



SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE

Mr. Tony Davis
Director

SCIENCE AND TECHNOLOGY

“Somewhere something incredible
is waiting to be known.”

-Carl Sagan

SCIENCE AND TECHNOLOGY

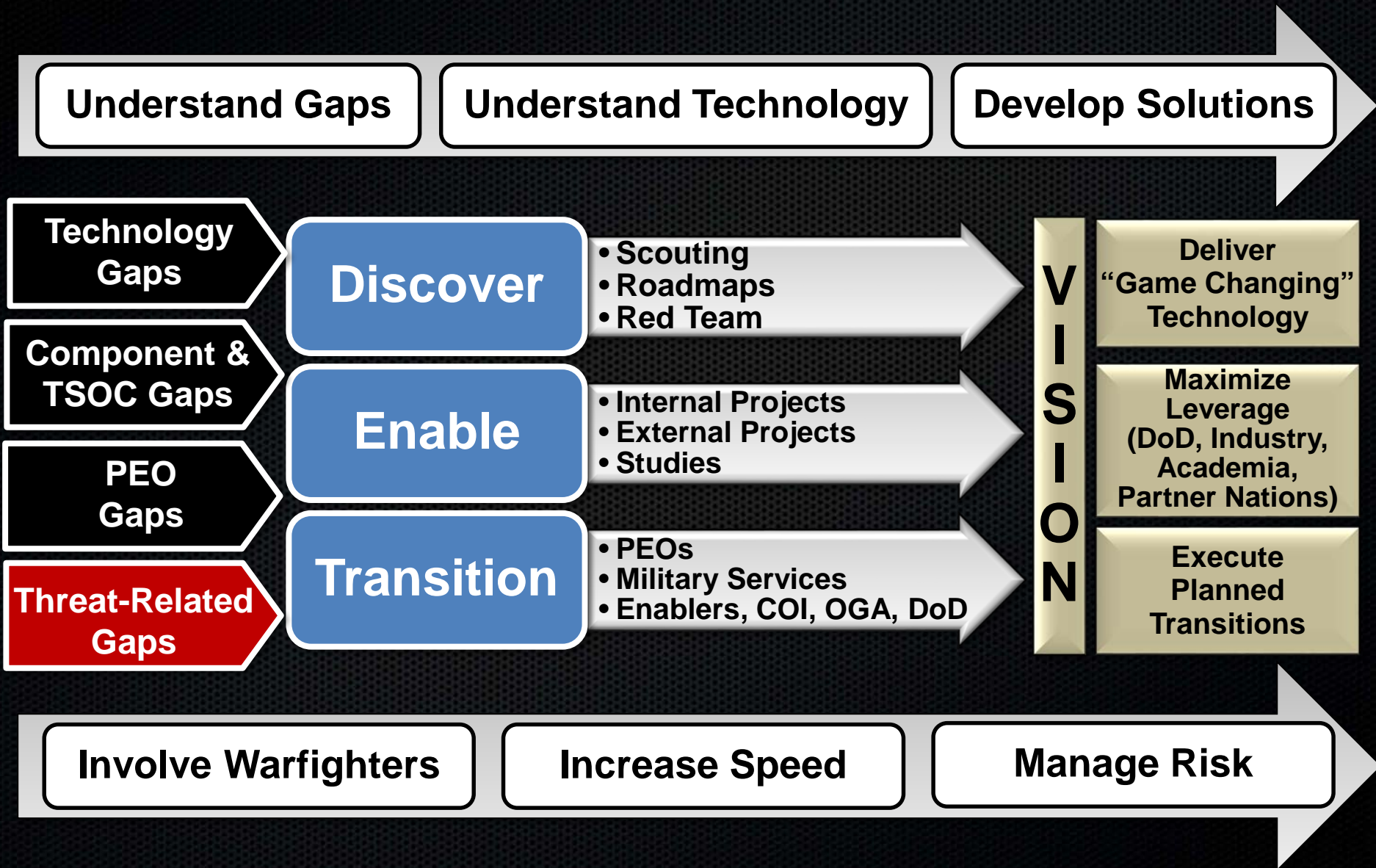
S&T Vision



**Discover, Enable, and Transition technologies
to provide an asymmetric advantage for
Special Operations Forces**



S&T Strategy Overview



Science and Technology Directorate

BIOMEDICAL / HUMAN PERFORMANCE



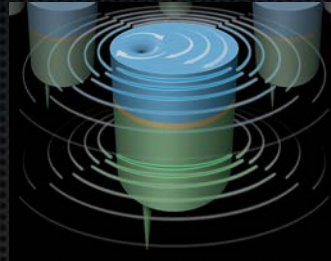
Far-Forward Combat Casualty Care

FIRES



Airborne High Energy Laser

C4



VHF/UHF Magnetically Coupled Antennas

MOBILITY



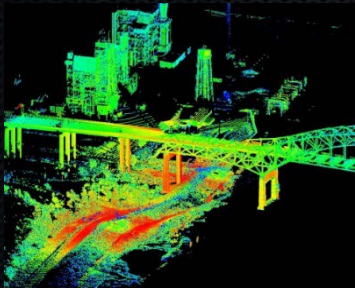
Transferrable Armor

TACTICAL ASSUALT LIGHT OPERATOR SUIT (TALOS)



