Problem Context & Operational Use Case

Guiding Questions:

- **What operational problem are you trying to solve?** Provide the Program Office and end users information on readily available Electronic Intelligence (ELINT) systems that could meet emerging needs in small form factor.
- **Who is the end user (unit, role, environment)?** USSOCOM
- **In what environment(s) will the solution be used (e.g., austere, maritime, airborne, cyber, space, contested)?** Maritime and Unmanned Aerial Systems
- **Is this capability intended for experimentation, prototyping, transition, or near-term fielding?** Near-term fielding

Target Technology Focus Area(s)

Payloads that detect, classify, and localize ELINT signals.
Capabilities will be evaluated against the following criteria:

- Detect, classify and localize the target emitter in a dense maritime environment at extended ranges or stand-off distances
- The system's localization accuracy
- The system classification accuracy of target emitter
- The system to conduct the detection, classification and localization with minimal human intervention
- The system sensor size, weight and power
- The system antenna size, weight and power and ruggedization to maritime environment
- The system data bandwidth requirement from UxS to operator
- System usability by warfighters
- System Frequency Range
- System maintainability by warfighters
- Ability to reprogram targets on the sensor at tactical edge
- System will have volatile memory on board the sensor
- Unit cost

Technology Readiness Level (TRL)

Technology Readiness Level (TRL) > 6
Minimum TRL: TRL 5
Desired TRL: TRL 7
Guiding Questions:

- **Should the solution be a concept, prototype, or deployable system?** Working prototype to a field testable system
- **Is the intent to mature the technology further through development?** Possible development to include additional features upon testing

Performance Characteristics (SWaP & Technical Attributes)

Size, Weight, and Power (SWaP)

Minimum Performance:

- **Size constraints:** Prefer to be within USSOCOM Modular Payload Standard 6.1 but not required
- **Weight limits:** Prefer to be within USSOCOM Modular Payload Standard 6.1 but not required
- **Power requirements (battery life, input voltage, recharge method):** Prefer to be within USSOCOM Modular Payload Standard 6.1 but not required

Desired Performance:

- **Reduced size/weight:** Prefer to be within USSOCOM Modular Payload Standard 6.1 but not required

Technical Performance

Guiding Questions:

- **What level of accuracy, range, latency, throughput, or endurance is required?** Frequency Range Coverage of 1 to 20 Ghz
- **Are there environmental constraints (temperature, dust, water, shock, EMI)?** Maritime
- **Are there interoperability requirements with existing systems?** No

Integration & Interoperability

Guiding Questions:

- **Will the solution be integrated with existing platforms, networks, or software?** TBD
- **Are open architectures, APIs, or modular designs preferred?** USSOCOM Modular Payload and VITA-49 IQ
- **Is government-furnished equipment (GFE) or data involved?** Maritime Platform for Demonstration.

Data, Cyber, and Security Considerations

Guiding Questions:

- **Will the solution eventually handle sensitive or classified data?** Yes, in the future.
- **Are there cybersecurity, encryption, or data handling expectations?** Yes, in the future.
- **Is an Authority to Operate (ATO) required now or in the future?** Future