



Soldier Requirements Division



Fort Moore, Home of the MCoE



Soldier Systems Branch 28 February 2024



Assess the FDE

Research Solutions

Define Concepts

Develop Requirements

Integrate Capabilities

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- **Organizational Clothing & Individual Equipment**
- **Soldier Protection**
- **Arctic Mobility & Sustainability**
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- **Dismounted Mission Command / Power**
- **Soldier Tactical Power**
- **Soldier Wearable Sensors**
- **Questions**



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MISSION STATEMENT



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“Soldier Requirements Division develops materiel requirements, integrates capabilities, and modernizes legacy programs to transform the Army of the future.”

Soldier Perspective for Future Capabilities



Assess the FDE

Research Solutions

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Soldier Portfolio Programs

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Organization Clothing & Individual Equipment



Airdrop Equipment



Soldier Protection



Small Unit Power & Dismounted Mission Command



Wearable Sensors





SSB Portfolio Programs



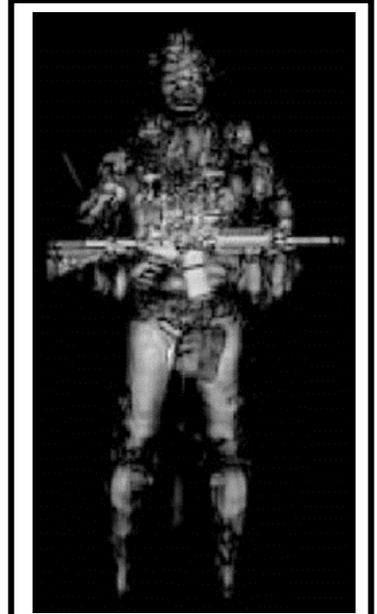
Organizational Clothing & Individual Equipment and Airdrop Fort Moore, Home of the MCoE



Next Gen Static Line – Parachute (NGSL-P)



Arctic Mobility Sustainment System (AMSS)



Signature Management



All Range Tactic Clothing (ARTC)



Arctic Mobility Dismounted (AM-D)



Description: Organizational Clothing and Individual Equipment encompasses everything worn or carried by the Soldier throughout their career that directly enables the individual such as boots, clothing, load carriage, gloves, sleeping systems, hydration, and environmental protection.

Soldier Load and Burden

- Integrated solutions that improve on efficiency and reduce redundancies utilizing light weight novel materials that reduce weight and bulk

Signature Management / Spectral Mitigation

- Overgarment, Hide, or integrated textiles that obscure the enemy's sensors that locate, see, hear, and detect friendly forces across all spectrums (IR, radar...)

Specialized Environmental Equipment

- **Jungle Boot:** Quick drying, large lug sole that expels mud, light weight
- **Hammock:** Vector protection, water repellent, self contained
- **Rugged Arctic skis, binding, boots:** integrated system, extreme cold weather boot (-20°F and Below)
- **Team and Squad 5/10-man tents:** breathable, wind/water resistant, and flame resistant.
- **Arctic heaters:** ambient temperature of $\geq 40^\circ$ F within two hours - capable of utilizing authorized Class III Petroleum, Oil, Lubricants (POL) (e.g., diesel, kerosene, or motor gas (MOGAS) based fuels), wood, coal, or alternative energy source
- **Survival blanket:** thermal insulation, medical treatment access, multiple lift points to carry or maneuver a casualty.

Durability in Extreme Cold (-40°F – below)

- Durable fabrics, fasteners, plastics and rigid materials, and vapor barriers that are reliable and readily available

Tactical Airborne Static Line Parachute

- Reduced in-air exposure, eliminate total malfunction of main canopy, operates at low altitude (≤ 500 ft), responsiveness to avoid collisions, lighter with less bulk to fit more paratroopers on aircraft, and supports 400lbs all up rigged weight



SSB Portfolio Programs

Soldier Protection

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Torso and Extremity Protection (TEP)



Ballistic Combat Shirt (BCS)



Modular Scalable Vest (MSV)



Blast Pelvic Protector (BPP)

Integrated Head Protection System (IHPS)



Vital Torso Protection (VTP)



Enhanced Small Arms Protective Insert



X-Threat Small Arms Protective Insert



Enhanced Side Ballistic Insert



X-Threat Side Ballistic Insert

Tactical Communications and Hearing Protection





Soldier & Hearing Protection

Desired Capabilities out to 2040



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Description: Soldier and hearing protection provides the most advanced head-borne and vital torso protection against prevalent battlefield threats with soft and hard armor, state of the art tactical communication and hearing protection, and eye protection

Compatibility of Components & Systems

- Integration of helmets and tactical communication and hearing protection (TAC-HP) a program of record beginning in FY26: Steady state active noise reduction, pass through communication
- One helmet solution for Close Combat Forces – Mounted and Dismounted
 - Utilizing Nex Gen IHPS protection technology → collectively decrease weight of all head borne equipment

Reduced weight, Improve Form Fit and Function

- Current ESAPI protects against prevalent battlefield threats but at a heavier weight
 - One common shape for all body types and genders

Vital Torso Protection

- Current protection: ESAPI and XSAPI
- Future desired capability
 - Conformable Body Armor that meets or exceeds current ballistic threat protection while reducing weight (Helmet and Body Armor)
 - Light weight polyethylene hard armor – same protection with less weight that increases mobility

