



EUROPE

1 - 3 OCTOBER 2024

Bratislava, Slovak Republic

GSOF Symposium Europe 2024

Prioritized Capabilities Catalog for Slovak SOF



2024 - 2025

This catalog provides a mechanism for Special Operations Forces (SOF) organizations to prioritize their capability requirements and interests.

The Global SOF Foundation (GSOF) markets the needs of SOF with leading industry organizations dedicated to providing unique, innovative and tailored solutions to SOF leaders.

In preparation for the 2024 GSOF Symposium Europe, which will be held in Bratislava, Slovak Republic, members of Slovak Republic's SOF (SVK SOF) have prioritized their capability needs on the following scale:

- 0. No Mission Requirement [These capabilities not included]**
- 1. Mission Requirement Currently Filled by Similar Capability**
- 2. Mission Requirement Currently Filled by Aging Capability**
- 3. May Meet an Emerging Mission Requirement**
- 4. May Fill an Existing Gap in Capabilities**

Their prioritized needs are documented in this catalog, which is intended to support industry decisions to attend and exhibit at the 2024 GSOF Symposium Europe from 1-3 OCT 2024.

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A) MAY FILL AN EXISTING GAP IN CAPABILITIES FOR SVK SOF

VISUAL AUGMENTATION SYSTEMS:

- **Weapon-Mounted Devices** - Size, weight, and power-enhancing weaponmounted VAS commodities.
- **Integrated Multi-Spectral Night Vision Optics** - Integrated with small arms and major weapons systems; ability to sense environments in zero light and degraded visibility.

WEAPONS SYSTEMS:

- **SURG** - Next-generation, modular upper receiver group that is interoperable with current lower receivers, is optimized for full time suppressed operation, and has advanced heat mitigation technology to counter mirage effect.
- **Signature Reduction for Small Arms** - Sound/Flash mitigation technologies that are light-weight and effective.

AMMUNITION / DEMOLITION:

- **Lightweight Ammunition** - Ammunition that can reduce weight by at least 30% of the current inventory of common ammunition from 5.56 up to 12.7x99.
- **Polymer Short Range Training Ammo** - Blank fire ammunition, man-marking rounds, and short range training ammunition.
- **Novel Breaching Explosives** - For increased effectiveness and decrease in collateral damage (follow through).
- **Barrier Breaching** - Technologies related to effectively and efficiently destroying high compressive strength concrete.
- **SOF-Specific Improvised Demolitions Course** - Improvised demolition procedures for situations when conventional demolitions systems are unavailable or their use is undesirable. Fully customizable course to include instruction in planning, design, construction and placement of improvised charges and firing systems.



SOLDIER SURVIVAL & SOLDIER EQUIPMENT SYSTEMS:

- **Armor** - Novel technologies and designs that decrease weight while increasing level of protection.
- **Helmets** - Novel technologies and designs that decrease weight while increasing level of protection.
- **Special Operations Eye Protection** - Laser protection, visible and IR; ability for a single lens to adapt to various lighting conditions near instantaneously.
- **Uniforms** - Novel technologies and designs for heated clothing and gloves and uniforms that lower heat signature and detection from night vision optics.

ISTAR (INTELLIGENCE, SURVEILLANCE, TARGET ACQUISITION, RECONNAISSANCE):

- **MESH Radios for Data and/or Digital Voice** - Scalable low and high power / low and high bandwidth solutions to empower the warfighter at the edge. To include increased sensor nodes, processing, "chat" communications, Blue Force Tracking messaging, voice, data, and video; mitigate the effects of terrain, noise and distance.
- **Field Voice and Document Translation Tools** – Rugged deployable tools that can be used on existing handheld devices that offer near real time interpretation of voice communications as well as visual capture and translation of hand written documents.
- **Human Geography** – Foundational, geospatially-referenced intelligence on a city, country or regional level.
- **Imagery and Geospatial Analysis** – Extracting actionable information from commercial imagery via imagery analysis, predictive analysis and modeling, crowd sourcing, automated big data processing and social media analysis.
- **Technical Forensic Training** - For computer, mobile, and wireless platforms.
- **Intelligence Analysis Products and Training** - For HUMINT, SIGINT, OSINT, IMINT, GEOINT and FMV.
- **Basic and Advanced Military Intelligence Officers Courses** - Provide the tools necessary for military to function as intelligence officers at the junior to senior levels of responsibility. Subjects include map reading, use of automated tools, Joint Intelligence Preparation of the Operations Environment, ISR synchronization matrices, advanced analytical writing, all source analysis and targeting.
- **All-Source Intelligence Analysis** - Provide advanced collection, exploitation, analysis, targeting, and cleared language services to U.S. SOF.
- **Threat Network Analysis** - Provide the analytical tools and methodologies to construct and analyze threat network structures, threat organization, identify critical nodes, types of associations, geodesic analysis, conventional and asymmetric threat group structures, interoperability of threat network cells, threat network use of social media, threat network strengths and threat network vulnerabilities.

- **Targeting of High Value Individuals** - Provide targeting fundamentals, lethal and non-lethal methods of targeting, target nomination, target prioritization, risk management, the Find, Fix, Finish, Exploit, Analyze, Disseminate process, the Decide, Detect, Deliver, Assess process, and the production of target support packages in support of targeting operations.
- **Intelligence Support to Asymmetric Warfare Threats** - Provide discussions on various asymmetric threats, the analytical concepts and methodologies that can be applied to counter asymmetric threats, and how threat group adapt asymmetric warfare to exploit conventional force threats and weaknesses.
- **Analyst's Notebook Premium (ANB)** - Training curriculum designed to focus on the ANB program functionality regardless of data type analyzed. The course teaches students to master the program's analytical capabilities to include geospatial, social network, and statistical analysis.

