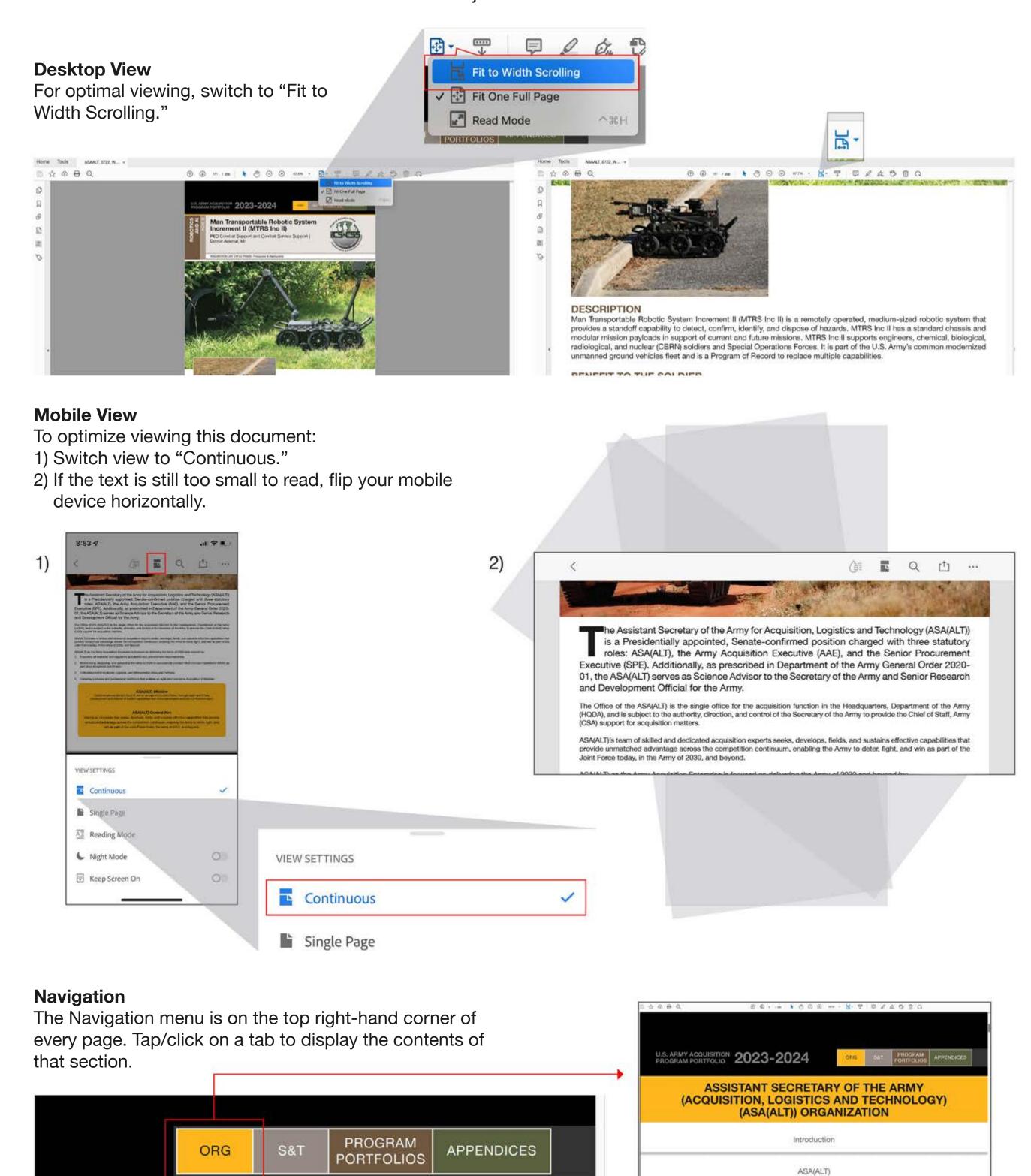


HOW TO USE THIS BOOK

his document is designed for use on both mobile and desktop viewers. For desktop viewing, Adobe Acrobat or another PDF reader is recommended. This document is compatible with both iPhone and Android devices and should be used in conjunction with a PDF reader.



Search

This document is integrated with Adobe Acrobat's native Search feature. Select the Search option from the toolbar or hold down CTRL and F. Type in the Search term; only exact matches will be returned as hits.





ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS AND TECHNOLOGY) (ASA(ALT)) ORGANIZATION

Introduction

ASA(ALT)

ASA(ALT) Organization Chart

Deputy Assistant Secretaries of the Army (DASAs) and Deputy for Acquisition and Systems Management (DASM)

Program Executive Offices (PEOs)

Partner Organizations

SCIENCE & TECHNOLOGY

U.S. Army Science and Technology (S&T) Overview

Army S&T Enterprise

Overview of Army S&T Investments

Army S&T Portfolios

Long Range Precision Fires S&T

Next Generation Combat Vehicle S&T

Future Vertical Lift S&T

Army Network Command, Control, Communications, and Intelligence S&T

Air and Missile Defense S&T

Soldier Lethality S&T

Army S&T Enterprise Programs

Army xTech Program/Army Applied Small Business Innovation Research Progam

Technology Maturation Initiative

Manufacturing Technology (ManTech)

Basic Research

Conclusion

PROGRAM PORTFOLIOS



AIR AND MISSILE DEFENSE



AMMUNITION



ASSURED MOBILITY



AVIATION



FIRES



INTELLIGENCE



MANEUVER



MISSION COMMAND



PROTECTION



ROBOTICS AND ARTIFICIAL INTELLIGENCE (AI)



SOLDIER



SUSTAINMENT



SYNTHETIC TRAINING ENVIRONMENT



TRANSPORTATION



AIR AND MISSILE DEFENSE

Air and Missile Defense Planning and Control System (AMDPCS)

Army Integrated Air and Missile Defense (AIAMD)

Forward Area Air Defense Command and Control (FAAD C2)

Forward Area Air Defense System, Line-of-Sight, Rear (Pedestal Mounted Stinger) – Avenger

Indirect Fire Protection Capability – High Power Microwave (IFPC-HPM)

Indirect Fire Protection Capability Increment 2 (IFPC Inc 2)

Iron Dome Defense System – Army (IDDS-A)

Long-Range Hypersonic Weapon (LRHW)

Lower Tier Air and Missile Defense Sensor (LTAMDS)

Maneuver-Short Range Air Defense Increment 1 (M-SHORAD Inc 1)

Maneuver-Short Range Air Defense Increment 2 (M-SHORAD Inc 2)

Maneuver-Short Range Air Defense Increment 3 (M-SHORAD Inc 3)

Phased Array Tracking Radar to Intercept of Target (PATRIOT)
Advanced Capability-3 (PAC-3)

Sentinel Aerial Surveillance Radar – AN/MPQ-64 A3 & AN/MPQ-64 A4 (Sentinel A3, Sentinel A4)

Stinger Block I with Proximity Fuze (PROX)



Ammunition – Large Caliber

Ammunition – Medium Caliber

Artillery Ammunition

ASSURED MOBILITY

Early Entry Fluid Distribution System (E2FDS)

High Mobility Engineer Excavator Type IV (HMEE-IV)

Military Bridging Systems

Robotic Mine Flail – M160

Small Multipurpose Equipment Transport (S-MET)

T-9 Medium Dozer with Winch and Tractor, Full-Tracked, T-9 Medium Dozer with Ripper

CH-47F Chinook Cargo Helicopter and CH-47F Block II

Fixed Wing Project Office (FWPO)

Helicopter Launched Fire and Forget (HELLFIRE (HF))

Improved Turbine Engine Program (ITEP) – T901

Joint Air-to-Ground Missile (JAGM)

UH/HH-60M Black Hawk

UH-72A/B Lakota (Light Utility Helicopter (LUH))



155 mm Excalibur Projectiles

155 mm M777A2 Lightweight Towed Howitzer

Army Tactical Missile System (ATACMS)

Counterfire Radar – AN/TPQ-53

Guided Multiple Launch Rocket System (GMLRS)

High Mobility Artillery Rocket System (HIMARS) – M142

Indirect Fire Protection Capability – High Energy Laser (IFPC-HEL)

Joint Effects Targeting System (JETS)

Mid-Range Capability (MRC)

Multiple Launch Rocket System (MLRS) – M270A1 and M270A2

Precision Guidance Kit/Long Range - Precision Guidance Kit (PGK/LR-PGK)

Precision Strike Missile (PrSM)

Product Director Paladin (M109A6/M992A2 (A6) and M109A7/M992A3 (A7) or Paladin Integrated Management Program)

Distributed Common Ground System – Army (DCGS-A)

Electronic Warfare Planning and Management Tool (EWPMT)

Multi-Function Electronic Warfare – Air Large (MFEW-AL)

Next Generation Biometric Collection Capability (NXGBCC)

Third Generation Forward Looking Infrared (3GEN FLIR)

Abrams Main Battle Tank

Air Soldier System (Air SS)

Armored Multi-Purpose Vehicle (AMPV)

Booker Combat Vehicle - M10

Bradley Fighting Vehicle – M2A4

Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) – M88A2

Infantry Squad Vehicle (ISV)

Mechanized Infantry Combat Vehicle – XM30

Robotic Combat Vehicle (RCV)

Stryker Brigade Combat Team (SBCT)



MISSION COMMAND

Command Post Computing Environment (CPCE)

Command Post Integrated Infrastructure (CPI2)

Cyber Situational Understanding (Cyber SU)

Defense Enterprise Wideband Satellite Communications System (DEWSS)

Dismounted Assured Positioning, Navigation, and Timing (PNT) System (DAPS)

Global Combat Support System – Army (GCSS-Army)

Handheld, Manpack, and Small Form Fit (HMS)

Joint Battle Command – Platform (JBC-P)

Mounted Assured Positioning, Navigation, and Timing (PNT) System (MAPS)

Mounted Mission Command – Software (MMC-S)

Satellite Communications Family of Terminals (SATCOM FoT)

Signal Modernization (SigMod)

Sustainment Transport System (STS)

Tactical Electric Power (TEP)

Tactical Network Transport (TNT) At The Halt (ATH) and On The Move (OTM)



Advanced Anticonvulsant System (AAS)

Aerosol Vapor Chemical Agent Detector (AVCAD)

Antiviral Therapeutics (AV TX)

Chemical, Biological, Radiological, Nuclear Dismounted Reconnaissance Systems (CBRN DRS)

Compact Vapor Chemical Agent Detector (CVCAD)

Joint Biological Agent Decontamination System (JBADS)

Joint Biological Tactical Detection System (JBTDS)

Joint Expeditionary Collective Protection (JECP)

Joint Handheld Bio-Agent Identifier (JHBI)

Joint Service General Purpose Mask (JSGPM) - M53A1

Man-portable Radiological Detection System (MRDS)

Multi-Phase Chemical Agent Detector (MPCAD)

Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)

Protection Assessment Test System (PATS) – M41A1

Service Equipment Decontamination System (SEDS)

Tactical Contamination Mitigation System (TCMS)

Uniform Integrated Protection Ensemble Family of Systems General Purpose (UIPE FoS GP)



ROBOTICS AND AI

Common Robotic System – Heavy (CRS-H)

Common Robotic System – Individual (CRS-I)

Man Transportable Robotic System Increment II (MTRS Inc II)



Advanced Anti-Tank Weapon System - Medium (Javelin)

Common Remotely Operated Weapon Station (CROWS) - M153

Enhanced Night Vision Goggle – Binocular (ENVG-B)

Family of Weapon Sights – Crew Served (FWS-CS)

Mortar Weapon Systems

Nett Warrior (NW)

Small Arms - Crew Served Weapons (CWS)

Soldier Protection System (SPS)

Force Provider Expeditionary (FPE)

Rapid Opioid Countermeasure System (ROCS)

Warfighter Brain Health Project Management Office (WBH PMO)

Warfighter Health Performance and Evacuation (WHPE)

Warfighter Protection and Acute Care Project Management Office (WPAC PMO)



SYNTHETIC TRAINING ENVIRONMENT

Cyber Environment Replication (CER)

Future Army System of Integrated Targets (FASIT)

Instrumentable-Multiple Integrated Laser Engagement System (I-MILES)

Intelligence and Electronic Warfare Tactical Proficiency Trainer Increment 1/Increment 2 (IEWTPT Inc 1/Inc 2)

Joint Land Component Constructive Training Capability (JLCCTC)

Army Watercraft Systems (AWS)

Enhanced Heavy Equipment Transporter System (EHETS)

Family of Medium Tactical Vehicles (FMTV) – A2

Joint Light Tactical Vehicle (JLTV)

Palletized Load System and Palletized Load System Extended Service Program (PLS/PLS ESP)

APPENDICES

Glossary of Terms

Points of Contact

Systems by Contractor

ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS AND TECHNOLOGY)

ASA(ALT) ORGANIZATION



Introduction

Program Portfolio. This updated version of the U.S. Army Weapon Systems Handbook provides information on some of the U.S. Army major weapon systems, equipment programs, and science and technology initiatives. This version is available digitally only.

While the U.S. Army Acquisition, Logistics and Technology community is working to develop and deliver the Army of 2030 and beyond, we are also enhancing how we showcase our program information, including more concise descriptions, updated photos, and an ability to locate entries by portfolio.

We hope you will find this new, digital interactive document a valuable and informative resource. If you are interested in providing feedback, please contact <u>usarmy.pentagon.hqda-asa-alt.list.communications@army.mil</u>.



Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT))



The Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) is a Presidentially appointed, Senate-confirmed position charged with three statutory roles: (1) the ASA(ALT), (2) the Army Acquisition Executive, and (3) the Senior Procurement Executive. Additionally, as prescribed in Department of the Army General Order 2020-01, the ASA(ALT) serves as Science Advisor to the Secretary of the Army and Senior Research and Development Official for the Army.

The Office of the ASA(ALT) is the single office for the acquisition function in the Headquarters, Department of the Army, and is subject to the authority, direction, and control of the Secretary of the Army to provide the Chief of Staff, Army support for acquisition matters.

ASA(ALT)'s 12 Program Executive Offices, 7 Deputy Assistant Secretaries, the Deputy for Acquisition and Systems Management, and 2 direct reporting units (Rapid Capabilities and Critical Technologies Office and U.S. Army Acquisition Support Center) operate in 6 locations nationwide.

ASA(ALT)'s team of skilled and dedicated acquisition experts seeks, develops, fields, and sustains effective capabilities that provide unmatched advantage across the competition continuum, enabling the Army to deter, fight, and win as part of the Joint Force today, in the Army of 2030, and beyond.

ASA(ALT) as the Army Acquisition Enterprise is focused on delivering the Army of 2030 and beyond by:

- Modernizing, equipping, and sustaining the Army of 2030 to successfully conduct Multi-Domain Operations as part of an integrated, Joint Force.
- Executing all statutory and regulatory acquisition and procurement responsibilities.
- Fostering a diverse and professional workforce that enables an agile and innovative Acquisition, Logistics and Technology Enterprise.
- Cultivating better-equipped, capable, and interoperable Allies and Partners.

ASA(ALT) Mission

Continuously modernize the U.S. Army, as part of the Joint Force, through rapid and timely development and delivery of soldier capabilities that deter adversaries and win our Nation's wars.

ASA(ALT) Central Aim

Having an enterprise that seeks, develops, fields, and sustains effective capabilities that provide unmatched advantage across the competition continuum, enabling the Army to deter, fight, and win as part of the Joint Force today, the Army of 2030, and beyond.

ASA(ALT) Organization Chart



Deputy Assistant Secretaries of the Army (DASAs) and Deputy for Acquisition and Systems Management (DASM)

DASA for Acquisition Policy and Logistics (APL) develops and oversees Department of the Army life cycle logistics policies and procedures for total life cycle systems management of weapon and support systems. DASA(APL) is also assigned the role of Army Corrosion Control and Prevention Executive, and through the Environmental Support Office, provides expertise in environmental, safety, occupational health, energy, and corrosion control and prevention.

DASA Data Engineering and Software (DES) delivers acquisition systems engineering governance to the Army by synthesizing systems engineering best practices across the Program Executive Offices (PEOs) in support of ASA(ALT)'s mission. DASA(DES) is the AAE's trusted agent in assessing and providing recommendations to programmatic and technical reviews in support of Milestone Decision Authority (MDA) and other investment decisions.

DASA for Defense Exports and Cooperation (DE&C) sets the strategic direction, develops policy, resources, and leads the Army's security assistance program, including Foreign Military Sales, export policy, and technology transfer. DASA(DE&C) also executes the Army's responsibilities to protect military technologies and prevent unauthorized proliferation of weapons, intellectual property, and sensitive information, ensuring that U.S. defense companies can compete in the global marketplace while maintaining our technological edge.

DASA for Plans, Programs and Resources (PPR) serves as Chief Financial Officer and Principal Advisor to the ASA(ALT) on budgetary and financial matters relating to Research, Development, Acquisition, and Operations and Maintenance for Army acquisition programs. DASA(PPR) plays a critical role in developing and implementing reform initiatives where efficiencies can be made to ensure sustainment of current systems through useful life while enabling Cross-Functional Teams (CFTs) to develop requirements for next generation systems.

DASA Procurement (P) serves as the Principal Advisor for Procurement to the ASA(ALT), executing the full range of responsibilities for the Senior Procurement Executive, Functional Chief, and the Senior Official for the Acquisition of Services. DASA(P) leads the contracting community of practice, which is comprised of more than 8,500 contracting professionals, both military and civilian.

DASA for Research and Technology (R&T) is the senior official responsible for oversight of science, research, and technology within the Department of the Army. DASA(R&T) serves as a science advisor to the Secretary of the Army and represents the Army in science, research, and technology matters to the Department of Defense (DOD), Congress, and non-DOD partners. DASA(R&T) is also responsible for Technology Readiness Assessments of Army Major Defense Acquisition Programs, advising the MDA at Milestone B in the determination of whether program technologies have acceptable levels of risk.

DASA Strategy and Acquisition Reform (SAR), working collaboratively with other elements of the modernization enterprise, is charged with developing long-term institutional transformation to meet the Secretary of the Army's Modernization, Readiness, and Reform priorities. DASA(SAR) has principal responsibility to design and implement acquisition reform and modernization initiatives across the total life cycle of the Army's weapon and support systems to ensure continued materiel dominance in a near-peer adversary and multi-domain environment.

DASM leads executive program oversight and implementation of acquisition policy for materiel capabilities. DASM office is the direct link between the ASA(ALT) and assigned PEOs. DASM leads the ASA(ALT) portion of Army Program Budget Briefs to defend the Army's budget request to Congressional staffs; plans, executes, reports, and retains statutory and regulatory reviews for all acquisition programs; and assesses emerging status and regulation pertaining to acquisition and systems management to advise the ASA(ALT) and Army leadership.



Program Executive Offices (PEOs)



Joint Program Executive Office Armaments & Ammunition Picatinny Arsenal, New Jersey

Joint Program Executive Office Armaments & Ammunition (JPEO A&A) leads the development, procurement, and fielding of lethal armaments and ammunition providing Joint warfighters and Allied Partners with overmatch capabilities to defeat current and future threats.

JPEO A&A programs support the Army's Modernization Priorities with active programs in Long Range Precision Fires; Next Generation Combat Vehicle; Future Vertical Lift; Assured Positioning, Navigation and Timing/Space; Soldier Lethality; and Air and Missile Defense Cross-Functional Teams (CFT) under Army Futures Command (AFC).

JPEO A&A is also designated as the Single Manager for Conventional Ammunition (SMCA) Executor. The SMCA objective is to achieve the highest possible level of effectiveness and efficiency in the Department of Defense (DOD) logistics operations involving acquisition and supply of conventional ammunition to the U.S. Armed Forces.

JPEO A&A's seven subordinate offices conduct life cycle management of more than 600 Army programs, providing the Joint warfighter with superior munitions and armaments through a collaborative effort that leverages Government and industry partnerships. These offices include:

- Project Manager Combat Ammunition Systems (PM CAS)
- Project Manager Close Combat Systems (PM CCS)
- Project Manager Maneuver Ammunition Systems (PM MAS)
- Program Manager for Towed Artillery Systems (PM TAS)
- Project Director Joint Bombs (PD JB)
- Project Director Joint Services (PD JS)
- Directorate of Integration (DOI)









Program Executive Office, Assembled Chemical Weapons Alternatives Aberdeen Proving Ground, Maryland

Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA) is responsible for the safe destruction of the remaining U.S. chemical weapons stockpile at U.S. Army Pueblo Chemical Depot in Colorado and Blue Grass Army Depot in Kentucky. Additionally, PEO ACWA maintains a supporting field office on Anniston Army Depot in Alabama.

PEO ACWA reports directly to the Under Secretary of Defense (Acquisition and Sustainment) through the Deputy Assistant Secretary of Defense (Threat Reduction and Arms Control), under the umbrella of the Department's Chemical Demilitarization Program as mandated by Congress in Public Law 105-261. The Chemical Demilitarization Program is on track to complete the chemical weapons destruction mission by the Chemical Weapons Convention date of September 30, 2023. After the destruction mission is complete, the program will manage a multiyear closure process.







Program Executive Office Aviation

Huntsville, Alabama

Program Executive Office (PEO) Aviation serves the U.S. Army and the Nation by designing, developing, delivering, and supporting advanced aviation capabilities. PEO Aviation supports Army Readiness and Modernization by leading and executing life cycle management for all Army aviation weapons systems.

PEO Aviation's expertise includes requirements validation, program planning and budgeting, acquisition processes, materiel solution development, systems integration, production, training, fielding, and support for the capabilities the organization manages.

PEO Aviation has three primary objectives:

- 1. Modernize, Equip, and Sustain the Army Aviation Portfolio of 2030 to Successfully Conduct Multi-Domain Operations as Part of an Integrated Joint Force
- 2. Cultivate More Equipped, Capable, and Interoperable Allies and Partners
- 3. Foster a Diverse and Professional Workforce that Enables an Agile and Innovative Acquisition, Logistics, and Technology Enterprise

PEO Aviation evaluates its mission effectiveness to validate the right people, processes, and tools are in place to best enable the workforce. PEO Aviation is committed to ensuring that Army aviation is ready to "fight tonight" even while continuing to design and develop capabilities for the future.

PEO Aviation has nine Project Offices:

- Apache Attack Helicopter
- Aviation Mission Systems and Architecture
- Aviation Turbine Engines
- Cargo Helicopters
- Fixed Wing Aircraft
- Future Attack Reconnaissance Aircraft
- Future Long Range Assault Aircraft
- Unmanned Aircraft Systems
- Utility Helicopters





Program Executive Office Command, Control, Communications-Tactical

Aberdeen Proving Ground, Maryland

To achieve a unified U.S. Army network, capability sets, and their associated technologies are fielded in two-year increments.

Each capability set, developed and managed by Program Executive Office Command, Control, Communications-Tactical (PEO C3T), builds on the previous set. These sets incorporate commercial solutions that are shaped by lessons learned from soldier touchpoints, Project Convergence, and other experimentation. PEO C3T supports network modernization initiatives, including fielding an integrated tactical network, enhanced satellite communications, mission command applications, sensor-to-shooter capabilities, advanced waveforms, data management, and artificial intelligence. PEO C3T is aligned with Army science and technology initiatives for transition into Programs of Record.

Through capability set fielding and development, the Army is enhancing the network to give commanders multiple communication choices (both military and commercial networks). This approach makes the network more user-friendly, better protected against cyber and Electronic Warfare threats, and easier to share information with Coalition partners. The resulting technologies provide warfighters with improved capabilities and dominance in a contested and congested environment.

To incorporate real-time operational feedback and generate fewer prescriptive requirements, the PEO is utilizing the proven industry practice of development security operations and robust operational experimentation, which places developers sideby-side with soldiers in operational units to evaluate potential technology solutions.





Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense

Aberdeen Proving Ground, Maryland

Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND) leads, manages, and directs the acquisition, fielding, and sustainment of CBRN sensors, protective equipment, medical countermeasures, specialized equipment for U.S. Special Forces, integration and information management systems, and defense-enabling biotechnologies.

JPEO-CBRND provides integrated layered CBRND capabilities to the Joint force across Combined Joint All-Domain Operations and focuses on integration initiatives that reduce risk, compress development timelines, and improve acquisition outcomes across the entire organization's portfolio.

JPEO-CBRND has Joint Project Managers (JPM) and Joint Project Leads (JPL) that manage the acquisition of CBRN defense equipment and medical countermeasures, including:



- JPM CBRN Medical
- JPM CBRN Protection
- JPM CBRN Sensors
- JPM CBRN Special Operations Forces
- JPL CBRN Integration
- JPL CBRND Enabling Biotechnologies

The JPMs and JPLs collaborate with internal and external partners to rapidly deliver CBRN defense solutions that are compatible and interoperable with current and future equipment. JPEO-CBRND's partnerships with government, academia, industry, and international allies make it possible to push the boundaries of innovation to quickly find solutions and put new capabilities in the hands of warfighters so they can operate in all denied environments.



Program Executive Office Combat Support & Combat Service Support

Detroit Arsenal, Michigan

Program Executive Office Combat Support & Combat Service Support (PEO CS&CSS) is responsible for the life cycle of approximately 20 percent of the Army's total equipment programs spanning the Engineer, Ordnance, Quartermaster, and Transportation portfolios.

PEO CS&CSS PM offices are: Expeditionary Energy and Sustainment Systems; Force Projection; Joint Program Office Joint Light Tactical Vehicles; Transportation Systems, and Project Lead Integration.

Within its responsibilities, PEO CS&CSS acquisition professionals and their support teams:

- Manage the full complement of processes associated with cost, schedule, and performance of a major portion of the Army's equipment programs
- Tailor and streamline program management initiatives using granted authorities, when appropriate, to bolster warfighter capability by accelerating modernized equipment to the field
- · Execute Foreign Military Sales cases within its vast portfolio
- Collaborate with whole-of-Department of Defense enterprise stakeholders and industry
 partners to assure optimal program management, equipment fielding, training, and support
 for the Joint warfighter, with a focus on the rapid transition of new technologies whenever
 practicable
- Consider and assess the complex conditions for modernization impacting PEO CS&CSS programs, including the National Defense Strategy, the Army's digital, climate, and Arctic strategies, the correlation of budget, the Program Objective Memorandum and Strategic Portfolio Analysis Review processes, as well as emerging commercial and organic industrial base considerations









Program Executive Office Enterprise Information Systems Fort Belvoir, Virginia

Program Executive Office Enterprise Information Systems (PEO EIS) is a critical provider, modernizing and managing the U.S. Army's network and enterprise business systems.

PEO EIS's diverse portfolio of 36 program offices and more than 71 acquisition programs supports and fields Army and DOD communications, logistics, medical, finance, personnel, training, and procurement systems for every domain, branch, unit, and soldier in the Army.

In December 2022, PEO EIS established a Chief Information Office (CIO) to align the PEO with the Army and DOD Digital Transformation Strategies and Priorities. The new CIO function serves to integrate the organization's previously standalone portfolios, the Business Mission Area and Enterprise Information Environment Mission Area. The PEO's six project management office portfolios – including the Army's data, finance and accounting, human capital and logistics, defensive cyber, enterprise services and network modernization-related programs – have been brought together, enabling the project managers to provide integrated solutions in support of the Army Data Plan, Cloud Plan, and Unified Network Plan.

From helping build and defend the unified network, to modernizing enterprise business systems, to providing artificial intelligence/machine learning-capable applications for data-driven decision-making, PEO EIS' solutions enable today's soldiers to become the Multi-Domain Operations-ready force of tomorrow.









Program Executive Office Ground Combat Systems Detroit Arsenal, Michigan

Program Executive Office Ground Combat Systems (PEO GCS) is responsible for providing soldiers world-class affordable, effective, and sustainable ground combat equipment. Its Combat Vehicle Modernization strategy emphasizes two of the Army's top Modernization Priorities – Long Range Precision Fires and fielding the Next Generation Combat Vehicle.

PEO GCS is building a foundation for improved long range precision fires through the Extended Range Cannon Artillery (ERCA) Family of Vehicles. These vehicles, based on mobility and survivability upgrades to the Paladin M109A7 Self-Propelled Howitzer, will close many artillery capability gaps, and provide an avenue for further increases in range and effectiveness by allowing for future propellant and projectile improvements.

The Mechanized Combat Vehicle – XM30 answers the Army's second highest priority: fielding Next Generation Combat Vehicles. The XM30, a middle tier rapid prototyping acquisition, will provide Armored Brigade Combat Teams a battlefield maneuver solution for soldiers seeking advantageous positions when involved in close combat. In addition, the XM30 is intended to control robotic and semiautonomous ground systems.





Other new ground combat vehicles include Booker Combat Vehicle – M10, which provides effective hard-hitting firepower that can accompany light maneuver forces on the field. The M10 will be the Army's first newly designed combat vehicle fielded in over four decades.

In addition to development of new systems, PEO GCS manages the modernization of the Army's legacy Combat Vehicle fleet with upgrades to the Bradley Fighting Vehicle, the Abrams Main Battle Tank, combat recovery systems like the M88A2, and the Stryker Family of Vehicles. In every case, PEO GCS is working to improve the ability to host the Army's future network. In cases where platforms cannot be upgraded, PEO GCS is leading the way in making sure obsolete vehicles are replaced with vehicles like the Armored Multi-Purpose Vehicle, which provides significant improvements in protection, mobility, and utility.



Program Executive Office Intelligence, Electronic Warfare and Sensors

Aberdeen Proving Ground, Maryland

Program Executive Office Intelligence, Electronic Warfare and Sensors (PEO IEW&S) delivers sensors as well as Processing, Exploitation, and Dissemination systems dedicated to providing decision dominance. With seven project managers located at Aberdeen Proving Ground, Maryland; Fort Belvoir, Virginia; and Redstone Arsenal, Alabama, the PEO for IEW&S leads a team that covers the gamut of military needs. As a key enabler for Multi-Domain Operations, the organization sits at the cross-roads of multiple Army Modernization efforts.

PEO IEW&S' diversified portfolio supports a wide range of organizations throughout the Army and Joint partners, including the Army G2, Army CYBER Command, Cyber Center of Excellence (CoE), Commanding General Intelligence CoE, Intelligence and Security Command, Space & Missile Defense Command, Combat Capabilities Development Command (CCDC) Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) Center, Army Research Lab, Army Futures Command, and many more.





PEO IEW&S Project Managers (PM) are as follows:

- PM Aircraft Survivability Equipment
- PM Cyber and Space
- PM Electronic Warfare and Cyber
- PM Intelligence Systems and Analytics
- PM Positioning, Navigation, and Timing (PNT)
- PM Terrestrial Sensors
- Project Director (PD) Sensors Aerial Intelligence



Program Executive Office Missiles and Space Redstone Arsenal, Alabama

Program Executive Office Missiles and Space (PEO MS) is on the cutting-edge of the U.S. Army's Long Range Precision Fires, Air and Missile Defense, Hypersonic, Directed Energy, Counter-Unmanned Aerial Systems, and Aviation and Ground Missiles modernization initiatives.

Of the Army's Modernization programs, five are managed by PEO MS: Integrated Air and Missile Defense Battle Command System, Precision Strike Missile, Maneuver-Short Range Air Defense, Indirect Fire Protection Capability, and the Lower Tier Air and Missile Defense Sensor. These critical Modernization programs will increase warfighter lethality and enhance force protection throughout the multi-domain battlespace.

PEO MS increases force protection and enhances warfighter lethality by developing, delivering, and sustaining air defense launch platforms and missiles, directed energy, radars and sensors, and command and control systems that provide warfighters with integrated offensive and defensive fires across all domains, beginning with target acquisition and culminating with target defeat.

PEO MS works in collaboration with Army Futures Command, Cross-Functional Teams, Centers of Excellence, other Services, and the defense industry to pursue opportunities for combined research and development on emerging technologies.









Program Executive Office Soldier

Fort Belvoir, Virginia

Program Executive Office (PEO) Soldier rapidly delivers agile and adaptive, leading-edge soldier capabilities to provide combat overmatch today and be more lethal tomorrow. PEO Soldier's focus is making sure soldiers have enhanced capabilities in lethality, mobility, survivability, situational awareness, and sustainment. The PEO treats the soldier as an integrated weapons system and the squad as an integrated combat platform – from their uniforms to their personal protection, to their weapons. Soldiers of the future will have adaptive, agile, modular, and scalable equipment that will be optimized for the mission without sacrificing capability or performance.

PEO Soldier provides soldiers with capabilities designed to attain and maintain overmatch of peer and near-peer adversaries to meet the objectives of the National Defense Strategy. Investments in people and programs enable the organization to be agile and innovative in rapidly delivering capabilities that provide soldiers the decisive edge while also being good stewards of taxpayer funding.

PEO Soldier's Project Management (PM) and Project Director Offices provide the very best equipment to enable mission success.

- Assistant Program Executive Officer Future and Integration (APEO)
- PM Integrated Visual Augmentation System (IVAS)
- PM Soldier Lethality (PM SL)
- PM Soldier Survivability (PM SSV)





Program Executive Office Simulation, Training and Instrumentation Orlando, Florida

Program Executive Office Simulation, Training and Instrumentation (PEO STRI) is the leader in delivering unmatched testing, training, and information operation capabilities enhancing the execution of more than 2.5 million training events across 260+ acquisition programs each year. The Army's priorities of people, readiness, and modernization are the backbone of the STRI mission.

With a diverse and highly qualified workforce of more than 1,100 military, civilian, and contracted personnel, PEO STRI works with industry, academia, other military services, and government partners to ensure soldiers have the high-fidelity, realistic training, testing, and threat products needed to remain the world's premier land fighting force.

PEO STRI has five Project Manager (PM)/Project Lead (PL) offices that help to align current and future programs with the Army's priorities: PM Synthetic Environment (PM SE); PM Soldier Training (PM ST); PM Cyber, Test and Training (PM CT2); PL Training Aids, Devices, Simulators and Simulations (TADSS) Support Operations (PL TSO); and PL International Programs Office (PL IPO).

Focused on strengthening collaboration, streamlining acquisition, and investing in people to transform and modernize while building the Army of 2030, PEO STRI's top priorities include:

- Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT)
- Persistent Cyber Training Environment (PCTE)
- Synthetic Training Environment (STE)



Program Executive Offices (PEOs)



Army Rapid Capabilities and Critical Technologies Office Redstone Arsenal, Alabama

Army Rapid Capabilities and Critical Technologies Office (RCCTO) is chartered to execute rapid experimental prototypes and field combat capabilities. RCCTO delivers rapid prototypes in support of the Army Modernization and National Defense strategies.

RCCTO's efforts include signature outcomes like hypersonics, mid-range capabilities, and directed energy, and critical efforts in emerging and disruptive technology areas such as hybrid electric vehicle technologies and innovative capabilities.

RCCTO's charter allows rapid navigation or exemption from many traditional processes that govern Army materiel development. The organization leverages innovation by other government agencies, industry partners, and warfighter's feedback to deliver solutions on an accelerated timeline.

Early and reoccurring interactions with warfighters during development are critically important to enabling RCCTO to provide prototypes with residual combat capability. These prototypes allow Army soldiers to train with these capabilities.

- Counter-small Unmanned Aircraft Systems (C-sUAS)
- Directed Energy
- Emerging Technologies
- Hypersonics
- Mid-Range Capabilities

RCCTO also serves as the materiel and acquisition lead in support of the Joint C-sUAS Office (JCO), the DOD C-sUAS lead. The JCO, RCCTO, and Services participate in industry demonstrations to evaluate emerging technologies that close gaps, inform requirements, and promote innovation.





U.S. Army Acquisition Support Center

Fort Belvoir, Virginia

The U.S. Army Acquisition Support Center (USAASC) is a direct reporting unit of the ASA(ALT). USAASC enhances the readiness of the Army's warfighter by providing support to the Army Acquisition Workforce as well as the 12 PEOs responsible for the prototyping, procurement, and fielding of equipment for the Army.

USAASC has several key responsibilities, including:

- Conduct the Director of Acquisition Career Management (DACM) mission in support of the Army Acquisition Workforce.
- Establish processes that facilitate communication, cooperation, information exchange, and collective decision-making between and among Army organizations, industry, academia, and other governmental entities.
- Provide support to PEOs in the areas of resource management, human resources management, and program force structure support; and serve as the higher headquarters for Protection and Security.

The USAASC director also serves as the DACM. Within USAASC, the Army DACM Office ensures a highly capable, agile, adaptive, and professional Army Acquisition Workforce in compliance with the Defense Acquisition Workforce Improvement Act.



Partner Organizations



U.S. Army Forces Command

(FORSCOM) trains and prepares a combat ready, globally responsive Total Force to build and sustain readiness to meet Combatant Commander requirements. The end state is combat-ready and globally responsive Total Army Forces who are well-led, disciplined, trained, and expeditionary... ready now to deploy and win in Large Scale Combat Operations against near-peer threats.



The purpose of the **U.S. Army Futures**

Command (AFC) is to transform the Army to ensure war-winning future readiness. AFC develops and maintains the Future Operational Environment that informs Army research, concepts, experimentation, and requirements. AFC works across the Total Army to integrate these essential functions across the Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, and Policy to deliver and design formation-based capability and dominant land forces.





U.S. Army Materiel

Command (AMC) is the Army's primary logistics and sustainment command, delivering precision sustainment and materiel readiness to an expeditionary global force from the Joint Strategic Support Area to the tactical point of contact. Installation and materiel readiness are the reasons AMC exists, ensuring the best equipped and sustained fighting force in the world.



U.S. Army Training and Doctrine Command (TRADOC) builds and sustains our highly trained, disciplined, and fit Army by acquiring the best people, training the most lethal Soldiers, developing the most professional leaders, guiding the Army's culture, and shaping the future force. We serve as a conduit; bringing together all major

commands to shape future Army design(s) and

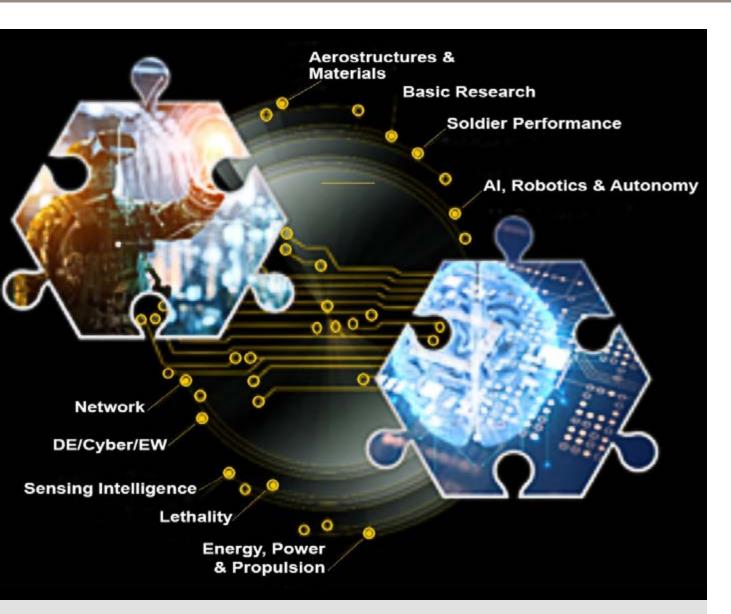
drive change across the Army.

SCIENCE & TECHNOLOGY



SCIENCE & TECHNOLOGY 34

U.S. ARMY SCIENCE & TECHNOLOGY



Forging scientific discovery into integrated, transformational technologies to enhance Army and Joint operations.

U.S. ARMY SCIENCE AND TECHNOLOGY (S&T) OVERVIEW

The U.S. Army is committed to ensuring our soldiers remain the dominant land force across the full spectrum of conflict. Building upon this commitment, the Army's Science and Technology (S&T) program focuses on enabling the Army's Modernization Priorities, established by the Secretary of the Army, while addressing the full spectrum of existing and emerging threats.

The Army S&T vision is to provide soldiers with the capabilities needed to deploy, fight, and win our Nation's wars. The future operational environment will demand land power dominance with increased flexibility, adaptability, and speed of responsiveness. To address capability shortfalls and outpace anticipated threats, the Army's S&T program fosters invention, innovation, and demonstration of affordable technology solutions. It matures advanced technologies into cost-effective and sustainable solutions, pursues foundational technology developments and breakthroughs, leverages organic capacity and the capacity of our partners, and invests in fundamental science that will yield decisive advantages in the future.

ARMY S&T ENTERPRISE

The Army S&T Enterprise is comprised of the Office of the Deputy Assistant Secretary of the Army Research and Technology, who is responsible for synchronization of S&T across the labs and centers within the following executing commands:

- U.S. Army Futures Command Combat Capabilities Development Command (DEVCOM) (Army Research Laboratory and Army Centers) and the Medical Research and Development Command
- U.S. Army Corps of Engineers Engineer Research and Development Center
- U.S. Army Space and Missile Defense Command/Army Forces Strategic Command Space and Missile Defense Technical Center
- Headquarters, Department of the Army, G-1 U.S. Army

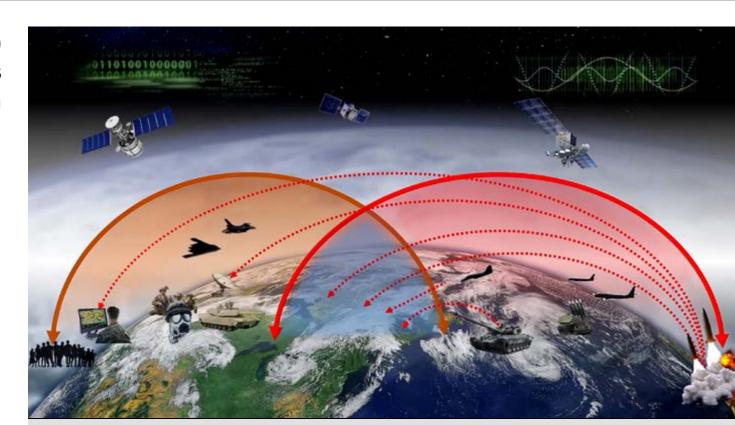


SCIENCE & TECHNOLOGY 35

U.S. ARMY SCIENCE & TECHNOLOGY

Engineer Research and Development Center (ERDC) supports the U.S. Army by providing critical technologies to support strategic goals and objectives. Specific research focus areas include:

- Military Engineering (ME) provides technology solutions to rapidly construct and deploy force projection and protection systems by leveraging expertise in blast and weapons effects to both develop more powerful weapons and to protect structures and facilities from threats. ME also provides expertise in retrofit protection, underbelly blast loading on vehicle structures, cold regions, and geotechnical materials to develop robust material solutions.
- Civil Works provides methods, tools, and technologies that allow innovative solutions for water resources missions such as navigation, flood risk management, environmental sustainability, hydropower, water supply, and recreation. This innovative research and development (R&D) helps the U.S. Army Corps of Engineers and our partners anticipate and plan for rapid decision-making for the benefit of future generations.

