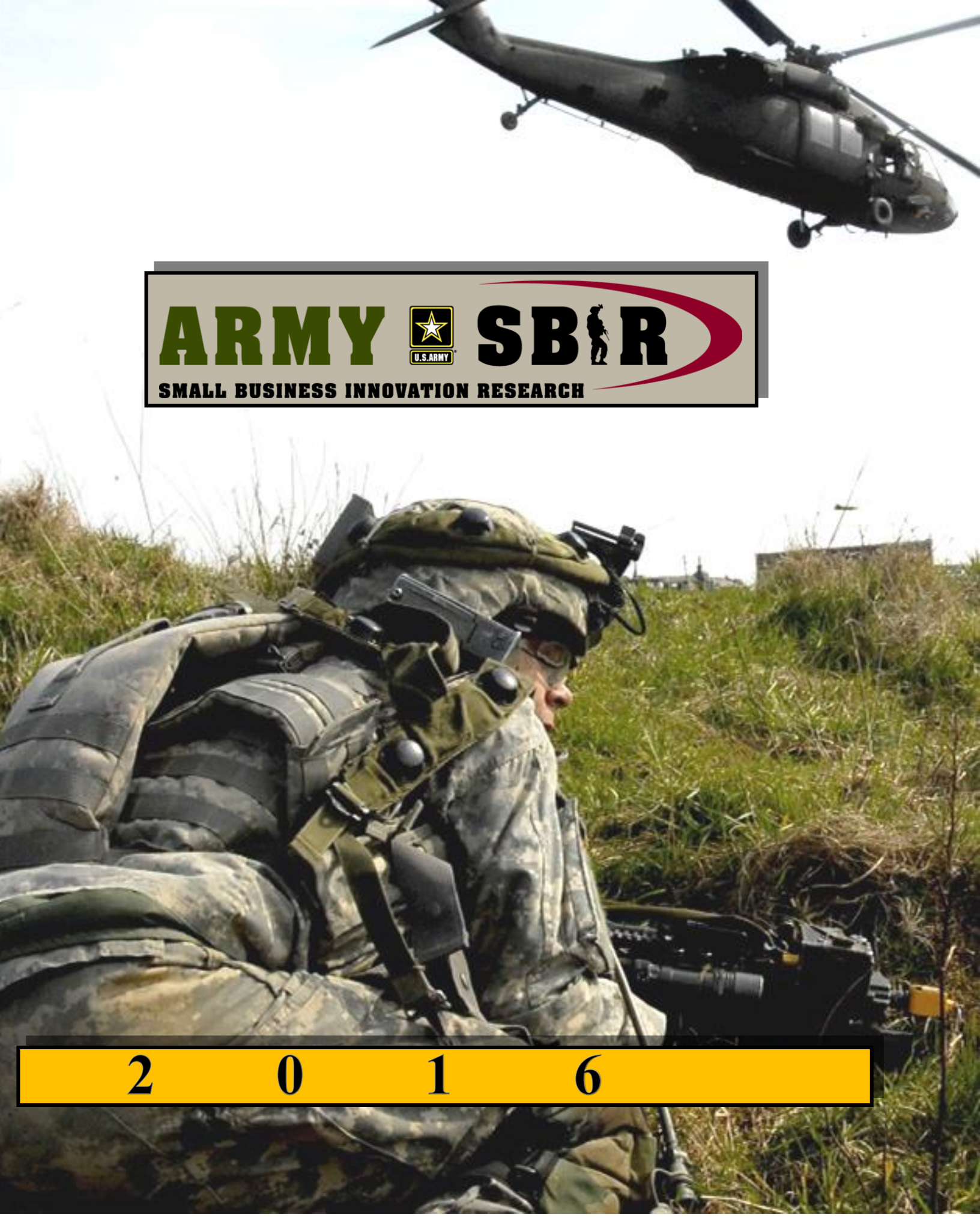

U.S. ARMY

SMALL BUSINESS INNOVATION RESEARCH PROGRAM (SBIR)

Mission Objectives and Points of Contact

Note: This document was compiled as a source of information for small businesses interested in participating in the Army SBIR program. Data in this document was compiled from public sources and as such, distribution is unlimited.

Edited by program management office, Army SBIR:
Credit to Mr. Otho H. Thomas, JR.,
Ms. Kathy Herring, and Ms. Jane R. Greer
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I. Armament, Research, Development and Engineering Center (ARDEC), Picatinny Arsenal, NJ

SBIR POC: usarmy.pica.rdecom-ardec.mbx.sbir@mail.mil, (973) 724-6275

Headquartered at Picatinny Arsenal, New Jersey, the Armament Research, Development and Engineering Center (ARDEC) is the Joint Center of Excellence for Armaments and Munitions, providing products and services to all branches of the U.S. military. By developing and maintaining a world-class workforce, ARDEC specializes in the research, development, acquisition and lifecycle management of advanced conventional weapon systems and advanced ammunition. ARDEC is responsible for most of the Army's lethality and all conventional ammunition for joint warfighters. ARDEC supports Army transformation goals by streamlining the acquisition process and delivering the armaments that Soldiers need exactly when they need them.

Mission: ARDEC's mission is to empower, unburden, and protect the Warfighter by providing superior armaments that dominate the battlefield.

Areas of Interest: ARDEC's mission is to lead research, development and engineering of systems solutions to arm those who defend the nation against all current and future threats, both at home and abroad.

Weapons Technologies:

- *Directed Energy*
- *Fire Control*
- *Robotic and Autonomous Systems*
- *Collaborative Fires*
- *Signature Reduction*
- *Modular, Common, Multi-use Components*
- *Non-Volume Suppressive Effects*
- *Improvised Explosive Neutralization*
- *Fires from Enclosure*

Munition Technologies:

- *Smart/Collaborative Munitions*
- *Highly Directional Explosives/Warheads*
- *Multi-function Munitions*
- *Reduced Health Impact of Expended Munitions*
- *Design for Demilitarization and Disposal*
- *Non-Kinetic Effects*
- *Scalable Munitions*
- *Enhanced Precision*
- *Counter-Measure Hardened Munitions*
- *Advanced Fuzing*
- *Extended Range Effects*
- *Interceptor Munitions*

Enabling Technologies:

- *Application of Advanced Materials*
- *Advanced Manufacturing*
- *Enhanced Propulsion Science*
- *Verified and Validated Modeling and Simulation Tools*
- *Reduced Lifecycle Environmental Impact*
- *Logistics Automation and Reduction*

II. Army Research Institute for the Behavioral and Social Science (ARI), Arlington, VA

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

Mission: Improve Soldier, leader, and unit performance through advances in behavioral and social sciences; enable synergy between human and technology innovation for mission success.

Areas Of interest:

- *Selection and classification*
- *Human learning*
- *Training and leader development*
- *Performance measurement*
- *Group dynamics*
- *Culture and society*
- *Attitudes and opinions*

III. Army Research Laboratory (ARL), Adelphi, MD

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The Army Research Laboratory (ARL) is the Army's corporate basic and applied research laboratory. Its mission is to provide innovative science, technology, and analysis to enable full-spectrum operations. ARL consists of the Army Research Office (ARO) and six Directorates-- Weapons and Materials, Sensors and Electron Devices, Human Research and Engineering, Computational and Information Sciences, Vehicle Technology, and Survivability and Lethality Analysis. ARL scientific discoveries, technological advances, and analyses provide the warfighters with the capabilities to succeed on the battlefield.

Mission: Discover, innovate, and transition science and technology to ensure dominant strategic land power.

Areas of Interest:

A. Army Research Office (ARO), Research Triangle Park, NC

Mission: The U.S. Army Research Office (ARO) mission is to seed scientific and far reaching technological discoveries that enhance Army capabilities. Basic research proposals from educational institutions, nonprofit organizations, and private industry are competitively selected and funded. ARO's research mission represents the most long-range army view for changes in its technology. It is the only Army organization that transcends all of its mission areas: Commander-Fire Support; Close Combat; Air Defense; Combat Support; Combat Service Support; Solider Support; Command, Control, and Communications. In all respects, the ARO program is the designated organization for the entire spectrum of army activities extending from research to development to acquisition. ARO priorities fully integrate Army-wide, long-range planning for research, development, and acquisition.

The roots of research are in the scientific and engineering disciplines: aeronautics, biology, chemistry, electronics, geosciences, mathematics, mechanics, metallurgy, physics, and so on. Many innovations are a direct result of fundamental changes in this science base. In recognition of these roots, the ARO program is organized along scientific disciplinary lines. This is the natural way in which the resident national talent base interfaces with the Army.

Chemistry Areas of Interest:

- *Elastomers for Soldier Protection and Army Materiel*
- *Electrochemistry and Power Sources*
- *Oxidation*
- *Organized Media And Organic Chemistry For Threat Agent Decontamination*
- *Surfaces & Catalysis*
- *Fast Reaction Kinetics and Energetic Materials*
- *Novel Molecules for Advanced Army Materiel*

Computing & Information Sciences Areas of Interest:

- *Systems And Controls*
- *Software And Knowledge-Based Systems*
- *Communications And Networks*
- *Info Processing/Fusion And Circuits*
- *Information Assurance*

Electronics Areas of Interest:

- *Multifunctional Sensing*
- *High Frequency, Mobile Platform Communications*
- *Information Science Electronics*
- *Optoelectronic Warfare*
- *Landmine Detection*

Environmental Sciences Areas of Interest:

- *Atmospheric Sciences*
- *Atmospheric Efforts On Signature And Communications*
- *Characterization Of The Atmosphere At High Resolution*
- *Management And Application Of Atmospheric Information*
- *Terrestrial Sciences*
  - Terrain Properties And Characterization
  - Terrestrial Processes And Dynamics
  - Terrestrial System Analysis And Modeling

Life Sciences Areas of Interest:

- *Bimolecular And Cellular Materials And Processes*
- *Microbiology And Biodegradation*
- *Physiology, Survivability & Performance*
- *Neurophysiology And Cognitive Sciences*
- *Molecular Genetics And Genomics*

Materials Science Areas of Interest:

- *Multifunctional And Smart Materials*
- *Probability And Statistics*
- *Deformation And Toughening Phenomena*
- *Defect Engineering*
- *Interface Engineering And Surface Modification*
- *Computational Materials Modeling And Design*
- *Synthesis & Processing*
- *Defect Engineering*
- *Deformation & Fracture*
- *Strengthening & Tough Materials*
- *Nondestructive Characterization*

Mathematical Sciences Areas of Interest:

- *Probability & Statistics*
  - Stochastic Analysis and Applied Probability
  - Statistical Methods
- *Discrete Mathematics And Computer Science*
  - Discrete Mathematics
  - Computer Science
- *Computational Mathematics*
  - Numerical Methods
  - Optimization
  - Software Tools
- *Modeling of Complex Systems*
  - Advanced Complex Materials for Structure, Armor, and Sensors
  - Inverse Scattering In Complex Media
  - Modeling of Multi-Scale Objects and functions
  - Nonlinear Dynamics for communications
  - Data Fusion In Complex Networks
  - Dynamics of Distributed Networks of embedded Sensors and Actuators

Mechanical Sciences Areas of Interest:

- *Propulsion and Energetics Programs*
  - Engine Combustion
  - Gun and Missile Propulsion/Energetic Materia Hazards
- *Fluid Dynamics Program*
  - Flow Separation/Dynamic Stall
  - Micro Adaptive Flow Control
- *Solid Mechanical Program*
  - Mechanics of Heterogeneous Systems
  - Impact, Blast, and Penetration
- *Structure And Dynamics Program*
  - Structural Mechanics of Composite Materials
  - Structural Dynamics and Simulation
  - Smart Structures

Physics Areas of Interest:

- *Condensed Matter Physics Program*
  - Nanometer-Scale Physics
  - Electronic and Photonic Band Engineering
  - Multifunctional Probes and Control
- *Theoretical Physics and Nonlinear Phenomena*
- *Quantum Information Sciences*
  - Fundamental Studies
  - Quantum Computation
  - Quantum Communication
- *Atomic And Molecular Physics*
  - Matter-Wave Optics
  - Molecular Physics
  - *Fundamental Atomic and Molecular Physics*
- *Optics, Photonics And Imaging Science*
  - Optics
  - Photonics
  - Imaging
- *Soldier Enhancement*
- *Atomic, Molecular, and Optical Physics*
- *Nonlinear Dynamics and Theoretical*
- *Photonics*
- *Optics, Photonics, Image*
- *Quantum Information Science*
- *Condensed Matter*

B. Computational & Information Sciences Directorate (CISD), Aberdeen Proving Ground & Adelphi, MD

Mission: The U.S. Army Research Laboratory (ARL) Computational and Information Sciences Directorate (CISD) plays a key role in Information Sciences and Technology Research within the Army and the Department of Defense (DoD). CISD provides innovative technologies to enable knowledge superiority for the Warfighter through basic and applied research focused on battlefield communications and networks, battlefield information processing, data fusion and knowledge management, battlefield weather and environmental effects, and computational science and engineering.

The CISD mission areas include the operation of the ARL DoD Major Shared Resource Center (MSRC), the Army High Performance Computing Research Center (AHPCRC), the Communications & Networks CTA, and the Network & Information Sciences ITA. The directorate works closely with many academic, industry, and government partners to accomplish its mission.

Areas of Interest:

- *Battlefield Information Processing (Software Technology, Intelligent Systems, Fusion)*
- *Tactical Communication & Networks (Information Distribution)*
- *Battlefield Environment (Weather/Meteorology)*
- *Computational Science & Engineering*
- *High Performance Computing*
- *Automation Resources*
- *Enterprise Systems*

C. Human Research and Engineering Directorate (HRED), Aberdeen Proving Ground, MD

Mission: The Human Research and Engineering Directorate's (HRED) mission is to optimize Soldier effectiveness and Soldier-machine interactions and to ensure that future system designs will enable our Soldiers to achieve maximum performance. To fulfill this mission, HRED conducts broad-based scientific research and technology application and provides leadership in human factors integration and support to MANPRINT.

Areas of Interest:

- *Soldier Performance*
- *Human Factors*
- *Soldier Information (Displays, Interfaces, Simulations)*
- *Soldier Centered Design Tools*

D. Sensors & Electron Devices Directorate (SEDD), Adelphi, MD

Mission: The Sensors and Electron Devices Directorate (SEDD) works in many areas crucial to the success of the future Army, providing fundamental research to give commanders real-time situational awareness; rapid and precise discrimination and targeting; highly compact, lightweight energy sources; as well as mitigating techniques for use against hostile enemy threats.

Areas of Interest:

- *Electro-Optics and Photonics*
- *RF & Electronics*
- *Signal & Image Processing*
- *Power Generation*
- *Directed Energy*
- *Low Observable Technology*

E. Survivability/Lethality Analysis Directorate (SLAD), White Sands, NM & Aberdeen Proving Ground, MD

Mission: On the future battlefield, the Soldier will face an array of threats from the conventional, Electronic, And Electromagnetic to the Nuclear, Biological, Chemical, and Environmental. The Survivability & Lethality Analysis Directorate (SLAD) develops and conducts vulnerability and lethality assessments of Army technologies and systems and provides recommendations and technical expertise to reduce or eliminate vulnerabilities and to improve effectiveness.

Areas of Interest:

- *Systems Survivability/Lethality*
- *Ballistic Vulnerability/Lethality*
- *Chem-Bio & Nuclear Effects*
- *Electronic Warfare*
- *Information Operations*

F. Vehicle Technology Directorate (VTD), Hampton, VA & Cleveland, OH

Mission: The Vehicle Technology Directorate (VTD) is the principal Army organization for research and development in vehicle propulsion and structures. VTD conducts innovative research in propulsion, transmission, structures, and aeromechanics to provide the Army with lighter, more reliable, and more fuel-efficient air and ground combat vehicles. VTD coordinates technologies within the Army, other services and their laboratories, industry, and academia to leverage basic and applied research opportunities for the benefit of the Army.

Areas of Interest:

- *Propulsion Technologies for Manned and Unmanned Air and Ground Vehicles*
- *Engine Components and Modeling*
- *Drive train Components and Modeling*
- *High Temperature Propulsion Materials*
- *Fracture mechanics structural failure prediction*
- *Nonlinear multibody dynamics*
- *Rotorcraft aeromechanics*
- *Microsystem mechanics*
- *Miniature high voltage amplification*

G. Weapons & Materials Research Directorate (WMRD), Aberdeen Proving Ground, MD

Mission: The U.S. Army Research Laboratory's Weapons and Materials Research Directorate (WMRD) is the principal Army organization for research and development in weapons and materials technologies. WMRD conceives, exploits, matures, and transitions novel concepts and technologies in the areas of weapons, protection, robotics, and materials to enhance the lethality and survivability of America's ground forces. WMRD also solves technical problems associated with developmental and fielded weapon systems and provides technology and support for enhanced survivability and lethality system assessment and for the Army's decision-making process. WMRD coordinates technologies within the Army, other services and their laboratories, industry, and academia to leverage basic and applied research opportunities for the benefit of the Army.