C5 (COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, CYBER):

- **Integration of Cloud Computing/AI/ML** – Ability to receive, store and process increasing amounts of data in the multi-domain operational environment to improve operational units lethality and pace of battle.
- **Blue/Friendly Force Tracking** – Soldier/Vehicle level tracking devices and/or devices to enable track sharing among partners.
- **Mobile Phone Security** - Lightweight, counter-surveillance device and security platform for mobile phones. Prevents even a hacked phone from being able to be used to monitor conversations or take video without permission. High-performance, removable faraday cage to go “off-grid” on demand. Ability to extend COTS smartphone functionality via addition of functional modules (e.g. sensors, comms, etc.).
- **Modular rugged deployable networking, processing and storage devices** – Equipment that significantly increases field processing of data while reducing complication, size, weight, and power.
- **Cyber Defense** - Software that helps protect communications networks from compromise.
- **NATO/USSOCOM Interoperable SATCOM with TRANSEC** – Universal SATCOM modems that offer STANAG compliant waveforms that allow for partner bandwidth sharing and direct termination on partner networks.
- **Commercial Satellite Bandwidth** – Commercial alternatives to military bandwidth that enhance mobility, coverage, and throughput while militating against the effects of EW and detection.
- **Virtual Mobile Infrastructure (VMI)** – Secure, user-centric technology providing access to sensitive mobile apps and data from any device without compromising enterprise security. A mobile thin client provides access to the virtual mobile environment running in the data center, leaving no data or apps at rest on physical mobile endpoints.



- **Software Defined Network (SDN)** – Virtualized network architecture that provides increased security, performance, and reliability. Provides controlled flow of traffic, creates secure logical network connections, improves throughput, and reduces the effects of latency and jitter. Supports aggregate multiple WAN connections over multiple mediums, provides managed attribution, and integrates complimentary technologies to assure secure communication.
- **Recall, Alert & Messaging and secure encrypted voice/video** - Automated messaging for recall, alert & messages. Secure encrypted voice and video
- **Virtual Mobility Solution (VMS)** - A highly secure virtual smartphone solution that lets users perform business tasks on their mobile devices while leaving zero footprint and guaranteeing 100% separation of personal and corporate data. A military-grade secure, regulatory compliant, centrally-managed virtual smartphone solution that lets users perform business tasks on their mobile devices while leaving zero footprint and guaranteeing 100% separation of personal and agency data.
- **Government Grade Security/Functionality for Commercial Mobility** – High-security ExoComputer that prevents compromised devices or over-reaching apps from using microphones and cameras for surveillance. Meets mobile device usage in Secure Spaces/SCIF's.

SENSORS:

- **Processing, Exploitation & Dissemination Capabilities** – Tools that help manage and generate actionable intelligence from the complex, high-volume data produced by sensors.
- **Sensors and Real-Time Tagging/Tracking Devices** – Wireless devices and services that provide real time indication of movement, events (Shots fired, Chemical/Bio/Nuclear release) over LOS/BLOS and Satellite links, specifically with reactive response capabilities.
 - **CWMD Sensors** - Platform for providing data convergence and sensor integration that delivers real-time situational understanding and enhanced mission-centric collaboration. Instant access to information is changing the way warfighters and leaders perform their missions. Specialized platform that provides exceptional mission value and is a key enabler to the vision of DoD and NATO CWMD missions, as well as a force multiplier in years to come.

CANINES:

- **Canine Requirements, Doctrine and Program Development** - Provide Canine (K9) SMEs on Doctrine, Organization, and Training Development at the Unit level. Provide assistance in Canine Selection, Early Infant Drive Analysis, Adolescent Canine Detection Enhancement, and Tactical K9 Team Development. Program may include basic recommendations on veterinary care, feeding, boarding, and exercise, as well as advanced recommendations on airborne training, and environmental and threat mitigation measures like ballistic vests, sensor goggles, cameras, and re-breather K9 masks for select mission sets. Each program can be tailored to the needs of the unit and the maturity of the existing Canine capability.



- **Canine Capabilities Training** – Training canines and their handlers for core capabilities include explosives detection, tracking, and protection work.

EOD / C-IED SYSTEMS:

- **EOD and C-IED Training Course Curriculum Development, Delivery and Analysis** - SMEs and curriculum development specialists create or improve existing client learning content, instructor lesson guides, training aids, and provide customized instructional media to meet learning objectives.
- **Home Station Training Complex** - Provide SMEs experienced in EOD operations, C-IED, combat shooting techniques, Navy expeditionary training evolutions, tactical vehicle operations and logistical support roles.

READINESS:

- **CRM System** - To help streamline information, increase collaboration, and facilitate the ability of personnel at all levels to remain focused on their mission: Duty Status, Personnel Tempo, Task Management, Strength Management and Planning, In/Out-Processing Queues, Awards & Evaluations, Recruiting Management, Legal & Passports, Mission, Travel Management, Deployed Forces Tracking, Courses and Evaluations, Physical Fitness, Vehicle/ Aircraft Qualifications, Weapons Qualifications, Medical Readiness, Budgeting, Security Clearance & Investigations.
- **Integrated Asset Management** – Simple and scalable software tools that provide visibility and status of assets, ease configuration and lifecycle management, while linking training materials and doctrine.
- **Language / Linguist Services** - First-tier translators, interpreters, cultural advisors, and other foreign language-enabled professionals.
- **Reality-based Simulation** - Includes training, exercises, environments, and props

AUTONOMOUS SYSTEMS (UAVs / USVs / UGRs):

- **Group 1 UASs** - Typically hand-launched, portable systems employed at the small unit level or for base security. They can provide “over the hill” or “around the corner” type of reconnaissance, surveillance and target acquisition. Payloads are modular such as fixed EOIR systems. Data from these systems is limited to the user / operator, usually within close-proximity to the UAS. These systems operate at altitudes less than 1,200 feet above ground level.



