fide employees or commercial agencies paid to secure business.
- m. Gratuities. The Government may terminate the contract if gratuities are offered to Government representatives to secure the contract.
- n. Patent Infringement. The contractor shall report patent infringement notices or claims based on contract performance.
- o. Military Security Requirements. The contractor shall safeguard contract-related information in accordance with applicable regulations.
- p. American Made Equipment and Products. Purchase only American-made equipment or products whenever possible in support of the SBIR award.
- q. Unique Identification (UID). Proposals including hardware to be delivered to the Government may include DFARS 252.211-7003.
- r. Publication Approval. Government review/approval is required prior to publication/dissemination, other than within/between the Contractor and subcontractors, if any, of classified and non-fundamental information resulting from contract performance or included in reports submitted under the contract.
- s. Animal Welfare. Contracts involving vertebrate animal research, development, test, evaluation, and/or training will include DFARS 252.235-7002.
- t. Protection of Human Subjects. Contracts including or potentially including research on human subjects IAW 32 CFR Part 219, DoD Directive 3216.02, and 10 USC 980, including that meeting the 32 CFR 219.101(b) exemption, will include DFARS 252.235-7004.
- u. E-Verify. Contracts exceeding the simplified acquisition threshold may include FAR 52.222-54, unless exempted as described in FAR 22.1803.
- v. ITAR. In accordance with DFARS 225.7901-4, Export Control Contract Clauses, the clause found at DFARS 252.225-7048 is included in all solicitations and contracts, including awards under this solicitation.
- w. Cybersecurity. SBIR awardees shall provide adequate security for covered contractor information systems. Specific security requirements are defined in DFARS 252.204-7012; compliance is mandatory.
- x. Adequate COVID-19 Safety Protocols for Federal Contractors. Class Deviation 2021-O0009 implements the requirements of Executive Order 14042, Ensuring Adequate COVID Safety Protocols for Federal Contractors, dated September 9, 2021. It directs agencies to include a clause in certain contracts to ensure contractors comply with all guidance for contractor and subcontractor workplace locations published by the Safer Federal

Workforce Task Force at: <https://www.saferfederalworkforce.gov/contractors/>.

G. COMMERCIALIZATION UPDATE

The awardee shall periodically update the Phase II commercialization results at <https://sbir.defensebusiness.org/>:

- New products and non-R&D services' sales revenue for the Phase II technology;
- Additional investment from non-SBIR/STTR Program sources in activities furthering the Phase II's development and/or commercialization;
- The Phase II technology used in a fielded DoD system or acquisition program, if any, and the

- system or program;
- Patents resulting from the contractor's SBIR/STTR participation;
- Increase in firm's employees; and
- Completion of an initial public stock offering resulting, in part, from the Phase II project.

These project updates will be required one year after the Phase II start, at Phase II conclusion, and at submission of a new DoD SBIR/STTR proposal. Firms not submitting new DoD proposals will be requested to provide annual updates after Phase II completion.

IV.1. Copyrights

With the Contracting or Agreements Officer'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 contain an appropriate acknowledgment and disclaimer statement.

IV.2. Patents

Awardees normally may 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 make public information disclosing a Government-supported invention for a period of five years to allow the awardee to pursue a patent. See also Invention Reporting

IV.3. Technical Data Rights

Technical Data Rights (Assertions). Rights in technical data, including software, developed under the terms of contracts awarded under this solicitation generally remain with the contractor. The Government obtains SBIR/STTR data rights in such technical data, beginning at contract award and ending five years after time of award. This data shall be marked with the DFARS 252.227-7018, Class Deviation 2020-O0007, Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program, restrictive legend. Upon expiration of the five year protection period, the Government has government purpose rights in the STTR data. If a proposer plans to submit assertions IAW DFARS 252.227-7018, Class Deviation 2020-O0007 or similar award term, those assertions must be identified and restrictions MUST be included in the proposal submission. Award cannot be executed until assertions are approved or mutually agreed-upon during negotiations.

IV.4. Invention Reporting

STTR 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, including the Edison Invention Reporting System at www.iedison.gov for those agencies participating in iEdison.

IV.5. 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.

SF 298 Form "Report Documentation Page" Preparation:

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/STTR Program Office." Note: Data developed under SBIR/STTR awards is subject to DFARS 252.227-7018 or similar protection. DAF will review the awardee's Block 12 information and assign the final distribution statement.

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 "STTR Report".

ii. Submission

All final reports are submitted to the awarding DAF organization IAW the award document. Companies shall not submit Final Reports directly to DTIC.

