Response Date: 28 October 2024 for 1st Tranche consideration

31 January 2024 for 2nd Tranche consideration

Synopsis:

A. EVENT: The Program Manager – SOF Lethality (PM-SOFL), in cooperation with the Joint Services Small Arms Program (JSSAP) and Project Manager – Soldier Lethality (PM-SL), will conduct the International Special Operations Forces (ISOF) Range 2025, 31 March – 2 April 2025 at the Nevada Test and Training Range (NTTR), NV. In addition, the Product Director – Crew Served Weapons (PD-CSW) will conduct a Remote Weapon System – Technology Demonstration Rodeo (RWS-TDR) and the Joint Service Signature Suppression Integrated Project Team (JS3-IPT) will conduct a Suppressor Summit – Exhibitor Rodeo and one-on-one exhibitor meetings.

1. This Request for Information (RFI) is NOT a solicitation for proposals, proposal abstracts, or quotations. The purpose of this RFI is to invite technology demonstration candidates from private industry, government Research and Development (R&D) organizations/labs, academia, and individuals (hereinafter "respondents") to apply with a technology quad chart (hereinafter "quad chart[s]") addressing innovative lethality technologies to exhibit at ISOF Range 2025. For the audience, U.S. Special Operations Command (USSOCOM) will provide Special Operations Forces (SOF) end users, SOF component combat developers, government technical engineers, contracting officers, the USSOCOM program management office, thirty-one(+) invited international SOF units, federal law enforcement special units, inter-agency special units, federal RDT&E agencies, and the United States Army, Navy, Air Force, Marine Corps, and Coast Guard combat development offices (hereinafter "attendees"). The attendees will use ISOF Range 2025 to conduct "hands-on" market research of technology to address lethality gaps and inform future requirements. The attendees will provide selected respondents' quad charts with written feedback on their demonstrated technologies. For the ISOF Range 2025 event, quad charts will be submitted to Phoenix Defence website: https://isofrange.com/ (see section C).
2. Technology categories for ISOF Range 2025:
    - Weapons
    - Visual Augmentation Systems
    - Demolitions/Breaching
    - Ammunition
    - Shoulder Launched Munitions

- Precision Strike Systems
- Remote Weapon System – Technology Demonstration Rodeo
- Other Relevant Disruptive Technologies

B. DETAILS:

1. Event: The range event will consist of an exhibitor range (approx. 70 x spaces) to display live fire technologies and an exhibitor alley (approx. 40 x spaces) to display non-live fire and potentially lower "Technology Readiness Level" demonstrations and/or briefings.
2. Tentative event schedule for ISOF Range 2025:
   - 31 March 2024 (Monday):
     - Afternoon: Exhibitor briefing, set-up, and test-fire (no attendees will be present)
   - 1 April 2025 (Tuesday):
     - Morning: Suppressor and laser-only open shoot
     - Afternoon: Open Shoot and 1-Off demo #1
     - Evening: Night open shoot with lasers
   - 2 April 2025 (Wednesday):
     - Morning: Open shoot
     - Afternoon: Open shoot, and 1-Off demo #2
3. Technology Readiness Level (TRL): Quad charts for Weapons, Visual Augmentation Systems, Demolitions/Breaching, Ammunition, Shoulder Launched Munitions, Precision Strike Systems, and Robotic counter unmanned aerial systems should be TRL 7 or higher. Quad charts for "Other Relevant Disruptive Technologies" can be at a lower TRL level.
4. Notification Dates:
   - **20 November 2024**: If quad charts are submitted by **28 October 2024** for the 1st tranche of voting, then respondents will receive a notification to attend with a survey, attend without a survey, not-attend, or placed on the stand-by list.
   - **7 February 2025**: If quad charts are submitted after 28 October 2024 and before **31 January 2025** for the 2nd tranche of voting, then respondents who submitted new quad charts or had previously been placed on "stand-by" will be given final notification on attending or not-attending. No more invitations will go out after this date.

