



# SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE

**COL John Reim**  
Program Executive Officer

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**SOF WARRIOR May 2016**



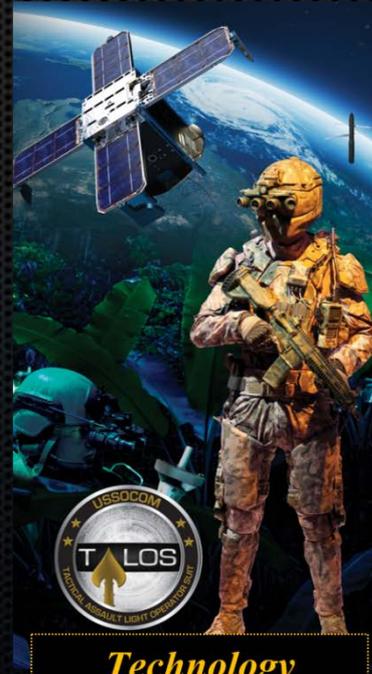
**SOF WARRIOR**

# Agenda

- PEO Introduction / Overview
- PEO-SW top Technology Needs
- Small Group Discussions (room is ours all week)



*Acquisition*



*Technology*



*Logistics*

# *PEO-SW*

## *Why We Are here*

- Industry | SOCOM need to meet!
- Ensure industry understands our Interests
- Reinforce industry collaboration w/Special Operations Forces Acquisition, Technology, and Logistics
- Continue to mature our process; more efficiently target SOF Warrior capability Interests
  - FedBiz OPS Special Notice – 1 April 2016 - UNCLASS Tech Interest Items
  - SOCOM BAA – Every March
- Will continue semi-annual trend of events
- Fourth annual SOF Warrior Industry Collaboration (SOFWIC) – (6) months post-SOFIC ~Oct/Nov 16

**TIRELESS, DILIGENT, FEARLESS IN OUR SUPPORT TO SOF!!**

# SOFIC - SOFWIC Process

**TODAY!**

**Interests @ SOFIC**

**FedBizOps**

**Eval Papers**

**SOFWIC**

**EMERGING INTERESTS**



## Objective

- Enhance PEO-SW and Supported Community User Team collaboration with industry in support of the SOF Operator.
- Identify innovative capability solutions that might add enhanced capabilities to the Special Operations Forces (SOF) warfighter.
- Influence Industry Research and Development (IRAD) - We want industry working on the right stuff that meets | our Interests!