Integrated Advanced VAS, Communications, & Situational Awareness

INTELLIGENCE, SURVEILLANCE, & RECONNAISSANCE



Standoff LIDAR System

PROTECTION



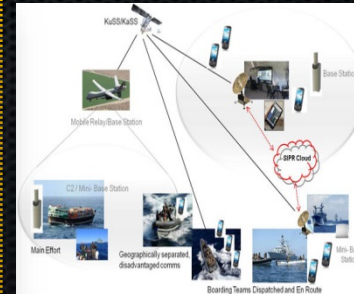
Advanced Tactical Standalone Body Armor

TECHNICAL EXPERIMENTATION (TE)



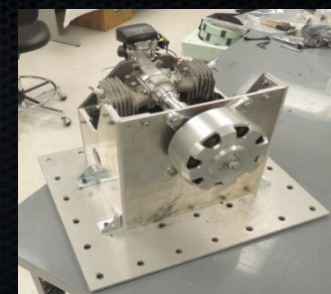
TE Themes/Venues

EMERGING CAPABILITIES & PROTOTYPING (EC&P)



Jolted Tactics JCTD

SMALL BUSINESS INNOVATION RESEARCH (SBIR)



Hybrid Electric Power Unit

Science & Technology Budget

- **Applied Research (BA2) & Advanced Technology Development (BA3)**
 - **BA2:** Studies, Early Laboratory Hardware, Software Development Models, Concept Exploration. Technology Readiness Level (TRL) 3-5
 - **BA3:** Operational Prototypes, Advanced Technology Demonstrations, Technical Experimentation, Technology Insertions. TRL 5-7

ACQUISITION STRATEGY

- Various (Competition, IDIQ, CRADA, Prize Challenges, etc.)
- External Leveraging (OGAs, Services, Laboratories)

PERIOD OF PERFORMANCE

- Project Dependent
- Emphasizing Tech Discovery, PEO TIRs needs, and game-changing technology development

MILESTONES

- Project Dependent

POINT OF CONTACT

- 813-826-9482 (TILO)

FUNDING

- FY16 BA2/3: \$21.79M/\$31.21M
- FY17 BA2/3: \$22.68M/\$38.96M

Note: Does not include TTL and MISO

CURRENT CONTRACT/OEM

- Various

Innovation Ecosystem

1. Build the Network
2. Provide the Venues
3. Develop Tools and Processes

CAPABILITY NEEDS

Small Business
Innovation
Research (SBIR)

Technology
& Industry
Liaison
Office (TILO)
tilo@socom.mil

International
Cooperation

Customers and
Culture

Innovation

Tools and
Processes

SOLUTIONS

Leverage Others:

- Services
- Government Labs
- Industry
- Academia
- Non-profits

Experimentation
Venues &
Combustion
Chambers



Technical Experimentation (TE)

- **TE 16-3, 11-15 July 2016, Muscatatuck/ Camp Atterbury, Indiana**
 - Experimentation Focus: Urban/Unconventional Warfare
- **TE 16-4, 19-23 September 2016, Little Creek, VA**
 - Experimentation Focus: Maritime Surface Systems
- **TE USSOCOM Public Link:**
<http://www.socom.mil/sordac/Pages/ExpWithUS.aspx>
- **LinkedIn Group:**
[SOCOM Technical Experimentation](#)



