

# Fires Support Next (FSN) Needs Statement

The Department of Defense's (DoD) Rapid Reaction Technology Office (RRTO) will conduct a Solutions Meeting on behalf of the Assistant Director of Autonomy within the Undersecretary of Defense for Research & Engineering (USD(R&E)) in Spring 2020 in McLean, VA. The Meeting provides selected innovative companies with an opportunity to make short technical presentations to government representatives about their technologies and products. There is a potential for companies to be selected for pilot projects or experimentation if their technology appears to match the DoD's needs.

The AD for Autonomy of USD(R&E) is looking for technologies in the following areas that utilize or enable the application of Autonomy & Artificial Intelligence / Machine Learning to enable manned/unmanned teaming to improve the speed of decision making:

## Human Machine Teaming

- Calibrated trust and transparency
- Common understanding and shared perception
- Interactive learning
- Distributed, self-forming, self-coordinating systems
- Modular System Architectures
- Enable more effective human behavior

## Autonomous Systems

- Autonomous Maneuver
- Multi-modal sensing & effects
- AI/ML, Algorithmic approaches
- Decision Agents
- Evidence based design and implementation
- Formation Behaviors (e.g. Swarming)
- Requirements development
  - Methods
  - Metrics
  - Tools
- Behavior prediction
- Autonomous positioning and navigation (non GPS)
- Autonomous sensor to shooter
- Autonomous airspace deconfliction/management

## Risk Management

- Dynamic Situational Awareness (e.g. Common Operating Picture)
- Rapid Assessment for Cognitive, Predictive task allocation
- Decision making at the edge
- Monitoring Missions, Threat Environments and Intrusion Responses
- User/System baselining, profiling and analysis

## **Command & Control Systems**

- Self-configuration
- Autonomous Management
- Distributed Architecture
- On-demand Situational Awareness with Big Data
- Mapping Wired/Wireless Networks, Systems, Activities and Detecting Changes

**Companies interested in participating in the Solutions Meeting should submit an application to RRTO Innovation via e-mail to [osd.pentagon.ousd-atl.mbx.rrto-innovation@mail.mil](mailto:osd.pentagon.ousd-atl.mbx.rrto-innovation@mail.mil).**

The following information is required in the application (Note: Only 1 application is permitted per company NOT 1 application per topic area): **\*\* All applications should be in the body of the email. No attachments are allowed.**

1. Email subject line "FSN Solutions Meeting Application"
2. Company name
3. Website address
4. POC, email, phone number and an alternate POC if desired
5. A succinct description (less than 100 words in length) of the one technology that the company plans to discuss if they are selected to present at the Solutions Meeting. This description should be about the technology/capability and should not include a description of the company.
6. Select the one technology area (the bolded technology areas above) that your technology BEST fits. Do not list multiple technology areas.

**All applications must be received on or before 5:00 PM EST, January 20, 2020. Submission of an application does not guarantee an invitation to the Solutions Meeting.**

Selected companies are responsible for their travel and all other expenses associated with participation in the FSN Solutions Meeting.