Areas of Interest:

- *Materials (Ceramics, Metals, Polymers, Composites, Nanomaterials, Etc.)*
- *Propulsion*
- *Aeroballistics*
- *Terminal Effects*
- *Weapons Technology Analysis and Concepts*
- *Semi-Autonomous Robotics*

IV. Communication-Electronics Research Development and Engineering Center (CERDEC), Aberdeen Proving Ground, MD

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The Communications-Electronics Research, Development and Engineering Center, more commonly known as CERDEC, actively advances Soldier capabilities that enable situational awareness and understanding, establish and secure communications, and protect Soldiers from surprise attack.

As an Army applied research center under the U.S. Army Research, Development and Engineering Command, CERDEC provides the diverse technical expertise and operational awareness and understanding to develop, engineer and foresee essential Army needs in mission command and intelligence technologies, applications and networks designed to connect and protect the Soldier. Whether Soldier-borne or on vehicle or aviation platforms, the Army relies on CERDEC's technical expertise to develop and/or seek out capability advancements to address Soldier needs.

CERDEC works with Defense Department and national basic research organizations and labs to influence research investment and adopt, adapt and mature relevant scientific breakthroughs. CERDEC maintains close ties to the U.S. Army Training and Doctrine Command's centers of excellence and operational units to stay in touch with the evolving realities of the Soldier environment, anticipate challenges, refine requirements and inform operational tactics, techniques and procedures.

Mission: To develop and integrate Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) technologies that enable information dominance and decisive lethality for the networked Warfighter.

Areas of Interest:

A. Night Vision and Electronic Sensors Directorate:

- *a. Thermal Imaging*
- *b. Digital, Low Light Level Sensors*
- *c. Advanced Optics and Displays*
- *d. Directed Energy to include Lasers and Laser Radars*
- *e. Soldier EO/IR Sensor Technologies*
- *f. Image and Signal Processing (e.g., Automatic/Aided Target Recognition)*
- *g. Mine/Improvised Explosive Device Detection Technology*
- *h. Sensor Modeling and Simulation*
- *i. Systems Level Integration*
- *j. Sensor Networks*
- *k. Camouflage, Concealment and Deception Technologies*
- *l. Digital Read-Out Integrated Circuits*
- *m. Sensor Fusion Algorithms*
- *n. Technologies for Sensor Protection*
- *o. Augmented Reality*

B. Intelligence and Information Warfare Directorate:

- *a. Cyber Operations*
- *b. Cyber Technology*

C. Space and Terrestrial Communications Directorate:

- *a. Enabling C4ISR Infrastructure*
  - i. Modeling and Simulation
  - ii. Lab Based Risk Reduction
  - iii. Field Based Risk Reduction
- *b. Cyber CEMA Operations*
  - i. Cyber Situational Awareness/Understanding
  - ii. Defensive Cyber Operations
- *c. Networking to Improve Maneuver and Expeditionary Operations*
  - i. Conduct Initial Entry Operations
  - ii. Develop Situational Understanding
  - iii. Sustain Operations & Maintain Freedom of Movement
- *d. Uninterrupted Communications*
  - i. Operate in a Congested Environment
  - ii. Operate in a Contested Environment
  - iii. Operate while Degraded

D. Command, Power, & Integration Directorate:

- *a. Mission Command Technologies*
- *b. Decision Support Tools and Applications*
- *c. Command Post Technologies*
- *d. Soldier Power Technologies*
- *e. Microgrids and Intelligent Power Distribution*
- *f. Positioning, Navigation & Timing in GPS Denied Environments*

V. Us Army Corps of Engineers, Engineer Research and Development Center (ERDC), Vicksburg, MS

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The US Army Corps of Engineers, Engineer Research and Development Center (ERDC) is one of the most diverse engineering and scientific research organizations in the world. ERDC conducts research and development at seven laboratories located at four geographical sites in MS, IL, NH and VA. ERDC employs more than 2,500 federal employees and contractors, and has an annual research program exceeding $1 billion.

Mission: To provide science, technology, and expertise in engineering and environmental sciences in support of our Armed Forces and the Nation to make the world safer and better. The ERDC addresses research and development in four major areas:

1. Civil Works/Water Resources
2. Environmental Quality/Installations
3. Geospatial Research and Engineering
4. Military Engineering

Areas of Interest: ERDC research and development focuses on five primary technical areas to support the Army and the Corps of Engineers:

- *Warfighter Support* – geospatial information; system development; operational support; force protection; and force projection and sustainment
- *Installations* – transformation; operations; and environmental issues
- *Environment* – remediation and restoration; land planning, stewardship and management; threatened and endangered species; and cultural resources
- *Water Resources* – infrastructure, environmental issues, and navigation; flood control and storm damage reduction
- *Information Technology* – informatics; geospatial technologies; computational services; and high performance computing applications.

A. Coastal and Hydraulics Laboratory, (CHL), 3909 Halls Ferry Road, Vicksburg, MS 39180-6199

Mission: The Coastal and Hydraulics Laboratory (CHL) is internationally known for its experimental and computational expertise needed to solve water resource problems worldwide. CHL addresses an entire spectrum of water resource challenges in groundwater, watersheds, rivers, reservoirs, estuaries, harbors, coastal inlets and wetlands.

Areas of Interest:

- *Inland/Coastal Navigation*
- *Logistics-over-the-shore*
- *Dredging*
- *Flood Control*
- *Storm and Erosion Protection*
- *Waterway Restoration*
- *Hydro-Environmental Modeling*
- *Water and Land Management*

B. Construction Engineering Research Laboratory (CERL), PO Box 9005, 2902 Newmark Drive, Champaign, IL 61826-9005

Mission: The Construction Engineering Research Laboratory (CERL) develops and infuses innovative technologies to provide state-of-the-art facilities and realistic training lands for the Department of Defense. Products and services from CERL research enhance the Army's ability to design, build, operate, and maintain its installations and to ensure environmental quality at the lowest life-cycle cost.

Areas of Interest:

- *Sustainable Installations*
- *Resilient Facilities and Infrastructure*
- *Durable and Multi-Functional Materials*
- *Installation Decision Support*
- *Urban and Stability Operations*
- *Military Ranges and Lands*

C. Cold Regions Research and Engineering Laboratory (CRREL), 72 Lyme Road, Hanover, NH 03755-1290

Mission: The mission of the Cold Regions Research and Engineering Laboratory (CRREL) is to solve interdisciplinary, strategically important problems of the US Army Corps of Engineers, Army, Department of Defense, and the Nation by advancing and applying science and engineering to complex environments, materials, and processes in all seasons and climates, with unique core competencies related to the Earth's cold regions.

Areas of Interest:

- *Biogeochemical Processes in Earth Materials* - enhances battlespace awareness and force protection, and sustains training through microbial forensics and use of new plant materials.
- *Cold Regions Infrastructure* - provides unique cold regions technologies for logistics, construction, operations and maintenance of tactical and strategic facilities.
- *Environmental Fate and Transport Geochemistry* - sustains training and restores the environment by rapid assessment of fate and transport of military contaminants under extreme terrain conditions.
- *Hydrology and Hydraulics* - provides assessments of, and technology for, winter impacts on Corps structures, ice jam mitigation, and cold regions hydrology and river restoration.
- *Maneuver Support and Sustainment* - enhances Army mobility and force projection over a variety of deformable terrain conditions across all seasons.
- *Signature Physics* – increases understanding of environmental influences on sensing phenomenology enabling battle command through decision support tools.
- *Terrain Properties and Properties Mission* - improves adaptation of operations to Earth surface dynamics forced by the atmosphere.
- *Water Resources Geospatial Applications* - improves data collection, analyses, and decision support through remote sensing and geographic information system applications.

D. Environmental Laboratory, (EL), 3909 Halls Ferry Road, Vicksburg, MS 39180-6199

Mission: The Environmental Laboratory (EL) is the problem solver for the Corps and the Nation in environmental science and engineering research and development in support of environmental systems. The staff supports the environmental missions of the US Army, the Department of Defense, and the Nation through research, development, special studies, and technology transfer. EL research includes a network of expertise and facilities from other ERDC and Corps of Engineers Laboratories, other government agencies, academia, and private sector.

Areas of Interest:

- *Environmental Site Characterization*
  - Installation Restoration
  - Ecosystem Processes
  - Wetlands Processes
  - Reservoir, Ravine, Estuarine and Coastal Water Quality
- *Natural Resource Management*
- *Range Sustainability*

E. Geotechnical and Structures Laboratory, (GSL), 3909 Halls Ferry Road, Vicksburg, MS 39180-6199

Mission: The Geotechnical and Structures Laboratory (GSL) serve the US Army and the nation by developing solutions to challenges in geotechnical and structural engineering and related disciplines. Its mission focuses on military engineering to develop innovative technologies for survivability and protective structures, airfields/pavements, and sustained maneuverability, and on civil works engineering to support water-resource infrastructure and geosciences.

Areas of Interest:

- *Soil and Rock Mechanics*
- *Geotechnical Engineering*
- *Geology, Geophysics, and Hydrogeology*
- *Earthquake Engineering*
- *Pavements Technology*
- *Structural Engineering, including Structural Dynamics*
- *Military Engineering*
- *Vehicle-Terrain Interaction*
- *Concrete and Construction Materials Technology*

F. Information Technology Laboratory (ITL), 3909 Halls Ferry Road, Vicksburg, MS 39180-6199

Mission: The Information Technology Laboratory (ITL) is the premier Department of Defense (DoD) laboratory for development and application of advanced information technology to military and civil works mission areas. ITL supports the research missions of the ERDC, other Corps activities, the Army, DoD, and other agencies by conceiving, planning, managing, conducting, and coordinating research and development (R&D) in high performance computing, computer-aided and interdisciplinary engineering, computer science, information technology, and instrumentation systems. Through a balanced program of R&D and demonstration, ITL advances the Army's knowledge and ability to use advanced information technology to address a wide range of engineering and scientific challenges.

Areas of Interest:

- *High Performance Computing*
- *Systems Engineering and Informatics*
- *Computational Science and Engineering*
- *Scientific Computing*

G. Geospatial Research Laboratory (GRL), 7701 Telegraph Road, Building 2592, Alexandria, VA 22315-3864

Mission: GRL provides the warfighter and Nation with superior knowledge of the battlefield through innovative basic and applied research in geospatial and related sciences. The laboratory conducts geospatial research, evaluates and develops emerging geospatial technologies to help characterize and measure phenomena within the physical (terrain) and social (cultural) environments encountered by the Army.

Areas of Interest:

- *Geo-positioned 2-, 3- and 4-D Pan-spectral imaging, exploitation and analysis*
- *Relative and absolute positioning and navigation technologies*
- *Integrated geospatial information technologies for managing, manipulating, modeling and analysis*
- *Terrain modeling and analysis for reasoning and decision support*
- *Crowd source information collection and processing to map and model cultural phenomena*
- *Environmental quality indices and monitoring technology research and development*

VI. Edgewood Chemical Biological Center (ECBC), Aberdeen Proving Ground, MD

SBIR POC: usarmy.apg.rdecom-ecbc.mbx.technical-outreach@mail.mil

The U.S. Army Edgewood Chemical Center (ECBC) is the primary Department of Defense technical organization for the non-medical chemical and biological defense, and is a subordinate command of the U.S. Army Research, Development and Engineering Command. ECBC possesses an unrivaled chemical biological research and development infrastructure with scientists, engineers, technicians and specialists located at three different sites in the Unites States: Edgewood Area of Aberdeen Proving Ground, MD; Pine Bluff, AR; and Rock Island, IL.

ECBC has a unique role in technology development that cannot be duplicated by private industry or research universities. It fosters research, development, testing, and application of technologies for protecting warfighters, first responders and the nation from chemical and biological warfare agents. ECBC is currently developing better ways to remotely detect these chemical and biological materials – before the warfighter or first responder ever enters the threat zone. ECBC is also developing a new generation of technologies to counter everything from homemade explosives to biological aerosols to traditional and non-traditional chemical hazards.

Mission: Be the Nation's premier provider of innovative chemical and biological solutions

Technical Core Competencies and Areas of Interest:

A. Chemistry & Biological Sciences
- *Toxicology*
- *Aerosol Physics*
- *Filtration Science*
- *Spectral Analysis & Algorithm Development for CBRNE Detection*
- *Decontamination & Protection*
- *Smoke, Obscuration & Pyrotechnics*

B. CBRNE Analysis & Testing
- *Screening of Unknown Chemicals*
- *Attributional Forensics*
- *Sampling & Analysis Method Development*
- *Environmental Monitoring*
- *Full Service CBRNE Testing*
- *Laboratory Networks: DENIX; ERLN; WLA; FERN*

C. CBRNE Agent Handling & Surety
- *Single Small Scale Facility*

D. Science & Technology for Emerging Threats
- *Characterizing the Problem*
- *Scenario Building*
- *Modeling & Simulation*
- *Equipment Testing*
- *Chemical Synthesis*
- *HME Synthesis and Analysis*
- *Molecular Engineering*
- *Synthetic Biology*

E. CBRNE Materiel Acquisition
- *CBRNE Acquisition Workforce*
- *Systems Engineering (Detection, Protection, Decontamination, & Smoke)*
- *Life Cycle Engineering (Concept Development, Rapid Prototyping, Manufacturing Support)*
- *Subject Matter Expertise via Reachback*

F. CBRNE Munitions Field Operations
- *Weapons Elimination*

VII. Natick Soldier Research, Development & Engineering Center (NSRDEC), Natick, MA

SBIR POC: Cathy Polito, 508-233-5372, cathryn.a.polito.civ@mail.mil

We accomplish our mission through basic and applied research, technology development and demonstration, and engineering of combat clothing and individual equipment, rations and food service equipment, airdrop systems, shelters, and organizational equipment. We also integrate and transition the technologies for combat-essential elements of command and control, survivability, lethality, sustainability and mobility into the Soldier system and warrior systems for other services and agencies. We are in direct support of the Army's S&T vision, strategy, and transformation objectives.

Mission: Providing the Army with innovative science and technology solutions to optimize the performance of our Soldiers.

Areas of Interest:

- *Ballistic Protection*
- *Percutaneous Chemical/Biological Protection*
- *Countermeasures to Sensors*
- *Multifunctional Materials*
- *Bioengineered Materials*
- *Laser Eye Protection*
- *Soldier Modeling and Simulation*
- *Soldier Integrated/Environmental Protection*
- *Airdrop Systems*
- *Performance Enhancements and Nutrition*
- *Food Preservation and Stabilization*
- *Food Packaging*
- *Food Service Equipment/Energy*
- *Airbeam Technology for Shelters*
- *Rigid and Soft Wall Shelters*
- *Organizational Equipment*

VIII. U.S. ARMY Medical Research and Materiel Command (USAMRMC), Fort Detrick, MD

SBIR POC: Mr. J.R. Myers, 301-619-7377, james.r.myers38.civ@mail.mil

USAMRMC manages and executes research in five basic areas: Military Infectious Diseases, Combat Casualty Care, Military Operational Medicine, Clinical and Rehabilitative Medicine, and Chemical Biological Defense. The command is also the research manager for the DoD Blast Injury Research Program Coordinating Office and the Armed Forces Institute of Regenerative Medicine.

Mission: Responsively and responsibly create, develop, deliver, and sustain medical capabilities for the Warfighter.

