



SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS EXPANDING THE COMPETITIVE SPACE

Mr. David Breede, Program Executive Officer
SPECIAL RECONNAISSANCE OVERVIEW



SPECIAL RECONNAISSANCE (SR)



Technical collection and communications through remote, unattended, or clandestine capabilities

“SR entails reconnaissance and surveillance actions normally conducted in a clandestine or covert manner to collect or verify information of strategic or operational significance, employing military capabilities not normally found in CF”

Threat warning, signals intelligence (SIGINT), and precision geo-location capabilities across the SOF inventory and all domains

Remote capabilities to emplace, C2, and collect data from unattended sensors and integrate national asset intelligence

Sensitive site exploitation to rapidly assess threats, exploit collected material, and support follow-on operations

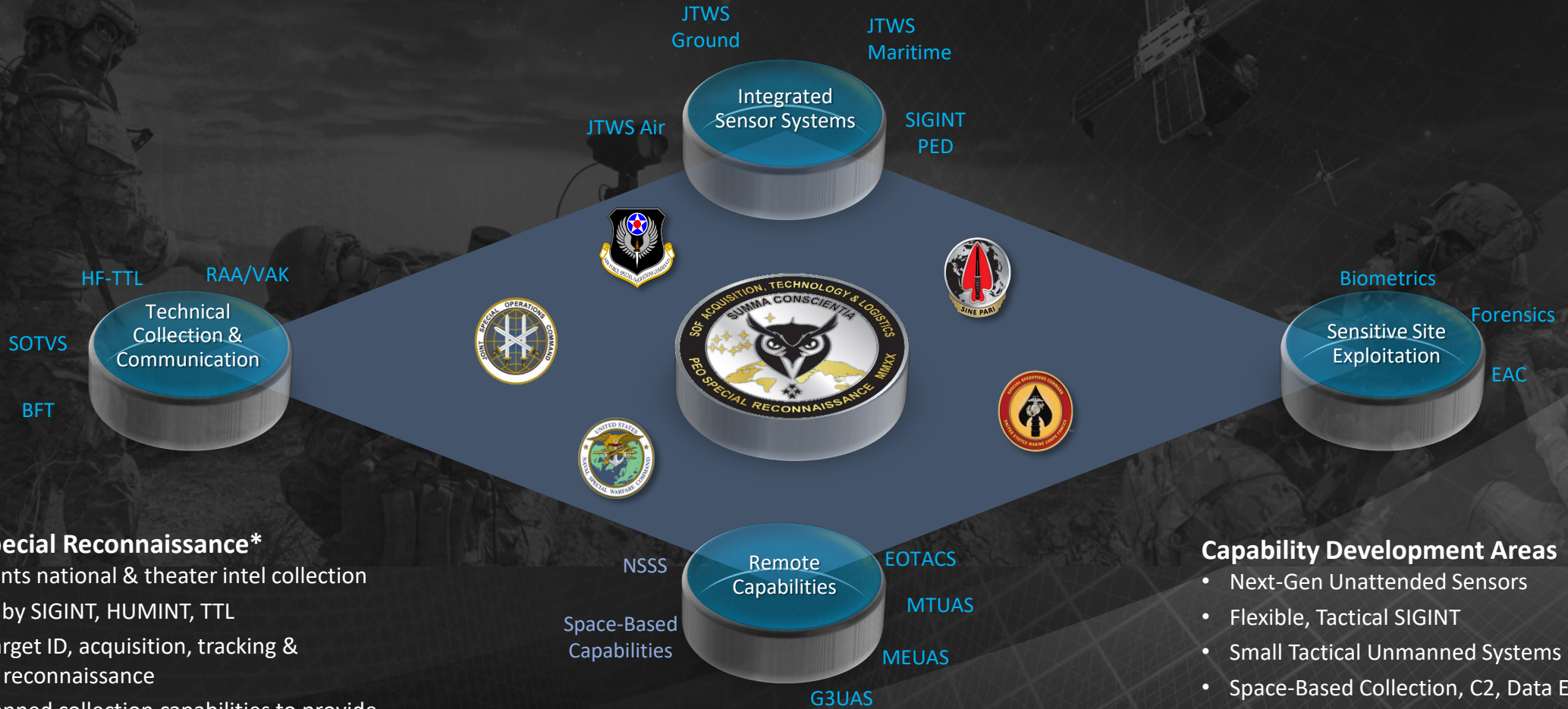
“SR includes target acquisition, area assessment, and post-strike reconnaissance, and may be accomplished by air, land, or maritime assets.”

* Source: Joint Publication 3-05, Special Operations



PEO-SPECIAL RECONNAISSANCE MISSION

Lead the rapid and focused acquisition of state-of-the-art sensors and associated C2, emplacement, recovery, and specialized communication systems across all domains to enable total situational awareness for the SOF Warfighter



Pillars of Special Reconnaissance*

- Complements national & theater intel collection
- Supported by SIGINT, HUMINT, TTL
- Used for target ID, acquisition, tracking & post-strike reconnaissance
- Uses unmanned collection capabilities to provide persistent, high-fidelity intelligence

* Per Joint Pub 3-05

Capability Development Areas

- Next-Gen Unattended Sensors
- Flexible, Tactical SIGINT
- Small Tactical Unmanned Systems
- Space-Based Collection, C2, Data Exfiltration
- Standoff Biometrics & Forensics
- Collaborative Special Reconnaissance



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PM TECHNICAL COLLECTION & COMMUNICATIONS (PM-TCC)

Develop, field and sustain credible special reconnaissance, surveillance, and communication capabilities that support the SOF Operator missions to include: Tagging, Tracking, and Locating of enemy assets; capturing and transferring of near-real time ground based tactical imagery and video; providing non-traditional communications capabilities for low density and sensitive missions; and providing battlefield visualization and situational awareness through remotely tracking and monitoring SOF Operators