INFORMATION TECHNOLOGIES:

- **Business and Information Technology Accelerator / Incubator** - Physical or virtual space to Identify, launch and accelerate innovative companies postured to provide service based or materiel solutions to US and Allied military organizations. Provide robust business and IT systems, infrastructure for collaboration, data analysis, modeling and simulation as well as laboratory services to test, train and produce proofs of concept.
- **Data Innovation** - Software defined storage, object based & secondary storage, data protection, as well as required information security and governance compliance.
- **Data Analysis** - Cloud, Big Data, and associated analytics.
- **Deployable IT solutions** - systems that store, assess, and share information in situations such as physical security mobilizing events or Humanitarian Assistance / Disaster Relief (HADR) efforts.
- **Information Technology Solutions** - Managing IT systems, enterprise-wide infrastructure and software management, IT strategy development, current system assessment, requirements determination, solution design, employment and appropriate life cycle upgrades, maintenance and support as well as consulting services.
- **Integration Technology Center** - Climate-controlled production environments with advanced networking, secure remote access, and certified procedures specifically designed for staging, kitting and configuring the latest advanced technology solutions.
- **Tactical Mobile Networking Solutions** - Modular and scalable networking system of systems designed to meet the requirements of military and government communications in any operational environment.
- **Agile and Responsive Software Development** – Agile software development methodology that allows responsiveness to the evolving needs of DoD customers. High-impact solutions through ongoing client collaboration, iterative development, and continuous testing. World class solutions with a range of technologies to a variety of organizations and stakeholders.
- **Secure Chat** – A secure tactical chat tool that can run on secure networks. Supports requirements for low-bandwidth operations, making it ideal for in-theater submarines, airplanes, and moving vehicles. The servers are connected in a global federation, enabling server and clients to automatically reconnect with full chat history availability. Engineered to operate in network disadvantaged environments with high latency, low bandwidth and jitter.
- **Exploitation of Publicly Available Information (PAI)** - Improve awareness of Persons of Interest (POI) and Human Networks (HNW). Sources include Mobile Marketing Data (MMD), relevant commercially procurable datasets, industry datasets that enrich Real Time Bidding (RTB) data, and commercially procurable Internet of Things (IOT) data.
- **Counter Autonomous Systems** – Electronic Warfare (EW) technology designed to anticipate how adversaries will employ autonomous systems, identify the associated technology, and develop Tactics, Techniques and Procedures (TTP) to defeat and exploit these systems, or mitigate their tactical advantage.
- **Counter GPS Jamming** – Electronic Warfare (EW) designed to counter the proliferation of advanced adversary Global Positioning System (GPS) jamming and spoofing capabilities. Desired end state is to disrupt adversary Electronic Warfare (EW) jamming while remaining undetected.



MISCELLANEOUS REQUIREMENT:

- **Large-format printers**
- **Tools for PsyOps products dissemination**

B) MAY FILL AN EMERGING MISSION REQUIREMENT FOR SVK SOF

VISUAL AUGMENTATION SYSTEMS:

- **Head-Mounted Devices** - Weight-saving technologies or novel methods to move weight off of the head while increasing target identification capability.
- **Handheld Devices** - Size, weight, and power-enhancing handheld VAS commodities, as well as novel multi-spectral capability, increasing target identification in all environments.
- **Target-Acquisition Accessories** - Reflex sites, red-dots, etc. that enhance the use of standard scopes and allow for faster target acquisition on both pistols and rifles.

WEAPONS SYSTEMS:

- **Advanced/Precision Sniper Rifle** - A multi-caliber platform that can shoot 7.62x51mm, .300NM, and .338NM. to sub minute of angle out to 1500m.
- **Scalable Weapons Effects** - Ability to scale effects of weapons against surface and sub-surface targets

AMMUNITION AND DEMOLITION:

- **Toxin Free Ammo** - Lead-free and reduced toxin alternative to current training munitions.
- **Multi-Environment Ammunition** - Supercavitating ammunition that can be shot in air, into water and from a submerged position.

SOLDIER SURVIVAL & SOLDIER EQUIPMENT SYSTEMS

- **Cold Weather Clothing Systems** - Capable of sustaining operations down to -40 degrees F (-40 degrees C), optimized for warmth while wet to allow for operations in and around freezing where heat retention is the most difficult.

- **Extreme Cold Weather Clothing Systems** - Additional clothing that can allow sustained operations down to -70 degrees F (-56.6 degrees C) for movement and -50 degrees F (45.5 degrees C) for static mission profiles.
- **Life Support** - Technology advancement in bare base equipment, tents, generators, solar technology, shop-in-a-box, portable chow facilities, Ops Room-in-a-box, GYM-in-a-box, head/shower facilities, expeditionary construction machinery, etc.
- **Liquid Logistics** - Advances in methods of fluid management to include water makers and purifiers, advanced portable/airborne capable liquid delivery (to include petroleum products), petroleum storage, etc.
- **Military Batteries for the Warfighter** - Light-weight, man-packable, and compact power source

TACTICAL COMBAT CASUALTY CARE MEDICAL SYSTEMS

- **Point of Injury Care Capabilities** – Products that align with tactical combat casualty care guidelines, including tourniquets, Individual First Aid Kits, Junctional Tourniquets, etc.
- **Medical Intervention Devices** – These devices streamline, improve or reduce difficulty for medical and non-medical personnel to provide appropriate medical interventions that include, but are not limited to Interosseous devices, cricothyroidotomy kits, etc.
- **Medical Monitoring Systems and Devices** – These devices support monitoring and care of casualties for prolonged periods of time in austere or resource limited environments, to include the ability to remote patient monitoring.
- **Enroute Care Systems** – Systems that support prolonged monitoring, treatment, management, and evacuation in nonstandard platforms.
- **Advanced Diagnostics Devices** - Lightweight, easy use, highly portable, limited power consumption advanced diagnostic devices, including blood typing, ultrasound, malaria diagnosis, etc.
- **Medical Simulation Training** - Capabilities to support live training with realistic surrogate casualties that provide individual and collective performance metrics
- **Medical Interventions Training** - Devices and simulation capabilities for rare, but life-saving interventions, that include far forward walking blood bank transfusions, medication administration, and limited surgical interventions.
- **Casualty Management Training** - Distributed virtual medical simulation capabilities to support cognitive individual and collective casualty management skills. Constructive simulation