Areas of Interest:

A. Military Infectious Diseases Research Program

- *Medical Readiness*
- *Vaccines*
- *Biotechnology*
- *Prophylaxis/Treatment Drugs*
- *Diagnostics/Prognostics*
- *Vector Control*
- *Medical C4ISR*
- *HIV Countermeasures*

B. Combat Casualty Care Research Program

- *Damage Control Resuscitation*
- *Traumatic Brain Injury*
- *Combat Trauma Therapies*
- *Health Monitoring & Diagnostic Technology*
- *Combat Dentistry*

C. Military Operational Medicine Research Program

- *Injury Prevention and Reduction*
- *Psychological Health and Resilience*
- *Physiological Health*
- *Environmental Health and Protection*

D. Clinical & Rehabilitative Medicine Research Program

- *Neuromusculoskeletal Rehabilitation*
- *Regenerative Medicine and Transplants*
- *Vision Restoration*
- *Pain Management*

E. Medical Chemical and Biological Defense Research

- *Medical Biological Defense*
  - I. Vaccines
  - II. Therapeutics
  - III. Diagnostics
  - IV. Basic Research
- *Medical Chemical Defense*
  - I. Pretreatments
  - II. Therapeutics
  - III. Diagnostics
  - IV. Basic Research
- *Laboratory Infrastructure*

F. DoD Blast Injury Research Program Coordinating Office

- *Injury Prevention*
- *Acute Treatment*
- *Reset*

G. Armed Forces Institute of Regenerative Medicine

- *Cranio-facial Reconstruction*
- *Healing Without Scarring*
- *Limb and Digit Salvage*
- *Compartment Syndrome*
- *Burn Repair*

IX. U.S. ARMY Aviation & Missile Research, Development & Engineering Center (AMRDEC), Redstone Arsenal, AL

SBIR POC: usarmy.redstone.rdecom-amrdec.mbx.sbir@mail.mil

The U. S. Army Aviation and Missile Research, Development, and Engineering Center (AMRDEC), a subordinate organization to the Research, Development and Engineering Command (RDECOM), is the Army's focal point for providing research, development, and engineering technology and services for aviation and missile platforms across the lifecycle.

Mission: Deliver collaborative and innovative technical capabilities for responsive and cost-effective research, product development, and life cycle systems engineering solutions.

Missile Mission: To plan, manage and conduct research, exploratory and advanced development, and provide one-stop life cycle engineering, technical, and scientific support for aviation and missile weapon systems and their support systems, robotic ground vehicles, and all other assigned systems, programs and projects.

Missile Areas of Interest:

A. Sensors

- *Size, Weight, Power and Cost (SWaP-C)*
- *Reliability*
- *Increased Accuracy/Minimize Collateral Damage*
- *All Weather/Environmental Conditions/Day/Night*
- *Expanding Target Set (Dismounted/Aerial Targets, Swarms)*
- *Background/Clutter Discrimination*
- *Need to Decrease Processing Time*
- *Increased Performance for Longer Range/Standoff*
- *Multi-mode Sensors for Counter-Acquisition Mitigation*

B. Navigation

- *Navigation Accuracy in GPS Denied/Degraded Environment*
- *GPS Accuracy in Jammed Environment*
- *Robust GPS Performance in GPS-Challenged Environments*
- *Inertial Navigation Accuracy*
- *Reliance on GPS Technologies*
- *Blended Navigation Solutions (aids, signals of opportunity and integration techniques)*
- *Size, Weight, Power, and Cost (SWAP-C)*
- *Startup Times*
- *Fast Alignment/Precision Pointing*
- *Operational Capabilities/Performance over High Dynamic Environments*
- *Reliability (Shelf Life)*

C. Power

- *Energy Storage – Increased Power and Energy Density*
  - Increase power and energy density of Thermal Reserve and Active batteries
  - Higher power density/Lower ESR low-voltage Super-Capacitors
  - Full temperature range for rechargeable (Lithium-Polymer) batteries
  - Full temperature range for primary battery technology
  - Decrease energy storage component size for small remote micro-sensors

- *Power Conversion Efficiency – Reduced Heat Generation, Energy Losses*
  - Higher voltages and lower I2R losses for a given power level
  - Increased efficiencies of switching regulators and converters
  - Decreased current demand automatically increases battery capacity
  - Decreased temperatures, thermal signatures, wasted battery power
  - Possible elimination of the Power Supply assembly via Point-of-Use regulation

D. Missile Electronics

- *System enabling electronics technologies*
- *Smaller and affordable on-board munitions*
- *Size, weight, power, and cost reducing technologies for embedded computers*
- *Extreme integration of electronic substrates and structural elements*
- *Miniature electronics architectures for hardware-based algorithm implementation*
- *Hardware accelerators for algorithm performance enhancement*
- *Optical computing technologies*

E. Propulsion

- *Propulsion Affordability*
  - Extended service life of currently fielded systems
  - Develop health monitoring sensors
  - Improve propulsion system aging models
- *Propulsion System*
  - Smaller and affordable propulsion systems
  - Multi-use propulsion systems
  - Extended range and mission flexibility
- *Propellant Development*
  - Increase propellant delivered impulse
  - Increase operating temperature range of propulsion systems
  - Improve IM capability of minimum signature propellants
- *Supporting Tools*
  - Support component design, development and evaluation
  - Improve modeling capability

F. Lethality

- *Increased capability to determine system effectiveness against UAS*
- *Modeling Capabilities to aid in counter UAS kill mechanism design*

G. Datalink

- *Develop bandwidth efficient waveforms of our short range data links (5 - 15 kilometers) to accommodate high frame rate imagery*
- *Technology for a very short range (~100m) data link that has high frame rate video capability and very low cost to support concepts (like swarming missile)*

H. Materials & Structures

- *Additive Manufacturing; applications, material and design optimization, and processing*
- *Novel composite materials with low cost fabrication methods and superior thermal and structural properties*
- *Impact energy absorbing materials; formulation, design and fabrication*

I. Warhead & Fuze

- *Warhead*
  - Novel techniques to combine warheads technologies to achieve multi-mode and scalable effects in limited size and weight against a suite of targets.
- *Fuzing*
  - Novel algorithms for multipoint and variable location/timing initiation schemes for tailoring warhead effects against s specific targets
  - Low cost, miniaturized rocket motor ignition safety device to meet current safety requirements

J. Guidance

- *Novel autopilot technology to increase robustness to design changes*

K. Control Systems

- *Novel reduced cost control mechanisms High performance compact brushless DC motors*
- *High performance magnets*
- *Advanced thermal management for motor winding dissipation*

L. Aerodynamics

- *Acoustic propagation techniques for sonic boom with application to missiles*
- *Propeller acoustic signature prediction techniques for electric powered missiles*
- *Panel code for novel low-speed missile configurations*
- *Semi-empirical model for Grid-fin design*
- *Low-Cost Wind tunnel model fabrication techniques*
- *Body bending shear and moment load prediction missile applications*

M. Model & Simulation

- *Semi-empirical concept development toolkit for air breathing missile applications*
- *Modeling of missile ground equipment power and energy system of systems for increased fuel efficiency*

N. Reliability & Maintainability

- *Advancements in Health Monitoring (General)*
  - Mitigate severe power and size constraints (effects everything)
  - Improve usability and value in decision making (wireless commo and alarms)
  - Improve integration into the weapon
- *Advancements in Health Monitoring (Sensors)*
  - Provide sensor solutions that address above constraints
  - Add new data elements and improve metrics of existing data elements
- *Reliability Characterizations and Failure Prediction*
  - Support future research, development, design and assessments
  - Establish stress vs. strength relationships that serve as the constitutive elements of enhanced sustainment
- *Enhanced (Lower Cost) Maintenance and Sustainment Processes*
  - Techniques combining data elements, failure characterizations, and decision process algorithms to enable lower cost condition-based maintenance, supply and sustainment of Army weapons

O. Launcher Electronics & Mechanics

P. Manufacturing, Affordability & Productibility

- *Missile Affordability*
  - Automated cost estimates for missiles
  - Increased accuracy of cost forecasts
  - Decision tools that map cost to performance/target sets
- *Manufacturing Science*
  - Manufacturing research for specific cutting edge technologies, including additive manufacturing
- *Production Technologies*
  - Investigate new processes and methods of manufacturing that reduce cost for missile components

Aviation Mission:

1. To manage and conduct basic research, applied research, and advanced technology development for Aviation Technologies.

2. To provide one-stop life cycle engineering and scientific support for aviation systems and UAS platforms, mature technology to maintain relevance of current fleet, and develop and mature technologies to support the future fleet.

Areas of Interest:

A. Aviation Mission Systems

- *DVE Mitigation*
- *Common Human Machine Interface*
- *Increased Levels of Autonomy*
- *Manned-Unmanned Intelligent Teaming*
- *Cognitive Decision Aiding*
- *Reduced Vehicle Signatures*
- *Advanced Threat Protection*
- *Weapons Integration*

B. Aviation Platforms

- *Joint Multi-Role Technology Demonstrator*
- *Rotorcraft Airframe Technology*
- *Lightweight, Durable, & Damage Tolerant Structures*
- *Advanced Flight Control Systems*
- *Reduced Vibrations*
- *Reduced Acoustic Signature*
- *Adaptive Vehicle Management*
- *Improved Vehicle Performance*
- *Advanced Rotors*
- *Aircrew Protection*

C. Aviation Sustainment

- *Reduced Maintenance Actions*
- *Improved Reliability*
- *Improved Mission Readiness*
- *Reduced Spares Logistics*
- *High Reliability Prognostics/Diagnostics*

D. Aviation Concept Design and Assessment

- *Advanced Concept Studies & Design*
- *Attribute and Effectiveness Assessment*

E. Aviation Power Systems

- *Increased Fuel Efficiency*
- *Lightweight Drive Trains*
- *Improved Reliability and Durability*
- *Reduced Weight/Vibration*
- *Alternative Concept Engines*

F. Aviation Basic Research

- *Rotor Aerodynamics*
- *Flow Control*

X. Space and Missile Defense Command (SMDC), HQ REDSTONE, AL

SBIR POC: usarmy.redstone.smdc.mbx.sbir-deliverables@mail.mil

The SMDC/ARSTRAT is built upon a lengthy history of achievement in space and missile defense. Since 1957, when the Army created the first program office for ballistic missile defense, the command has dedicated itself to missile defense research, development and deployment.

Mission: USASMDC/ARSTRAT conducts space and missile defense operations and provides planning, integration, control and coordination of Army forces and capabilities in support of U.S. Strategic Command missions; serves as the Army force modernization proponent for space, high altitude and global missile defense; serves as the Army operational integrator for global missile defense; and conducts mission-related research and development in support of Army Title 10 responsibilities.

Areas of Interest:

A. High Power Microwave (HPM) Technologies

- *HPM munitions ranging in various sizes*
- *New pulsed power technologies (explosive and non-explosive)*
- *Power conditioning components,*
- *Sealed vacuum HPM tubes,*
- *Efficient broad band electrically small and large antennas with high power handling capability, specifically, compact and electrically small antennas*
- *Rugged efficient HPM tubes with a long shelf life*
- *Advance ferroelectric and ferromagnetic materials*
- *Efficient closing and opening switches*
- *Inexpensive expendable broadband diagnostics*
- *Efficient Marx generators with rapid chargers Rugged flux compression generators*

B. Laser Directed Energy Technologies

- *Laser Directed Energy (DE) Sources, Concepts, and Applications*
- *Advanced Solid State Laser (SSL) concepts that reduce cost, weight, and complexity while improving efficiency, reliability, and eye safety*
- *Advanced solid state laser component technologies that improve laser system performance*
- *Advanced Laser pump sources that increase the current state of the art in efficiency, high brightness, reliability, operating temperature, and reduces production costs*
- *Beam control components and techniques that reduce weight, cost, and complexity with improved engagement ranges of weapon systems*
- *Advanced beam control and beam combining concepts and technologies that improve laser DE system efficiency, extends effective range, and improves overall system performance*
- *Directed Energy lethality and propagation testing and support technology and equipment (sensors) to provide validated data to laser DE modeling and simulations and war gaming*
- *Compact pulsed power concepts and technologies*

C. Lightweight Nanosat Subsystem Technologies

- *Attitude determination and control system*
- *Electrical power conditioning subsystem*
- *Intersat communications system*
- *Lidar payload*
- *Electrical power subsystem*

D. Counter IED Systems and Forensics

- *HPM Sources*
- *HPM Detectors*
- *Compact RF Sources*
- *DNA Technologies*
- *Fast Information Correlation Engines*
- *Explosives Detection*
- *Explosives Identification*
- *Detonator Identification*
- *Trusted Path Technologies*
- *Predictive HPM Effects*
- *RF and EM modeling*

E. Cyberspace Technologies

- *Trusted Information Exchange*
- *Space Communication Network Security*
- *Global Supply Chain Security and Risk Management*

XI. SFC. Paul Ray Smith Simulation and Training Technology Center (STTC), Orlando, FL

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The Army Simulation and Training Technology (STTC) provide DoD and DHS with state-of-the-art applied research to develop simulation technologies, build on current simulation knowledge, and understand system of systems environments where human, agent, and teams are involved.

Mission: Provides simulation expertise, research and transition of simulation enabled learning technologies for training, test and training instrumentation, mission planning and mission rehearsal systems.

Areas of Interest:

- *Real-Time Human-In-The-Loop Simulation***:** This area includes technologies that support training, learning and mission rehearsal. It includes human, agent, and team interfaces, sensory stimulation, and tracking technologies for systems of systems approach to linked, distributed, or embedded systems

- *Behavioral Representation:* Artificial intelligence technologies are widespread among the STTC's missions (embedded training, medical training, agent simulations, advanced learning environments, etc.) and include computer-generated forces, intelligent tutoring systems, composable behavior technologies, and simulation management technologies.

- *Shared Simulation Environments:* This area includes test and training environments for missions like urban operations, advanced learning, embedded training, and distributed development. It includes technologies for the rapid construction of urban environments and multi-elevation structures. It includes cross-domain technologies like augmented reality and architectures and standards for distributed simulation environments.

- *Support Training Transformation (T2):* Providing simulation technologies for a capabilities-based learning environment for the department of defense in support of national security requirements.
    - Joint Knowledge Development and Distribution Capability
    - Joint National Training Capability
    - Joint Assessment and Enabling Capability

XII. U.S. Army Tank Automotive Research, Development, and Engineering Center (TARDEC)

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The U.S. Army Tank-Automotive Research, Development and Engineering Center (TARDEC), is the nation's laboratory for advanced military automotive technology. Headquartered at the Detroit Arsenal, Warren, MI, TARDEC is located in the heart of the world's automotive capitol.

Mission: Provide full service life cycle engineering support to our TACOM LCMC Customers (PEO GCS, PEO CS&CSS, ILSC) and PM FCS (BCT), to develop and integrate the right technology solutions to improve the effectiveness of the current force and realize the superior capability of the future force to facilitate Army transformation.

Areas of Interest

A. Product Lines

- *Combat and Tactical Vehicles*
- *Logistics Equipment*
- *Water Generation and Purification*
- *Fuels and Lubricants*
- *Military Bridging*
- *Fuel and Water Storage, Distribution and Quality Surveillance Equipment*
- *Countermine Equipment*

B. Technology Thrusts

- *Vehicle Survivability Systems*
- *Water Generation and Purification*
- *Unmanned Vehicle Developments*
- *Advanced Vehicle Concepts*
- *Fuel and Lubricant Research*
- *Crew Station Integration and Automation*
- *Software/Vetronics*
- *Next Generation Software*
- *Hybrid-Electric Power*
- *Propulsion*
- *Fuel Cells*
- *Collaborative Environments*
- *Physical Prototyping*
- *Advanced Materials*
- *Analytical and Physical Simulation*
- High Performance Computing

C. Strategic Technology Areas

- *Unmanned Ground Vehicle Robotics*
- *Power & Energy*
  - Advanced Power Systems
  - Energy Storage
  - Fuel Strategy
- *Vehicle Electronics*
  - On-board Prognostics/Diagnostics
  - Condition-based Maintenance
  - Logistics
- *Leverage industry technologies to enhance TARDEC programs*
- *Lifecycle Data Management*

XIII. U.S. ARMY Test and Evaluation Command (ATEC), Aberdeen Proving Ground, MD

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The U.S. Army Test and Evaluation Command (ATEC) was established October 1, 1999 by the Vice Chief of Staff with the primary function of ensuring that our Soldiers go to war with weapons that work. ATEC has overall responsibility for all Army developmental and operational testing, operating from subordinate commands and test centers.

Mission: U.S. Army Test and Evaluation Command (ATEC) plans, integrates, and conducts experiments, developmental testing, independent operational testing, and independent evaluations and assessments to provide essential information to acquisition decision makers and commanders.

Areas of Interest:

A. *Primary function of ensuring that our Soldiers go to war with weapons that work. ATEC has overall responsibility for all Army developmental and operational testing, operating from subordinate commands and test centers***.**

B. *Army Evaluation Center, Aberdeen Proving Ground, MD* -- plan, support, conduct and provide independent evaluations, assessments, and experiments in order to provide essential information to decision-makers.