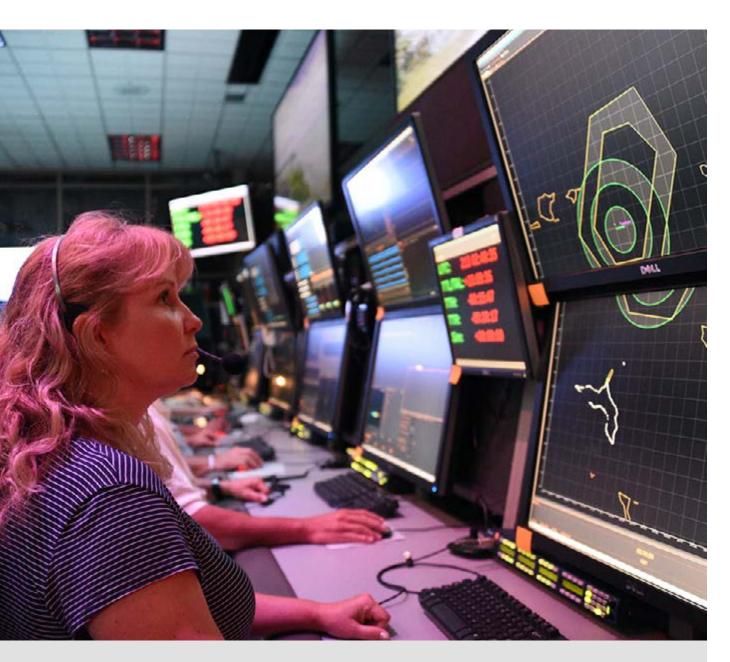


ERDC's geospatial research and engineering competency merges operational environment intelligence with geospatial mapping products to create superior situational awareness.

(Photo courtesy of ERDC.)

- Installations & Operational Environments provides cutting-edge solutions for installations, training ranges, contingency basing, and energy sustainability, resilience, and security. This area generates new capabilities for smart installation infrastructure and understands the warfighter environment, detecting hazards before they can have negative impacts on our soldiers.
- Geospatial Research & Engineering (GRE) develops and demonstrates mapping, geospatial analysis, and mission planning technologies to ensure superior situational awareness of the operational environment for the soldier and mission command. GRE merges intelligence preparation of the operational environment with geospatial mapping and analysis and map-based planning for convergence and transformation of the Army's mission command systems.
- Engineered Resilient Systems (ERS) combines advanced engineering with DOD high-performance computing capabilities to develop tools to amplify design options during the early stages of the weapons system acquisition process. ERS spans all DOD Services, with methods being applied to fixed-wing planes, rotorcraft, ground vehicles, and ships. These trade space analytics tools can compare millions of design options and performance characteristics in hours rather than months for more robust designs for consideration during the engineering phase.

ERDC R&D priorities closely follow the Army's number one priority – its people – by considering quality of life initiatives, 21st Century talent management, and readiness by ensuring the safety and well-being of the warfighter and family members, and quality of life and readiness on our military installations before, during, and after deployment.



Personnel man the Kwajalein Mission Command Center at the Ronald Reagan Ballistic Missile Defense Test Site on the Kwajalein Atoll in the Republic of the Marshall Islands. (Photo by Carrie Campbell, U.S. Army Space and Missile Defense Command.)

U.S. Army Space and Missile Defense Command Technical Center (SMDTC) supports the Joint warfighter by providing science, technology, and developmental and operational test capabilities to enable warfighter dominance today and in the future. As part of the Army S&T enterprise, SMDTC contributes to the current fight and enables the next generation to prevail in conflicts to come. SMDTC focuses on three essential tasks: executing S&T, research and development, and developmental and operational test support. It contributes to the success of the warfighter and Joint force in three major science and technology areas: directed energy, tactical responsive space and high altitude, and hypersonic and strategic weapons.

The Technical Center also operates the Ronald Reagan Ballistic Missile Defense Test Site (RTS) on Kwajalein Atoll. As part of the Major Range and Test Facility Base, RTS provides one-of-a-kind sensor capabilities and provides contributing sensors for 24/7 space domain awareness. Additionally, SMDTC operates state-of-the-art systems integration laboratories and provides low-cost threat representative targets for missile defense testing.

SCIENCE & TECHNOLOGY 36

OVERVIEW OF ARMY S&T INVESTMENTS

The Army Modernization Priorities were established to regain overmatch and attain competitive advantage over emerging threats, competitors, and adversaries. The Army's S&T investments are aligned to address the Army's top modernization challenges to ensure competitive advantage against near-peer threats. These include:

- Long Range Precision Fires
- Next Generation Combat Vehicle
- Future Vertical Lift
- Army Network
- · Air and Missile Defense
- Soldier Lethality

Additionally, S&T investments that support and enable the modernization priority areas are focused under the following investment areas:

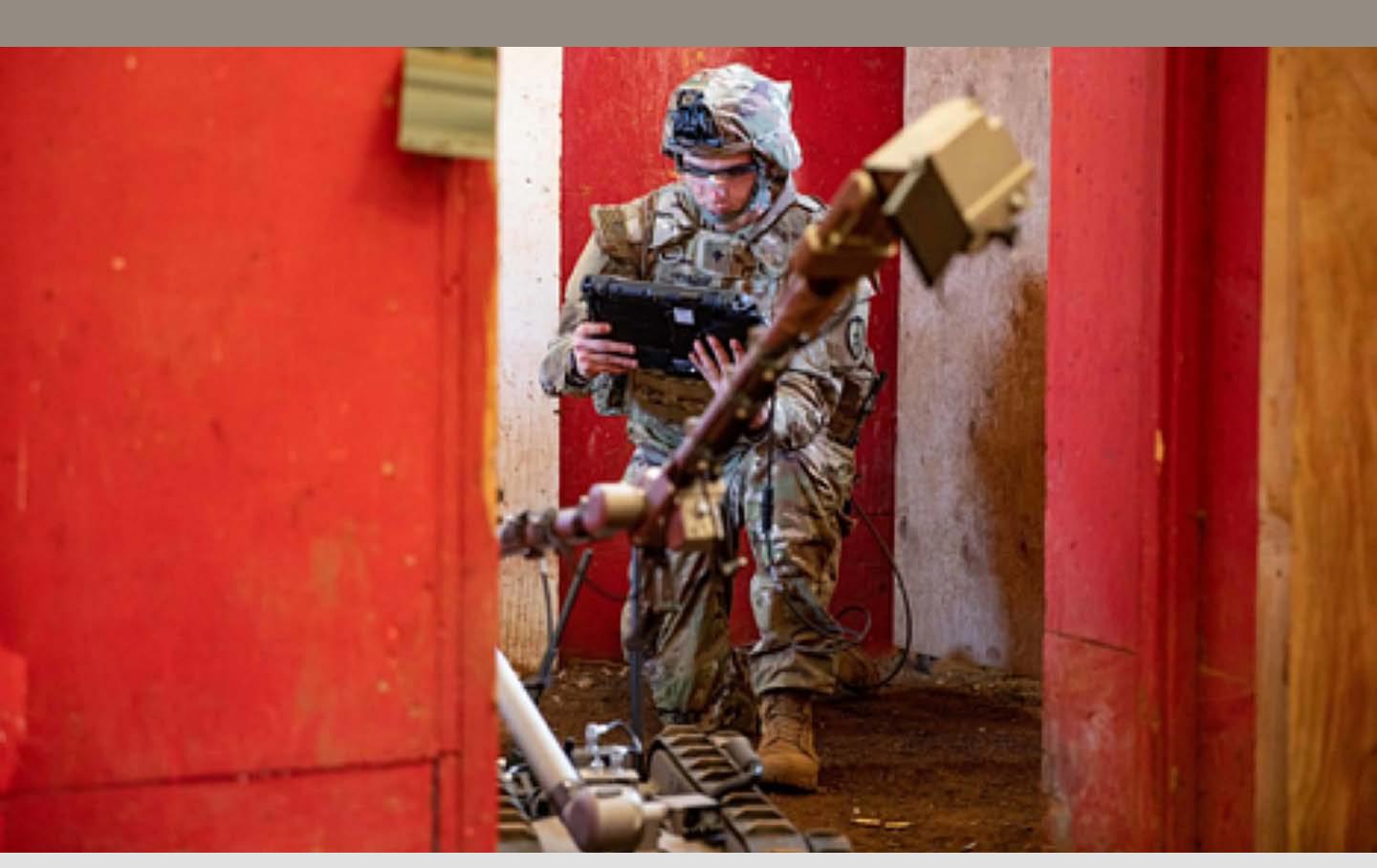
- Medical
- Technology Maturation
- Basic Research

Army S&T executes Research and Development (R&D) funding for its S&T program through a variety of strategies, mechanisms, and partnerships. Scientists and engineers working at Army laboratories and other government laboratories and centers conduct Basic Research (Budget Activity (BA)) 1), Applied Research (BA2), and Advanced Technology Development (BA3) activities. These investments are also carried out through university grants, contracts with industry, and agreements with other government agencies and organizations.

The Army S&T enterprise is responsible for a portion of the Army's Advanced Component Development and Prototyping (BA4) and all its Manufacturing Technology (ManTech). These resources support the risk reduction of S&T products, ensuring technology maturation, and manufacturing feasibility for transition into systems development programs. Finally, the S&T Enterprise, in concert with the Program Executive Offices (PEOs) and Program Managers (PMs), executes the Army's R&D funding allocated under the Small Business Innovation Research and Small Business Technology Transfer Research program.



Army S&T provides advanced technology to the warfighter. (Photo illustration by Justin Rakowski, U.S. Army.)



Army researchers, along with their collaborators, develop a novel computational model that allows robots to ask clarifying questions to soldiers, enabling them to be more effective teammates in tactical environments.

ARMY SCIENCE AND TECHNOLOGY PORTFOLIOS

LONG RANGE PRECISION FIRES S&T

Long Range Precision Fires investments will provide massed and mobile strike options at extended range and greater lethality to restore overmatch, improve deterrence, and disrupt anti-access/area denial (A2/AD) in Multi-Domain Operations (MDO). S&T products include:

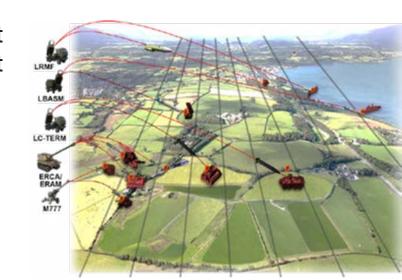
- · Hypersonic weapons
- Extended Range Cannon Artillery
- Enhances guidance and navigation for weapon systems
- Advanced energetics for improved propulsion and more lethal warheads
- Next-generation radar

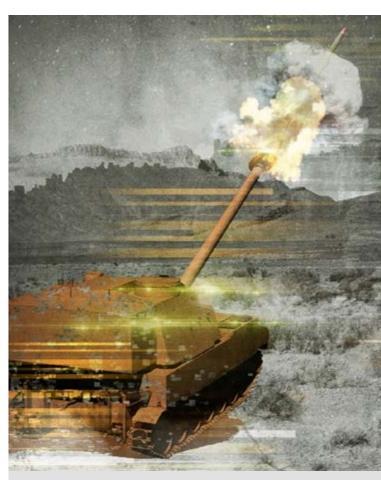
Several S&T projects are developing key technologies and components for the Precision Strike Missile (PrSM) Program of Record (PoR), to ensure this system keeps pace with emerging threats.

The Land-Based Anti-Ship Missile project is developing sensor and payload component technologies for engaging and defeating land and maritime platforms and systems. The PrSM Modular Payload project will develop and demonstrate enhanced lethality payloads to find and engage deep moved, moving, dispersed, and poorly located targets in areas with contested access, transitioning to future spirals of PrSM.

The Long Range Maneuver Fires (LRMF) project will develop and demonstrate extended range missile technology to survive and penetrate future A2/AD environments and increase the operational range. LRMF will also transition technology to the PrSM PoR in the near future. Other enabling projects in energetics will improve range, speed, and lethality through new formulations and manufacturing techniques.

The Advanced Hypersonics Technology program is developing component technology for the common hypersonic glide body for the Long Range Hypersonic Weapon. Technologies include advanced aerostructures for improved performance; cost and manufacturing throughput; datalink and dynamic kill chain integration; enhanced guidance, navigation, and control in global positioning system denied environments, and advanced thermal management.





Long Range Precision Fires provide extended range allowing an increased capability to support maneuver and counter enemy long-range systems.



NEXT GENERATION COMBAT VEHICLE S&T

Next Generation Combat Vehicle (NGCV) and Ground Enabling Technology investments ensure U.S. overmatch in offensive and defensive ground maneuver operations. S&T is focused to enable manned and unmanned ground combat formations to enter austere environments, survive and defeat emerging threats, and sustain an operationally feasible footprint.

S&T investments include:

- Advanced Materials
- Armor and Active Defense Systems
- Force Projection into All Environments
- Ground Vehicle Platforms, Power, and Energy
- Kinetic Armaments and Control Systems
- Logistics and Sustainment
- Protection of Deployed Assets
- Robotics and Autonomous Systems
- Sensors for Situational Awareness and Targeting

The Army's Robotics and Autonomous Systems' investments develop teamed autonomous combat technologies to engage opposing forces while enabling combat platforms to traverse the battlefield over a variety of terrain, obstacles, and threats. Combat Vehicle Robotics integrates and develops robotic and autonomous ground vehicles able to fight with greater freedom of maneuver and increased standoff. Crew Optimization and Augmentation Technologies develops and enables flexible, adaptive, and robust manned-unmanned team dynamics between soldiers and unmanned assets, including autonomous mobility technologies and weapon engagement systems. Additionally, the Artificial Intelligence/ Machine Learning (AI/ML) project explores maturing AI capabilities to expand autonomous behaviors to execute combat relevant scenarios, enable soldier and AI teaming, and reduce the cognitive burden on soldier operators.

The Army's Ground System Active Defense provides modular layered protection for ground vehicles, including hostile fire detection, soft-kill (defeat of a threat's guidance technique) Active Protection Systems (APS), hard-kill (kinetic defeat of incoming threat) APS, and passive and reactive armor. Advanced Concepts for Active Defense develops novel technologies that enable cooperative protection and adaptability to complex, emerging, and future threats to ground vehicles.

Platform Electrification and Mobility provides the Army with electrification architectures and mobility solutions that provide significantly improved mobility, operational duration, and on-board electrical power generation. Vehicle electrification serves to enable Army ground vehicles with improved combat capability, and extended range of operation. Electrification also seeks to reduce vehicle fuel demand and lower sustainment requirements.



Autonomous vehicles can provide platforms for a variety of systems and roles.



Ground System Active Defense provides layered protection for ground vehicles.

FUTURE VERTICAL LIFT S&T

Aviation S&T provides research, development, demonstration, and transition of S&T products to provide the U.S. Army and Joint Force with manned, optionally manned, unmanned, and autonomous attack, reconnaissance, utility, and medical evacuation aviation platforms for high-speed and long-range operations. Army aviation platforms will need extended range and speed to maneuver into positions of advantage, actively engage threat formations, and survive in contested or anti-access/area denial (A2/AD) air space.

The Aviation Portfolio encompasses S&T projects that support Future Vertical Lift (FVL) research, technology development and demonstrations, and that enable research that will provide technology to address long-term needs. The goal of aviation S&T is to provide longer range and persistence, larger payloads, and increased speed, survivability, and combat overmatch in the future A2/AD battlefield, with an overall lower cost of ownership. S&T investments include:

- Aviation concept designs and assessments
- Module open systems architecture
- Holistic aviation survivability
- Improved situational awareness in degraded environments
- Integrated mission systems
- Advanced power systems and thermal management
- Increased lethality
- Air Launched Effects
- Advanced Teaming

The Air Launched Effects and Advanced Teaming efforts are demonstrating the ability to launch unmanned aircraft systems (UAS) from manned or unmanned FVL platforms, control UAS from the cockpit or a crew station, and mixed platform teaming behaviors and decision-making for manned and unmanned FVL Platforms.





Air Launched Effects Demonstration: Area-I ALTIUS (Agile-Launch, Tactically Integrated, Unmanned System) horizontal launch from a UH-60.



ARMY NETWORK COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE S&T

Army Network S&T investments develop, demonstrate, and transition technologies to enable: future hardware, software, and network infrastructure with resilient and assured communication links; Assured Position, Navigation, and Timing (APN&T) data for ground and air domains using trusted signals of opportunities and non-radio frequency (RF) capabilities; decision aids that expedite situational understanding and decision-making; and space-based assets and high-altitude payloads that provide the ability to sense and understand, in real-time, the multi-domain battlefield to reveal threat intentions, strategies, capabilities, and tactics of a peer adversary in a contested cyber and electromagnetic environment.

To support the Army's Network modernization objectives, the Army is focusing S&T investments in the following areas:

- Tactical Communications and Networking
- APN&T
- Cyber Electromagnetic Activities (CEMA)
- Decision Aids that Enable Situational Understanding
- Persistent Intelligence, Surveillance, and Reconnaissance (ISR)
- Command Post Mobility and Survivability
- Space-based and High-altitude Technologies
- Quantum, 5G, and Terahertz Communications

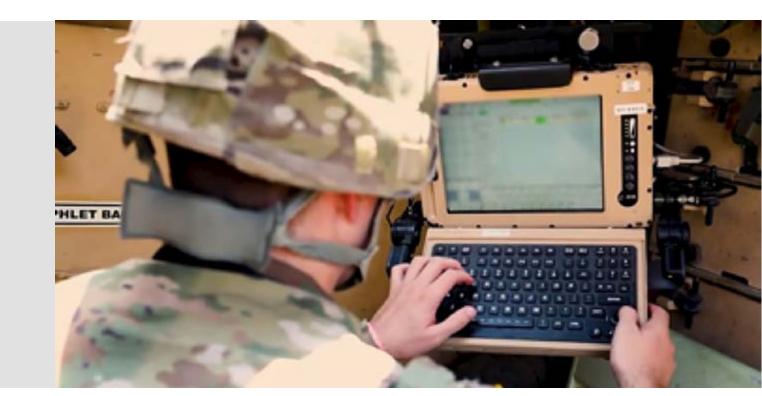
Tactical Communications and Networking efforts investigate and develop automated and intelligent networks with antijam capabilities, spectrum situational awareness, and highbandwidth commercial technologies, providing assured and resilient communication links in contested, congested, and degraded environments.

APN&T addresses the Army's needs by investing in trusted RF signals and non-RF capabilities that provide reliable and resilient location and timing data to all Army systems through modular and scalable sub-systems.

CEMA S&T investments deliver technologies that harden the Army's tactical network against adversary offensive CEMA operations and provide non-kinetic effects against the adversary communication links by developing and maturing cyber architectures, offensive cyber techniques, and automated and intelligent tools for detection of cyber intrusions.

Command Post (CP) Mobility and Survivability provides the Army with survivable, modular, scalable, and decentralized command posts that are rapidly deployed, reduce manpower requirements and minimize time to setup/tear-down. Investments reduce electronic and physical signatures of CPs, increase power generation and storage for distributed operations, and develop novel composite materials for CP structures.

Army S&T investments will provide Joint Forces with an integrated Situational Awareness and Understanding of Adversary operations capability across command posts and platforms. These capabilities reduce cognitive costs to decision-making through all echelons, providing core services, applications, and warfighter functionality in the areas of cyber, fires, logistics, intelligence, airspace management, and maneuver.



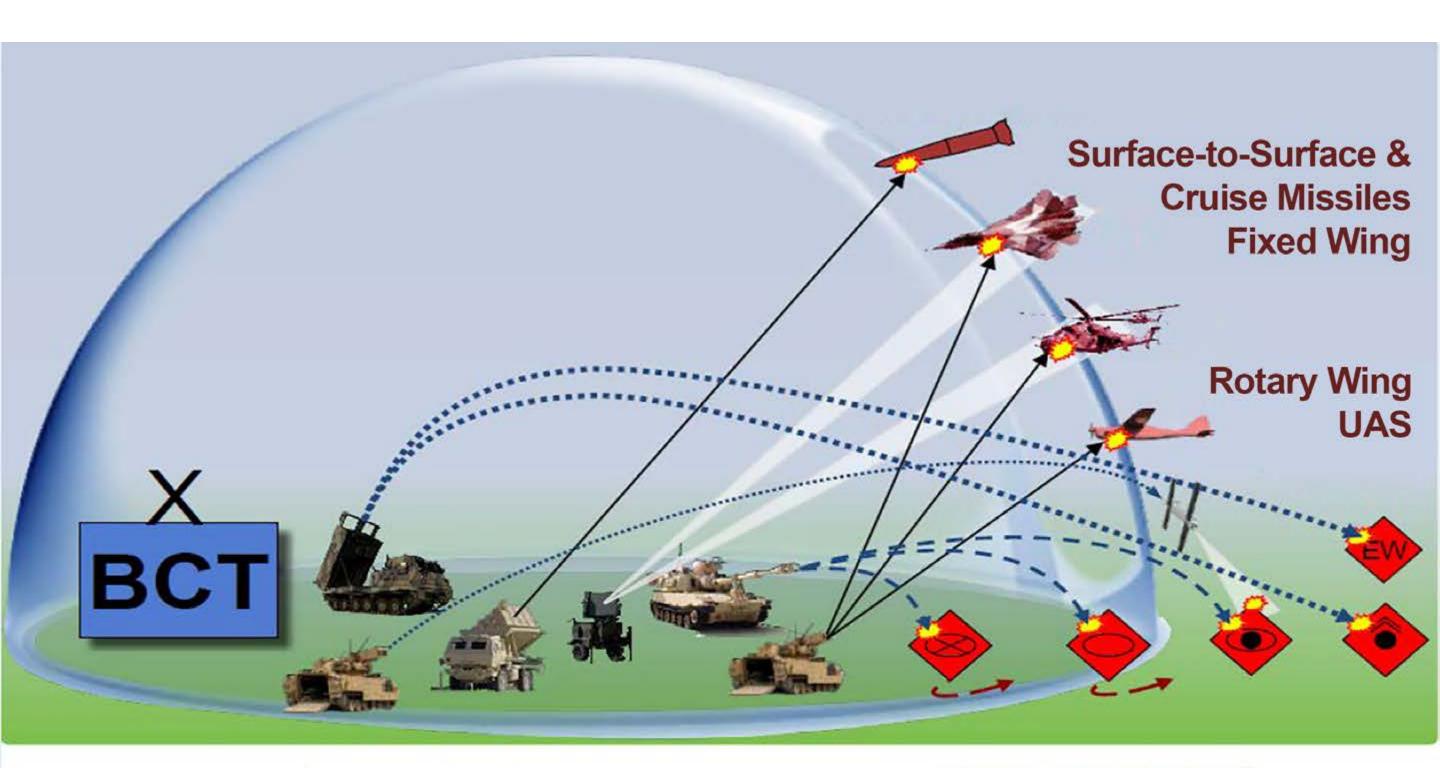
AIR AND MISSILE DEFENSE S&T

Air and Missile Defense investments will provide the Army and Joint Force overmatch at extended ranges with precise and affordable weapons. S&T activities in this area seek to reduce the cost of missile defense, restore overmatch, survive volley-fire attacks, and operate within sophisticated anti-access/area denial (A2/AD) and contested domains, and focus on:

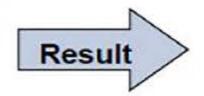
- Maneuver-Short Range Air Defense (M-SHORAD)
- Smaller and more affordable missiles
- High-Energy Lasers (HEL)
- Defense against emerging threats, including unmanned aircraft systems (UAS)
- Advanced seekers
- Advanced energetics and propulsion
- Next-generation radars

The HEL Tactical Demonstrator will develop HEL weapon components and subsystems in coordination with the Office of the Under Secretary of Defense for Research and Engineering Laser Scaling Initiative to demonstrate a pre-prototype weapon system on a mobile platform to defeat various surface and aerial threats. Enabling and support projects will develop foundational technologies, such as lethality modules and analytic tools, adaptive optics, beam combiners, improved laser sources, and thermal management systems to improve performance and ensure future growth.

The Maneuver Air Defense Technologies program is developing and demonstrating missile technologies and components (such as seekers, guidance, and control systems) for an affordable, short-range air defense intercept capability to defeat rotary-wing, tactical UAS, and fixed-wing threats. This project will be complemented by enabling projects in advanced and disruptive energetics, propulsion, guidance, and materials.



AMD Detects and Defeats Enemy Air Defense Threats



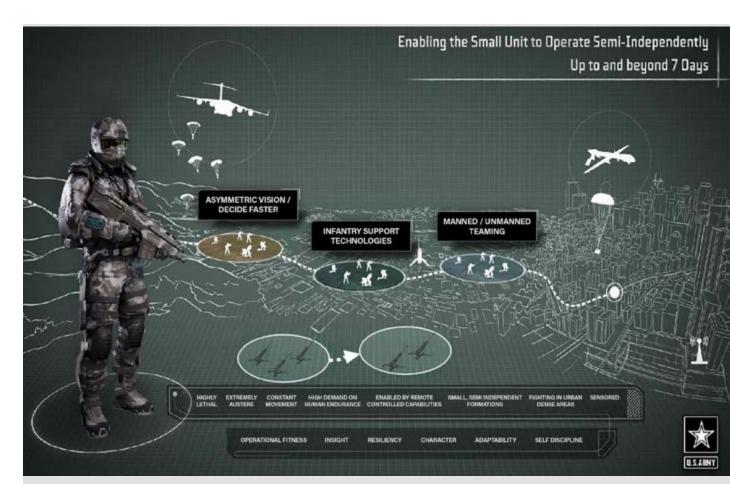
Protection of LRPF Assets, Restored Overmatch and Freedom of Maneuver

Air and Missile Defense (AMD) S&T provides the capability to defend against enemy air attack at extended range. AMD detects and defeats enemy air defense threats, resulting in protection of Long Range Precision Fires assets, restored overmatch, and freedom of maneuver.

SOLDIER LETHALITY S&T

Soldier Lethality investments are oriented to the discovery, innovation, and transition of S&T solutions that provide Army Close Combat Forces with improved lethality, communication, mobility, situational awareness, protection, survivability, training, and human performance required to dominate in Multi-Domain Operations (MDO). Soldier Lethality leads research, development, and demonstration of S&T solutions to improve individual and team performance, reduce tactical surprise, increase protection, and enhance lethality in close combat on an intensely lethal and distributed battlefield, and within complex, urban terrain. Investments focus on integrated, lightweight, and energy-efficient soldiercentric systems and equipment, decision-making, human performance research, and advanced training technologies. Areas of critical investment include:

- Next generation weapons and munitions with advanced fire control
- Integrated soldier architecture
- Advanced soldier protection
- Power and energy harvesting and distribution
- Optimized and enhanced soldier and squad performance
- Joint Combat Feeding advanced technologies
- Synthetic Training Environment (STE)



The future operational environment will push our soldiers to the extreme limits of their cognitive, physical, and emotional capabilities. Army S&T focuses on optimizing and enhancing the capabilities of soldiers and small units. These capabilities will be critical for the success of Multi-Domain Operations (MDO).

Next generation weapons and munitions with advanced fire control investments include research into lighter weight materials, improved ammunition, modular components, and enabling technologies such as integrated fire controls, optics, and sensors. Future weapons and munitions will need to defeat adversaries employing partial and full defilade to protect their positions and equipment, limiting the effects of direct-fire small arms and indirect fire systems. Therefore, Army S&T is focused on weapon system standoff and increased range performance while reducing the size and weight of counter-defilade capabilities, putting counter-defilade in the hands of soldiers and squads along with more lethal weapons.

As technology matures and is incorporated into soldier and small-unit equipment, and the future operational environment becomes increasingly arduous and complex for our ground forces, Soldier Lethality S&T seeks to configure an integrated soldier architecture that incorporates ergonomically designed systems and components developed through material research, component miniaturization, and capability integration. Advanced soldier protection technologies seek to provide our soldiers with lighter and more effective body armor, increased ballistic and blast head protection, integrated multifunctional environmental protection and camouflage, concealment, and decoy capabilities from elevated and ground-based sensors across the electromagnetic spectrum.

Power and energy harvesting and distribution is a critical research area that will contribute to this architecture through reduced weight, new and enhanced battery chemistries, and energy management approaches that can extend dismounted soldier mission duration.

Additionally, S&T investments in Joint combat feeding advanced technologies seek to enhance combat ration nutrient composition and optimize soldier nutrition to maximize cognitive and physical performance on the battlefield. These solutions will improve performance, recovery, and lethality across the DOD, as the Army is the Executive Agent for the Joint Combat Feeding program. Optimized and enhanced soldier and squad performance advancements focus on S&T solutions that improve cognitive and physical capabilities of our soldiers to enable them to fight and win in MDO.



STE advanced technology tools reduce the cost and time to develop models and behaviors for the Army's STE.

S&T investments in Synthetic Training Environments (STE) combine advanced virtual reality technology with constructive and live environments to provide responsive and reconfigurable training that immerses human senses in mixed reality, including providing touch and feel to simulate objects such as obstacles and walls. New training technologies and environments are emphasized to allow soldiers to train and rehearse skills such as faster decision-making, and to gain the advantage of speed over adversaries. Integrated with capabilities such as intelligent agents that challenge the soldier, STE will improve individual and team performance while reducing training time and cost.

ARMY S&T ENTERPRISE PROGRAMS

ARMY xTECH PROGRAM/ARMY APPLIED SMALL BUSINESS INNOVATION RESEARCH PROGAM

In concert with the PEOs and PMs from across the Army enterprise, the Congressionally mandated Army Applied Small Business Innovation Research (SBIR) Program works to:

- · Connect with non-traditional small businesses to spur innovation
- Break down barriers and accelerate technology development for the Army
- Propel American business toward enduring commercial viability and success

The Army xTech Program manages the Army's prize competitions to award and accelerate non-traditional small business technology solutions to help solve current Army challenges.

These programs identify the most advanced, unrivaled technologies in the private sector, and provide mechanisms to integrate these technologies into Army systems while operating at the pace of innovation, under the government's auspices of being transparent, fair, and equitable.

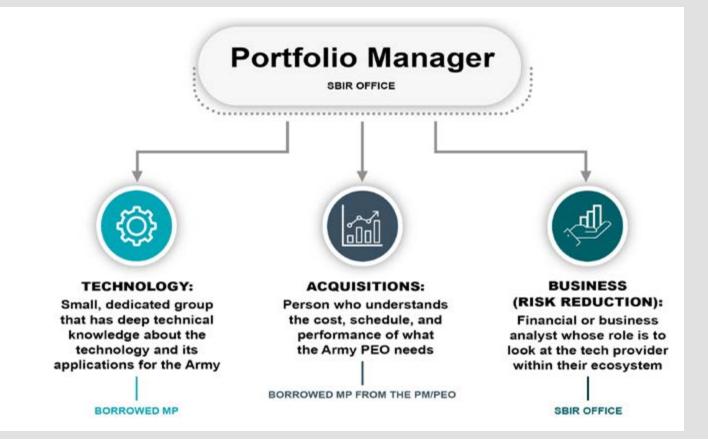
Newly constructed Army Applied SBIR Transition Broker Teams (TBT) — comprised of acquisition officials, soldiers, and technical experts from across the Army enterprise — leverage technology scouting to determine which technologies respond to not only the Army's needs, but small business needs as well.

- In fact, in 2022, the Army announced more than \$5 million in new funding contracts with three small businesses to transition their innovative solutions in wind measurement systems. This was the first topic released under the TBT construct to find the most effective, mature, and affordable fire control capability for the Future Attack Reconnaissance Aircraft (FARA) weapon system.
- Through a partnership between the Artificial Intelligence (AI) and Machine Learning TBT and Joint Program Executive Office for Armaments and Ammunition (JPEO A&A), the Army released two contract opportunities to solicit the latest innovations in two areas of weapons systems: Armament System AI Data Logger and Architecture and Datalink-Enabled AI for Fires Optimization.

The Army Applied SBIR program is focused on maximizing transition of technology into Army programs — and into the hands of the soldier.

The Army Applied
SBIR Program
releases contract
opportunities on a
rolling basis, enabling
Army programs to
seek timely, innovative
solutions for their most
critical modernization
priorities.





Transition Broker Teams serve as a catalyst for economic growth, engaging the innovation ecosystem, identifying critical needs, injecting dual-use technologies, and transitioning them to Army programs.

TECHNOLOGY MATURATION INITIATIVE

The Technology Maturation Initiative (TMI) program was established in 2012 to promote disruptive military innovation and experimentation for transition to Army Programs of Record (PoR). TMI focuses on partnership (S&T Laboratories/Centers and Program Executive Offices (PEOs)), prototyping, and transition to mature advanced technologies to meet PoR requirements. TMI works to manage Technology Maturation Risk Reduction and improve technology transition to PoRs utilizing BA4 funding. This program matures technologies through prototyping from Technology Readiness Level (TRL) 6 to TRL 7. Each TMI effort is executed by a S&T developer and PEO/Program Manager (PM) partnership with a realistic plan to transition the technology.

TMI Projects are classified in one of three categories:

- Supersystem projects prototype, integrate, and demonstrate emerging technologies that fill requirements to multiple PoR applications and/or across traditional PEO boundaries.
- Technology Product Prototyping projects mature technologies from S&T BA3 that have demonstrated at TRL 6, but are experimental prototypes with higher risk (but potentially greater impact) than the baseline approach currently taken by a PoR.
- Emerging/Disruptive Technology Opportunity projects (from S&T, industry, or non-traditional sources) that require out-of-cycle funding to prototype and evaluate disruptive impact against PoR requirements (threshold or objective).



Universal 360-degree for Ground Combat Vehicles sensor technology, an example of a TMI Super-System project, can provide scalable architecture across PEO Ground Combat Systems platforms that provide advanced situational awareness for crew/dismounts and targeting information.



Composite rubber track on a 46-ton demonstrator vehicle. The Army is maturing manufacturing capability of the composite rubber track which enables lighter weight and better fuel efficiency, along with other operational benefits to ground maneuverability. (Photo courtesy of Soucy International – Defense.)



Army ManTech will leverage novel manufacturing techniques to enhance the production of Extended Range Cannon Artillery (ERCA) Cannon Tubes to achieve longer objective ranges with higher energy propellants. ERCA will be an improvement to the latest version of the Paladin self-propelled howitzer that provides indirect fires for the brigade combat team and division-level fight. (Photo courtesy of Edward Lopez/ U.S. Army.)

MANUFACTURING TECHNOLOGY (MANTECH)

The U.S. Army Manufacturing Technology (ManTech) program's mission is to support Army readiness and modernization priorities by improving and maturing manufacturing technologies to ensure overmatch and fulfill national security objectives. The Army ManTech Program addresses manufacturing solutions that enable and improve the efficiency and affordability of manufacturing processes to advance the Army's technological capabilities while reducing life-cycle costs for Army acquisition programs. The goal of the program is to improve end-item affordability by addressing manufacturing and producibility risks and facilitating the maturation and transition of critical technologies to weapon system platforms.

There are three objectives of this program: 1) Material development to meet performance requirements, 2) Improve manufacturability and reduce the cost to PoRs, and 3) Advance the Organic Industrial Base. ManTech projects concentrate on efforts that mature technology readiness from a Manufacturing Readiness Level (MRL) 4 and MRL 7 and provide affordable and timely manufacturing solutions that address the Army's highest priority needs. Critical technology maturation and transition is accomplished by partnership between the Army S&T community, the PEOs and their supporting PMs, industrial partners, and the defense industrial base through effective, efficient, affordable, and adaptable manufacturing processes.

The Army ManTech program supports Army-wide manufacturing requirements with current coordinated efforts across the ASA(ALT); the U.S. Army Materiel Command; the U.S. Army Futures Command, the U.S. Army Space and Missile Defense Command; U.S. Army Medical Research and Development Command; and the U.S. Army Rapid Capabilities and Critical Technologies Office. The Deputy Assistant Secretary of the Army for Research and Technology (DASA(R&T)) provides oversight and management of the Army ManTech program.

BASIC RESEARCH

Army Basic Research seeks to advance the frontiers of fundamental S&T and drive long-term, game-changing Army capabilities through a multidisciplinary portfolio that links the Army's in-house researchers with the global academic community. Basic Research investments are the Army's primary drivers to enable leap-ahead technologies that will enhance soldier capability and increase soldier protection. These investments support the nine Priority Research Areas outlined in the 2019 Army Modernization Strategy. Activities are focused on discovering and understanding fundamental science through Army-led investigations and by assessing breakthrough innovations to advance overall scientific knowledge.

This work generates new knowledge for the Army to address diverse, rapidly evolving threats, while simultaneously attracting the country's most talented and gifted scientists and engineers to the future workforce.

The Basic Research investment area leverages partnerships such as University Affiliated Research Centers, Collaborative Research Alliances, Multidisciplinary University Research Initiatives, and the Single Investigator Program to exploit a range of research opportunities. Some major Army Basic Research efforts include:

Synthetic Biology

Synthetic biology is the creation of new biological systems or the redesign of existing biological systems. Army Basic Research in this area focuses on harnessing biology's capacity for custom/responsive materials development to support disruptive capabilities, such as self-healing, adaptation, and protection.

This research will enable agility in production and reclamation of materials at the point-of-need and advanced situational awareness and countermeasures to threats in theater, allowing the Army to adapt at the pace of war.

Disruptive Energetics

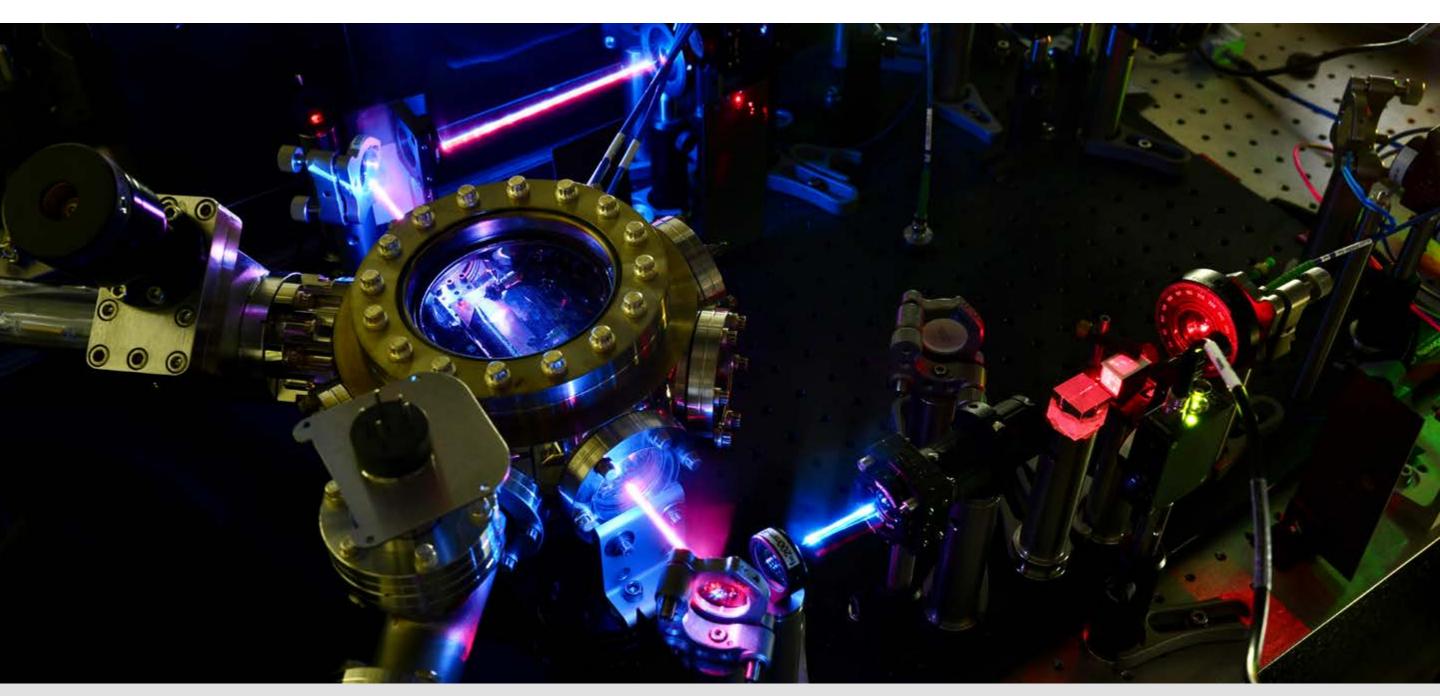
Achieving the range and lethality necessary for the future battlefield requires new and powerful energetic materials and propulsive concepts. Army Basic Research in this area focuses on the discovery, synthesis, and experimental verification of these disruptive energetic materials and concepts. This research enables overmatching lethality and range of U.S. Army ordnance.

Artificial Intelligence

Artificial Intelligence (AI) is expected to strongly enhance performance of all technological components and Army systems. Army Basic Research in this area focuses on integration of AI algorithms and approaches to advancing distributive sensing, target recognition, and cooperative and distributed navigation and mobility. This research will enable optimal and highly coordinated operation of various Army units.

Quantum Effects and Quantum Information Sciences

Quantum science is the study of the behavior of matter and its interactions with energy on the scale of atoms and subatomic particles. Army Basic Research in this area focuses on generating advances in quantum science by investigating the ultimate performance limits of quantum sensors, clocks, networks, and information processing through distributed quantum entanglement. Quantum sensing, quantum navigation, quantum communications and networks, and processing have the potential to revolutionize Army technologies.



Experiments with quantum technologies may open the door to new battlefield devices that provide soldiers with key advantages against adversaries. Atoms in a glass cell probed by lasers can act as a microwave receiver in a completely different way than traditional metal antennas.

CONCLUSION

The Army's Modernization Priorities and supporting S&T investment strategy provide a robust and unifying framework that postures the S&T program, workforce, laboratories and engineering centers, and industrial and academic partners to deliver disruptive technologies for Army and Joint Force operational overmatch. To facilitate critical developments for the future, the Army will leverage the best and brightest from across the S&T Enterprise, and bring together scientific professionals from government, academia, and industry to address the most challenging technical barriers and ensure for competitive advantage to the U.S. Army and the Joint Force.



Army scientists at work in Chemical Security Laboratory, Aberdeen Proving Grounds, Maryland.

PROGRAM PORTFOLIO AIR AND MISSILE DEFENSE



Air and Missile Defense Planning and **Control System (AMDPCS)**

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Air and Missile Defense Planning and Control System (AMDPCS) is an Army Objective Force system that provides integration of Air and Missile Defense operations at all echelons. AMDPCS are centered on a single baseline shelter known as Air Defense and Airspace Management (ADAM) Cells. The Air and Missile Defense Workstation is a staff planning and battlespace situational awareness tool that provides commanders at all echelons with a common tactical and operational air picture.

BENEFIT TO THE SOLDIER

- Provides soldiers with the ability to track aircraft inside and outside of their operational airspace at all echelons
- Identifies Friend or Foe platforms and reduces fratricide
- Allows collaboration and staff planning
- Provides early warning capabilities

PROGRAM STATUS

FY20-FY23: Fielding

PRIME CONTRACTORS

Northrop Grumman Systems Corporation **Ultra Electronics**

Army Integrated Air and Missile Defense (AIAMD)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Army Integrated Air and Missile Defense (AIAMD) provides a single air picture, increases defended area, and provides flexibility in systems deployment. The Integrated Battle Command System (IBCS) is the fire control and operational center capability that affords greater defense effectiveness than what can be provided in the current construct. This provides a more accurate target track and more weapon battlespace than current systems. The IBCS also provides a common engagement operations center and data-sharing capability for all echelons of Army AMD through all domains of military operations.

BENEFIT TO THE SOLDIER

- Provides the framework to distribute fire control quality data, commands, and messaging among components in near real-time to provide a coordinated and integrated response to complex threat raids
- Offers a dynamic defense design capability
- Mitigates coverage gaps and single points of failure
- Reduces manpower, operation, and support costs, while providing enhanced training capability

PROGRAM STATUS

- FY20: Testing
- FY21: Milestone C
- FY22: Initial Operational Test and Evaluation
- FY23: Initial Operational Capability

PRIME CONTRACTORS

Lockheed Martin Corporation Northrop Grumman Systems Corporation Raytheon

Forward Area Air Defense Command and Control (FAAD C2)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Operations & Support





DESCRIPTION

Forward Area Air Defense Command and Control (FAAD C2) provides critical C2, situational awareness, and automated air track information by integrating engagement operations software to support multiple missions. FAAD C2 supports air defense and Counter-Rocket, Artillery, Mortar (C-RAM) weapon systems engagement operations. The system also performs C2 engagement operations.