ISTAR (INTELLIGENCE, SURVEILLANCE, TARGET ACQUISITION, RECONNAISSANCE)

- **Computer Forensics** – Rugged field deployable tools that allow for data extraction from computers and hard drives.
- **Intelligence Support to the MDMP** - Provide the fundamentals to produce intelligence products to support each of the seven steps of MDMP to include mission analysis, IPB, requirements development, decision support matrices, war gaming, and identifying threat courses of action, risk assessments and recommending Priority Intelligence Requirements.

- **Intelligence Support to IO** - Provide discussions on each function of IO and their roles in shaping the operations environment throughout all phases of the military operations from preconflict to post-conflict stabilization force operations.
- **Transnational Threat Analysis** - Provides the tools and methodologies to analyze transnational threats to include organized crime organizations, terrorist groups, weapons and narcotics trafficking, and insurgent organizations. Participants will discuss how various transnational groups are organized, relationships, similarities, differences and their strengths and vulnerabilities.
- **Intelligence Analysis Products and Training** - Enterprise Insight Analysis (EIA) with Enhanced Technological Capabilities (unstructured text analytics, facial recognition, exploitation databases, federated searching).

C5 (COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, CYBER):

- **Unprecedented, High-Performance Removable Faraday Cage** - 110 dB minimum RF attenuation. Allows users to go "off grid" at will, preventing location tracking, RF detection/ emissions or RF hacking when enabled, even if near a cell tower, cell detector or cell interceptor (rogue base station). Hardened, air-gapped platform, companion two-factor authentication app, extensible platform enables addition of other features/capabilities (e.g., off-board encryption, tactical radio, voice morphing, RF awareness, traffic monitoring, multi-factor authentication and biometrics etc.)
- **Radio Interoperability and Multimedia Resource Sharing** – Devices that allow audio resources like radios and VoIP to be cross banded to disparate platforms as well as share video, files, chat and other data in an ad-hoc manner.
- **WAN Optimization and Error Correction Software** – Software that provides for assured packet delivery (i.e., cleaning up FMV so there is no distortion) and making the most of available bandwidth through spoofing, compression and packet shaping.
- **COP** – Simple, scalable platforms that enable information sharing from brigade level to the operator.
- **Conventional and Alternative Field Power Systems** – Flex Fuel/Universal Fuel generators, solar, wind, and fuel cell technologies that extend the operating range and deployment time when disconnected from conventional logistical lines of support.
- **Alternatives to RF Communications** – Copper wire, fiber optic and free-space optical communications for LPD/LPI communications and to mitigate against hostile RF environments.
- **Lithium-Ion batteries** - For radios, robots, sensors, etc.
- **Non-Standard Application/ Installation Antennas** – Antenna technologies and research that enable multi-band, omnidirectional and directional antennas for use with handheld or manpack radios, stay behind devices, or wideband Satellite Communications (SATCOM) terminals on aircraft, maritime, or vehicle platforms.



- **Protected Advanced Extremely High Frequency (AEHF) Satellite Communications (SATCOM)** – Innovative technologies to enable AEHF SATCOM for expeditionary operations in a Declared Theater of Active Armed Conflict (DTAAC) or an Outside Declared Theater of Active Armed Conflict (ODTAAC).

EOD & C-IED SYSTEMS:

- **Explosive Ordnance Disposal (EOD) and Tactical Remote Structure Reconnaissance** - Capability to remotely survey structures to identify potential hazards to personnel including Improvised Explosive Devices (IEDs), toxic materials, and enemy combatants within denied structures of interest. A range of sensor modalities from visual to advanced diagnostics would allow personnel to quickly map the internal layout of structures, indicating areas of interest and potential hazards for follow-on exploitation without putting the operator into a hazardous environment.
- **Passive Infrared (PIR) Sensor Defeat technologies** - To identify, disrupt and defeat PIR devices often used as motion detectors on home security systems, detect unique human motion and thermal signatures and can be used for nefarious activity.
- **Training Analytics** - Provide EOD, C-IED, C-WMD, and MCM training SMEs to determine an organization's Return on Investment using objective and subjective analysis. Deliver technology and subject matter experts to capture data, and provide meaningful and insightful reports on training effectiveness, curriculum adequacy, testing adequacy and ultimately, the retained knowledge of students. Develop curriculum/instructional standards offices of military and civilian organizations to assist them and their leadership in understanding curriculum efficacy.
- **C-WMD and C-IED Exercise Design SME** - Provide support for C-WMD and C-IED exercise design, planning, execution, data collection and analysis, and after action reporting.
- **UMCM** - Facilitate the delivery of operations and maintenance classroom training for emerging mine warfare technologies (unmanned underwater systems); support the development of unmanned underwater vehicles, which includes maturation of areas such as manpower, personnel, training, training logistics, facilities, and training courseware.
- **UWPB and IED Exploitation** - Provide SMEs on UWPB and IED exploitation to include development of TTPs, curriculum development, tactical development & evaluation, and system integration.

READINESS:

- **Inflatable Wall System** – Rapidly Deployable and fully scalable, walls can be used to create an immersive and realistic CQB/Active Shooter training environment anywhere. The Walls are resistant to all types of training ammunition and are customizable with a selection of shapes to replicate several different structure or operating scenarios.

AVIATION (FIXED WING / ROTARY WING):

- **Advanced Special Operations Aviation Training** - Comprehensive training program for existing pilots to conduct special operations aviation, to include SOPs and TTPs.