C. *Aberdeen Test Center, Aberdeen Proving Ground, MD* – Automotive, Live-Fire, Direct-Fire, Engineer Equipment, Soldier Systems, and Unmanned Ground Vehicles.

D. *Dugway Proving Ground, UT* – Chem/Bio Defense, NBC Survivability, Smoke & Obscurants, Meteorology.

E. *Electronic Proving Ground, Fort Huachuca, AZ* – Digitization Testing, Command, Control, Communications, Computers & Intelligence, Information Assurance, C3 Testing, SW Blocking.

F. *Operational Test Command* -- plans, conducts and reports rigorous operational tests, assessments and experiments in order to provide essential information for the acquisition and fielding of Warfighting systems.

G. *Redstone Test Center, Redstone Arsenal, AL* – Line-of-Sight Missiles and Rockets, Guidance Systems, Lightning Effects, Shoulder-fired Weapons, Optical/Electro-optical Systems, Aircraft Systems, and Airworthiness.

H. *White Sands Missile Range, NM* – MEADS Missiles, Ballistic Missile Defense, Nuclear Effects, Directed Energy Weapons, Fixed-wing A/C Armaments.

I. *Yuma Proving Ground & Satellites, Yuma, AZ* -- Indirect Fire, Air Delivery, Rotary-wing A/C, Armaments, UAS, Improvised Explosive Devises, Natural Environments
   - Cold Regions Test Center, Fort Greeley, AK – Natural Environments
   - Tropic Regions Test Center, Panama – Natural Environments

XIV. PEO Ammunition

SBIR POC: https://www.pica.army.mil/PEOAmmo/EmailUs.aspx?poc=1

PEO Ammo is committed to providing superior ammunition to the Soldier. The PEO is responsible for life-cycle acquisition management of all conventional ammunition, which includes integrating budgets, acquisition strategies, R&D and life-cycle management across all ammunition families.

Mission: Develop, equip, and sustain lethal armament and protective systems enabling joint warfighter dominance.

- *Support the Joint Warfighter*
- *Deliver Improved Capabilities*
- *Develop People and Teams*
- *Operate Effectively and Efficiently*

A. PM Close Combat Systems

Mission: Maintaining freedom to move on the battlefield is mission-essential for Army ground forces. The vision and mission of PM Close Combat Systems is to ensure that Soldiers have this capability by developing and supporting technologically advanced in networked munitions, countermine, and demolitions, protect force, explosive ordnance disposal equipment, grenades, pyrotechnics, and shoulder launched munitions.

Areas of Interest and Technologies Associated with the following:

- *Networked Munitions*
- *Countermine Systems and Explosive Ordnance Disposal Equipment*
- *Demolitions*
- *Non-Lethal Systems and Munitions*
- *Grenades*
- *Pyrotechnics*
- *Shoulder Launched Munitions*

B. PM Combat Ammunition Systems–Indirect Fire

Mission: PM Combat Ammunition Systems (PM CAS) performs life-cycle management of gun-launched indirect fire munitions, mortar weapons and mortar fire control systems including related fuzes, fuze setters, propellants, explosive fills, software, hardware and electronics. Life-cycle management includes development, integration, test, production, remanufacturing, and sustainment. PM CAS' vision is to deliver conventional and leap-ahead munitions combat power to warfighters, giving them the materiel edge over our nation's real and potential adversaries.

Areas of Interest and Technologies Associated with the following:

- *Precision-Guided Munitions*
- *Smart Munitions*
- *Conventional Munitions*
- *Mortar Weapon Systems*
- *Mortar Fire Control Systems*
- *Fuzes And Fuze Setters*

C. PM Joint Services

Mission: The vision of PM joint services (PM JS) is to create an acquisition "pipeline" that rapidly provides the warfighter with conventional ammunition. This necessitates an acquisition approach that delivers rapid, affordable conventional ammunition and is flexible, responsive and proactive while improving the health of the industrial base and meets and exceeds the services expectations. Continual improvement to the customers total munitions delivery time, including acquisition and production cycle time, is an overarching objective of PM JS.

Areas of Interest:

- *Procurement Of Other Services' Unique Conventional Ammunition (e.g., Bombs, Pyrotechnics, Propellants, Navy Gun Ammo, Explosives)*
- *Demilitarization of Conventional Ammunition*
- *Execution Of SMCA Industrial Base Functions*

D. PM Maneuver Ammunition Systems–Direct Fire

Mission: The mission of PM Maneuver Ammunition Systems (PM MAS) is to equip warfighters, mounted and dismounted, with all calibers of direct fire ammunition for the Army's current, Stryker, and future forces. Under the single manager for conventional ammunition responsibilities, PM MAS also procures ammunition for the Navy, Air Force, and Marines. PM MAS provides ammunition for ground combat platforms, helicopters, ships, and high performance aircraft. The PM does this through life cycle program management of small, medium, and large caliber ammunition to include smart munitions.

Areas of Interest and Technologies Associated with the following:

- *Small Caliber*
- *Medium Caliber*
- *Large Caliber*
- *Smart Munitions*

V. PEO Aviation

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

Serves as DA centrally selected Project Manager for the Apache Attack Helicopter (AH-64). Responsible for all duties and functions associated with being the Army's central point of contact for all materiel system matters pertaining to the AH-64. Plans, programs, manages, and executes an annual research, development and procurement budget in excess of $1B. Responsible for support and sustainment of AH-64D fleet, and remanufacture, testing, fielding, support and sustainment of AH-64E fleet and Fire Control Radar.

Mission: Leads and Executes the Army's Life Cycle Management for Aviation Weapon Systems.

Areas of Interest:

A. PM Aviation Systems

Mission: Project Manager Aviation Systems (PM AS) supports the Soldier worldwide with responsive services and overmatching technologies. Our professional workforce collaborates with all stakeholders to develop, acquire, field, and sustain equipment that maximizes readiness and innovates future capabilities. Products managed include Air Traffic Control (ATC), Aviation Mission Equipment (AME), Aviation Mission Planning (AMP), and Aviation Ground Support Equipment (AGSE).

B. PM Cargo Helicopter

Mission: Serves as DA centrally selected Project Manager for Chinook Helicopter (CH-47). Responsible for all duties and functions associated with being the Army's central point of contact for all materiel system matters pertaining to the CH-47 Platform. Plans, programs, manages, and executes an annual research, development and procurement budget, provides worldwide CH-47 users with an operationally capable, safe, technologically superior, and cost effective cargo helicopter fleet. Balances Current and Future Readiness and provides the right sustainment CH-47 to fight the Overseas Contingency Operation (OCO). Produce and field a superior CH-47F to meet needs of current and future conflicts.

C. PM Unmanned Aircraft Systems

Mission: Serves as DA Centralized Selected Project Manager for Unmanned Aircraft Systems (UAS). Responsible for cost, schedule, and performance associated with the development, production, fielding, and sustainment of all Army Unmanned Aircraft Systems including the Gray Eagle (ACAT-1C), Hunter, Warrior Alpha, Gray Eagle Block 0, Shadow (ACAT-1C), Raven (ACAT-III), Puma, One System Remote Video Terminal (OSRVT)(ACAT-III), Universal Ground Control Station, Universal Ground Data Terminal, and Ground-Based Sense and Avoid (GBSAA) system. Leads a military, civilian, and contractor team of over 800 personnel, to include over 400 forward deployed contractors. Plans, programs, manages, and executes a portfolio budget in excess of $1B.

D. PM Utility Helicopters

Mission: Responsible for the leadership, centralized program management, and systems life cycle management of the Black Hawk and Lakota helicopter fleets, the world's largest helicopter fleets, as well as the T700 Engine Program. Provides overall direction for planning, programming, and execution of ACAT1C multi-billion dollar programs. Sets program baseline objectives integrating logistics support functions within the acquisition strategy to develop, acquire, test, and produce these systems. Directs, supervises, and coordinates the efforts of a dedicated Joint Service team of military, senior DA civilians, technical specialists, and contractor acquisition professionals. Coordinates Army Enterprise efforts for the program and interfaces with other government agencies, governments, and civilian organizations as required ensuring program success.

E. PM Fixed Wing Aircraft

Mission: Provides Life Cycle Acquisition Management of the Army's fixed wing fleet of transport and manned ISR aircraft.

F. PM Improved Turbine Engine/Future Vertical Lift (ITE/FVL)

Mission: Revolutionize our Nation's aviation warfighting capability by being the recognized innovators in the life cycle management of the Army's Improved Turbine Engine and Future Vertical Lift Programs. Effectively and efficiently execute all duties and functions associated with being the central point of contact for materiel system matters pertaining to the state of the art propulsion and vertical lift systems by creating a culture of motivated and empowered professionals staffed and resourced appropriately to provide the right capability to the warfighter. Plan, program, manage, and execute a steadily growing annual research, development budget for two multi-billion dollar programs.

G. Project Lead Non-Standard Rotary Wing Aircraft (NSRWA)

Mission: The mission of the Non-Standard Rotary Wing Aircraft (NSRWA) Project Office is to procure, field, and sustain Non-Standard Rotorcraft for the Department of Defense (DoD), allied countries, or as directed by the office of the Secretary of Defense (OSD) in support of overseas contingency operations (OCO).

XVI. JPEO Chemical Biological Defense (CBD)

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The Joint Science and Technology Office for Chemical and Biological Defense (JSTO-CBD) provides the management for the Science and Technology component of the Chemical and Biological Defense Program (CBDP). The JSTO-CBD Science & Technology programs and initiatives provide the basis for improved capabilities against chemical and biological weapons. Technologies developed under the SBIR program have the potential to transition to the Joint Program Executive Office for Chemical and Biological Defense (JPEO-CBD) when the appropriate level of technology maturity has been demonstrated. The JPEO-CBD consists of five joint project managers (JPMs) with specific portfolios of both developmental and fielded capabilities for the Warfighter.

Mission: Provide Research, Development, Acquisition Fielding and Life-Cycle Support of Chemical, Biological, Radiological and Nuclear Defense Equipment, Medical Countermeasures and Installation and Force Protection Integrated Capabilities Supporting the National Strategies.

Areas of Interest:

A. JPM Nuclear, Biological, and Chemical Contamination Avoidance (NBC CA)

Mission: Equip and sustain chemical and biological sensors, integrated reconnaissance systems and obscuration capability for our Joint Forces through tailored, cost effective, timely acquisition and services. Provide contamination avoidance products, test infrastructure capability and support services that focus on delivering capability to the Joint Warfighter in support of an ever changing real-world mission.

- **Product Director, Cross Commodity Advanced Threats and Test Infrastructure:** Provides Non-Traditional Agent Defense capabilities for the DoD through Research Development, Test, & Evaluation (RDT&E), in particular through improvements to existing test assets via the Test Grid initiative or provision of new test capabilities such as the Whole System Live Agent Test Chamber and the Non-Traditional Agent Defense Test System.
- **Product Director, Sensors:** Provides chemical warfare agent detection capabilities to the DoD through RDT&E, in particular through fielding the Joint Chemical Agent Detector and the Improved Point Detection System-Lifecycle Replacement, as well as developing the Next Generation Chemical Detector.
- **Joint Product Manager, Reconnaissance and Platform Integration:** Provides obscuration capabilities through development of the Screening Obscuration Module and fielding the Light Vehicle Obscuration Smoke System. Provides NBC reconnaissance through fielding the Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade and Dismounted Reconnaissance Sets Kits and Outfits while sustaining capabilities through the Chemical Biological Radiological and Nuclear Contractor Logistics Support. Also conducts advanced technology demonstration (ATD) similar initiatives such as the Joint CBRN Advanced Capability Sets (JCACS) Enhanced Capability Demonstration (ECD).
- **Joint Product Director, Biological Detection Systems:** Provides biological warfare agent detection capabilities to the DoD through RDT&E, in particular through developing the Joint Biological Tactical Detection System and Enhanced Maritime Biological Detection System, while contributing to ATDs such as the Joint United States Forces Korea Portal and Integrated Threat Recognition Assessment of Environmental Detection.

B. JPM Protection (P)

Mission: Equip and sustain the Joint Force for current and future expeditionary, deliberate, and crisis-response operations with the most capable and cost effective full spectrum chemical, biological, and radiological protection and hazard mitigation capabilities. Specific mission areas include Collective Protection which provides mobile, transportable, shipboard, and fixed site collective protection systems (e.g. filters, shelters, field hospitals, and kits); Individual Protection which provides percutaneous protection (suits, boots, gloves) as well as inhalation and ocular protection (respirators) on the ground and in the air, to include rotary and fixed wing variants; and Hazard Mitigation which provides technologies that rapidly reduce contamination hazards and enable reduction of Mission Oriented Protective Posture (MOPP) level while reducing life-cycle costs and logistical burdens.

Products/Programs:

- **Chemical Biological Protective Shelter (CBPS):** Mobile, self-contained, rapidly deployable chemical and biological shelter that provides a contamination-free, environmentally-controlled medical treatment area for U.S. Army Medical units.
- **Contamination Indicator Decontamination Assurance System (CIDAS):** Contamination indication/decontamination assurance technology and applicators for visually indicating traditional and nontraditional chemical warfare agents on tactical vehicles, aircraft, ships, crew-served weapons, and individual weapons exposed to chemical contamination.
- **Joint Biological Agent Decontamination System (JBADS)** Phase I: Thorough biological decontamination of the interior and exterior of cargo aircraft.
- **Joint General Purpose Decontaminant For Hardened Military EQUIPMENT (JGPD-HME)**: Thorough decontaminant that is compatible with the M26 and has a significantly reduced logistics footprint for tactical vehicles, shipboard surfaces, crew-served weapons, and individual/personal weapons in hostile and non-hostile environments that have been exposed to chemical and biological (CB) agents/contamination.
- **Joint Expeditionary Collective Protection (JECP):** Family of modular, transportable, and versatile collective protection systems, protecting personnel and infrastructure from Chemical, Biological, Radiological and Toxic Industrial Material contamination on and off the battlefield.
- **Joint Service Aircrew Mask-Joint Strike Fighter (JSAM-JSF):** Above-the-neck chemical biological, hypoxia, and anti-gravity protective respirator for F-35 pilots.
- **Joint Service Aircrew Mask Rotary Wing (JSAM RW):** Above-the-neck chemical biological protective respirator for general purpose rotary wing aircrew; capable of being donned and doffed while in flight. JSAM RW will provide increased CB protection and improved operational capability compared to legacy systems. JSAM RW allows aircrew to fly unencumbered and improves integration with aircraft and aircrew equipment.
- **Joint Service Aircrew Mask for Strategic Aircraft (JSAM SA):** Above-the-neck chemical biological protective respirator that provides Pressure Breathing for Altitude for fixed wing aircraft that do not require Pressure Breathing for Gravity.
- **Joint Service Aircrew Mask for Tactical Aircraft (JSAM TA)**: Above-the-neck chemical biological protective respirator that provides simultaneous Pressure Breathing for Altitude/Pressure Breathing for Gravity in high performance aircraft.
- **Joint Service Equipment Wipe (JSEW):** Immediate/operational decontamination capability for sensitive and non-sensitive equipment that has been exposed to chemical agent contamination in hostile and non-hostile environments.
- **Joint Service General Purpose Mask (JSGPM):** Above-the-neck chemical biological protective respirators against battlefield concentrations of CB agents, toxins, toxic industrial materials and radioactive particulate matter. Two variants: M50 (ground use) and M51 (ground vehicle use).
- **Uniform Integrated Protection Ensemble Increment 1 (UIPE Incr 1):** Percutaneous protection through reduction of physiological and psychological burdens associated with the weight, bulk, thermal strain, and encumbrance of wearing CBRN protective gear.
- **Uniform Integrated Protection Ensemble Increment 2 (UIPE Incr 2):** The UIPE Incr 2 program will develop, integrate, test, procure, and field incremental capability solutions that are modular in function and offer alternatives to current systems. The program will explore trade-space in areas such as protection level, protection time, heat stress, durability, flame resistance, and cost in order to provide capabilities that afford maximum utility to the Warfighter. A Family of Systems approach will be considered to address the full spectrum of CBRN protection across the DoD.

C. JPM Guardian (G)

Mission: Deliver agile capabilities to execute the Department of Defense (DoD) national security Chemical, Biological, Radiological and Nuclear (CBRN) priorities by deploying state of the art laboratory platforms and technologies, advanced CBRNE identification and analytic methodologies, and Chemical/Biological warfare agent elimination systems.

