ARMY APPLICATIONS LABORATORY

BEACON FOR ASSURED LANDING LOCATION

PRECISION LANDING FOR UAS

THE PROBLEM

Landing drones in contested or austere conditions is a challenge – leading to diversions and crashes. Current Army missions involving drone landings require a human to manually perform all operations, including environment analysis, flight decisions, and safe landing protocols. This process can be unreliable due to complications in contested environments such as degraded GPS, faulty communication links between the drone and operator, adversarial signal blocking, or other hazardous engagements.

THE OPPORTUNITY

The chosen company will develop, demonstrate, and deliver solutions that increase the precision of automated drone landings onto unmanned platforms or an identified location within urban or austere environments. The system would employ low-detection signals, without the need for a human in the loop.

The total funding for award in this Direct to Phase II (DP2) effort is $1.6 million for an 18 month period of performance.

DP2 proposals should refine the preliminary design proposed in the solicitation response and create a Technology Readiness Level (TRL) 6 prototype and operational demonstration for evaluation.

The solution should include, but is not limited to, the following features:

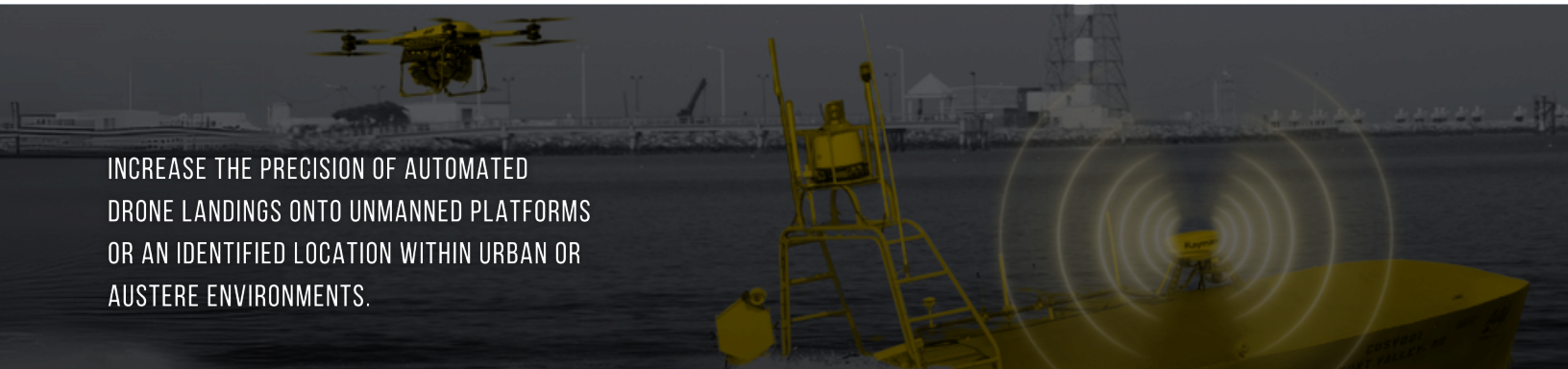
- Pinpoint and navigate UAS to landing sites, static, and in-motion, +/- 1 meter precision
- Support multiple landing locations simultaneously
- Be capable of remote activation/deactivation
- Adapt effectively to changing, unpredictable, and contested conditions
- Function with little or no direct communication from a drone operator
- Feature learning algorithms that adapt to various environments and relative motion
- Open integration with current and future drone platforms

IMPORTANT DATES

Applications Open: Jan 8

Applications Close: Feb 5 at 12:00PM ET

Learn more at aal.mil



INCREASE THE PRECISION OF AUTOMATED DRONE LANDINGS ONTO UNMANNED PLATFORMS OR AN IDENTIFIED LOCATION WITHIN URBAN OR AUSTERE ENVIRONMENTS.

THE SPARTN PROGRAM

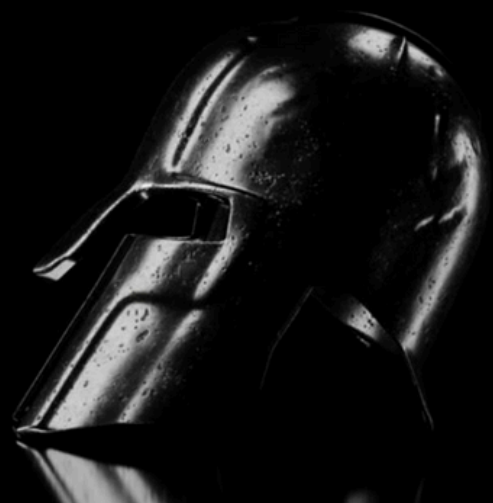
Special Program Awards for Required Technology Needs (SPARTN) blends government and industry best practices to introduce a new whole-of-Army, collaborative approach to solution innovation. The result is a way to solve Army problems faster and to accelerate the process by which successful technology is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

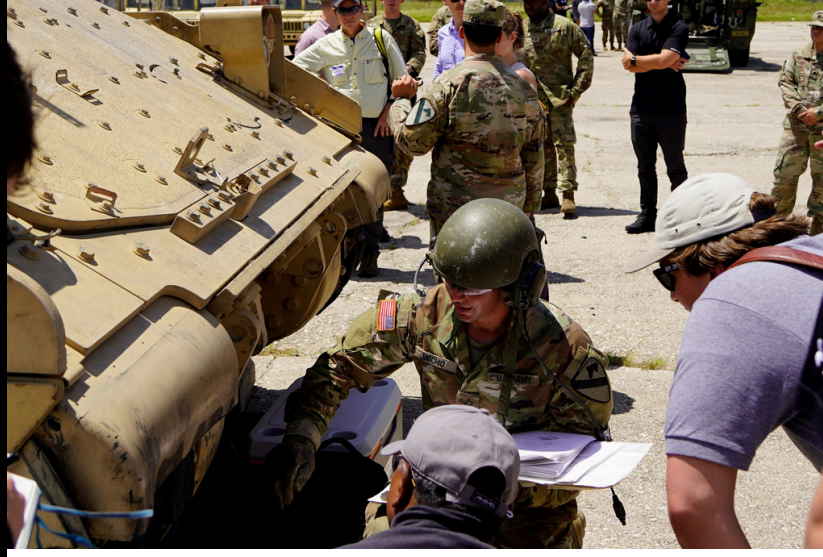
All topics released through SPARTN feature challenging and important problem statements from problem owners across the Army. These represent some of our biggest challenges and the ones we want to work closely with industry to solve.

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.