Delivery of the draft final report is normally required within 30 calendar days after technical program completion.

Requirements regarding other deliverables' submission will be defined in Sections B and 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.'

iii. Proprietary Information

Information contained in unsuccessful proposals will remain the property of the Applicant. However, the Federal Government may 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 the proposal is clearly marked by the Applicant as follows:

1. The following legend must appear on the title page of the proposal:

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 law. 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.*] (End of Legend); and

2. The following legend must appear on each page of the proposal that contains information the Applicant wishes to protect: **Use or disclosure of information contained on this sheet is subject to the restriction on the title page of this proposal**
- iv. 252.225-7973 Prohibition on the Procurement of Foreign-Made Unmanned Aircraft Systems—Representation. (DEVIATION 2020-O0015)
1. *Prohibition.* Section 848 of the National Defense Authorization Act for Fiscal Year 2020 (Pub. L. 116-92) prohibits DoD from using or procuring—
 - a. An unmanned aircraft system (UAS), or any related services or equipment, that—
 - b. Is manufactured in the People’s Republic of China or by an entity domiciled in the People’s Republic of China;
 - c. Uses flight controllers, radios, data transmission devices, cameras, or gimbals People’s Republic of China;
 - d. Uses a ground control system or operating software developed in the People’s Republic of China or by an entity domiciled in the People’s Republic of China; or
 - e. Uses network connectivity or data storage located in, or administered by an entity domiciled in, the People’s Republic of China; or
 2. A system for the detection or identification of a UAS, or any related services or equipment, that is manufactured—
 - a. In the People’s Republic of China; or

- b. By an entity domiciled in the People's Republic of China.
- 3. *Representations.* By submission of its offer, the Offeror represents that it will not provide or use—
 - a. A UAS, as described in paragraph (a)(1) of this provision, in the performance of any contract, subcontract, or other contractual instrument resulting from this solicitation; and
 - b. A system for the detection or identification of a UAS, as described in paragraph VIII.5.4.2 of this provision, in the performance of any contract, subcontract, or other contractual instrument resulting from this solicitation.

(End of provision)

DAF X21.A STTR PHASE II INSTRUCTIONS ATTACHMENTS

Attachment 1 – DAF X21.A STTR Phase II - Customer Memorandum (Required)

1a – Schedule of Milestones (Required)

1b – Non-Proprietary Work Plan (Required)

1c – TPOC Designation Letter (Info only; do not include in Memo)

1d - Phase III Transition Resources (Do not include in Memo)

1e – STTR Definition and Suitability Resources (Do not include in Memo)

Attachment 2 – DAF X21.A STTR Phase II – Funding Commitment Form (Required if proposal includes non-SBIR Government funding or private investment)

Attachment 3 – DAF X21.A STTR Phase II – Lifecycle Certifications

Attachment 4 – DAF X21.A STTR Phase II - SBIR/STTR Environmental Safety, and Occupational Health (ESOH) Questionnaire

Attachment 5 – DAF X21.A STTR Phase II – DoD SBIR/STTR Programs Contractor Certification Regarding Provision of Prohibited Video Surveillance and Telecommunications Services and Equipment (Required)

Attachment 6 – DAF X21.A STTR Phase II - DoD SBIR/STTR Programs Disclosure of Offeror's Ownership or Control by a Foreign Government (Required, if applicable)

X21.A STTR PHASE II ATTACHMENT 1 CUSTOMER MEMORANDUM TEMPLATE



DEPARTMENT OF THE AIR FORCE

<<Air Force Organization>>

<DATE>>

MEMORANDUM FOR AFRL/RGV (AF Ventures)

References: (a) 15 U.S.C. §638
(b) U.S. Small Business Administration SBIR/STTR Policy Directive (May 2019)
(c) 5 C.F.R. §2635.702(c), Exception (1)

FROM: <<DAF Organization>>

SUBJECT: AFRL/RGV X21.A Small Business Technology Transfer (STTR) Phase II – DAF Organization Defense Need and Participation Interest in the STTR Project under Topic AF21A-TCSO1 with <<STTR Company>>.

BLUE TEXT IS INFORMATIONAL; REMOVE BEFORE SIGNING!

NOTE – The use of this template is MANDATORY; all elements MUST BE present and complete. Proposals without completed and signed memoranda accomplished IAW this template will be determined **non-responsive to the solicitation and not considered for award**. Check the template's "Subject" line to ensure it corresponds to the proposal's applicable solicitation number, e.g., X21.A, X21.1, X20.3, etc.