**BAA's & Tech Experiments**

**Capability Collaboration Events - SOFWERX**

**SBIRS / CRADA**

**Combat Eval/Projects**

**ICD/CDD/CPD - Programs**



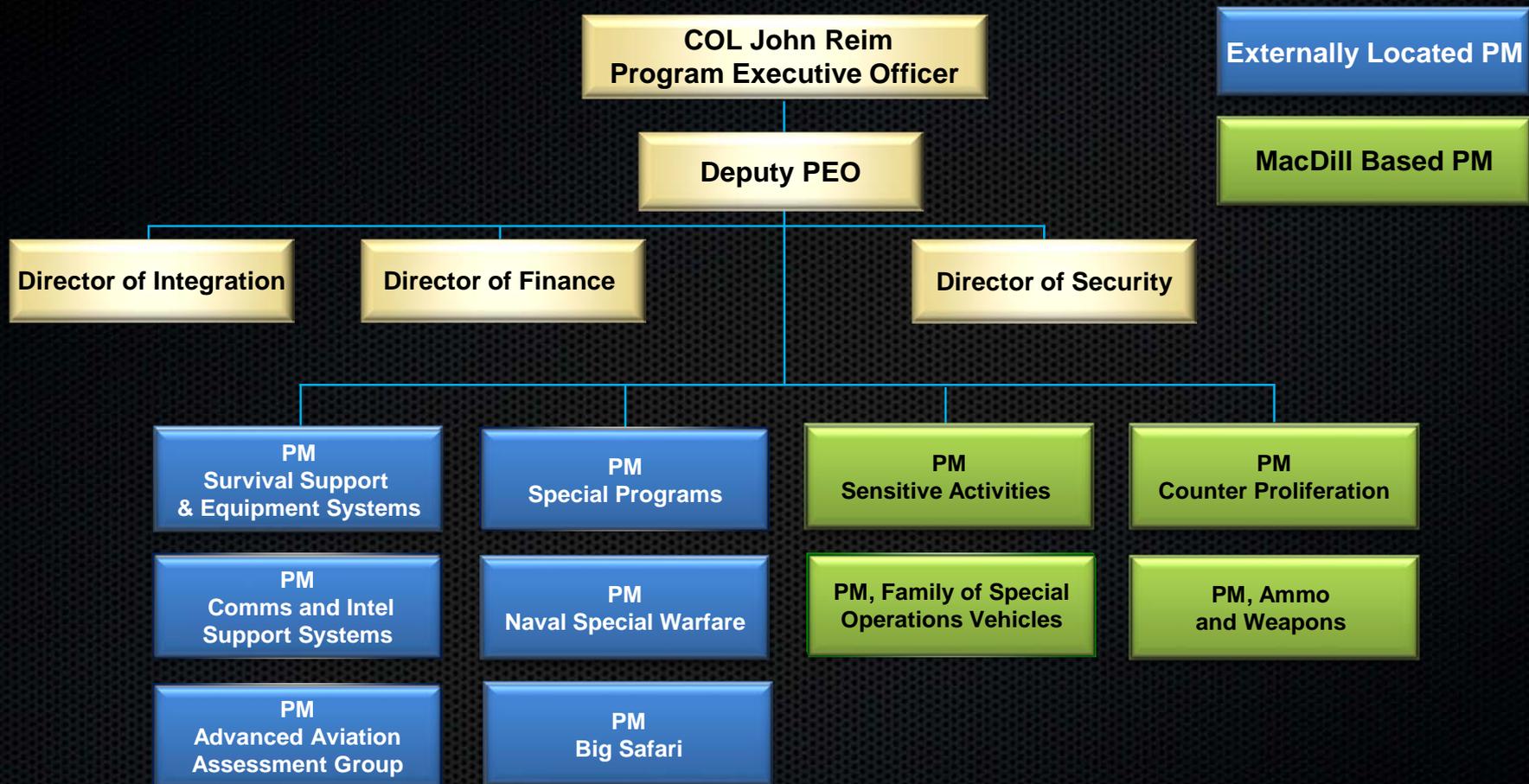
# *SOFWIC 2015 Metrics*

- 150+ Vendor Submissions received in response to the USSOCOM Special Notice
- 62 Total white papers selected to brief:
  - 48 Vendor proposals selected to brief USSOCOM
  - 14 Vendor proposals selected to brief JSOC on CRADA opportunities
- \$50.78M Vendor proposed IRAD
- \$1025.68M total leveraged investment

# *SOFWIC 2015 Results*

- PEO-SW
  - 2 purchases (Soldier Survival)
  - 2 CRADA/possible project (Communications & Mobility)
  - 2 vendors continued market research/monitoring (VAS & ISR)
- JSOC pursuing multiple CRADAs:
  - Communications
  - Intelligence, Surveillance, and Reconnaissance (ISR)
  - Power and Energy
- TALOS
  - Made multiple NEW industry connections
  - Incorporated in to TALOS networking/events

# PEO-SW Organization



## MISSION

“Provide rapid and focused acquisition of SOF-unique capabilities to USSOCOM operators conducting decisive SOF activities and global operations against terrorist networks”

# Program Executive Office SOF Warrior

## MOBILITY

“Individual to Heavy Ground Vehicles”