- Potentially immediately: If a respondent has a compelling reason for an early decision, e.g., import lead times or an exceptionally compelling technology, then an immediate invitation to attend may be rendered.

5. Event Post-Notification Coordination: USSOCOM has entered into an agreement with Phoenix Defence, which will be organizing respondents' participation in ISOF Range 2025. If a respondent receives an invitation from USSOCOM to attend, then that "respondent" becomes an "exhibitor" and coordinating instructions with Phoenix Defence will be provided after receipt of the invitation. Exhibitors will conduct all future correspondence, coordination, and information request with Phoenix Defence under their terms and conditions, this includes fees for shipping and attendance.

6. Technology areas to explore during the event include the following:

6.1. Weapons

6.1.1. New or novel rifle and machine gun suppressor designs and materials in the following calibers: 5.56mm, .300 BLK (Super/Subsonic), 7.62mm, 6.5 Creedmoor, .338 Norma Magnum. Exploring designs and materials that are capable of handling high rates of fire from medium machine guns.

6.1.2. .338 Norma Magnum machine gun enabling technologies.

6.1.3. Signature management/reduction technologies that include coatings, attachments, or covers that reduce visual, auditory, and thermal signatures.

6.1.4. Weight reduction concepts that include weapon modifications, ergonomic carrying solutions, ammunition, and weapon accessories.

6.1.5. Novel materials/solutions to extend weapon lifecycle parts and predictive maintenance solutions which increase lifecycle and reduce malfunctions.

6.1.6. Pistol modification and enhancement solutions for existing USG issued pistols.

6.1.7. New and novel weapon accessories which provide significant operational improvement to SOF operators from legacy weapon accessories.

6.1.8. Additional event opportunity: PM-SOFL will conduct a programmatic Lightweight Machine Gun - Assault (LMG-A) rodeo on the morning of 31 March 2025 to conduct targeted market research for the MK48 lightweight machine gun life-cycle replacement. The LMG-A will be a man portable, multi-caliber, belt-fed weapon system that will provide enhanced lethality and overmatch against competitors across the spectrum of armed conflict. If you submit a quad chart to ISOF Range for this described technology, you may also request

to participate and be invited to the LMG-A programmatic event. If you submit a quad chart and are not invited to attend the LMG-A programmatic rodeo, you still may be invited to attend the ISOF Range open shoot. Specific event details will follow if selected to attend the LMG-A programmatic rodeo.

6.1.9. Additional event opportunity: JS3-IPT will conduct an exhibitor suppressor rodeo for purpose-built 5.56mm M4A1 combat-ready signature suppression technologies to measure flash performance, as well as potentially for sound, blowback, and / or thermal signature in a newly developed mobile test facility. If you submit a quad chart to ISOF Range for an M4A1 suppressor, you may also request to participate in the suppressor data collection. If selected to participate, exhibitors will be required to bring one (1) M4A1 suppressor as well as any hardware (flash hider, muzzle device, etc.) necessary to attach the suppressor to a government – provided M4A1 weapon system. Selected exhibitors will be given a time and location to bring their suppressor and attachment hardware during the ISOF Range open shoot on either 1 or 2 April 2025. If you submit a quad chart and are not invited to participate in the suppressor rodeo, you still may be invited to attend the ISOF Range open shoot. Test results will be supplied to exhibitors as permitted by U.S. Government data sharing guidelines and procedures. Specific event details will follow if selected to attend the suppressor exhibitor rodeo.

6.1.10. Additional event opportunity: JS3-IPT will conduct short and informal one-on-one meetings at the Las Vegas Readiness Center (LVRC) on 3 April 2025, which is the day after ISOF Range, to facilitate a closed-door discussion between interested suppressor exhibitors and the JS3-IPT. There is no format for the meeting and the time can be used for an exhibitor to brief the JS3-IPT on new technologies and developments or to ask the JS3-IPT questions. If you are a suppressor exhibitor of any type and submit a quad chart to ISOF Range, you may also request to participate in the one-on-one meetings. If selected to participate, you will be given a time and specific location to meet. Every effort will be made to accommodate all requested meetings however, space and time is limited. Specific event details will follow if selected to attend the suppressor one-on-one meetings.