R/R&D/RDT&E SUITABILITY – To ensure efforts submitted are appropriate for the SBIR/STTR Programs, general definitions and R/R&D/RDT&E suitability language may be found in the attachments. This language is not exhaustive but meant only for reference.

To learn more about AF Ventures SBIR/STTR open topics and access additional resources including videos, sample applications, and more, visit <https://www.afwerx.af.mil/sbir-for-airmen.html>.

- Purpose:** This memorandum is executed in furtherance of references (a) and (b) and the applicable Air Force 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 STTR Phase awardee on a proposed Phase II effort.
- Defense Mission Need:** <<DAF Organization>> has a national Defense-related mission need in the area of <<Area of Interest>>, specifically <<describe the mission need and impact>>. We believe technology development under this effort could contribute to future mission need fulfillment. The mission impact of this project on the DAF and DoD will be <<impact statements>>. The main goals of

our involvement in this project are:

- (1) << measurable goal 1>>
- (2) << measurable goal 2>>
- (3) << measurable goal 3>>
- (4) Etc.

3. **Project Timeline:** If this SBIR Phase II proposal is selected and awarded, we expect this project to be executed from <<start month/year>> to <<end month/year>>.

4. **Phase II Funding Commitment from <<DAF Organization>>:** DAF Customer Government funding commitments are not required for Phase II STTR awards. However, a DAF Customer may wish to provide its own funds to supplement STTR program funds in order to increase project success and likelihood of selection according to Reference (b), (Appendix I)(e.)§4(b)(1)(v)(B).

Pursuant to Reference (b), DAF Customer may expend its non-STTR funds as supplements to the Phase II award. DFARS Subpart 204.71, Uniform Contract Line Item Numbering System, contains procedures for applying multiple lines of accounting to a single contract, including modifications.

In order to be included in the contract award, if selected, funding must be provided to AFRL/RGF no later than 30 calendar days after the corresponding solicitation's closing date. 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.

If non-STTR Federal funding commitments are planned, include this language: If a Phase II award is executed, <<DoD/DAF Organization>> will provide <<amount and type of funds>> non-STTR Government funds. <<DAF Customer Finance Office symbol>> concurs with this type funding's use and verifies funds availability.

If funds will be applied directly to Phase II via funds transfer to AFRL/RGF, also include: <<DAF Organization>> will transfer the funds to AFRL/RGF no later than 30 days after the applicable solicitation's closing date. It is understood if these funds do not arrive within the specified period of time, the Phase II may not be awarded. If the Phase I company is not selected for Phase II award, the funds will be returned to the providing DAF organization.

5. **Additional agreement:** Prior to and/or following award, if necessary for project success, <<DAF Organization>> will consult with Air Force 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, <<DAF Organization>> 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 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.

7. **Milestones:** The milestones found in Attachment 1.1, Schedule of Milestones, will provide value as 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:

Primary End-User Organization*: <<DAF End-User Organization>>

POC: <<Name, Rank, Title, Email>>

The organization which will operationally benefit from the solution.

Primary Customer Organization:** <<DAF Customer Organization>>

POC: <<Name, Rank, Title, Email>>

The organization responsible for acquiring the solution on behalf of the End-User.

Phase II Technical Points of Contact (TPOCs):

Primary: <<Name, Rank, Title, Email>>

Alternate: <<Name, Rank, Title, Email>>

TPOCs 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, ebase access, waivers/certifications, etc.; and driving the effort towards Phase III transition if successful. Please see the **TPOC Designation Letter** provided in the attachments. Should this proposal be selected for award, this letter will need to be signed. **Note:** 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 or civilian personnel..

Strategic Stakeholders (for data collection purposes):

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

Name of PEO or Center this proposal most directly impacts (required):

Staff Functions (as applicable) Providing Concurrence:

Security Office (required for CAC/base access; see Section 10):

Information Assurance/Cybersecurity (required for a Risk Management Framework; see Section 11):

Finance (required for Phase II Government Funding Commitments; see Section 4):

Contracting:

Strategy, Integration, and Requirements (A5):

Small Business Office:

Commander:

Legal:

Engineering/SPO/Test:

Public Affairs:

<<Insert additional stakeholders here as necessary>>

- 9. Phase III Transition Strategy:** The program's core objective is transition of STTR-funded small business innovations to Phase III. Describe this efforts' transition strategy; address at a minimum 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 STTR company.

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

- 10. Installation Access:** The STTR Company <<will/will not>> require access to military installations and/or facilities to perform the proposed work under Phase II. If CAC/Base Access is required, include the following: <<Security Office>> confirms if a Phase II is awarded with the requisite terms and conditions, it will support this requirement (to include processing paperwork, as required). AFVentures does not process DD254 or other forms.

