



# **NAVAIR/NAVSEA**

## **Counter-UAS SBIR Open Topic**

### **Industry Day**

*June 16, 2026*



# Agenda



- Introduction to the Open Topic
- NAVAIR/NAVSEA perspective on Counter-UAS
- Sub-Topic briefs
- Q&A
  - Enter questions in the chat
  - Indicate which sub-topic your question relates to, if applicable
  - ‘Like’ any questions you would particularly like to see answered



# Introduction



- Open Topic - broader than the usual SBIR/STTR topic
- Advertised on a Commercial Solutions Opening (CSO), vice Broad Agency Announcement (BAA)
- Awards to this CSO will be executed as Prototype Other Transactions (OT)
- Seeking both mature and developmental solutions
- Schedule
  - Pre-release Jun 3-Jun 23
  - Open for submissions Jun 24-Jul 22
- Phase I
  - Base: 6 months / not to exceed \$200k
  - Option: 6 months / not to exceed \$115k
  - Deliverables: Kick-Off Briefing, Final Report, and Initial Phase II Proposal



# Counter-UAS



- NAVAIR Perspective:



## Shore C-UxS Mission

- Mission
  - Protect high value and critical naval assets at SECNAV-prioritized locations around the world supporting public safety against threats posed by the inadvertent/unlawful misuse of unmanned aircraft systems (UAS).
- Roles & Responsibilities
  - Planning, Resourcing & Oversight (OPR: OPNAV)
  - Man, Train, and Equip, Policy, and Requirements (OPR: CNIC)
  - Budget Submitting Office (OPR: NAVAIR)
  - ISEAs (OPR: NAWCAD, NAVSEA)
  - Testing (OPR: UX-24)
  - Program Office Responsibilities (PEO(U&W))
    - PM billet sits at PEO(U&W)
    - Provides PEO level support





# Counter-UAS

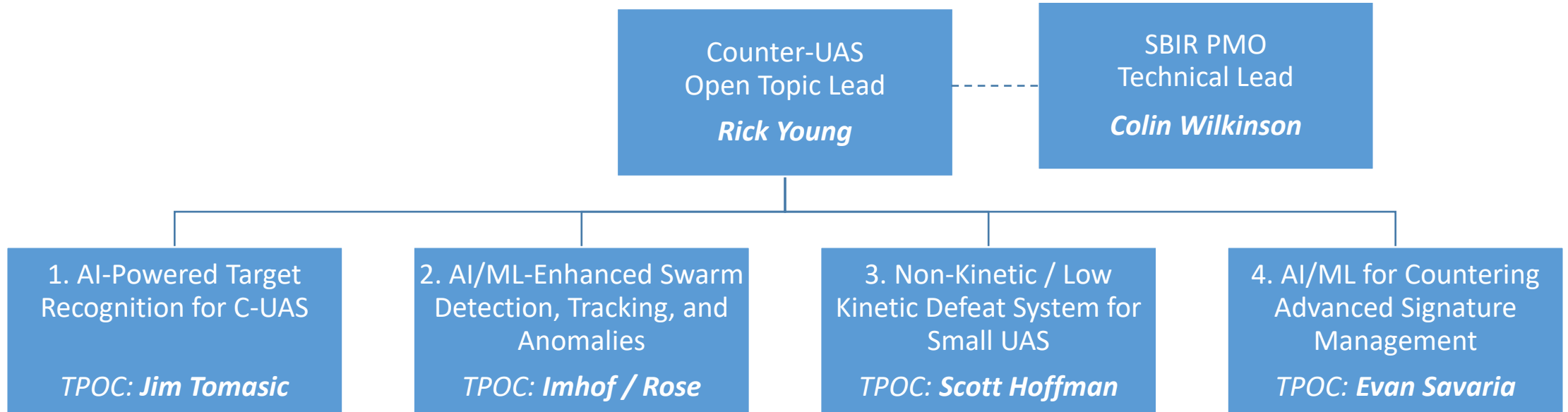


- NAVSEA Perspective:

- The urgent need for comprehensive Counter-UAS (C-UAS) capabilities is driven by the rapid advancement of inexpensive, highly adaptable drone technologies employed by adversaries in various geographic locations.
- Surveillance UAS in contested environments present a constant, asymmetric threat to warships operating in littorals and critical maritime choke points. Defending against this daily volume of activity using traditional, high-end interceptors creates an undesirable cost-exchange ratio.
- The emergence of swarming and advanced signature management technologies requires modernized detection and engagement approaches. To effectively manage these evolving profiles, the Surface Navy continues its transition toward intelligent, scalable C-UAS architectures.
- Ultimately, adaptive C-UAS systems with optimized, low-cost effectors will enhance the Surface Navy's capability for sustainable and decisive countermeasures against evolving threats.



