

USAF 'Showcase' Seeks EMSO-Related Solutions

By John Knowles

Air Force Global Strike Command (AFGSC), Commercial Capabilities Integration and Transition Division (A5N/CCIT), is soliciting proposals for its 2026 "Showcase Topics," which include several EMSO-related efforts. The Showcase aims to connect "warfighter problems with real-world solutions," with selected bidders invited to present their technologies at an in-person event in May.

The five topics include Quantum Sensing Beyond Positioning, Navigation, and Timing; Advanced Manufacturing (AM) for Sustained Weapons, Decoys & Expendable Countermeasure Production During Wartime Operations, a topic cosponsored by the Air Force Rapid Sustainment Office; and Large Aircraft Defensive Systems (In Contested Environments), a topic cosponsored by Air Mobility Command.

The Quantum Sensing topic will look at "quantum-enabled sensing approaches to enhance situational awareness and decision confidence in dense, cluttered, and denied environments where traditional sensing is degraded." It adds, "Applications that present technology solutions for novel quantum detection modalities or new use cases for existing modalities are also encouraged, particularly where they enable detection of subtle physical anomalies or environmental perturbations relevant to ISR and decision support."

The Advanced Manufacturing topic will look at a variety of applications, including "...rapid, scalable production of decoys and expendable countermeasures intended for deception, survivability enhancement, or cost-imposition strategies. Solutions should emphasize manufacturability at scale,

affordability, and adaptability to evolving threat environments.”

Finally, the Large Aircraft Defensive Systems topic will address the EW gap presented by advanced threats. According to the topic description, “Large aircraft across Air Force Global Strike Command (AFGSC) and Air Mobility Command (AMC) are increasingly required to operate inside or near the threat envelopes of modern integrated air defense systems (IADS). These environments feature faster, more numerous, and networked threats that outpace the design assumptions of existing defensive systems. As adversary sensing and engagement ranges expand, traditional standoff distances are compressed, creating distinct but converging survivability challenges for low-observable bombers (B-2/B-21), legacy non-L0 bombers (B-52/B-1), and AMC mobility aircraft (C-130, C-17, C-5, KC-135, KC-46).

More specifically, the problem statement for this topic says, “Current large-aircraft defensive architectures cannot meet the sensing fidelity, warning timelines, threat characterization, or adaptive countermeasure performance required for survival in contested and semi-contested environments. L0 platforms face emerging detection modalities (multi-static radars, passive RF,IRST networks) that erode traditional advantages. Legacy bombers face acute vulnerability as compressed standoff [distance] eliminates maneuver and EW-based survivability tactics. Mobility aircraft, historically reliant on sanctuary and routing, now face elevated risk as global IADS coverage expands and maneuver space collapses. The result is a fleet-wide survivability gap driven by the widening mismatch between threat evolution and defensive modernization timelines.”

In response to these challenges, AFGSC is seeking near-term, platform-agnostic, and threat-agnostic survivability solutions that: “provide improved detection, identification, and cueing across a global, multi-domain threat spectrum; enable rapid,

adaptive, and effective countermeasures against advanced, networked, and time-compressed engagements; address the differing signatures, mission profiles, and integration constraints of L0 bombers, legacy bombers, and AMC mobility aircraft; integrate through open systems architectures and modular interfaces to support multi-platform fielding; minimize size, weight, power, and cooling (SWaP-C) impacts to enable broad fleet adoption; and support accelerated fielding timelines, scalable integration pathways, and rapid modernization cycles." It adds, "These solutions should restore operational flexibility for mobility and strike forces by enabling large aircraft to survive and operate effectively in compressed standoff environments against rapidly advancing IADS threats."

Phase 1 of this effort called for white papers, which were due by February 17. Selected companies will be invited for a live showcase and demonstration in Bossier City, La., May 13-14. Following this event, AFGSC will conduct another down-selection and invite those companies to submit a Commercial Solution Proposal for Phase 3 awards, which are to be announced on June 30. The total budget for these awards is \$3 million. Historically, technology areas such as decoys and large aircraft EW suites have come from military suppliers rather than commercial companies. It will be interesting to see what types of commercial solutions are proposed for these topics.