BENEFIT TO THE SOLDIER

Provides a real-time correlated air picture of the battlespace with positive aircraft identification for early detection, warning, and response to forward deployed forces

PROGRAM STATUS

- FY21:
 - Software Sustainment Contract Awarded
 - Urgent Materiel Release
- **FY22:**
 - Army Interoperability Certification
 - Training
 - Full Materiel Release
- **FY23**:
 - Training and Testing
 - Urgent Materiel Release

PRIME CONTRACTORS

Northrop Grumman Systems Corporation

Forward Area Air Defense System, Line-of-Sight, Rear (Pedestal Mounted Stinger) - Avenger

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Operations & Support





DESCRIPTION

Forward Area Air Defense System, Line-of-Sight, Rear (Pedestal Mounted Stinger) – Avenger is a lightweight, ground-to-air missile and gun weapon system that protects against unmanned aircraft systems, cruise missiles, and fixed- and rotarywing threats. The system employs Stinger missiles to counter aerial threats and a M3P Machine Gun for close-in ground and air threats. An Identification Friend or Foe system aids in the identification of friendly aircraft to minimize the potential for fratricide. The Avenger fleet is equipped with a digital Slew-to-Cue capability to speed target detection and engagement.

BENEFIT TO THE SOLDIER

Lightweight, short-range air defense system

PROGRAM STATUS

- FY22: Fielding
- **FY23**:
 - Sustainment
 - Modification-Service Life Extension Program

PRIME CONTRACTORS

Boeing

Indirect Fire Protection Capability – **High Power Microwave (IFPC-HPM)**

Rapid Capabilities and Critical Technologies Office | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Technology Maturation & Risk Reduction, Engineering & Manufacturing Development, Production & Deployment









DESCRIPTION

Indirect Fire Protection Capability - High Power Microwave (IFPC-HPM) is a solid-state, software-defined, HPM-phased array prototype weapon system which allows for quickly switching between and engaging multiple targets. The IFPC-HPM prototype operates standalone or integrated with Army command and control systems.

BENEFIT TO THE SOLDIER

- Provides fixed and semi-fixed defense
- Capable of rapid set-up and redeployment

PROGRAM STATUS

- FY22: Downselect
- FY23: Other Transaction Authority Award

PRIME CONTRACTORS

Epirus, Inc.

Indirect Fire Protection Capability Increment 2 (IFPC Inc 2)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

Indirect Fire Protection Capability Increment 2 (IFPC Inc 2) is a mobile, ground-based weapon system designed to defeat unmanned aircraft systems (UAS), Cruise Missiles (CM), and Rocket, Artillery, and Mortars (RAM) projectiles. The IFPC Inc 2 capability will be developed in three blocks, each a separate acquisition program. IFPC Inc 2 will provide a ground-based weapon system designed to acquire, track, engage, and defeat subsonic CMs, UAS, RAM, and other aerial threats. The IFPC Inc 2 system supports the Threshold CM and UAS defeat mission. The objective counter-RAM mission employs both alternative kinetic and non-kinetic defeat solutions.

BENEFIT TO THE SOLDIER

Provides an enduring solution to protect supported forces

PROGRAM STATUS

- FY21: Army Acquisition Executive Acquisition Decision Memorandum approval of Middle Tier Acquisition pathway
- FY23: System Readiness Review and Testing

PRIME CONTRACTORS

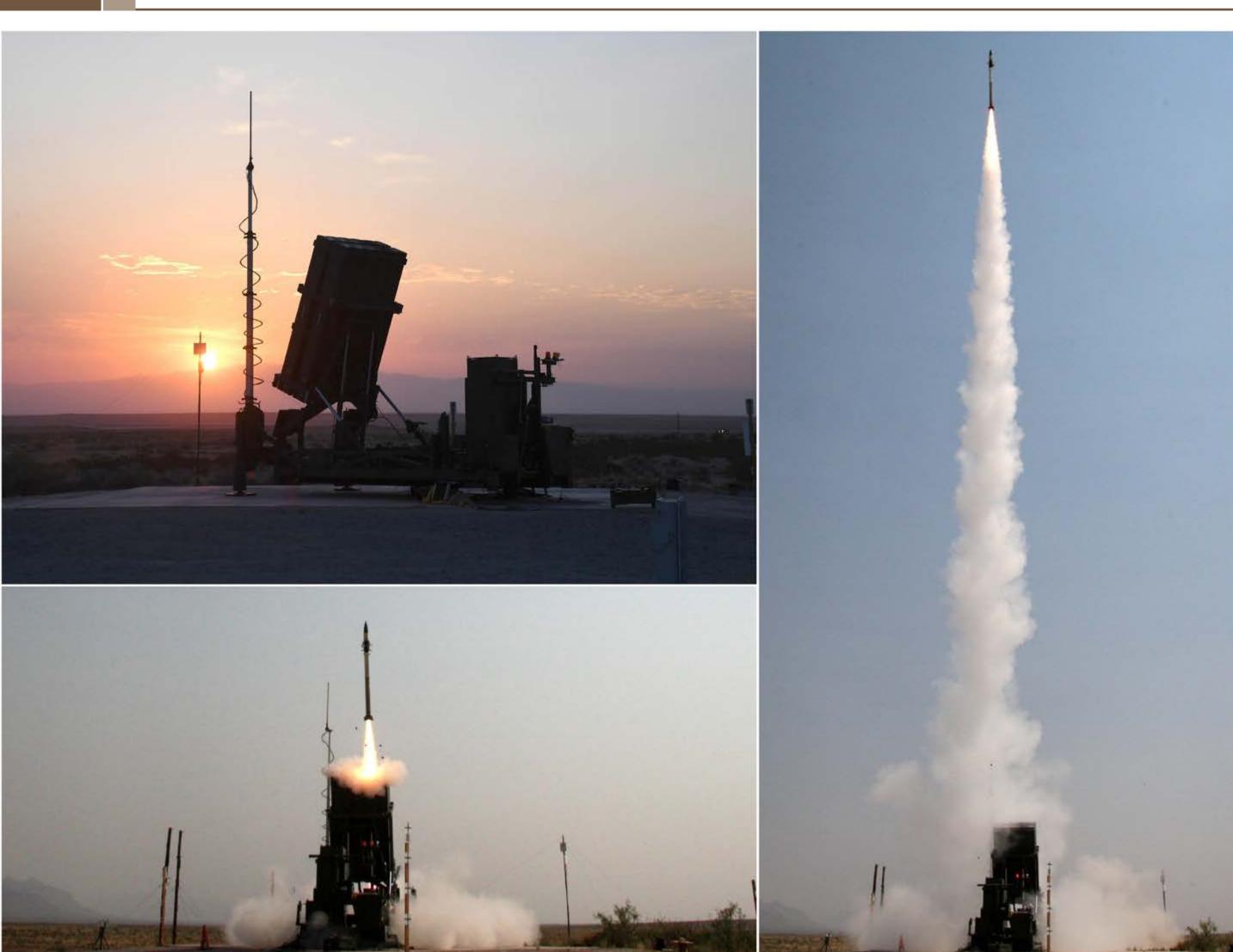
Dynetics

Iron Dome Defense System -**Army (IDDS-A)**

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Operations & Support



DESCRIPTION

The Iron Dome Defense System – Army (IDDS-A) is an Israeli-developed system that provides an initial cruise missile defense capability. IDDS-A engages many simultaneous threats arriving from different azimuths.

BENEFIT TO THE SOLDIER

Provides air defense protection to supported forces within fixed and semi-fixed locations

PROGRAM STATUS

- FY20: Batteries arrive in the United States
- FY22: Deployment and Testing
- FY23: Training completed and Delivery

PRIME CONTRACTORS

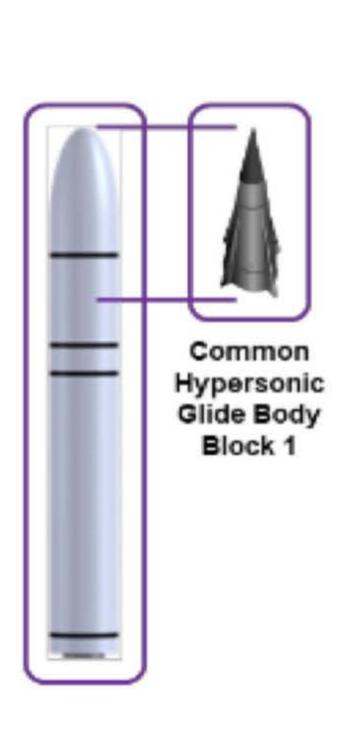
Israeli Ministry of Defense

Long-Range Hypersonic Weapon (LRHW)

Rapid Capabilities and Critical Technologies Office Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Technology Maturation & Risk Reduction, Engineering & Manufacturing Development, Production & Deployment





Canister

Battery Operations Center (BOC) System

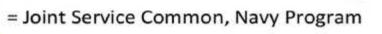








All Up Round (AUR)



DESCRIPTION

Long-Range Hypersonic Weapon (LRHW) is a ground-launched hypersonic capability to defeat various threats, suppress adversary long-range fires, and engage high-payoff, time-critical targets in support of Multi-Domain Operations.

BENEFIT TO THE SOLDIER

- Road mobile and air transportable
- Common with a Navy program

PROGRAM STATUS

- **FY21:**
 - Abbreviated Capability Development Document
 - Ground support equipment delivered
- FY22: Training
- FY23: Delivery

PRIME CONTRACTORS

Dynetics Lockheed Martin Corporation

Lower Tier Air and Missile Defense Sensor (LTAMDS)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

Lower Tier Air and Missile Defense Sensor (LTAMDS) expands the battlespace for the Phased Array Tracking Radar to Intercept of Target (PATRIOT) Advanced Capability-3 Missile Segment Enhancement interceptor and is a lower-tier sensor component of the Army's Integrated Air and Missile Defense architecture.

BENEFIT TO THE SOLDIER

- 360-degree search, track, and engage capability
- Increased battlespace to protect larger defended asset list
- Improved capability to counter complex integrated attack
- Enhanced classification, discrimination, and identification capability
- Reduced Operational and Sustainment costs

PROGRAM STATUS

- FY20: Prototyping Contract Awarded
- **FY22:**
 - Updated Acquisition Strategy approved
 - Prototype 3 Full-Sector Assembly complete
 - **Testing**
 - Product Improvement Contract Awarded
- **FY23**:
 - **Testing**
 - **Developmental Testing and Evaluation**

PRIME CONTRACTORS

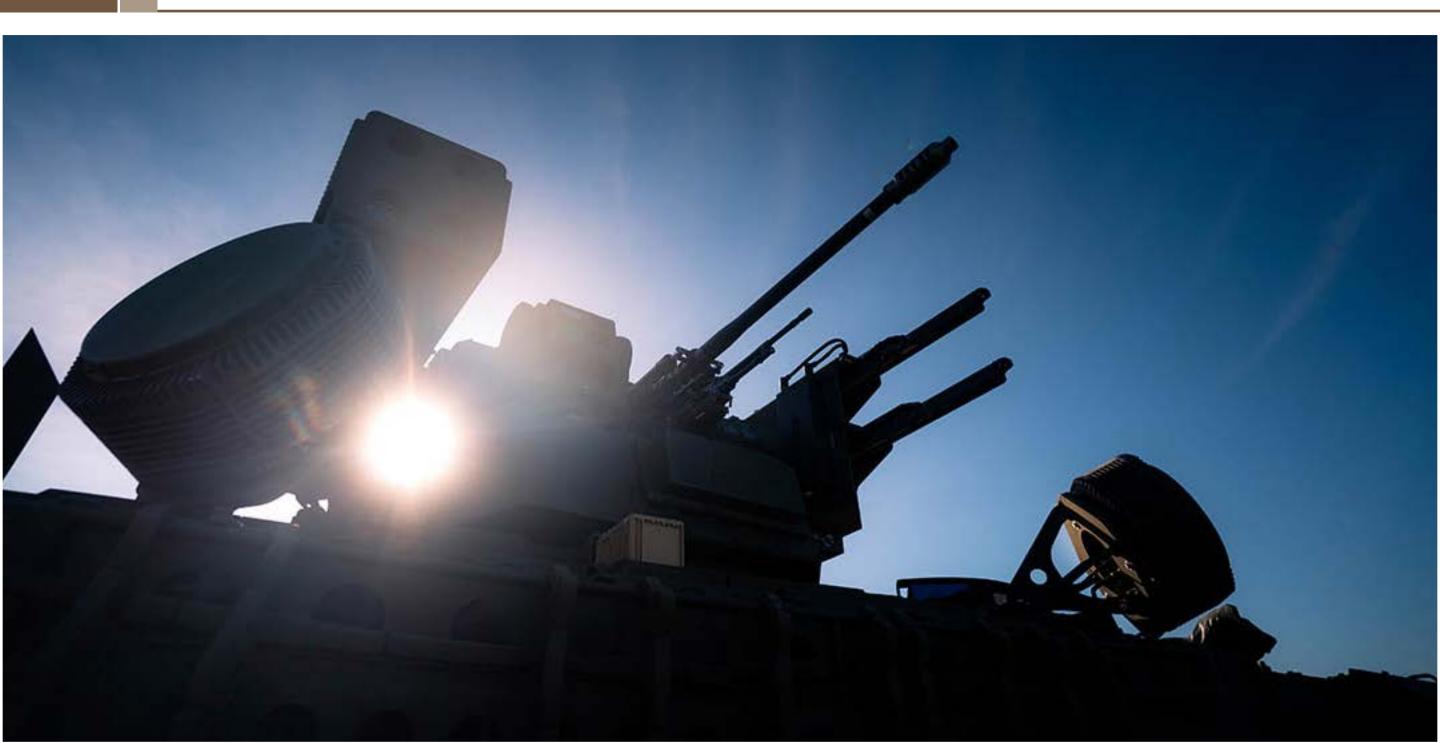
Raytheon Technologies

Maneuver-Short Range Air Defense **Increment 1 (M-SHORAD Inc 1)**

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Maneuver-Short Range Air Defense (M-SHORAD) capabilities protect maneuvering forces by defeating, destroying, or neutralizing threat rotary wing, fixed wing, unmanned aircraft systems, rockets, artillery, and mortar capabilities. M-SHORAD is a Family of Systems that perform operations to detect, track, and engage threat aerial objects. The M-SHORAD capability will be provided through a multiphase approach.

BENEFIT TO THE SOLDIER

- Armed with Stinger Missiles, a 30 mm gun, and a M240 Coaxial Machine Gun
- Onboard radar sensor and electro-optical/infrared sensors

PROGRAM STATUS

- FY20: Production Contract Awarded
- FY21: Fielding and weapon upgrades
- FY23: Fielding

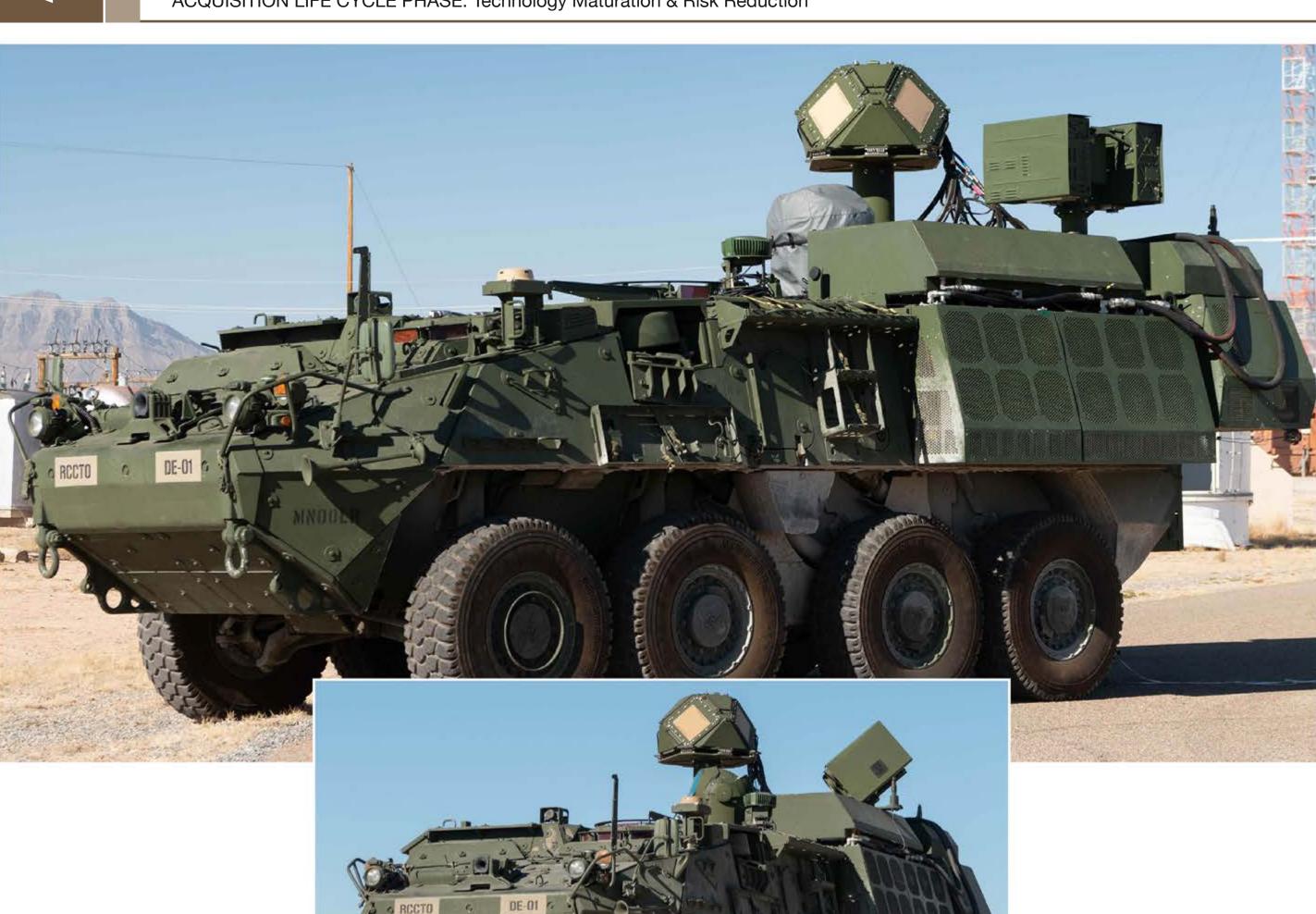
PRIME CONTRACTORS General Dynamics Land Systems

Maneuver-Short Range Air Defense Increment 2 (M-SHORAD Inc 2)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Technology Maturation & Risk Reduction



DESCRIPTION

Maneuver-Short Range Air Defense Increment 2 (M-SHORAD Inc 2) is a 50 kW-class laser. M-SHORAD Inc 2 is an Army Modernization Priority program managed by the Army Rapid Capabilities and Critical Technologies Office with plans to transition to Program Executive Office Missiles and Space in Fiscal Year 2025.

BENEFIT TO THE SOLDIER

- Defeats various threats
- Onboard radar sensor supports independent or autonomous methods of control

PROGRAM STATUS

- **FY22:**
 - Combat Shoot-Off
 - Delivery
- FY23: User Assessment

PRIME CONTRACTORS **TBD**

Maneuver-Short Range Air Defense Increment 3 (M-SHORAD Inc 3)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Materiel Solution Analysis



DESCRIPTION

Maneuver-Short Range Air Defense Increment 3 (M-SHORAD Inc 3) is the Army's Next Generation interceptor to replace the legacy Stinger Missile, with Production starting in Fiscal Year 2027. The Army will also field new 30 mm Proximity Airburst Ammunition, which are being developed by Project Manager Maneuver Ammunition Systems to increase lethality against Unmanned Aerial Systems.

BENEFIT TO THE SOLDIER

- Maintains compatibility with the Stinger Vehicle **Universal Launcher**
- Maintains soldier-portable capability
- Reduces missile cost
- Meets insensitive munitions requirements

PROGRAM STATUS

- FY21-FY22: Production Capability Assessment
- - Middle Tier Acquisition Rapid Prototyping
 - Industry Day
- FY23: Design Phase Contract Awarded



PRIME CONTRACTORS **TBD**

Phased Array Tracking Radar to Intercept of Target (PATRIOT) **Advanced Capability-3 (PAC-3)**

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment





DESCRIPTION

Phased Array Tracking Radar to Intercept of Target (PATRIOT) Advanced Capability-3 Missile Segment Enhancement (PAC-3 MSE) is a high-velocity, hit-to-kill, surface-to-air missile capable of intercepting and destroying threats. The PAC-3 MSE is the follow-on variant of the PAC-3 missile. The PAC-3 MSE has improved capability and employs kinetic energy to destroy targets. It provides expanded battlespace performance against complex threats.

BENEFIT TO THE SOLDIER

- Provides area defense of critical protected assets
- Offers capability to current and future forces
- Critical in Multi-Domain Operations

PROGRAM STATUS

- **FY22**:
 - Production
 - Fielding
 - Launcher Electronics System software update
 - Urgent Materiel Release
 - Post-Deployment Build and Testing
- FY23:
 - Production Contract Award for multiple components
 - Design Review and Testing for multiple components

PRIME CONTRACTORS

Lockheed Martin Corporation Missiles and Fire Control

Sentinel Aerial Surveillance Radar -AN/MPQ-64 A3 & AN/MPQ-64 A4 (Sentinel A3, Sentinel A4)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Operations & Support





DESCRIPTION

Sentinel consists of a trailer-mounted radar with prime mover, generator, Identification Friend or Foe system, and Forward Area Air Defense Command, Control, and Intelligence systems interface. Sentinel provides persistent surveillance and fire control quality data on Army and Joint networks enabling protection of U.S. and coalition forces as well as critical geopolitical assets against various threats. The Sentinel A4 is a modification to the current Sentinel A3 radar that will be a ground-based sensor system designed to locate, identify, and track threats. The simultaneous multi-mission Sentinel A4 system will provide 360-degree surveillance and tracking with the ability to handle concurrent threats arriving from different azimuths.

BENEFIT TO THE SOLDIER

- Enables protection of U.S. and coalition forces as well as geopolitical assets
- A3 provides protection against various threats
- A4 provides simultaneous multi-mission capability supporting air defense and counter fires missions
- A4 hemispherically surveils, acquires, and tracks various threats
- A4 includes growth potential as a key design feature to allow the radar to respond to future evolving threats

PROGRAM STATUS

- FY21:
 - A3 Production Contract Award and Testing
 - A4 Software Release
- **FY22:**
 - A3 Software Materiel Release
 - A4 User Operation Evaluation System Production Award
 - A4 Soldier Touch Point Event
 - A4 Engineering and Manufacturing Development Asset Delivery
 - A4 Engineering Services Contract Award
 - A4 Testing
- **FY23**:
 - A3 new radar Production completed
 - A4 Milestone C decision
 - A4 Low-Rate Initial Production

PRIME CONTRACTORS

A3: Raytheon Information Systems A4: Lockheed Martin Corporation

Stinger Block I with Proximity Fuze (PROX)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Operations & Support



DESCRIPTION

The Stinger Block I missile is an advanced, fire-and-forget, short-range, man-portable, shoulder-fired, platform-mounted, guided missile system that provides the maneuver force and point defense assets air defense protection. Stinger's mission is to provide the force with low-altitude air defense against various threats. The Stinger missile is deployable from a variety of platforms. The missile is delivered as a certified round and requires no field testing or maintenance.

BENEFIT TO THE SOLDIER

- Fire-and-forget, combat-proven capability
- Multiple guidance systems
- Employed for homeland defense
- Provides a proximity capability and improved effectiveness against threats

PROGRAM STATUS

- **FY22:**
 - Production and Contract Awards
 - Stockpile Reliability Program (SRP) Extension
 - Refurbishment
- FY23: SRP Extension

PRIME CONTRACTORS

Raytheon Missile and Defense

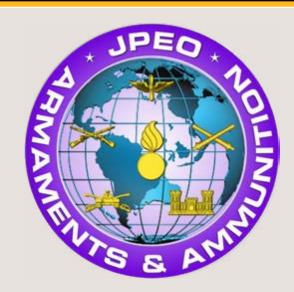
PROGRAM PORTFOLIO AMMUNITION



M1 Abrams

Ammunition – Large Caliber

JPEO Armaments & Ammunition | Picatinny Arsenal, NJ



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment, Operations & Support



Large Caliber Ammunition Portfolio







NOT TO SCALE

DESCRIPTION

M724A2 M1040 M393A3 M467A1

Large Caliber Ammunition includes 120 mm and 105 mm direct-fire ammunition. Platforms supported include the Abrams tank and emerging Next Generation Combat Vehicles, including the XM30 Mechanized Infantry Combat Vehicle and the M10 Booker Combat Vehicle.

BENEFIT TO THE SOLDIER

Provides warfighters with the necessary lethality required to defeat the enemy

M900 M724A1 M456A2 M490A1

PROGRAM STATUS

- FY20: Various Large Caliber Ammunition Fielded, Manufactured, and Engineering Change Proposal Qualification
- FY21: Various 120 mm ammunition Low-Rate Initial Production
- FY21-FY23: Various 120 mm ammunition in Full-Rate Production

PRIME CONTRACTORS

General Dynamics Ordnance and Tactical Systems Northrop Grumman Systems Corporation

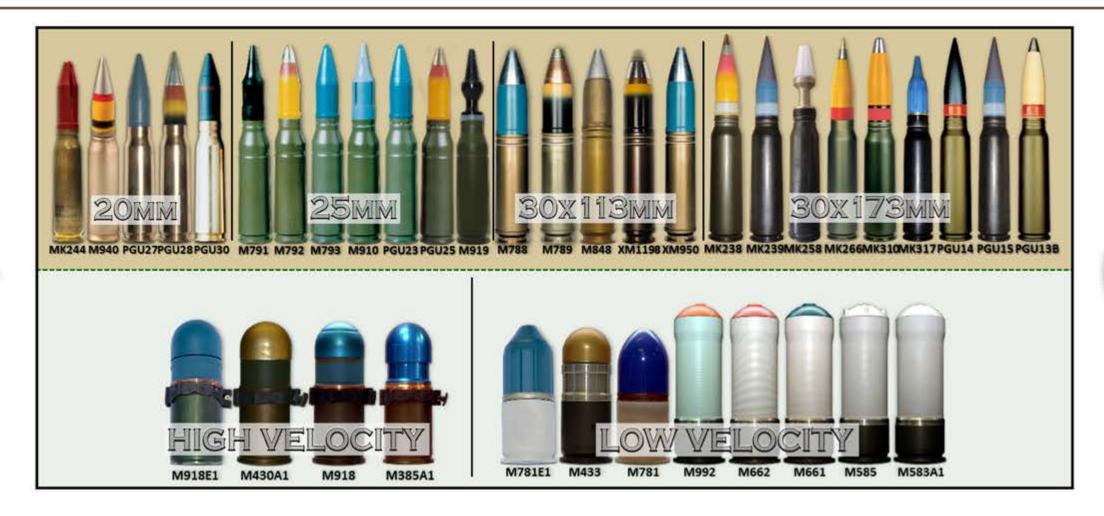
Ammunition – Medium Caliber

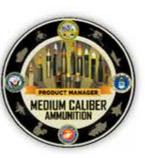
JPEO Armaments & Ammunition | Picatinny Arsenal, NJ



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment, Operations & Support







DESCRIPTION

Medium Caliber Ammunition (MCA) includes 20 mm, 25 mm, 30 mm, and 40 mm armor-piercing, high-explosive, smoke, illumination, and training cartridges with the capability to defeat multiple types of targets. These munitions provide overwhelming lethality in MCA and point- and area-target engagement.

BENEFIT TO THE SOLDIER

- Delivers capability to defeat materiel targets
- Supports multiple ground and air platforms
- Provides the warfighter with grenade training and tactical cartridges

PROGRAM STATUS

- FY20: Various contracts awarded
- FY21: Continued Design, Production, and Sustainment of various MCA
- FY22: Conducted demonstrations and published necessary Capability Development Documents for a variety of MCA
- FY23: Began Low-Rate Initial Production, Fielding, and safety and suitability qualification for a variety of MCA

PRIME CONTRACTORS

General Dynamics Ordnance and Tactical Systems Northrop Grumman Systems Corporation

Artillery Ammunition

JPEO Armaments & Ammunition | Picatinny Arsenal, NJ



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment



DESCRIPTION

The U.S. Army's Artillery Ammunition program includes 75 mm (used for ceremonies and simulated firings), 105 mm, and 155 mm projectiles and their associated fuzes and propelling charges. The Artillery Ammunition program includes fuzes for cargo-carrying projectiles, such as smoke and illumination, and bursting projectiles such as High Explosive. This program also includes bag propellant for the 105 mm semi-fixed cartridges and Modular Artillery Charge System for 155 mm howitzers.

BENEFIT TO THE SOLDIER

- Unmatched firepower to the maneuver force commander to defeat enemy targets at extended ranges
- Provides effective illumination via both visible light and infrared and smoke for obscuration

PROGRAM STATUS

- FY20: Completed Preliminary Design Reviews (PDRs), Critical Design Reviews (CDRs), and Full Materiel Release for a variety of Artillery Ammunition programs
- FY21: Awarded contracts, completed PDRs, and achieved Acquisition Program Baseline for several Artillery Ammunition programs
- FY22: Completed Operational Assessments, Urgent Materiel Release, conducted CDRs, and Testing for a variety of artillery ammunition programs
- FY23: Awarded Production Contracts and Testing for a variety of Artillery Ammunition programs

PRIME CONTRACTORS

Action Manufacturing American Ordnance Amtech **BAE Systems**

General Dynamics Ordnance and Tactical Systems Nammo Northop Grumman Systems Corporation Pine Bluff Arsenal

PROGRAM PORTFOLIO ASSURED MOBILITY

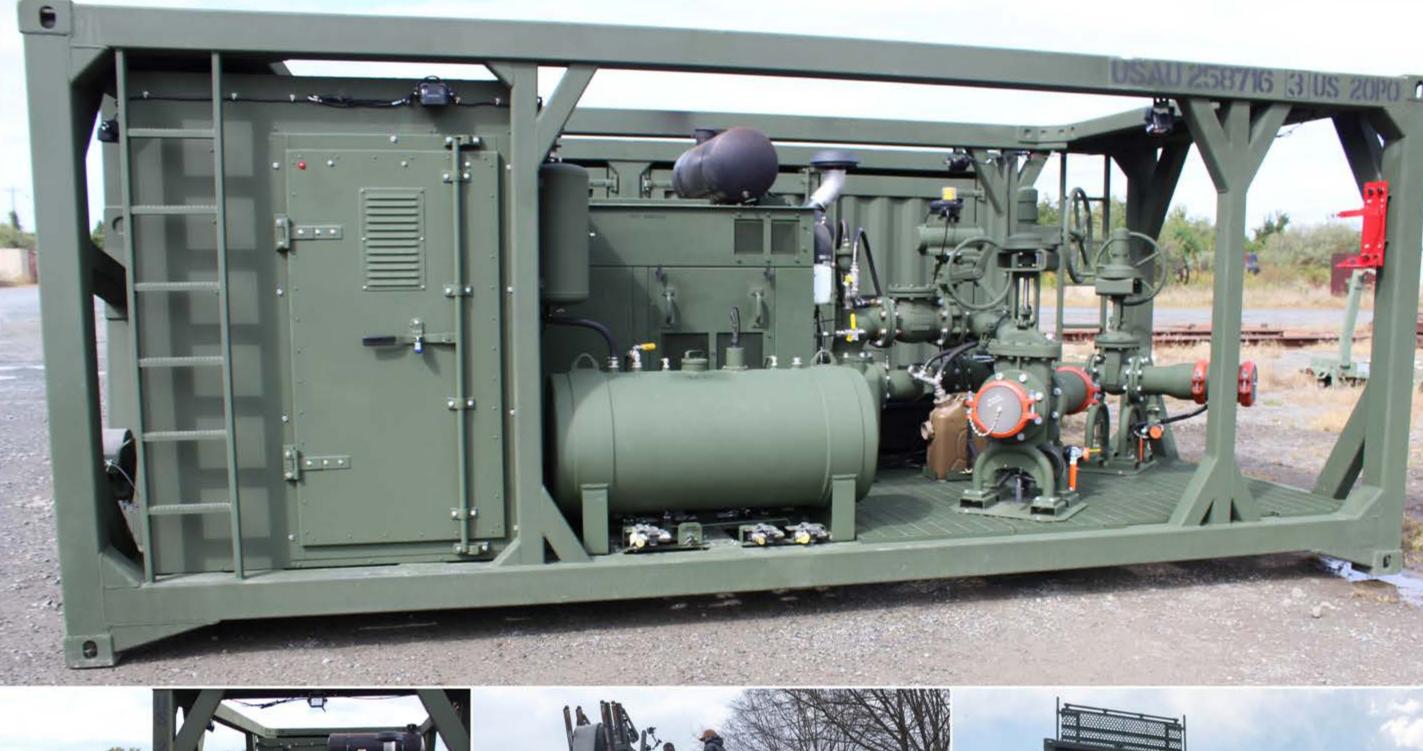


Early Entry Fluid Distribution System (E2FDS)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Full-Rate Production, Production & Deployment









DESCRIPTION

Early Entry Fluid Distribution System (E2FDS) complements the Inland Petroleum Distribution System (IPDS) pipeline by rapidly establishing new or extending existing pipeline traces.

BENEFIT TO THE SOLDIER

- Requires little to no engineer support to emplace the conduit or pump stations
- Pump stations are fully automated and have a variety of control options

PROGRAM STATUS

- FY21: Low-Rate Initial Production (LRIP) Test System Awarded
- **FY22:**
 - Production Qualification Test (PQT), Reliability, Availability and Maintainability Testing completed
 - Milestone C achieved
 - LRIP awarded
 - Full-Rate Production achieved
- **FY23:**
 - PQT completion
 - Product Readiness Review/Program Configuration Management and system production configuration lock

PRIME CONTRACTORS

Leonardo DRS, Inc.

ORG

High Mobility Engineer Excavator Type IV (HMEE-IV)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment







DESCRIPTION

High Mobility Engineer Excavator Type IV (HMEE-IV) is a modified configuration of the legacy HMEE-I vehicle. HMEE-IVs repair and improve roads, trails, bridges, and airfields. The high mobility of the HMEE-IV provides earthmoving machines capable of maintaining pace with the Army's current combat systems. All HMEE-IV vehicles will have improved survivability and are diesel driven. HMEE-IV replaces the Small Emplacement Excavators.

BENEFIT TO THE SOLDIER

- Conducts light earthmoving, loading, and excavation
- Performs tasks, including repair and improvement of roads, trails, bridges, and airfields

PROGRAM STATUS

- FY20-FY22: Production and Fielding
- FY23: Begin Service Life Extension Program

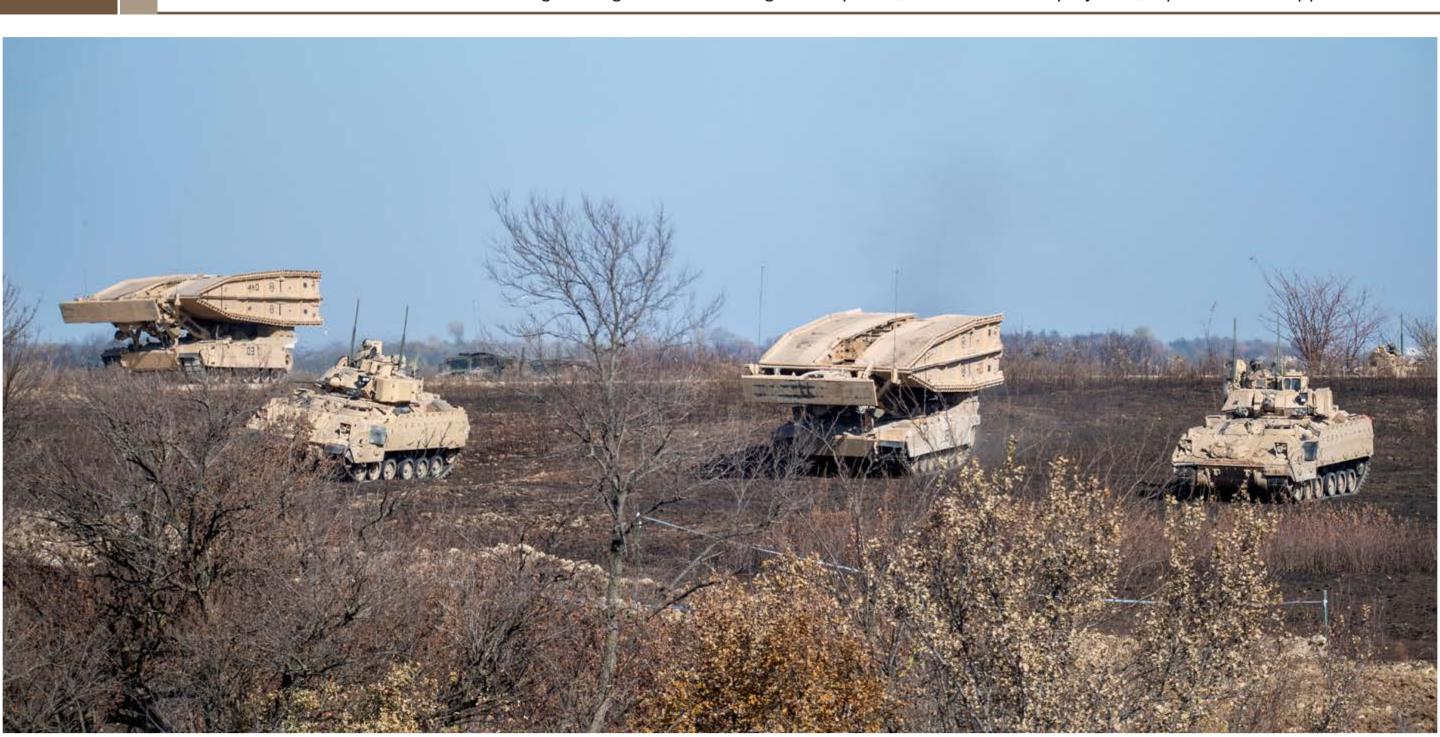
PRIME CONTRACTORS **JCB**

Military Bridging Systems

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment, Operations & Support



DESCRIPTION

Product Manager Bridging develops, acquires, fields, and sustains gap crossing and breaching solutions to meet current and future warfighter requirements for the engineer regiment as well as U.S. Allies and partners. The Military Bridging Systems portfolio consists of one Acquisition Category (ACAT) II and 10 ACAT III programs.

BENEFIT TO THE SOLDIER

- The Joint Assault Bridge is a sustainable system designated to replace the Armored Vehicle Launch Bridge system.
- The Heavy Assault Scissoring Bridge is a transportable, maneuverable, and rapidly emplaced bridge capable of spanning wet or dry gap obstacles (small streams, gullies, ravines, or enemy-placed obstacles).
- The Line of Communication Bridge supports continuous combat operations and provides commanders with a semipermanent bridge and the ability to reinforce existing bridges.
- permanent bridge and the ability to reinforce existing bridges.

 The Rapidly Emplaced Bridge System enables warfighters to navigate over the world's landmasses cut by canals,
- ditches, and other significant impediments.

 The Common Bridge Transporter transports, launches, and retrieves all float and dry span bridging equipment.
- The Assault Breacher Vehicle provides crew protection and vehicle survivability while having the speed and mobility to keep pace with the maneuver force.
- The Bridge Erection Boat features a crew protection kit, supports rafting operations in fast water, and operates in high-particulate matter environments.
- The M15 Bridge Adapter Pallet provides the necessary locks, rollers, and guides to launch, retrieve, and transport the bridge equipment.
- The Dry Support Bridge is used in general support of the Division/Corps force pool.
- The Bridge Supplemental Set will support Multi-Role Bridge Company by employing long-term bridge anchorage systems, emplacing access/egress matting to enhance bridge site mobility/traction for emplaced bridges.
- The Improved Ribbon Bridge allows for crossings of faster waterways with higher banks and offers an option to rapidly close distances and move critical capabilities and supplies.

PROGRAM STATUS

- FY20-FY22: Programs in various stages of the Acquisition lifecycle from Engineering & Manufacturing Development to Operations & Support
- **FY23**:
 - Contracts awarded
 - Various military bridges involved in Full Materiel Release, Training, Production, Fielding, and Sustainment activities

PRIME CONTRACTORS

Acrow Corporation of America Acrow Global Limited Amentum Services, Inc. Anniston Army Depot Birdon America Inc. DRS Network & Imaging Systems, LLC General Dynamics European Land Systems GT Machining Leonardo DRS, Inc. Oshkosh Defense, LLC Pearson Engineering Limited Tobyhanna Army Depot Williams Fairey Engineering Ltd.

Robotic Mine Flail – M160

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Operations & Support







DESCRIPTION

M160 Robotic Mine Flail clears areas infested with land mines and counters the effects of mines that could impede the mobility of friendly forces, destroy systems, or cause personnel casualties. It protects soldiers against mine fragments and clears mines with the flailing motion of high-speed, rotating chained hammers.

BENEFIT TO THE SOLDIER

Provides standoff protection to soldiers while clearing mines

PROGRAM STATUS

- FY21: Transition to Sustainment
- FY23: Develop and implement software updates

PRIME CONTRACTORS

DOK-ING

Small Multipurpose Equipment Transport (S-MET)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Small Multipurpose Equipment Transport (S-MET) is designed to offload weight from the dismounted soldier, squad, and small unit. S-MET will carry additional supplies and equipment as well as modular mission payloads increasing combat effectiveness.