Technical Collection & Communication Enabling SR Portfolio

- Tagging, Tracking and Locating – SOF, Hostile and Partner Forces
- Target identification and threat assessment
- Collect and provide near-real time imagery (stills, video, audio) and sensor data
- Information for situational awareness and de-confliction

Capability Development Areas

- Next-Gen Unattended Sensors (Ground & Maritime)
- Alternative PNT Tracking Solutions
- Non-Traditional Sensor Emplacement Techniques
- Collaborative Special Reconnaissance
- Space-Based Collection, C2, Data Exfiltration



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Hostile Forces-
TTL

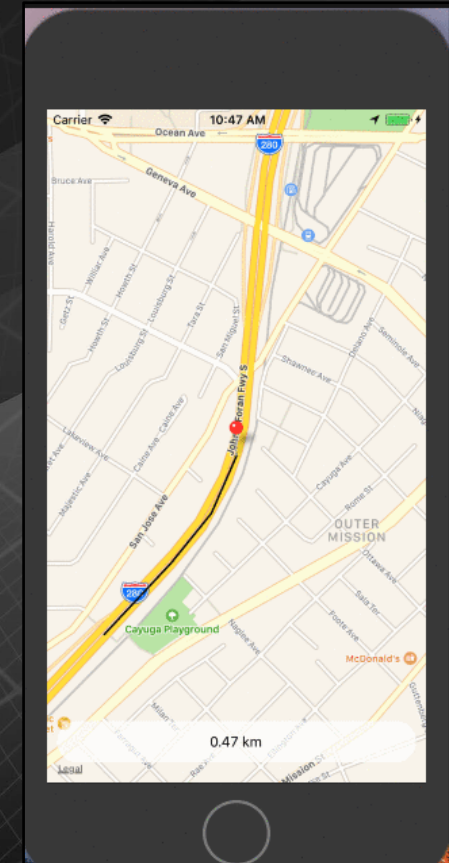
Hostile Forces – Tagging, Tracking, & Locating

Capability Description

The Hostile Forces – Tagging, Tracking, and Locating program acquires and fields capabilities to tag, track, and locate targets such as personnel, mobility platforms, and objects using clandestinely employed devices with low probability of interception and low probability of detection

Operational Relevance

Support SOF technical collection missions through the development, acquisition, and fielding of tracking and close target reconnaissance capabilities and their associated detection, interrogation, viewing, and communications systems



Blue Force
Tracking

Blue Force Tracking / Personnel Recovery

Capability Description

The Blue Force Tracking program fields a family of devices used to :

- Remotely track and monitor SOF Blue Forces
- Enhance Command and Control, threat warning, force protection, situational awareness, battlefield visualization, counter-fratricide, and combat Personnel Recovery

Operational Relevance

Provides stand-alone SOF-peculiar capabilities for Situational Awareness and Command and Control in austere environments



Tactical Video Systems / Reconnaissance Surveillance Target Acquisition

Tactical Video
Systems

Capability Description

Tactical Video Systems consist of interoperable equipment to capture and transfer near-real-time ground-based, tactical day/night/reduced visibility, imagery, video, and electronic proximity and movement sensing, all capable of dissemination through SOF organic, global C4I, and commercial communications infrastructures

Operational Relevance

Tactical Video Systems consist of interoperable equipment to capture and transfer near-real-time ground-based, tactical day/night/reduced visibility, imagery, video, and electronic proximity and movement sensing, all capable of dissemination through SOF organic, global C4I, and commercial communications infrastructures



Remote Advise &
Assist

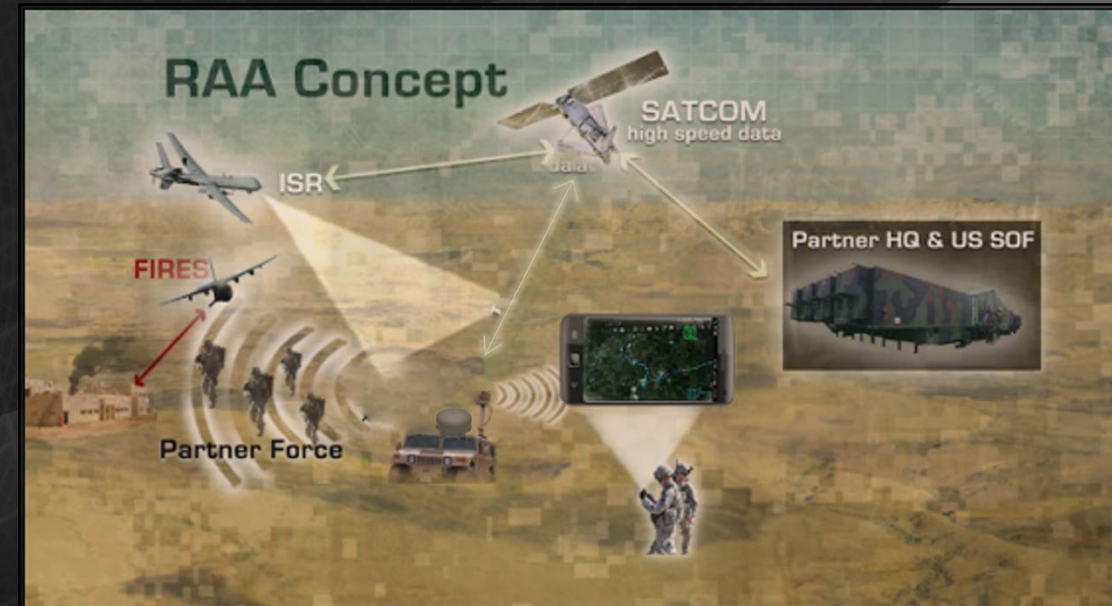
Remote Advise & Assist - Virtual Accompany Kit