Light Tactical All Terrain Vehicles



Non-Standard Commercial Vehicles



GMV 1.1



Ground Mobility Vehicle (Medium)



MRAP-ATV (Heavy)

## SURVIVAL

“Protection, Load Carriage & Medical”



Combat Uniform & Helmets



Body Armor / Load Carriage System



Individual & Combat Medic Kits



Casualty Evacuation

## LETHALITY

“Munitions, Visual Augmentation, Lasers & Weapons”



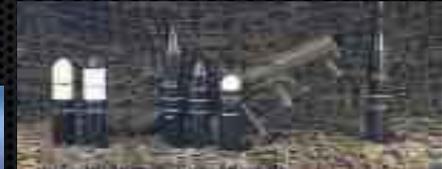
Night Vision Goggles AN/PVS-31



MK 17 Combat Assault Rifles



Aviation Ammo



Multi-purpose Anti-armor Anti-personnel Weapon System



Demolition Kits



Handheld Laser Marker

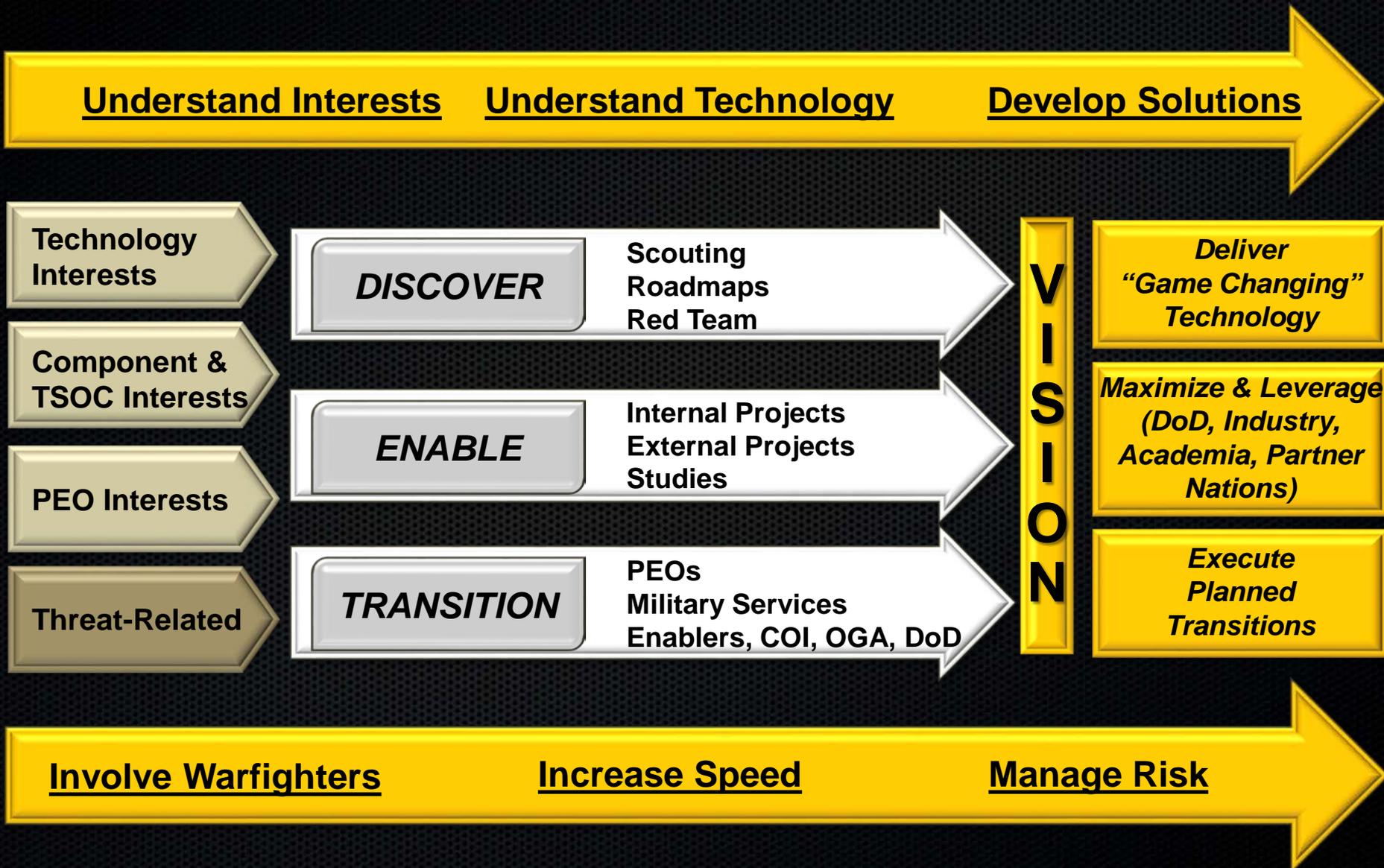


Laser Acquisition Markers

Sniper Weapons & Accessories



# Planning for the Future



# *PEO-SW PM Portfolio Briefs*

## *SOF Warrior Technology Interests*

# PEO-SW Interests



“Somewhere something incredible  
is waiting to be known.”

-Carl Sagan

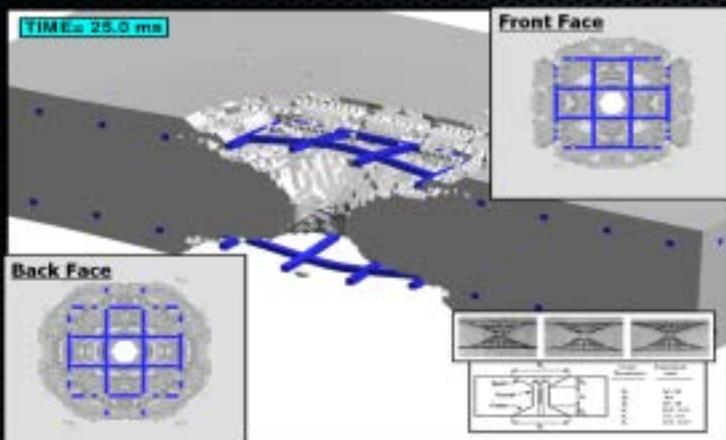
- Breaching
- Communications
- Electronic Warfare
- Fire Support
- Information Technology
- Intelligence, Surveillance and Reconnaissance
- Knowledge Management
- Lighten the Load
- Mobility
- Scalable Effects Engagement/Non-Lethal
- Power and Energy
- Soldier Survival
- Target Engagement
- Visual Augmentation

# *PEO-SW Technology Interests*

**Breaching**

# PEO-SW Technology Interests

## Breaching



## Capability & Technology Interest Item:

- **Barrier Characterization**
- SOF is interested in a method to effectively and efficiently characterize concrete composition
- Technology Interest Items:
  - Accurately and reliably determine structure thickness & hardness
  - Accurately characterize obstacles included within a barrier
  - Accurately and reliably determine PI rating within +/- y PSI
  - Barrier analyzer and concrete analysis gauges need to be: Man-portable & Minimally invasive

# *PEO-SW Technology Interests*

## **Communications**

# PEO-SW Technology Interests

## Communication



## Capability & Technology Interest Item:

- **Secure Personal Area Networks – Advanced Antennas**
- SOF is interested in an a system to wirelessly connect devices.
- **Technology Interest Items:**
  - Novel wireless communications that are distinct from common wireless protocols, infrastructure architectures and currently used RF bands
  - Operate worldwide in both urbanized and austere combat environments
  - Capable of forming ad hoc wireless network within certain ranges
  - Individually programmable sensors
  - SWAP conducive to dismounted operations