AUTONOMOUS SYSTEMS (UAVs / USVs / UGRs):

- **C-UAS (Drone Detection and Interdiction Systems)** - Designed to detect, track, identify, and defeat UAS engaged in hostile airborne surveillance and potentially malicious activity. A complete system will provide command and control across the detect, track, identify, and defeat cycle, ensure digital interoperability with joint integrated air and missile defense, and field non-kinetic/ kinetic capabilities versus UAS in defense of a maneuver force.

AIRBORNE INFILTRATION:

- **Airborne Infiltration Equipment** - Includes, but is not limited to the latest technology in Static Line Systems, Reserve Parachutes, High Altitude Low Opening Systems (HALO), High Altitude High Opening Systems (HAHO), Helmets, Oxygen Masks, Night Vision Technologies, Communications Equipment, Altimeters, Automatic Opening Devices, Navigation, and Precision Guided Cargo Delivery Systems.

C) MISSION REQUIREMENT CURRENTLY FILLED BY AN AGING CAPABILITY FOR SVK SOF

GROUND MOBILITY:

- **Modular Purpose Built Chassis for NSCV SUVs and Trucks** - Cost effective solutions to allow vehicles that are commercial in appearance to be reset at the end of a lifecycle, instead of disposed of and re-procured, allowing different bodies to be interchanged on a common chassis.
- **Low Profile Antennas for LOS, SATCOM, and ECMS for NSCV** - Antennas that can be hidden on/in/around the vehicle to appear almost non-existent while still effectively transmitting desired frequencies at specific power levels.
- **Light Vehicle Safety Improvements and Accessories for LTATV** - Improvements to general safety items to include (but not limited to): seating, roll cages, stability control, driver assist functions, etc.
- **Low Visibility Transferable Armor for NSCV** - Armor materials that can be transferred and integrated from one NSCV to another with minimal manpower and in a minimal timeframe.
- **Lightweight Transparent Armor for NSCV and GMV 1.1** - Novel lightweight and cost effective technologies that can replace current heavy transparent armor solutions on vehicle platforms.
- **Lightweight Electric Motorcycle** - Capable of operating in all types of terrain and extreme climates and has increased range, reduced maintenance, and lower audible signature than conventional gas operated motorcycles. Capable of carrying one SOF operator and his equipment (60 pounds) for up to 5 hours before recharge.

WEAPONS SYSTEMS:

- **Concealable/Low Visibility Firearms** - Ability to provide personal defense in environments where visible firearms are undesirable. Technological and ergonomic advances in holstering and concealment clothing.

- **Next Generation Squad Weapon (NGSW)** - A carbine and automatic rifle utilizing a 6.8 mm Cased Telescoped Polymer Ammunition with a 35% weight savings in a “push-through” feed and eject system

AMMUNITION / DEMOLITION:

- **Medium Caliber Precision Guided Munitions** - Novel technologies and materials to increase combat effectiveness.
- **Supercavitating Ammunition** - Increased ability to for superior round stability and the ability to engage submerged targets and superior ballistic penetration.

TACTICAL COMBAT CASUALTY CARE MEDICAL SYSTEMS:

- **Medical Equipment Delivery in Austere Environments** - A system or capability that is able to deliver medical logistics in austere environments. The ideal capability would be an unmanned automated resupply system that will operate in hostile, RF cluttered, GPS Denied/Jammed environments, operate in day/night, with a load carrying capacity of 50lbs. and a range of at least 300 miles (150 miles out and 150 miles back), altitude of at least 18,000 feet and will take-off and land vertically without the need for a runway.
- **Commander’s Casualty Response Systems Training** – Systems, training devices and aides that enable the effective performance of the Commander’s Casualty Response System at the tactical, operational and strategic levels through the development of both individual and collective skills.
- **Traumatic Brain Injury (TBI) Mitigation** - Through development of a device, capability, or change to current equipment that prevents concussive events in the force.

MARITIME SYSTEMS:

- **RHIBs** – High quality vessels available in a range of sizes. The modular and rapidly configurable range includes 2-man back pack mounted boats with stealth whisper engine, foldable and air droppable 380m, 470m, 530m inflatables and a selection of RHIBs up to 9m designed for superior handling and maximum passenger or equipment payload.
- **Heliborne Insertion** - Including small firearms training onboard a vessel

ISTAR (INTELLIGENCE, SURVEILLANCE, TARGET ACQUISITION, RECONNAISSANCE):

- **Software Tools to Create a COP** - Provides greater situational awareness and drives improved decision making processes for operators, security forces and first responders maximizing the power of geospatial technology.
- **Cellular Geolocation and Exploitation** – Simple field deployable devices to help locate devices and extract data from them.
- **Biometrics Collection and Analysis Tools** – Rugged deployable devices that are interoperable with current USSOCOM biometrics data bases.

- **Geospatial Technology** - High fidelity, street level information from any place in the world, no matter how remote or inaccessible.
- **Handheld Geospatial Mapping, Tracking, Planning Communications and Survey Tool** – Software that operates on handheld devices to enhance soldier understanding of the battlefield while securely communicating critical information to peers, partners and leaders as required.