Capability Description

SOF operators require the capability to harness technologies to improve RAA mission sets with Partnered Forces (PF). This capability serves as a force multiplier in support of effective mission command in support of SOF missions

Operational Relevance

RAA-VAK will provide SOF commanders, staff, and operators access to near-real-time information and support activities such as mission planning and execution, while SOF operators remain at the last covered and concealed position, outside the maximum effective range of small arms fire





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Capability Development Areas

- Next-Gen Unattended Sensors
- Flexible, Tactical SIGINT
- Small Tactical Unmanned Systems
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PM INTEGRATED SENSOR SYSTEMS (ISS)

Synchronize acquisition of radio frequency signal collection, processing, exploitation, and dissemination capabilities across the air, ground, and maritime domains. Enhanced target acquisition and analysis of enemy Signals of Interest. Develop and field modular, interoperable, networked sensors and analysis tools based upon open hardware and software architectures to enable the common operating picture and data sharing to/from national databases.



Integrated Sensor Systems Enabling SR Portfolio

- SOF depend on manned and unmanned RF Collection and Exploitation
- PM-ISS provides extended surveillance, reconnaissance to answer PIRs
- Complements national/theater intel collection
- Used for target ID, confirmation, tracking & post-strike reconnaissance

Capability Development Areas

- Next-Gen Sensors/Antennas for Next Gen Signals
- All Domain Flexible, Tactical SIGINT
- Cross Platform Mod-Payloads for UAS, UUV, USV
- Payloads for Space
- National Reach-back for Special Reconnaissance Collaboration and Dissemination





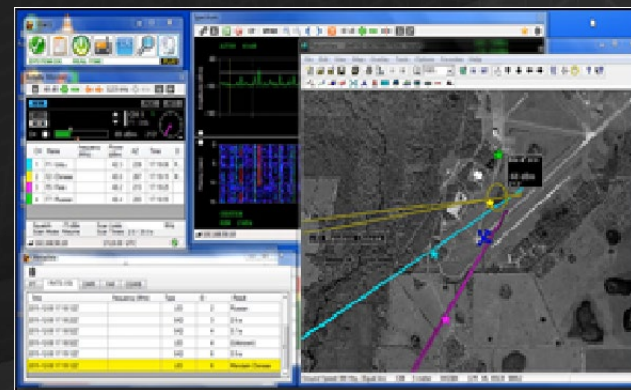
Joint Threat Warning System Air

Capability Description

- JTWS-Air (Light, Medium, and Heavy) carry-on/carry-off Threat Warning capability in various size, weight, and power configurations to support AFSOC Mission Requirements
- Detects, locates, and exploits signals of interest across the RF spectrum
- Situational Awareness & Threat Warning Payloads on Small UAS platforms (Groups 1-3)

Operational Relevance

Provides Force Protection, Threat Warning, and Situational Awareness to SOF in an Airborne Configuration



JTWS
Ground

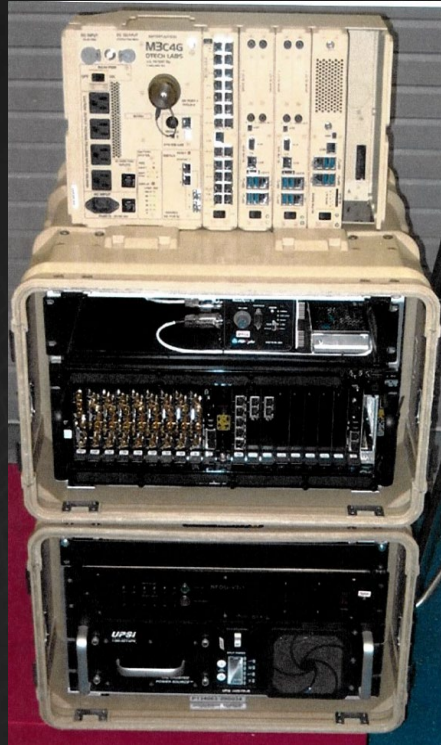
Joint Threat Warning System Ground

Capability Description

- Static- Next Generation Multi-Protocol Collection System at reduced SWaP
- Mobile- HF/VHF/UHF DF & Multi-protocol Receiver (some in development/test)
- Body Worn- VHF/UHF Direction Finding, Rugged, man-packable, requires 1 user per kit

Operational Relevance

Threat Warning, Force Protection, and Situational Awareness for SOF Ground Elements



JTWS
Maritime

Joint Threat Warning System Maritime

Capability Description

- HF/VHF/UHF DF Receiver & Multi-protocol COMINT/ELINT
- Carry-on/Carry-Off SIGINT Capabilities for Standard and Non-standard Platforms
- Configurable, ruggedized, low-profile capabilities that minimize SWaP

Operational Relevance

Threat Warning, Force Protection, and Situational Awareness for SOF Maritime Elements



SIGINT PED

SIGINT PED SILENTDAGGER

Capability Description

- Provides critical intelligence support and decision-making information via national technical means to globally deployed Special Operations Forces (SOF)
- Provides Intelligence, Surveillance, and Reconnaissance (ISR), and analytical capabilities at the Joint Task Force level and below
- Provides Processing Exploitation, and Dissemination capability in both garrison and deployed environments

Operational Relevance

Provides real-time collection processing at the tactical edge enabling Find, Fix, Analyze, and Disseminate (F2AD) operations