BENEFIT TO THE SOLDIER

Provides small units with the ability to support squad and platoon operations

PROGRAM STATUS

- FY20: Test and Logistics Systems Delivered and Production Contract Award
- FY21: Pre-Production Qualification Testing completed
- FY23: Conditional Materiel Release

PRIME CONTRACTORS

General Dynamics Land Systems

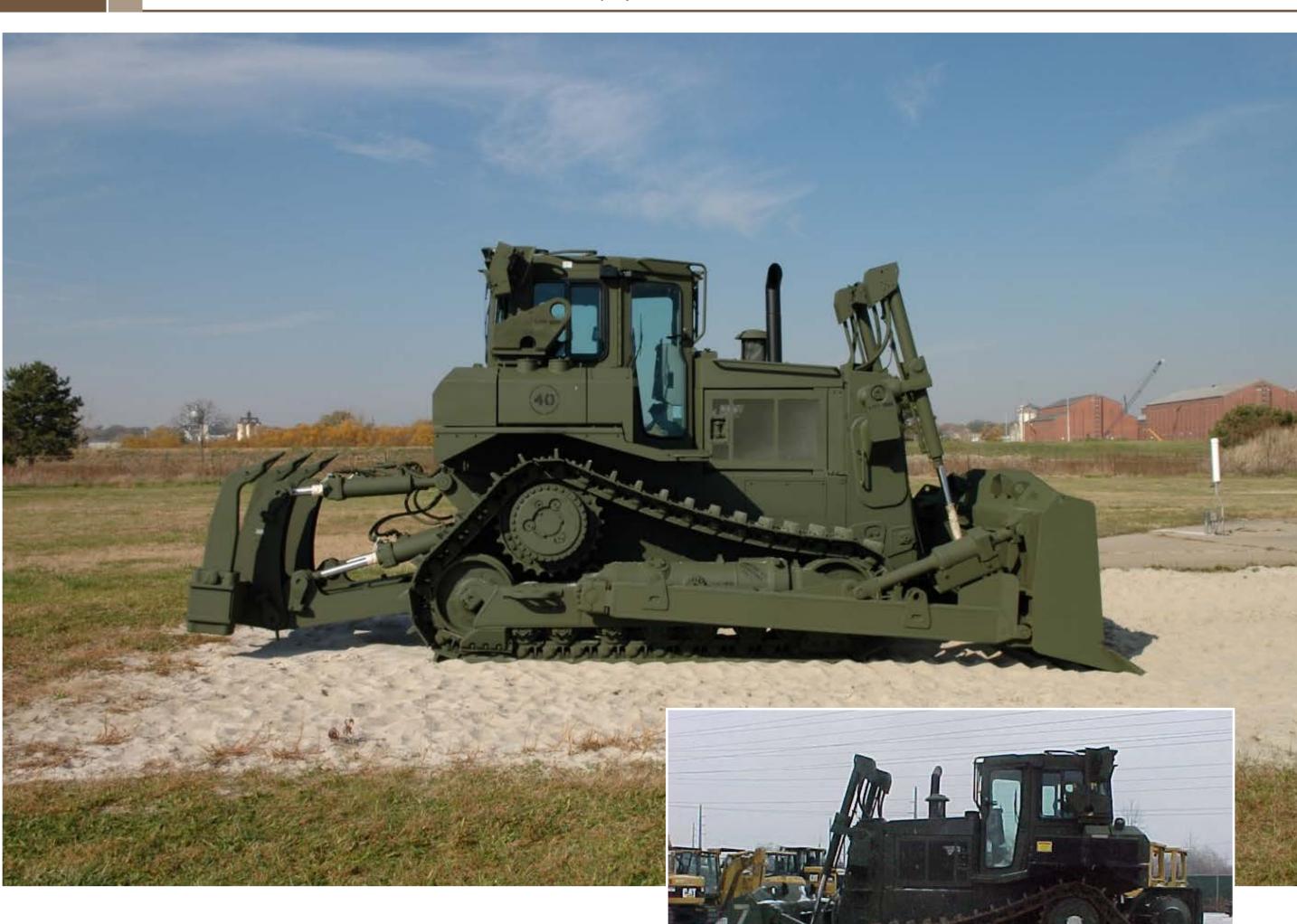
ASSURED MOBILITY 73

T-9 Medium Dozer with Winch and Tractor, Full-Tracked, T-9 Medium **Dozer with Ripper**

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

T-9 Medium Dozer is a medium drawbar, air-transportable, diesel-engine-driven crawler tractor with a dozer blade and optional winch (Type I) or ripper (Type II). T-9 Medium Dozer is a commercial vehicle with military modifications.

BENEFIT TO THE SOLDIER

- Builds and maintains air and ground lines of communication
- Enhances infrastructure and force protection for the warfighter

PROGRAM STATUS

- FY21: Awarded new Production Contract
- FY22: Fielding and Production continued
- **FY23:**
 - Full Materiel Release
 - Continued Fielding activities

PRIME CONTRACTORS

Caterpillar

ASSURED MOBILITY 74

PROGRAM PORTFOLIO AVIATION



CH-47F Chinook Cargo Helicopter and CH-47F Block II

PEO Aviation | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment





DESCRIPTION

CH-47F Chinook is the Army's only heavy-lift cargo helicopter supporting combat and other critical operations, representing an essential element of the Army of 2030. CH-47F has a suite of improved features. CH-47F Block II will provide an increased payload among other capabilities and future growth potential. CH-47F Block II will enable the Army to better support the rapid response capability necessary for operations and contingency missions.

BENEFIT TO THE SOLDIER

- Transports forces and associated equipment
- Provides routine aerial sustainment of maneuver forces
- Enables secondary missions such as medical evacuation, search and rescue, parachute drops, disaster relief, and aircraft recovery

PROGRAM STATUS

- FY21-FY22: Procurement Awards
- FY22: Completed Testing and Engineering and Manufacturing Development
- FY23: Fielding and System Verification

PRIME CONTRACTORS

Boeing Collins Aerospace Goodrich Honeywell

Fixed Wing Project Office (FWPO)

PEO Aviation | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Operations & Support





DESCRIPTION

Fixed Wing provides lifecycle acquisition management of the Army's fixed wing fleet of transport and manned aerial intelligence, surveillance, and reconnaissance (A-ISR) aircraft. Fixed Wing also serves as the Office of Primary Responsibility for the development of the Army's high-altitude platforms.

The Special Electronic Mission Aircraft (SEMA) Product Office oversees A-ISR programs and manages high-altitude technology demonstrators as assets for Multi-Domain Operations.

The International and Transport Aircraft Product Directorate manages Foreign Military Sales and two distinct fleets of aircraft. The Mission Support Aircraft are utilized by the Army's "Golden Knights" Parachute Team, the Army Test and Evaluation Command, and West Point's Aviation Training Program.

BENEFIT TO THE SOLDIER

- Modernization of Army A-ISR fleets through development of high-altitude technology demonstrators
- Timely movement of key personnel to critical locations

PROGRAM STATUS

- FY20: Completed aircraft modifications
- FY20-FY22:
 - Upgraded aircraft and communications systems
 - Modified C-26E aircraft and upgraded certain C-37 aircraft
- FY22: Cockpit upgrades
- **FY23:**
 - Aircraft upgrades
 - Service contracts awarded

PRIME CONTRACTORS

Amentum Services, Inc. Avion Solutions, Inc. Defense Systems and Solutions Gulfstream Aerospace **Huntington Ingalls Industries**

KBR L3Harris - Integrated Mission Systems Leidos, Inc. MAG DS Corp. Northrop Grumman Systems Corporation Sierra Nevada Corporation **TCSI** Textron Aviation, Inc.

Helicopter Launched Fire and Forget (HELLFIRE (HF))

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Helicopter Launched Fire and Forget (HELLFIRE (HF)) Romeo (AGM-114R) missile provides point-target precision strike capability.

BENEFIT TO THE SOLDIER

Point-target precision strike capability

PROGRAM STATUS

- FY21-FY23:
 - Full-Rate Production
 - Sustainment

PRIME CONTRACTORS

Lockheed Martin Corporation

Improved Turbine Engine Program (ITEP) - T901

PEO Aviation | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

T901 turbine engine will provide more power with greater fuel efficiency. T901 is aligned with the DOD Operational Energy Strategy, the Army Climate Strategy, and the National Defense Strategy.

BENEFIT TO THE SOLDIER

- Supports Multi-Domain Operations
- More power with greater fuel efficiency

PROGRAM STATUS

- FY20: Preliminary Design and Critical Design Reviews (CDR) completed
- FY22: Testing and CDR completed
- FY23: Begin Testing and schedule engine deliveries

PRIME CONTRACTORS

GE Aviation

Joint Air-to-Ground Missile (JAGM)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Joint Air-to-Ground Missile (JAGM) program is Army-led, with Joint interest with the Navy, Marine Corps, and Air Force. JAGM is the next generation, multimode, air-to-ground munition replacing legacy HELLFIRE (HF) and HF Longbow munitions.

BENEFIT TO THE SOLDIER

Point target precision strike capability

PROGRAM STATUS

- FY20-FY22: Low-Rate Initial Production
- FY22: Full-Rate Production (FRP)
- FY23: Awarded FRP Contract

PRIME CONTRACTORS

Lockheed Martin Corporation

UH/HH-60M Black Hawk

PEO Aviation | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support







DESCRIPTION

UH-60M Black Hawk multirole helicopter performs as the Army's utility helicopter for the near- and mid-term force. UH-60M Black Hawk is a digital networked platform providing greater range and lift from its predecessor to support maneuver commanders through air assault, general support, command and control, and aeromedical evacuation.

BENEFIT TO THE SOLDIER

- Delivers warfighters to the fight quicker to mass effects
- Transports infantry in all-weather conditions

PROGRAM STATUS

- **FY22:**
 - Completed aircraft deliveries
 - Awarded multiyear contract
- FY23: Field Integrated Area Navigation

PRIME CONTRACTORS

General Electric Sikorsky, a Lockheed Martin Company

UH-72A/B Lakota (Light Utility Helicopter (LUH))

PEO Aviation | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support









DESCRIPTION

UH-72 Lakota is a twin engine utility helicopter interoperable with civil, military, and government agencies. UH-72 Lakota performs general support missions such as initial entry rotary wing flight training, air movement, civil command and control, surveillance, search and rescue (SAR), homeland security, and Medical Evacuation (MEDEVAC). The UH-72B is a modernized version.

BENEFIT TO THE SOLDIER

- Primary aircraft supporting the Army Flight School and Combat Training Centers
- Operates worldwide in permissive environments to accomplish a myriad of missions to include general support, SAR, and MEDEVAC
- Supports Homeland Defense and Security missions such as border patrol operations, response to terrorist incidents, and disaster relief

PROGRAM STATUS

- FY21: Delivered UH-72Bs to the Army National Guard
- **FY22:**
 - Awarded follow-on support contract
 - Transitioned to Sustainment
- FY23: Continued equipment upgrades

PRIME CONTRACTORS

Airbus Helicopter, Inc. Safran

PROGRAM PORTFOLIO FIRES



155 mm Excalibur Projectiles

Joint PEO Armaments & Ammunition | Picatinny Arsenal, NJ



ACQUISITION LIFE CYCLE PHASE: Production & Deployment





DESCRIPTION

Excalibur is a fin-stabilized, canard-controlled, precision projectile. It conducts in-flight guidance and trajectory correction for precision attack, which enables a first-round effect on targets and reduces the number of rounds required to engage targets. The recent shaped trajectory upgrade increases scope of target engagements.

BENEFIT TO THE SOLDIER

- Provide first-round effects on target
- Reduced collateral damage
- Engage targets on reverse slopes

PROGRAM STATUS

- FY20-FY23: Option Awards
- **FY21:** Delivery
- FY22: Upgrades

PRIME CONTRACTORS

Raytheon Missiles and Defense

155 mm M777A2 Lightweight **Towed Howitzer**

Joint PEO Armaments & Ammunition | Picatinny Arsenal, NJ



ACQUISITION LIFE CYCLE PHASE: Operations & Support









DESCRIPTION

M777A2 Lightweight Howitzer provides direct, reinforcing, and general artillery fire support to maneuver forces. M777A2 is a towed 155 mm howitzer jointly developed by the U.S. Army and Marine Corps to replace the M198 Howitzer.

BENEFIT TO THE SOLDIER

Reduced weight, improved survivability, lethality, deployability, and mobility

PROGRAM STATUS

- FY20: New software versions released
- FY21: Completed Operational Sustainment Review
- FY22: Testing and Fielding
- **FY23:**
 - Awarded new Sustainment Contract
 - Acceptance and Fielding
 - Delivery
 - Interactive Electronic Technical Manual published

PRIME CONTRACTORS

BAE Systems DRS Honeywell

Army Tactical Missile System (ATACMS)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support





DESCRIPTION

Army Tactical Missile System (ATACMS) unitary variants are 24/7, all-weather, precision missiles that expand the current ATACMS target set.

BENEFIT TO THE SOLDIER

Provides area effects

PROGRAM STATUS

FY21-FY22: Delivery

PRIME CONTRACTORS

Aerojet Rocketdyne Ball Aerospace Boeing Collins Aerospace Eagle-Picher

Honeywell Kaman L3 FOS L3 Harris Technologies, Inc. Lockheed Martin Missiles and Fire Control

Counterfire Radar – AN/TPQ-53

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment





DESCRIPTION

Counterfire Radar – AN/TPQ-53 is a highly mobile counterfire target acquisition radar organic to brigade combat teams, field artillery brigades, and the division artillery.

BENEFIT TO THE SOLDIER

- Highly mobile with rapid emplacement and deplacement
- Supports Long Range Precision Fires

PROGRAM STATUS

• FY22-FY23: Development, Fielding, and Sustainment

PRIME CONTRACTORS

Lockheed Martin Corporation

ORG

Guided Multiple Launch Rocket System (GMLRS)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Guided Multiple Launch Rocket System (GMLRS) provides a responsive, all-weather, rapidly deployable, long-range, surfaceto-surface, precision strike capability.

BENEFIT TO THE SOLDIER

- High rate of fire
- Rapid reload capability
- Insensitive Munitions Propulsion System increases system safety and launcher survivability.

PROGRAM STATUS

- FY21: Enhanced Alternative Warhead Modification Program initiated
- FY22: Extended Range GMLRS Modification entered System Qualification Phase

PRIME CONTRACTORS

Lockheed Martin Missiles and Fire Control

High Mobility Artillery Rocket System (HIMARS) - M142

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support







DESCRIPTION

The M142 High Mobility Artillery Rocket System (HIMARS) is a full-spectrum, combat-proven, all-weather, 24/7, lethal and responsive, wheeled, precision strike weapons system.

BENEFIT TO THE SOLDIER

Supports Joint Forces

PROGRAM STATUS

- **FY22:** Full-Rate Production
- **FY23:**
 - **Contract Award**
 - Fielding and Delivery

PRIME CONTRACTORS

Lockheed Martin Corporation

Indirect Fire Protection Capability -**High Energy Laser (IFPC-HEL)**

Rapid Capabilities and Critical Technologies Office | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Technology Maturation & Risk Reduction, Engineering & Manufacturing Development, Production & Deployment



DESCRIPTION

Indirect Fire Protection Capability - High Energy Laser (IFPC-HEL) is a HEL prototype weapon system designed to fit on an Army truck, including onboard target tracking and integration with Army command and control systems.

BENEFIT TO THE SOLDIER

- Safe, reliable, and highly technical weapon system with regenerating power for munition replenishment
- Designed to protect fixed and semi-fixed sites
- Greatly reduces logistical footprint
- Eliminates need to reload ammunition
- Offers rapid recharge time

PROGRAM STATUS

- FY22: Completed laboratory demonstration
- FY23: Contract Award for Prototyping

PRIME CONTRACTORS **TBD**

Joint Effects Targeting System (JETS)

PEO Soldier | Fort Belvoir, VA



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Joint Effects Targeting System (JETS) Target Location Designation System (TLDS) is a U.S. Army-led Joint information program with the Air Force and Marine Corps to develop and field a one-man-portable, handheld capability to rapidly acquire, precisely locate, and accurately engage targets with precision-guided munitions. It also improves the effectiveness of engagement with unguided munitions.

BENEFIT TO THE SOLDIER

- Addresses a high-priority capability gap for a lightweight, highly accurate targeting system, allowing a single soldier to engage targets with precision munitions
- Provides crucial digital connectivity to request and control indirect fires and close air support
- Allows access to precision targeting in all operational environments

PROGRAM STATUS

- **FY22:**
 - Training and Fielding
 - Full Materiel Release
 - JETS II development Acquisition Decision Memorandum
- **FY23:**
 - Training and Fielding
 - Other Transaction Authority Prototyping Award

PRIME CONTRACTORS

Leonardo DRS

Mid-Range Capability (MRC)

Rapid Capabilities and Critical Technologies Office | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Technology Maturation & Risk Reduction, Engineering & Manufacturing Development, Production & Deployment



DESCRIPTION

Mid-Range Capability (MRC) is a prototype, ground-launched missile system designed in support of Multi-Domain Operations.

BENEFIT TO THE SOLDIER

Provides capability of conducting multi-domain strike operations against a variety of targets at significant range

PROGRAM STATUS

- FY20: Program initiated
- **FY21:**
 - Critical Design Review
 - Other Transaction Agreement for Prototype Contract Awarded
- FY22: Prototype battery fabrication completed
- **FY23:**
 - Delivery
 - Training complete
 - Testing

PRIME CONTRACTORS

Lockheed Martin Corporation

Multiple Launch Rocket System (MLRS) - M270A1 and M270A2

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support



DESCRIPTION

M270A1 Multiple Launch Rocket System (MLRS) is a full-spectrum, combat-proven, all-weather, 24/7, lethal and responsive, tracked precision strike weapon system organic or assigned to field artillery brigades (FAB).

BENEFIT TO THE SOLDIER

- Provides 24-hour, all-weather, lethal, close- and long-range precision rocket and missile fire support
- Supports Joint forces, early-entry expeditionary forces, contingency forces, and FAB supporting brigade combat teams
- M270A2 provides improved crew protection.

PROGRAM STATUS

- **FY22:**
 - M270A2 Fleet Expansion Contract Award
 - Improved Armored Cab Contract Award
 - Production begins
- - Improved Armored Cab Contract Award
 - M270A2 Contract Award

PRIME CONTRACTORS

Lockheed Martin Corporation

Precision Guidance Kit/ Long Range – Precision Guidance Kit (PGK/LR-PGK)

Joint PEO Armaments & Ammunition | Picatinny Arsenal, NJ



ACQUISITION LIFE CYCLE PHASE: Technology Maturation & Risk Reduction, Production & Deployment







DESCRIPTION

Precision Guidance Kit (PGK) contains fuzing functions to correct the inherent errors associated with ballistic firing solutions, reducing the number of artillery projectiles required to defeat targets. The PGK's precision capability allows operational commanders to engage assigned targets and rapidly achieve desired effects while minimizing collateral damage.

BENEFIT TO THE SOLDIER

- Reduces target delivery error
- Reduces collateral damage

PROGRAM STATUS

- FY20: Initial Production
- FY21: Directed requirement and Urgent Materiel Release
- FY21-FY22: Continued Production
- **FY23:**
 - **Initial Fielding**
 - Critical Design Reviews

PRIME CONTRACTORS

BAE Systems

Northrop Grumman Systems Corporation

Precision Strike Missile (PrSM)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development





DESCRIPTION

Precision Strike Missile, the Army's next generation surface-to-surface ballistic missile replaces the Army Tactical Missile System (ATACMS). It provides a 24/7, all-weather attack of critical and time sensitive area and point targets at all depths of the Joint all-domain battlefield.

BENEFIT TO THE SOLDIER

- **Insensitive Munitions**
- Cluster Munitions compliant

PROGRAM STATUS

- **FY21:**
 - Directed Requirement approved
 - Joint Requirements Oversight Council Validation
 - Milestone B
- Early Operational Capability and Engineering Manufacturing Development Contract Award
- FY22: System Critical Design Review
- FY23: Delivery

PRIME CONTRACTORS

Lockheed Martin Missiles and Fire Control

Product Director Paladin (M109A6/ M992A2 (A6) and M109A7/ M992A3 (A7) or Paladin Integrated **Management Program)**



PEO Ground Combat Systems | Detroit Arsenal, MI

ACQUISITION LIFE CYCLE PHASE: Production & Deployment











DESCRIPTION

M109A7 Paladin Self-Propelled Howitzer (SPH) and M992A3 Carrier Ammunition Tracked (CAT) are indirect fire weapon systems with the ability to deliver accurate, precision-guided, long-range, lethal, and non-lethal cannon fires capabilities to support large-scale combat Multi-Domain Operations (MDO). The upgrades improve mobility, survivability, power, and reliability through an entirely new hull and chassis and modernization.

BENEFIT TO THE SOLDIER

- Increases mobility, force protection, and survivability
- Offers growth potential for future increases in lethality and range

PROGRAM STATUS

- FY20: Full-Rate Production approved
- **FY22:**
 - Early Order Materiel (EOM) awarded
 - Production Contract awarded
 - Delivery and Full Materiel Release (FMR) achieved
- **FY23:**
 - **EOM** projected
 - SPH FMR projected
 - **Production Contract awarded**

PRIME CONTRACTORS

BAE Systems

PROGRAM PORTFOLIO INTELLIGENCE



Distributed Common Ground System – Army (DCGS–A)

PEO Intelligence, Electronic Warfare and Sensors Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support



Operational Intel Ground Station OGS Corps/AEB



ADV



Intel Proc Center (V)2 Corps/DIV/BCT/BfSB/E-MIB

Fixed-MFWS MI Bde/ASCC



Intel Proc Center (V)1



Tactical Intel Ground Station (TGS) Corps/Div/BCT/E-MIB



Capability Drop 1 (CD1)



GEOINT WS



All Units Intel Fusion Server (IFS/TSI)



Cross Domain Solution (CDSS)



Capability Drop 2 (CD2)



DESCRIPTION

Distributed Common Ground System - Army (DCGS-A) provides processing, exploitation, and dissemination of near realtime intelligence data.

BENEFIT TO THE SOLDIER

- Provides commanders an enhanced intelligence capability that allows for better synchronization of fires and maneuver
- Provides persistent/dynamic operational awareness
- Modernizes data management and intelligence production

PROGRAM STATUS

- FY21: Completed Fielding of a diverse portfolio of DCGS-A equipment
- FY22: Operational Utility Assessment conducted
- FY23: Modernization and Fielding

PRIME CONTRACTORS

Boeing **Booz Allen Hamilton CACI** Force Point General Dynamics Mission Systems

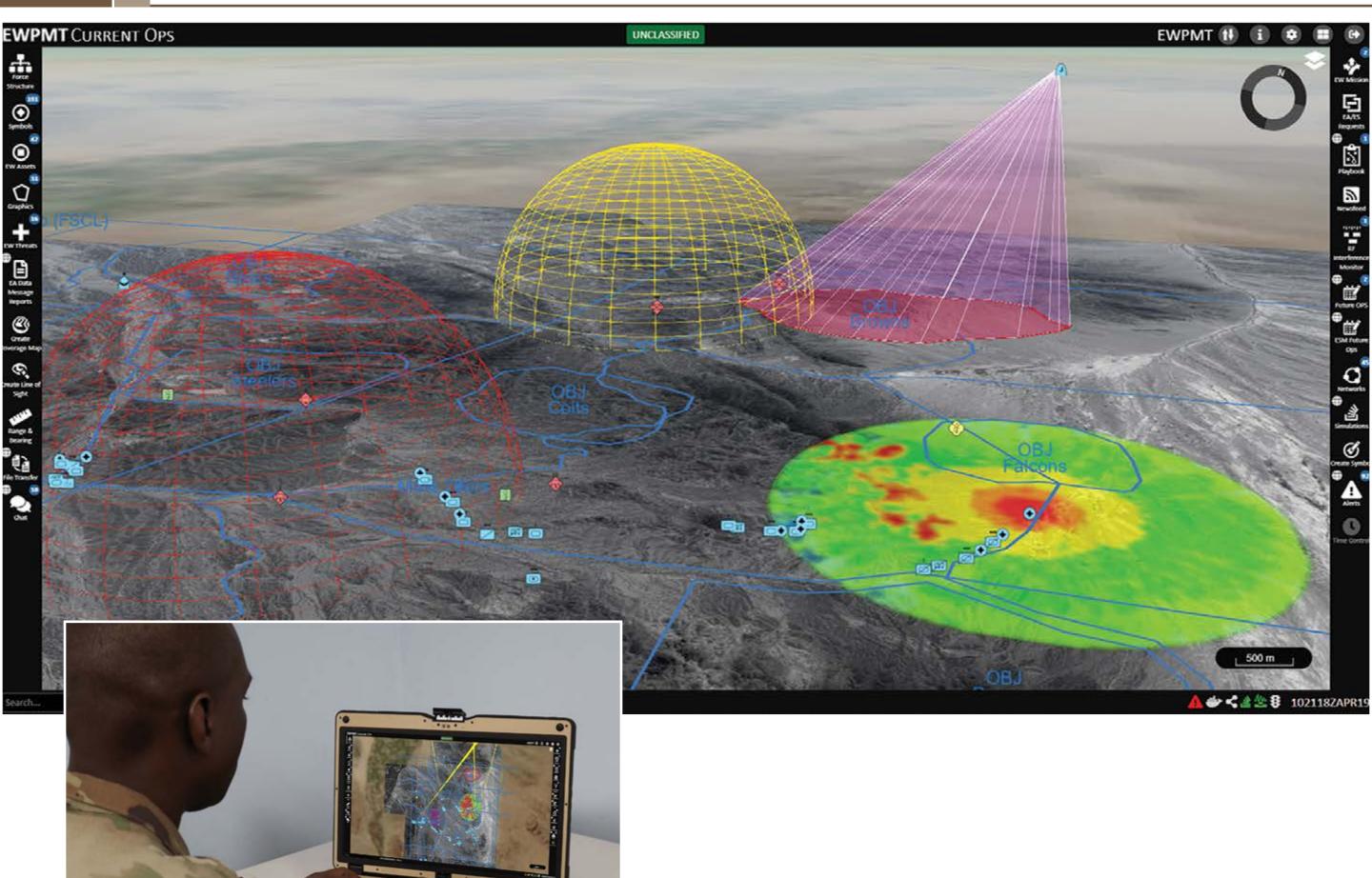
L3 Harris Technologies, Inc. MaxVision, Rugged Portable Computers, LLC Palantir USG, Inc. Raytheon Information Systems

Electronic Warfare Planning and Management Tool (EWPMT)

PE®

PEO Intelligence, Electronic Warfare and Sensors Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Operations & Support



DESCRIPTION

Electronic Warfare Planning and Management Tool (EWPMT) provides major operations capabilities at varying levels of technical maturity. Future Operations mode provides the ability to plan, model, and simulate EW effects. Current Operations mode provides the means to receive geographical lines of bearing and other sensor data to produce visualizations of the electromagnetic operating environment, enabling situational awareness. EWPMT enables cyber and electromagnetic activities and provides data for the overall Mission Command Operational Picture. Future development includes a more refined ability to ingest Terrestrial Layer System and Multi-Function EW sensor data, provide positioning, navigation, and timing situational awareness, and the eventual means to command and control the sensors through EWPMT.

BENEFIT TO THE SOLDIER

- Gives commanders a tool to visualize, control, manage, and dominate the electromagnetic spectrum to support Multi-**Domain Operations**
- Provides the ability to manage and remotely control EW assets
- Enhances targeting and enable maneuver
- Synchronizes EW and spectrum management operations

PROGRAM STATUS

- FY20-FY23: Units equipped and supported with Operational Needs Statement
- FY22: Capability Set Test
- **FY23:**
 - Fielding, Training, Development and Warfighter Support Contract Award
 - Delivery

PRIME CONTRACTORS

Raytheon

Multi-Function Electronic Warfare – Air Large (MFEW-AL)



PEO Intelligence, Electronic Warfare and Sensors Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

Multi-Function Electronic Warfare - Air Large (MFEW-AL) is a single, self-contained, airborne electronic warfare pod. MFEW-AL will support command and control, remote operations, and dynamic tasking.

BENEFIT TO THE SOLDIER

- Provides brigade combat team commanders with an organic airborne offensive electronic warfare capability
- Delivers offensive electronic attack and electronic warfare support

PROGRAM STATUS

- FY20: Other Transaction Authority Award for Engineering and Manufacturing Development
- FY21:
 - Milestone C approved
 - Operational Demonstrations and Soldier Touch Points (STP)
- FY22: Developmental Flight Tests
- FY23: Developmental Test and STPs

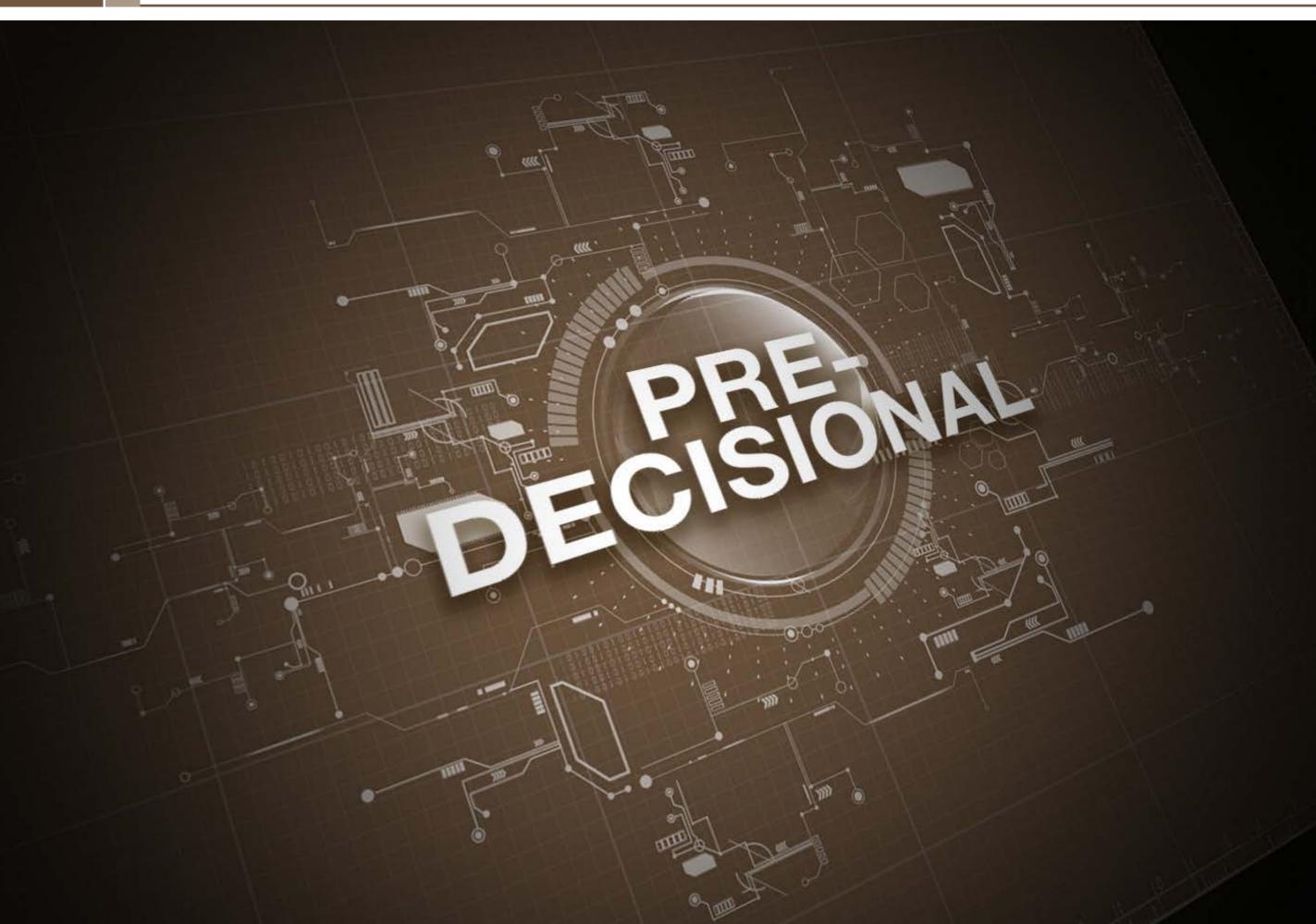
PRIME CONTRACTORS

Lockheed Martin Rotary and Mission Systems

Next Generation Biometric Collection Capability (NXGBCC)

PEO Intelligence, Electronic Warfare and Sensors Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Next Generation Biometric Collection Capability (NXGBCC) is the U.S. Army's enabler for Joint forces to conduct force protection and military intelligence activities involving identification of combatants, managing enemy prisoners of war, civilian detainees, displaced persons, and refugees during large-scale combat operations. NXGBCC collects, matches, and stores biometrics in 3 minutes.

BENEFIT TO THE SOLDIER

- Provides the Biometrically Enabled Watchlist and match report to the soldier
- Offers force protection by enhancing access control
- Shares data with coalition partners
- Protects expeditionary forces while building combat power

PROGRAM STATUS

- FY21: Program initiated new strategy
- **FY22:**
 - Received Congressional funding approval
 - Awarded Delivery Order
- **FY23:**
 - Milestone C
 - Awarded Delivery Order

PRIME CONTRACTORS

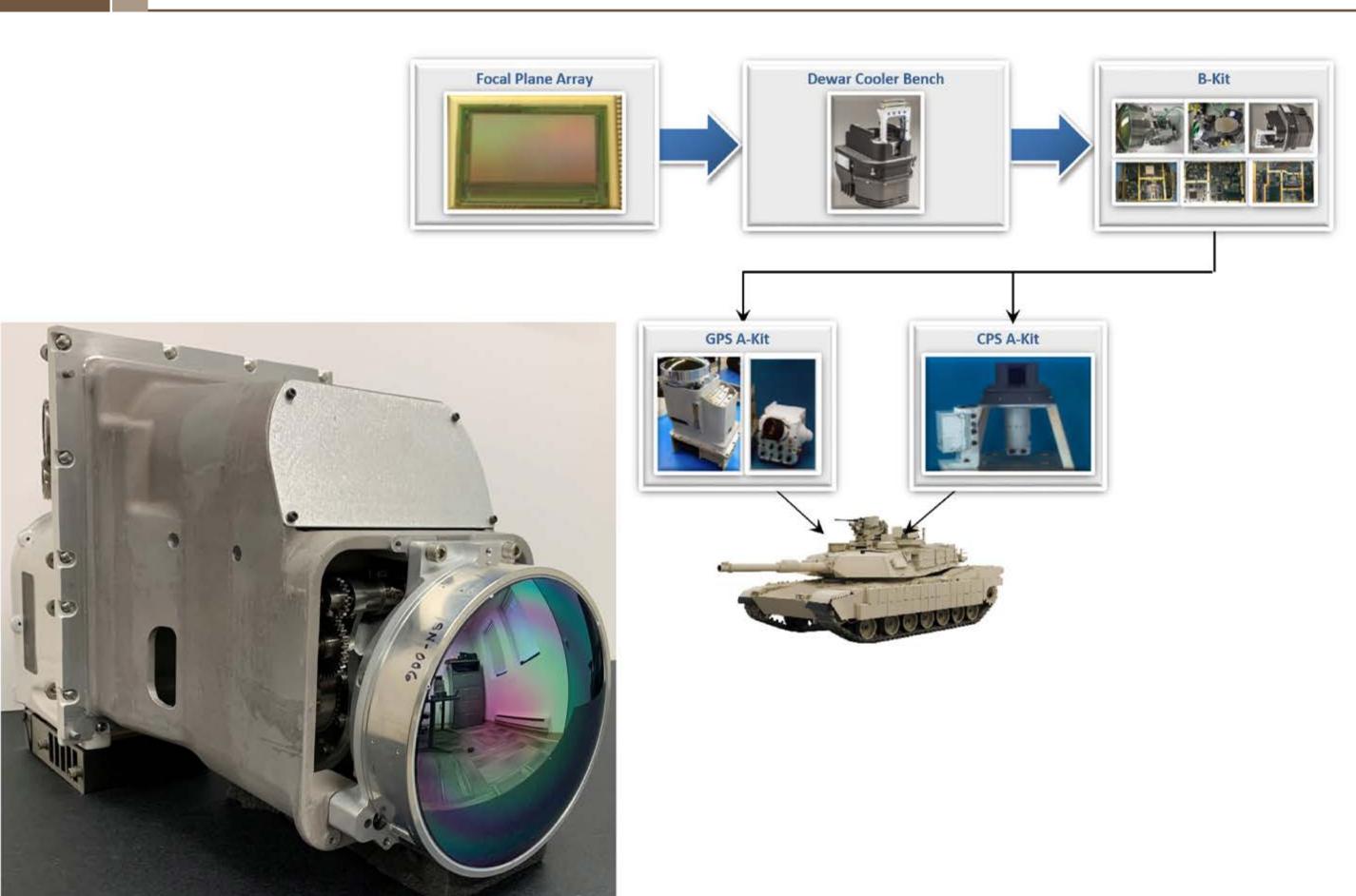
Booz Allen Hamilton Ideal Innovations Incorporated (I3)

Third Generation Forward Looking Infrared (3GEN FLIR)



PEO Intelligence, Electronic Warfare and Sensors Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

Third Generation Forward Looking Infrared (3GEN FLIR) is the next generation of reconnaissance, surveillance, and target acquisition (RSTA) sights to restore sensor overmatch through significant improvements in range and resolution. The 3GEN FLIR program incorporates high-definition dual-band mid-wave infrared and long-wave infrared sensing technology advancements into a common B-Kit for RSTA capabilities in day-night and degraded battlefield environments.

BENEFIT TO THE SOLDIER

- Significantly increases target identification compared to legacy Second Generation FLIR
- Increases lethality and survivability

PROGRAM STATUS

- FY20: B-Kit Test Readiness Review
- FY21: Completed Engineering and Manufacturing Development B-Kit
- **FY22**:
 - Awarded Low-Rate Initial Production Contract (LRIP)
 - Operational Assessment
- **FY23:**
 - B-Kit LRIP Award
 - Milestone C

PRIME CONTRACTORS

DRS

Raytheon Intelligence & Space

PROGRAM PORTFOLIO MANEUVER

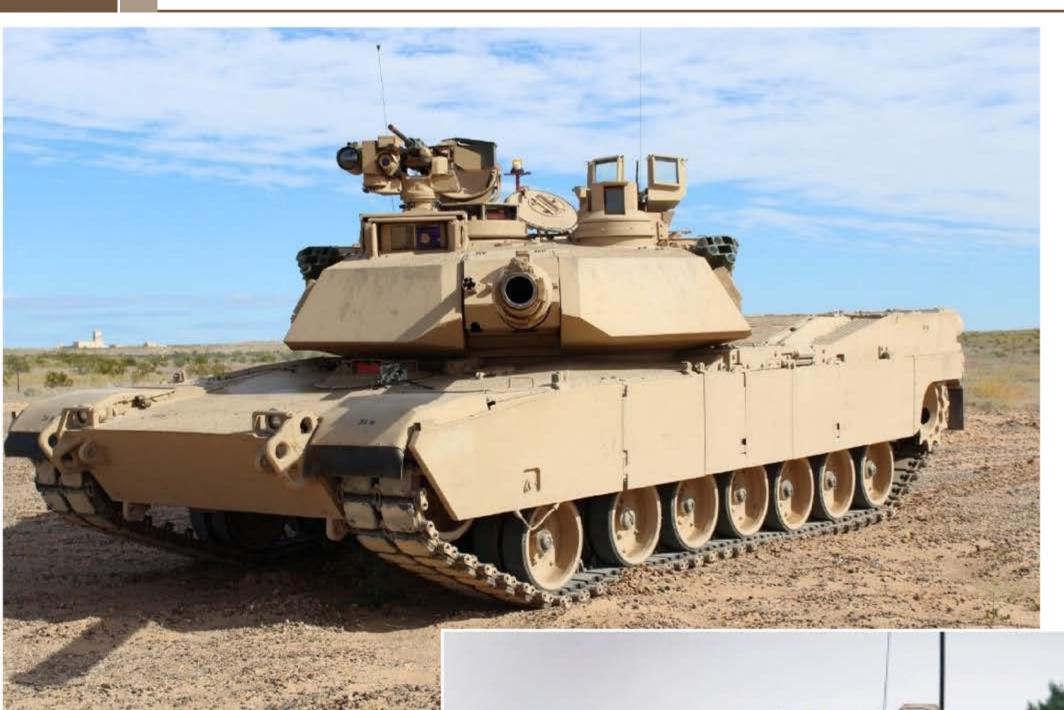


Abrams Main Battle Tank

PEO Ground Combat Systems | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support



DESCRIPTION

The Abrams tank is the Army's primary ground combat system.

BENEFIT TO THE SOLDIER

Provides the lethality, survivability, and fightability necessary to defeat advanced threats well into the future

PROGRAM STATUS

- FY20: Delivery of the System Enhancement Program (SEP) v3
- FY22: Testing for SEPv4
- FY23: SEPv4 Development continues

PRIME CONTRACTORS

Allison Transmission **Anniston Army Depot** General Dynamics Land Systems Honeywell

Joint Systems Manufacturing Center

M1A2 SEPV3

Air Soldier System (Air SS)

PEO Soldier | Fort Belvoir, VA



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

The Air Soldier System (Air SS) is flight crew life support and mission equipment.

BENEFIT TO THE SOLDIER

- Improves aviation soldier survivability
- Improves flight crew situational awareness mission effectiveness

PROGRAM STATUS

- FY20: First Unit Equipped with soldier and aircraft kits
- FY21: Limited Procurement Decision
- **FY22:** Operational Assessment
- FY23: Various Procurement Decisions, Contract Awards, and Fielding

PRIME CONTRACTORS

Government is the prime integrator and awards various contracts to multiple vendors providing components.

Armored Multi-Purpose Vehicle (AMPV)

PEO Ground Combat Systems | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Armored Multi-Purpose Vehicle (AMPV) will replace the Armored Brigade Combat Team's (ABCT's) M113 Family of Vehicles. AMPV will provide commanders with viable capabilities to maneuver across the full breadth of the ABCT's battlefield.

BENEFIT TO THE SOLDIER

Improves mobility, survivability, protection, and indirect fires

PROGRAM STATUS

- FY21:
 - Acquisition Program Baseline Re-baseline
 - Physical Configuration Audit complete
- **FY22:**
 - Live Fire Testing and Evaluation
 - Initial Operational Test complete
- FY23:
 - Full-Rate Production Decision Review
 - **Initial Operating Capability**

PRIME CONTRACTORS

BAE Systems

Booker Combat Vehicle - M10

PEO Ground Combat Systems | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

M10 Booker Combat Vehicle is the U.S. Army's newest tracked ground combat vehicle and will provide a direct fire capability and overwhelming precision firepower to infantry brigades. The platform will provide greater survivability, the ability to identify threat systems earlier and at greater distances, and will not restrict movement in off-road terrain. M10 Booker Combat Vehicle will also allow soldiers to move at a faster pace.

BENEFIT TO THE SOLDIER

Provides IBCTs with mobile, protected direct fire capability

PROGRAM STATUS

- FY20-FY21:
 - Prototype Deliveries
 - Soldier Vehicle Assessment
 - Limited User Test
- FY22: Low-Rate Initial Production (LRIP) Contract Award
- FY23: LRIP begins

PRIME CONTRACTORS

General Dynamics Land Systems

Bradley Fighting Vehicle – M2A4

PEO Ground Combat Systems | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Operations & Support







DESCRIPTION

M2A4 Bradley Fighting Vehicle is a digital, full-tracked, medium-armored vehicle that provides cross-country mobility, mounted firepower, communications, protection to mechanized infantry when mounted, and overwatch support when dismounted.

BENEFIT TO THE SOLDIER

Ensures warfighters can continue to maintain combat overmatch battlefield capabilities

PROGRAM STATUS

- **FY22:**
 - Track and Suspension Engineering Change Proposal (ECP) Installs and Upgrades
- Production
- FY23: ECP Upgrades

PRIME CONTRACTORS

BAE Systems Cummins DRS Loc Performance

Renk America

Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) - M88A2

PEO Ground Combat Systems | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support







DESCRIPTION

The M88A2 Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) provides towing, winching, and hoisting to support battlefield recovery operations and evacuation. HERCULES is the recovery workhorse of the Armored Brigade Combat Team (ABCT).

BENEFIT TO THE SOLDIER

Provides towing, winching, and hoisting to support battlefield recovery operations and evacuations

PROGRAM STATUS

- **FY20:**
 - Awarded Other Transaction Authority for engine and electronic fuel injection and diagnostics capability
 - Final Production contract
- FY22: Production and Fielding
- FY23: Research, Development, Test, and Evaluation

PRIME CONTRACTORS

BAE Systems

Infantry Squad Vehicle (ISV)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

The Infantry Squad Vehicle (ISV) provides enhanced tactical mobility for an Infantry Brigade Combat team with its associated equipment to quickly move around the battlefield. This provides commanders greater freedom of movement and action.

