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Our Mission
Protect the Joint Force from weapons of mass destruction by generating affordable capabilities.

Our Vision
A resilient Joint Force enabled to fight and win unencumbered by a chemical, biological, radiological, or nuclear environment; championed by innovative, agile, results-oriented acquisition professionals.
The Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND) is the Joint Service’s lead for development, acquisition, fielding and life-cycle support of chemical, biological, radiological and nuclear (CBRN) defense equipment and medical countermeasures. As an effective acquisition program, we put capable and supportable systems in the hands of the service members and first responders when and where they are needed at an affordable price. Our vision is a resilient Joint Force enabled to fight and win unencumbered by a chemical, biological, radiological, or nuclear environment; championed by innovative and state-of-the-art solutions.

We are structured into portfolios that focus on CBRN Protection, Medical and Sensors. This construct allows us greater flexibility in aligning investments to goals and balancing risk against performance in order to enable mission success. These core focus areas contribute to building a more lethal force, a priority in the National Defense Strategy, and streamline JPEO-CBRND efforts to meet the Joint Service’s needs in combatting CBRN threats.

Three Joint Project Managers (JPM) provide oversight for the portfolios, including JPM CBRN Protection, JPM CBRN Medical and JPM CBRN Sensors. Four Joint Project Leads (JPL) focus on CBRN Special Operations Forces, Information Management/Information Technology, Portfolio Resources and Enabling Biotechnologies. The JPLs also provide portfolio-wide enabling support across the JPEO-CBRND.

The future of defense acquisition is fast and agile, and we work closely with our partners and end users every step of the way to deliver capabilities faster and at the right cost. At JPEO-CBRND, we are streamlining our business processes in order to provide the Joint Force the equipment it needs to succeed in any environment.

Mr. Douglas W. Bryce  
Joint Program Executive Officer for Chemical, Biological, Radiological and Nuclear Defense
Mr. Douglas W. Bryce was designated the Joint Program Executive Officer for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND) on 22 October 2015. As the JPEO-CBRND, he has materiel acquisition decision authority for the services on chemical, biological, radiological and nuclear defense equipment. He provides acquisition management and professional leadership on complex issues related to joint service CBRN defense acquisition programs. He plans, directs, manages and coordinates the JPEO-CBRND’s mission, and is responsible for the development, acquisition, distribution, and deployment of highly specialized and dynamic joint CBRN defense devices, as well as medical diagnostic systems, drugs, and vaccines.

For the 10 years prior to his current role, Mr. Bryce served as the Deputy Joint Program Executive Officer for Chemical and Biological Defense, overseeing a diverse team of acquisition professionals and technical subject matter experts to effectively manage the CBRN defense acquisition process. From 2003-2005, he served concurrently as the Joint Project Manager for Individual Protective Equipment and the Project Manager for Marine Corps CBRN Defense Equipment. Prior to 2005, he was the Project Manager for Individual Marine Combat Equipment and NBC Defense Equipment, and the Product Manager for NBC Defense Equipment for Marine Corps Systems Command. Mr. Bryce served 20 years in the United States Marine Corps, retiring as a Chief Warrant Officer 3.

Mr. Bryce attended Los Angeles Community College, holds a Level III Program Management Certification from the Defense Acquisition University and is a member of the Navy Acquisition Corps. He authored articles published in Military Medical Technology magazine, Marine magazine and the Marine Corps Gazette.

Mr. Bryce’s awards include the Navy Unit Commendation, Marine Corps Systems Command; the David Packard Excellence in Acquisition Award; the Commander’s Roundtable Team Excellence Award; the Navy Certificate of Excellence; the Meritorious Service Medal (Gold Star in lieu of second award); and the Navy Commendation Medal (Gold Star in lieu of second award).
DR. JASON W. ROOS

Dr. Roos serves as Deputy Joint Program Executive Officer for Chemical, Biological, Radiological and Nuclear Defense. He provides management and technical direction to the entire portfolio and leads civilian and military multi-disciplinary teams whose mission is to protect the U.S. Joint Forces and nation from CBRN threats. As a career Army acquisition professional and Ph.D. scientist, he brings a unique blend of acquisition, technical and business expertise to JPEO-CBRND.