6.2. Visual Augmentation Systems

6.2.1. Low-light, reflective band sensor technologies with objective lens diameters in the range of 12mm to 80mm as a guideline.

6.2.2. Emissive band sensor technologies with objective lens diameters in the range of 12mm to 125mm as a guideline.

6.2.3. Single-sensor technologies for imaging in both reflective and emissive bands.

6.2.4. Novel sensor and imaging technologies.

6.2.5. Passive range measurement technologies.

6.2.6. Novel display technologies to reduce size and weight of VAS devices.

6.2.7. Direct-view and Clip-on Machine Gun Optics.

6.2.8. Crew-Served - This area includes imagers as well as fire control systems. Clip-on imager capability for beyond 0-2000m target recognition for rapid-fire long-range machine guns including Heavy Machine Guns (HMGs), Advanced Lightweight Grenade Launchers (ALGL's), Grenade Machine Guns (GMGs), intermediate caliber Lightweight Medium Machine Gun (LMMG), and other crew-served platforms. This category also includes fire control devices. Must be capable of target identification at ranges commensurate with the host weapon and must be compatible with material solutions being delivered to SOF Operators. The system-of-systems approach integrates laser range-finding and augmented reality functions to achieve "smart-sensor" and "day-night" battlefield awareness objectives along with calculated aim points for timely and precise fire solutions to achieve higher probability of hit to the effective range of the weapon and munition in all day-night and extreme environmental conditions.

6.2.9. Medium Range and Long-Range VAS for weapon-mounted applications to increase lethality at night. There is interest in single sensor, multi-sensor, fused, or image intensified solutions.

6.2.10. Laser markers used for target handoff and laser designators used for terminal guidance.

6.2.11. Displays suitable for providing digital information to users wearing analog night vision goggles. There is interest in both external displays as well as displays capable of being incorporated into the housing of the night vision goggle in-line with the image intensifier.

6.2.12. Next generation night vision goggle concepts. Integration of digital solutions to enhance analog imaging, integrated inertial sensors.

6.2.13. Small form factor, low-cost SWIR cameras for detection of common laser rangefinders and laser markers and designators.

6.2.14. Handheld multi-sensor imaging and multi-domain sensing of the user's environment with a focus on increasing lethality.

6.2.15. Color night vision technologies.

6.2.16. Low SWaP-C laser see-spot technologies.

6.2.17. Laser detection/warning technologies.

6.2.18. Anti-bloom image intensifier devices.

6.3. Demolition/Breaching

6.3.1. Remote Firing Devices. Improved secure Remote Firing Device (RFD) that is capable to function with all currently issued demolitions DODICs Devices. Should be capable of Line of Sight (LOS) and/or Non-Line of Sight (NLOS) Command Detonation for both Short Range (<200m) and Long Range (>1km). Emplacement of devices (initiator and/or repeaters, if applicable) by hand and/or unmanned systems (UxS).

6.3.2. Time Delay Firing Devices. Lightweight Time Delay Firing Device (TDFD) that has fixed time delay settings from 6sec to < 1hr and is compatible with all currently issued explosive devices. Removable battery is preferred. Device should be constructed to be non-attributable and/or consumed during use.

6.3.3. Firing Device. Device should be single hand operated and non-electric initiating. Device should be dual initiating but also capable of single initiation. Device should be a mechanically functioning dual initiator that is single hand operated, safe, simple to use, light weight and interoperable with currently issued munitions. The mechanism shall be able to re-set/re-cocked one handed and be able to initiate dual or single systems. The design shall be streamlined to reduce snag protrusions.

6.3.4. Stand Off Breaching. 40mm Low Velocity Grenade that provides the ability to breach multiple standard door types (wood, metal, in/out opening, etc.) from stand-off ranges. Grenades must be compatible with currently fielded M320 Low Velocity Grenade Launcher module (mounted and standalone).