# NAVAIR/NAVSEA Team





# Sub-Topic 1

## AI-Powered Target Recognition for C-UAS



- BLUF: AI-Powered Target Recognition for Counter-Unmanned Aerial Systems (C-UAS) utilizes machine learning to automate the detection, tracking, and classification of unmanned threats. It addresses the need for human operators to quickly and accurately distinguish low signature Group 1-3 UAV from biological clutter (birds), civilian aircraft, and environmental noise in a compressed engagement window (30-90 seconds).
- Four (4) technology pillar areas include but are not limited to the following:
  - AI/ML Software & Algorithmic Frameworks
    - Deep Learning Frameworks, Computer Vision Libraries, Inference Engines, Object Detection Networks
  - Edge-Compute & Hardware Acceleration
    - Edge GPUs, Specialized TPUs/ASICs, Programmable Logic (FPGAs)
  - Sensor Digitization & Multi-Sensor Fusion
    - Digital Video Out, Software Defined Radios (SDRs), Sensor Fusion Engines
  - Integration Middleware & Command and Control (C2)
    - Military C2 protocols, Open Architecture Standards, Containerization
- AI-Powered Target Recognition for C-UAS capability is an absolute necessity for survival on the modern battlefield.



## Sub-Topic 2

# AI/ML-Enhanced Swarm Detection, Tracking, & Anomalies



- BLUF: Traditional tracking and identification methods can be overwhelmed by unmanned swarms due to their increased number of individual targets and complex tactics. This topic looks to advance detection, tracking and prediction of swarms and their behavior by leveraging AI/ML powered solutions. This likely requires a combination of sensor and processing technologies, similar to Topic 1
- The goal is to develop an AI/ML-enhanced monitoring framework that:
  - Integrates advanced object detection with behavioral analysis
  - Detects, tracks, and predicts the collective intent of diverse drone swarms in real time
  - Evaluates potential risks by establishing behavioral baselines and assessing factors such as flight paths, payloads, and proximity to sensitive areas
- The framework will serve as a primary trigger for risk escalation and the deployment of protective measures, providing a sophisticated solution for managing the complexities of coordinated swarm behavior



## Sub-Topic 3

### ***Non-Kinetic / Low Kinetic Defeat System for Small UAS***



- Neutralize single and swarms of UAS from Air, Sea, or Ground leveraging Manned or Unmanned platforms
- Develop a lightweight, low-cost-per-kill system with a focus on minimizing size, weight, and power requirements for integration on Naval platforms for the non-kinetic/low kinetic defeat of Group 1 and 2 UAS at tactically relevant ranges
- Non-kinetic is any kind of defeat using energy or a cyber effect
- Low kinetic includes nets, strands, liquids, up to potentially shotgun shells
- Group 1 and 2 UAS weigh up to 55 lbs, operate at less than 3500 ft AGL and less than 250 knots



# Sub-Topic 4

## AI/ML for Countering Advanced Signature Management



BLUF: As operational environments become increasingly complex, there is a continuous need to advance signature management and detection capabilities. To maintain robust situational awareness, next-generation AI/ML models must evolve beyond traditional sensor baselines to rapidly adapt to dynamic, anomalous, or previously unseen signature profiles. Modernizing these detection approaches will ensure continued operational effectiveness and resilience in contested environments.

### Desired Capabilities:

- AI/ML framework
  - Capable of autonomously detecting and adapting to novel, programmable signature management tactics mid-mission.
- Intelligent Automation
  - Autonomously increase detection accuracy against advanced threat signatures eliminating humans-in-the-loop, requiring highly resource-efficient architectures designed specifically for size, weight, and power (SWaP).
- DoD Impact
  - Increase the survivability of platforms and personnel in highly unpredictable, unstructured threat environments.
- Commercial Potential
  - Strong potential for civilian autonomous vehicles, robotics, and commercial surveillance systems.



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# Q&A

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