- 11. Cyber Security:** Every Information Technology (IT) requires an RMF within the Air Force. First, the Air Force TPOC must consult with the applicable wing-level cybersecurity office and submit a RMF request for the associated IT. The RMF assessment ascertains the IT's data security requirement and assigns an Impact Level (IL) of cloud security, e.g. IL-2 through IL-5. DevSecOps must then be established in a secure cloud environment meeting the business's needs. Fundamental cybersecurity control requirements for businesses 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. Cybersecurity Maturity Model Certification, another measure of cybersecurity and preparation for this future requirement, is fulfilled by the steps above. AFVentures does not grant ATOs.

- a) The proposed solution <<is/is not>> considered an Information Technology.

- 1) If considered an IT, include the following:

<<Information Assurance/Cybersecurity Office>> will work with <<STTR Company>> to obtain an RMF and fulfill follow-on requirements.

- 12. Flight Testing or Utilization of Unmanned Aerial Systems (UAS):** The STTR company <<will/will not>> require flight testing or UAS utilization to accomplish the proposed Phase II work. 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 shall work with the Government TPOC to also pursue a "use waiver". Contract execution is not dependent on use waiver completion. But it is important to start the process as early as possible, as completion could impact efforts' milestone schedules.

13. Conclusion and Signatures. Please contact the individuals below with questions or concerns. Certain ranks/grades for signatories are not required. However, the individuals should be in positions to speak for their organizations, e.g., individuals must understand and exert influence over operational needs, formal requirements, or funding. Customer Memoranda without two signatures will **NOT** be accepted. Rarely, the End-User and Customer will be the same organization/individual. However, if this is the case, the organization/individual must sign **TWICE**.

a. AF End-User Suitability. Briefly describe the AF End-User signatory's appropriateness for this effort.

b. AF Customer Suitability. Briefly describe the AF Customer signatory's appropriateness for this effort.

(Handwritten/Digital Signature)

DAF CUSTOMER

FIRST MI LAST, Rank/Grade, USAF

(Handwritten/Digital Signature)

DAF End-User

FIRST MI LAST, Rank/Grade, USAF

Attachment 1a: Schedule of Milestones (required)

Attachment 1b: Non-Proprietary Work Plan (required)

Attachment 1c: TPOC Designation Letter (informational; **do not** include in the signed memo)

Attachment 1d: Phase III Transition Resources (**do not** include in signed memo)

Attachment 1e: STTR Definitions and Suitability Resources (**do not** include in signed memo)

ATTACHMENT 1a - SCHEDULE OF MILESTONES

STTR funds will not exceed \$750,000

The below chart should detail the proposed milestone list. Milestones will correspond to a measurable event's completion, e.g., baseline execution plan, test plan, prototype production or a component thereof, final report, etc. Status reports shall not be milestones. The milestone description should indicate demonstrated completion. Associated milestone payments must reflect comprehensive completion costs.

<u>TASK</u> <i>Max 15 milestones.</i>	<u>EXPECTED DELIVERY (MONTH AFTER CONTRACT AWARD)</u> <i>Max 15 mos; 12 tech, 3 reporting</i>	<u>DELIVERABLE</u>	<u>ACCEPTANCE CRITERIA</u>	<u>PAYMENT</u> <i>Max STTR funds \$750K; non- STTR Federal funds, which have no max, must be identified. <u>Do not</u> include Phase III/private funds.</i>
NOTE – All milestones in this table are examples only. (EXAMPLE) 01 – Deliver 5 working prototypes of the Flux Capacitor .	Award + 2 months	Produce, test, and deliver 5 working prototypes of the final design for the Flux Capacitor along with the detailed design package drawings.	The DAF end-user will physically accept the adapted widgets	\$100,000 (DAF Customer 3600)
(EXAMPLE) 02 - Deliver 3 adapted commercial widgets	Award + 4 months	Three adapted widgets will be delivered to the DAF end- user, meeting the specifications XYZ.	The DAF end-user will physically accept the adapted widgets	\$250,000

ATTACHMENT 1b - NON-PROPRIETARY WORK PLAN

This section allows the Air Force Stakeholders to review the Work Plan before signing the Memorandum, rather than base signature on proposed milestones only. The Work Plan will be incorporated into the Phase II award document, if selected.

