

Making the Case for Radar in a FEMA C-UAS Grant Request

Preparing a strong funding request to your State Administrative Agency for FY 2027 Phase 2

This booklet helps state, local, territorial, and tribal (SLTT) police agencies translate a local airspace security need into a clear request to their State Administrative Agency (SAA). It connects risk, coverage gaps, equipment, training, and measurable outcomes—and explains why high-fidelity Echodyne MESA radar belongs in the baseline for high-risk missions.

How Phase 1 leads into Phase 2

FEMA's C-UAS program is being delivered in two fiscal-year phases. Phase 1 directed \$250 million in FY 2026 to the 11 states and the National Capital Region supporting FIFA World Cup 2026 and America 250 events. Phase 2 makes the remaining \$250 million available across all states and territories to build nationwide detection and response capacity, with added emphasis on the 2028 Olympic and Paralympic Games and the nationwide torch relay.

If your agency received Phase 1 support, show how the new request expands, improves, complements, or sustains that capability. Identify what is already funded and explain how each proposed item fills a distinct gap; the NOFO cautions against unnecessary duplication.

The case in one sentence

If your documented risk includes autonomous, pre-programmed, low-emission, or otherwise non-cooperative drones, radar is essential to detecting and tracking aircraft that may provide no RF or Remote ID signal.

Use this guide to

- Define the mission. Describe the people, places, events, and operating areas you must protect.
- Show the gap. Explain what current sensors can and cannot detect or track in your environment.
- Make an implementable request. Give the SAA a mission-based scope, budget, timeline, training plan, and evaluation method.

FEMA strongly encourages active or passive radar with a mission-specific use case and a basic siting, coverage, and integration concept. The NOFO specifically identifies radar as a critical way to detect non-cooperative UAS.

01 | START WITH RISK

Define the mission before naming equipment

A persuasive request begins with an operational problem, not a product list. Use a short vulnerability assessment and a map or diagram to show where unauthorized UAS activity could affect public safety, critical infrastructure, a major event, or a DFR operating area.

Question for your team	What to document
What must be protected?	Facilities, public venues, crowds, event perimeters, transportation routes, critical services, or DFR response areas.
What drone behavior is credible?	Remote-controlled, autonomous, pre-programmed, no Remote ID, low-emission, or intermittent-link operations.
Where are the coverage gaps?	Current sensor locations, terrain/building masking, blind areas, line of sight, expected approach paths, and track continuity.
What is the operational consequence?	Delayed warning, lost track, inability to cue a camera, gaps in mutual aid, or an unsafe response to a developing event.

RADAR IS ESSENTIAL WHEN THE THREAT MAY NOT TRANSMIT. RF detection and Remote ID can provide useful clues when a drone emits or broadcasts. An autonomous or RF-silent aircraft may provide neither. Radar detects and tracks the aircraft from its physical presence, giving operators a continuous source of airspace data for assessment.

