

sUAS SOFTWARE STATEMENT OF OBJECTIVES (SOO)

1.0 Objective:

The Air Force Life Cycle Management Center (AFLCMC) is seeking to identify sources that can provide mature, production-ready software solutions for Small Uncrewed Aerial Systems (sUAS) to support Group 2 (20 to 55 pounds) and Group 3 (55 to 1,320 pounds) platforms. The objective is to rapidly assess and integrate advanced software capabilities that enhance the operational effectiveness, security, and sustainability of sUAS employed by the Air Force. The desired software must be deployable within 6 months of contract award. All drones and critical drone components for this effort must be compliant with section 848 of the National Defense Authorization Act for Fiscal Year 2020 ("FY 2020 NDAA") (Public Law 116-92).

2.0 Background:

The Air Force requires advanced software capabilities to maximize the potential of its sUAS fleet. This includes enhancing autonomy, improving command and control, ensuring robust cybersecurity, and facilitating interoperability across various platforms and operational environments. The software solution must be adaptable to evolving threats and mission requirements, and readily exportable to approved foreign partners.

3.0 Desired Outcomes:

The successful offeror shall provide a software solution that meets or exceeds the following Key Performance Parameters (KPPs) and Key System Attributes (KSAs):

3.1 Key Performance Parameters (KPPs):

- **System Security and Anti-Tamper Protection:** The software shall incorporate robust security measures to protect against unauthorized access, modification, or exploitation. Anti-tamper techniques shall be implemented to prevent reverse engineering and protect sensitive technologies.
- **Cybersecurity:** The software shall be designed and developed according to industry best practices for cybersecurity, including vulnerability assessments, penetration testing, and mitigation strategies. The software must comply with all applicable DoD cybersecurity policies and regulations.
- **Vehicle Command and Control in Flight:** The software shall provide reliable and responsive command and control capabilities, enabling operators to effectively manage sUAS flight operations in various environments and conditions.

- **Autonomy for Swarming:** The software shall enable autonomous swarming capabilities, allowing multiple sUAS to operate collaboratively and perform complex tasks with minimal operator intervention.
- **Exportability to Foreign Countries:** The software shall be designed for exportability to approved foreign countries, in compliance with all applicable export control regulations.

3.2 Key System Attributes (KSAs):

- **Autonomy (Flight Path, Area Loitering, and Target Identification):** The software shall provide advanced autonomy features, including intelligent flight path planning, automated area loitering, and accurate target identification capabilities.
- **Common Control Software (Operator to Operator):** The software shall provide a common control interface across multiple operators, facilitating collaboration and information sharing.
- **Data Link and Radio:** The software shall seamlessly integrate with existing data links and radio systems, enabling secure and reliable communication between the sUAS and the ground control station.
- **Open Architecture Interface:** The software shall be designed with an open architecture interface, allowing for easy integration with other systems and future upgrades. Compliance with relevant industry standards is highly desirable.

4.0 Constraints:

- The software solution must be production-ready within 6 months of contract award.
- The software must be compatible, upgradable and integrated with existing Air Force sUAS platforms or be readily adaptable.
- The software must comply with all applicable DoD regulations and policies.

5.0 Government Furnished Information (GFI):

- Interface Control Document and/or Government Reference Model.

6.0 Offeror Provided Information:

Offerors should provide information demonstrating their ability to meet the objectives outlined in this SOO, including:

- Technical approach and design

- Software development and testing methodology
- Development schedule and milestones
- Risk management plan
- Cybersecurity plan
- Sustainment plan
- Exportability plan
- Cost estimate

Note: This Statement of Objectives is for informational purposes only and does not constitute a solicitation. The Government reserves the right to modify or cancel this effort at any time.