6.4. Ammunition

6.4.1. Alternate Case Material Cartridges. Small arms cartridges utilizing alternative case materials (polymer, stainless steel, multi-piece hybrid cases, etc.), especially in 6.5mm Creedmoor and .338 Norma Magnum. Benefit of the alternate material configuration shall focus on improving performance over standard cartridges, such as increased velocity, improved muzzle velocity standard deviation, etc.

6.4.2. Signature on Target. Small arms ammunition providing signature on target effects while matching ballistic trajectory of existing cartridges as closely as possible.

6.5. Shoulder Launched Munitions

6.5.1. Shoulder Launched Munition systems (reloadable and/or one shot “disposable”) that can provide anti-structural, anti-personnel, bunker / light-armor defeat and/or programmable air-burst counter-defilade

capabilities configured with or without fire-from-enclosure (confined-space) firing capability with a focus on reduced overall system weight.

6.5.2. Lightweight Shoulder-Launched Guided Missiles that can provide anti-structural, anti-personnel, bunker / light-armor defeat and/or programmable air-burst counter-defilade capabilities at ranges between 1 and 4 km.

6.6. **Precision Strike Systems:**

6.6.1. Payloads should be platform agnostic and self-contained to include all required subsystems for power and command of arming, releasing, and detonating functions independently from the platform itself. Delivery platform must be able to release payload and return undamaged. Payload controller should have unique pairing to the payload with visual safe indicators that indicate “safe” and “armed” status. The interface between payload and mobility device may incorporate familiar rails or other established mounting standards.

6.6.2. Exhibitor is expected to provide the mobility platform, the payload system, and operators for the demonstration.

6.6.3. Weapons with Alternative Communications and or Navigation Capabilities. Alternative capabilities should be fully integrated and facilitate demonstration in potentially adverse environments.

6.7. Remote Weapon System – Technology Demonstration Rodeo (RWS-TDR)

6.7.1. PM-SL/PD-CSW will conduct targeted market research with the RWS-TDR for mature RWS technologies, focusing on counter unmanned aerial systems (cUAS) Medium RWSs (MRWS) and Light Weight RWSs (LWRWS) with robotic enhancements. Live fire demonstrations will take place during the ISOF Range 1-off demonstrations on 1 and 2 April 2025. If you submit a specific RWS-TDR quad chart to ISOF Range and are accepted, you will receive a date/time for your <7min demonstration. If you are not accepted to the RWS-TDR, you may still be invited to attend the ISOF Range open shoot.

6.7.2. The MRWS shall incorporate 30x113mm and below Crew Served Weapons integrated on RWSs.

6.7.3. The MRWS and LWRWS may be mounted on a hardstand or can be integrated on a wheeled/tracked mobile platform.

6.7.4. CUAS MRWS and LWRWS enhancements shall be able to engage Group 1 or Group 2 UAS while maintaining personnel safety.

6.7.5. Robotic enhancements may include but is not limited to cUAS capability, Artificial Intelligence Target Recognition, and enhanced target tracking.

6.7.6. The LWRWS shall incorporate .338 Norma Magnum or below Crew Served Weapon.

6.7.7. The LWRWS shall be low profile and quickly stowable by a team of 2 personnel while minimizing the use of tools.

6.7.8. Participants shall furnish all required RWS(s), 30mm XM914 and/or Crew Served Weapon(s), ammunition, UASs, UAS pilots, support personnel, and other items required for the live fire demonstration at no cost to the USG.

6.8. **Other Relevant Disruptive Technologies** (whether directly or indirectly "lethality" oriented)

6.8.1. This is a "catch-all" category available to respondents whose technology would not otherwise fit into a category above but may be interesting to the attendees.

6.8.2. For this category, the technology may be lower than TRL 7 and will be able to be displayed in the "exhibitor alley" if needed or applicable.

6.8.3. Some examples for this category are medical equipment, targetry, personal protective equipment, shooting analytic tools, etc.

6.8.4. This is an opportunity for respondents to capitalize on the all-inclusive SOF audience by displaying interesting and emerging technologies that support USSOCOM's ability to achieve lethal overmatch in a future contested environment.