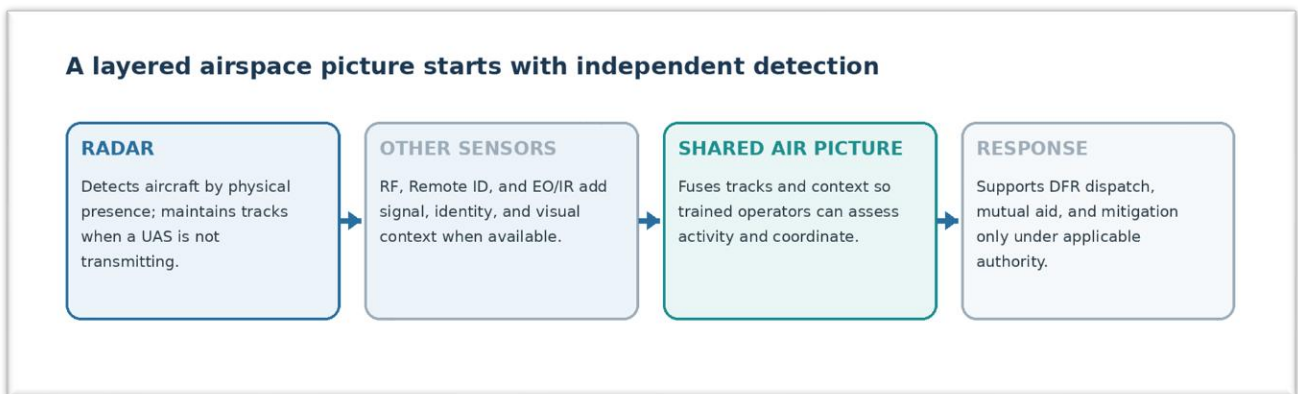


Figure 1. Illustrative layered architecture. Radar supplies independent detection and tracks; other sensors add context. Operators assess and act under agency policy and applicable law.

Plan for the operating area

Use a mission-appropriate coverage concept. Identify the sites or routes that need protection, proposed radar locations and heights, likely masking from buildings or terrain, how fixed and mobile sensors will work together, and how tracks reach the people who must assess them. A DFR program, a one-time event, and a permanent facility may need different placement and mobility plans.

02 | BUILD A REQUEST THE SAA CAN USE

Translate the mission into a FEMA-ready project

Police agencies request funding through their SAA; the SAA consolidates and submits the state's application to FEMA. Follow the SAA's intake schedule and template. Give the SAA a complete package that explains operational need, vulnerability, proposed activities, implementation, and the reason for each cost.

FEMA cost area	How to connect it to your mission
Planning	Risk and vulnerability assessment; coverage and siting concept; operating procedures; interagency coordination and information sharing.
Organization	Named operating agency, roles, agreements, dispatch and command links, mutual-aid arrangements, and sustainment responsibility.
Equipment	Radar, sensors, integration, communications, deployment equipment, and other items allowed by the NOFO and tied to a defined capability gap.
Training	Operator and maintainer instruction; role-based training; certifications or accreditation when required for the proposed activity.
Exercises	Validate detection and tracking, camera cueing, data sharing, operator decisions, and coordination using realistic scenarios.

Give the SAA the evidence it needs

- **Operational need and risk.** Name the locations, events, threats, vulnerabilities, and coverage gaps the project will address.
- **A feasible project plan.** List equipment and supporting costs, responsible personnel, milestones, training, maintenance, and completion within the award period.
- **A measurable outcome.** Define what success means—for example, coverage of priority zones, track continuity, time to cue EO/IR, or tested data sharing.
- **A clear budget.** Explain each line item and show its connection to the mission and FEMA's Planning, Organization, Equipment, Training, and Exercises (POETE) categories.
- **Event and mutual-aid value.** Describe how the capability supports relevant NSSE/SEAR events, the Olympics, the torch relay, or mutual aid where applicable.

Address prior funding and operating authority

If your agency received FY 2026 C-UAS funds, explicitly show how the Phase 2 request expands or improves current capability rather than buying an unnecessary duplicate. Also identify the agency that will control and operate each system. Buying equipment does not itself authorize its use: the NOFO has distinct certification and accreditation requirements for certain detection and mitigation activities. Radar used for detection is not subject to the 6 U.S.C. § 124n training requirement identified for RF systems that intercept or access UAS control communications; mitigation remains subject to its separate authorities and approvals.

03 | SPECIFY CAPABILITY, NOT JUST EQUIPMENT

Build a dependable DTIM chain

A counter-UAS system needs to detect activity, maintain a track, assemble enough information to identify and assess it, and support an authorized response. Radar is the independent sensing foundation for targets that do not cooperate or transmit. Other sensors and trained personnel add context and decide what to do.

DTIM function	What the request should enable	Radar's contribution
Detect	Find UAS in the mission area, including aircraft that do not broadcast Remote ID or maintain a command link.	Detects and tracks from the aircraft's physical presence.
Track	Maintain location and motion over time; establish continuity through maneuver or clutter.	Provides persistent position and motion data for the operating picture.
Identify and assess	Cue EO/IR, correlate RF or Remote ID when available, and support trained operator assessment.	Provides a precise track to cue other sensors; radar alone does not determine intent.
Mitigate or respond	Support DFR dispatch, coordination, or mitigation within applicable authority and agency policy.	Provides high-quality track data to authorized decision and response systems.