ATTACHMENT 1c - TPOC DESIGNATION LETTER
(info only; do not include in Memo)



DEPARTMENT OF THE AIR FORCE
AIR FORCE RESEARCH LABORATORY (AFMC)

Date

MEMORANDUM FOR Org/office symbol

ATTENTION TPOC name and rank/grade

FROM: AFRL/RGK
711 E Monument Street
Dayton OH 45402

SUBJECT: Designation of AFWERX Technical Point of Contact (TPOC) Duties for Proposal
<<number>>, entitled <<title>>

Reference: Federal Acquisition Regulations (FAR) 2.101, Definitions
Defense Federal Acquisition Regulations Supplement (DFARS) Part 201.602-2,
Responsibilities

1. IAW the above references, you are hereby designated the Technical Point of Contact (TPOC) for the subject proposal. A contract number will be designated upon award. You will be designated by name in the contract, when awarded, as the TPOC. If for any reason the proposal is determined non-awardable, the AFRL/RGK Contracting Officer (CO) will provide notification.
2. **You are not authorized to discuss performance or any other matter related to the proposed effort until contract execution is complete.** Award notice will include appropriate POCs, including the CO, for award administration. (The undersigned may not be the permanently assigned CO.) The AFWERX Phase II Program Manager (PM) for this activity is Lt Col Ray Khan. Please use the p2@afwerx.af.mil for all PM-related correspondence.
3. As the designated TPOC, it is your responsibility to monitor the contractor's performance to ensure successful contract completion, including timely contract deliverable submission up to and including the final technical report. Specifically, you will be responsible for the following:
 - a. Monitoring cost, technical, and schedule performance to identify and promptly inform the Phase II PM and CO of marginal or unsatisfactory technical performance; contractor's failure to meet delivery schedules; or any non-compliance with contract requirements. As the TPOC, you are not authorized make commitments or changes affecting price, quality, quantity, delivery schedule/period of performance, scope of work, place of performance, or other terms and conditions of the contract/award, and may be personally liable for unauthorized acts. The CO is the only individual authorized to obligate Government funds or execute contract changes.

- b. Ensuring contractor personnel performing on-site at Government facilities are briefed by responsible and knowledgeable persons, e.g., the TPOC or TPOC's leadership, regarding emergency management procedures, including evacuation plans, shelter-in-place instructions, and personnel accountability procedures unique to the contract performance location.
- c. Receiving/approving contract deliverables for payment. To ensure timely payment is made to the contractor after acceptance, please send an email to p2@afwerx.af.mil using the following format:

EMAIL SUBJECT: Company Name, Contract Number, Deliverable Approval/Rejection

EMAIL BODY:

- Company Name
- Contract Number
- Deliverable or Milestone # (e.g., CLIN 003, ALIN 002, Milestone 0002, etc.)
- Recommendation: Approve/Reject (select one)
- Approval/Rejection (select one) Date:
- Instructions to (company name): Upon receipt of this email, please submit your invoice for payment of the approved (deliverable) in WAWF
- Other relevant information (optional)

Provide a mailing address for shipped deliverable receipt (mailing address required regardless of shipping or no shipping requirement; may be anywhere mail can be received):

- d. Maintain close liaison with the identified Phase II PM and/or CO, as well as the Administrative CO, if other than AFRL/RGK.
- e. Work with the contractor, base, and other local Government organizations to gain approvals/waivers and/or resolve execution issues including but not limited to security requirements, e.g., CACs, DD254 coordination, etc., program protection compliance, cybersecurity compliance, flight testing, unmanned aerial systems (UAS), safety, d.measures, when required. Coordinate these actions with the Phase II PM or designee using p2@afwerx.af.mil.
- f. Maintain records, including copies of the contract/order and all modifications, unless available electronically; TPOC designation memorandum (this document); correspondence with the contractor; correspondence with the Contracting Officer; records of inspection activities and results; and all other documented actions taken as the TPOC. This information must be made available to the CO upon request. Contact the CO with documentation-related questions.
- g. If unable to perform the assigned TPOC duties, you are responsible for identifying a replacement TPOC. Notify the PM and CO immediately, so they can begin the transition process. Replacement TPOCs must acknowledge their assumed responsibilities by signing a new version of this memorandum. Your role as TPOC expires upon official re-designation by the CO. At that time, you must ensure all documentation is provided to the newly-designated TPOC.