# PEO-SW Technology Interests

## Communication

### Capability & Technology Interest Item:

- **Omni-Directional Hand Radio High Gain UHF SATCOM Antenna**
- SOF is interested in a capability to connect a UHF SATCOM antenna either directly or remoted from a radio to the communicators rucksack that is omni-directional while maintaining a reliable UHF SATCOM connection
- Technology Interest Items:
  - OMNI directional UHF SATCOM antenna for dedicated UFO, legacy UHF SATCOM, MUOS enabled connectivity in a form factor length no longer than the current tactical UHF Line of Site Antenna



# PEO-SW Technology Interests

## Communication

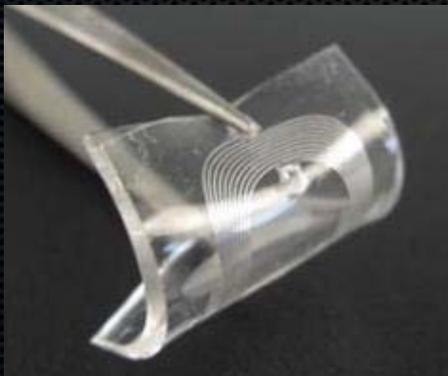


## Capability & Technology Interest Item:

- Over the Horizon (OTH) Full Motion Video (FMV) and Audio
- SOF is interested in a capability to reliably transmit high bandwidth data to include Full Motion Video (FMV) OTH from standalone devices where no existing infrastructure exists
- Technology Interest Items:
  - Explore potential for 24/7 on-demand global satellite connectivity to sensors and cameras on the ground
  - Where satellite coverage doesn't exist, or the coverage is sporadic, an alternative means of connectivity is required

# PEO-SW Technology Interests

## Communication



## Capability & Technology Interest Item:

- **Conformal Antennas**
- SOF is interested in conformal antennas that duplicate the performance of traditional designs.
- Technology Interest Items:
  - New materials that adapt their shape to their container and maintain a fluidic flexibility while providing optimal performance for radiating radio frequency energy.
  - Textile and Small form factor software defined antennas.

# *PEO-SW Technology Interests*

## **Fire Support**

# PEO-SW Technology Interests

## Fire Support



## Capability & Technology Interest Item:

- **Position Location Information (PLI) for Disadvantaged Environments – Precision Targeting**
- SOF is interested in the ability to determine location information of friendly and enemy forces without relying upon GPS
- **Technology Interest Items:**
  - Device that collects sensor data from device-enabled sensors
  - Compatible with mobile applications
  - Maintains accuracy during movement
  - Delivers CoT-enabled feed via Ethernet, Serial, or USB
  - LOS & NLOS Relay Tags, Relay Points, Alt Radio Frequencies, Multi-spectral Tags

# *PEO-SW Technology Interests*

**ISR**

# PEO-SW Technology Interests

## Intelligence, Surveillance and Reconnaissance



## Capability & Technology Interest Item:

- **Biometric Tactical Matching**
- SOF is interested in an a capability to collect tactical biometric matching with a lightweight system capable of operating in austere environmental conditions
- Technology Interest Items:
  - Comprehensive survey of biometric systems to accomplish data collection/analyses
  - Biometric Systems that are portable, small, lightweight, easy to operate, and operable in harsh environments
  - Databases that are easily accessible for quick matching or enrollment

# *PEO-SW Technology Interests*

**Mobility**

# *PEO-SW Technology Interests*

## **Mobility**



## **Capability & Technology Interest Item:**

- **All Terrain Vehicle (ATV) Noise Reduction**
- SOF is interested in the ability to manage acoustical signature on ATVs without sacrificing tactical utility in range and power

# *PEO-SW Technology Interests*

## **Soldier Survival**

# PEO-SW Technology Interests

## Soldier Survival



## Capability & Technology Interest Item:

- **Armored Vehicle Extraction**
- SOF is interested in a capability to safely and rapidly recover personnel and equipment from armored troop carriers. Current equipment is heavy, slow, prone to failure and requires generators or large quantities of batteries.
- Solutions must be lightweight, single man operable, rapidly deployable and not harm personnel trapped in vehicles