BENEFIT TO THE SOLDIER

- Provides flexibility for entry operations
- Counter threat anti-access strategies

PROGRAM STATUS

- **FY20:**
 - Milestone C approval
 - Production Contract Award
- **FY22:**
 - Conditional Materiel Release
- Fielding
- **FY23:**
 - Fielding
 - **Full-Rate Production**
 - Initial Operational Test and Evaluation

PRIME CONTRACTORS

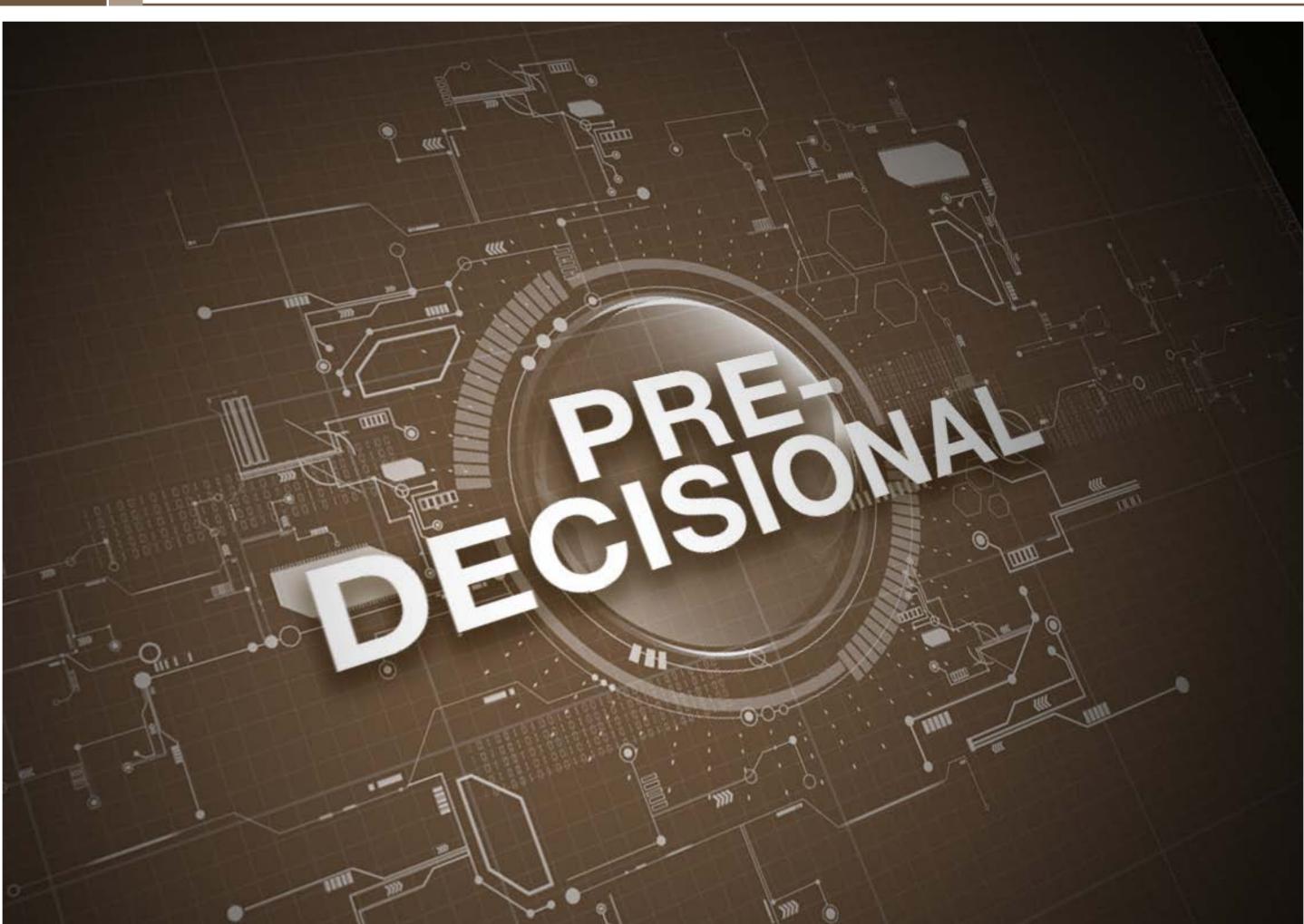
GM Defense

Mechanized Infantry Combat Vehicle - XM30

PEO Ground Combat Systems | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Materiel Solution Analysis



DESCRIPTION

XM30 Mechanized Infantry Combat Vehicle will serve as the U.S. Army's infantry fighting vehicle tasked to maneuver and operate as part of a Joint combined arms team for the purpose of creating an advantageous position, relative to the enemy, to deliver a decisive strike while also controlling maneuver robotics and semi-autonomous systems. XM30 will replace the Bradley Fighting Vehicle.

BENEFIT TO THE SOLDIER

- Survivable against current and emerging threats to deliver soldiers into the fight and maneuver them to a point of positional advantage on the battlefield
- Provides mobility and can react to threats at tactically relevant speeds

PROGRAM STATUS

- FY21: Preliminary Digital Design Awarded
- **FY22:**
 - Abbreviated Capability Development Document finalized
 - Request For Proposal Detailed Design/Prototype Build and Test released
- **FY23:**
 - Source Selection Evaluation Board
 - Preliminary Digital Design completed
 - Detail Digital Design and Prototype Build and Test Awards

PRIME CONTRACTORS

TBD

Robotic Combat Vehicle (RCV)

PEO Ground Combat Systems | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Middle Tier Acquisition Rapid Prototyping (MTA-RP) and Software Acquisition Pathway (SWP)



DESCRIPTION

Robotic Combat Vehicle (RCV) program will utilize existing prototypes procured for soldier operational experiments for development, experimentation, and unit integration. Development will focus on improving platform autonomy, cybersecurity, and safety.

The RCV software pathway (SWP) program will focus on software capabilities for autonomous mobility, user interface, platform control, and payload control. Future soldier feedback and technical performance collected during operations in relevant tactical environments will dictate the requirements for each annual software release as the RCV SWP increases the automation of operator and crew tasks.

BENEFIT TO THE SOLDIER

- Expands the geometry of the battlefield and enables commanders to dictate the terms of the first human engagement by leveraging Robotic and Autonomous Systems to provide reaction time and maneuver space while conducting Cross Domain Maneuver during multiple Multi-Domain Operations problems
- Pushes modular mission payload capabilities to the point-of-need
- Provides a dynamic variable that forces the threat to account for a wide spectrum of potential employment strategies, thus demonstrating a credible deterrence during competition

PROGRAM STATUS

- FY21: SWP Planning Phase Approval
- FY22: Middle Tier Acquisition-Rapid Prototype Approval
- FY23: SWP Execution Phase Approval and Prototype Demonstrator Task Assignment Awards

PRIME CONTRACTORS

Applied Intuition Kodiak Robotics QinetiQ **Textron**

Stryker Brigade Combat Team (SBCT)

PEO Ground Combat Systems | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

As the primary combat and combat support platform of the Stryker Brigade Combat Team (SBCT), the Stryker Family of Vehicles is a strategically deployable brigade capable of rapid movement worldwide in a combat-ready configuration.

BENEFIT TO THE SOLDIER

Provides the warfighter with a reliable, combat-tested platform that includes significant enhancements since the original Fielding in 2002

PROGRAM STATUS

FY20: Fielding

FY21: Production Award

FY22: Fielding

PRIME CONTRACTORS

General Dynamics Oskkosh Defense, LLC

PROGRAM PORTFOLIO MISSION COMMAND



Command Post Computing Environment (CPCE)



PEO Command, Control, Communications-Tactical Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

The Command Post Computing Environment (CPCE) is the U.S. Army's Program of Record for an easy-to-use common operating picture (COP) through a single mission command suite operated and maintained by soldiers. CPCE provides a software and server hardware framework upon which warfighter applications can be converged and future applications built.

BENEFIT TO THE SOLDIER

- Soldiers can access CPCE software via a standard web browser
- Provides a common geospatial solution (map) and common data services
- Reduces the training burden on soldiers
- Software infrastructure framework enables convergence and integration of future warfighting capabilities

PROGRAM STATUS

- FY21: Testing
- **FY22:**
 - Full Deployment Decision
 - Milestone B
- FY23: Critical Design Review

PRIME CONTRACTORS

Systematic

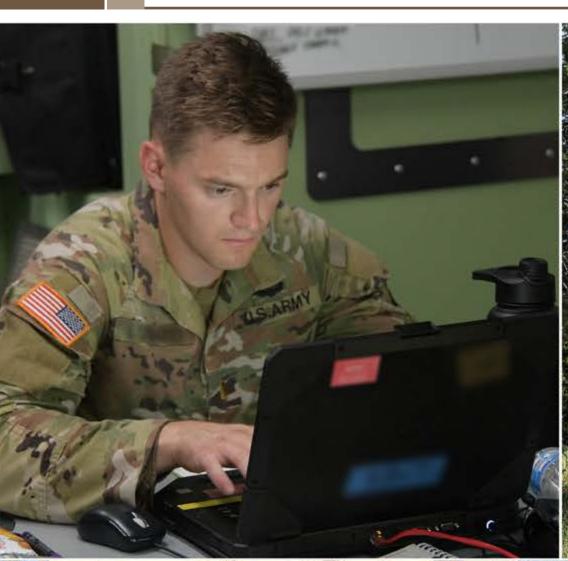
Weapons & Software Engineering Center

Command Post Integrated Infrastructure (CPI2)



PEO Command, Control, Communications-Tactical Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment











DESCRIPTION

The Command Post Integrated Infrastructure (CPI2) program improves mobility, scalability, and survivability of U.S. Army command posts to address the challenges posed by contemporary and future land conflict. Product Manager CPI2 leveraged soldier feedback from experimental units to test and refine the new CPI2 mobile CPs. CPI2's final prototype design review sets the stage for follow-on production phases within the next year, where the Army will begin to see the radically mobilized CP designs in action. Initial Fielding is slated for Fiscal Year 2023.

BENEFIT TO THE SOLDIER

- Leverages improvements in technology to reduce the current CP footprint and improve agility
- Consists of the integration of approved and fielded mission command information systems, government off-the-shelf and commercial-off-the-shelf technology
- Provides ancillary equipment for fully outfitting the mobile CP

PROGRAM STATUS

- FY20: Capability Development Document approved
- FY21: Milestone B
- FY22: Milestone C
- **FY23:**
 - Draft Request for Proposal Contracts for various CPI2s
 - Testing and Fielding

PRIME CONTRACTORS

Elbit Systems of America **SCI Technology** Serco

Cyber Situational Understanding (Cyber SU)



PEO Command, Control, Communications-Tactical Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Cyber Situational Understanding (Cyber SU) is a software solution that enables tactical maneuver commanders to visualize, understand, and make decisions in Multi-Domain Operations (MDO). Cyber SU ingests data from multiple sources to allow the tactical maneuver commander and others to make data centric decisions.

BENEFIT TO THE SOLDIER

- Visualize Cyber Electromagnetic Activity threats in their area of operations
- Understand cyberspace impacts in MDO
- Facilitate the military decision-making process in near real-time

PROGRAM STATUS

- FY20: Contract Award and Development
- **FY21:**
 - Operational Assessment (OA)
 - Development of Capability Drop (CD) 1
- **FY22:**
 - Deployment
 - Fielding
 - Initial Operational Capability
- **FY23:**

 - **Deployment Fielding Decision**
 - Initiate Development of CD 2

PRIME CONTRACTORS

Research Innovations Incorporated

Defense Enterprise Wideband Satellite Communications System (DEWSS)



PEO Enterprise Information Systems | Fort Belvoir, VA

ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment, Operations & Support





DESCRIPTION

The Defense Enterprise Wideband Satellite Communications (SATCOM) System (DEWSS) provides strategic satellite communication systems and satellite network control and planning systems for the Defense SATCOM and Wideband Global SATCOM system satellite constellations. DEWSS includes two major capabilities:

- Wideband Satellite Operations and Management System (WSOMS) enables the Army to efficiently plan and manage the global SATCOM network.
- Enterprise Wideband Satellite Terminal System provides large aperture satellite communication terminals and associated satellite modems, multiplexers, routers, and supporting telecommunications equipment to strategic Army SATCOM gateway facilities worldwide.

BENEFIT TO THE SOLDIER

Highly available strategic military satellite communication systems enable warfighters to execute worldwide command and control of deployed forces

PROGRAM STATUS

- FY20-FY22:
 - Modernized SATCOM terminals
 - Established organic capability for integration, independent verification, and validation of WSOMS subsystems
 - Achieved Initial Operating Capability
- **FY23:**
 - Fielding
 - Modernized communication capabilities
 - Complete Deployment

PRIME CONTRACTORS

Boeing

IAP Inc.

L3 Harris Technologies, Inc.

Northrop Grumman Systems Corporation

Dismounted Assured Positioning, **Navigation, and Timing (PNT)** System (DAPS)



PEO Intelligence, Electronic Warfare and Sensors Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

The Dismounted Assured Positioning, Navigation, and Timing (PNT) System (DAPS) focuses on providing Army forces with unhindered access to assured/trusted PNT information. The capability enables Multi-Domain Operations (MDO) Army units to access and assure PNT information required to conduct PNT dependent tasks while operating in conditions with degraded or denied access. DAPS is a near-term and enduring capability.

BENEFIT TO THE SOLDIER

- Provide assured PNT to dismounted users by disseminating PNT to dependent devices in GPS degraded environments
- Critical in Army MDOs that are impacted by Anti-Access/Area Denial conditions

PROGRAM STATUS

- **FY21:**
 - Materiel Solution Selection
 - Operational Assessment
- **FY22:**
 - Operational Assessment
 - Capability Development Document
- **FY23**:
 - **Urgent Materiel Release**
 - **Testing**
 - Milestone C Decision
 - Low-Rate Initial Production Contract award

PRIME CONTRACTORS

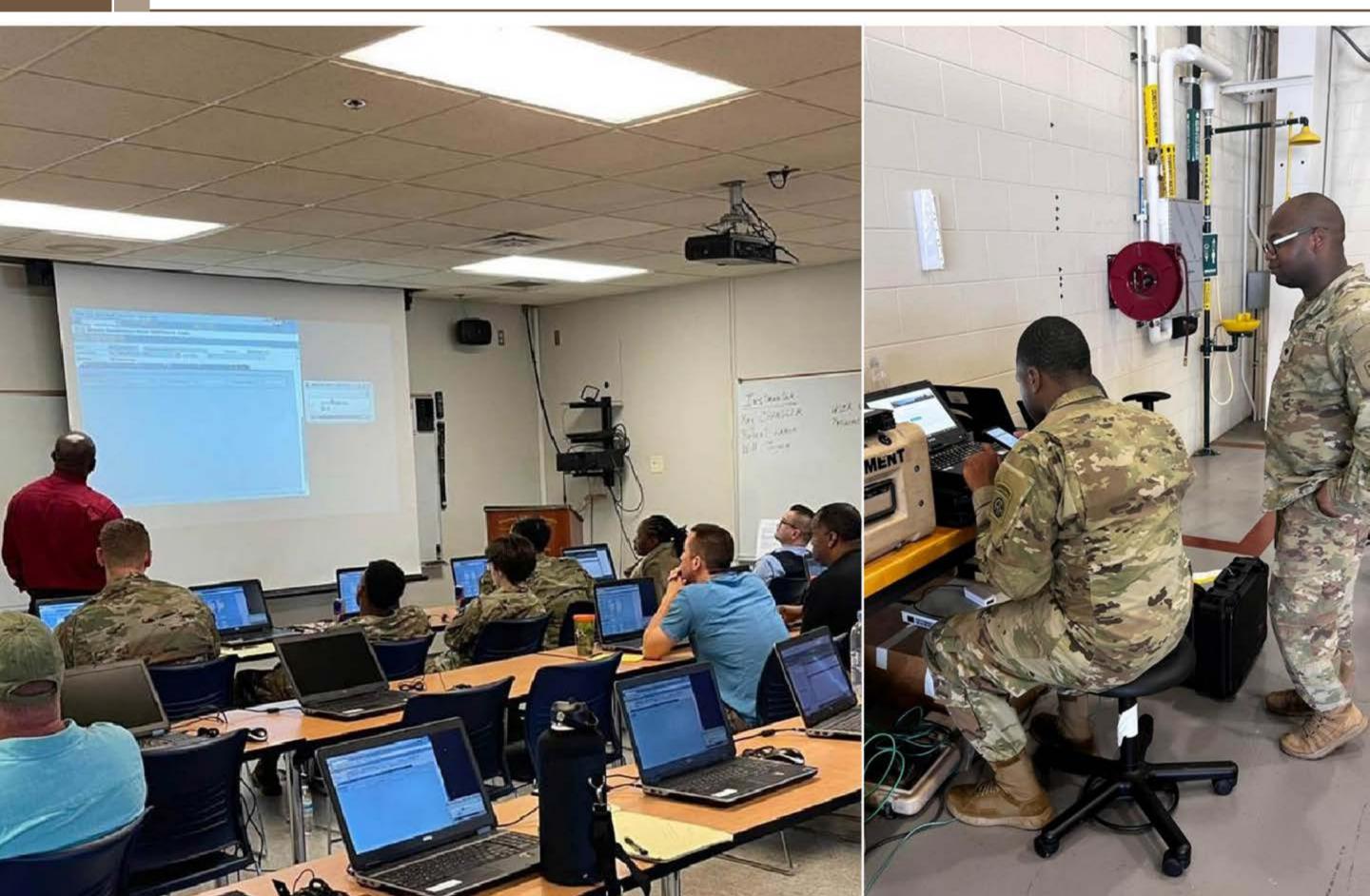
TRX Systems, Inc.

Global Combat Support System -**Army (GCSS-Army)**



PEO Enterprise Information Systems | Fort Belvoir, VA

ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment, Operations & Support



DESCRIPTION

Global Combat Support System - Army (GCSS-Army) is an automated information system that serves as the primary tactical logistics enabler supporting U.S. Army and Joint transformation for Sustainment. The program re-engineered former business processes to achieve end-to-end logistics and integration with applicable command and control (C2) and Joint systems. GCSS-Army uses commercial off-the-shelf Enterprise Resource Planning software products to support rapid force projection in the battlefield.

BENEFIT TO THE SOLDIER

- Responsive support at the right place and time
- Improved situational awareness with accurate and responsive information
- Better efficiency and visibility for users
- Financial auditability for Army

PROGRAM STATUS

- FY19-FY22: Incorporated enhanced capabilities into baseline
- FY20: Sustainment
- FY21-FY22:
 - Incorporated Aviation Data into Capability Drops
 - Trained and Fielded
- **FY23**:
 - Trained and Fielded
 - Incorporated data through five capability drops

PRIME CONTRACTORS

4M Research InSAP LMI

Handheld, Manpack, and Small Form Fit (HMS)



PEO Command, Control, Communications-Tactical Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Handheld, Manpack, and Small Form Fit (HMS) acquires affordable networking tactical radio systems that meet U.S. Army operational requirements while also meeting the needs of the Marine Corps, Navy, Air Force, and Special Operations Command. HMS radio systems provide extended voice and data communications to the tactical edge. These products provide simultaneous voice, data, and video communications; increase data throughput; are interoperable with legacy systems and end user devices; and provide tactical satellite communications.

BENEFIT TO THE SOLDIER

Provides interoperable voice and data connectivity at the tactical level with an on-the-move and at-the-halt line-ofsight and beyond line-of-sight capability for dismounted personnel and platforms

PROGRAM STATUS

- FY20-FY22: Fielding
- - Initial Operational Test and Evaluation
 - Full-Rate Production
- **FY22:** Soldier Touchpoint
- **FY23**:
 - Fielding
 - **Testing**
 - Operational User Assessment

PRIME CONTRACTORS

Collins Aerospace Domo Tactical Communications L3 Harris Technologies, Inc. Silvus Technologies

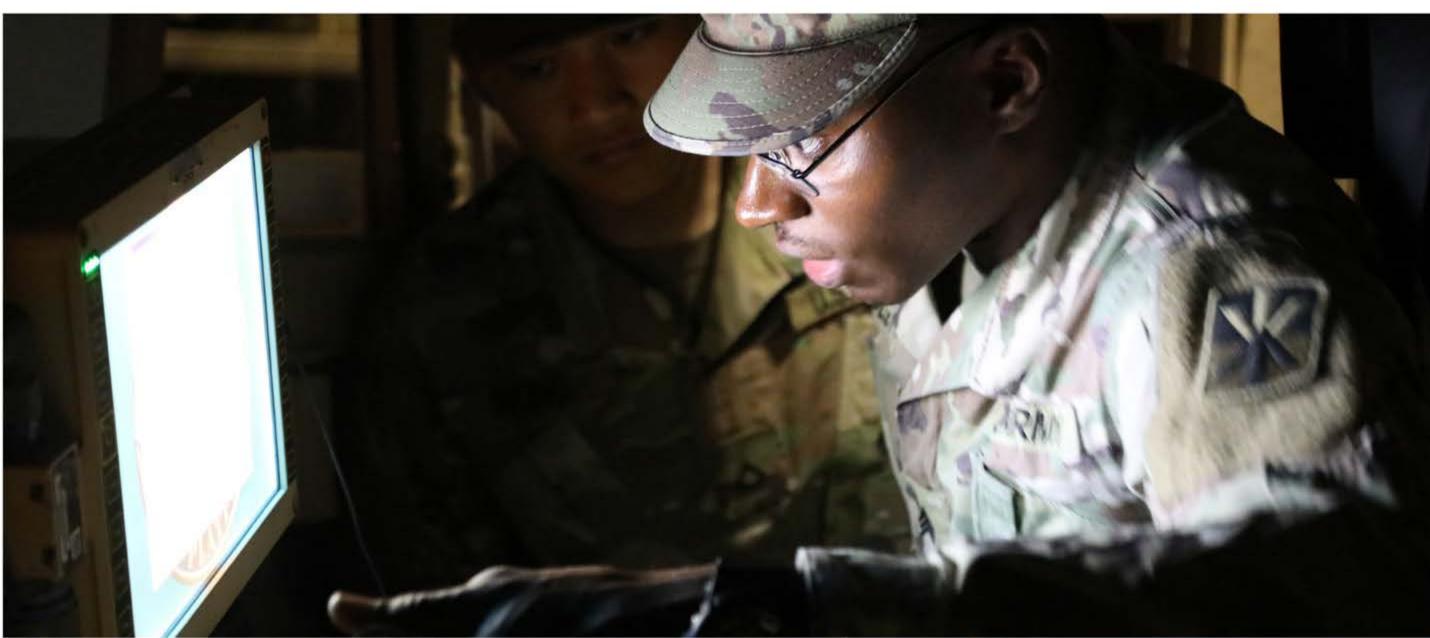
Thales Defense & Security, Inc.

Joint Battle Command - Platform (JBC-P)



PEO Command, Control, Communications-Tactical Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Production & Deployment







DESCRIPTION

The purpose of the Joint Battle Command - Platform (JBC-P) is to distribute accurate digital command and control and situational awareness at all echelons to the platform and dismounted domains, populating a common operating picture and reducing risk of fratricide.

BENEFIT TO THE SOLDIER

- Enables mission command and logistics functionality on vehicle variants and command post elements across all unit formation types
- Serves as mission command on-the-move

PROGRAM STATUS

- FY20-FY23:
 - Production and Deployment
 - Post Milestone C

PRIME CONTRACTORS

ACE Electronics DRS ViaSat

Mounted Assured Positioning, **Navigation, and Timing (PNT)** System (MAPS)



PEO Intelligence, Electronic Warfare and Sensors Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Production & Deployment





DESCRIPTION

Mounted Assured Positioning, Navigation, and Timing (PNT) System (MAPS), a next generation capability, enables U.S. Army forces to shoot, move, and communicate in a contested Global Positioning System (GPS) environment. This includes distributing PNT information to multiple mounted platform vehicle systems.

BENEFIT TO THE SOLDIER

- Provides accurate/trusted PNT information
- Enhanced anti-jamming and anti-spoofing protections reduces reliance on GPS
- Distributes PNT data to multiple systems directly and via the network under all conditions

PROGRAM STATUS

- **FY20:**
 - Other Transaction Authority Phase 3 Award
 - Capability Development Document approved
- FY21: Limited User Test
- **FY22:**
 - **Production Contract Award**
 - Milestone C Brief
 - Maintainability Demonstration
 - Product Qualification Testing
- **FY23**:
 - Equipping
 - Initial Operational Test and Evaluation

PRIME CONTRACTORS

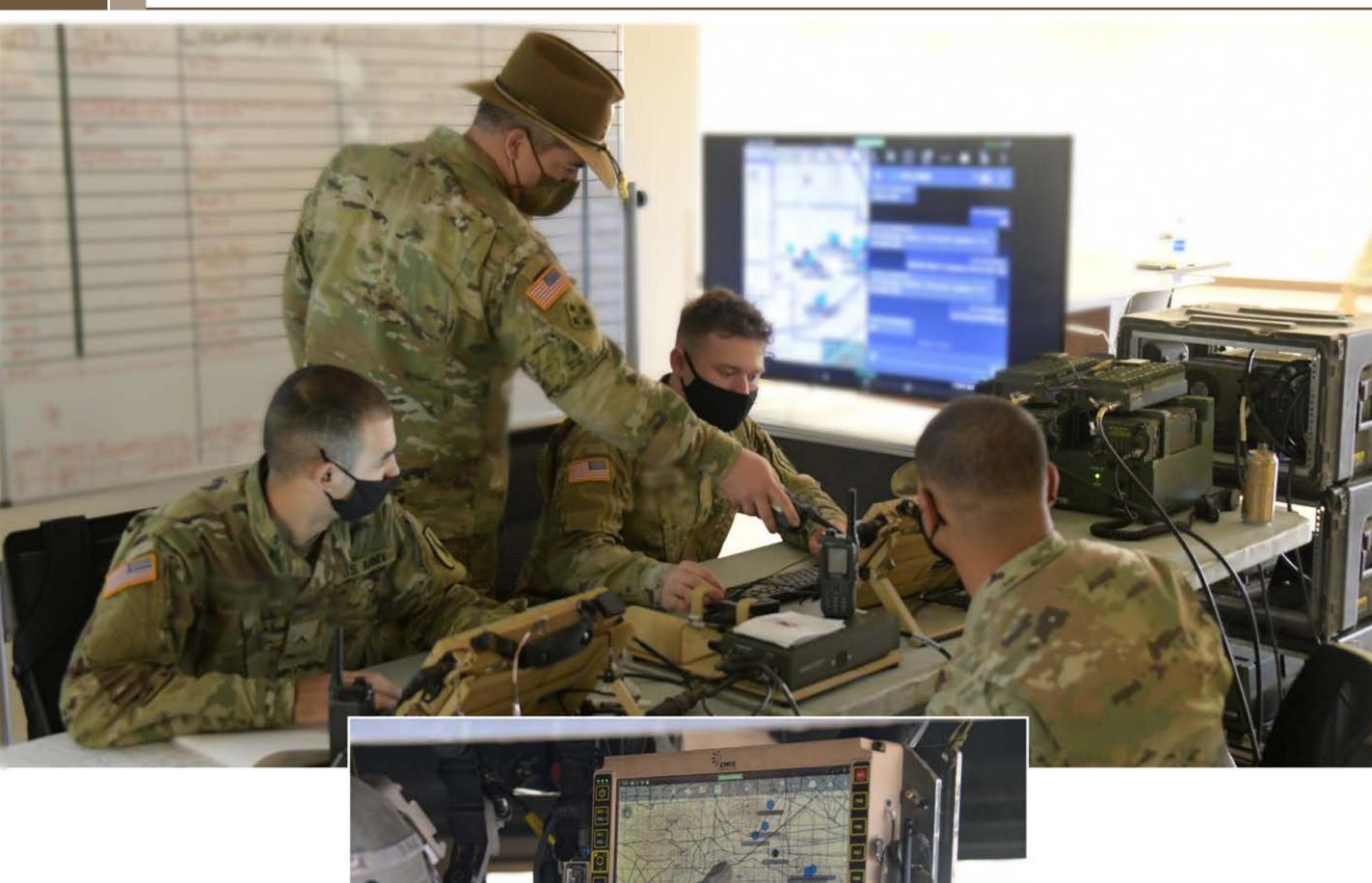
Collins Aerospace

Mounted Mission Command – Software (MMC-S)



PEO Command, Control, Communications-Tactical Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

Mounted Mission Command - Software (MMC-S) is designed to distribute accurate digital command and control and situational awareness at all echelons to the platform and dismounted domains, populating a common operating picture (COP), and reducing the risk of fratricide. MMC-S develops the Mounted Computing Environment capability that will converge warfighting function applications into its infrastructure.

BENEFIT TO THE SOLDIER

- Tactical Assault Kit (TAK)-based software solution provides a common look and feel to the handheld computing environment
- Provides open standards and the ability to leverage plug-ins across multiple computing environments
- Provides soldiers and commanders a map-based COP of the battlefield
- Leverages an intuitive operating system that reduces the training burden on units and soldiers

PROGRAM STATUS

- FY20: Development
- FY21-FY22: Development and Test activities
- - Initial Operational Test and Evaluation
 - Full Deployment Decision

PRIME CONTRACTORS

C5ISR Ultra

Satellite Communications Family of Terminals (SATCOM FoT)



PEO Command, Control, Communications-Tactical Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Materiel Solution Analysis, Technology Maturation & Risk Reduction, Engineering & Manufacturing Development, Production & Deployment, Operations & Support







DESCRIPTION

The U.S. Army's flexible, modular, scalable, and tailorable Satellite Communications (SATCOM) Family of Terminals (FoT) provides a variety of expeditionary terminals to units worldwide, to best support different formations, echelons, mission requirements, and locations. The Fiscal Year (FY) 2022 to FY23 FoT comes in varying sizes from extra small to extra large.

The Army is working to standardize, consolidate, and significantly reduce the number of SATCOM terminals in its portfolio, with the ability to leverage existing systems to support different missions. The FoT acquisition strategy will continue to deliver the right array of terminal solutions to enable operational flexibility, cost savings, diversity, and enhanced capability to the warfighter in current and future Multi-Domain Operations (MDO).

BENEFIT TO THE SOLDIER

- Global mission command and voice, video, and data exchange in Army, Joint, and coalition MDO
- High-capacity bandwidth, range, and situational awareness
- Enables data-centric environment, decision dominance

PROGRAM STATUS

- FY20-FY22:
 - Extra Small SATCOM Procurement
 - Medium SATCOM Fielding Basis of Issue (BOI)
- FY21: Medium and Large SATCOM Fieldings
- FY22: Fielded Large SATCOM Initial Expeditionary Signal Battalion-Enhanced (ESB-E)
- **FY23**:
 - Medium SATCOM Material Development Decision, Milestone C, and Fielding
 - Large SATCOM Fieldings to ESB-Es
 - Small SATCOM BOI, Initial Procurement, Full Materiel Release, and Fielding

PRIME CONTRACTORS

Amentum Services, Inc. DTECH Labs Envistacom **Fairwinds GATR** JANUS Research Group

Klas L3 Harris Technologies, Inc. **Linchpin Solutions** Lite Coms/AVL Pacific Star (PacStar) Communications Tampa Microwave

Signal Modernization (SigMod)

PEO Command, Control, Communications-Tactical | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Materiel Solution Analysis, Technology Maturation & Risk Reduction, Engineering & Manufacturing Development, Production & Deployment, Operations & Support







DESCRIPTION

The Signal Modernization (SigMod) program delivers innovative expeditionary commercial line-of-sight and beyond-line-of-sight communications and tactical network transport capabilities that enable commanders to make rapid decisions in Joint coalition Multi-Domain Operations at every phase of operation. These easy-to-deploy, easy-to-operate systems increase signal path diversity, network resiliency, speed of maneuver, and operational flexibility. SigMod includes a variety of high-capacity radio systems, secure wireless systems, and a vehicle-to-vehicle wireless solution, and several variants of Commercial Coalition Equipment (CCE) that provide expeditionary coalition and commercial connectivity in support of both civil and military operations.

BENEFIT TO THE SOLDIER

- Adds multipath diversity, enhanced network primary, alternate, contingency, and emergency communications, and operational flexibility
- High-capacity radios and Tropo operate in satellite-denied environments with significant increase in bandwidth and range versus previous capability
- Significant size, weight, and power reduction
- Easy to operate and deploy; rapid set-up/tear down, enhances command post mobility and survivability

PROGRAM STATUS

- FY20-FY22:
 - Fielding
 - Full Materiel Release
 - Milestone C approval and procurements
 - Initiated P3 to support full organic Sustainment
- **FY21:** Various systems in Preliminary Design Review/Critical Design Review (PDR/CDR), Operational Demonstrations, and Testing
- FY22: CCE achieved Full-Rate Production and continued Fielding
- FY23:
 - Various programs completed Operational Assessment, Full Rate Production, and Milestone C
 - PDR/CDR, Testing, and Fielding
 - Full Operational Capability
 - Transition to Sustainment

PRIME CONTRACTORS

BAE Systems
Blue Sky Mast
Klas
Pacific Star (PacStar) Communications

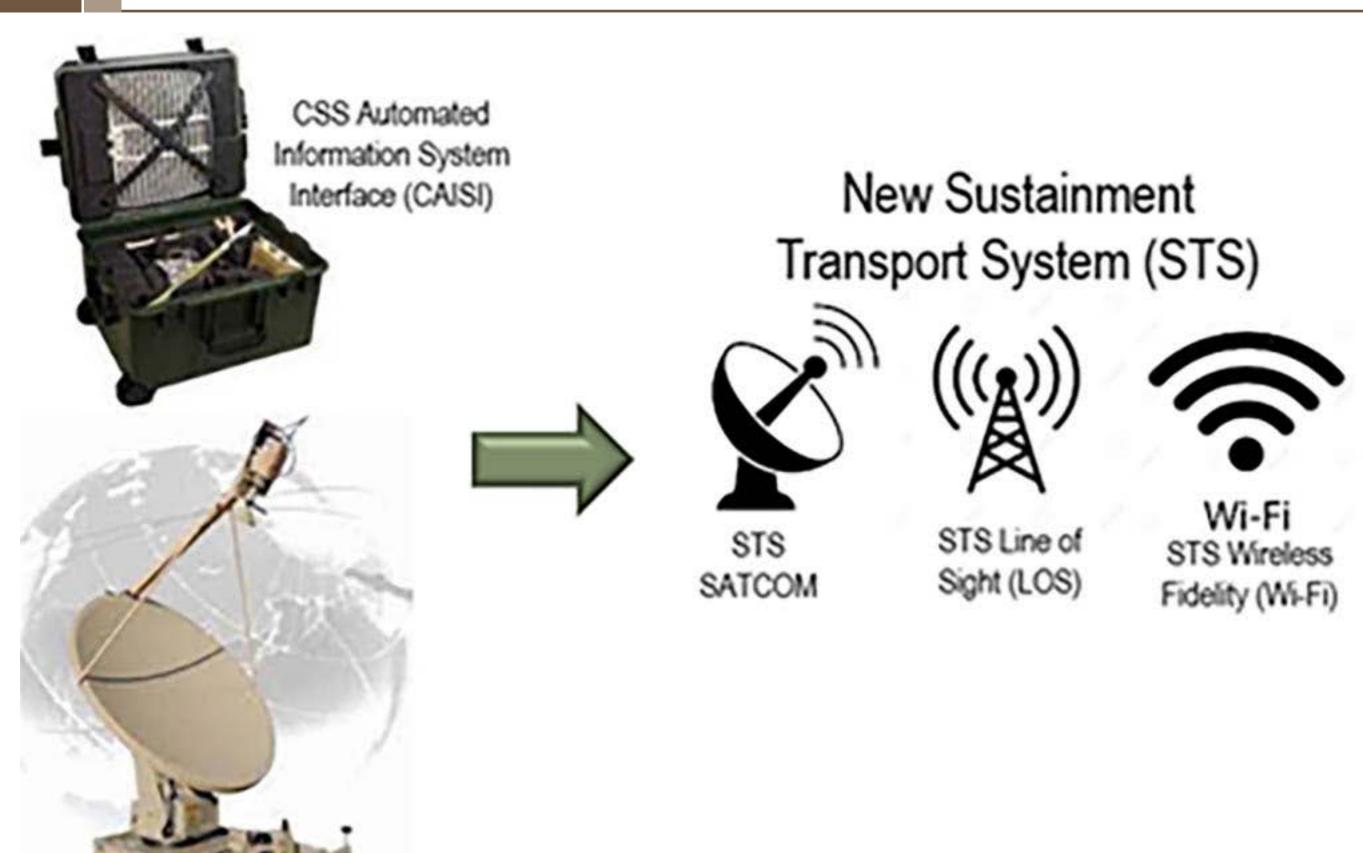
Sigma Defense
Silvus Technologies
Ultra Intelligence and Communications

Sustainment Transport System (STS)

PEO©C3T

PEO Command, Control, Communications-Tactical | Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Materiel Solution Analysis, Production & Deployment, Operations & Support



DESCRIPTION

Sustainment Transport System (STS) modernizes the way the U.S. Army exchanges logistics data, both globally and locally, on the battlefield. The service established three new data transport programs known collectively as the STS: STS Satellite Communications (SATCOM), STS Line-of-Sight (LoS), and STS Wireless-Fidelity (Wi-Fi). STS will enable soldiers to utilize the critical sustainment tools that ensure U.S. forces always possess the supplies, personnel, medical, and force protection required in all environments and against any adversary.

BENEFIT TO THE SOLDIER

CSS VSAT

- Secure high-capacity global tactical network transport
- Easy to operate for general purpose users
- Easy to transport for rapid deployment and mobility
- Supports Army Enterprise Resource Planning solutions
- Enables both global and local data exchange

PROGRAM STATUS

- FY20-FY22: Requirements Development
- FY23:
 - Materiel Development Decision
 - Milestone C

PRIME CONTRACTORS TBD

Tactical Electric Power (TEP)

PEO Combat Support & Combat Service Support Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment, Operations & Support



DESCRIPTION

Tactical Electric Power (TEP) provides a standardized family of tactical electric power sources to the DOD in accordance with DOD Instruction 4120.11, Mobile Electric Power Systems.

The TEP program consists of a variety of generator set sizes.

- Small Generators: Military Tactical Generators (MTG), Tactical Quiet Generators (TQG), Small Tactical Electric Power (STEP)
- Medium Generators: TQGs, Advanced Medium Mobile Power Sources (AMMPS), trailer-mounted Power Units (PU), Power Plants, and Microgrid
- Large Generators: TQGs, Large Tactical Power System (LTPS)
- Prime Generators: Deployable Power Generation and Distribution System (DPGDS)
- Power Distribution: Power Distribution Illumination Systems Electrical (PDISE). The STEP, AMMPS, and LTPS are third generation TEP systems that will replace TQGs over time. The DPGDS PU is undergoing a recapitalization back to zero hours.

BENEFIT TO THE SOLDIER

- Increased system efficiency, reliability, mobility, and maintainability
- Significant reduction in fuel consumption

PROGRAM STATUS

- FY20-FY22:
 - Production and Fielding of various TEP generators
 - LTPS Rapid Prototyping Other Transaction Authority
- **FY22:**
 - LTPS Rapid Prototyping Agreement Awarded
 - DPGDS PU Recapitalization FRP Decision
- **FY23:**
 - DPGDS PU FMR and Fielding
 - STEP Milestone B, entering Engineering & Manufacturing Development
 - LTPS Design Maturity Reviews
 - PDISE Transition to Sustainment to U.S. Army Communications-Electronics Command
 - AMMPS Production Rebuy Contract Award

PRIME CONTRACTORS

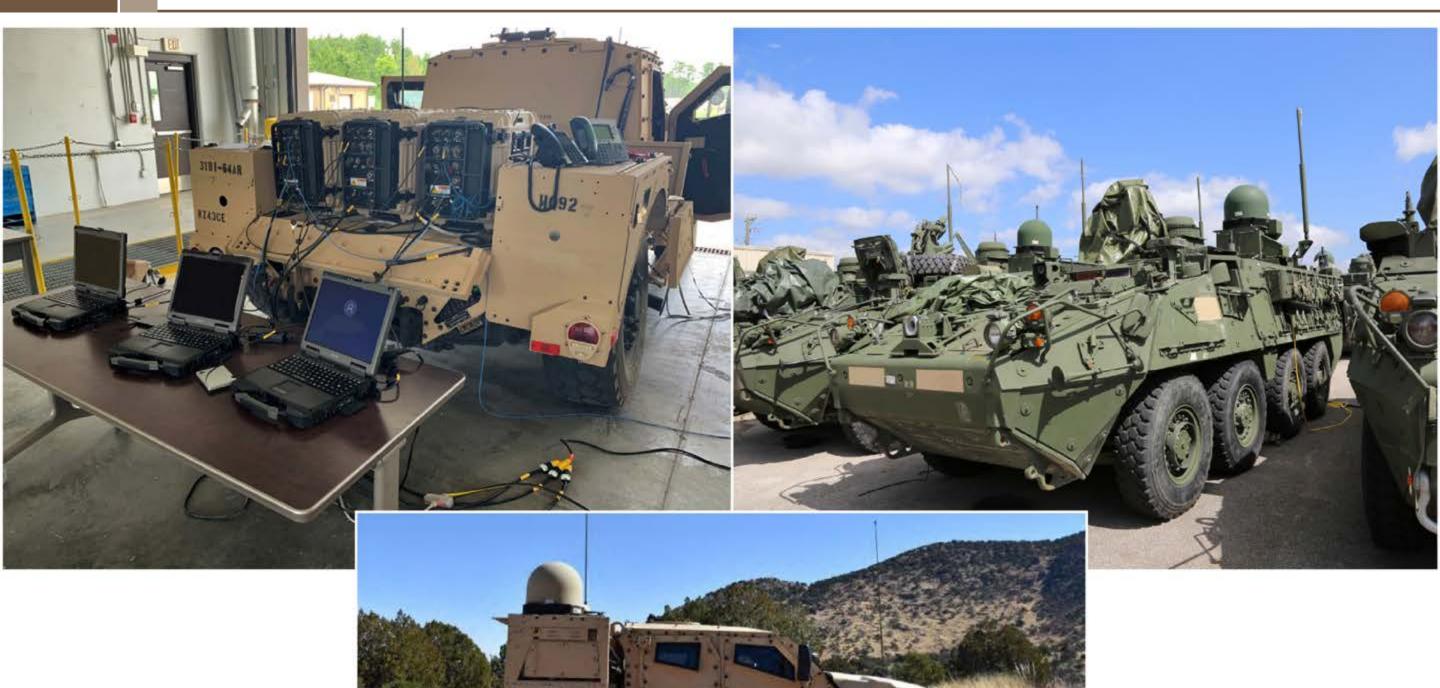
Cummins Power Generation Fidelity Technologies Corporation PD Power Systems

Tactical Network Transport (TNT) At The Halt (ATH) and On The Move (OTM)



PEO Command, Control, Communications-Tactical Aberdeen Proving Ground, MD

ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support



DESCRIPTION

Tactic Network Transport (TNT) At The Halt (ATH) and On The Move (OTM) enables global mission command and the full range of voice, video, and data exchange that soldiers and commanders need to be successful in Multi-Domain Operations against near-peer threats. A holistic modernization approach and redesign of the TNT ATH baseline addresses end-of-life/ obsolescence equipment with a focus on a One Network approach. These systems keep highly mobile and dispersed forces connected to one another and to the U.S. Army's global information network.

BENEFIT TO THE SOLDIER

- Enables global high-capacity mission command and voice, video, and data exchange
- Satellite Communications and line-of-sight enable multipath diversity
- Enhances unit mobility

PROGRAM STATUS

- FY20-FY22:
 - Modernized Modified Work Order prototype pilots
 - Completed Fieldings and Technical Insertions
- **FY22:**
 - OTM Pilot
 - Network Integration Technology Enhancement (NITE)
- **FY23:**
 - Continue NITE and Satellite Transportable Terminal Technical Insertions

PRIME CONTRACTORS

AASKI Technology CodeMettle **DTECH Labs** Evistacom **General Dynamics** JANUS Research Group

Klas L3 Harris Technologies, Inc. **Lockheed Martin Corporation** Microsoft Pacific Star (PacStar) Communications Riverbed Technology

Tampa Microwave TeleCommunications Systems, Inc.