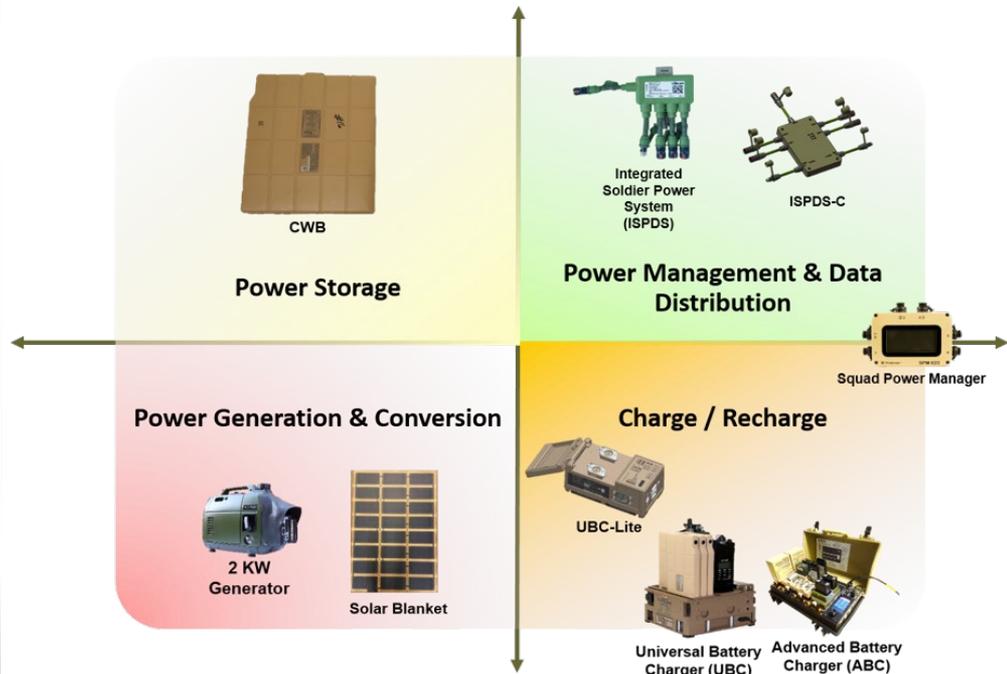
SSB Portfolio Programs

Wearable Systems and Small Unit Power

Wearable Sensors



Small Unit Power





Small Unit Power

Desired Capabilities out to 2040



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Description: Small Unit Power is a suite of capabilities that provide an organic, rapidly deployable, modular, lightweight systems that stores, generates, manages, and distributes power & energy at the Platoon level and below.

Energy Storage:

- Increased energy densities, decreased weight
- Decreased recharging Time
- Common family of batteries

Power/Data Management & Distribution

- Support reconfigurable power usage
- Seamlessly share power consumption and management of data with any platform or peripheral device

Power Generation and Conversion

- Small, efficient on-the-move Soldier Power Generator $\geq 100W$
- Small, efficient carried "Soldier Borne" Squad Generator $\geq 500W$
- Small, efficient, man portable bulk generators ($>3kW$, under 50lbs)

Charge/Recharge Batteries

- Quick charge/recharge of multiple battery types rapidly and efficiently at the Small Unit Level
- Smart-grid compliant chargers

Operation in extreme climatic conditions

- Operate in Arctic conditions down to $-40^{\circ}F$ and below without impacting total power required
- Operate in extreme heat and/or humid conditions up to $140^{\circ}F$
- Operate electronic equipment at and above 9,000 ft sea level

Soldier Wearable Systems Desired Capabilities out to 2040

Description: Warfighter Integrated Sensor Ensemble (WISE) is a data-to-decision leader system which informs on individual and organizational health, performance, and readiness.

Wearable Systems

- Physiological data must be secured from collection to visualization.
 - Simplification of data movement (Hub, mid-tier device, all-in-one)
- User-friendly and intuitive visualization system
- Simplified ecosystem for collection, transmission, storage, and visualization
 - Integration into existing Army network
- Form factor must be acceptable to Soldier and cost effective





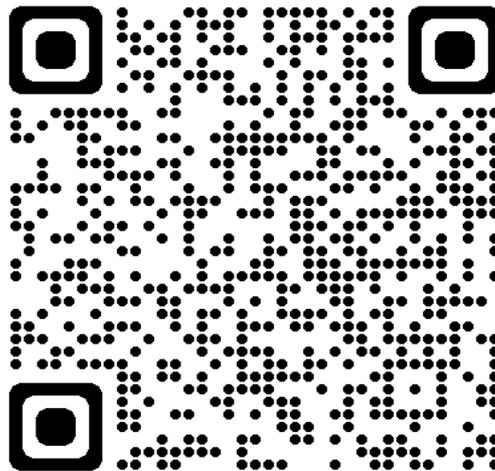
Soldier Enhancement Program



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SEP is a congressionally mandated program established by the FY1990 National Defense Authorization Act (NDAA) to buy COTS / GOTS technology, allow Soldiers to try it in real world scenarios, and decide on applicability for the broader force.

Proposal Submission





Soldier Systems Branch

POINTS OF CONTACT



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Questions?