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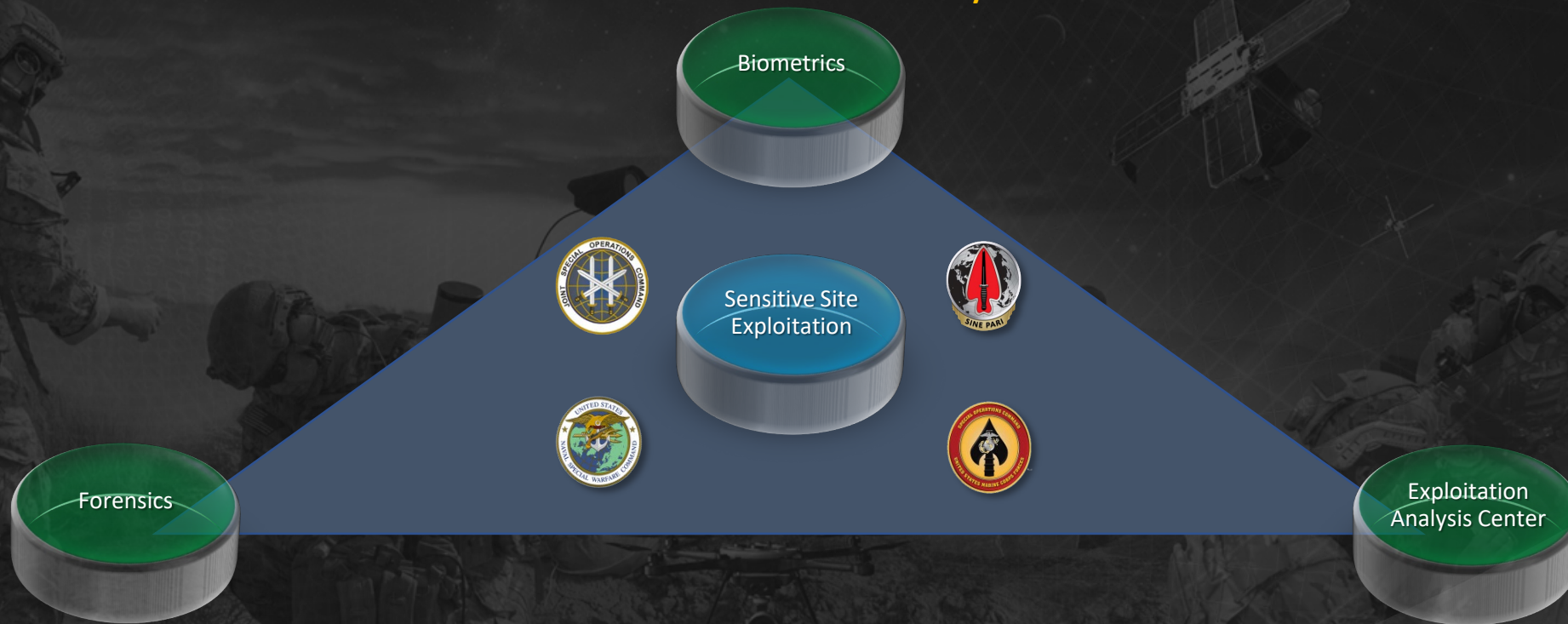


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PM SENSITIVE SITE EXPLOITATION (SSE)

Detect, identify, link and locate individuals/locations/items of strategic or operational significance Provides advanced digital and multimedia forensic hardware and software to support SOF elements in remote locations Provides analytical and clinical chemistry to include trace evidence analysis



Sensitive site Exploitation Enabling SR Portfolio

- Collect/verify information of strategic/operational significance
- Complements national & theater intel collection
- Used for target ID, acquisition, tracking & pre/post-strike recon
- Provide information to develop a CDR's situational awareness

Capability Development Areas

- Forensic Evidence Detection
- Dustless Latent Fingerprint Collection
- Biological/Chemical Identification and Detection
- Identify Explosive/Chemical Materials and Sources
- Cellular, Document and Media Exploitation Tools
- Facial and Iris Tactical Media Triage and Processing



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Forensics

Forensic Exploitation

Capability Description

Forensic exploitation is a scalable, modular, and adaptable multi-disciplined forensic science capability that supports the F3EAD cycle (Find, Fix, Finish, Exploit, Analyze and Disseminate) through the recovery, identification, and analysis of captured enemy material; and inform tactical or strategic objectives in support of identity operations

Operational Relevance

- Detect, identify, link and locate individuals/locations/items of strategic or operational significance
- Provides advanced digital and multimedia forensic hardware and software to support SOF elements in remote locations
- Provides analytical and clinical chemistry to include trace evidence analysis



BIOMETRICS

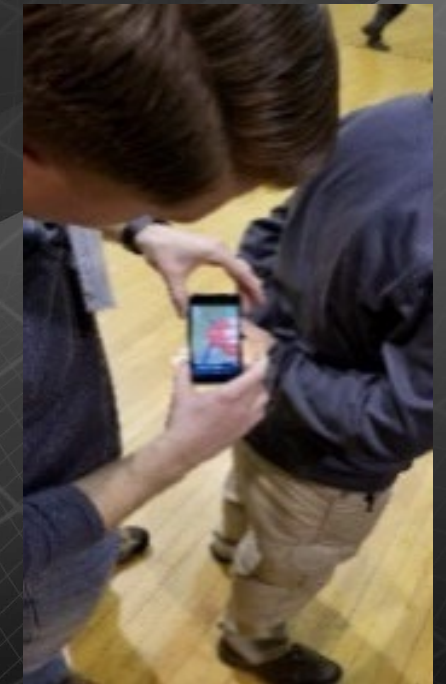
Biometrics

Capability Description

Biometrics enables the collection and transmission of unique and measurable biometric signatures from personnel to include live/latent fingerprints, iris patterns, DNA, and facial features. Biometric signatures are used to verify against or enroll into the DoD authoritative databases and can support hold or release decisions

Operational Relevance

- Detect, identify and locate individuals
- Monitor and track individuals from initial contact through a desired end state
- Establishes direct link through SOF web-based exploitation architecture to organize, correlate and conduct identity operations



EACs

Capability Description

Exploitation Analysis Capability (EACs) is a modular and scalable SOF unique forensic laboratory environment for more in-depth exploitation of captured exploitable material

Operational Relevance

- Scalable from as small as a “fly away” pelican case to a large laboratory that includes hard stand shelters
- Links leaders, collectors, analysts, planners, and execution elements within a collaborative environment





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PM REMOTE CAPABILITIES (RC)

Develop, field, and sustain unmanned systems across space, air, ground and maritime domains. Enable autonomous collection and exploitation of ISR sensor capabilities providing total situational awareness in support of SOF operations in permissive and contested environments.