- **Joint Product Manager, Chemical Biological Radiological Nuclear and Explosives Analytics and Response Systems:** Providing the highest quality materiel solution to DoD Consequence Management Responders, applying rapid acquisition and fielding processes. On order, supports other Federal, State Agencies, and Local First Responders. Key products include:
    - Common Analytical Laboratory System (CALS) will integrate a common suite of commercial-and government-off-the-shelf components to provide a common, modular, and transportable/mobile analytical laboratory system to support DoD field analytic units with field confirmatory-and/or theater validation-level analysis capabilities.
    - Unified Command Suite (UCS) is a fully integrated mobile communications platform that is self-sufficient and highly interoperable using integrated commercial and military communication hardware. The UCS provides communications interoperability with federal, state, local, and military emergency response elements at an incident scene.
    - Chemical Reconnaissance and Explosives Screening Set (CRESS) is a disposable/consumable kit designed to quickly and easily screen for specific homemade explosive (HME) and precursors.
    - Search and Rescue, Mass Casualty Decontamination, and CBRN Reconnaissance Augmentation Kits and Medical Personal Protective Equipment (PPE) to support the Defense CBRNE Response Force.
    - Mortuary Affairs Contaminated Remains Mitigation System (MACRMS) provides Mortuary Affairs personnel with the equipment needed to decontaminate human remains (HR), support the forensic identification of HR packing and transportation.
    - Foreign Military Support provides mobile laboratory systems and Mass Casualty Decontamination sets, and PPE to Foreign Military partners.
- **Joint Product Leader, Emergency Management Modernization Program:** Provides integrated all-hazards emergency management capabilities to Army installations by serving as the lifecycle manager for development, acquisition, training, fielding, sustainment and product improvement. Core products are:
    - Mass Warning Notification (MWN) provides multi-modal warning notification capability that enables installation commanders to warn personnel within 10 minutes of incident confirmation.
    - Enhanced 911 (E911) provides automatic number identification and automatic location information to installation dispatch center operators for data collection and transfer to first responders.
    - Joint US Forces Korea Portal and Integrated Threat Recognition (JUPITR) Early Warning provides integration platform with map based common operating picture and a suite of integrated force protection, chemical and bio standoff sensors and detectors.
- **Joint Project Leader For Elimination:** Develops, produces, tests, integrates, sustains, operates and fields the capabilities (people, equipment, and training) required to conduct chemical WMD destruction operations (assess, access, demilitarize, decontaminate, dispose, and recover) worldwide. Key efforts are:
    - Scalable Elimination Sets, Kits and Outfits (SESKO) will provide a deployable identification, destruction, and disposition capability for small amounts/quantities of chemical warfare material in bulk agent containers and munitions used in a field environment to render chemical warfare material into compounds that cannot be used as weapons.
    - Non-Intrusive Detection Systems: As the project lead for the Chemical Materials Activity (CMA), the joint project leader investigates, tests, and demonstrates non-intrusive assessment technologies to evaluate recovered chemical warfare materiel (CWM). Technologies include the Portable Isotopic Neutron Spectroscopy system, Non-Intrusive Threat Detection System, and Digital Radiography and Computed Tomography system.

- Detonation of Ammunition in a Vacuum Integrated Chamber (DAVINCH) – Lite. As the project lead for CMA, the joint project leader developed acquisition strategy and tested the unit. Manages the project scope, schedule, budget, and execution for the testing.
- Remediation of Contaminated Soils. As the project lead for CMA, the joint project leader developed and are executing the acquisition strategy for testing and evaluating two technologies using thermal desorption and Vapor Energy Generator.
- Super Polymer Absorbent (SPA). As the project lead for Special Operations Command (SOCOM), the joint project leader developed and managed the execution of costs, schedules, test strategies, matrices and criteria; developed and managed acquisition strategies and contracts; and managed the Independent Verification and Validation milestone for low rate initial production.
- Explosive Destruction System (EDS) Development. As the project lead for Program Executive Office Assembled Chemical Weapons Assessment, the joint project leader developed the project scope and engineering changes from the existing EDS, a transportable chemical munitions elimination system to fabricate an enhanced version. Managed destruction of munitions - Pueblo stockpile.
- OCONUS Operations. As the technical lead for Army South, the joint project leader planned and supported the analysis of recovered chemical filled bombs located in a small island in Panama.

- **Joint Project Leader for Radiological and Nuclear Defense:** Provides research, development, acquisition, fielding, and life-cycle sustainment of joint radiological and nuclear defense systems supporting the National Military Strategy. Current programs are:
  - AN/PDR 75A Legacy Dosimeter records radiation exposure to the Warfighter. New production contract awarded 2011 for PDR-75A/DT236A; full material release in FY13.
  - Radiological Detection Systems (RDS) replaces DoD's legacy Radiation Detection, Indication and Computation (RADIAC) survey meters (AN/PDR-77, VDR-2, MFR Suite, and ADM-300) and provides the Warfighter with the capability to measure alpha, beta, gamma, neutron, and low energy x-rays.
  - Joint Personal Dosimeter – Individual provides a dosimeter to record, retrieve, and transmit a Service Member's radiation exposure.
- **The Joint Product Leader for Defense Biological Product Assurance Office**: Supports the Warfighter, the DoD, other federal agencies, and international allies through the consolidation of efforts in development, manufacture and distribution of reagents and assays for identification, detection, and characterization of biological agents.
  - Reagents: Antibodies, genomic materials and inactivated bacterial and viral pathogens are essential bio-detection reagents and are produced under International Organization for Standardization (ISO) Guide 34 and requisite ISO 17025 certified quality management systems. These reagent materials are derived from highly-characterized bacteria and viruses curated in the DoD Unified Culture Collection and produced under ISO Guide 34 and requisite ISO 17025 certified quality management systems.
  - Assays: Electrochemiluminescence (ECL) and Lateral Flow Immunoassays assays are antibody-based tests designed to detect the presence of biological threat agents and toxins thus are produced in accordance with rigorous quality assurance and quality control measures. Polymerase Chain Reaction (PCR) assays are uniquely formulated to detect specific biological threat agents and are produced under ISO Guide 34 and ISO 17025.

D. JPM Medical Countermeasure Systems (MCS)

Mission: The Medical Countermeasure Systems (MCS) Joint Project Management Office mission is to provide U.S. military forces and the nation safe, effective, and innovative medical solutions to counter CBRN threats. MCS was charted in 2013 as the acquisition life cycle manager of the Joint Project Executive Office of Chemical and Biological Defense's Medical Countermeasure (MCM) Portfolio. MCS is charged with the advanced development of new and improved MCM's technologies, and processes to provide U.S. military forces and the nation safe, effective medical solutions to counter evolving chemical, biological, radiological and nuclear (CBRN) threats and emerging infectious diseases (EID).

- **Joint Vaccine Acquisition Program (JVAP)**

  Fielded Products
  - Anthrax Vaccine Absorbed (AVA): Vaccine to protect Service Members from potential exposure to Bacillus anthracis, the causative agent of anthrax.
  - Smallpox (SPX) Vaccine: Vaccine (ACAM2000™) to protect Service Members from potential exposure to viruses that cause smallpox.
  - Vaccinia Immune Globulin Intravenous (VIG-IV): Treatment for rare but serious adverse reactions associated with the smallpox vaccine (ACAM2000™).

  In The Pipeline
  - JVAP is developing a portfolio of vaccines to protect Service Members from aerolized exposure to:
    - Botululium toxin A/B
    - Plague Vaccine
    - Filovirus Vaccine
    - Ricin Vaccine
    - Western, Eastern, and Venezuelan equine encephalitis

- **Chemical Defense Pharmaceuticals (CDP)**

  Fielded Products
  - Soman Nerve Agent Pretreatment Pyridostigmine (SNAPP): Pretreatment for the nerve agent soman. Efficacy of SNAPP is dependent on rapid use of atropine and pralidoxime (2-PAM) after soman exposure.
  - Antidote Treatment Nerve Agent Autoinjector (ATNAA): a dual-chambered, single-needle device that delivers atropine and 2-PAM to treat exposure to nerve agents by restoring muscle function.
  - Convulsant Antidote for Nerve Agents (CANA): Adjunct for the treatment of seizures due to nerve agent poisoning. Intended for buddy-aid administration.

  In The Pipeline
  - Bioscavenger (BSCAV): A human-derived protein with the ability to sequester and inactivate highly toxic traditional nerve agents.
  - Improved Nerve Agent Treatment System (INATS): A two-component system that will include a more effective oxiome to replace 2-PAM, and a centrally acting therapeutic to increase survival.
  - Advanced Anticonvulsant System (AAS): Midazolam will replace diazepam in the fielded CANA.
  - Alternate Autoinjector (Alt-Ai) Effort: multiple efforts focused on identifying and qualifying additional manufacturing and/or supplier sources for autoinjector delivered nerve agent treatments.

- **Diagnostics (DX)**

  Fielded Products
  - Joint Biological Agent Identification and Diagnostic System (JBAIDS): FDA-cleared reusable and portable biological agent identification and diagnostic system capable of rapid, reliable, and simultaneous identification of multiple biological agents in clinical and environmental samples. Sixteen pathogen surveillance assay kits are deployed covering 14 biological warfare agents (BWAs); seven FDA-cleared kits cover four BWAs and influenza.
  - Ebola Zaire (EZ1): Emergency Use Authorization (EUA) granted by FDA for the EZ1 polymerase chain reaction diagnostic kit on the JBAIDS, ABI 7500 Fast Dx, and LightCycler.
  - Next Generation Diagnostics System (NGDS) Increment 1: An FDA-cleared reusable, portable biological pathogen diagnostic and identification system capable of rapidly analyzing clinical and environmental samples.

  In The Pipeline
  - Next Generation Diagnostics System (NGDS) Increment 2: provide chemical, biological and radiological diagnostics capabilities to complement the NGDS Increment 1.
  - Joint Handheld Bio-Agent Identifier (JHBI): A lightweight, battery-operated, multiplexed, high-confidence, bioidentification system with sample preparation and a turnaround time of less than 60 minutes from sample to result.

- **Advanced Development and Manufacturing Capability (ADMC)**
  - The Advanced Development Manufacturer (ADM) Program: Provides a full spectrum of medical product functions, including research, manufacturing, nonclinical and clinical development, and fill finish operations. The ADM is owned by the Department of Defense (DoD), but operated by the DoD's contractor, Nanotherapeutics, Inc.

E. JPM Information Systems (IS)

Mission: Building the enterprise solution to provide the common warning and reporting, hazard prediction, and decision support backbone for the collection, analysis and dissemination of Chemical, Biological, Radiological and Nuclear information. JPM IS provides the Warfighter with integrated early warning capability, an accredited hazard prediction model, state-of-the-art consequence management, and course of action analysis tools. The Joint Warning and Reporting Network (JWARN), the Joint Effects Model (JEM), the Biosurveillance Portal and utilization of consequence management and decision support systems will provide the data and services optimizing decision support capability for commanders across all operational levels from the tactical to strategic as well as bridging the interoperability gap from DOD to civil agencies.

Products/Programs --

- **Joint Effects Model (JEM):** JEM provides the single DOD-approved and accredited methodology to model a common representation of CBRN hazard areas and effects resulting from CBRN events and TIC/TIM incidents. Using weather, terrain, agent characteristics, and advanced physics modeling, JEM provides an enhanced situational awareness of the operational environment for decision support and risk mitigation.
- **Joint Warning and Reporting Network (JWARN):** JWARN is a computer- based application integrating Chemical, Biological, Radiological, and Nuclear (CBRN) data and facilitates sensor information into Joint and Service C2 systems for battle space situational awareness. JWARN incorporates sensor alert information and CBRN observation reports from the field, makes a plot of the hazard area, provides overlays for display on the Common Operational Picture (COP), and generates the warning message to units.
- **Global Biosurveillance Portal (GBSP):** The Global Biosurveillance Portal (BSP) is an unclassified, web-based enterprise environment that will facilitate collaboration, communication, and information sharing in support of the detection, management, and mitigation of man-made and naturally occurring biological events. It provides a set of tools and capabilities that will facilitate the timely identification and detection of biological events in order to minimize operational impacts to the local and global populations.
- **CBRN Information Systems (CBRN IS):** Provide an "End-to-End", easily accessible set of CBRN Enterprise capabilities through web services utilizing Service Oriented Architecture (SOA).

XVII. PEO COMBAT SUPPORT AND COMBAT SERVICE SUPPORT (CS&CSS)

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The U.S. Army's Program Executive Office, Combat Support & Combat Service Support engages a team of more than 1,500 employees at five geographic locations to shape a common focus across multiple stakeholder organizations as we collaboratively design, develop, and deliver the essential, affordable capabilities America's Soldiers need for the 21st Century's diverse mission challenges.

Mission: Lead an innovative, disciplined lifecycle management team that enables America's warfighters by unburdening Soldiers in the field and constantly providing and improving the integrated, combat-enabling systems they need to dominate the full spectrum of Joint and Unified Land Operations.

Areas of Interest:

A. Project Manager Force Projection

Mission: Sustain and rapidly move the force and enable strategic response. PM FP systems touch every aspect of the Soldier's lives and provide emergency relief for natural disasters domestic and abroad.

Areas of Interest:

- *Construction And Materials Handling Equipment (Cranes, Construction Plants And Equipment, Graders And Scrapers)*
- *Petroleum and Water Systems (transportation, dispensing, storage, purification)*
- *Army Bridges (assault, tactical, and line of communication)*
- *Soldier Portable Sets (Battle Damage Assessment and Repair Kit, Explosive Ordnance and Disposal Kits, Individual Aircraft Armament Repair Tool Set, Forward Repair System, Battalion Maintenance Set, Glass and Canvas Shop Set)*
- *Modular Shop Sets (Body, Explosive Ordnance Disposal, Shop Equipment, Welding, Woodworking Shop Set)*
- *Shop Support Equipment (Milling Machines, Welding Machines, Engine Lathes)*
- *Diving Equipment (Individual Swimmer Support Set, Divers Underwater Photo Support Set, Swimmer Support Set, Open Circuit Scuba Set)*
- *Test, measurement, Diagnostic and Calibration Equipment*
- *Robotic and unmanned ground platforms*

Surrogate Product Manager/Director Offices: Combat Engineer and Material Handling Equipment (CE/MHE), Petroleum and Water Systems (PAWS), Bridging, Sets, Kits, Outfits, and Tools (SKOT), Test Measurement and Diagnostic Equipment (TMDE), Robotic Systems.

B. Joint Program Office Joint Light Tactical Vehicle (JPO JLTV)

Mission: Develop, Acquire and Field the Family of Joint Light Tactical Vehicles in order to provide capability and flexibility to the Joint Warfighter across the full spectrum of military options for the next 30 years and beyond

Areas of Interest: Technologies Associated With The Following:

- *Joint Light Tactical Vehicle technologies focused on balancing the iron triangle of payload, performance, and protection in the first vehicle purpose built for warfighter network connectivity*

Surrogate Product Manager/Director Offices: JLTV EMD A, JLTV EMD B, JLTV EMD C, Test.

C. ARMY Program Office Mine-Resistant, Ambush Protected (APO MRAP)

Mission: Deliver Mine Resistant Ambush Protected (MRAP) Vehicles, maintain the operational relevancy of the MRAP vehicle fleet, and sustain maximum readiness for the U.S. and Coalition Forces.

Areas of Interest: Technologies Associated With The Following:

- *Mine-Resistant Ambush Protected Vehicles*
- *Route Clearance vehicles (RG-31, Buffalo, Husky, RG-33/Panther, Area Mine Clearance System)*
- *Route Clearance Enablers (Interrogation Arm, Wire Neutralization System, Blower)*

Surrogate Product Manager/Director Offices: Joint Logistics, MRAP Vehicles Systems, Assured Mobility Systems.

D. Project Manager Mobile Electric Power (PM MEP)

Mission: Provide integrated expeditionary energy, force sustainment, and contingency basing support to the Joint Warfighter across the full range of military operations.

Areas of Interest:

- *Generators, Batteries, and Hybrid/Alternative Power Generation Sources.*
- *Power Distribution technologies.*
- *Environmental Control Unit technologies*
- *Force Sustainment Systems (Aerial Delivery Equipment, Shelter Systems, Field Feeding Systems)*

Surrogate Product Manager/Director Offices: Small Power Sources, Medium Power Sources, Large Power Sources, Battery Power Sources, Force Sustainment Systems, Contingency Basing Infrastructure.