7. Security/Classification Requirements: Respondents will only submit unclassified information to the website. Classified Nominations will not be accepted.

8. All respondents' submission costs, travel costs, technology demonstrations, event attendance, ammunition costs, and associated costs will be at the respondents' expense. The event venue will provide access to ranges, infrastructure for conducting remote activities, and basic durable targets (note: any consumable targets must be provided by the respondent). Invited respondents/Exhibitors must be prepared to be self-sufficient during the execution of their technology demonstrations and not dependent on venue resources without prior coordination with Phoenix Defence.

9. Time and space will be made available for respondents to conduct real-time modifications and updates to their technology demonstrations during the event. Respondents are advised to bring all tools and equipment necessary to present/operate their technology at the event.

10. Other Special Requirements: DO NOT SUBMIT PROPOSALS. SUBMIT QUAD CHARTS. QUAD CHARTS FOR THIS RFI WILL ONLY BE ACCEPTED UNTIL THE FINAL CLOSING DATE OF **31 January 2025, 1700 EST**. No contracts will be awarded based solely on this announcement or any subsequent supplemental RFI

announcements. There is no intention on the part of USSOCOM to purchase or procure equipment based solely on participation in the event.

C. SUBMISSION INSTRUCTIONS:

1. Respondents will apply to exhibit their technology by completing a quad chart submission at: https://isofrange.com. Respondents will submit a quad chart and, only if applicable, a Laser Information Worksheet and/or the Unmanned Aerial Systems/Unmanned Ground Vehicle (UAS/UGV) Worksheets by **28 October 2024** to be considered during the first and main tranche of voting or **by 31 January 2025** for the second and final tranche of voting.
2. If your technology is or has any type of laser/emitter (or you plan to use a laser of any kind to enable your technology demonstration), it must be declared, have a Laser Information Worksheet, and subsequently be approved to energize on the range. To assist filling out the Laser Information Worksheet, a copy of MIL-STD-1425A "Safety Design Requirements for Military Lasers" can be found at https://isofrange.com in the technology quad resources section. If your laser/emitter gets approved to energize at the range, you will further be required to submit an FDA Compliance Form, which will be sent by Phoenix Defence.
    - This includes all lasers, regardless of FDA or IEC hazard classification (e.g., Classes I, 1, 1M, II, IIa, 2, 2M, IIIa, 3R, IIIb, 3B, IV, or 4)
    - This includes a laser that is described as "eye-safe"
    - This includes a laser that you do not plan to energize during your demonstration (we still need to know it is there)
    - This includes a laser that is available commercially
3. If your technology is or has any UAS/UGV component, it must be declared and have a UAS/UGV Worksheet, and subsequently be approved to operate on the range. If your UAS/UGV technology is not approved to operate on the range, you may still be able to bring the technology for a static display only.
4. If you want to be considered for the LMG-A Rodeo, annotate the additional request on the ISOF Range website.
5. If you want to be considered for the Suppressor Rodeo, annotate the additional request on the ISOF Range website.
6. If you want to attend the Suppressor one-on-one meetings, annotate the additional request on the ISOF Range website.

7. If you want to be considered for the RWS-TDR, annotate the additional request on the ISOF Range website.
8. Frequency Requirements: If your demonstration will be radiating on a given frequency or frequency band, you must annotate this in the nomination packet. If you are invited to attend, further instructions will be sent from Phoenix Defence.

D. Safety Requirements: The ISOF Range will be conducted, managed, and controlled in accordance with the Military-Standard 882E, "Standard Practice: System Safety." All respondents are expected to conduct themselves in a safe manner on the range and follow all instructions from the Range Safety Officers (RSOs). Failure to follow safety protocols or obey the RSOs may result in being removed from the range. If a respondent is invited to participate in the range with a unique or unfamiliar technology, then a follow-on Deliberate Risk Assessment Worksheet (Department of Defense Form 2977) may be requested to assess and mitigate risk. All respondents are suggested to review Military Standard 882E before attending the range. For your convenience, a copy of MIL-STD 882E is posted at https://isofrange.com in the technology quad resources section. Respondents wishing to conduct demonstrations of a kinetic or energetic nature are responsible for ammunition and/or explosives shipments to include an Interim Hazard Classification (IHC) or Final Hazard Classification (FHC) and coordination for receipt and storage with Phoenix Defence.