C5 (COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, CYBER):

- **LPI/LPD EW-tolerant LOS/BLOS Terrestrial Wireless and SATCOMs** – Devices that maintain communications in RF noisy environments, provide single hop links over 100km, fault tolerant MESH architecture, and Frequency Hopping and/or Spread Spectrum technology.
- **Alternatives to GPS for Position, Navigation & Timing** – Devices that continue providing PNT services in the absence of trusted GPS signaling.
- **Mortar Fire Detection and Tracking** - The capability to detect, track, and provide impact and location coordinates in milliseconds for mortar fire.
- **Cognitive Radios that employ Artificial Intelligence/Machine Learning/Deep Learning (AI/ML/DL)** – Intelligently sense spectrum, adjust transmit power, and “roam” when in an Electronic Warfare (EW) cluttered environment with very little user interaction. Radios need to integrate with military hardware owned and carried by SOF operators. Software should be available as a plugin or add on as required.
- **Next Generation High Frequency (HF) Radio** - For use as an alternatives to traditional voice Satellite Communications (SATCOM) or Mobile User Objective System (MUOS) capabilities in Electronic Warfare – expeditionary environments. These technologies would be integrated to support both Reconnaissance Surveillance Target Acquisition (RSTA), air assets (helicopter and fixed wing), and Army SOF mission sets.
- **Tactical Edge Sensor Processing** - Leverages Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL) sensor edge processing in the Battlefield of Things (BoT) that can be easily trained and implemented in SOF formations at all levels. The focus should include distribution of compute across all force assets.
- **Wireless Patient Monitoring System** - Designed to assist in performing damage control surgery (DCS) and damage control resuscitation (DCR) in remote, austere, and confined spaces. A wireless patient monitoring and electronic medical record system which is able to monitor and record vital signs as well as document medications, treatments, and interventions for multiple patients.

SENSORS:

- **Biosensors** - Sensors and tools that allow leaders to receive real time feedback on the health and status of service members in combat.



EOD & C-IED SYSTEMS:

- **Portable X-ray Systems for Security Applications** - Innovative and cost-effective portable X-ray systems. Multi-platform software and hardware interface allows seamless integration of a wide variety of portable X-ray imaging devices on a single PC
- **EXMCM** - Develop and deliver EXMCM tactics, techniques, and procedures doctrine, which integrates the systems and capabilities across the find, fix, finish, exploit, and analyze spectrum; develop the EXMCM CONOPS.
- **EOD, C-IED, and C-WMD Requirements and Doctrine Development** - Provide SOF/JCIDS subject matter expertise for Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy analysis, CBA, and requirements development (ICD, CDD, CPD) in support of EOD, C-IED, and C-WMD forces and operations.
- **MCM Emerging Technology and Tactics Integration** - Provide SME in EOD, Naval MCM, EXMCM and C-IED missions that provides great insight into the effects of emerging systems and capabilities across the entire Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy spectrum. Conduct analysis and develop foundational documentation and programs required to transition concepts into fully supported programs of record.
- **C-IED and C-WMD Program Assessment** - Provide SMEs for joint, Service, and NATO EOD, C-IED, UMCM, and irregular warfare doctrine and TTP development. Support the development EOD and C-IED strategic efforts to synchronize lines of operations across the operating forces, training, and technology.
- **SME Support for C-IED Training and System Integration** - On functional areas that include NATO C-IED policy, concept, doctrine development, experimentation, training plans, and future year program support. Includes augmented reality, miles interface, curriculum development, and instruction to support C-IED training initiatives.

READINESS:

- **Human Performance Programs** - Designed to meet the unique physical needs of the SOF operator and accomplished through holistic physical training programs developed and led by certified professionals that involve focused strength and conditioning, performance nutrition, and physical therapy.

AVIATION (FIXED WING / ROTARY WING):

- **Night Navigation Enabling Avionics** - Technology that allows SOF aviation assets to navigate at night, at low levels over water and dense foliage, and in denied space minimizing detection.
- **Enhanced Night Vision Imaging Systems** - EOS/FLIR, with types of thermal imaging equipment for aerial surveillance to allow SOF aviation assets to operate at night and in all weather conditions. Capabilities including, but not limited to, encrypted communication.
- **Joint Terminal Attack Controller Training** - Training qualified service members in directing the action of combat aircraft.

- **Flight Simulation Systems** - Reduce training costs but maintain pilot quality with realistic flight simulators.

AUTONOMOUS SYSTEMS (UAVs / USVs / UGRs):

- **UAS Classifications and Capabilities** – Below are commonly accepted and understood UAS categories. These categories establish the foundation for joint/combined UAS capabilities and terminology.
- **Group 2 UAS** - Typically medium-size, catapult-launched, mobile systems that usually support brigade-level and lower ISR and RSTA requirements. These systems operate at altitudes less than 3,500 feet above ground level with a local to medium range. They usually operate from unimproved areas and do not usually require an improved runway. Payloads may include a sensor ball with EOIR and a LRF/D capability.
- **Loitering Munitions** - Unmanned platforms capable of conducting reconnaissance, target identification, and precision strike.

CHEMICAL BIOLOGICAL RADIOLOGICAL AND NUCLEAR DEFENSE (CBRNE):

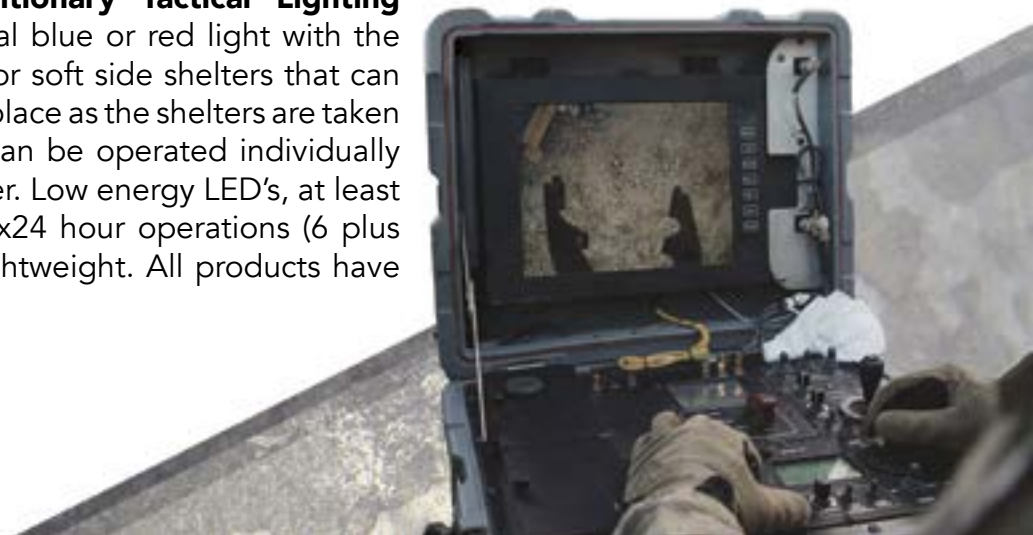
- **Emerging Technology, Training Development and Tactics Integration** - Access to Subject Matter Expertise to develop and cross-level training programs and shared lessons learned between Partner Units and across a broad Military and Civilian Community of Interest / Community of Action.