Remote Capabilities Enabling SR Portfolio

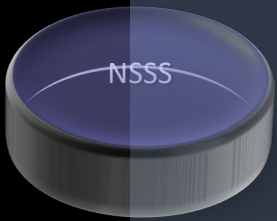
- Sensor C2 and Data Exfiltration
- Integration with Service Partners
- Unmanned SSE Chemical Detection (future)
- Remote Emplacement of Unattended Sensors
- EO/IR Tipping & Cueing

Capability Development Areas

- Collaborative Autonomy
- Alternative and Assured PNT
- Space-Based Collection, C2, Data Exfiltration
- Remote Sensor Emplacement
- Tactical Exploitation of National Capabilities



National Systems Support to SOF

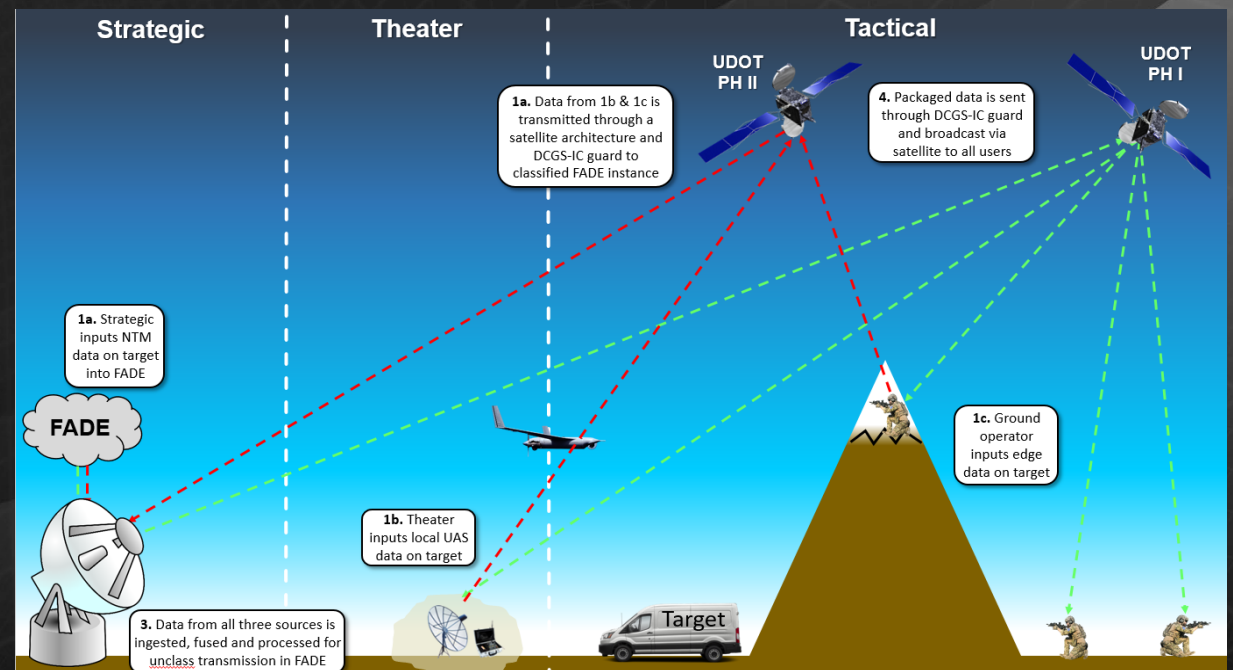
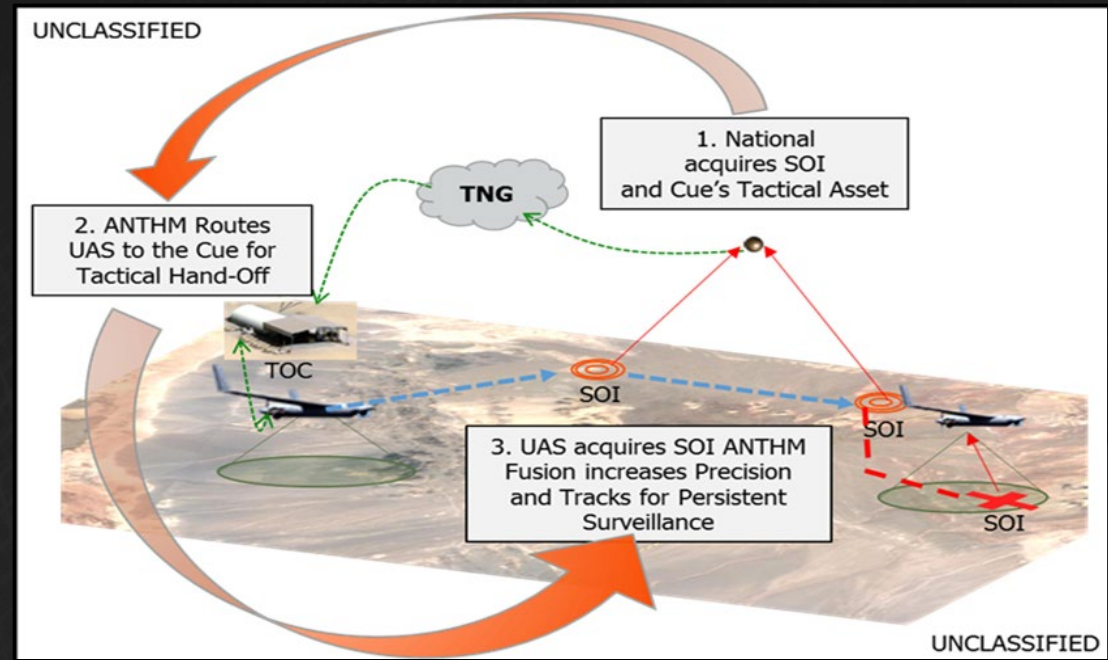