E. BASIS FOR SELECTION TO PARTICIPATE:

1. Selection of respondents to participate (for all but the Suppressor Rodeo, Suppressor one-on-one meetings, and RWS-TDR) shall be based on the extent to which the nominated technology to be demonstrated addresses lethality gaps and/or informs future lethality requirements as evaluated by the USSOCOM component lethality subject matter experts (SMEs).
2. Selection of respondents to participate in the Suppressor Rodeo shall be based on the extent to which the nominated technology to be demonstrated addresses the J3S-IPT interest.
3. Selection of respondents to participate in the Suppressor one-on-one meetings shall be based on the extent to which the nominated technology to be demonstrated addresses the J3S-IPT interest and the time available.
4. Selection of respondents to participate in the RWS-TDR shall be based on the extent to which the nominated technology to be demonstrated addresses the PD-CSW requirements listed in paragraph 6.7 above.

F. ADDITIONAL INFORMATION:

1. All proprietary information contained in the quad chart and associated documents shall be appropriately marked. All efforts shall be made to protect proprietary information that is clearly marked. Lessons learned by USSOCOM from these demonstrations may be broadly disseminated, but only within the U.S. Government. If selected for

participation in the event, respondents may be requested to provide additional information that will be used in preparation for the demonstration.

2. The respondent's attention is directed to the fact that Federally Funded Research and Development Centers (FFRDCs) and Government Support Contractor (GSC) personnel will provide support during the review of the quad charts. The FFRDC and GSC personnel will have access to respondent quad charts and will be utilized to objectively review a submission in a particular functional area and provide comments and recommendations to the U.S. Governments' decision makers. They will not establish final assessments of risk, rate, or rank of respondent quad charts. All advisors have complied with Procurement Integrity Laws and have signed Non-Disclosure and Rules of Conduct/Conflict of Interest statements. The Government has taken into consideration requirements for avoiding conflicts of interest and ensure advisors comply with safeguarding source selection and proprietary data. Submission of quad charts in response to the RFI constitutes approval to release the quad charts to FFRDC and GSCs.
3. Respondents are required to identify demonstrations that are subject to export controls since foreign participants will attend the event. Participants may include foreign government, military and industry or U.S. industry foreign national personnel. Respondents are ultimately responsible for complying with Export Control regulations for concepts, equipment, systems, or technology associated with the U.S. Munitions List (USML) or Commerce Control List (CCL). Visit the U.S. Department of State Directorate of Defense Trade Controls website (https://www.pmddtc.state.gov/ddtc_public) for more information on USML International Traffic in Arms Regulations (ITAR) and the U.S. Department of Commerce Bureau of Industry and Security website (https://www.bis.doc.gov) for more information on CCL Export Administration Regulations (EAR). If necessary, USSOCOM event organizers will restrict access to export-controlled technology demonstrations.

G. Per Federal Acquisition Regulation (FAR) 52.215-3, Request for Information or Solicitation for Planning Purposes (Oct 1997):

    1. The Government does not intend to award a contract on the basis of this RFI notice or to otherwise pay for the information.
    2. Although the term "respondent" is used in this RFI, your responses will be treated as information only. It shall not be used as a proposal.
    3. In accordance with FAR 15.209(c), the purpose of this RFI is to solicit technology demonstration candidates from private industry, government Research and Development (R&D) organizations/labs, academia, and individuals to submit technology demonstration nominations addressing innovative lethality technologies.

H. Points of Contact:

1. Contracting Office Address:

   SOF AT&L KR
   7701 Tampa Point Blvd
   MacDill AFB, Florida 33621-5323

2. Individual(s):

   - Mr. Marvin Marcia: marvin.marcia@socom.mil