X224-OCSO1: Phase I Open Call for Innovative Defense-Related Dual-Purpose Technologies/Solutions with a Clear Air Force or Space Force Stakeholder Need

ADDITIONAL INFORMATION
N/A

TECHNOLOGY AREAS:
Air Platform | Battlespace | Bio Medical | Chem Bio Defense | Electronics | Ground Sea | Information Systems | Materials | Nuclear | Sensors | Space Platforms

MODERNIZATION PRIORITIES:
5G | Artificial Intelligence/ Machine Learning | Autonomy | Biotechnology | Control and Communications | Cybersecurity | Directed Energy | General Warfighting Requirements (GWR) | Hypersonics | Microelectronics | Network Command | Nuclear | Quantum Sciences | Space

KEYWORDS:
Open; Other; Disruptive; Radical; Dual-Use; Commercial

OBJECTIVE:
This is a Department of the Air Force (DAF) Special Topic in partnership with AFWERX and SpaceWERX. This topic is seeking technologies for transition into the United States Air Force and/or United States Space Force. Primary objectives of this topic include exploring innovative technologies applicable to both defense and non-defense markets, scaling capability, and growing the industrial base for defense. This topic is intended to reach companies capable of completing a feasibility study and prototype-validated concepts under accelerated Phase I and II schedules. This topic is aimed at applied research and development efforts rather than "front-end" or basic R/R&D. Phase I awards will have a maximum value of $75,000 and a maximum duration of 3 months, including two months technical effort and one month for reporting. Phase II awards will have a maximum value of $1,250,000 and a maximum period of performance of 21 months, including 18 months technical performance and three months for reporting. Please see the official solicitation for further details at https://rt.cto.mil/rtl-small-business-resources/sbir-sttr/.

DESCRIPTION:
The DAF is a large and complex organization consisting of many functions, a vast majority of which have similar counterparts in the commercial sector. It is important that potential solutions have a high probability of keeping pace with technological change. Thus, they should be closely tied to commercial technologies and solutions supporting the proposed development. This topic is meant for non-defense commercial solutions to be adapted to meet DAF stakeholders' needs. Submissions should focus on the following characteristics: • Commercialization Potential - The potential for Government or private sector commercialization as well as the resulting benefits and capabilities. • Defense Need - Offeror(s) should demonstrate understanding of the potential fit between their solution and Defense stakeholders. Offeror(s) may provide indication of a Defense 'need' by including evidence of preliminary discussions with DAF stakeholders. • Technical Merit - The soundness, technical merit, and innovation of the proposed 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. The topic is truly 'open' (agnostic of industry, technology, and problem area), but proposals for this topic should demonstrate a high probability of

identifying a product-market fit between a DAF stakeholder and the proposed adaptation of the non-defense commercial solution.

PHASE I:
Determine, insofar as possible, the scientific and technical merit and feasibility of ideas thought to have potential to transition to DAF applications. Additionally, validate the product-market fit between the proposed solution and a potential Air Force and/or Space Force stakeholder. Define a clear, immediately actionable plan with the proposed solution and the DAF customer and end-user. This feasibility study should: 1. Clearly identify the potential stakeholders of the adapted solution for solving the Air Force and/or Space Force need(s). 2. Describe the pathway to integrating with DAF operations, to include how the offeror plans to accomplish core technology development, navigate applicable regulatory processes, and integrate with other relevant DAF systems and/or processes. 3. Describe if and how the solution can be used by other DoD or Governmental customers.

PHASE II:
Continue RDT&E to develop, install, integrate, demonstrate, and/or test and evaluate the prototype system(s) determined to be the most feasible solution during the Phase I feasibility study. These activities should focus specifically on: 1. Evaluating the adapted solution against the objectives and measurable key results defined in the Phase I feasibility study. 2. Describing in detail how the solution differs from the non-defense commercial offering to solve the Air Force or Space Force need and how it can be modified for scale. 3. The solution's clear transition path including consideration of all affected stakeholders' inputs. This would include, but not be limited to, end users, engineering, sustainment, contracting, finance, legal, and cyber security. 4. Providing specific details about the solution's integration with other current and future solutions. 5. Explaining the solution's sustainability, i.e., supportability. 6. Identifying other DoD or Governmental customers interested in the solution.

PHASE III DUAL USE APPLICATIONS:
Some solutions may go straight from Phase I to Phase III as soon as the product-market fit is verified. The contractor will transition the adapted non-Defense commercial solution to provide expanded mission capability for a broad range of potential Governmental and civilian users and alternate mission applications. NOTES: To answer questions about this topic, AFWERX will host webinars discussing this opportunity. Details about these events will be published on https://afwerx.com/events_/ DAF SBIR/STTR Phase I awards are FAR-based firm fixed price purchase orders. Phase II awards are either FAR-based firm fixed price contracts or Other Transactions for Prototype. If already registered in SAM, ensure the CAGE code, company name, address information, DUNS numbers, etc., are correct and current. Firms' SAM registrations shall reflect ALL AWARDS for "Purpose of Registration". Otherwise, the proposal will not be considered for award. For more information, visit SAM.gov. Purchase orders shall be signed and emailed back to AFRL/SBRK at sbrk.sprints@us.af.mil within five business days of receipt or the award will not be issued. Proposed technologies may be restricted under the International Traffic in Arms Regulations (ITAR) which control Defense-related materials/services import/export, or the Export Administration Regulations (EAR), controlling dual use items. Offerors must review the U.S. Munitions List, https://www.law.cornell.edu/cfr/text/22/121.1, and provide a tentative determination regarding applicability to their proposed efforts. If determined applicable, a certified DD Form 2345, Militarily Critical Technology Agreement, must be submitted with the proposal. Information regarding the application process and instructions for form completion are found at https://www.dla.mil/HQ/LogisticsOperations/Services/JCP/DD2345Instructions/. NOTE: Export

control compliance statements are not all-inclusive and do not remove submitters' liability to 1) comply with applicable ITAR/EAR export control restrictions or 2) inform the Government of potential export restrictions as efforts proceed.

REFERENCES:

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2. Blank, S. (2016). The Mission Model Canvas: An Adapted Business Model Canvas for Mission-Driven Organizations. Retrieved 12 June 2018, https://steveblank.com/2016/02/23/the-mission-model-canvas- an-adapted-business-model-canvas-for-mission-driven
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4. Chaplain, C. T. (2016). Space Acquisitions: Challenges Facing DOD as it Changes Approaches to Space Acquisitions. US Government Accountability Office Washington United States.
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TOPIC POINT OF CONTACT (TPOC):

TPOC-1: Jenna Roueche
PHONE: 9372104489
EMAIL: jenna.roueche@afwerx.af.mil