4. During contract performance:
 - a. Do not discuss acquisition plans/strategies or provide advance information with potential to give one contractor an advantage over another in forthcoming procurements.
 - b. Do not instruct the contractor how to perform but rather of the contract/award's requirements.
 - c. Do not participate in the contractor hiring/termination processes.
5. It is essential you maintain a well-documented project folder/R&D case file. Each contract/order memorandum for record, other similar records, and other correspondence shall cite the contract number/order number. Copies of documentation and correspondence shall be furnished to the CO and others at the CO's request. Strictly adhere to restrictions regarding contractor proprietary data and business sensitive information. Contracting personnel are available for advice and guidance regarding fulfillment of contract terms.
6. You are required to complete on-line training modules regarding TPOC responsibilities. Defense Acquisition University, <https://www.dau.edu>, and Air Force myLearning, <https://lms-jets.cce.af.mil/moodle/>, offers online course modules. If these courses have been completed or annual recertification is current, these requirements are met. Email completion certificates or signed memoranda of completion for all required courses to p2@afwerx.af.mil. Training-related questions should be addressed to p2@afwerx.af.mil. Required course numbers:
 - ACQ 1010 Fundamentals of Systems Acquisition Management (8 hrs) or ACQ101 - DAU
 - CLC 106 Contracting Officer's Representative with a Mission Focus (3 hrs) - DAU
 - CLC 011 Contracting for the Rest of Us (2 hrs) - DAU
 - U.S. Air Force Annual Ethics Training - C08937 (1 hr) – myLearning
 - SYS600 Wide Area Work Flow (WAWF) Intro Course (1 hr) – myLearning
 - SYS601 Wide Area Work Flow (WAWF) Acceptor Course (1.5 hrs) – myLearning
 - Follow-on training
 - Additional training available for SBIR/STTR management and/or program-specific requirements.
7. Standards of Conduct and Conflicts of Interest. You are reminded Government employment, as a public trust, requires DoD personnel to place loyalty to country, ethical principles, and law above private gain and other interests. You must comply with DOD 5500.7-R, Joint Ethics Regulation. As a TPOC, you shall read and understand FAR 3.2, Contractor Gratuities to Government Personnel, to ensure official responsibilities are performed without actions which might result in, or reasonably be expected to create the appearance of, conduct prejudicial to the Government. You will not be placed in a position from which a conflict of interest might arise or justifiably be suspected. You are reminded the FAR and DFARS includes direction relating to gratuities. This direction applies not only to you but also to your family members. You are cautioned if any Standards of Conduct are violated, you will be subject to the full range of statutory and regulatory sanctions.
8. Upon award, a dually-signed copy of this designation shall be disseminated. Retain a copy of this designation letter for your official files. Should you have questions regarding this letter of appointment, please contact the Phase II PM and CO, to be identified upon contract execution.
9. By signing this memorandum, you acknowledge you understand, accept, and will abide by the full terms and conditions documented above.

TPOC SIGNATURE BLOCK

CO SIGNATURE BLOCK

ATTACHMENT 1d - PHASE III TRANSITION RESOURCES
(Info only; do not include in Memo)

Transition strategies include, but are not limited to, the following:

DAF Customer may consider transitioning the STTR technology by pursuing one or more specific strategies, e.g., an acquisition program transition plan, found in *Equipping Warfighter with Small Business Ingenuity: The Air Force SBIR/STTR Phase III Desk Reference* (v. 2.0, JAN 2019). Transition plans may focus on risk reduction, new technology insertion, increased competition, equipment replacement, etc. The *Desk Reference* contains several sample transition strategies. The *Desk Reference* is found at:

https://www.airforcesmallbiz.af.mil/Portals/58/Phase%20III%20Desk%20Reference%20V%202%200%20PhaseIII_BookletV2-JAN2019-88ABW-2016-0636-low-res.pdf

DAF Customer may consider transitioning the STTR technology by awarding the company a Phase III contract via the Phase III special acquisition preference and/or through other small business programs such as Section 8(a), HUBZone, WOSB, or SDVOSB. This Phase III contract may be for further development, testing, evaluation, or production/delivery.

DAF Customer may consider transitioning the STTR Technology into their acquisition program(s) via stated preference for SBIR/STTR subcontractors in solicitations for contracts, orders, or assistance instruments. Evaluation criteria may be written to provide additional consideration for companies having searched for and entered into sub-agreements with SBIR/STTR Phase I, II, or III awardees whose technologies are pertinent to the solicited effort.

DAF Customer may consider transitioning the STTR technology by awarding the STTR company, or a team including the STTR company, a Phase III assistance instrument or other transaction with or without a follow-on procurement, e.g., grant, cooperative agreement, or other transaction for prototype agreement with or without a follow-on production contract.

DAF Customer may consider transitioning the STTR technology by supporting funding and/or other assistance for the STTR company under the Defense Production Act (DPA), and/or the Air Force's/other Federal agency's Mentor-Protégé Program (MPP).