## Capability & Technology Interest Item:

- **Air / Gas Expanders**
- SOF is interested in the ability to reduce or eliminate the reliance on compressed air containers for rescue/recovery operations
- The current heavy lift kit used to lift buildings, aircraft or vehicles in order to rescue trapped personnel relies on highly compressed air systems that are vulnerable to enemy fire and subsequent explosions

# PEO-SW Technology Interests

## Soldier Survival



## Capability & Technology Interest Item:

- Remote Vital Signs Detector
- SOF is interested in the ability to sense and locate live humans trapped in a structural collapse, aircraft crash or hazardous confined space environment from standoff distances
- A human safe sensor which indicated the three dimensional location of survivors will drastically reduce time to locate and subsequently rescue trapped occupants

# PEO-SW Technology Interests

## Soldier Survival / Tactical Medical



## Capability & Technology Interest Item:

- **Blood Substitute**
- SOF is interested a shelf stable blood substitute
- SOF medics can carry blood onto the battlefield but it must be kept refrigerated or on ice. Blood will deteriorate and become harmful if allowed to deviate from temperature standards

## Capability & Technology Interest Item:

- **Minimally Invasive Hemorrhage Control**
- SOF is interested a minimally invasive capability to stop the internal bleeding of battlefield casualties
- The area of focus that is beyond SOF medics current capabilities is the treatment of internal bleeding within the abdominal and thoracic cavities

# PEO-SW Technology Interests

## Soldier Survival / Tactical Medical



## Capability & Technology Interest Item:

- **Non-invasive Tactical Trauma Analysis**
- SOF medics are interested in a capability to rapidly assess, locate and identify internal injuries (bleeding, fractures, etc.)
- Current equipment and methodologies are antiquated and sometimes require invasive techniques which could cause more harm or are untenable in a contaminated environment

# PEO-SW Technology Interests

## Soldier Survival / Human Performance



## Capability & Technology Interest Item:

- High Altitude Human Performance
- SOF is interested in an enhanced capability to optimize human performance under physiological stressors of high altitude operations during prolonged dismounted operations
- High altitude operations typically require operators to carry heavy loads for extended durations, decreasing an operators ability to conduct the assigned mission and increasing the loss of life due to altitude sickness

## Capability & Technology Interest Item:

- Lighten the Load
- SOF desires to lighten and reduce the size of all equipment to the maximum extent possible

# *PEO-SW Technology Interests*

## **Target Engagement**

# PEO-SW Technology Interests

## Target Engagement



## Capability & Technology Interest Item:

- **Lightweight Ammunition**
- SOF is interested in Ammunition that weighs less than conventional ammunition and will reduce the overall weight of ammunition carried by the individual operator, vehicles, and aircraft
- **Technology Interest Items:**
  - Lighter weight ammunition material solutions with the ability to reliably function in extreme temperatures and all fielded machine gun weapon systems
  - Focus areas include engineering, materials, chemistry, physics, mechanics, ballistics, and explosives

# *PEO-SW Technology Interests*

## **Visual Augmentation Systems**

# PEO-SW Technology Interests

## Visual Augmentation



## Capability & Technology Interest Item:

- **Cursor on Target (CoT) Integrated Heads-Up Display (HUD)**
- SOF is interested in a capability to accurately view SA data to aid in rapidly identifying aircraft location as it relates to friendly and enemy positions
- Technology Interest Items:
  - Survey of digital scope/display technologies to achieve spotter/shooter cooperation
  - Performance should meet/exceed analog technologies and be comparable/smaller in SWAP
  - Image overlay, low light level and image filtering enhancements capabilities

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# Questions



***We Support Our Nations Very Best!***



# *Break-Out Discussions*