PROGRAM PORTFOLIO PROTECTION



Advanced Anticonvulsant System (AAS)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment





DESCRIPTION

The Advanced Anticonvulsant System (AAS) program provides treatment of nerve agent-induced seizures. AAS will treat traditional nerve agent and non-traditional agent-induced seizures and will prevent subsequent neurological damage. Midazolam is more water-soluble than diazepam (the currently fielded medication to control nerve agent-induced seizures) and terminates nerve agent-induced seizures more quickly. The U.S. Food and Drug Administration (FDA) approved the midazolam autoinjector in 2002.

BENEFIT TO THE SOLDIER

Provides lifesaving anticonvulsant medical countermeasures

PROGRAM STATUS

- **FY22:**
 - Full-Rate Production
 - FDA Approval
- FY23: Initial Operational Capability

PRIME CONTRACTORS

Rafa Laboratories, LTD

Aerosol Vapor Chemical Agent Detector (AVCAD)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development







DESCRIPTION

Aerosol Vapor Chemical Agent Detector (AVCAD) is a man-portable system to detect aerosol and vapor chemical agents. AVCAD will also detect low-level off-gassing, or residual vapors, to prevent/mitigate health effects associated with low concentration exposures and will perform remote alarm warning and reporting. AVCAD will support chemical and biological defense missions including monitoring, collective protection, base defense, decontamination, unmasking, and reconnaissance. AVCAD has a fixed site variant.

BENEFIT TO THE SOLDIER

Provides a man-portable, sensitive aerosol, and vapor chemical detection capability

PROGRAM STATUS

- FY21: Authority to Operate approved
- FY23: Milestone C Low-Rate Initial Production

PRIME CONTRACTORS

Smiths Detection, Inc.

Antiviral Therapeutics (AV TX)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

The Antiviral Therapeutics (AV TX) Filovirus Program will develop a safe and efficacious broad-spectrum antiviral therapeutic effective against disease and will obtain U.S. Food and Drug Administration (FDA) approval for the drug product in the United States.

BENEFIT TO THE SOLDIER

Protects against exposure and infection of specific viruses

PROGRAM STATUS

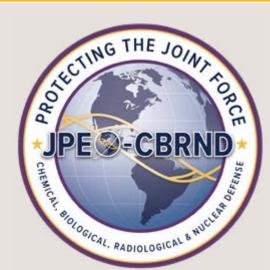
- **FY22:**
 - FDA Type C Meeting
 - Completion and Receipt of Final Report
- FY23: Submission to the FDA

PRIME CONTRACTORS

Gilead Sciences, Inc.

Chemical, Biological, Radiological, **Nuclear Dismounted Reconnaissance** Systems (CBRN DRS)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

The Chemical, Biological, Radiological, Nuclear Dismounted Reconnaissance Systems (CBRN DRS) consists of commercial and government off-the-shelf equipment providing detection, identification, sample collection, decontamination, marking, and hazard reporting of CBRN threats, as well as personnel protection from CBRN hazards. Explosive Ordnance Disposal (EOD) variants have been added to provide CBRN protection and detection capabilities for use in render safe operations. System Modernization Packages (SMPs) provide enhanced time on target, battlespace awareness, and increased confidence in CBRN detection and identification to the Joint Service in support of their DRS mission and 2030 Modernization objectives.

BENEFIT TO THE SOLDIER

- Provides a comprehensive, all-hazards dismounted reconnaissance and site assessment capability to protect against, detect, and decontaminate chemical warfare agents, biological warfare agents, toxic industrial chemicals, and other hazards
- SMPs enhance detection, protection, and situational awareness

PROGRAM STATUS

FY22-FY23: Full Operational Capability for certain CBRN systems

PRIME CONTRACTORS

L2 Defense Teledyne FLIR

Compact Vapor Chemical Agent Detector (CVCAD)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Technology Maturation & Risk Reduction







DESCRIPTION

Compact Vapor Chemical Agent Detector (CVCAD) is designed to be an unobtrusive, low-profile chemical detection capability that will continuously and autonomously monitor and alert general and specialized units to an unsafe environment without further burdening the warfighters' payload or interfering with the primary mission. The small form factor is amenable to both man-worn and unmanned aerial or ground system operations to enable timely personnel protective action and other force protection decisions.

BENEFIT TO THE SOLDIER

Alerts warfighters to presence of hazards and applicable to man-worn or unmanned applications

PROGRAM STATUS

- **FY23:**
 - Downselect
 - **Technology Readiness Assessment**

PRIME CONTRACTORS

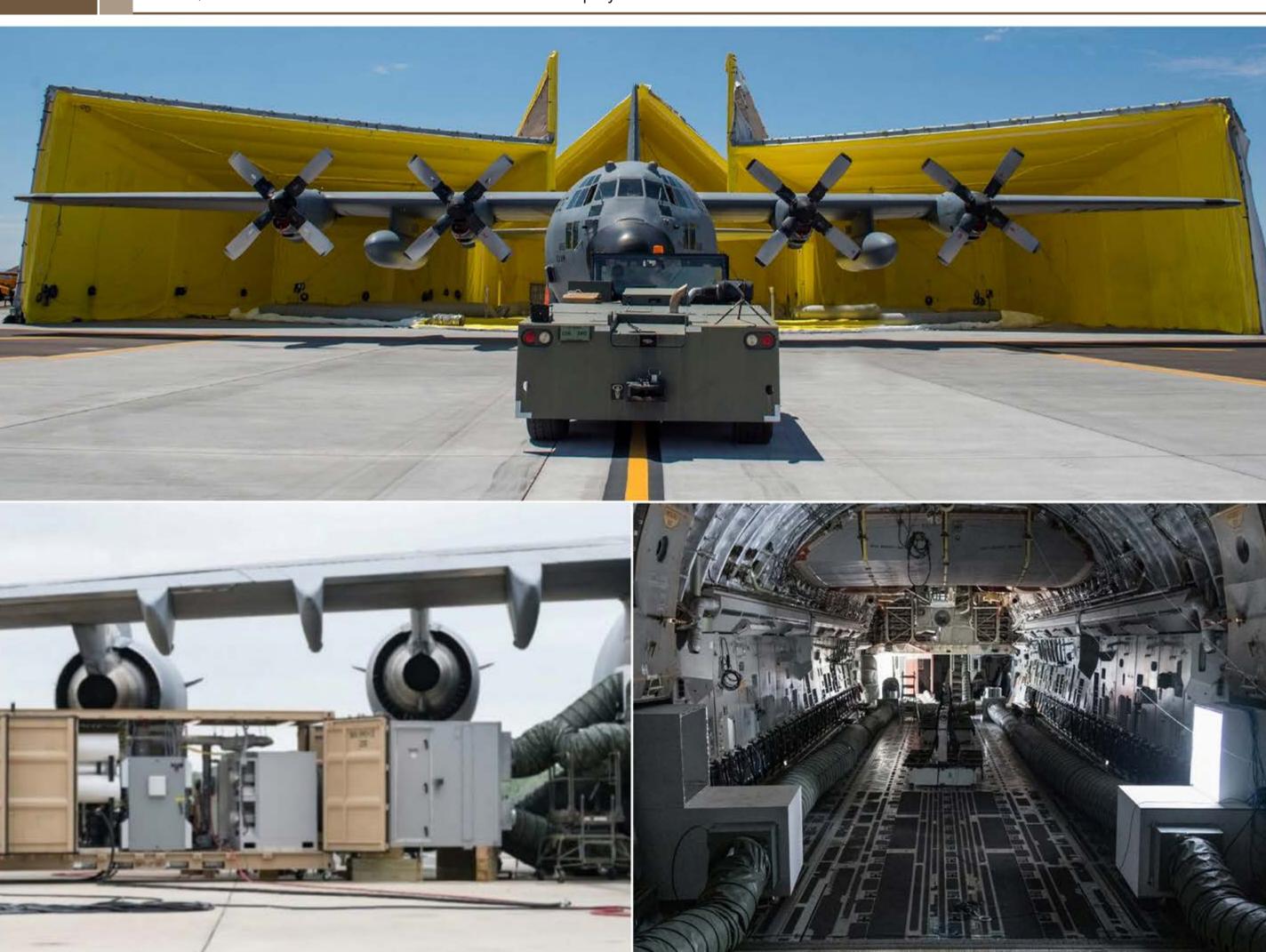
FLIR Systems, Inc GE Global Research Hamilton Sundstrand Corp N5 Sensors Inc.

Joint Biological Agent Decontamination System (JBADS)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

The Joint Biological Agent Decontamination System (JBADS) program will provide the capability to conduct biological agent decontamination of the interior and exterior of aircraft. The design incorporates a chemical liner for potential chemical agent decontamination ability. The JBADS capability set will include a decontamination delivery system using hot-humid air, a shelter to encapsulate an airframe, an environmental control and monitoring system(s), and other ancillary components. It will provide the capability to decontaminate biologically contaminated airframes to safe levels, allow more rapid return to service, and provide a cornerstone to obtaining a waterless decontamination system as required by all Services. The JBADS focus is on the biological agent decontamination for specific aircraft, and future efforts may address chemical and biological decontamination of other airframes and vehicles.

BENEFIT TO THE SOLDIER

Allows biologically decontaminated aircraft to return to service and enable mission continuation

PROGRAM STATUS

- **FY22:**
 - Full-Rate Production
 - Initial Operational Capability
- **FY23:**
 - Full Operational Capability

PRIME CONTRACTORS

AeroClave, LLC

Joint Biological Tactical Detection System (JBTDS)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development





DESCRIPTION

Joint Biological Tactical Detection System (JBTDS) is the first tactical lightweight, low-cost biological surveillance system to detect, collect, and identify biological warfare agent aerosols. JBTDS components are man-portable, battery-operable, and easy to employ by any military user. JBTDS provides notification of a hazard, enhances battlespace awareness to protect and preserve the forces, and can archive a sample for follow up analysis. JBTDS provides surface sampling capability to support sensitive site exploitation missions.

BENEFIT TO THE SOLDIER

- Detects, collects, and identifies biological warfare agents, giving warfighters additional time to make decisions and take action
- Provides field confirmatory bioagent identification, enabling commanders to rapidly support battlespace decisions

PROGRAM STATUS

FY23: Milestone C

PRIME CONTRACTORS

Chemring Sensors and Electronic Systems

Joint Expeditionary Collective Protection (JECP)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment







DESCRIPTION

Joint Expeditionary Collective Protection (JECP) provides the Joint Expeditionary Forces a collective protection (CP) capability which is lightweight, compact, modular, and affordable. JECP is a family of systems. JECP will maintain lethality through rest and relief in a CBRN environment by protecting personnel groups of varying size.

BENEFIT TO THE SOLDIER

Protects personnel and infrastructure from chemical, biological, radiological, and toxic industrial material contamination on the battlefield and during military operations other than war

PROGRAM STATUS

- FY22: Full-Rate Production
- FY23: Initial Operational Capability

PRIME CONTRACTORS

Leidos

Production Products Manufacturing & Sale

Joint Handheld Bio-Agent **Identifier (JHBI)**

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment





DESCRIPTION

The Joint Handheld Bio-Agent Identifier (JHBI) program is a Joint Service program that addresses the requirement for handheld, multiplexed, environmental, bio-agent identification.

BENEFIT TO THE SOLDIER

- Lowers burden of portable biological detection capability
- Improves warfighter awareness of the presence of biological agents
- Accurately identifies threats

PROGRAM STATUS

- FY21:
 - Testing completed
 - Milestone C

PRIME CONTRACTORS

Atlantic Diving Supply, Inc. MRI Global

Joint Service General Purpose Mask (JSGPM) - M553A1

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment









DESCRIPTION

Joint Service General Purpose Mask (JSGPM) M53A1 is an above-the-neck chemical and biological protective respirator that provides protection against battlefield concentrations of chemical and biological agents, toxins, toxic industrial materials, and radioactive particulate matter. M53A1 is the first mask to be approved and certified by the National Institute for Occupational Safety and Health for both domestic response and military missions.

BENEFIT TO THE SOLDIER

Approved for both domestic response and military support missions

PROGRAM STATUS

- **FY20:**
 - Full Materiel Release Approval
 - Fielding
- FY23: Full Operational Capability

PRIME CONTRACTORS

Avon Protection Systems, Inc.

Man-portable Radiological Detection System (MRDS)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment





DESCRIPTION

Man-portable Radiological Detection System (MRDS) provides increased radiological and nuclear (RN) detection, localization, and presumptive and field-confirmatory identification. The system will support countering weapons of mass destruction interdiction and elimination operations, specifically RN sensitive site assessments and sensitive site exploitations.

BENEFIT TO THE SOLDIER

Increases the warfighter's awareness of radiological threats at the tactical level

PROGRAM STATUS

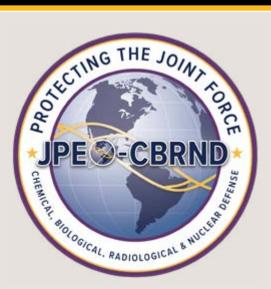
FY23: Full-Rate Production

PRIME CONTRACTORS

Advanced Measurement Technology, Inc. Bruker Detection Corp. General Dynamics Veterans Corps of America

Multi-Phase Chemical Agent Detector (MPCAD)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

Multi-Phase Chemical Agent Detector (MPCAD) is a two-man portable system that will conduct near real-time, near-laboratory grade analysis of solid, liquid, and vapor samples collected by the operator in a presumptively contaminated area. MPCAD results will support the commander's tactical and operational decisions regarding maneuver, protection, decontamination, and treatment measures.

BENEFIT TO THE SOLDIER

Provides higher fidelity analysis of samples

PROGRAM STATUS

FY23: Milestone C Low-Rate Initial Production

PRIME CONTRACTORS

Signature Science Teledyne FLIR

Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

The Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU) provides maneuver formations the ability to conduct mounted reconnaissance and surveillance missions of chemical, biological, radiological, and nuclear (CBRN) named areas of interest. NBCRV SSU provides the ability to detect and identify hazards from traditional and emerging CBRN threats to improve the timeliness and confidence in answering the commander's priority intelligence requirements and facilitates proactive, risk-based decisions to ensure freedom of action and survivability.

BENEFIT TO THE SOLDIER

Provides CBRN detection, tipping, and queueing to accomplish desired standoff distances

PROGRAM STATUS

- FY21: Developmental Testing started
- FY23: First Unit Issued

PRIME CONTRACTORS

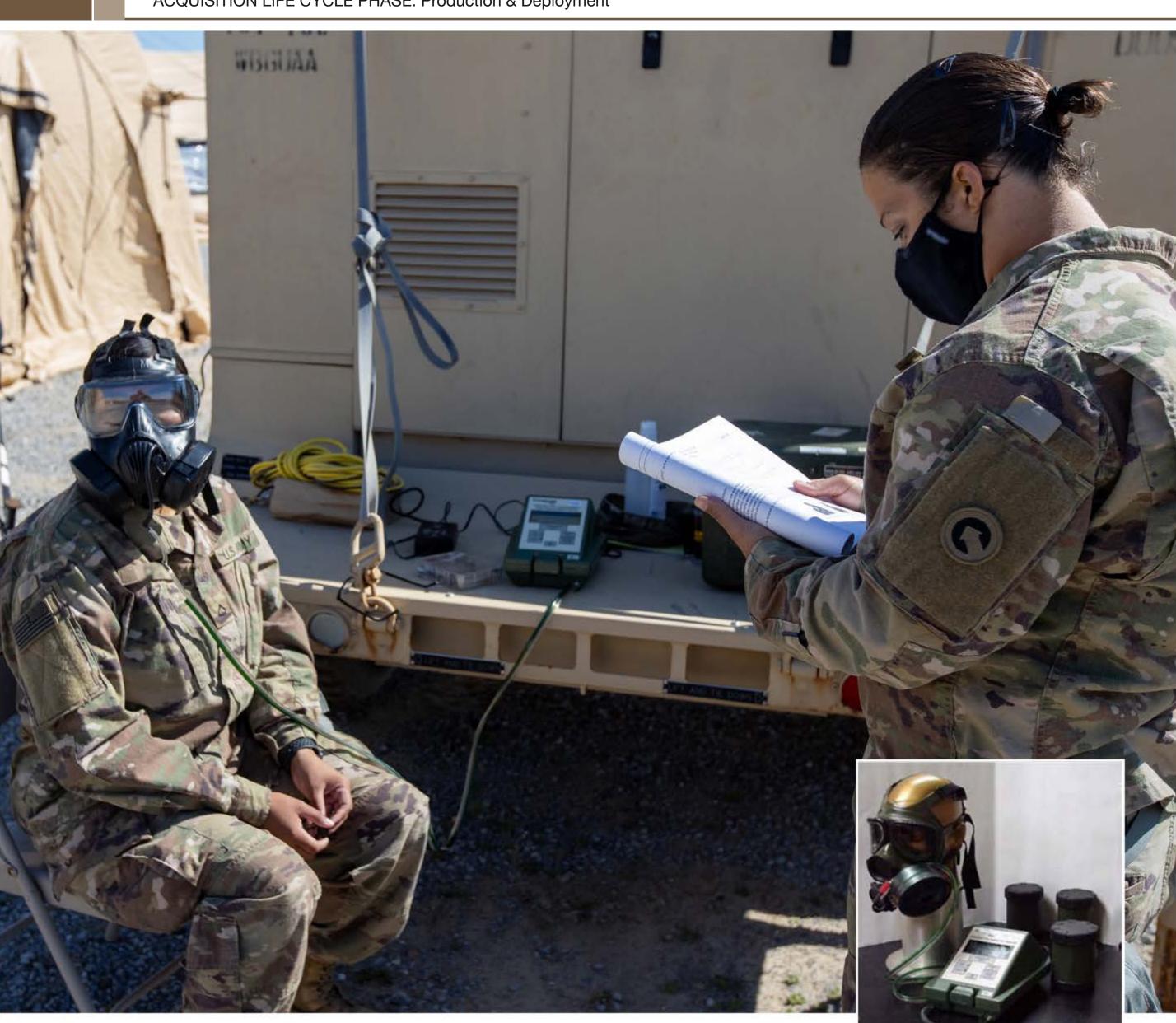
L2 Defense, Inc. MRI Global Teledyne FLIR

Protection Assessment Test System (PATS) - M41A1

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

M41A1 Protection Assessment Test System (PATS) is a test system that measures the fit factor of a protective mask on a soldier, emphasizing the importance of the mask's proper fit and wear.

BENEFIT TO THE SOLDIER

Enables man-mask system fit factor testing to provide a "go/no-go" check of mask fit on the user

PROGRAM STATUS

FY22: Fielding Completion

PRIME CONTRACTORS

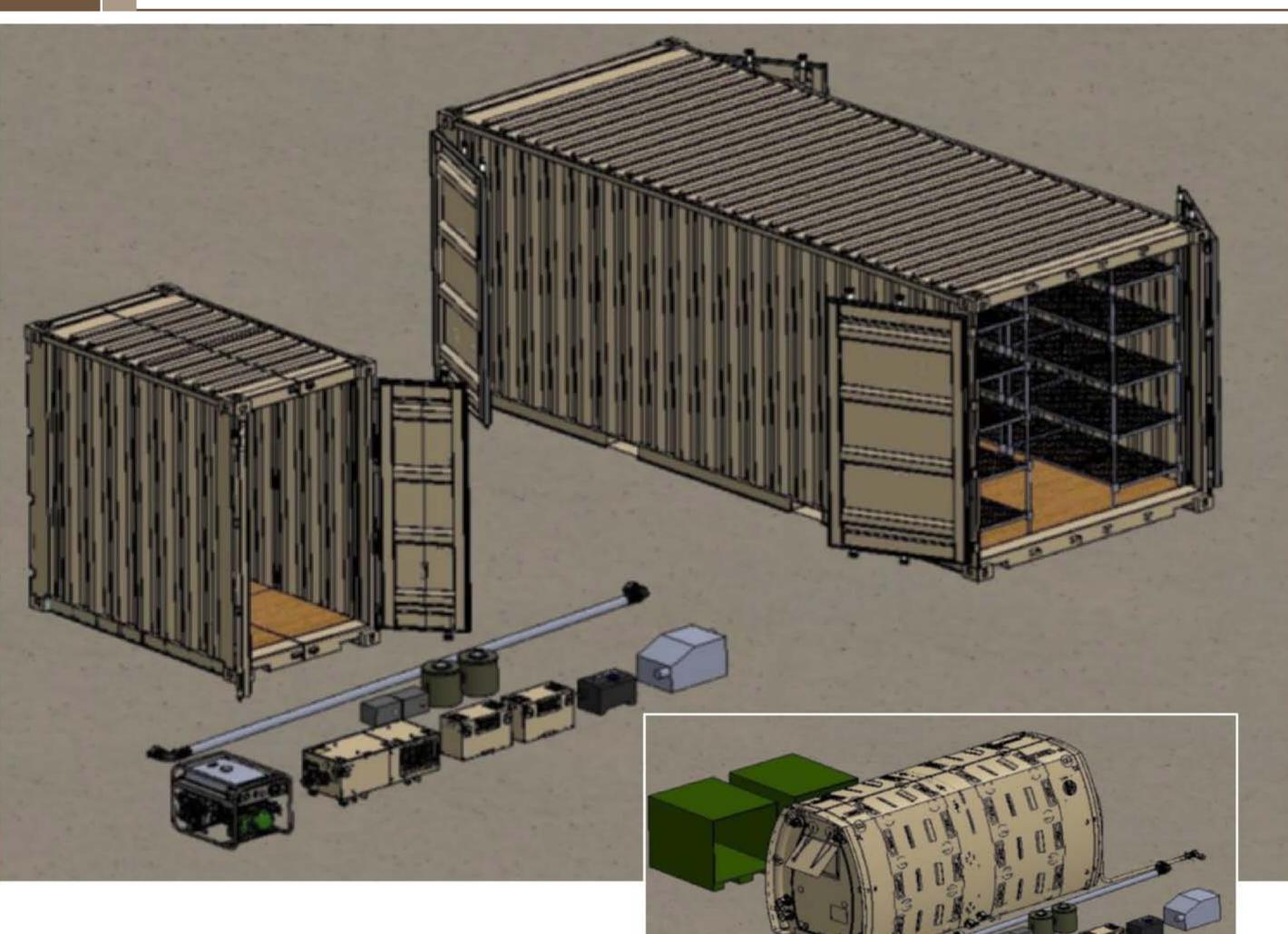
TSI, Incorporated

Service Equipment Decontamination System (SEDS)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Materiel Solution Analysis



DESCRIPTION

Service Equipment Decontamination System (SEDS) is a container in varying sizes that, through the introduction of specialized decontaminants, can clean sensitive or critical equipment contaminated by any chemical agent.

BENEFIT TO THE SOLDIER

Allows equipment to be returned to use without the need to wear protective equipment

PROGRAM STATUS

FY23: Milestone A

PRIME CONTRACTORS

Advanced Technology International

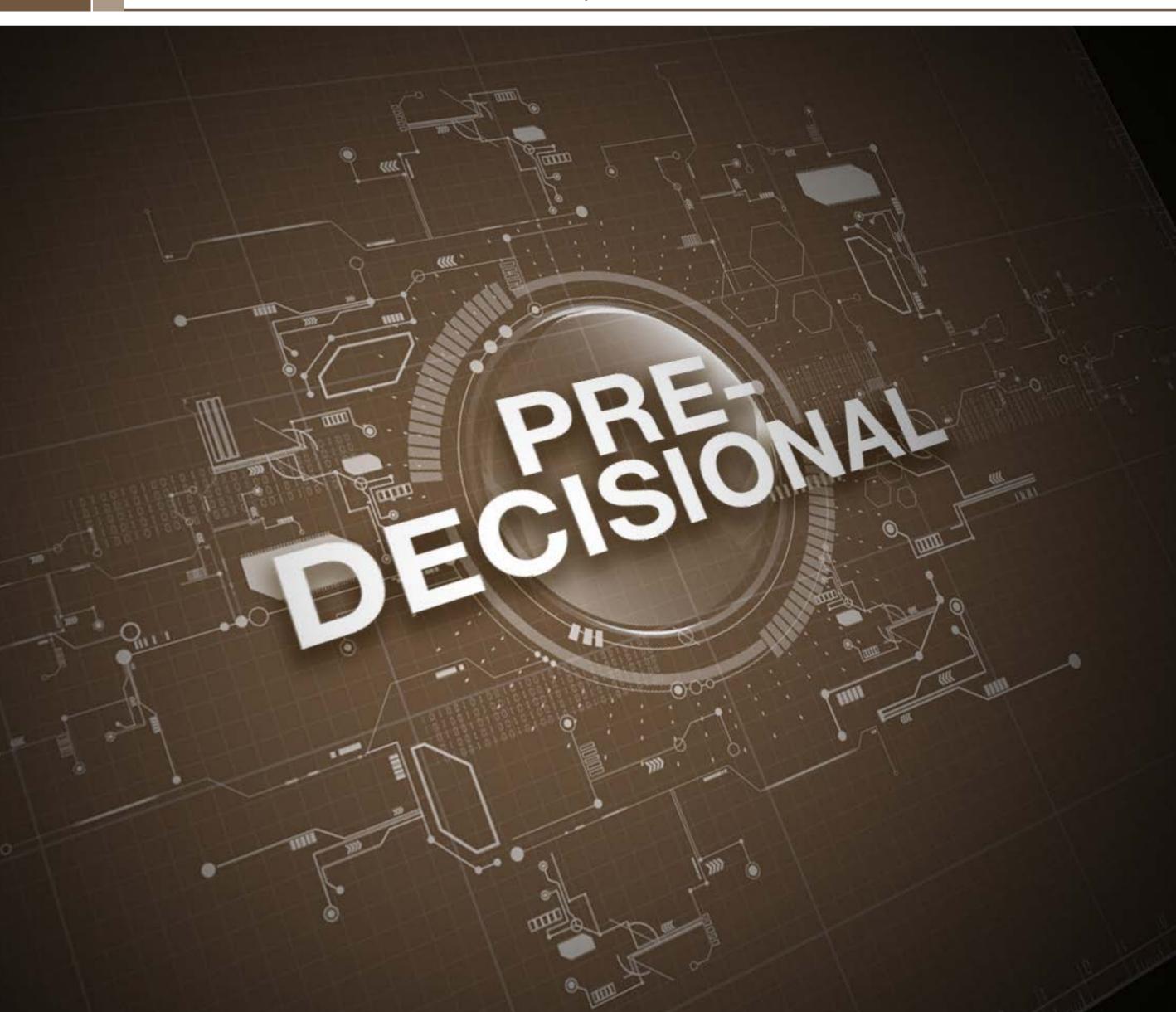
PROTECTION 145

Tactical Contamination Mitigation System (TCMS)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Materiel Solution Analysis



DESCRIPTION

The Tactical Contamination Mitigation System (TCMS) program will limit the spread and mitigate the effects of chemical, biological, radiological, and nuclear (CBRN) contamination.

BENEFIT TO THE SOLDIER

Allows warfighters to continue their mission without certain protection in high-threat or contaminated areas or equipment

PROGRAM STATUS

FY22: Other Transaction Authority Prototype Award

PRIME CONTRACTORS

Integrated Solutions for Systems, Inc.

PROTECTION 146

Uniform Integrated Protection Ensemble Family of Systems General Purpose (UIPE FoS GP)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development



DESCRIPTION

Uniform Integrated Protection Ensemble Family of Systems General Purpose (UIPE FoS GP) will provide the broad spectrum of users' individual percutaneous protective equipment with the ability to operate in a contaminated environment with no or minimal degradation in performance. UIPE FoS GP will also give the warfighter percutaneous protection from operationally relevant traditional, non-traditional, and advanced chemical, biological, radiological, and nuclear and toxic industrial material threats likely to be encountered during Joint Force operations.

BENEFIT TO THE SOLDIER

Provides all general-purpose Service Members with improved chemical and biological protection, reduced thermal burden in all combat theaters, and an improved fit, function, and integration with current combat kits and equipment

PROGRAM STATUS

FY21: Milestone B

FY23: Milestone C

PRIME CONTRACTORS

ReadyOne Industries SourceAmerica

PROTECTION 147

PROGRAM PORTFOLIO ROBOTICS AND ARTIFICIAL INTELLIGENICE

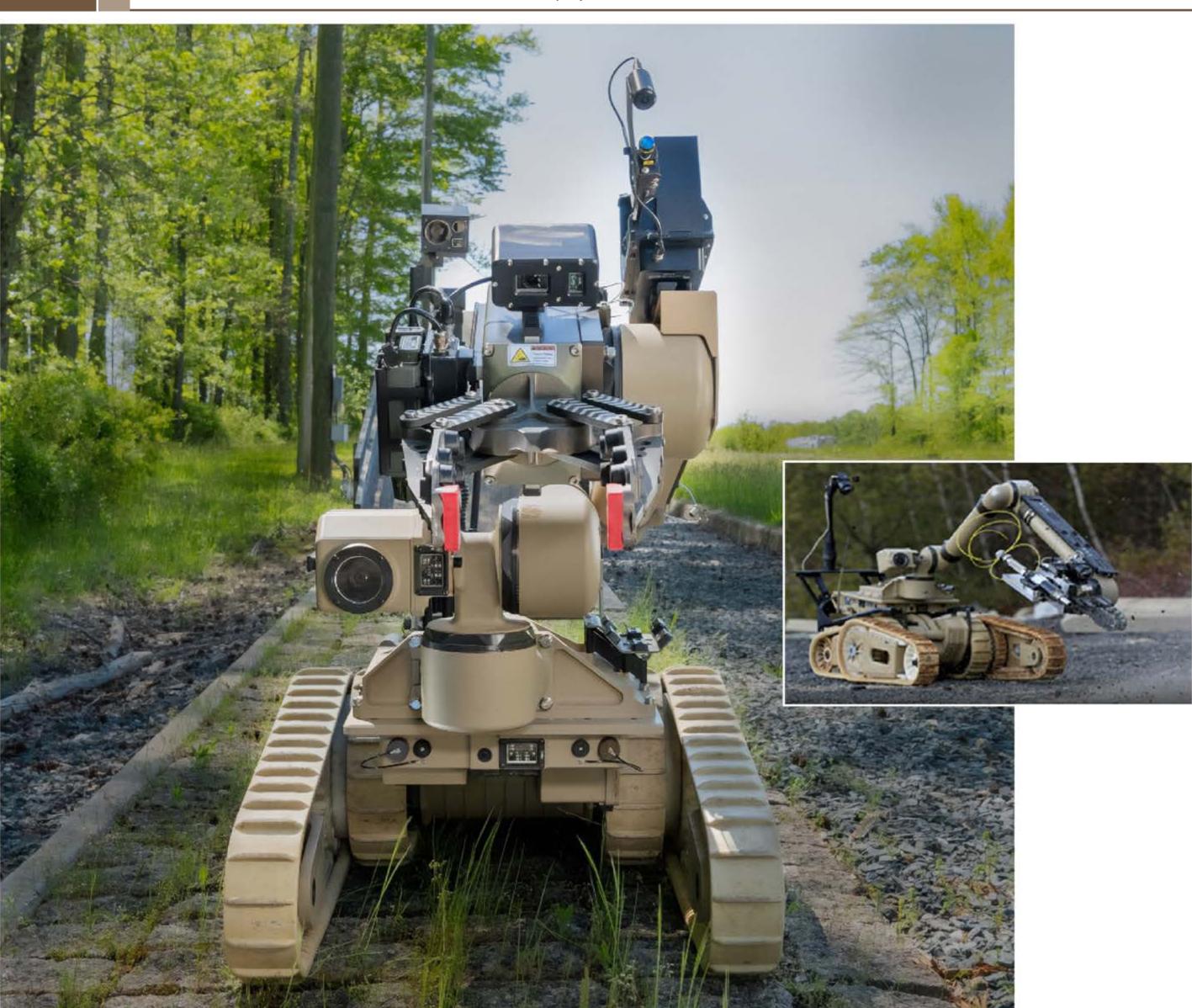


Common Robotic System - Heavy (CRS-H)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Common Robotic System - Heavy (CRS-H) is the U.S. Army's large-sized, modernized, vehicle transportable, common robotic platform capable of accepting various mission payloads. It enhances protection to the Explosive Ordnance Disposal (EOD) soldier in support of the range of military operations and homeland defense applications.

BENEFIT TO THE SOLDIER

- Enables EOD soldiers to interrogate hazardous devices in the range of military operations and homeland defense operations
- Provides enhanced capability to detect, identify, access, render safe, exploit, and achieve final disposition of heavy explosive ordnance

PROGRAM STATUS

- **FY21:**
 - Conditional Materiel Release
- Full-Rate Production
- FY22: Testing
- **FY23:**
 - **Technical Manual Verification**
 - **New Equipment Training**

PRIME CONTRACTORS

Teledyne FLIR

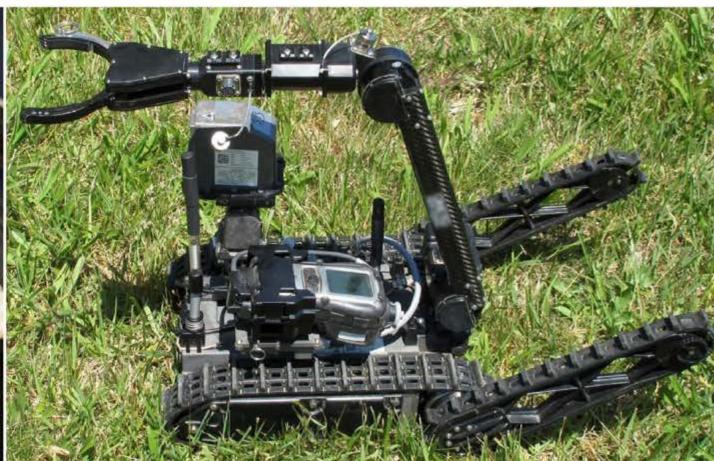
Common Robotic System -Individual (CRS-I)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment







DESCRIPTION

Common Robotic System Individual (CRS-I) is the Army's small-sized, common platform, remotely operated, and soldier back-packable robotic system. CRS-I replaces the aging non-standard fleet of robots with a single solution and enables the warfighter to perform mobility missions.

BENEFIT TO THE SOLDIER

- Provides standoff for short-range intelligence, surveillance, and reconnaissance enhancing surveillance in the dark and in subterranean spaces
- Allows for remote clearance of dangerous zones

PROGRAM STATUS

- FY20-FY21:
 - Production Qualification Testing
 - Conditional Materiel Release (CMR) completed
- **FY21:**
 - Full Materiel Release completed
 - Full-Rate Production Decision
- FY22: CMR achieved

PRIME CONTRACTORS

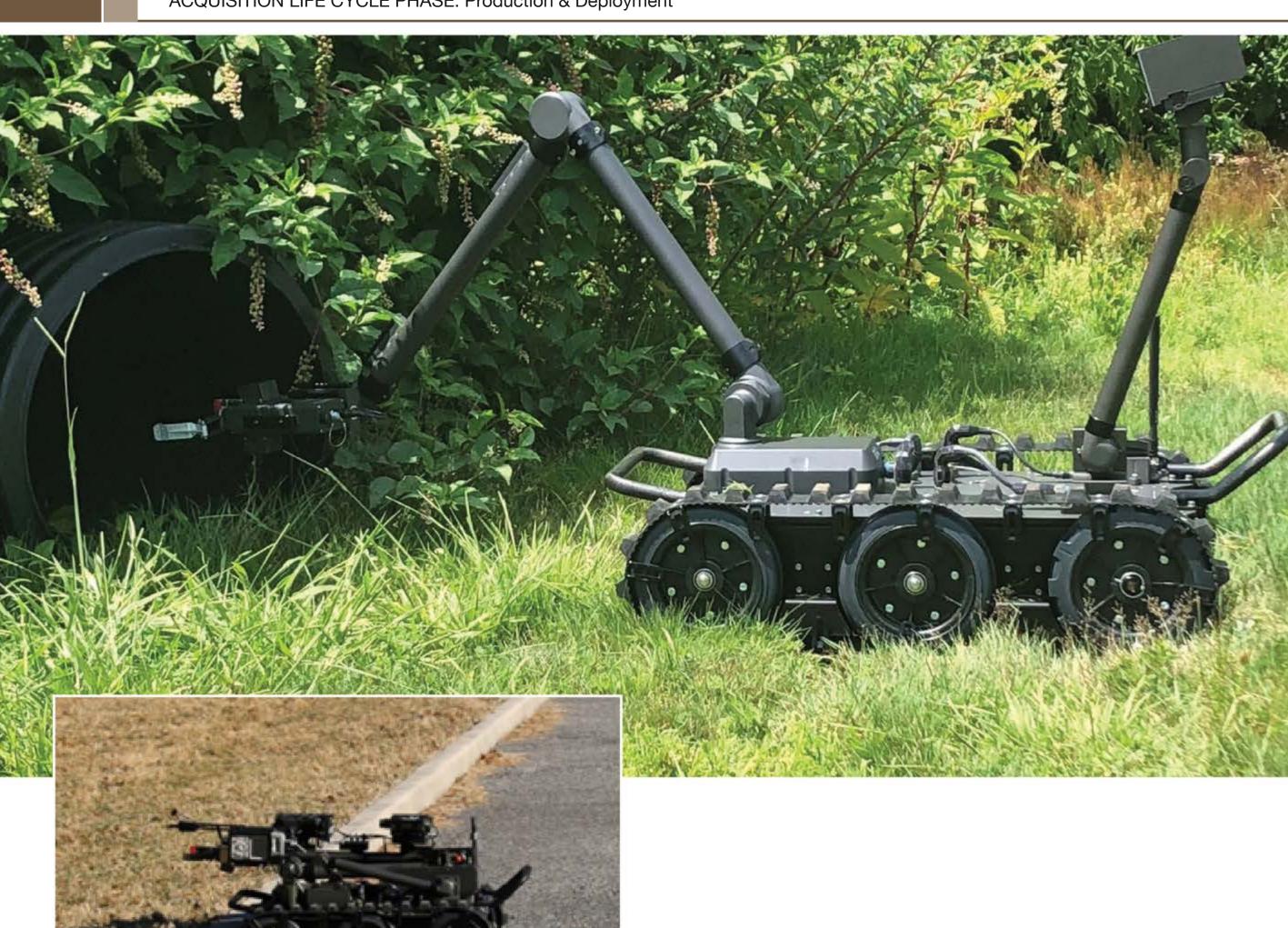
QinetiQ, Inc.

Man Transportable Robotic System Increment II (MTRS Inc II)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Man Transportable Robotic System Increment II (MTRS Inc II) is a remotely operated, medium-sized robotic system that provides a standoff capability to detect, confirm, identify, and dispose of hazards. MTRS Inc II has a standard chassis and modular mission payloads in support of current and future missions. MTRS Inc II supports engineers, chemical, biological, radiological, and nuclear (CBRN) soldiers and Special Operations Forces. It is part of the U.S. Army's common modernized unmanned ground vehicles fleet and is a Program of Record to replace multiple capabilities.

BENEFIT TO THE SOLDIER

- Provides the warfighter a remote standoff ability
- Offers CBRN soldiers the capability to employ CBRN sensors from a distance
- Replaces the aging non-standard fleet with new robots featuring enhanced capabilities to clear obstacles and threats to improve survivability and the ability to maneuver

PROGRAM STATUS

- **FY20:**
 - Conditional Materiel Release
 - Full-Rate Production Decision
- FY23: Full Materiel Release

PRIME CONTRACTORS

Teledyne FLIR

PROGRAM PORTFOLIO SOLDIER



Advanced Anti-Tank Weapon System -Medium (Javelin)

PEO Missiles and Space | Redstone Arsenal, AL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment









DESCRIPTION

Javelin provides a man-portable, fire-and-forget, medium-range missile with enhanced capabilities to defeat armored vehicles, fortifications, and soft targets in full-spectrum operations. Javelin has a high kill rate against a variety of targets at extended ranges under diverse conditions.

BENEFIT TO THE SOLDIER

- Provides fire-and-forget anti-armor capability
- Defeats personnel and equipment in fortifications and in the open
- Command Launch Unit provides the soldier with the ability for targeting and surveillance

PROGRAM STATUS

- FY20-FY22: Procurement, Development, and Testing
- FY22: Awarded Low-Rate Initial Production Contract
- **FY23:**
 - Conduct Operational Testing
 - Begin Fielding

PRIME CONTRACTORS

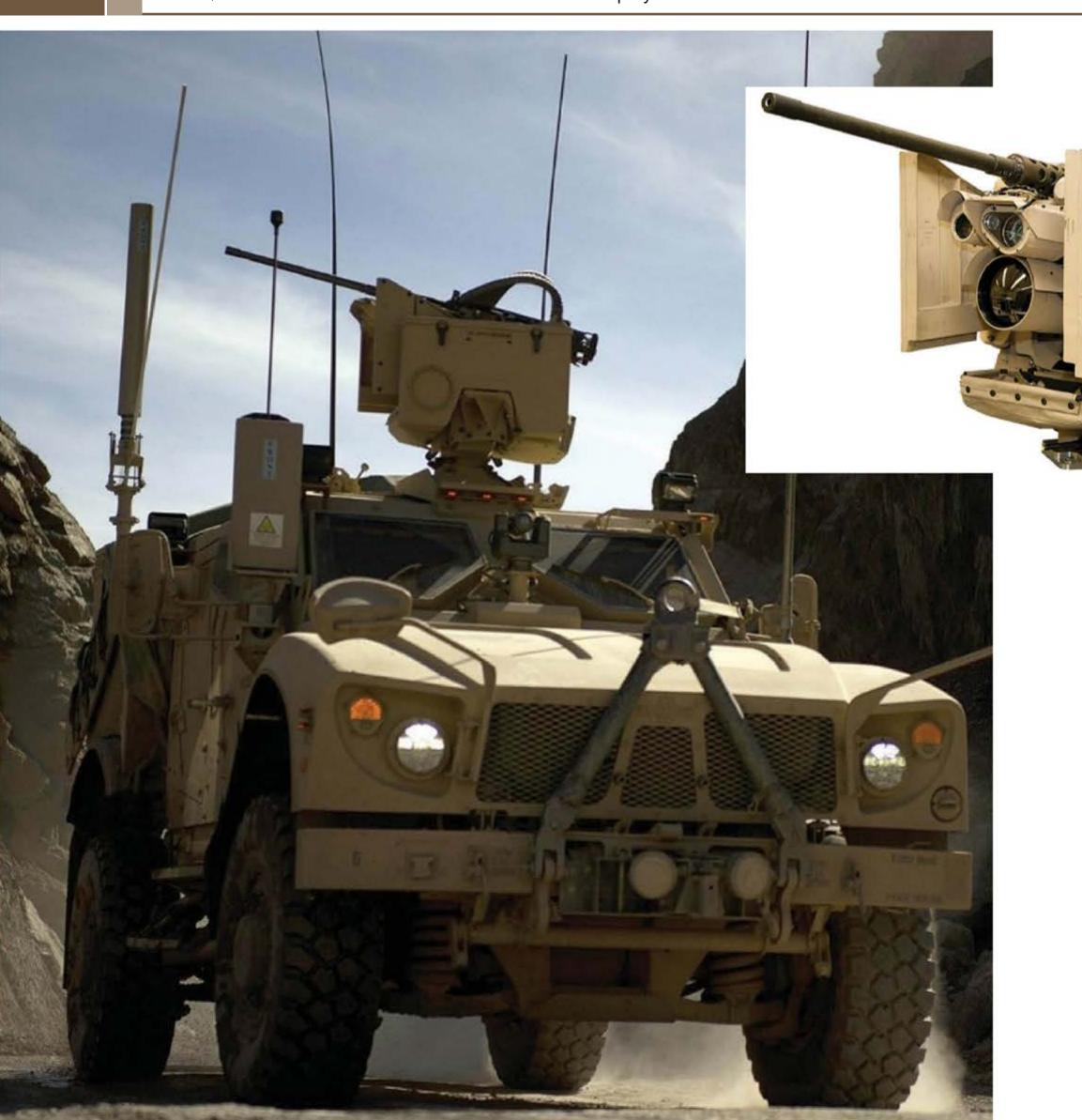
Lockheed Martin Corporation Raytheon Technologies

Common Remotely Operated Weapon Station (CROWS) - M153

PEO Soldier | Fort Belvoir, VA



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

The M153 Common Remotely Operated Weapon Station (CROWS) allows for day and night operations while under armor and provides precision fire while stationary and on-the-move.