ATTACHMENT 1e - STTR DEFINITIONS & SUITABILITY RESOURCES
(Info only; do not include in Memo)

**Identifying Research, Development, Testing, and Evaluation
(RDT&E) in SBIR/STTR Proposals**

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 (Oct 2020), and DoD Financial Management Regulation (FMR), Vol. 2A, Chapter 1, Section 0102, *Funding Policies* (June 2004, as amended). Subject to programmatic phase conditions, SBIR/STTR awards are made for research, development, test and evaluation (RTD&E) efforts.

Phase I and Phase II Conditions: Consistent with 15 USC 638 and Combined SBIR/STTR Policy Directive (2019, both Phase I and Phase II awards are aimed at furthering “scientific and technical merit and feasibility” of ideas in the proposals. The object of Phase I is to conduct feasibility-related experimental or theoretical research/research and development related to agency’s described broad or narrow requirements, as to determine the scientific and technical merit and feasibility of the proposed effort and the quality of performance of the offeror. The object of Phase II is to continue the research/research and development effort from the completed Phase I (or from prior non-SBIR/STTR research in case of Direct-to-Phase II award). 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 that the offeror’s idea has sufficient scientific and technical feasibility and merit despite the lack of Phase I award.

Research or Research and Development (R/R&D): Any activity that is: (1) A systematic study directed toward greater knowledge or understanding of the subject studied; (2) a systematic study directed specifically toward applying knowledge and innovation to meet a recognized but unmet need; or (3) a systematic application of knowledge and innovation 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. The term "research and development (R&D)" is intended broadly to include the work performed under a funding agreement with the government. It includes R&D in all fields, including the physical sciences, engineering, etc. **Research** is systematic study directed toward *fuller scientific knowledge or understanding* of the subject studied. **Development** is systematic use of *the knowledge and understanding gained from research*, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes.

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 that **significantly changes** the performance envelope of the end item. 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, incremental 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.

INSTRUCTIONS TO OFFERORS: *The offeror shall describe its proposed RDT&E effort, i.e., is it research? If so, explain. It is development? Based on the research, what constitutes the development activity?*

Developing COTs or Commercial Product: If adapting a commercial product/process, what is the intended modification to the COTs or commercial product? Explain.

The offeror's proposal must also identify scientific and technical baseline based on relevant literature, and describe the RDT&E effort's advancing this baseline. As part of the Direct to Phase II proposal, the offeror shall provide information sufficiently enable thing agency to make a scientific and technical feasibility and merit determination IAW 15 USC 638(cc). The Team discussion shall address qualifications for conducting RDT&E, as well as commercialization.

Tie to Defense Acquisition Program: In furtherance of 15 USC 638(y), the offeror must identify any Defense Acquisition Program to which the proposal is tied, if known. This information will be used to identify any resulting Phase I or Phase II award in the Federal Procurement Data System (FPDS). If this information is not known, the proposal shall so state.

X21.A STTR PHASE II ATTACHMENT 2 FUNDING COMMITMENT FORM

1. For Government funding commitment

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

2. For private funding commitment

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

3. Total Government Funds Amount: \$ _____

4. Total Private Fund Amount: \$ _____

5. Total Requested STTR 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 or additional R&D or marketing under the proposed STTR 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 or additional R&D or marketing under the proposed STTR project?]

X21.A STTR PHASE II ATTACHMENT 3 SBIR/STTR LIFECYCLE CERTIFICATIONS

Complete the lifecycle certifications found at <https://www.afsbirsttr.af.mil/Portals/60/documents/SBIR%20Funding%20Certification%20-%20Life%20Cycle%20-%20May%202021%20JPM.pdf>. Include completed certifications in the proposal under Volume 5, Other Documents.

**AF X21.A STTR PHASE II ATTACHMENT 4
SBIR/STTR ENVIRONMENT, SAFETY AND
OCCUPATIONAL HEALTH (ESOH) QUESTIONNAIRE**

Complete the questionnaire found at

https://www.afsbirsttr.af.mil/Portals/60/Pages/Overview/Air%20Force%20SBIR_STTR%20Environment%20Safety%20and%20Occupational%20Health_ESOH_Oct%202021_JSH.pdf. Include the completed document in the proposal under Volume 5, Other Documents.

AF X21.A STTR PHASE II ATTACHMENT 4
DoD SBIR/STTR PROGRAMS
CONTRACTOR CERTIFICATION REGARDING
PROVISION OF PROHIBITED VIDEO SURVEILLANCE
AND TELECOMMUNICATIONS SERVICES AND EQUIPMENT

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.