Capability Description

Rapidly prototypes technology from laboratory to acquisition programs of record/operations use

Operational Relevance

- Improve warfighter's ability to leverage the National Systems Data at the tactical level
- Quickly communicate vital intelligence data directly to and from the tactical edge



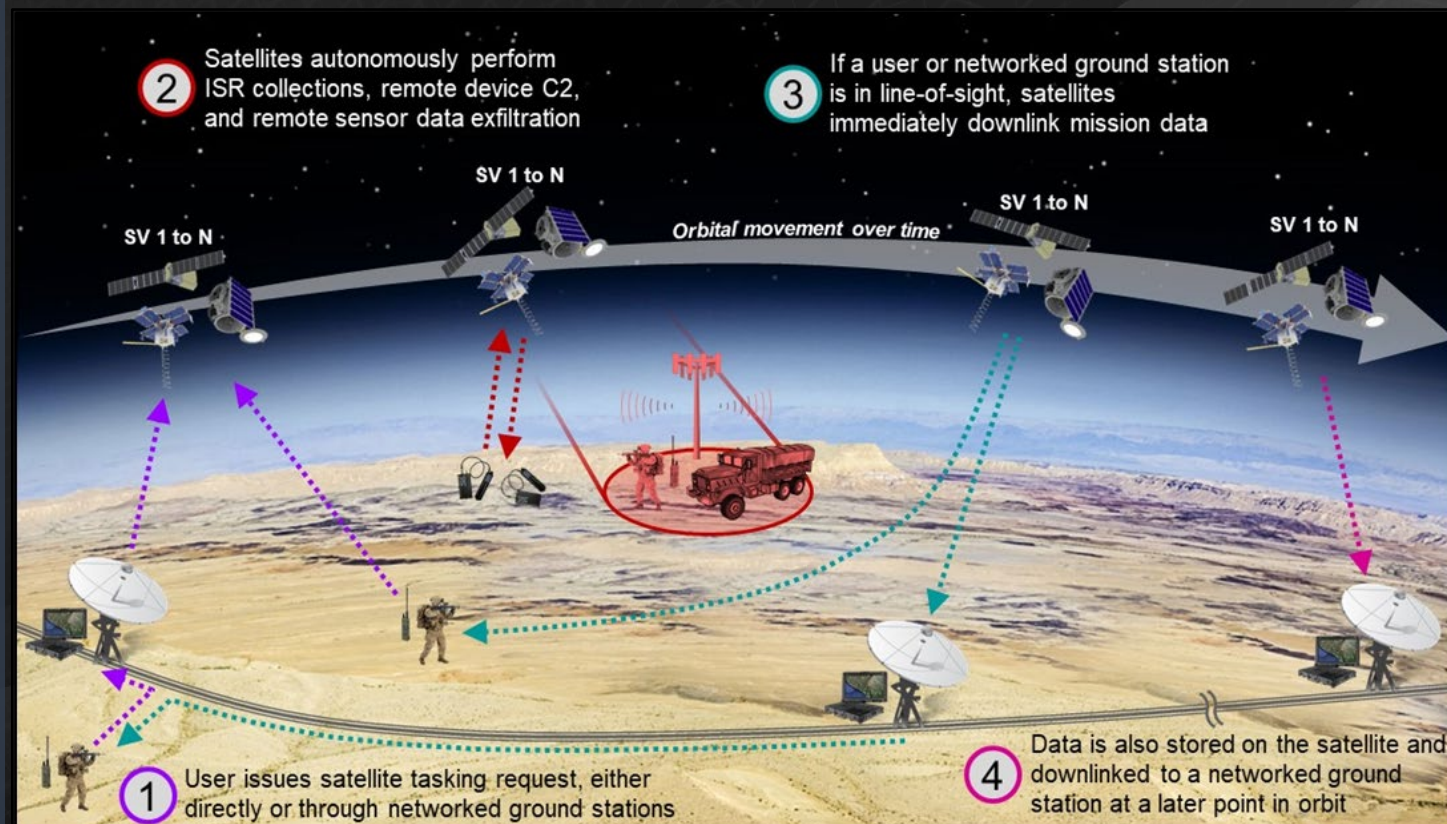
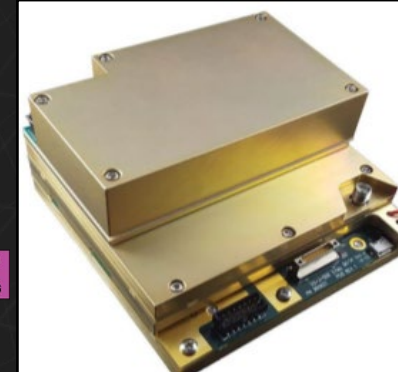
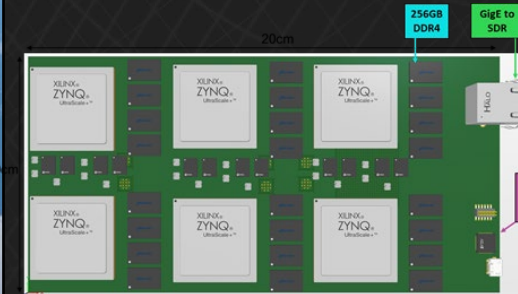
Capability Description