Innovation Thrives in a Marketplace

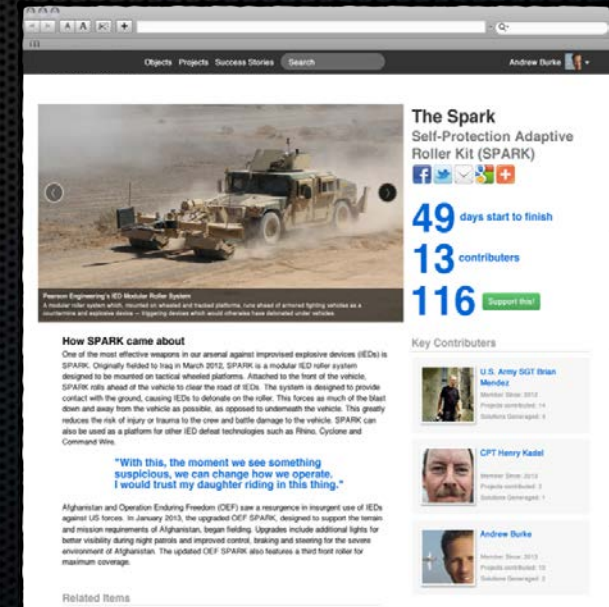
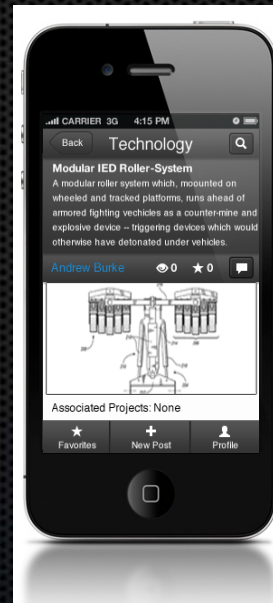


“So by accelerating the collisions, community, and co-learning... innovation and productivity increases.” Tony Hsieh, Zappos.com

*Marketing Monday
Warfighter Wednesday
MIL-OSS Mini-Hacks
Thunderdome Thursday
FFRDC Friday
Tech Talks*

Project Vulcan

- Pilot deployment of a Technology Domain Awareness innovation platform jointly developed with the DoD Information Analysis Centers (IACs)
- Links technology options in DoD, defense industry, and the broader commercial and academic R&D communities to the needs of SOF for better, cheaper, faster capability development
- Incorporate Lessons Learned from 2016 SOFIC
 - Industry feedback is valued and appreciated
 - Improve the ‘Scout Card’ Creation process



Technology Discovery and Knowledge Management Tool

Industry Fellowships

- **USSOCOM advertised vacancies for three - five energetic technical experts from industry to be Exchange Fellows in the SOFWERX innovation environment. Ability to work in a dynamic environment is a must. Desired Industry Exchange Fellowship positions:**
 1. **Electro-Optics Engineer**
 2. **Mechatronics Engineer**
 3. **Biomedical Engineer**
 4. **Software Engineer**
 5. **Industrial Designer**
 6. **Aeronautical Engineer**
- **USSOCOM is currently making first round selections, this is an ongoing process**
- **Details will be provided on FedBizOps: SOCOM Industry Exchange Fellowship, Solicitation Number: SOCOMFELLOW**

PEO Technology Insertion Roadmaps

C4

- Stabilized Rapid Adaption of Network
- Security and Network Management/Monitoring of Mobile Ad-hoc Network
- Open Standard Airborne ISR Transport Modem

Fixed Wing

- High definition, 3D & multi-color EO/IR, multiple moving target tracking, FOPEN
- Crew workload reduction, machine intelligent processing/Tactical Flight Mgmt
- Situational awareness with full spectrum threat reduction and counter measures
- 105 mm cannon precision guided ammunition and fuses, loitering munitions
- High energy laser, power management, aiming and focus turret
- Multispectral sensor
- Combat ID, IFF to ID friendly and hostile in all environments

Maritime

- Common Operating Tactical Picture
- Low Probability of Intercept/ Detection Communications
- Wireless Intercom
- Surface System/Active Ride Control
- Maritime Personnel Signature Management Technologies
- Situational Awareness, High Visual/NIR Transmittance Window Films

PEO Technology Insertion Roadmaps (2)

- Rotary Wing**
- High Power Watts for Over the Horizon Communications
 - Improved RW Counter Measures
 - Advanced IR Countermeasures & Self-Protection for RW Aircraft

- SRSE**
- Maritime Forensics Exploitation Capability
 - Hidden Chamber/Material Detection
 - Portable, Automated 3D Room/Building Mapping Device
 - Stand-off/Remote Facial Recognition & Iris Capture
 - Dustless Latent Print Collection
 - Rapid Identification of Materials for Site Exploitation

- SOF Warrior**
- Transferrable armor for commercial vehicles
 - Helmet sensor system to monitor and record linear and rotational accelerations
 - High Sulfur Diesel Engine Capability
 - Camouflage Applique
 - Reduced IR Signature
 - Improved Gun Barrels
 - Variable Transmission & Laser Protection Eyewear
 - Tactical stand-alone ballistic plate
 - Multiple colors or spectral bands within the same sensor and SWAP
 - Thermal band Identify Friend or Foe (IFF) beacon, backwards compatible

QUESTIONS?

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