BENEFIT TO THE SOLDIER

- Provides standard and special weapon suites
- Offers targeting system, vector stabilization, color day camera, thermal camera, and laser rangefinder
- Provides auto scan, auto lead, auto focus, and auto tracker

PROGRAM STATUS

- FY22: Indefinite Delivery/Indefinite Quantity Contract for Production, Engineering, and Depot Services
- FY23: Fielding

PRIME CONTRACTORS

Kongsberg Defence and Aerospace

Enhanced Night Vision Goggle -Binocular (ENVG-B)

PEO Soldier | Fort Belvoir, VA



ACQUISITION LIFE CYCLE PHASE: Production & Deployment









DESCRIPTION

The Enhanced Night Vision Goggle – Binocular (ENVG-B) is a helmet-mountable individual night vision device that displays images in high definition. ENVG-B can be used during low-/high-light levels, extreme weather, and with obscurants. ENVG-B operates with the Family of Weapon Sights-Individual for a Passive Rapid Target Acquisition capability. The ENVG-B allows the soldier to display navigational, targeting, and situational graphics.

BENEFIT TO THE SOLDIER

- Increased situational awareness and lethality
- Employed in all weather and light conditions
- Decreases soldier risk on the battlefield

PROGRAM STATUS

- **FY20:**
 - Milestone C
- Low-Rate Initial Production
- FY21-FY22: Limited User Test
- FY23: Materiel Release

PRIME CONTRACTORS

Elbit Systems of America L3 Harris Technologies, Inc.

Family of Weapon Sights - Crew Served (FWS-CS)

PEO Soldier | Fort Belvoir, VA



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development







DESCRIPTION

Family of Weapon Sights - Crew Served (FWS-CS) is a thermal and visible imaging system. The Ballistic Calculator provides a ballistically adjusted reticle and video.

BENEFIT TO THE SOLDIER

- Increases first burst probability of hit and rapid target engagement
- Enhances machine gunner's ability to detect, recognize, and identify threats
- Provides protective eye relief standoff for heavy recoil weapons

PROGRAM STATUS

- FY21:
 - Milestone C
 - Low-Rate Initial Production (LRIP) Award
- FY22: Procurement
- **FY23:**
 - LRIP Award
 - Completed Type Classification Standard and Full Materiel Release
 - Full-Rate Production Award

PRIME CONTRACTORS

Leonardo DRS, Inc.

Mortar Weapon Systems

JPEO Armaments & Ammunition | Picatinny Arsenal, NJ



ACQUISITION LIFE CYCLE PHASE: Production & Deployment







DESCRIPTION

Mortar weapons provide organic, indirect fire support to the maneuver commander and are employed in all combat formations. The U.S. Army uses three calibers of mortar weapons, both mounted and dismounted: 60 mm, 81 mm, and 120 mm. All mortar weapon systems fire a full family of ammunition (high-explosive, infrared and visible light, smoke, and training).

BENEFIT TO THE SOLDIER

- Organic fire support
- Responsiveness
- Accurate fires
- Survivability

PROGRAM STATUS

- FY20: Began Product Qualification Testing (PQT)
- FY20-FY23: Continued Production, Fielding, and deliveries of various Mortar Weapon Systems
- FY22:
 - Awarded Production Contracts
 - Completed PQT
- FY23: Full-Rate Production, Award Production Contracts, and Full Materiel Release

PRIME CONTRACTORS

Day & Zimmermann
Elbit Systems of America
General Dynamics
Nordic Ammunition Company (Nammo-Pocal), Inc.

Pine Bluff Arsenal

Nett Warrior (NW)

PEO Soldier | Fort Belvoir, VA



ACQUISITION LIFE CYCLE PHASE: Full-Rate Production





DESCRIPTION

Nett Warrior (NW) is an integrated dismounted leader Situational Awareness (SA) system used during combat operations. The system provides unparalleled SA to the dismounted leader, allowing for faster and more accurate decision-making in the tactical fight. With advanced navigation, SA, and information-sharing capabilities, leaders can avoid fratricide and are more effective and lethal in the execution of their combat missions. This allows the leader to easily see, understand, and interact in the method best suited to the user and the mission.

BENEFIT TO THE SOLDIER

- Enables rapid decision-making, reduces deliberate communications, and increases leaders' confidence in mission execution
- Provides overmatch operational capabilities to ground combat leaders and small-unit operations

PROGRAM STATUS

- **FY20:**
 - Created and provided the Crisis Response Situational Awareness/Situational Understanding Tactical Application Leader Kit in support of the National COVID-19 Response
 - Fielding and Training
- FY22-FY23: Fielding

PRIME CONTRACTORS

Amentum Services, Inc. Augustine Consulting, Inc. (ACI) Tobyhanna Army Depot

Small Arms - Crew Served Weapons (CSW)

PEO Soldier | Fort Belvoir, VA



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support









DESCRIPTION

Crew Served Weapons (CSW) are operated by a crew of two or more warfighters enabling them and small units to engage targets with lethal fire to defeat or deter adversaries. U.S. Army Small Arms CSW include the M2/M2A1 .50 Caliber Heavy Machine Gun, M240 7.62 mm Medium Machine Gun, M249 5.56 mm Squad Automatic Weapon, and the MK19 40 mm Grenade Machine Gun.

BENEFIT TO THE SOLDIER

- Speeds target engagement and improves survivability and safety
- Reduces the soldier's combat load while allowing easier handling and movement
- Improves weapon control, egress, and maneuver in close-quarter combat
- Supports the warfighter in offense and defense

PROGRAM STATUS

FY21-FY23: Fielding and Sustainment

PRIME CONTRACTORS

Fabrique National Manufacturing, LLC FN America, LLC General Dynamics Ordnance and Tactical Systems **US** Ordnance

Soldier Protection System (SPS)

PEO Soldier | Fort Belvoir, VA



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Soldier Protection System (SPS) provides modular, scalable, integrated system of mission tailorable ballistic protective subsystems at reduced weight.

BENEFIT TO THE SOLDIER

- Offers extended sizes to fit soldiers appropriately
- · Provides the soldier with multiple levels of ballistic protection tailorable to a broad range of missions

PROGRAM STATUS

- FY20-FY23:
 - Production and Contract Awards for various SPS
 - Fielding and Delivery
 - Full-Rate Production
- FY23:
 - Testing
 - Production
 - Full and Open Solicitations Released
 - Transition to Sustainment

PRIME CONTRACTORS

APC/Ceradyne Armor Express Bethel Industries Carter Enterprises Engense Inc.

Florida Armor, LLC Leading Technology Composites, Inc. Point Blank Enterprises Slate Solutions TenCate Advanced Armor USA

PROGRAM PORTFOLIO SUSTAINMENT



Force Provider Expeditionary (FPE)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment







DESCRIPTION

Force Provider Expeditionary (FPE) is a modular base camp life support capability with environmentally controlled billeting, food service, hygiene, power generation and distribution, petroleum and water storage and distribution, and grey water recycling.

BENEFIT TO THE SOLDIER

- Provides force projection
- Scalable life support capability
- Highly mobile, rapidly deployable modular system
- Energy efficient technologies, easily sustainable

PROGRAM STATUS

FY23: Currently deployed and in Production

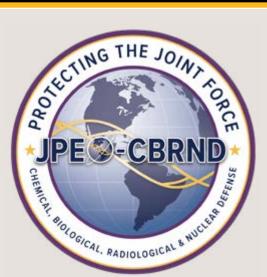
PRIME CONTRACTORS

Berg Manufacturing Hunter Defense Technologies (HDT) **ICF** Incorporated Letterkenny Army Depot

Production Products Manufacturing & Sales, Co., Inc. Ready One Industries, Inc.

Rapid Opioid Countermeasure System (ROCS)

JPEO for Chemical, Biological, Radiological and Nuclear Defense | Aberdeen Proving Ground, MD



ACQUISITION LIFE CYCLE PHASE: Operations & Support





USE FOR OPIOID EMERGENCIES

Instructions for use found inside on device

SEEK EMERGENCY MEDICAL ATTENTION

DESCRIPTION

The Rapid Opioid Countermeasure System (ROCS) program provides a Food and Drug Administration (FDA)-approved therapeutic medical countermeasure to protect the Joint Service warfighter against operational exposures to the opioid class of pharmaceutical-based agents. ROCS developed a naloxone autoinjector as a rescue treatment that will counteract the adverse effects from exposure to opioids. ROCS was the first and only DOD medical program to deliver a Service-wide capability using the Middle Tier Acquisition pathway. The program management office has delivered prototypes as a residual capability, and the Services will sustain it.

BENEFIT TO THE SOLDIER

Allows impacted service members to remain ambulatory move to higher levels of care

PROGRAM STATUS

- **FY22**:
 - FDA Approval
 - Prototype Delivery

PRIME CONTRACTORS

Kaléo, Inc.

Warfighter Brain Health Project Management Office (WBH PMO)

U.S. Army Medical Research and Development Command Fort Detrick, MD



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Materiel Solutions Analysis



DESCRIPTION

The mission of the Warfighter Brain Health (WBH) Project Management Office (PMO) is to rapidly develop and field U.S. Food and Drug Administration (FDA) approved/cleared medical solutions across the continuum of care. These solutions aid in the detection, protection, prevention, and treatment of neurotrauma/head injury and psychological health conditions, such as Traumatic Brain Injury (TBI), Post-Traumatic Stress Disorder, and suicide. This program enables warfighter health, readiness, and lethality.

The portfolio includes:

- Analyzer, Traumatic Brain Injury (ATBI) (ACAT III) (Engineering & Manufacturing Development Phase): ATBI is an FDA-approved assessment tool used to aid theater-based medical providers in assessment, triage, and management of casualties with suspected TBI through blood-based indicators. Clinical trials are ongoing to support a whole blood version of the test.
- Noninvasive Neuro-Assessment Devices (NINAD) (ACAT III) (Materiel Solutions Analysis Phase): The development effort supports a field deployable capability to objectively assess suspected TBI casualties and confirm injury and/or predict return to duty. This capability will inform priority of triage, evacuation, and treatment decisions, and is envisioned to be available to field medical personnel from point of care to the field hospital. Additionally, it will have a low to zero logistical footprint, and low-unit cost.

BENEFIT TO THE SOLDIER

- Enables medical personnel to assess the severity of TBI quickly and objectively, to determine the need for evacuation
- Keeps soldiers in the fight, which optimizes unit readiness and improves lethality

PROGRAM STATUS

- FY20-FY22:
 - FDA approval of plasma test cartridge
 - Touchpoints by intended users ongoing
 - **Contract Award**
- **FY23**:
 - Projects in various states of completion
 - Clinical and operational studies conducted
 - Capability Development Document update
 - Milestone C for ATBI
 - Milestone A for NINAD

PRIME CONTRACTORS

Abbott Point of Care RTI International

Warfighter Health Performance and **Evacuation (WHPE)**

U.S. Army Medical Research and Development Command Fort Detrick, MD



ACQUISITION LIFE CYCLE PHASE: Production & Development, Operations & Sustainment







DESCRIPTION

Warfighter Health, Performance, and Evacuation (WHPE) is a family of products supporting medical evacuation (MEDEVAC), casualty extraction and movement, and operational and preventive medicine. This program supports soldier and brigade medical evacuation readiness and modernization in support of Multi-Domain Operations. The portfolio includes:

- MEDEVAC and Treatment Vehicle Medical Equipment Package (MEP) (Non-ACAT): This program supports unique medical evacuation requirements for specifications, product development, testing, and integration of medical equipment air and ground vehicles.
- Medical Equipment Sets Holistic Health and Fitness (MES-H2F) (ACAT III) (Production & Development Phase): The MES H2F program will deliver Army physical therapy, occupational therapy, and registered dietitian equipment sets in support of the overarching Army H2F program.
- Environmental Sentinel Biomonitor (ESB) (ACAT IV) (Production & Development Phase): The ESB rapidly screens and identifies toxic industrial chemicals in field drinking water. Deployed preventative medicine personnel will use this Environmental Protection Agency-registered device to mitigate disease non-battle injuries and maintain readiness.
- Chemical Patient Protective Wrap (CPPW) (ACAT IV) (Operations & Sustainment Phase): The military unique CPPW was modernized and upgraded to replace a late 1980s legacy product with the new version. Designed similarly in style to a sleeping bag, the CPPW is a portable, protective, patient transport device, which allows for patient treatment, while protecting patients from contamination by chemical agents and pathogens of operational and clinical concern.
- Health Readiness and Performance System (HRAPS) (ACAT III): HRAPS supports the health and medical mission of an integrated system of wearable sensors that provides commanders with actionable information to improve performance and mitigate injuries.
- Canine Thermal Monitor (CTM) and Model (ACAT IV): The heat strain decision software application and collar system for Military Working Dog (MWD) handlers, trainers, and veterinary staff works to reduce heat injury and safely acclimatize the MWD. The CTM provides safe, effective training and operations for MWD in extreme climates.

BENEFIT TO THE SOLDIER

Improves health outcomes, supports medical evacuation, prevents illness and injury, enhances operational readiness, and improves soldier lethality

PROGRAM STATUS

- FY22-FY23: Products continue from Materiel Development Decision through Initial Operational Capability
- FY23: Products continue through Development and Full Operational Capability

PRIME CONTRACTORS

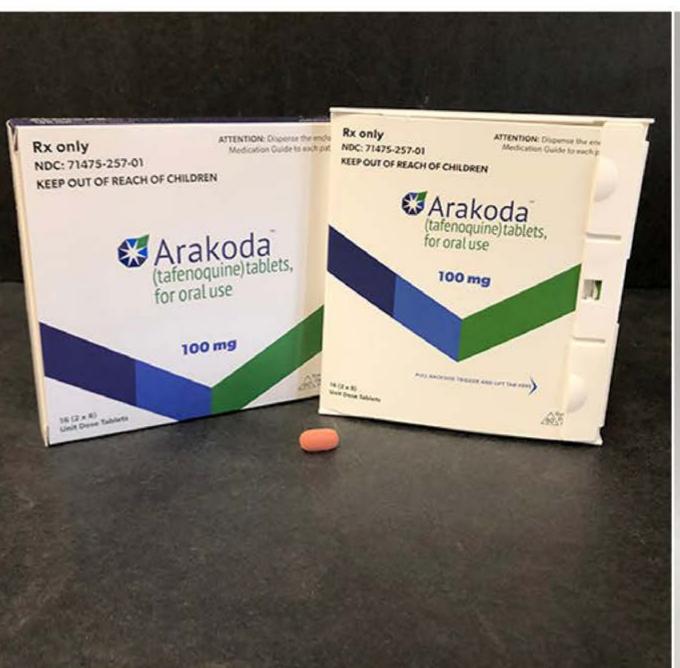
Lifelens **Nanohmics** Pine Bluff Arsenal

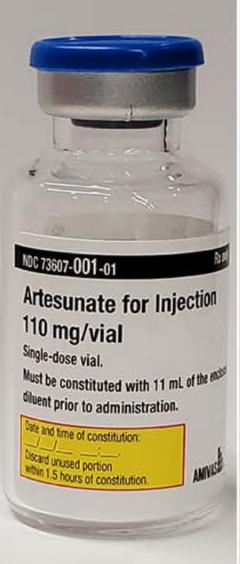
Warfighter Protection and Acute Care Project Management Office (WPAC PMO)

U.S. Army Medical Research and Development Command | Fort Detrick, MD



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Development, Operations & Sustainment







DESCRIPTION

Warfighter Protection and Acute Care Project Management Office (WPAC PMO) develops and delivers U.S. Food and Drug Administration (FDA)-approved infectious disease drugs, vaccines, and diagnostics; blood products and components; and drugs for battlefield pain management to protect and sustain the warfighter through all phases of Multi-Domain Operations. The portfolio includes:

- Malaria Prophylactic Drug Tafenoquine (ACAT III) (Production & Development Phase): Pills to prevent malaria during deployment that are safer and require less frequent dosing.
- Malaria Treatment Drug Intravenous Artesunate (IVAS) (ACAT IV) (Operations & Sustainment Phase): An intravenous drug to treat warfighters with severe/complicated malaria. Treats severe/complicated malaria and has been safely used around the world to save hundreds of lives since 2007 under a special FDA protocol.
- Blood Products (ACAT III) (Various phases of development): Blood products include freeze-dried plasma, cryopreserved platelets, and cold stored platelets. These life-saving products will also significantly reduce the logistics burden compared to current blood products.
- Rapid Human Diagnostic Devices (ACAT IV) (Engineering & Manufacturing Development Phase): Far forward, rapid response tests to rapidly diagnose a variety of military-relevant infectious diseases.
- Rapid Human Diagnostic Device COVID (ACAT III): A rapid diagnostic assay for diagnosis of SARS-CoV-2 in symptomatic and asymptomatic patients.

BENEFIT TO THE SOLDIER

 Products improve health, deployability, survivability, and lethality by preventing, diagnosing, or treating infectious diseases and enhancing battlefield trauma care

PROGRAM STATUS

- FY20-FY23:
 - Varying stages of completion
 - Tafenoquine and IVAS are FDA approved, Fielded, or working toward Full Operating Capacity. COVID diagnostics have received full FDA approval or approval for limited, emergency, or humanitarian use, pending full approval.
- FY23:
 - Clinical and operational studies will be conducted to achieve FDA approval and meet DOD requirements
 - Anticipated Milestone C

PRIME CONTRACTORS

60° Pharmaceuticals Amivas Cellphire Therapeutics, Inc. InBios International, Inc. Vascular Solutions Inc. Westat

PROGRAM PORTFOLIO SYNTHETIC TRAINING ENVIRONMENT

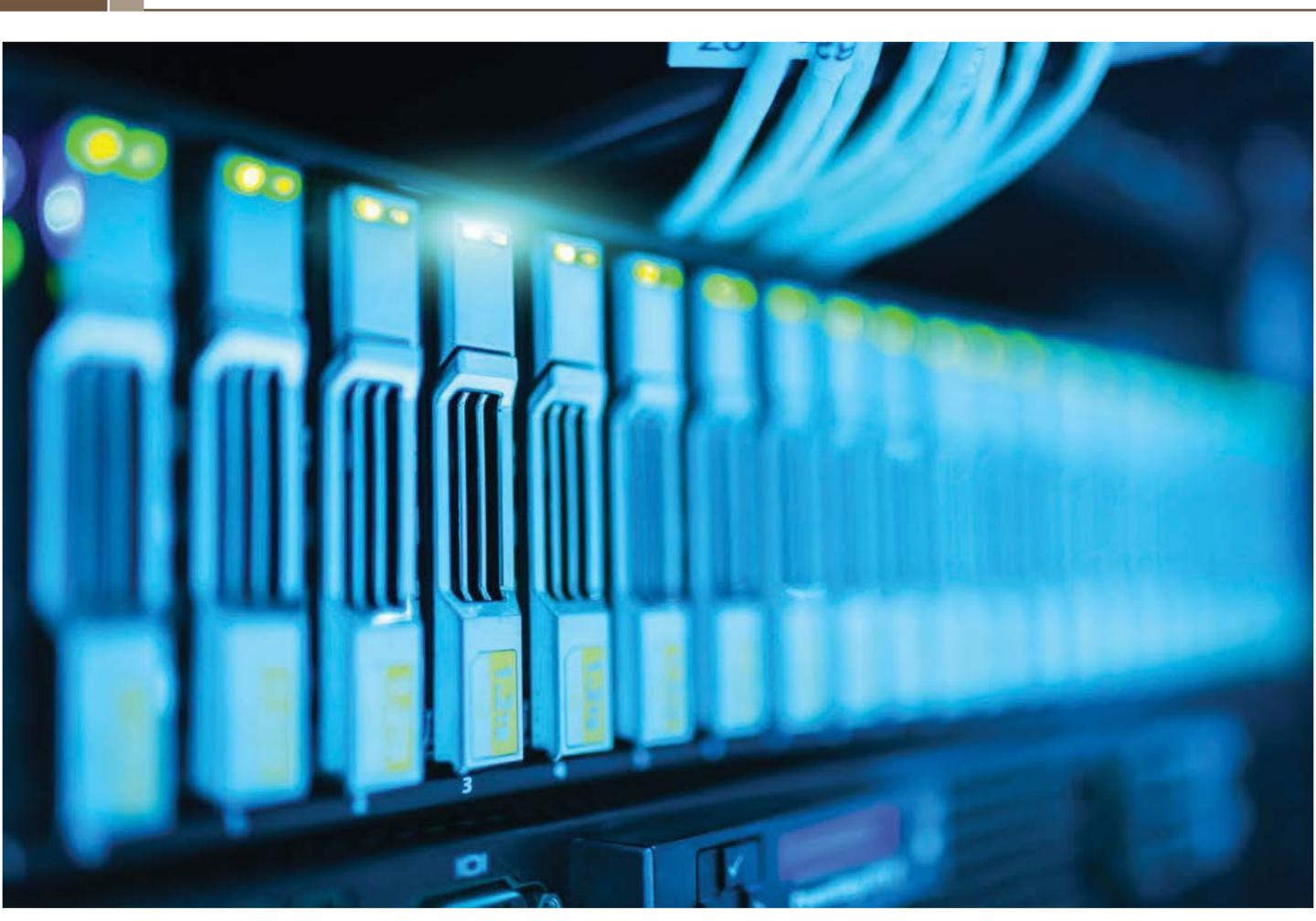


Cyber Environment Replication (CER)

PEO Simulation, Training and Instrumentation | Orlando, FL



ACQUISITION LIFE CYCLE PHASE: Operations & Support



DESCRIPTION

Cyber Environment Replication (CER) supports the live training operational environment, which must portray emerging, hybrid, and future threats within operational doctrine and organizational tactics, techniques, and procedures (TTPs). CER also provides a live training ground for cyber forces to conduct critical training objectives.

BENEFIT TO THE SOLDIER

- Provides a proving ground for cyber forces to train critical TTPs against threat representative infrastructure
- Prepares brigade commanders for Multi-Domain Operations presented by near-peer adversaries

PROGRAM STATUS

- **FY21:**
 - Deployment
 - Supported post-Full Operational Capacity
- FY21-FY22: Successful integration with another PEO STRI Program of Record
- **FY21–FY23:** Enduring network operations support

PRIME CONTRACTORS

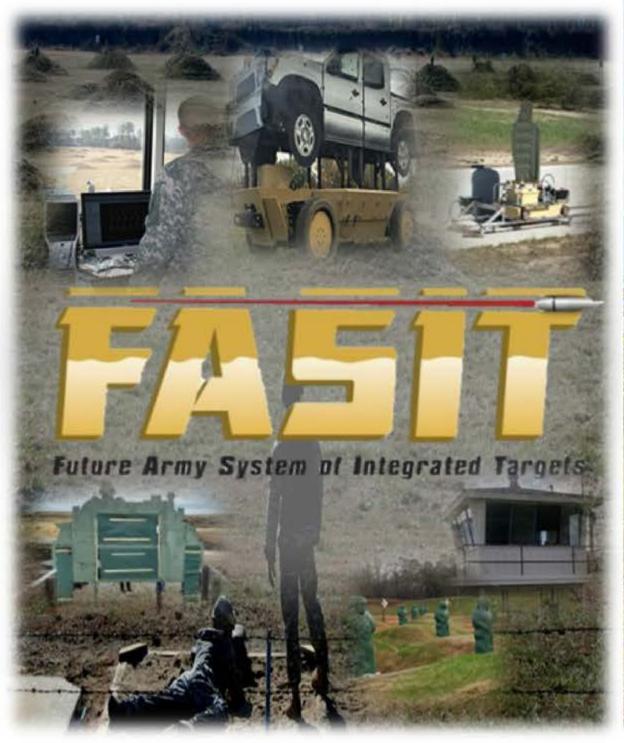
Electronic Warfare Associates

Future Army System of Integrated Targets (FASIT)

PEO Simulation, Training and Instrumentation | Orlando, FL



ACQUISITION LIFE CYCLE PHASE: Technology Maturation & Risk Reduction, Engineering & Manufacturing Development, Production & Deployment, Operations & Support





DESCRIPTION

The Future Army System of Integrated Targets (FASIT) program will provide live-fire training systems capable of supporting U.S. Army automated ranges. FASIT's live-fire training systems include a single, government-owned, universal target control software capability for all ranges. It provides users a common look and feel; downrange presentation devices that interact with the control software and provide scoring feedback; battlefield/weapons effects devices that simulate combat situations, visuals, and sounds; and targets/silhouettes that provide visual, image intensification, thermal representations of friendly/threat engagements.

FASIT supports skills qualification, sustainment training, and collective exercises during live-fire exercises at all levels.

BENEFIT TO THE SOLDIER

- Improves soldier lethality, readiness, and confidence through live-fire training
- Provides access to live-fire ranges worldwide
- Enhances training experience with state-of-the-art live-fire systems
- Standardizes live-fire range operation with singular range control software
- Challenges soldiers with unpredictable Trackless Moving Targets (TMT)

PROGRAM STATUS

- FY22:
 - Completed Information Technology equipment installations and upgrades
 - Completed Critical Design Review
 - Produced initial prototype units
- FY22-FY23: Low-Rate Initial Production (LRIP) and TMT Deployment
- FY23:
 - Acquisition Program Baseline established
 - Milestone C
 - LRIP
 - Modernization of training systems

PRIME CONTRACTORS

ADA Technologies
Cornerstone Research Group
Digital Solid State Propulsion
General Dynamics Mission Systems
InVeris Training Solutions
JRM Technologies

Nokomis
Phoenix Defense
Pratt Miller Defense
SensorMetrix
Theissen Training System
Zel Tech

Instrumentable-Multiple Integrated Laser Engagement System (I-MILES)

PEO Simulation, Training and Instrumentation | Orlando, FL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support









DESCRIPTION

The Instrumentable-Multiple Integrated Laser Engagement System (I-MILES) program enhances the warfighter's ability to prepare for combat operations allowing training and assessment of individual and collective tasks during force-on-force operations. I-MILES provides realistic, real-time casualty effects for force-on-force tactical engagement training scenarios.

BENEFIT TO THE SOLDIER

- Provides mission-essential, skills-based training and real-time casualty assessments
- Offers individual soldier and combat vehicle crew skills training during force-on-force training events
- Supports Home Stations and Combat Training Centers

PROGRAM STATUS

- FY20-FY21: Testing
- FY21-FY22: Testing and Fielding
- FY23: Fielding

PRIME CONTRACTORS

Lockheed Martin Corporation

Intelligence and Electronic Warfare **Tactical Proficiency Trainer Increment** 1/Increment 2 (IEWTPT Inc 1/Inc 2)



PEO Simulation, Training and Instrumentation | Orlando, FL

ACQUISITION LIFE CYCLE PHASE: Inc 1: Operations & Support; Inc 2: Software Acquisition Pathway Planning Phase





DESCRIPTION

Intelligence and Electronic Warfare Tactical Proficiency Trainer Increment 1/Increment 2 (IEWTPT Inc 1/Inc 2) provides a realistic target environment for training Military Intelligence and Electronic Warfare (EW) analysts and system operators in multiple intelligence disciplines and tasks in a distributed, multi-domain simulation environment. It provides simulation/ scenarios for home station training and applicable institutional training bases.

BENEFIT TO THE SOLDIER

- Enables key training to satisfy Military Intelligence Training Standards requirements
- Provides mission-essential skills-based training to intelligence collectors and analysts
- Supports individual, crew, and collective training across various intelligence and EW disciplines

PROGRAM STATUS

- FY20: Inc 1 achieved Full Operational Capability
- FY21: Inc 2 entered Software Acquisition Pathway Planning Phase **FY23:**
 - Inc 2 Contact Award
 - Inc 2 Software Acquisition Pathway Execution Phase

PRIME CONTRACTORS

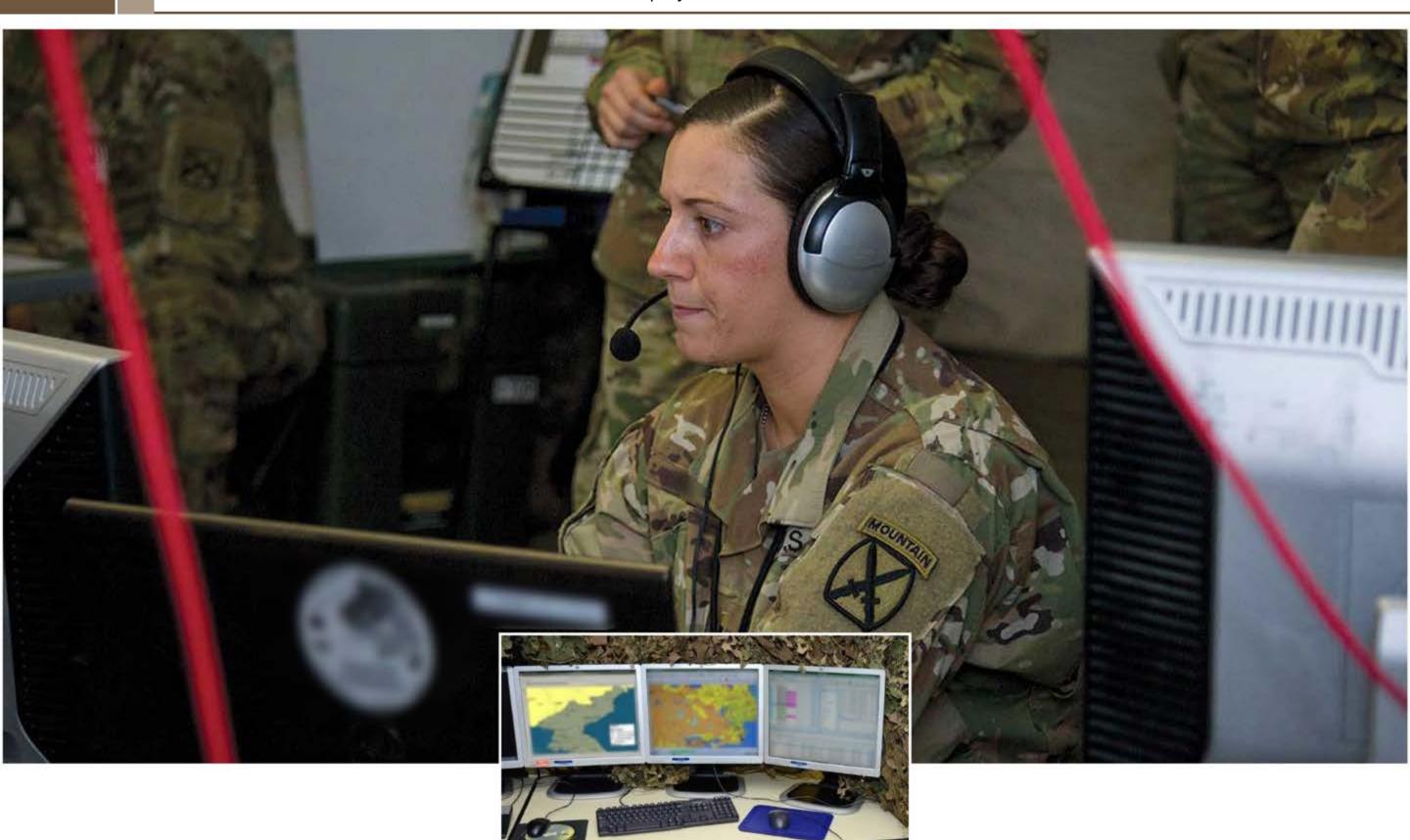
General Dynamics Mission Systems

Joint Land Component Constructive Training Capability (JLCCTC)

PEO Simulation, Training and Instrumentation | Orlando, FL



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

Joint Land Component Constructive Training Capability (JLCCTC) supports Army Title X training worldwide for U.S. Army commanders and their staff. JLCCTC trains commanders and their staff in offensive, defensive, stability, and civil support operations. System capabilities include:

- Simulation of mission command systems
- Intelligence modeling capabilities
- Irregular warfare (insurgents, terrorists, car bombs/improvised explosive devices, civilians/refugees, etc.)
- Unmanned aerial vehicle visualization
- Logistics training (maintenance, supply, transportation, ammunition, personnel, etc.)
- Non-kinetic effects modeling
- After Action Review system
- Interface with the Air Force Simulation and the Air and Space Cyber Constructive Environment

BENEFIT TO THE SOLDIER

- Provides Army commanders and their battle staff the capability to train in an operationally relevant, constructive simulation environment that simulates decisive action operations
- Provides capabilities across the range of warfighting functions in support of training for Active, Reserve, and National Guard units
- Automates tactical, technical, and procedural behaviors

PROGRAM STATUS

- FY20: Contract Award
- **FY23:**
 - Completed Assessment and Validation activities
 - Fielding

PRIME CONTRACTORS

SYNTHETIC TRAINING ENVIRONMENT

Phoenix Logistics, Inc.

PROGRAM PORTFOLIO TRANSPORTATION



Army Watercraft Systems (AWS)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Engineering & Manufacturing Development, Production & Deployment, Operations & Support



DESCRIPTION

Army Watercraft Systems (AWS) expand commanders' movement and maneuver options in support of unified land operations. The Army's current fleet enables commanders to operate through fixed, degraded, and austere ports, conducting expeditionary sustainment, movement, and maneuver of forces for missions across the spectrum of military operations.

BENEFIT TO THE SOLDIER

- Provide responsive, cross-domain capability to move combat-configured forces, equipment, and sustainment supplies
- Create multiple, complex operational dilemmas for adversaries throughout all phases of operations

PROGRAM STATUS

- FY20-FY22: Various AWS in Prototype Build, Production, and Delivery
- **FY23**:
 - Various AWS in Full-Rate Production and Prototype Testing
 - Several AWS in Production and Delivery

PRIME CONTRACTORS

Conrad/Orange Shipbuilding DCS Marinette Marine Corporation MossPoint Marine

Vigor Works, LLC **VT Halter Marine**

Enhanced Heavy Equipment Transporter System (EHETS)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

The Enhanced Heavy Equipment Transporter System (EHETS) consists of the M1300 tractor and the M1302 semitrailer. The EHETS tractor is used in combination with the M1302 trailer to transport heavy tracked and wheeled vehicles. The M1300 is a lightened M1070A1 tractor featuring a powertrain upgrade. The M1302 trailer is an eight-axle flatbed trailer capable of hauling the heaviest Army-tracked payloads.

BENEFIT TO THE SOLDIER

- Capable of carrying the heaviest tracked payloads
- Upgraded M1300 powertrain provides increased payload and reliability

PROGRAM STATUS

- FY22: Awarded follow-on contract
- FY23: Trailer Production began

PRIME CONTRACTORS

Broshuis BV Oshkosh Defense, LLC Red River Army Depot

Family of Medium Tactical Vehicles (FMTV) - A2

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment, Operations & Support









DESCRIPTION

The Family of Medium Tactical Vehicles (FMTV) – A2 operates as a multipurpose transportation and unit mobility vehicle in Combat, Combat Support, and Sustainment units. The A2 incorporates new technologies and can transport a heavier payload over more difficult terrain in a shorter amount of time with greater protection than its predecessor.

BENEFIT TO THE SOLDIER

- Increased payload capacity for cargo variants
- Improved suspension and wheel capacity
- Upgraded vehicle data bus with a simplified electrical system
- Augmented crew survivability with armor protection

PROGRAM STATUS

- **FY22:**
 - **Development Testing**
 - Production
- **FY23:**
 - Follow-on Test and Evaluation
 - Full Materiel Release

PRIME CONTRACTORS

Oshkosh Defense, LLC

Joint Light Tactical Vehicles (JLTV)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment





DESCRIPTION

The Joint Light Tactical Vehicle (JLTV) Family of Vehicles is a U.S. Army-led, Joint-service program designed to replace a portion of each Service's light tactical wheeled vehicle fleets while closing existing capability gaps.

BENEFIT TO THE SOLDIER

- Protected, sustained, and networked mobility for personnel and payloads across the full range of military operations
- Improved off-road mobility, fuel efficiency, and reliability
- Transportable by lift assets to support operations across the range of military operations

PROGRAM STATUS

- FY22: Full Materiel Release
- FY23: Follow-on Production Contract Award

PRIME CONTRACTORS

Oshkosh Defense, LLC

Palletized Load System and **Palletized Load System Extended** Service Program (PLS/PLS ESP)

PEO Combat Support & Combat Service Support | Detroit Arsenal, MI



ACQUISITION LIFE CYCLE PHASE: Production & Deployment



DESCRIPTION

The Palletized Load System (PLS) is a heavy, multi-wheeled drive truck designed for cross-country movement of combatconfigured loads of ammunition and other classes of supply. The PLS Extended Service Program is a Department of the Army supported Recapitalization (RECAP) program increasing the PLS fleet density in the field.

BENEFIT TO THE SOLDIER

- Operates across all tactical mobility levels in the combat zone supporting the Battlefield Distribution System in a variety of Combat Arms, Combat Support, and Sustainment units
- Assists commanders by enabling more agile, flexible, and full-spectrum movement across the range of military operations throughout the battlefield

PROGRAM STATUS

- FY20-FY22: Production and Fielding
- - Family of Heavy Tactical Vehicles Contract Extension and follow-on contract award
 - Continued Production and Fielding of RECAP and PLS Trailers

PRIME CONTRACTORS

Oshkosh Defense, LLC

APPENDICES



Glossary of Terms



ACQUISITION CATEGORY (ACAT)

ACATs are established to facilitate decentralized decision-making, execution, and compliance with statutorily imposed requirements. The categories determine the level of review, decision authority, and applicable procedures. ACAT categories include: ACAT I, ACAT II, ACAT III, ACAT IV (Army, Navy, and Marine Corps only), and Abbreviated Acquisition Program (Navy and Marine Corps only).

ACAT I

ACAT I programs are Major Defense Acquisition Programs (MDAPs). A MDAP is a program that is designated by the Milestone Decision Authority (MDA). Dollar value for all increments of the program are estimated by the Defense Acquisition Executive (DAE) to require an eventual total expenditure for research, development, test, and evaluation of more than \$525 million in Fiscal Year (FY) 2020 constant dollars or, for procurement, of more than \$3.065 billion in FY20 constant dollars. ACAT I programs have three subcategories:

- ACAT ID, for which the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) as the DAE makes a
 decision to become the MDA or designate another Office of the Secretary of Defense (OSD) official as the MDA. This
 decision would be based on one or more exceptions in Title 10 of the U.S. Code, section 2430(d) (10 U.S.C. 2430(d)).
 The DAE or designee will review ACAT ID programs.
- ACAT IC, for which the USD(A&S) delegated ACAT I MDA to the Head of the DOD Component or, if delegated, the Component Acquisition Executive (CAE). This designation (ACAT IC) is only for programs that reached Milestone A before October 1, 2016.
- ACAT IB, a MDAP for which the Service Acquisition Executive (SAE) is the MDA by operation of 10 U.S.C. 2430e, will
 be designated within the DOD as ACAT IB programs. The SAE of the Military Department that is managing an MDAP
 reaching Milestone A after October 1, 2016, will be the MDA for the MDAP and designated ACAT IB to differentiate
 these programs from ACAT ID programs or ACAT IC programs.

ACAT II

ACAT II programs are defined as those acquisition programs that do not meet the criteria for an ACAT I program but do meet the criteria for a major system as defined in 10 U.S.C. 2302(d). The dollar value as estimated by the DOD Component head would require an eventual total expenditure for research, development, test, and evaluation of more than \$200 million in FY20 constant dollars, or for procurement of more than \$920 million in FY20 constant dollars. The CAE, or the individual designated by the CAE, will review ACAT II programs as the MDA.

ACAT III

ACAT III programs are defined as those acquisition programs that do not meet the dollar value thresholds for ACAT II or above and are not designated a "major system" by the MDA. The MDA is designated by the CAE.

ACAT IV

ACAT IV programs not otherwise designated as ACAT III are designated as ACAT IV in accordance with Service policy. Decisions are made at the lowest appropriate level. The MDA is designated by the AAE and shall be at the lowest appropriate level, typically the Program Executive Officer level. However, MDA can be further delegated to the Colonel-level Program/ Project Manager. The estimated costs for ACAT IV acquisition programs are below the thresholds for ACAT III acquisition programs.

ACQUISITION LIFE CYCLE PHASE

Acquisition Life Cycle: The relationship between the acquisition phases and work efforts, and key program events such as decision points and reviews. It employs acquisition processes that match the characteristics of the capability being acquired.

Acquisition Phase: All the tasks and activities needed to bring a program to the next major milestone occur during an acquisition phase. Phases provide a logical means of progressively translating broadly stated capabilities into well-defined, system-specific requirements and ultimately into operationally effective, suitable, and survivable systems. The acquisition phases for the systems described in this handbook are defined below:

• Materiel Solution Analysis (MSA) Phase is the first phase of the Major Capability Acquisition process. The purpose of this phase is to conduct an Analysis of Alternatives (AoA) and other activities needed to choose the concept for the product that will be acquired, to begin translating validated capability gaps into system-specific requirements, and to conduct planning to support a decision on the acquisition strategy for the product. An AoA will be conducted, and the initial Acquisition Strategy and draft Capability Development Document (CDD) will be formulated. The CAE will select a Program Manager (PM) and establish a Program Office to complete actions associated with planning the acquisition program preparing for the next decision point. This phase ends when the necessary analysis and activities to support a decision to proceed to the next decision point/phase in the acquisition process.