AIRBORNE INFILTRATION:

- **Emerging Technology, Training Development and Tactics Integration** - Access to Subject Matter Expertise to develop and cross-level training programs and shared lessons learned between Units and across a broad Military and Civilian Community of Interest / Community of Action.

LOGISTICS AND SUPPLY CHAIN MANAGEMENT:

- **Nearly indestructible Expeditionary Tactical Lighting**
 - Options should include tactical blue or red light with the white LED non-tactical mode, for soft side shelters that can be installed one time and left in place as the shelters are taken down and redeployed. Lights can be operated individually or from a single master controller. Low energy LED's, at least 50,000 hours of useful life in 7x24 hour operations (6 plus years!), no maintenance and lightweight. All products have an assigned NSN.



D) MISSION REQUIREMENT CURRENTLY FILLED BY A SIMILAR CAPABILITY FOR SVK SOF

GROUND MOBILITY:

- **Lightweight Off-Road Vehicle** – Capable of carrying up to four SOF operators and their equipment (100 pounds per person) with 1 – 2 light machine guns, operating in all types of terrain and extreme climates, and of being loaded into a helicopter or sling loaded and with a range of 400 miles before refueling.
- **Small Multipurpose Equipment Transport** - Unmanned/robotic transport for light infantry. Vehicle capable of carrying in excess of 500kgs, power generation, and maintain movement with a dismounted element over various terrain.
- **Training Simulator** - Ground vehicle training simulation system and tools.

SOLDIER SURVIVAL & SOLDIER EQUIPMENT SYSTEMS:

- **Hot Weather / Jungle Clothing** - Hot weather and jungle uniform optimized for heat and humidity. Insect repellency is built into the fabric for added protection against illness.

TACTICAL COMBAT CASUALTY CARE MEDICAL SYSTEMS:

- **Soldier Worn Health Status Sensors** - Provide health status situational awareness
- **Remote Surgical Suite** - Lightweight, highly portable, remote tele-surgery capability that allows a doctor to perform surgery on a patient near the battlefield even though they are not physically present at the same location.
- **Portable Medical Shelter** - That provides a lightweight, free standing popup shelter in which to treat and protect a traumatically injured casualty from harsh environmental conditions. A portable shelter must be opaque, allowing medical providers to use white light inside.

ISTAR (INTELLIGENCE, SURVEILLANCE, TARGET ACQUISITION, RECONNAISSANCE):

- **Prisoner Management** - Technological and logistical advances in expeditionary prisoner/detainee pods and supporting rooms as well as temporary prisoner billeting.
- **Rapid DNA Testing** - Capabilities to collect and analyze DNA from a single-source DNA (i.e., buccal swab) in an in situ ready instrument, resulting in a full DNA profile in less than 90 minutes.



- **3D GEOINT** - Faced with sophisticated adversaries, today's warfighter requires familiarity with an area before deployment. Training, planning, and rehearsal demand realistic 3D situational awareness—as well as the ability to georeference disparate information. Visualization is critical to success. 3D surface models and precise digital elevations enhance GEOINT data—covering the globe to support preparation, rehearsal, and execution.
- **Precision 3D Geo-Registration and Precision Geo-Location (PGL)** - Remote sensing — via satellites, manned aircraft, unmanned aerial vehicles, or drones — has provided a wealth of new geospatial data to interpret and analyze. Analysts and operators know, however, that this data often is distorted, inaccurate, or misaligned. Sensor data needs to be georegistered, so it aligns with the actual places it is describing, is useful, and provides meaning. Current methods of precision mensuration rely on stereo pairs of photographs, are labor intensive, and can't always measure the z-factor where you need it, e.g., on the sides of buildings. This paradigm, however, just changed. Precision 3D Registration (P3DR) synthesizes the globe in 3D — a worldwide 3D foundation — with sophisticated algorithms to deliver fast, accurate, and reliable georegistration of your sensor data, anywhere.

C5 (COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, CYBER):

- **T2SDT Baseband Kits** - High-data rate, ruggedized FMV terminals that support the backhaul, storage, reception, transrating/transcoding and overall management of real-time FMV.
- **Extreme Weather Detection and Tracking** - The capability to detect, track, and provide impact and launch coordinates in milliseconds for tornadoes, hurricanes, earthquakes, etc.

AVIATION (FIXED WING / ROTARY WING):

- **Rotary Wing Platforms** - Light, medium, and heavy vertical take-off platforms are used to transport SOF and SOF assets in a variety of operational situations. Equipment enables increased payloads, lethality, survivability, and situational awareness while decreasing crew workload.
- **FARP Kits** - Grounding wires, fire bottles, etc. to refuel somewhere other than an airfield
- **IR Jammer Countermeasures** - Technologies that provide IR signature management capabilities that can be mission packaged or fully integrated onto the airframe.
- **Air Delivery Systems** - To include parachutes, remote control cargo drop, canister drops, and the ability to operate in GPS-denied environments

AUTONOMOUS SYSTEMS (UAVs / USVs / UGRs):

- **Group 3 UASs** - Larger systems that operate at medium altitudes and usually have medium to long range and extended endurance. Their payloads may include a sensor ball with EOIR, LRF/D, Synthetic Aperture Radar, moving target indicator, SIGINT, communications relay, and CBRNE detection. Some systems carry weapons. These systems operate at altitudes less than 18,000 feet below mean sea level with a local to medium range. They usually operate from unimproved areas and may not require an improved runway.