Why Echodyne MESA belongs in the baseline

MESA is Echodyne's metamaterials-based electronically scanned array architecture. Compared with conventional phase-shifter-heavy AESA designs, Echodyne describes MESA as a simpler solid-state design with denser transmit/receive elements and tighter spacing. That architecture is designed to produce narrower, more precise beams and higher spatial resolution, supporting the detection and separation of small UAS in complex low-altitude airspace. Agency requests should turn those claims into testable requirements for the local mission, including coverage, accuracy, track continuity, clutter conditions, and integration.

Across DTIM, radar detects a non-cooperative aircraft and provides consistent tracks; the track can cue EO/IR or be combined with RF and Remote ID data to support identification and operator assessment. Stable, accurate data can then support a lawful response system or authorized mitigation operator. MESA is a sensing component, not a substitute for human judgment, agency procedure, or legal authority.

American innovation with operational evidence

Echodyne is an American radar innovator whose MESA systems are designed and manufactured in Washington State. The NOFO asks applicants to state a preference toward American-manufactured equipment and to explain intended use, sustainment, asset tracking, and the connection to program priorities. Echodyne reports that more than 250 radars were in use across every U.S. FIFA World Cup 2026 host location—a relevant example of multi-site public-event deployment at scale.

04 | PUT THE CASE IN WRITING

SAA-ready narrative starter

Our agency requests funding to close documented low-altitude airspace awareness gaps at [priority facilities, events, routes, or DFR operating areas]. Our risk assessment identifies [specific UAS behaviors and consequences], including the possibility of autonomous or non-RF-emitting aircraft that may not be detected by systems dependent on command links or Remote ID. We propose an integrated detection, tracking, identification, and response capability centered on Echodyne MESA radar, with [RF/Remote ID/EO-IR and other components] added where they address defined mission needs. The project will include a coverage and siting plan, system integration, operator training, sustainment, and exercises. We will measure performance through [coverage, detection and track continuity, cueing time, and interagency data-sharing objectives]. If previously funded under FY 2026, this request [expands/improves/complements/sustains] that capability and avoids unnecessary duplication.

Before you send the request to your SAA

- **Risk and coverage.** Attach a concise vulnerability assessment, priority-area map, and description of current blind spots.
- **Mission-fit system design.** Explain radar placement, fixed/mobile coverage, sensor roles, integration, and how data reaches operators.
- **Performance and evaluation.** Set measurable acceptance objectives and explain how an exercise will validate the operating concept.
- **Budget and sustainment.** Justify each cost; cover training, maintenance, asset tracking, lifecycle support, and American-manufactured equipment preference.
- **Governance and compliance.** Name the operating agency, identify applicable agreements and authorities, and address required certification or accreditation.
- **Phase 1 coordination.** Identify previous awards and show that each proposed cost expands, improves, complements, or sustains capability without unnecessary redundancy.

Use the current FEMA NOFO and your SAA's intake instructions as the controlling documents. The agency's request should make the risk, capability gap, proposed solution, implementation plan, and measurable outcome easy to review.

References and source notes

[1] FEMA, Fiscal Year 2027 Counter Unmanned Aircraft Systems (C-UAS) Grant Program Notice of Funding Opportunity, DHS-27-GPD-161-00-99. Relevant sections: Executive Summary and phased structure (printed pp. 4–7); radar recommendation and allowable project types (p. 8); equipment request information and American-manufactured preference (pp. 27–28); application and SAA review criteria (pp. 31–34); Appendix B, allowable equipment (pp. 66–67).

[2] Echodyne, "MESA Metamaterials ESA Radar," official product and technology overview: <https://www.echodyne.com/radar-systems/mesa>

[3] Echodyne, "Echodyne Opens New Manufacturing Facility to Meet Surging Global Demand for Advanced MESA Radar," July 9, 2026: <https://www.echodyne.com/newsroom/echodyne-opens-new-manufacturing-facility-to-meet-surging-global-demand-for-advanced-mesa-r-radar>

[4] World Cup deployment figure (>250 radars across all U.S. host locations) is an Echodyne-reported operational figure supplied for this guide.