ARMY APPLICATIONS LABORATORY

LOW-ALTITUDE PASSIVE DETECTION SYSTEM

THE PROBLEM

Currently, the Army's detection systems for identifying sUAS are better suited for identifying larger threats at higher altitude. This makes it difficult to detect multiple low-altitude threats (sUAS) at various velocities. Detection limitations of these surface-based radar systems are due to the curvature of the Earth, terrain, and other obstacles that inhibit their range. As a result, there is a limited advance warning window obtained for sUAS at low altitudes.

THE OPPORTUNITY

The chosen companies will develop a solution that is low cost, low size, weight and power (SwAP), modular, and capable of passive detection for threats with various speeds at a low altitude (0 - 6,000 feet above ground level).

The final deliverables include two prototypes inclusive of the components (hardware and software) necessary to leave behind for end user experimentation. System refinement should also include integration of the solution into identified Army reporting systems.

For this Direct to Phase II project, selected companies will be awarded up to $2 million each for a 24-month period of performance.

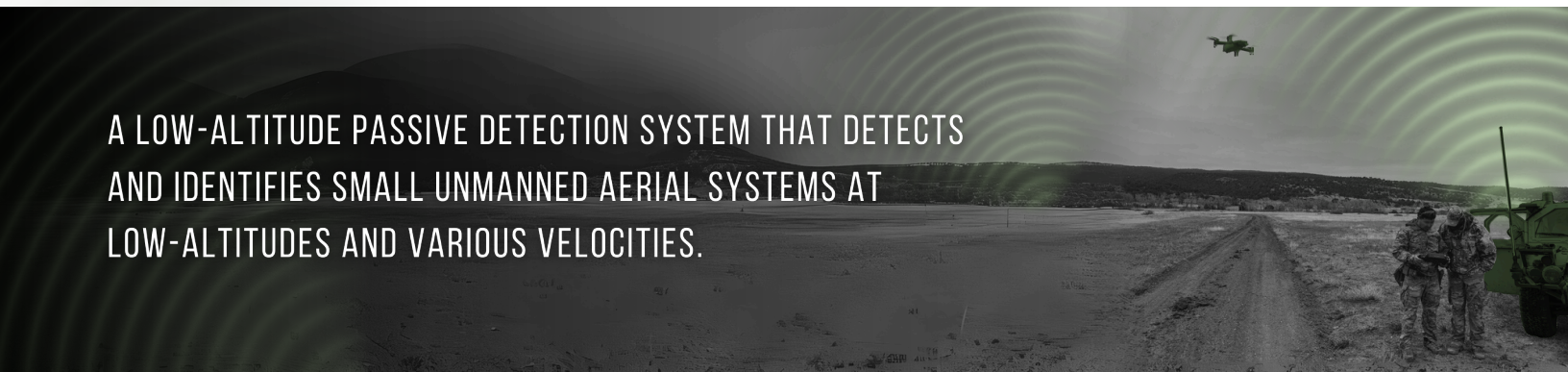
Solutions should include, but may not be limited to, a combination of the following capabilities:

- Classify, identify, and discriminate threat(s) at low altitudes (0 – 6,000 feet above ground level)
- Minimum notification time of three minutes to the end user from initial detection of the threat.
- Air/ground platform agnostic
- A modular open system approach to enable incremental development and enhance competition, innovation, and interoperability in the future
- Capable of integration with an intuitive graphic user interface into the Tactical Assault Kit and other Army systems
- Form factor that is compatible with Group 1 sUAS and/or Tethered UAS payload interface to enable it to be mounted if needed (not required)
- Could include, but is not limited to, the following sensors: optical, infrared, acoustic, visual, radio frequency, and event sensor
- Onboard power with a minimum operational time of two weeks
- Tamper-proof design with remote zeroize capability

IMPORTANT DATES

Applications Open: April 23

Applications Close: May 21 at 12:00PM ET



A LOW-ALTITUDE PASSIVE DETECTION SYSTEM THAT DETECTS AND IDENTIFIES SMALL UNMANNED AERIAL SYSTEMS AT LOW-ALTITUDES AND VARIOUS VELOCITIES.

THE SPARTN PROGRAM

Special Program Awards for Required Technology Needs (SPARTN) blends government and industry best practices to introduce a new whole-of-Army, collaborative approach to solution innovation. The result is a way to solve Army problems faster and to accelerate the process by which successful technology is purchased by the Army.

All topics released through SPARTN feature challenging and important problem statements from problem owners across the Army. These represent some of our biggest challenges and the ones we want to work closely with industry to solve.

WHAT MAKES SPARTN DIFFERENT?

- Problems released through SPARTN are tied to the Army's critical needs and other focused modernization efforts
- Faster contracting speed, with businesses typically notified of award 4x faster than the conventional SBIR process
- Potential for millions in total value of follow-on contracts to build a concept or prototype related to the specific problems
- Acquisition teams included early on, with the goal of easing transition and building new tech into recurring Army budgets
- Potential for future high-value contracts by combining SBIR or other government funds, and private investment you secure

To learn more about SPARTN or how to apply for SPARTN topics, visit aal.mil/SPARTN

SPARTN Phases Explained

The objective of Phase I is to establish the technical merit, feasibility, and commercial potential of the proposed effort, and to determine the quality of performance of the awarded companies prior to providing further support in Phase II. Final deliverables will be a concept design presentation, optional proof of technology demonstration, and plans for follow-on Phase II work.

In Phase II, companies are selected for a period of performance to advance their technology into a working prototype with higher federal funding and, on certain projects, matched funds from private investment. Companies receive technical and programmatic feedback from Soldiers, DOD scientists, and engineers. Senior leadership provides guidance on how to move forward.

To make it to Phase III, companies must receive Program Executive Office (PEO) endorsement. Selected companies are then given more funding and the opportunity to continue developing their technology with the goal of transitioning it to an Army program of record.

AAL COHORT MODEL

Our cohort program brings together companies that may not typically work with the DOD and focuses them on solving a specific Army problem. They work side by side with Soldiers, a community of Army experts, and other stakeholders on a shared learning journey. While joining a cohort isn't required, it can provide a deeper level of insight to help refine your solution.

A Different Kind of Cohort

+ Hybrid program with virtual and in-person activities
+ Each cohort focuses on solving a specific SPARTN problem
+ Increased contact with Army stakeholders and Soldiers
+ Visits to military installations where you can see the problem firsthand

Visit aal.mil/cohort-program to learn more about the AAL cohort program and the benefits of participating.