FAR CLAUSES INCORPORATED IN FULL TEXT:

52.204-24 Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment (AUG 2020)

The Offeror shall not complete the representation at paragraph (d)(1) of this provision if the Offeror has represented that it “does not provide covered 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” in the provision at 52.204-26, Covered Telecommunications Equipment or Services—Representation, or in paragraph (v) of the provision at 52.212-3, Offeror Representations and Certifications-Commercial Items.

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

Backhaul, covered telecommunications equipment or services, critical technology, interconnection arrangements, reasonable inquiry, roaming, and substantial or essential component have the meanings provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) Prohibition. (1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. Nothing in the prohibition shall be construed to—

(i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract or extending or renewing a contract with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract. Nothing in the prohibition shall be construed to—

(i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(c) *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 telecommunications equipment or services.”

(d) *Representations.* The Offeror represents that—

(1) It ☐ **will**, ☐ **will not** provide covered telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation. The Offeror shall provide the additional disclosure information required at paragraph (e)(1) of this section if the Offeror responds “will” in paragraph (d)(1) of this section; and

(2) After conducting a reasonable inquiry, for purposes of this representation, the Offeror represents that—

It ☐ **does**, ☐ **does not** use covered telecommunications equipment or services, or use any equipment, system, or service that uses covered telecommunications equipment or services. The Offeror shall provide the additional disclosure information required at paragraph (e)(2) of this section if the Offeror responds “does” in paragraph (d)(2) of this section.

(e) *Disclosures.* (1) Disclosure for the representation in paragraph (d)(1) of this provision. If the Offeror has responded “will” in the representation in paragraph (d)(1) of this provision, the Offeror shall provide the following information as part of the offer:

(i) For covered equipment—

(A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the original equipment manufacturer (OEM) or a distributor, if known);

(B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and

(C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.

(ii) For covered services—

(A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or

(B) If not associated with maintenance, the Product Service Code (PSC) of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.

(2) Disclosure for the representation in paragraph (d)(2) of this provision. If the Offeror has responded “does” in the representation in paragraph (d)(2) of this provision, the Offeror shall provide the following information as part of the offer:

(i) For covered equipment—

(A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known);

(B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and

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

(ii) For covered services—

(A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or

(B) If not associated with maintenance, the PSC of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision.

(End of provision)

52.204-25 Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (AUG 2020)

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

Backhaul means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

Covered foreign country means The People's Republic of China.

Covered 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) For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);

(3) Telecommunications or video surveillance services provided by such entities or using such equipment; or

(4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

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).

Interconnection arrangements means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

Reasonable inquiry means an inquiry designed to uncover any information in the entity's possession about the identity of the producer or provider of covered telecommunications equipment or services used by the entity that excludes the need to include an internal or third-party audit.

Roaming means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

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

(b) Prohibition. (1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. The Contractor is prohibited from providing to the Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract, or extending or renewing a contract, with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract.

(c) Exceptions. This clause does not prohibit contractors from providing—

- (1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
- (2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(d) Reporting requirement. (1) In the event the Contractor identifies covered 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, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the Contracting Officer, unless elsewhere in this contract are established procedures for reporting the information; in the case of the Department of Defense, the Contractor shall report to the website at <https://dibnet.dod.mil>. For indefinite delivery contracts, the Contractor shall report to the Contracting Officer for the indefinite delivery contract and the Contracting Officer(s) for any affected order or, in the case of the Department of Defense, identify both the indefinite delivery contract and any affected orders in the report provided at <https://dibnet.dod.mil>.

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

(i) Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); 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 10 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 covered 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 items.

(End of clause)

52.204-26 Covered Telecommunications Equipment or Services-Representation (DEC 2019)

(a) Definitions. As used in this provision, “covered telecommunications equipment or services” has the meaning provided in the clause [52.204-25](#), Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(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 telecommunications equipment or services”.

(c) Representation. The Offeror represents that it ☐ **does**, ☐ **does not** provide covered 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)

X21.A STTR PHASE II ATTACHMENT 5

DoD SBIR/STTR PROGRAM DISCLOSURE OF OFFEROR'S OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT

OMB No. 0704-0187
OMB approval expires
August 31, 2021

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.

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		

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DFARS 252.209-7002 Disclosure of Ownership or Control by a Foreign Government (JUN 2010)

(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. 2536(a).

(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:

Offeror's Point of Contact for Questions about Disclosure

(Name and Phone Number with Country Code, City Code and Area Code, as applicable)

Name and Address of Offeror

Name and Address of Entity Controlled by a Foreign Government

Description of Interest, Ownership Percentage, and Identification of Foreign Government

(End of provision)