E. Project Manager Transportation Systems (PM TS)

Mission: Conduct Life Cycle Management for Joint, Expeditionary and Coalition forces, fielding essential maneuver and readiness capabilities to the Warfighter, capitalizing on emerging technologies while maintaining maximum performance of fielded systems. The current TWV fleet is composed of the M915, PLS, HET, HEMTT, FMTV, and HMMWV family of vehicles, as well as all associated trailers and armor solutions. PM TS pursues technology that will improve the capabilities of the current fleet with the right products at the right time for the right price.

Areas of Interest:

- *Tactical Vehicles*
- *Watercraft Systems (Landing Craft Utility, Logistics Support Vessel, Tugboats, Causeway Systems, Landing Craft Mechanized/Maneuver Support Vessels, Barge Derrick, Roll On Roll Off Discharge Facility)*
- *Vehicle armor protection solutions.*

Surrogate Product Manager/Director Offices: Light Tactical Vehicles, Medium Tactical Vehicles, Heavy Tactical Vehicles, Army Watercraft Systems, Product Support Manager Armored Security Vehicle (PSM ASV), and Allied Tactical Vehicles.

XVIII. PEO Command, Control and Communications Tactical (C3T)

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The Program Executive Office: Command, Control and Communications-Tactical (PEO C3T) is a United States Army procurement office. Organizationally PEO C3T falls under the United States Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA(ALT)).

The PEO C3T provides U.S. Army Soldiers with the computer systems, radios and communications networks in support of combat operations. They develop, acquire and field to all Army units a range of products including specialized software applications, generators, radios, computers, servers and communications systems; and integrate these systems together so they function seamlessly; while providing on-site training and support for the systems deployed worldwide.

The organization is responsible for Six Project Management (PM)/Product Management (PdM) offices who play a key role in the design acquisition, fielding and support of fully integrated and cost-effective Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR).

Mission: To rapidly develop, field, and support fully networked capability sets.

Areas of Interest:

- *Tactical Satellite Ground And Commercial Terminal Programs*
- *Tactical And Portable Satellite Communications Terminals*
- *Software Programmable And Hardware Configurable Digital Radio Networking System*
- *Communications System For Reliable, Secure, And Seamless Video, Data, Imagery, And Voice Services*
- *Terrain Analysis, Image Maps, Battlefield Data And Topographic Information*
- *Generation Of A Variety Of Mobility, Visibility, And Special Purpose Tactical Decision Aids*
- *File Access, File Management, Database Access, And Database Management*
- *Forward Entry Devices*
- *Handheld C2 And Wireless Technologies*
- *Geo-Referencing Software*
- *Tactical Radios*
- *Area Common User System*
- *Network Operations Systems*
- *Antenna Technologies*

A. Project Manager Mission Command (PM MC)

PM MC delivers capabilities across the warfighting functions of movement and maneuver, command and control, fires, sustainment, protection, intelligence and engagement. Implementing the Army's Common Operating Environment, PM MC fields the Command Post Computing Environment (CP CE) and, the Mounted Computing Environment (MCE) while facilitating interoperability between CP CE, MCE and other CEs. PM MC uses an agile and effective development process to achieve both near-term deliveries to current systems and longer-term development to enhance mission command capabilities.

Mission
PM Mission Command (PM MC) is to provide intuitive, adaptive mission command and situational awareness capabilities for the command post and platform that enable mission execution by commanders and leaders at all levels to be more effective, agile and decisive.

Description
Project Manager Mission Command (PM MC) develops, deploys and sustains integrated mission command and situational awareness capabilities to the Army and Joint forces. PM MC recently merged with Joint Battle Command-Platform (JBC-P) to create a single, enhanced organization that is providing interoperable command post and mounted capabilities to the Soldier.

B. Program Manager Office Network Enablers (PMO Net E)

Mission
Provide a common axis of acquisition discipline and resource efficiencies to enable security, standards, policies, planning, initialization and products while focused on the simplification of data and tactical C4ISR network infrastructures.

Description
Program Management Office Network Enablers (PMO Net E) provides the products that serve as critical enablers for the Army's tactical communications and data network capabilities. PMO Net E ensures the security and fidelity of the information transmitted across the network; simplifies warfighter and first responder network tasks and operations; and streamlines the delivery of hardware and software solutions to meet changing technology needs. Several organizations have been consolidated under the common Net-E umbrella to provide integrated, standardized and cost-effective network products and services to improve the user experience and support a dynamic network environment. PMO Net E partners with all Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) product teams to create and apply common standards aimed at delivering the most intuitive and efficient solutions for the user.

C. Project Manager Warfighter Information Network-Tactical (PM WIN-T)

To meet the Army's strategic priorities for readiness, responsiveness and regional engagement, ongoing capability advancements in the WIN-T programs are improving simplicity, mobility, modularity and agility. The program's advanced communications capabilities enable scalable expeditionary networking and directly support the Army's goal for uninterrupted mission command at every stage of operation.

Mission
The mission of PM Warfighter Information Network – Tactical (WIN-T) is to integrate the communications network for the Objective Force (OF), optimized for offensive and Joint operations, while providing the Theater Commander in Chief (CINC) the capability to perform multiple missions simultaneously with campaign quality. It will be a framework, which will set standards and protocols for OF Infospheres while interfacing with and/or replacing equipment in legacy and interim forces. WIN-T is the OF high-speed and high capacity backbone communications network. The WIN-T program is the army's communications system for reliable, secure, and seamless video, data, imagery, and voice services that enable decisive combat actions. The WIN-T system will establish an environment in which commanders at all echelons will have the ability to operate with virtual staffs and analytical centers that are located at remote locations throughout the battle space.

Description
Project Manager Warfighter Information Network-Tactical (PM WIN-T) provides network connectivity to the Army through a suite of scalable integrated capability and services to meet the needs of Soldiers in current and future operations. WIN-T is the Army's common tactical communications network backbone that enables mission command and secure reliable voice, video and data communications anytime, anywhere. Leveraging both satellite and line-of-sight for optimum efficiency and effectiveness, the WIN-T network provides the data "pipe" that other communication and mission command systems need to connect into in order to operate. With WIN-T, Commanders can leverage mission command applications anywhere from a traditional command post, to a network-equipped vehicle crossing the battlefield, even from the belly of C17 aircraft en route to an objective. Connected to the WIN-T network, Soldiers at every echelon are continually backed by the strength and expertise of the entire force and are armed with the mission command capabilities needed to win in a complex world.

D. Project Manager Tactical Radios(PM TR)

Mission
Project Manager Tactical Radios (PM TR) provides the Army and other services with tactical radio communications systems to meet mission requirements.

Description
Project Manager Tactical Radios (PM TR) enables tactical communications by providing a range of products that are capable of terrestrial and celestial communications. There are three Product Managers (PdMs) within PM TR: Product Manager Airborne, Maritime Fixed Station (PdM AMF), Product Manager Handheld, Manpack and Small Form Fit (PdM HMS) and Product Manager Mid-tier Networking Vehicular Radio (PdM MNVR).

PM TR's acquisition mission is to develop and field the next generation of software-defined tactical radio systems, while also fielding and sustaining legacy/current force tactical radio systems. The tactical radios team supports the Army and other services by providing the right radio, at the right time, in the right place.

E. Cyber Operations / Chief Information Officer

Mission
Cyber Operations / CIO provides a full spectrum, system of systems approach to the delivery of defensive cyber solutions and implementation of cyber operations for the tactical communications network, crypto devices, tactical radios and mission command assets.

Description
Cyber Operations / CIO enables cyber security, information security and risk management across PEO C3T, its program offices and tactical systems. By implementing policies, standards and procedures, Cyber Operations / CIO will ensure a secure information sharing environment for PEO C3T's daily operations and the Army's tactical network. Three subsections, including the Chief Information Security Officer, Cyber Outreach/Research and Development/Cyber Initiatives, and CIO Support collaborate to address the following five lines of effort: security architecture and engineering; cyber processes; capabilities and solutions; workforce development and training; and communication with external organizations.

F. Joint Tactical Networking Center (JTNC)

Mission
To ensure interoperable, secure, and affordable waveform and wireless communications by recommending standards, conducting compliance and certification assessments in accordance with DoD policies, and maintaining a DoD Waveform Information Repository (IR).

Description
The Joint Tactical Networking Center provides coordinated wireless communications expert technical support to USD (AT&L) and DoD CIO-related policy initiatives and governance processes aimed at ensuring interoperable, secure, and affordable waveform and wireless communications.

To achieve its vision and execute its mission, the JTNC is organized into three functional entities: DoD Waveform Information Repository, DoD Waveform Standards, DoD Waveform Compliance & Certification. Also included under PEO C3T is the Military Technical Solutions Office, the Readiness Management Division, Business Management Division and Technical Management Division.

XIX. PEO Enterprise Information Systems (EIS)

SBIR POC: usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil, 866-570-7247

The AcqBusiness Program provides Information Management capabilities that support Acquisition community needs for Acquisition data, data management services and Enterprise Business applications. These capabilities enable the consistent, effective and efficient conduct of the acquisition business. Planning and development of additional capabilities are ongoing with rapid prototyping, user involvement and rapid capability distribution as core elements of the program strategy.

Mission: ***Enable information dominance*** for every Soldier by rapidly delivering innovative and cost-effective IT solutions connecting the global Army.

Areas of Interest:

A. Acquisition, Logistics and Technology Enterprise Systems and Services (ALTESS)

Mission: ALTESS provides enterprise products and services to the Army Acquisition Executive (AAE), the Office of the Assistant Secretary of the Army for Acquisition, Logistics & Technology (ASA (ALT)) and the Acquisition Domain. The platform is a net-centric collaborative environment relevant to the Army and DoD acquisition domains. ALTESS also provides specialized information management products, support, solutions and services to other Army and DoD elements. The Army Enterprise Systems Integration Program (AESIP) is the means by which the Army will integrate business functions by providing a single source for enterprise hub services, centralized master data management and business intelligence and analytics. The mission of AESIP (formerly known as Product Lifecycle Management Plus [PLM+]) has been expanded to provide cross-domain integration services for the Army's Business Mission Area.

B. Army Human Resource System (AHRS)

Mission: The Army Human Resource System (AHRS) Product Management Office produces and establishes personnel management information systems for the active Army. AHRS facilitates the modernization of human resource advancement that includes support to the Army's personnel transformation by providing commanders with Web-based, interactive and accurate military personnel information to make decisions and effectively manage personnel. The AHRS overall goal is to consolidate some of the Army field level personnel systems in preparation for migration to the Defense Integrated Military Human Resource System (DIMHRS).

C. Army Knowledge Online (AKO)

Mission: The Army Knowledge Online Project Office provides premiere enterprise Web portal functions, tools and services to the warfighter, institution and greater Army community, securely and reliably, anywhere and anytime. It enables transformation, efficiency and greater connectivity among Soldiers, Army families and the Army workforce.

D. Computing, Hardware and Enterprise Software Solutions (PROGRAM (CHESS)

Mission: To support the Army's warfighter information dominance objectives by developing, implementing and managing information technology contracts that provide comprehensive hardware and software solutions with enterprise focused support services within the Army Knowledge Enterprise Architecture.

E. Biometrics

New to the PEO EIS family, Product Director (PD) Enterprise Biometrics will be responsible for design, engineering, development, implementation and life cycle sustainment of a DoD enterprise biometric solution.

F. Command Center Upgrades/Special Projects Office (CCU/SPO) PM NSC

Mission: CCU/SPO provides overall project management, engineering, acquisition, installation, integration and testing for the upgrade, modernization or relocation of Command, Control, Communications, and Computers Information System (C4IS) operations and systems at Army, Joint, and Combined Headquarters/Command Centers and other C4IS-intensive facilities. CCU/SPO not only has decades of experience in command center upgrades, but also has expertise in technical disciplines including voice, video, data, long-haul communications, telephone switching, software intelligence, audio-visual distribution briefing display systems and emergency response systems (911).

G. Network Service Center (NSC)

Mission: Acquire and sustain upgrades/modernization of Enterprise-enabled voice and data networks in support of the Installation Information Infrastructure Programs worldwide. PM NSC provides core data backbone and telecommunications infrastructure upgrades and modernizations to Army installations around the world. PM DCASS is the primary implementer of the Installation Information Infrastructure Modernization Program (I3MP) and has recently assumed responsibility to provide the Goal 3 enterprise solution in support of the Army Knowledge Management (AKM) Strategic Plan.

H. Defense Communications and Army Transmissions Systems (DCATS)

Mission: PM DCATS supports joint warfighters, major commands and Combatant Commanders with dedicated, worldwide, strategic satellite ground components and long-haul terrestrial microwave communications systems, tech

control facilities, command center upgrades, base radios, combat vehicle intercom systems and deployed forces infrastructure. DCATS is a suite of more than 100 projects. PM DCATS provides centralized, intensive project management of communications transmission systems projects and other special programs, worldwide. With a track record of proven success since 1967, PM DCATS can provide the long-haul connectivity customers need, using microwave, satellite, fiber optic or copper cable links regardless of distance, terrain or other impediments.

I. Defense Information Management Human Resources Systems (DIMHRS)

Description: DIMHRS will be a single, standard military personnel and pay system supporting military personnel of all services and their components at the services -- personnel support activities. It will collect, store, pass, process and report personnel and pay data for these personnel. In addition, DIMHRS will provide the capability to collect, process and report appropriate data on DoD-sponsored civilians and designated foreign military personnel deployed to, or in, a theater of operations as required during specified contingency, wartime and non-combatant evacuation operations. This capability will accommodate surges in records maintained. The system will maintain personnel information on retirees and survivor personnel. Another system will provide pay support for survivors and retirees.

J. Defense Messaging System-Army (DMS-A)

Mission: To support the Army and joint warfighter's information dominance objectives by partnering with DoD and other governmental agencies to develop, acquire, integrate, and deploy an enterprise solution for an interoperable, seamless and secure writer-to-reader electronic messaging system for organizational users. Extend the solution throughout the Army and supported Combatant Commands, whether strategically placed or tactically deployed.

K. Defense Wide Transmission System (DWTS)

Mission: DWTS fields selected strategic and base support C4I systems. DWTS is also responsible for providing development, modernizing C4I systems, implementing terrestrial transmissions and improving technical control projects worldwide, for the Army, other services and the Joint Chiefs of Staff.

L. Distributed Learning System (DLS)

Mission: Acquire, deploy and maintain a worldwide distributed learning system to ensure our nation's Soldiers receive critical training for mission success. Soldier readiness necessitates training on-demand. Distributed Learning System (DLS), the infrastructure that delivers distributed learning, is breaking old training paradigms by bringing training to the Soldier anywhere, anytime, 24/7. Using state-of-the-art technology, DLS streamlines training processes; automates training management functions; delivers training using electronic means; and enables military and civilian personnel, training developers, training managers, unit commanders and training noncommissioned officers (NCOs) to access training using the Web. Distributed learning provides the Army with the capability to obtain the state of readiness necessary to accomplish the Army's mission and contributes to quality of life by increasing stability for both Soldiers and civilians in their personal and professional lives. DLS is dedicated to providing a quality distance-learning system to all Army components in the most expeditious and cost-effective manner possible. DLS is responsible for fielding multiple training systems simultaneously–the success of each program directly impacting the Army's ability to meet its training mission. To date, DLS has trained over 581,000 Soldiers through one of the five components it supports.

M. Force Management System Mission (FMS)

Mission: To design, develop and deploy an integrated Force Management System that will establish accurate, consistent and timely force structure information to the Army Force Management community. FMS will directly support the director of Force Management in the Office of the Deputy Chief of Staff, (G-3/5/7) and its mission of managing and allocating manpower and force structure information; documenting unit models (requirements) and authorizations over time; and providing organizational/ force structure solutions in support of the Army's transformation towards the Future Force.

N. General Fund Enterprise Business Systems (GFEBS)

GFEBS is a Web-based enterprise resource planning (ERP) solution that leverages commercial-off-the-shelf business enterprise software to enable the Army to compile and share accurate, up-to-date financial and accounting data across the service. As the Army's system of record for financial accounting and management, GFEBS will replace at least 80 percent of all overlapping and redundant systems and become one of the world's largest enterprise financial systems, eventually managing $100 billion in annual spending. Release 1.1 of the GFEBS solution–a Real Property Inventory technical demonstration for Fort Jackson, S.C.–was set for completion in April 2006. Additional financial and accounting functions will be designed and configured in subsequent releases and increments. Following a phased in deployment strategy, the GFEBS solution will be fully functional at all Army and DFAS locations worldwide by 2009. A common system providing one authoritative source of the Army's financial management information, GFEBS facilitates deployed and geographically distributed operations and integration with other commercial business systems. Additionally, it will improve a commander's ability to allocate resources by: Increasing buying power providing real-time budget execution information Pinpointing costs of specific operations Identifying total operational cost (mission and support costs) Improving asset visibility, cost of ownership and buy/repair decisions providing accurate cost of readiness reports.