Space-based ISR technologies supporting acquisition Program of Record requirements

- Rapidly prototype and demonstrate SOF relevant capabilities
- Develop and integrate ISR and enabling technology payloads onto commercial and USG satellites

Operational Relevance

- Provide SOF operators direct tasking authority
- Operational data on tactically relevant timelines



MEUAS

Capability Description

- Contractor-owned, contractor operated ISR services capability
- Signal Intelligence & Full Motion Video from a Tactical Unmanned Aerial System (TUAS)
- Small/Medium payload
- On-demand, vertical take-off & landing provided with runway independence
- Long loiter/on-target time
- Easily transportable

Operational Relevance

- Supports the Find, Fix, and Finish mission
- Deployable to remote operations for locally supported ISR with runway independence
- Provide real-time situational awareness

Arcturus T-20 Jump



L3 Harris FVR-90



Insitu ScanEagle Block E



Aerovel Flexrotor



Textron Aerosonde Mk 4.7G



Wildflower SpektreWorks Cobalt 110



Mid-Endurance
UAS (MEUAS)

G3UAS

Group 3 Unmanned Aircraft System (G3UAS)

Capability Description

Full motion video, signal intelligence (SIGINT), special payloads, and mission kits for use on the Service provided RQ-21A Blackjack UAS to meet Naval Special Warfare (NSW) mission requirements

Operational Relevance

NSW utilizes the RQ-21A with SOF-p payloads and mission kits for organic, tactical, long-range, expeditionary, Intelligence, Surveillance and Reconnaissance (ISR) in support of Multi-Intelligence (INT) collection in austere locations



Multi-mission Tactical Unmanned Aerial System Program (MTUAS)

MTUAS

Capability Description

Modular, mission configurable, unmanned aircraft system (UAS)

- Near real-time, high resolution full motion day and low-light full motion video
- Small Unmanned Radio Frequency Receiver (SURFR) for Multi-Intelligence (INT) collection and electronic warfare in austere environments
- Emerging launch and recovery equipment independence and modular payload compliance
- Scalable maritime and mobile employment

Operational Relevance

NSW utilizes the MQ-27B ScanEagle-based UAS and the V-BAT 128 with various modular payloads and mission kits to find, fix, and finish enemy combatants



Expeditionary Organic Tactical AISR Capability Sets (EOTACS)



EOTACS

Capability Description

EOTACS provides the SOF warfighter with day and night full motion video (FMV) capability and/or specialized payload operations in an expeditionary environment

Operational Relevance

EOTACS provides airborne ISR and sensor emplacement capabilities integrated into small unit/team maneuvers for timely support of Special Recon, Direct Action, Unconventional Warfare, and other core SOF activities





Operations in a Near-Peer and Non-Permissive Environment

- Low signature
- Remote/unmanned/unattended sensors
- Integrated & cooperative SR
- Alternative Position, Navigation, and Timing (A-PNT)



More Efficient CT/CVEO

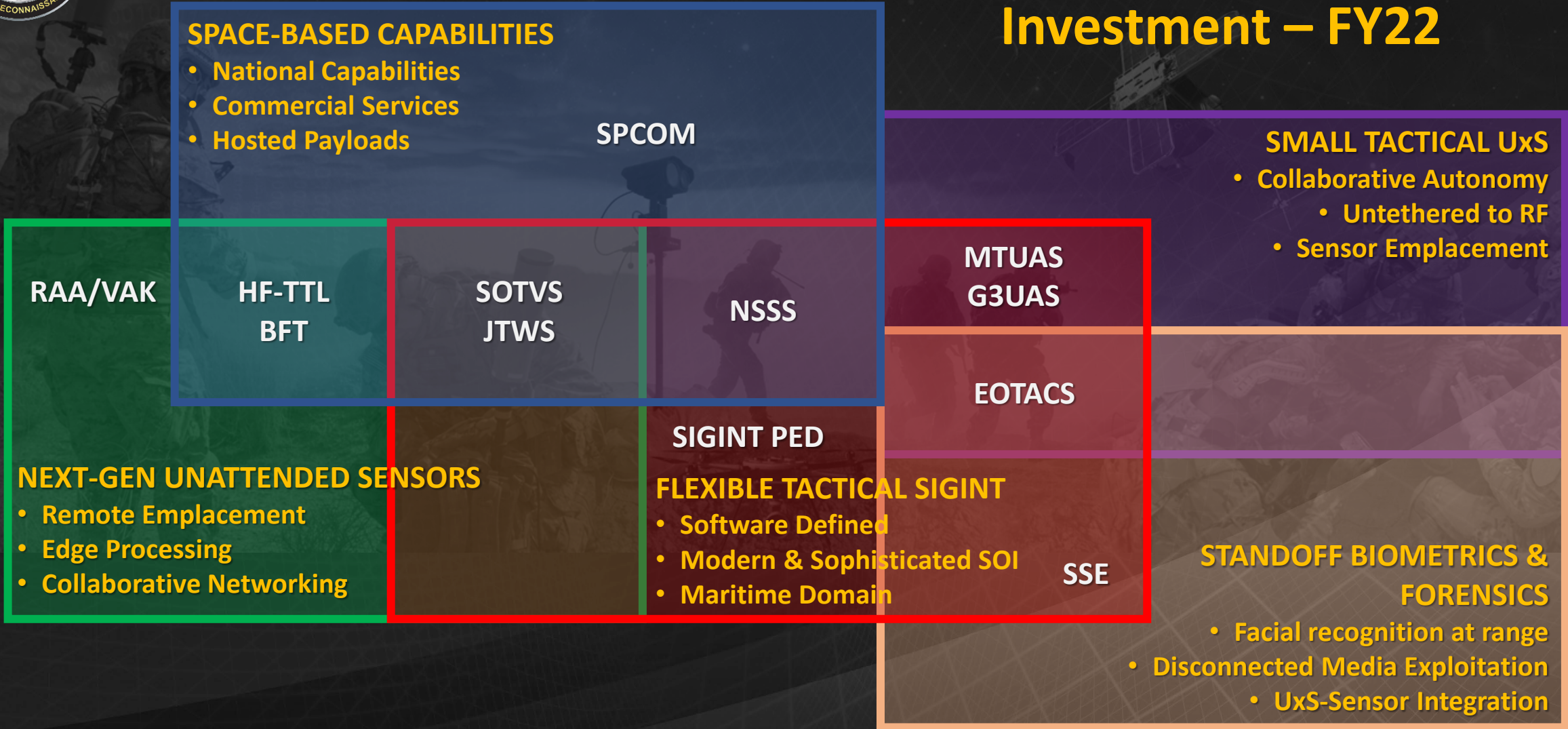
- Cross-Program Solutions
- Partner Force Advise and Assist
- Releasable technologies
- Shareable and accessible intelligence