APPENDICES 180

- <u>Technology Maturation and Risk Reduction (TMRR) Phase</u> is the second phase of the Major Capability Acquisition process. Its purpose is to reduce technology, engineering, integration, and life cycle cost risk to the point that a decision to contract for Engineering and Manufacturing Development (EMD) can be made with confidence in successful program execution for development, production, and sustainment. The phase includes activities intended to reduce specific risks associated with the product to be developed. Activities include additional design trades and requirements trades to ensure an affordable product and an executable development and production program. Capability requirements are matured and validated, and affordability caps are finalized during this phase. This phase normally includes competitive sources conducting TMRR activities to demonstrate new technologies in a relevant environment. A Preliminary Design Review prior to Milestone B will be conducted, unless waived by the MDA.
- The EMD Phase is the third phase of the Major Capability Acquisition process. The purpose of the phase is to develop, build, test, and evaluate a materiel solution to verify that all operational and implied requirements, including those for security, have been met, and to support production, deployment, and sustainment decisions. The program will complete all needed hardware and software detailed designs. A critical design review establishes the initial technical baseline and assesses design maturity, design build-to or code-to documentation, and remaining risks. The EMD phase will end when the design is stable; the system meets validated capability requirements demonstrated by developmental, live fire (as appropriate), and early operational testing; manufacturing processes have been effectively demonstrated and are under control; software sustainment processes are in place and functioning; industrial production capabilities are reasonably available; program security remains uncompromised; and the program has met or exceeds all directed phase exit criteria and Milestone C entrance criteria per the MDA's direction.
- The Production and Deployment (P&D) Phase is the fourth phase of the Major Capability Acquisition process. The purpose of the P&D Phase is to produce and deploy requirements-compliant material solutions to receiving operating organizations. In this phase, the product is produced and fielded for use by operational units and encompasses a number of events: Low-Rate Initial Production (LRIP), personnel training, completion of developmental test and evaluation (if required), Initial Operational Test and Evaluation, and the Full-Rate Production (FRP) Decision or the Full Deployment Decision. All system sustainment and support activities are initiated if not already begun, and the appropriate operational authority will declare Initial Operational Capability when the defined operational organization has been equipped, trained, and determined to be capable of conducting mission operations. "Should cost" management and other techniques will be used to control and reduce cost.
- The Operations and Support (O&S) Phase is the fifth phase of the Major Capability Acquisition process. The purpose of the O&S phase is to execute the Product Support Strategy (PSS), satisfy material readiness and operational support performance requirements including personnel training, and sustain the system over its life cycle, including disposal. This phase has two major efforts: Sustainment and Disposal. The MDA-approved PSS is the basis for the activities conducted during this phase. The PM will deploy the support package and monitor its performance according to the PSS. At the end of its useful life, a system will be demilitarized and disposed of in accordance with all legal and regulatory requirements and policy relating to safety (including explosives safety), security, and the environment, in accordance with the PSS. Disposal planning will include consideration of retirement, disposition, and reclamation.

ACQUISITION PROGRAM

A directed, funded effort that provides a new, improved, or continuing materiel, weapon, information system, or service capability in response to an approved need. Acquisition programs are divided into categories that are established to facilitate decentralized decision-making, execution, and compliance with statutory requirements.

ADAPTIVE ACQUISITION FRAMEWORK (AAF)

A series of acquisition pathways to enable the workforce to tailor strategies to deliver better solutions faster. The AAF acquisition pathways provide opportunities for milestone decision authorities, decision authorities, and PMs to develop acquisition strategies and employ acquisition processes that match the characteristics of the capability being acquired.



BUSINESS SYSTEM CATEGORY (BCAT)

BCAT I:

- Priority Defense Business Systems (DBS) expected to have a total amount of budget authority over the period of the current Future Years Defense Program (FYDP) in excess of \$250,000,000
- DOD Chief Management Officer (CMO) designation as priority based on complexity, scope, technical risk, and after notification to Congress
- Decision Authorities:
 - Requirements Validation/CMO Certification: DOD CMO or as delegated
 - MDA: DAE or as delegated (not below CAE)

BCAT II:

- DBS that do not meet criteria for BCAT I and are expected to have a total amount of budget authority over the period
 of the current FYDP in excess of \$50M
- · Decision Authorities:
 - Requirements Validation/CMO Certification: Military Department CMO or as delegated; DOD CMO or as delegated for all other DOD Components
 - MDA: CAE or as delegated

BCAT III:

- DBS that do not meet the criteria for BCAT II
- Decision Authorities:
 - · Requirements Validation/CMO Certification: DOD CMO or MILDEP CMO may designate as requiring certification
 - · MDA: Same as category II and further delegation is encouraged



CROSS-FUNCTIONAL TEAM (CFT)

CFTs were established to narrow existing capability gaps by developing capability documents, informed by experimentation and technical demonstrations, to rapidly deliver requirements to the Army Acquisition System. The Army's Modernization Priorities, which are necessary for future Readiness and Multi-Domain Operations, are the focus of the CFTs' activity: (1) Long Range Precision Fires, (2) Next Generation Combat Vehicles, (3) Future Vertical Lift, (4) Army Network, (5) Air and Missile Defense, and (6) Soldier Lethality.



DEFENSE BUSINESS SYSTEM (DBS)

An information system that is operated by, for, or on behalf of DOD, including financial systems, financial data feeder systems, contracting systems, logistics systems, planning, and budgeting systems, installations management systems, human resources management systems, and training and readiness systems. A business system does not include a national security system or an information system used exclusively by and within the defense commissary system or the exchange system or other instrumentality of the DOD conducted for the morale, welfare, and recreation of members of the Armed Forces using non-appropriated funds.

DEMILITARIZATION AND DISPOSAL

Demilitarization is the act of destroying the military offensive or defensive capability inherent in certain types of equipment or materiel. The term includes mutilation, scrapping, melting, burning, or alteration designed to prevent the further use of this equipment and materiel for its originally intended military or lethal purpose. It applies equally to materiel in unserviceable or serviceable condition that has been screened through an Inventory Control Point and declared excess or foreign excess. Disposal is the second effort of the O&S phase. At the end of its useful life, a system will be demilitarized and disposed of in accordance with all legal and regulatory requirements and policy relating to safety (including explosives safety), security, and the environment, in accordance with the PSS. Disposal planning will include consideration of retirement, disposition, and reclamation.

DEVELOPMENTAL TEST AND EVALUATION (DT&E)

DT&E includes any testing used to assist in the development and maturation of products, product elements, or manufacturing or support processes. It also includes any engineering-type test used to verify status of technical progress, verify that design risks are minimized, substantiate achievement of contract technical performance, and certify readiness for initial operational testing. Development tests generally require instrumentation and measurements and are accomplished by engineers, technicians, or soldier operator-maintainer test personnel in a controlled environment to facilitate failure analysis.

DIRECTED REQUIREMENT (DR)

If operational analysis and assessment of an Operational Needs Statement (ONS) or Joint Urgent Operational Need (JUON) solution or results of an Advanced Technology Demonstration (ATD) or Joint Capability Technology Demonstration (JCTD), indicate a specific, limited but necessary, urgent need exists, Headquarters, Department of Army, Deputy Chief of Staff G-8 may prepare and issue a DR and specify the funding source and priority. DRs are not recognized as a requirements document. A DR is designed to produce information in support of early acquisition and programming decisions. The scope

of a DR will be limited to addressing urgent operational needs that fall outside of the established Joint Capabilities Integration and Development System process, and if not addressed immediately, will seriously endanger personnel, or pose a major threat to the success of ongoing operations. A DR should not involve the development of a new technology or capability; however, the acceleration of an ATD or JCTD is within scope.



FULL OPERATIONAL CAPABILITY (FOC)

In general, FOC is attained when all units and/or organizations in the force structure scheduled to receive a system have received it and have the ability to employ and maintain it. The specifics for any particular system FOC are defined in that system's CDD, which identifies operational performance attributes of the proposed system and updated CDD.

FULL-RATE PRODUCTION (FRP) DECISION REVIEW

MDA review to assess the results of Initial Operational Test and Evaluation (IOT&E) and initial manufacturing and deployment to determine whether to approve proceeding to FRP or Full Deployment. Continuing into FRP or Full Deployment requires demonstrated control of the manufacturing process, acceptable performance and reliability, and the establishment of adequate sustainment and support.



INITIAL OPERATIONAL CAPABILITY (IOC)

In general, IOC is attained when some units and/or organizations in the force structure scheduled to receive a system have received it and have the ability to employ and maintain it. The specifics for any particular system IOC are defined in that system's CDD and updated CDD.



JOINT ACQUISITION PROGRAM

Any acquisition system, subsystem, component, or technology program with a strategy that includes funding by more than one DOD component during any phase of a system's life cycle. The MDA decides whether to place the program under Joint acquisition management. The MDA should make this decision and, if appropriate, designate the lead executive DOD component as early as possible in the acquisition process.



LIVE FIRE TEST AND EVALUATION (LFT&E)

LFT&E is a test process that provides a timely assessment of the survivability and/or lethality of a conventional weapon or conventional weapon system as it progresses through its design and development. LFT&E is a statutory requirement (Title 10 U.S.C. § 2366) for covered systems, major munitions programs, missile programs, or product improvements to a covered system, major munitions programs, or missile programs before they can proceed beyond Low-Rate Initial Production (LRIP).

LOW-RATE INITIAL PRODUCTION (LRIP)

LRIP is the first part of the P&D phase. LRIP is intended to result in completion of manufacturing development to ensure adequate and efficient manufacturing capability and to produce the minimum quantity necessary to provide production or production-representative articles for IOT&E, establish an initial production base for the system, and permit an orderly increase in the production rate for the system, sufficient to lead to FRP upon successful completion of operational (and live-fire, where applicable) testing.



MAJOR DEFENSE ACQUISITION PROGRAM (MDAP)

An acquisition program within the meaning of 10 U.S.C. 2430. The term "major defense acquisition program" means a DOD acquisition program that is not a highly sensitive classified program (as determined by the Secretary of Defense) and (A) that is designated by the Secretary of Defense as a MDAP; or (B) in the case of a program that is not a program for the acquisition of an automated information system (either a product or a service) that is estimated by the Secretary of Defense for all increments of the program to require an eventual total expenditure for research, development, test, and evaluation of more than \$525 million in FY20 constant dollars or, for procurement, of more than \$3.065 billion in FY20 constant dollars.

MAJOR MILESTONE

A major milestone is the decision point that separates the phases of an acquisition program. MDAP milestones include, as examples, the decisions to authorize entry into the EMD phase or FRP.

- Milestone A: Entry into the TMRR Phase
- Milestone B: Entry into the EMD Phase
- Milestone C: Entry into the P&D Phase

MAJOR SYSTEMS

A combination of elements that will function together to produce the capabilities required to fulfill a mission need. The elements may include hardware, equipment, software, or any combination thereof, but excludes construction or other improvements to real property. A system is considered a major system if the conditions of section 2302d of this title are satisfied, or the system is designated a "major system" by the head of the agency responsible for the system.

MIDDLE TIER ACQUISITION (MTA)

Sometimes referred to as Section 804 acquisition, MTA is established in Public Law 114–92, Section 804, and in DOD Instruction 5000.80. MTA is a rapid acquisition interim approach that focuses on delivering a capability in a period of 2-5 years with rapid prototypes and rapid fielding with proven technology. The approach is part of the AAF. The MTA pathway is used to rapidly develop fieldable prototypes within an acquisition program to demonstrate new capabilities and/or rapidly field production quantities of systems with proven technologies that require minimal development.

MILESTONE

The point at which a recommendation is made and approval sought regarding starting or continuing an acquisition program, e.g., proceeding to the next phase.

MILESTONE DECISION AUTHORITY (MDA)

Designated individual with overall responsibility for a program. The MDA will have the authority to approve entry of an acquisition program into the next phase of the acquisition process and shall be accountable for cost, schedule, and performance reporting to higher authority, including Congressional reporting.

- **DAE:** The individual responsible for supervising the Defense Acquisition System. The DAE takes precedence on all acquisition matters after the Secretary of Defense and the Deputy Secretary of Defense.
- Army Acquisition Executive (AAE): The individual solely responsible for acquisition matters within the Department of the Army and the single decision authority for all Army acquisition matters. The AAE is responsible for approving requests to initiate new acquisition programs and will do so only when they are supported by approved capability documents, requisite funding, and program documentation.
- **PEO:** A military officer or civilian individual assigned program responsibilities for the execution and management of ACAT II, III, and IV programs, or for any other program determined by the AAE to require dedicated executive management.

MODERNIZATION PRIORITIES

In December 2017, the U.S. Army established six modernization priorities with one simple focus: make soldiers and units more lethal. To be successful, ideas must be turned into actions through continuous experimenting and prototyping, improving acquisition business processes, pursuing appropriate commercial-off-the-shelf options, and improving training. Additionally, the Army's modernized capabilities must have interoperability with allies built-in. Based on these fundamentals, the Army's Modernization Priorities are:

- Long Range Precision Fires: Develop platforms, capabilities, munitions, and formations that restore U.S. Army dominance in range, lethality, mobility, precision, and target acquisition.
- **Next Generation Combat Vehicles:** Develop combat vehicles that integrate other close combat capabilities in manned, unmanned, and optionally manned teaming that leverages semi-autonomous and autonomous platforms in conjunction with the most modern firepower, protection, mobility, and power generation capabilities necessary to ensure that future combat formations can fight and win against any foe, in any environment.
- Future Vertical Lift: A set of manned, unmanned, and optionally manned platforms that can execute attack, lift, and reconnaissance missions on the modern and future battlefields at greater range, altitude, lethality, and payload.
- **Army Network:** An integrated system of hardware, software, and infrastructure that is sufficiently mobile, reliable, user-friendly, discreet in signature, expeditionary, and can be used to fight effectively in any environment where the electromagnetic spectrum is denied or degraded.
- Air and Missile Defense: A series of mobile integrated platforms, capabilities, munitions, and formations that ensure future combat formations are lethal while remaining protected from modern and advanced air and missile delivered fires, to include drones.

• Soldier Lethality: A holistic series of capabilities, equipment, training, and enhancements that span all fundamentals of combat: shooting, moving, communicating, protecting, and sustaining to ensure soldiers are more lethal and less vulnerable on the modern battlefield. This will include not only next generation individual and squad weapons, but also improved body armor, sensors, radios, and load-bearing exoskeletons. These efforts will be joined by research in improved human performance and decision-making.

MODIFICATIONS

A configuration change to the form, fit, function, or interface (F3I) of an in-service, configuration-managed, or produced Configuration Item (CI). Modifications are defined by their purpose. A capability modification alters the F3I in a manner that requires a change to the existing system, performance, or technical specification of the asset. Such modifications are accomplished to add a new capability or function to a system or component, or to enhance existing technical performance or operational effectiveness. A sustainment modification alters the F3I of an asset in a manner that does not change the existing system, performance, or technical specification of the asset. Such modifications correct product quality deficiencies, or to bring the asset in compliance with established technical or performance specification(s) associated with the asset. Sustainment modifications may improve the reliability, availability, maintainability, or supportability, and reduce its ownership costs.



OPERATIONAL TEST AND EVALUATION (OT&E)

OT&E is a field test, under realistic conditions, of any item (or key component) of weapons, equipment, or munitions for the purpose of determining the effectiveness and suitability of the weapons, equipment, or munitions for use in combat by typical military users, and the evaluation of the results of such tests.

OPERATIONS AND SUPPORT (0&S) PHASE

O&S is the fifth phase of the Major Capability Acquisition process. The purpose of the O&S phase is to execute the PSS, satisfy materiel readiness and operational support performance requirements including personnel training, and sustain the system over its life cycle, including disposal. This phase has two major efforts: Sustainment and Disposal. The MDA-approved PSS is the basis for the activities conducted during this phase. The PM will deploy the support package and monitor its performance according to the PSS. At the end of its useful life, a system will be demilitarized and disposed of in accordance with all legal and regulatory requirements and policy relating to safety (including explosives safety), security, and the environment, in accordance with the PSS. Disposal planning will include consideration of retirement, disposition, and reclamation.



PRE-MAJOR DEFENSE ACQUISITION PROGRAM (PRE-MDAP)

Pre-MDAP programs are in the MSA or Technology Development Phases preceding Milestone B of the Defense Acquisition System and identified to have the potential to become a MDAP.



URGENT MATERIEL RELEASE (UMR)

The UMR designation is used to meet an operational, training, or readiness need of a force or as directed by one of the HQDA or user requested documents identified in Army Regulation 770–3. This process is determined according to ONS and must be authorized by an approved or validated Headquarters, Department of Army, Modified Tables of Organization and Equipment or Tables of Distribution and Allowances, Mission Essential Equipment List ONS, or any other DCS, G-3/5/7 approved authorization or validation document. Once the immediate need is filled, the PM will withdraw the system and provide the appropriate disposition instructions.

ADDITIONAL RESOURCES

For additional information on acquisition terms, or terms not defined, please refer to DOD Directives, available on the Internet at http://www.esd.whs.mil/Directives/ issuances/dodd. For more information on the AAF, visit https://aaf.dau.edu/. The Defense Acquisition Guidebook is available at https://www.dau.edu/tools/dag.

S&T

Points of Contact



JPEO Armaments & Ammunition Picatinny Arsenal, NJ

- 155 mm Excalibur Projectiles
- 155 mm M777A2 Lightweight Towed Howitzer
- Ammunition Large Caliber
- Ammunition Medium Caliber
- **Artillery Ammunition**
- Mortar Weapon Systems
- Precision Guidance Kit/Long Range Precision Guidance Kit (PGK/LR-PGK)



JPEO Chemical, Biological, Radiological and Nuclear Defense (CBRND) Aberdeen Proving Ground, MD

- Advanced Anticonvulsant System (AAS)
- Aerosol Vapor Chemical Agent Detector (AVCAD)
- Antiviral Therapeutics (AV TX)
- Chemical, Biological, Radiological, Nuclear Dismounted Reconnaissance Systems (CBRN DRS)
- Compact Vapor Chemical Agent Detector (CVCAD)
- Joint Biological Agent Decontamination System (JBADS)
- Joint Biological Tactical Detection System (JBTDS)
- Joint Expeditionary Collective Protection (JECP)
- Joint Handheld Bio-Agent Identifier (JHBI)
- Joint Service General Purpose Mask (JSGPM) M553A1
- Man-portable Radiological Detection System (MRDS)
- Multi-Phase Chemical Agent Detector (MPCAD)
- Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)
- Protection Assessment Tool System (PATS) M41A1
- Rapid Opioid Countermeasure System (ROCS)
- Service Equipment Decontamination System (SEDS)
- Tactical Contamination Mitigation System (TCMS)
- Uniform Integrated Protection Ensemble Family of Systems General Purpose (UIPE FoS GP)



PEO Aviation

Redstone Arsenal, AL

- CH-47F Chinook Cargo Helicopter and CH-47F Block II
- Fixed Wing Project Office (FWPO)
- Improved Turbine Engine Program (ITEP) T901
- UH/HH-60M Black Hawk
- UH-72A/B Lakota (Light Utility Helicopter (LUH))



PEO Combat Support & Combat Service Support

Detroit Arsenal, MI

- Army Watercraft Systems (AWS)
- Common Robotic System Heavy (CRS-H)
- Common Robotic System Individual (CRS-I)
- Early Entry Fluid Distribution System (E2FDS)
- Enhanced Heavy Equipment Transporter System (EHETS)
- Family of Medium Tactical Vehicles (FMTV) A2
- Force Provider Expeditionary (FPE)
- High Mobility Engineer Excavator Type IV (HMEE-IV)
- Infantry Squad Vehicle (ISV)
- Joint Light Tactical Vehicle (JLTV)
- Man Transportable Robotic System Increment II (MTRS Inc II)
- Military Bridging Systems
- Palletized Load System and Palletized Load System Extended Service Program (PLS/PLS ESP)
- Robotic Mine Flail M160
- Small Multipurpose Equipment Transport (S-MET)
- T-9 Medium Dozer with Winch and Tractor, Full-Tracked, T-9 Medium Dozer with Ripper
- Tactical Electric Power (TEP)

Points of Contact (Continued)



PEO Command, Control, Communications-Tactical **Aberdeen Proving Ground, MD**

- Command Post Computing Environment (CPCE)
- Command Post Integrated Infrastructure (CPI2)
- Cyber Situational Understanding (Cyber SU)
- Handheld, Manpack, and Small Form Fit (HMS)
- Joint Battle Command Platform (JBC-P)
- Mounted Mission Command Software (MMC-S)
- Satellite Communications Family of Terminals (SATCOM FoT)
- Signal Modernization (SigMod)
- Sustainment Transport System (STS)
- Tactical Network Transport (TNT) At The Halt (ATH) and On The Move (OTM)



PEO Enterprise Information Systems Fort Belvoir, VA

- Defense Enterprise Wideband Satellite Communications System (DEWSS)
- Global Combat Support System Army (GCSS-Army)



PEO Ground Combat Systems

Detroit Arsenal, MI

- Abrams Main Battle Tank
- Armored Multi-Purpose Vehicle (AMPV)
- Booker Combat Vehicle M10
- Bradley Fighting Vehicle M2A4
- Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) M88A2
- Mechanized Infantry Combat Vehicle (XM30)
- Product Director Paladin (M109A6/M992A2 (A6) and M109A7/M992A3 (A7) or Paladin Integrated Management Program)
- Robotic Combat Vehicle (RCV)
- Stryker Brigade Combat Team (SBCT)



PEO Intelligence, Electronic Warfare and Sensors **Aberdeen Proving Ground, MD**

- Dismounted Assured Positioning, Navigation, and Timing (PNT) System (DAPS)
- Distributed Common Ground System Army (DCGS-A)
- Electronic Warfare Planning and Management Tool (EWPMT)
- Mounted Assured Positioning, Navigation, and Timing (PNT) System (MAPS)
- Multi-Function Electronic Warfare-Air Large (MFEW-AL)
- Next Generation Biometric Collection Capability (NXGBCC)
- Third Generation Forward Looking Infrared (3GEN FLIR)



PEO Missiles and Space

Redstone Arsenal, AL

- Advanced Anti-Tank Weapon System Medium (Javelin)
- Air and Missile Defense Planning and Control System (AMDPCS)
- Army Integrated Air and Missile Defense (AIAMD)
- Army Tactical Missile System (ATACMS)
- Counterfire Radar AN/TPQ-53
- Forward Area Air Defense Command and Control (FAAD C2)
- Forward Area Air Defense System, Line-of-Sight, Rear (Pedestal Mounted Stinger Avenger)
- Guided Multiple Launch Rocket System (GMLRS)
- Helicopter Launched Fire and Forget (HELLFIRE (HF))
- High Mobility Artillery Rocket System (HIMARS) M142
- Indirect Fire Protection Capability Increment 2 (IFPC Inc 2)
- Iron Dome Defense System Army (IDDS-A)
- Joint Air-to-Ground Missile (JAGM)
- Lower Tier Air and Missile Defense Sensor (LTAMDS)
- Maneuver-Short Range Air Defense Increment 1 (M-SHORAD Inc 1)
- Maneuver-Short Range Air Defense Increment 2 (M-SHORAD Inc 2)
- Maneuver-Short Range Air Defense Increment 3 (M-SHORAD Inc 3)
- Multiple Launch Rocket System (MLRS) M270A1 and M270A2
- Phased Array Tracking Radar to Intercept of Target (PATRIOT) Advanced Capability-3 (PAC-3)
 - Precision Strike Missile (PrSM)
- Sentinel Aerial Surveillance Radar AN/MPQ-64 A3 & AN/MPQ-64 A4 (Sentinel A3, Sentinel A4)
- Stinger Block I with Proximity Fuze (PROX)

Points of Contact (Continued)



PEO Simulation, Training and Instrumentation Orlando, FL

- Cyber Environment Replication (CER)
- Future Army System of Integrated Targets (FASIT)
- Instrumentable-Multiple Integrated Laser Engagement System (I-MILES)
- Intelligence and Electronic Warfare Tactical Proficiency Trainer Increment 1/Increment 2 (IEWTPT Inc 1/Inc 2)
- Joint Land Component Constructive Training Capability (JLCCTC)



PEO Soldier Fort Belvoir, VA

- Air Soldier System (Air SS)
- Common Remotely Operated Weapon Station (CROWS)
- Enhanced Night Vision Goggle Binocular (ENVG-B)
- Family of Weapon Sights Crew Served (FWS-CS)
- Joint Effects Targeting System (JETS)
- Nett Warrior (NW)
- Small Arms Crew Served Weapons (CSW)
- Soldier Protection System (SPS)



Rapid Capabilities and Critical Technologies Office Redstone Arsenal, AL

- Indirect Fire Protection Capability High Energy Laser (IFPC-HEL)
- Indirect Fire Protection Capability High Power Microwave (IFPC-HPM)
- Long-Range Hypersonic Weapon (LRHW)
- Mid-Range Capability (MRC)



U.S. Army Medical Research and Development Command Fort Detrick, MD

- Warfighter Brain Health Project Management Office (WBH PMO)
- Warfighter Health Performance and Evacuation (WHPE)
- Warfighter Protection and Acute Care Project Management Office (WPAC PMO)

S&T

Systems By Contractor

4M Research

Global Combat Support System – Army (GCSS-Army)

60° Pharmaceuticals

Warfighter Protection and Acute Care Project Management Office (WPAC PMO)

AASKI Technology

Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Abbott Point of Care

Warfighter Brain Health Project Management Office (WBH PMO)

ACE Electronics

Joint Battle Command – Platform (JBC-P)

Action Manufacturing

Artillery Ammunition

Acrow Corporation of America

Military Bridging Systems

Acrow Global Limited

Military Bridging Systems

ADA Technologies

Future Army System of Integrated Targets (FASIT)

Advanced Measurement Technology, Inc.

Man-portable Radiological Detection System (MRDS)

Advanced Technology International

Service Equipment Decontamination System (SEDS)

AeroClave, LLC

Joint Biological Agent Decontamination System (JBADS)

Aerojet Rocketdyne

Army Tactical Missile System (ATACMS)

Airbus Helicopter, Inc.

• UH-72A/B Lakota (Light Utility Helicopter (LUH))

Allison Transmission

Abrams Main Battle Tank

Amentum Services, Inc.

- Fixed Wing Project Office (FWPO)
- Nett Warrior (NW)
- Military Bridging Systems
- Satellite Communications Family of Terminals (SATCOM FoT)

American Ordnance

Artillery Ammunition

Amivas

Warfighter Protection and Acute Care Project Management Office (WPAC PMO)

Amtech

Artillery Ammunition

Anniston Army Depot

- Abrams Main Battle Tank
- Military Bridging Systems

APC/Ceradyne

Soldier Protection System (SPS)

Applied Intuition

Robotic Combat Vehicle (RCV)

Atlantic Diving Supply, Inc.

Joint Handheld Bio-Agent Identifier (JHBI)

Armor Express

Soldier Protection System (SPS)

Augustine Consulting, Inc. (ACI)

Nett Warrior (NW)

Avion Solutions, Inc.

Fixed Wing Project Office (FWPO)

Avon Protection Systems, Inc.

Joint Service General Purpose Mask (JSGPM) – M53A1

BAE Systems

- 155 mm M777A2 Lightweight Towed Howitzer
- Armored Multi-Purpose Vehicle (AMPV)
- Artillery Ammunition
- Bradley Fighting Vehicle M2A4
- Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) M88A2
- Precision Guidance Kit/Long Range Precision Guidance Kit (PGK/LR-PGK)
- Product Director Paladin (M109A6/M992A2 (A6) and M109A7/M992A3 (A7) or Paladin Integrated Management Program)
- Signal Modification (SigMod)

Ball Aerospace

Army Tactical Missile System (ATACMS)

Berg Manufacturing

Force Provider Expeditionary (FPE)

Bethel Industries

Soldier Protection System (SPS)

Birdon America Inc.

Military Bridging Systems

Blue Sky Mast

Signal Modification (SigMod)

Boeing

- Army Tactical Missile System (ATACMS)
- CH-47F Chinook Cargo Helicopter and CH-47F Block II
- Defense Enterprise Wideband Satellite Communications System (DEWSS)
- Distributed Common Ground System Army (DCGS-A)
- Forward Area Air Defense System, Line-of-Sight, Rear (Pedestal Mounted Stinger Avenger)

Booz Allen Hamilton

- Distributed Common Ground System Army (DCGS-A)
- Next Generation Biometric Collection Capability (NGXBCC)

Broshuis BV

Enhanced Heavy Equipment Transporter System (EHETS)

Bruker Detection Corp.

Man-portable Radiological Detection System (MRDS)

C5ISR Ultra

Mounted Mission Command – Software (MMC-S)

CACI

Distributed Common Ground System – Army (DCGS-A)

Carter Enterprises

Soldier Protection System (SPS)

Caterpillar

T-9 Medium Dozer with Winch and Tractor, Full-Tracked, T-9 Medium Dozer with Ripper

Cellphire Therapeutics, Inc.

Warfighter Protection and Acute Care Project Management Office (WPAC PMO)

Chemring Sensors and Electronic Systems

Joint Biological Tactical Detection System (JBTDS)

CodeMettle

Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Collins Aerospace

- Army Tactical Missile System (ATACMS)
- CH-47F Chinook Cargo Helicopter and CH-47F Block II
- Handheld, Manpack, and Small Form Fit (HMS)
- Mounted Assured Positioning, Navigation, and Timing (PNT) System (MAPS)

Conrad/Orange Shipbuilding

Army Watercraft Systems (AWS)

Cornerstone Research Group

Future Army System of Integrated Targets (FASIT)

Cummins

Bradley Fighting Vehicle – M2A4

Cummins Power Generation

Tactical Electric Power (TEP)

Day & Zimmermann

Mortar Weapon Systems

DCS

Army Watercraft Systems (AWS)

Defense Systems and Solutions

Fixed Wing Project Office (FWPO)

Digital Solid State Propulsion

Future Army System of Integrated Targets (FASIT)

DOK-ING

Robotic Mine Flail - M160

Domo Tactical Communications

Handheld, Manpack, and Small Form Fit (HMS)

DRS

- 155 mm M777A2 Lightweight Towed Howitzer
- Bradley Fighting Vehicle M2A4
- Third Generation Forward Looking Infrared (3GEN FLIR)
- Joint Battle Command Platform (JBC-P)

DRS Network & Imaging Services, LLC

Military Bridging Systems

DTECH Labs

- Satellite Communications Family of Terminals (SATCOM FoT)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Dynetics

- Indirect Fire Protection Capability Increment 2 (IFPC Inc 2)
- Long-Range Hypersonic Weapon (LRHW)

Eagle-Picher

Army Tactical Missile System (ATACMS)

S&T

Systems By Contractor (Continued)

Elbit Systems of America

- Command Post Integrated Infrastructure (CPI2)
- Enhanced Night Vision Goggle Binocular (ENVG-B)
- Mortar Weapon Systems

Electronic Warfare Associates

Cyber Environment Replication (CER)

Engense Inc.

Soldier Protection System (SPS)

Epirus, Inc.

Indirect Fire Protection Capability – High Power Microwave (IFPC-HPM)

Evistacom

- Satellite Communications Family of Terminals (SATCOM FoT)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Fabrique National Manufacturing, LLC

Small Arms - Crew Served Weapons (CSW)

Fairwinds

Satellite Communications Family of Terminals (SATCOM FoT)

Fidelity Technologies Corporation

Tactical Electric Power (TEP)

FLIR Systems, Inc

Compact Vapor Chemical Agent Detector (CVCAD)

Florida Armor, LLC

Soldier Protection System (SPS)

FN America, LLC

Small Arms - Crew Served Weapons (CSW)

Force Point

Distributed Common Ground System - Army (DCGS-A)

GATR

Satellite Communications Family of Terminals (SATCOM FoT)

GE Aviation

Improved Turbine Engine Program (ITEP) - T901

GE Global Research

Compact Vapor Chemical Agent Detector (CVCAD)

General Dynamics

- Man-portable Radiological Detection System (MRDS)
- Mortar Weapon Systems
- Stryker Brigade Combat Team (SBCT)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

General Dynamics European Land Systems

Military Bridging Systems

General Dynamics Land Systems

- Abrams Main Battle Tank
- Booker Combat Vehicle M10
- Maneuver-Short Range Air Defense Increment 1 (M-SHORAD Inc 1)
- Small Multipurpose Equipment Transport (S-MET)

General Dynamics Mission Systems

- Distributed Common Ground Systems Army (DCGS-A)
- Future Army System of Integrated Targets (FASIT)
- Intelligence and Electronic Warfare Tactical Proficiency Trainer Increment 1/Increment 2 (IEWTPT Inc 1/Inc 2)

General Dynamics Ordnance and Tactical Systems

- Ammunition Large Caliber
- Ammunition Medium Caliber
- Artillery Ammunition
- Small Arms Crew Served Weapons (CSW)

General Electric

UH/HH-60M Black Hawk

Gilead Sciences, Inc.

Antiviral Therapeutics (AV TX)

GM Defense

Infantry Squad Vehicle (ISV)

Goodrich

CH-47F Chinook Cargo Helicopter and CH-47F Block II

GT Machining

Military Bridging Systems

Gulfstream/Aerospace

Fixed Wing Project Office (FWPO)

Hamilton Sundstrand Corp

Compact Vapor Chemical Agent Detector (CVCAD)

Honeywell

- 155 mm M777A2 Lightweight Towed Howitzer
- Abrams Main Battle Tank
- Army Tactical Missile System (ATACMS)
- CH-47F Chinook Cargo Helicopter and CH-47F Block II

Hunter Defense Technologies (HDT)

Force Provider Expeditionary (FPE)

Huntington Ingalls Industries

Fixed Wing Project Office (FWPO)

IAP Inc.

Defense Enterprise Wideband Satellite Communications System (DEWSS)

ICF Incorporated

Force Provider Expeditionary (FPE)

Ideal Innovation Incorporated (I3)

Next Generation Biometric Collection Capability (NGXBCC)

InSAP

Global Combat Support System – Army (GCSS-Army)

InBios International, Inc.

Warfighter Protection and Acute Care Project Management Office (WPAC PMO)

Integrated Solutions for Systems, Inc.

Tactical Contamination Mitigation System (TCMS)

InVeris Training Solutions

Future Army System of Integrated Targets (FASIT)

Israeli Ministry of Defense

Iron Dome Defense System – Army (IDDS-A)

JANUS Research Group

- Satellite Communications Family of Terminals (SATCOM FoT)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

JCB

High Mobility Engineer Excavator Type IV (HMEE-IV)

JRM Technologies

Future Army System of Integrated Targets (FASIT)

Joint Systems Manufacturing Center

Abrams Main Battle Tank

Kaléo, Inc.

Rapid Opioid Countermeasure System (ROCS)

Kaman

Army Tactical Missile System (ATACMS)

KBR

Fixed Wing Project Office (FWPO)

Klas

- Satellite Communications Family of Terminals (SATCOM FoT)
- Signal Modification (SigMod)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Kodiak Robotics

Robotic Combat Vehicle (RCV)

Kongsberg Defence and Aerospace

Common Remotely Operated Weapon Station (CROWS) – M153

L2 Defense

- Chemical, Biological, Radiological, Nuclear Dismounted Reconnaissance Systems (CBRN DRS)
- Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)

L3 FOS

Army Tactical Missile System (ATACMS)

L3 Harris - Integrated Mission Systems

Fixed Wing Project Office (FWPO)

L3 Harris Technologies, Inc.

- Army Tactical Missile System (ATACMS)
- Defense Enterprise Wideband Satellite Communications System (DEWSS)
- Distributed Common Ground System Army (DCGS-A)
- Enhanced Night Vision Goggle Binocular (ENVG-B)
- Handheld, Manpack, and Small Form Fit (HMS)
- Satellite Communications Family of Terminals (SATCOM FoT)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Leading Technology Composites, Inc.

Soldier Protection Systems (SPS)

Leidos

Joint Expeditionary Collective Protection (JECP)

Leidos, Inc.

Fixed Wing Project Office (FWPO)

Leonardo DRS, Inc.

- Early Entry Fluid Distribution System (E2FDS)
- Family of Weapon Sights Crew Served (FWS-CS)
- Joint Effects Targeting System (JETS)
- Military Bridging Systems

Letterkenny Army Depot

Force Provider Expeditionary (FPE)

Lifelens

Warfighter Health Performance and Evacuation (WHPE)

Linchpin Solutions

Satellite Communications Family of Terminals (SATCOM FoT)

Lite Coms/AVL

Satellite Communications Family of Terminals (SATCOM FoT)

LMI

Global Combat Support System – Army (GCSS-Army)

Lockheed Martin Corporation

- Advanced Anti-Tank Weapon System Medium (Javelin)
- Army Integrated Air and Missile Defense (AIAMD)
- Counterfire Radar AN/TPQ-53
- Helicopter Launched Fire and Forget (HELLFIRE (HF))
- High Mobility Artillery Rocket System (HIMARS) M142
- Instrumentable-Multiple Integrated Laser Engagement System (I-MILES)
- Joint Air-to-Ground Missile (JAGM)
- Long-Range Hypersonic Weapon (LRHW)
- Mid-Range Capability (MRC)
- Multiple Launch Rocket System (MLRS) M270A1 and M270A2
- Sentinel Aerial Surveillance Radar AN/MPQ-64 A3 & AN/MPQ-64 A4 (Sentinel A3, Sentinel A4)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Lockheed Martin Missiles and Fire Control

- Army Tactical Missile System (ATACMS)
- Guided Multiple Launch Rocket System (GMLRS)
- Phased Array Tracking Radar to Intercept of Target (PATRIOT) Advanced Capability-3 (PAC-3)
- Precision Strike Missile (PrSM)

Lockheed Martin Rotary and Mission Systems

Multi-Function Electronic Warfare – Air Large (MFEW-AL)

Loc Performance

Bradley Fighting Vehicle – M2A4

MAG DS Corp.

Fixed Wing Project Office (FWPO)

Marinette Marine Corporation

Army Watercraft Systems (AWS)

MaxVision, Rugged Portable Computers, LLC

Distributed Common Ground System – Army (DCGS-A)

Microsoft

Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

MossPoint Marine

Army Watercraft Systems (AWS)

MRI Global

- Joint Handheld Bio-Agent Identifier (JHBI)
- Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)

Nammo

Artillery Ammunition

Nanohmics

Warfighter Health Performance and Evacuation (WHPE)

N5 Sensors Inc.

Compact Vapor Chemical Agent Detector (CVCAD)

Nokomis

Future Army System of Integrated Targets (FASIT)

Nordic Ammunition Company (Nammo)-Pocal, Inc.

Mortar Weapon Systems

Northrop Grumman Systems Corporation

- Air and Missile Defense Planning and Control System (AMDPCS)
- Ammunition Large Caliber
- Ammunition Medium Caliber
- Army Integrated Air and Missile Defense (AIAMD)
- Artillery Ammunition
- Defense Enterprise Wideband Satellite Communications System (DEWSS)
- Forward Area Air Defense Command and Control (FAAD C2)
- Fixed Wing Project Office (FWPO)
- Precision Guidance Kit/Long Range Precision Guidance Kit (PGK/LR-PGK)

Oshkosh Defense, LLC

- Enhanced Heavy Equipment Transporter System (EHETS)
- Family of Medium Tactical Vehicles (FMTV) A2
- Joint Light Tactical Vehicles (JLTV)
- · Military Bridging Systems
- Palletized Load System (PLS) and PLS Extended Service Program (ESP)
- Stryker Brigade Combat Team (SBCT)

Pacific Star Communications (PacStar)

- Satellite Communications Family of Terminals (SATCOM FoT)
- Signal Modification (SigMod)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Palantir USG, Inc.

Distributed Common Ground System – Army (DCGS-A)

PD Power Systems

Tactical Electric Power (TEP)

Pearson Engineering Limited

Military Bridging Systems

Phoenix Defense

Future Army System of Integrated Targets (FASIT)

Phoenix Logistics, Inc.

Joint Land Component Constructive Training Capability (JLCCTC)

Pine Bluff Arsenal

- Artillery Ammunition
- Mortar Weapon Systems
- Warfighter Health Performance and Evacuation (WHPE)

Point Blank Enterprises

Soldier Protection Systems (SPS)

Pratt Miller Defense

Future Army System of Integrated Targets (FASIT)

Production Products Manufacturing & Sales, Co., Inc.

- Force Provider Expeditionary (FPE)
- Joint Expeditionary Collective Protection (JECP)

QinetiQ, Inc.

- Common Robotic System Individual (CRS-I)
- Robotic Combat Vehicle (RCV)

Rafa Laboratories, LTD

Advanced Anticonvulsant System (AAS)

Raytheon

- Army Integrated Air and Missile Defense (AIAMD)
- Electronic Warfare Planning and Management Tool (EWPMT)

Raytheon Information Systems

- Distributed Common Ground System Army (DCGS-A)
- Sentinel Aerial Surveillance Radar AN/MPQ-64 A3 & AN/MPQ-64 A4 (Sentinel A3, Sentinel A4)

Raytheon Intelligence and Space

Third Generation Forward Looking Infrared (3GEN FLIR)

Raytheon Missiles and Defense

- 155 mm Excalibur Projectiles
- Stinger Block I with Proximity Fuze (PROX)

Raytheon Technologies

- Advanced Anti-Tank Weapon System Medium (Javelin)
- Lower Tier Air and Missile Defense Sensor (LTAMDS)

Ready One Industries, Inc.

- Force Provider Expeditionary (FPE)
- Uniform Integrated Protection Ensemble Family of Systems General Purpose (UIPE FoS GP)

Red River Army Depot

Enhanced Heavy Equipment Transporter System (EHETS)

Renk America

Bradley Fighting Vehicle – M2A4

Research Innovations Incorporated

Cyber Situational Understanding (Cyber SU)

Riverbend Technology

Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

RTI International

Warfighter Brain Health Project Management Office (WBH PMO)

Safran

UH-72A/B Lakota Light Utility Helicopter (LUH)

SCI Technology

Command Post Integrated Infrastructure (CPI2)

SensorMetrix

Future Army System of Integrated Targets (FASIT)

Serco

Command Post Integrated Infrastructure (CPI2)

Sierra Nevada Corporation

Fixed Wing Project Office (FWPO)

Sigma Defense

Signal Modification (SigMod)

Signature Science

Multi-Phase Chemical Agent Detector (MPCAD)

Sikorsky, a Lockheed Martin Company

UH/HH-60M Black Hawk

Silvus Technologies

- Handheld, Manpack, and Small Form Fit (HMS)
- Signal Modification (SigMod)

Slate Solutions

Soldier Protection Systems (SPS)

Smiths Detection, Inc.

Aerosol Vapor Chemical Agent Detector (AVCAD)

SourceAmerica

Uniform Integrated Protection Ensemble Family of Systems General Purpose (UIPE FoS GP)

Systematic

Command Post Computing Environment (CPCE)

Tampa Microwave

- Satellite Communications Family of Terminals (SATCOM FoT)
- Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

TCSI

Fixed Wing Project Office (FWPO)

Telecommunications Systems, Inc.

Tactical Network Transport (TNT) At The Halt (ATH) And On The Move (OTM)

Teledyne FLIR

- Chemical, Biological, Radiological, Nuclear Dismounted Reconnaissance Systems (CBRN DRS)
- Common Robotic System Heavy (CRS-H)
- Man Transportable Robotic System Increment II (MTRS Inc II)
- Multi-Phase Chemical Agent Detector (MPCAD)
- Nuclear Biological Chemical Reconnaissance Vehicle Sensor Suite Upgrade (NBCRV SSU)

TenCate Advanced Armor USA

Soldier Protection System (SPS)

Textron Aviation Inc.

Fixed Wing Project Office (FWPO)

Textron

Robotic Combat Vehicle (RCV)

Thales Defense & Security, Inc.

Handheld, Manpack, and Small Form Fit (HMS)

Theissen Training System

Future Army System of Integrated Targets (FASIT)

Tobyhanna Army Depot

- Military Bridging Systems
- Nett Warrior (NW)

TRX Systems

Dismounted Assured Positioning, Navigation, and Timing (PNT) System (DAPS)

TSI, Incorporated

Protection Assessment Test System (PATS) – M41A1

Ultra Electronics

Air and Missile Defense Planning and Control System (AMDPCS)

Ultra Intelligence and Communications

Signal Modification (SigMod)

US Ordinance

Small Arms – Crew Served Weapons (CSW)

Vascular Solutions Inc.

Warfighter Protection and Acute Care Project Management Office (WPAC PMO)

Veterans Corps of America

Man-portable Radiological Detection System (MRDS)

ViaSat

Joint Battle Command – Platform (JBC-P)

Vigor Works, LLC

Army Watercraft System (AWS)

VT Halter Marine

Army Watercraft Systems (AWS)

Weapons & Software Engineering Center

Command Post Computing Environment (CPCE)

Westat

Warfighter Protection and Acute Care Project Management Office (WPAC PMO)

Williams Fairey Engineering Ltd.

Military Bridging Systems

Zel Tech

Future Army System of Integrated Targets (FASIT)