Mission: The General Fund Enterprise Business System (GFEBS) system will supply top-tier Army and DoD leadership with standardized, real-time financial data and business information, empowering them to make strategic

business decisions that directly benefit America's warfighters.

O. Global Combat Support System-Army (Field/Tactical) (GCSS-A (F/T))

Mission: The Global Combat Support System-Army (Field/Tactical) is an enterprise resource planning (ERP) system for the tactical component of the Single Army Logistics Enterprise (SALE). GCSS-A (F/T) will execute tactical logistic business processes that will integrate/interface with applicable Command and Control and Joint systems. It is a logistics enabler that will help achieve the Army's and the Logistics Combat Support/Combat Service Support (CS/CSS) Transformation Vision. GCSS-A (F/T) was established in 2003 to convert legacy STAMIS systems into an ERP solution. Today, STAMIS systems interface with existing CSS automated systems and include functionality such as supply operations, property accountability, maintenance, ammunition and logistics management. Each system runs at any level or organization where the Army performs that function. The ERP implementation of GCSS-A (F/T) will be the Army's primary information system for tactical logistics. It will enable a seamless, integrated and interactive CSS information management and operations system for users at all echelons. The system will use an architecture comprising the user and a centralized national-level database and ERP application software, with interfaces to other systems as required. It will establish a net-centric management system with robust communications for timely and responsive Army logistics.

P. Installation Information Infrastructure Modernization Program (I3MP) NSC

Mission: The Assistant Project Manager, Installation Information Infrastructure Modernization Program Enterprise Systems (IES) provides the Army with capabilities and adaptive processes that support net-centricity, secure access to knowledge and improved information systems and services throughout the Army environment. IES supports Army's ability to integrate and manage the infrastructure as an enterprise to enhance capabilities and efficiencies through the consolidation of print, file, Web and e-mail servers, Army global directories and by implementing enterprise system management for desktop operating environments. As the Army moves toward overall enterprise management, the efficiencies associated with the IES mission will reduce total cost of ownership. I3MP provides for the engineering, acquisition, implementation and management of the Army's installation level telecommunications infrastructure (voice/data/ cable/long-haul gateway) to include the hardware and software required to manage the enterprise at Army posts, camps and stations worldwide. I3MP provides the capabilities to support the Global Information Grid (GIG), GIG Bandwidth Expansion (GIG-BE), Army Campaign Plan, Modularity, Army Expeditionary, Joint and Combined Forces, reach back and implementation of Army Knowledge Management Goal #3 (manage the infostructure as an enterprise to enhance capabilities and efficiencies). IES implementation of the infrastructure and support of a network centric Army will significantly impact the warfighter's ability to obtain timely and secure access to critical information.

Q. Installation Management Systems-Army (IMS-A)

Mission: Provide Army personnel with IT that improves efficiency and provides standardization for the day-to-day functional business processes associated with the Army community.

R. Information Technology Systems (ITS)

Mission: Information Technology Systems (ITS) provides intensive centralized management of the modernization and replacement of IT systems infrastructure services and capabilities during the renovation of the Pentagon and associated facilities.

S. Joint-Automatic Identification Technology (J-AIT)

PM J-AIT provides automated near real time accurate data collection, aggregation, and retrieval that enhance information management systems. We also manage Radio Frequency In-Transit Visibility (RFITV) for DoD, NATO and coalition partners in support of expeditionary logistics and the joint warfighter.

Mission: PM J-AIT provides a single point of contact for procurement and technical expertise across the suite of AIT enabling technologies. This supports focused logistics, Total Asset Visibility (TAV), and the integration of global supply chains.

T. Logistics Modernization Program (LMP)

Mission: The Logistics Management Program (LMP) will provide a modernized solution that enables the Army Materiel Command to deliver world-class logistics and readiness to the warfighter. LMP will integrate such functionality as procurement and asset management, depot maintenance planning and execution, financial management, ammunition manufacture and maintenance, requisition processing and long-term supply planning. When fully deployed, LMP will support all aspects of the Army's national- and installation-level logistics.

U. Land Mobile Radio (LMR)

Mission: LMR manages engineers, acquires, delivers and supports CONUS non-tactical LMR systems that support installation force protection, public safety, installation management and homeland security. The LMR program supports migration of Army, DoD and federal civilian agencies to narrowband frequencies as mandated by the National Telecommunications and Information Administration (NTIA). LMR is pursuing regionalization when economically and operationally feasible and promoting state and local interoperability requirements.

V. Medical Communications for Combat Casualty Care (MC4)

Mission: Medical Communications for Combat Casualty Care (MC4) develops fields and supports a medical information management system for Army tactical medical forces, enabling a comprehensive, life-long electronic

medical record for all service members, and enhancing medical situational awareness for operational commanders. By accomplishing this mission, the MC4 Product Management Office (PMO) will have provided the Army's solution to presidential and congressional objectives, set forth by Title 10 in 1997, which called for a medical tracking system for all deployed service members.

W. Movement Tracking System (MTS)

Mission: MTS is the keystone to bringing logistics into the digitized battlefield of the 21st century. This technology will provide the communications and tracking necessary for all tactical wheeled vehicles (TWV) and other select Combat Service Support (CSS) assets to complete their distribution missions on the digitized battlefield. MTS provides the capability to identify position, track progress and communicate with the operators of TWV. Through the use of positioning and commercial communication satellites, MTS provides the means for transportation movement control and Combat Support/ Combat Service Support (CS/CSS) operations sections to exercise assured positive control of assets anywhere in the world.

X. Reserve Component Automation System (RCAS)

Mission: Develop, field and sustain a modern automated information system that will sustain the United States in the 21st century, support the mobilization of reserve component units and significantly improve their ability to accomplish day-to-day unit administration. PMO RCAS is also responsible for Distributive Training Technology Project (DTTP). The RCAS is an automated information system that provides the Army the capability to administer, manage and mobilize Army Guard and Reserve forces more effectively. More than 50 percent of the Army's force structure is in the Reserve component. RCAS provides an integrated capability that supports mobilization and improves day-to-day administration and management of Reserve and Guard forces. RCAS links approximately 10,500 Guard and Reserve units at approximately 4,000 sites located in all 50 states, three territories and the District of Columbia.

Y. Satellite Communications Systems (SCS)

Mission: SCS manages the modernization, development and acquisition of DSCS earth terminals and baseband equipment for all military services and agencies. SCS is responsible for the development, acquisition, logistics support, testing, product improvements and fielding of strategic Super-High Frequency (SHF) satellite communications ground terminals. These satellite terminals are Joint Chiefs of Staff assets and are of prime importance to the Army, Navy, Air Force, Defense Information System Agency and other special users like the National Communication Authority's Direct Communication Link (DCL) program. SCS acquires, develops, fields and supports the satellite terrestrial subsystem, which provides the digital modulation data stream to the Defense Communications Sub-System earth terminals using the Standardized Tactical Entry Point (STEP) and Multiplexer Integration and DCSS Automation System (MIDAS) Programs. SCS is also the system integrator for the ACAT 1 Teleport Program, responsible for the Teleport baseband equipment procurement and implementation.

Z. Technology Application Office (TAO)

Mission: The Technology Applications Office (TAO) is a functionally integrated, task force organization designed to provide centralized, life-cycle management, engineering, fielding and operation of IT and infrastructure projects, supporting Headquarters, Department of the Army-approved programs. TAO also provides operational support in identifying, developing, testing and evaluating emerging technologies for interoperability and integration into information management equipment and systems.

AA. Transportation Information Systems (TIS)

Mission: TIS is a joint program that falls within the DoD mission area of mobility and transportation for DoD passengers and cargo during war and peace. Operating as part of the Global Combat Support System (GCSS), it provides critical data to the Global Transportation Network (GTN) and Command and Control (C2) systems. It interfaces with joint and service systems to provide In- Transit Visibility (ITV) and Total Asset Visibility (TAV) to all branches.

AB. Wideband Control (WC)

Mission: Wideband Control is the manager for the development, acquisition, testing and fielding of satellite control systems for the Defense Satellite Communications System (DSCS) and Wideband Gapfiller System (WGS) programs. WC provides strategic satellite payload network control and planning systems for use with DSCS, Wideband Gapfiller and commercial satellite systems, such as the Objective DSCS Operational Control System (ODOCS); Gapfiller Satellite Configuration Control Element (GSCCE); Control Network Planning Software (CNIPS); Replacement Satellite Configuration Control Element (GSCCE); and Integrated Management and Power Control Subsystem (IMPCS), among others.

XX. PEO GROUND COMBAT SYSTEMS (GCS)

SBIR POC: usarmy.detroit.peo-gcs.mbx.portal@mail.mil

Program Executive Office Ground Combat Systems (PEO GCS) is responsible for providing world-class affordable, relevant and sustainable ground combat equipment to Joint Warfighters. Our portfolio includes the Abrams Main Battle Tank, Bradley Family of Vehicles (FoV), Self-propelled Howitzer Systems, Stryker Family of Vehicles, M88 HERCULES, the Armored Knight, and the Armored Security Vehicle. With a focus on developing advanced technologies, PEO GCS is leading the design and development of the Army's Future Fighting Vehicle and Armored Multi-Purpose Vehicle, the Army's highest priority combat vehicle. Foreign Military Sales are also vital to our portfolio, beneficially supporting U.S. national security and foreign policy objectives, allowing our allies to promote peace and stability in their region.

Mission: Modernize, sustain and transform the Army's portfolio of premier ground combat systems.

Areas of Interest:

A. PM Main Battle Tank Systems

Mission: The Project Director (PD) Main Battle Tank Systems (PM MBTS) modernizes and sustains the premier tank and support systems to equip the warfighter and strategic partners. PD MBTS is the Army's life cycle manager for the Abrams and M88 family of vehicles and manages the Foreign Military Sales efforts for PEO GCS. Our responsibilities include the design, development, production, fielding and sustainment of safe, reliable and lethal ground combat systems.

Areas of Interest:

- *Survivability*
- *Lethality*
- *Mobility*

B. PM Armored Multi-Purpose Vehicle (AMPV)

Mission: To deliver an affordable family of vehicles to restore protected support to the ABCT – our nation's decisive force for good! The Armored Multi-Purpose Vehicle (AMPV) program remains the Army combat vehicle portfolio's highest priority developmental effort. It is intended to replace the M113 in Army brigade combat teams; the M113s lack the protection, mobility and survivability necessary to fight in those formations. AMPV will replace the M113 in five mission roles: General Purpose, Mission Command, Mortar Carrier, and Medical Evacuation and Treatment. The AMPV is primarily a vehicle integration program as opposed to a developmental program. This military derivative vehicle program is envisioned to maximize reuse of legacy subsystems to reduce technical risk and enhance armored brigade combat team commonality. The AMPV Milestone B review was completed in December 2014. The Engineering and Manufacturing Development contract was awarded to BAE Systems on Dec. 23, 2014.

C. PM Armored Fighting Vehicles (AFV)

The Bradley serves four mission roles within the Armored Brigade Combat Team with the Infantry Fighting Vehicle (M2A3), Cavalry Vehicle (M3A3), Fire Support (A3 BFIST) and Engineer Vehicle. The Bradley provides protected transport of an Infantry squad to critical points on the battlefield and performs Cavalry scout and other essential missions.

Product Manager Self-Propelled Howitzer Systems manages approximately 1,087 platforms which include the M109A6 Paladin, M992A2 Field Artillery Ammunition Supply Vehicle (FAASV), the M109A7 Self-Propelled Howitzer (SPH), and the M992A3 Carrier Ammunition Tracked (CAT) vehicles. The M109A6 155 mm howitzer provides the primary indirect-fire support to modular Armored Brigade Combat Teams (ABCTs). Like the earlier M109 models, the M109A6 Paladin is a fully tracked, armored vehicle. The Paladin M109A6 configuration is achieved through modifications to existing M109A2/A3 vehicle hulls and the subsequent introduction of an entirely new cab assembly that includes new sub-systems (as described in the paragraph below) with a new cab structure.
The Paladin M109A6 includes an onboard Paladin digital fire-control system, a vehicle location/navigation system, secure radio communications systems, an improved M284 cannon and M182A1 gun mount, automotive improvements, improved ballistic and nuclear-biological-chemical protection, driver's night-vision capability, and built-in test equipment.

The Future Fighting Vehicle Product Management Office is the focal point for the Army's next generation fighting vehicle. PdM FFV's focus is to shape requirements for the design and development of the Army's next generation Fighting Vehicle. The PdMO provides the leadership, technical expertise, and oversight for the developmental effort.

Mission: Develop, acquire, and support the world's best war machines including the Bradley family of vehicles, self-propelled howitzers and the Future Fighting Vehicle.

D. PM Stryker Brigade Combat Team

In March 2010, the Stryker underwent a game-changing transformation when the Army took lessons learned from theater and incorporated an improved hull design to protect Soldiers from improvised explosive devices and roadside mines. These production vehicles were delivered in January 2011. This new underbody design, known as a Double-V Hull (DVH), was based on proven technology similar to that found on MRAP vehicles, which deflect blasts away from the vehicle and the Soldiers inside. The other nine flat-bottom variants consist of the M1130 commander's vehicle, M1127 Reconnaissance Vehicle, M1131 A1 Fire Support Vehicle, M1129 A1 Mounted Mortar Carrier, M1134 Antitank Guided Missile Vehicle, M1132 Engineer Squad Vehicle, M1133 Medical Evacuation Vehicle and M1135 Nuclear-Biological-Chemical Reconnaissance Vehicle. The M1128 Mobile Gun System is based on the ICV.

Mission: The Project Manager Stryker Brigade Combat Team (PM SBCT) develops, produces and sustains the full range of safe, reliable, supportable and effective Stryker vehicle systems—a diverse fleet of medium-weight vehicles capable of being rapidly deployed to trouble spots around the world. SBCT now incorporates the armored security vehicle as well as the armored knight, making SBCT the home of all wheeled ground combat vehicles. The Stryker Family of Vehicles (FoV) consists of 10 unique mission equipment packages incorporated into the eight-wheeled, common combat vehicle platform configurations.

XXI. PEO Intelligence, Electronic Warfare & Sensors (IEW&S)

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PEO IEW&S develops and integrates sensors and sensor data across multiple technologies ensuring warfighters have a complete understanding of the battlefield. This is achieved through our ability to assimilate sensor information into relevant, timely products that can be used for targeting, situational awareness, force protection, and Reconnaissance, Surveillance, and Target Acquisition (RSTA).

Mission: Provide affordable, world class Senor and Electronic Warfare capabilities enabling rapid situational understanding and decisive action.

Areas of Interest:

A. PM Aviation Electronic Systems

Mission: PM Aviation Electronic Systems provides Army aviation platforms countermeasures for self-protection and survivability.

B. PM Distributed Common Ground System–Army

Mission: PM Distributed Common Ground System-Army (DCGS-A) is the Army embodiment of net-centric Intelligence, Surveillance, and Reconnaissance (ISR) for the Commander, analyst, and shooter. It brings threat, neutral, and weather capability to the common operating picture while providing sensor tasking, posting and processing of information, and exploitation of that information. It will provide fixed, deployable, man-portable systems or a software application depending on the Commander's requirements.

C. PM Navigation Systems

Mission: PM Navigation Systems (NAV SYS) provides the tactical Army with capability for self-location through ground based and airborne GPS. NAVSYS also provides the means for combat identification.

Areas of Interest:

- Meteorological Measuring Set (Mms) (Upper Air Meteorological System That Makes Vertical Profiles Of The Earth's Atmosphere)
- Meteorological Measuring Set - Profiler (Mms-P) (Uses A Suite Of Meteorological Sensors And Data From Communication Satellites Along An Advanced Weather Model To Provide Highly Accurate Meteorological Data Out To A Range Of 500km
- Combat Identification/Quick Fix Devices (Includes A Family Of Devices Used To Reduce The Risk Of Fratricide)

D. PM Night Vision/Reconnaissance, Surveillance, And Target Acquisition

Mission: PM Night Vision/Reconnaissance, Surveillance, and Target Acquisition develops, acquires, and provides superior, affordable day/night vision systems, weapon locating systems, and multi-sensor systems to the American Warfighter.