- **Group 4 UASs** - Relatively large systems, operate at medium to high altitude, and have extended range and endurance. Their capabilities include payloads that may include EOIR, radars, lasers, communications relay, SIGINT, AIS and weapons. These systems must meet DoD airworthiness standards prior to operating in National Air Space. Lack of SATCOM links could inhibit BLOS capability for some UASs in this group. These systems operate at altitudes 18,000 feet above MSL. Additionally, the logistics footprint is equal to that of a manned aircraft organization, usually requiring an improved area for launch and recovery.
- **C-UAS Training and Support** - Provide C-UAS training and instruction with threat driven training aids, and global support.

CHEMICAL BIOLOGICAL RADIOLOGICAL AND NUCLEAR DEFENSE (CBRNE):

- **CBRNE Operations Equipment** - Includes, but is not limited to the latest technology in Masks, Impregnated Uniforms, Under-garments, Over-garments, Remote Sensors, Robotics, Detection Equipment, Reach Back Capabilities, Disruption Technologies, Render Safe TTP, Package and Transport TTP, Expedient and Deliberate Decontamination, and Casualty Care and Evacuation.

LOGISTICS AND SUPPLY CHAIN MANAGEMENT:

- **Life Cycle LOGISTICS AND SUPPLY CHAIN MANAGEMENT Management** - Employing physical and technological solutions to manage the flow of goods and services, suppliers, movement and storage of raw materials and work-in-process inventory, as well as finished goods from point of origin to point of consumption.

E] KEY ACRONYMS DEFINED:

- **AIS:** Automated Identification System
- **ANB:** Analyst's Notebook Premium
- **AvFID:** Aviation Foreign Internal Defense
- **BLOS:** Beyond Line of Sight
- **C-IED:** Counter-Improvised Explosive Device
- **C-UAS:** Counter-Unmanned Aircraft System
- **C-WMD:** Counter-Weapons of Mass Destruction
- **C4ISR:** Command, Control, Communications, Computer, Intelligence, Surveillance & Reconnaissance
- **CBA:** Capabilities Based Assessment
- **CBRNE:** Chemical, Biological, Radiological and Nuclear and high yield Explosives
- **CDD:** Capabilities Development Document
- **COP:** Common Operating Picture
- **CPD:** Capabilities Production Document
- **CQB/CQC:** Close Quarters Battle/Close Quarters Combat
- **CRM:** Customer Relationship Management
- **DPD:** Diver Propulsion Device
- **ECMS:** Electronic Counter Measures System
- **EOD:** Explosive Ordnance Disposal
- **EOIR:** Electro-Optical Infrared
- **EOS:** Electro-Optical Systems
- **EW:** Electronic Warfare
- **EXMCM:** Expeditionary Mine Countermeasures
- **FAP:** Full Access Parachute
- **FARP:** Forward Area Refueling Point
- **FDA:** United States Food and Drug Administration
- **FLIR:** Forward-Looking Infrared
- **FMV:** Full Motion Video
- **GCS:** Ground Control Stations
- **GEOINT:** Geospatial Intelligence
- **GMV:** Ground Mobility Vehicle
- **GPS:** Global Positioning System
- **HALE:** High Altitude Long Endurance
- **HUMINT:** Human Intelligence
- **ICD:** Initial Capabilities Document
- **IO:** Information Operations
- **IMINT:** Imagery Intelligence
- **IPB:** Intelligence Property Book
- **IR:** Infrared
- **ITAR:** International Traffic in Arms Regulations
- **JCIDS:** Joint Capabilities Integration & Development System
- **LaaS:** Lab as a Service
- **LiDAR:** Light Detection & Ranging
- **LMASS:** Lightweight Maritime Assault Suit System
- **LOS:** Line of Sight
- **LPD:** Low Probability of Detection
- **LPI:** Low Probability of Intercept
- **LRF/D:** Laser Range Finder / Designator
- **LTATV:** Lightweight Tactical All-Terrain Vehicles
- **MALE:** Micro, Medium Altitude Long Endurance
- **MASS:** Maritime Assault Suit System
- **MCM:** Mine/Mining Countermeasures
- **MDMP:** Military Decision Making Process
- **NGSW:** Next Generation Squad Weapon
- **NSCV:** Non-Standard Commercial Vehicles
- **OSINT:** Open Source Intelligence
- **PGL:** Precision Geo-Location
- **PNT:** Private Network Transport
- **RF:** Radio Frequency
- **RHIB:** Rigid Hull Inflatable Boats
- **RSTA:** ISR and Reconnaissance, Surveillance, And Target Acquisition
- **SAR:** Synthetic Aperture Radar
- **SATCOM:** Satellite Communications
- **SIGINT:** Signal Intelligence
- **SME:** Subject Matter Expert
- **SOF:** Special Operations Forces
- **SOP:** Standard Operating Procedure
- **STANAG:** Standardization Agreement
- **SURG:** Suppressed Upper Receiver Group
- **SUV:** Sport Utility Vehicle
- **T2SDT:** Tactical Two-way Sensor Data Transport
- **TBI:** Traumatic Brain Injury
- **TRANSEC:** Transmissions Security
- **TTP:** Techniques, Tactics, and Procedures
- **UAS:** Unmanned Aircraft System
- **UAV:** Unmanned Aerial Vehicle
- **UMCM:** Underwater Mining Countermeasures
- **USSOCOM:** US Special Operations Command
- **UWPB:** Underwater Post Blast
- **VAR:** Value-Added Reseller
- **VAS:** Visual Augmentation Systems
- **VBSS:** Visit, Board, Search, and Seizure
- **VMS:** Virtual Mobility Station
- **VoIP:** Voice Over Internet Protocol
- **WAN:** Wide Area Network



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