Next Generation of Special Reconnaissance



Capability development addresses requirements across multiple programs

PEO-SR Technology Investment – FY22

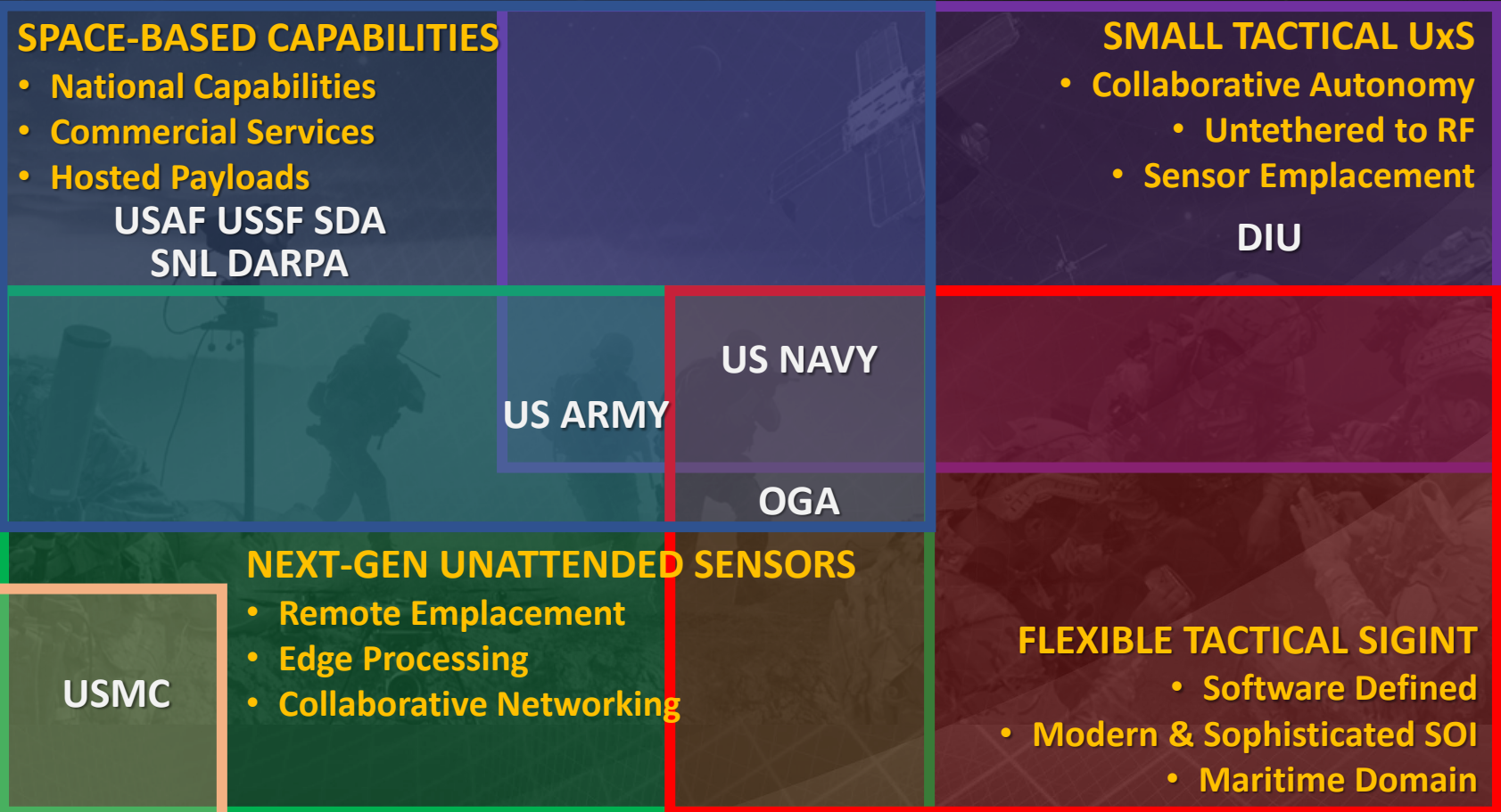




PEO-SR Technology Partnerships

- Collaborative development projects
- Technology transition pathway
- User evaluations
- Design/requirements review

Leveraging subject matter expertise where it already exists



STANDOFF BIOMETRICS & FORENSICS

- Facial recognition at range
- Disconnected Media Exploitation
- UxS-Sensor Integration

DIA
FBI
RRTO

Increasing the return on others' investments



Industry Support to the SOF Mission

- Partnering – Collaboration
- Modular Solutions
- Multiple Points of Entry
- Don't be Afraid of Small Projects
- Warfighter Focus
- Big Leaps as well as Iterations
- Yes, if...