Areas of Interest:

- Long-Range Reconnaissance And Surveillance Sensor Systems
- Modular Target Location/Laser Designation Systems
- Thermal Imaging Technology
- Mobile Phased Array Artillery Locating Radar Systems
- Short Range Air Defense Systems
- Reconnaissance, Surveillance And Target Acquisition Systems

PM Signals Warfare

Mission: PM Signals Warfare provides the American Warfighter with the finest combat effective intelligence, surveillance, reconnaissance, and electronic warfare systems in the world, in a timely, cost effective and sustainable manner, while fully supporting Army transformation.

Areas of Interest: Technologies Associated With The Following:

- Providing Precision Targeting, Imaging And Geolocation
- Controlling And Exploiting UAV Mission Payloads
- Interception And Location Of Radio Emissions
- Airborne Signals Intelligence Collection Location And Exploitation Systems

E. PM Aerial Common Sensors (ACS)

Mission: PM ACS is chartered to provide warfighters with the capability for tactically relevant airborne intelligence, Surveillance, and Reconnaissance (ISR) collection, processing, and dissemination. PM ACS programs include the management, sustainment, and modernization of two fielded systems, GUARDRAIL/Common Sensor (GR/CS) and Airborne Reconnaissance Low (ARL). Current GR/CS modernization efforts include the airborne sensor package and the migration to the GUARDRAIL Ground Baseline (GGB) to replace the current processing facilities. In addition, the PM has oversight for two systems under development, Tactical SIGINT Payload (TSP) currently in the System Development and Demonstration (SDD) phase and Aerial Common Sensor now in the Technology Demonstration (TD) phase.

F. PO Joint Programs Sustainment And Development

Mission: In response to the requirements of Combatant Commanders and the Department of Defense, PO Joint Programs Sustainment and Development (PO JPSD) integrates maturing technologies, commercial hardware and software and new tactics, techniques and procedures to facilitate development of capabilities in the areas of Command, Control, Communications, and Computers (C4), and Intelligence, Surveillance and Reconnaissance (ISR). PO JPSD uses non-traditional acquisition approaches, such as Advanced Concept Technology Demonstrations, Simulation Based Acquisition, rapid prototyping, and other novel approaches to accelerate the maturation and transition of key capabilities to the Army Future Force and future elements of the Joint Warfighting Force.

XXII. PEO Missiles and Space

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The PEO Missiles and Space provides centralized management for all Army air and missile defense and tactical missile programs as well as selected Army Space programs. The PEO is responsible for the full life-cycle management of assigned programs.

Mission: To Develop, Field, and Sustain Missile and Space Systems for the U.S. Army, Joint and Coalition Warfighters that Provide a Decisive Battlefield Advantage.

A. PM Integrated Air And Missile Defense

Mission: Develop, acquire, field and sustain the Army's Integrated Air and Missile Defense (IAMD) capability within an overarching joint IAMD construct in a manner to support integration of current and future sensors and shooters providing an effective IAMD capability needs at home and abroad.

B. PM Joint Attack Munition Systems

Mission: Develop, field, and sustain versatile air-launched weapon systems for the U.S. Army, Joint, and Coalition Warfighters that provide a Decisive Advantage.

C. PM Close Combat Weapon Systems

Mission: To provide the Warfighter the world's best CCWS capabilities by developing, producing, fielding, training and sustaining the best weapon system capabilities in an affordable, timely reliable and responsive manner in support of Warfighter needs at home and abroad.

Close Combat Weapon Systems (CCWS) Project Office manages a number of anti-armor missile and target acquisition systems. Current missile systems include TOW 2, TOW 2A and TOW 2B. CCWS-managed target acquisition systems include the Improved Target Acquisition System (ITAS) and the Improved Bradley Acquisition Subsystem (IBAS). CCWS is also responsible for managing related ancillary Bradley TOW subsystems items and for preliminary work on the TOW Fire-and-Forget Missile System and the JAVELIN Medium Anti-tank System.

D. PM Cruise Missile Defense Systems

Mission: CMDS develops, produces, fields and sustains the world's premiere short and medium range air defense systems and Counter Fire radars to protect the force and its selected geopolitical assets against Cruise Missiles (CM), Unmanned Aerial Systems and Artillery (RAM) projectile.

E. PM Lower Tier

Mission: Provide superior air and missile defense to US and International interests against current and evolving threats while maintaining high readiness levels, while continuously improving integration with Integrated Air & Missile Defense (IAMD) and Ballistic Missile Defense (BMD) systems.

F. PM Missile Defense And Space Systems

Mission: To Provide Acquisition Support for Upper Tier Missile Defense and Space Systems for the U.S. Army, Joint and Coalition Warfighters that Provide a Decisive Battlefield Advantage.

G. PM Precision Fires Rocket And Missile Systems

Mission: The Precision Fires Rockets and Missile Systems PMO manages through effective program management and a professional workforce; develop, produce, field and sustain the Precision Fires family of launchers and munitions to fulfill the long-range artillery requirements of the U.S. Warfighter and Allies.

H. C-RAM

Mission: Responsible for the overall life cycle management of activities related to research, development, acquisition, fielding, and sustainment of automated Air and Missile Defense (AMD) Command and Control (C2) systems, including the Forward Area Air Defense Command and Control (FAAD C2) system and the Air and Missile Defense Planning and Control System (AMDPCS). Manages the Rocket, Artillery, Mortar (RAM) Warn and C-RAM Intercept programs, as well as the C-RAM system-of-systems capabilities in theater, providing force protection against the indirect fire threat. This responsibility includes the development of C-RAM C2 and holistic C-RAM capability, ensuring effective interfaces are developed and maintained between the Air Defense C2 and C-RAM systems and the Mission Command Networks and Systems, other services, and allied nations.

XXIII. PEO SIMULATION, TRAINING AND INSTRUMENTATION (STRI)

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Mission: Develop, Acquire and Sustain Simulation, Training, Testing and Modeling Solutions to Achieve Army Readiness

Areas of Interest:

- *Computer-Driven Combat Vehicle Simulators*
- *Synthetic Flight Training System Simulators*
- *Ground Combat Virtual Training Devices*
- *Constructive Simulations*
- *Gunnery Training Systems*

A. PM Combined Arms Tactical Trainers

Mission: PM Combined Arms Tactical Trainers (PM CATT) manages the development, acquisition, fielding, and life cycle support of the Virtual Synthetic Environment and associated Training Aids, Devices, Simulators, and Simulations (TADSS) to support individual, institutional, and collective training.

B. PM Constructive Simulation

Mission: PM Constructive Simulation (PM CS), in partnership with the National Simulation Center (NSC), cost effectively develops and sustains constructive simulations primarily supporting the Army's command and staff training requirements. Constructive simulations are currently the most effective means to train commanders and staffs of division and larger units and are playing an increasing role in the training of brigade and smaller commanders and staffs. As the army transforms to the Unit of Action and Unit of Employment this training venue will become even more important to battle staff training and protection against digital skill decay. Limited resources and increasingly limited time reinforces the need for a family of simulations tailor-made for a given training objective across the Range of Military Operations (i.e.; reception, staging, onward movement, and integration –RSOI operation, high intensity conflict, and stability and support operations -SASO). The simulations PM CS manages and develops are used by the Army to satisfy, in part, its statutory training responsibility. These simulations and tools as the Army Constructive Training Federation (ACTF) are also used to train the Army in a Joint Service context.

C. PM Field Operations And Support

Mission: PM Field Operation and Support (PM Field OPS) provides Program Management and direction of the worldwide Life Cycle Contractor Support (LCCS) program. This includes Planning, Programming and Budget Execution as well as awarding and managing competitive services contracts to support and operate Training Devices, Simulator and Simulations (TDSS) deployed around the world. TDSS are centrally managed by DA (DAMO-TRS) and include those developed by PEO STRI PMs and TDSSs developed by weapon platform PMs and Major Army Commands. OPS supports TDSS in the Live, Virtual and Constructive domains and supports PEO STRI PMs with acquisition logistics support throughout the development process.

D. PM Future Force (Simulation)

Mission: PM Future Force (Simulation) [PM FF(S)], which is the integrating agent for PEO STRI, is responsible for orchestrating integrated and interoperable simulation solutions. PM FF(S): excels in providing the Warfighter the best possible training solutions and training environment supporting Army Transformation, current and future forces across the full spectrum of military operations; develops future collaborative training through a seamless Joint Live, Virtual, and Constructive Training Environment; leads as the Material Developer of training systems for the Future Combat System and other Army Future Force training systems; ensures enhanced Warfighter readiness and proficiency through Modeling and Simulation (M&S) applications in training and operational utilization and reuse of Common Product Components; and, provides the Soldier and Army leaders with the resources to implement developments of Simulation and Modeling for Acquisition, Requirements, and Training (SMART) processes, capabilities and services.

E. PM Instrumentation, Targets And Threat Simulators

Mission: PM Instrumentation, Targets and Threat Simulators: manages the research, development, design, acquisition, fielding, modification, and capability accounting of major instrumentation, targets, and threat simulators required for developmental and operational test and evaluation (T&E) and training; manages the Central Test and Evaluation Investment Program (CTEIP) and Resource Enhancement Program (REP) for the Army; manages operations of targets for T&E and training of Army and Foreign Military Sales (FMS) customer troops; manages the Army Instrumentation, Targets, and Threat Simulators (ITTS) Long Range Planning Process; develops and implements policy direction and control over funding and execution of major instrumentation, targets and threat simulator/simulation projects; and, serves as the Army's single manager for acquiring targets, threat simulators/simulations, and major test instrumentation.

F. PM Training Devices

Mission: PM Training Devise (PM TRADE) takes great pride in having provided a wide variety of training systems to support the Soldier in the field for fifty years. Our legacy includes Army standards such as MILES, COFT and Flight/Combat Mission Simulators. PM TRADE developed and fielded instrumented training systems to the National Training Center at Fort Irwin, California, the Joint Readiness Training Center at Fort Polk, Louisiana, and the Combat Maneuver Training Center at Hohenfels, Germany which enables them to provide world class training and after action reviews for the training units. Currently, PM TRADE focuses on Live Environment Training Systems including training instrumentation systems to support home station training, Military Operations in Urban Terrain training, Maneuver Combat Training Center training, and digital ranges. Additionally, PM TRADE provides the Army's Tactical Engagement Simulation Systems and Precision Gunner Systems to support all aspects of live tactical engagement simulations, generic training threat simulators and training products to support digitized force training.

XXIV. PEO Soldier

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For the past decade, Program Executive Office (PEO) Soldier has provided our Soldiers with capabilities to ensure they remain decisive and dominant throughout the full spectrum of military operations. Our Army conducts offensive operations, defensive operations, stability operations and civil support operations with Soldiers equipped and trained to use the very best equipment and capabilities that PEO Soldier can provide.

Mission: Develop, acquire, field and sustain affordable integrated state of the art equipment to improve Soldier dominance in Army operations today and in the future.

A. PM Soldier Protection and Individual Equipment (PM SPIE)

Mission: PM SPIE develops and fields advanced Soldier protection products, comfortable uniforms that enhance mission effectiveness, and improved parachute systems. These products are designed to protect Soldiers and allow them to operate in any conditions.

- Product Manager Soldier Clothing and Individual Equipment (PdM SCIE)
- Product Manager Soldier Protective Equipment (PdM SPE)

Areas of Interest:

- *Helmet-mounted vision enhancement for improved situational awareness in all visibility conditions*
- *Ballistic and fragmentation protection*
- *Advanced multifunctional materials that provide improved protection from various threats and environments*
- *Improved thermally protective materials with improved durability, strength, and moisture vapor transport at reduced weights*
- *Spatial vector protection technologies with increased deterrence, functional time and low toxicity*
- *Alternative concealment (camouflage) technologies and chemistries*
- *Innovative weight distribution technologies for Soldier load carriage equipment*
- *Personnel parachute and other airdrop equipment*

B. PM Soldier Warrior

Mission: Project Manager Soldier Warrior (PM SWAR) supports Soldiers through the acquisition of integrated systems. Current systems include Nett Warrior (NW), Air Warrior (AW), Air Soldier System (Air SS), Soldier Power, and Tactical Communication and Protective Systems (TCAPS). PM SWAR's product managers and directors develop and integrate components into complete systems designed to increase combat effectiveness, decrease combat load and improve mission flexibility.

- Product Manager Air Warrior (PdM AW)
- Product Manager Ground Soldier System (PdM GSS)
- Product Director Soldier Systems and Integration (PD SS & I)

Areas of Interest:

- *Air Soldier Systems:*
  - Soldier-worn Conformal Power Supply (250-300 Watt-Hr, wireless recharge in aircraft, Enhanced Small Arms Protective Insert (ESAPI) size).
  - Secure Wireless Local Area Network between Soldier and the aircraft.
  - Improved Laser Eye Protection (AGILE type system with high transmissivity, while stopping multiple laser threats).
  - Aviation Ballistic Helmet (ACH level of protection within HGU-56/P weight and size limits while maintaining crash protection levels).
- *Ground Soldier Systems:*
  - Non GPS Individual Location and Navigation
  - Flexible Electronics (Textiles) for Power/Data Transfer
  - Secure Company/Platoon/Squad Communications with higher bandwidth/lower power than SRW
  - Unmanned Robotics/Unmanned Sensors Data Feeds for unclassified/classified (cross-domain guard)
  - Dual Persona on End User Devices (EUDs) with Hypervisor technology for isolation

- 2-part Authentication Simplification (addressing key distribution)
- Head-borne Augmented Reality to improve dismounted Soldier Situational Awareness
- Countermeasures for Emerging Network Electronic Warfare and Cyber Activities for company and below network

- *Soldier Power:*
  - Smart Textiles for Power Transfer
  - Renewable Power Sources for Soldier and Squad (kinetic, thermoelectric, biomass, etc.)
  - Wireless Battery Charging
  - Power Demand Reduction in Individual/Unit Equipment
  - Ultrafast Rechargeable Energy Storage Devices

C. PM Soldier Weapons

Mission: Project Manager Soldier Weapons (PM SW) ensures that Soldiers on the battlefield have overmatch capabilities in individual and crew served weapons. PM SW supports Soldiers through the development, production, fielding, and sustainment of current and future systems, as well as associated target acquisition/fire control products. As a result of PM SW's efforts, Soldiers benefit from continuous improvement programs and are equipped with systems that enhance both survivability and lethality.

- Product Manager Individual Weapon (PdM IW)
- Product Manager Crew Served Weapons (PdM CSW)

Areas of Interest:

- *Small Arms Weapons and Accessories*
- *Carbines, Pistols, Shotguns*
- *Grenade Launchers and Grenade Machine Guns*
- *Soldier Fired Airburst Weapons*
- *Target Acquisition and Fire Control*
- *Light, Medium and Heavy Machine Guns*
- *Ground Mounts and Tripods*
- *Sniper and Precision Weapons Systems*
- *Remote Weapons Stations*
- *Binoculars*

D. PM Soldier Sensors and Lasers

Mission: Project Manager Soldier Sensors and Lasers (PM SSL) provides Soldiers with improved lethality, mobility, and survivability in all weather and visibility conditions. Soldier-borne sensors and lasers enhance the Soldier's ability to see in all battlefield and lighting conditions, to acquire objects of military significance before the Soldier is detected, and to target threat objects accurately for engagement by Soldiers or precision-guided munitions. These systems provide critical, on-the-ground direct support to U.S. forces.

- Product Manager Soldier Maneuver Sensors (PdM SMS)
- Product Manager Soldier Precision Targeting Devices (PdM SPTD)

Areas of Interest:

- *Helmet-mounted vision enhancement for improved situational awareness in all visibility conditions*
- *Weapon sights for enhanced target acquisition*
- *Weapon-mounted and Soldier-carried sensors and lasers for accurate location of targets by pointing, illuminating, locating, and/or designating*
- *Thermal sensors*
- *Night Vision sensors*
- *24-hour Imaging sensors*
- *Weapons Mounted Lights*
- *Far Target Location*
- *Laser sources and receivers*
- *North-finding, North-keeping and Position keeping for individual Soldier*
- *Individual Soldier non-GPS self-location*
- *Wireless connectivity between individual Soldier devices*
- *Power sources (including rechargeable) for individual Soldier devices*

E. PM Rapid Equipping Force

Mission: Project Manager Rapid Equipping Force (PM REF) equips Commercial Off The Shelf (COTS), Government Off the Shelf (GOTS), Non-Developmental Items (NDI) nonstandard equipment across all Warfighter functional areas to address urgent capability gaps for a specific time, place and unit.