Dr. Roos engages with Congress, the US Army and other Department of Defense organizations on CBRN defense program management and execution. He interfaces with the science and technology (S&T) community, and coordinates CBRN defense technology needs with DoD S&T agencies, interagency elements, international partners and industry.

Dr. Roos previously held numerous management positions within JPEO-CBRND, leading innovation and reform in CBRN defense acquisition. He was Director of the Biosurveillance Management Office (BMO), managing a portfolio of programs to field capabilities to enable early detection and warning of global health threats. He led the Joint Product Management Office for Biosurveillance—Provisional where he conducted total life cycle management of the Joint Biological Agent Identification and Diagnostic System, the Next Generation Diagnostic System and the Critical Reagents Program.

Dr. Roos holds a Bachelor’s in chemistry from College of the Holy Cross; a Ph.D. in Biochemistry, Cellular and Molecular Biology from Johns Hopkins University School of Medicine; and a Master’s in National Resource Strategy from National Defense University. He is a Certified Acquisition Professional.

MR. DANIEL J. MCCORMICK

Mr. McCormick is the Deputy Joint Program Executive Officer for Operations and Modernization. In this role, he leverages an extensive background and significant experience in the Chemical and Biological Defense Program. He helps ensure JPEO-CBRND programs are synchronized, prioritized and balanced to effectively integrate technologies in support of delivering CBRN defense capabilities to the Warfighter and nation.

Mr. McCormick’s work experience includes more than 28 years of service as an Army officer and more than 20 years of acquisition experience. Prior to his current assignment, Mr. McCormick served JPEO-CBRND as Acting Deputy, Deputy Chief of Staff for Strategic Portfolio Integration and Special Assistant for Acquisition Integration. Mr. McCormick also served JPEO-CBRND as a Joint Project Manager responsible for the development, manufacture, test, fielding and life-cycle management of Department of Defense nuclear, chemical and biological defense programs. During his tenure as Joint Project Manager for Nuclear Biological and Chemical Contamination Avoidance, then Colonel McCormick deployed to Afghanistan to lead planning, establishment and execution of Afghan Public Protection Force efforts in direct support of the Commander, International Security Assistance Force.

Mr. McCormick’s acquisition assignments included Test Director for Future Combat Systems; Director of Plans, Programs and Resources for the Office of the Assistant Secretary of the Army; and the Joint Product Manager for Nuclear, Biological, Chemical Reconnaissance and Obscuration Systems. He had numerous other acquisition and tactical field artillery assignments during his Army career. He is a member of the Acquisition Corps and is Level III certified in Program Management. He holds a Master’s degree from Naval War College and George Mason University, and a Bachelor’s degree from Florida Institute of Technology.
COLONEL ANNA M. SCHNEIDER

Colonel Schneider has served as the Assistant Joint Program Executive Officer since July 2019. Prior to joining JPEO-CBRND, she served in numerous assignments as a developmental engineer, program manager, and political-military affairs strategist.

Colonel Schneider began her military career as a Satellite Control Systems Development Engineer at the Space and Missile Systems Center, Los Angeles Air Force Base. She served as Assistant Chief of Wing Mission Planning Cell in the 51st Fighter Wing at Osan Air Base, then and as a Foreign Electronic Systems Analyst and Executive Officer at Ramstein Air Base. She was a CV-22 Flight Test Engineer at Edwards Air Force Base and Chief of Engineering Officer Assignments at Randolph Air Force Base. Additional assignments included Deputy Assistant Program Manager for Test and Evaluation and Acquisition Manager for the Deployable Joint Command and Control System Joint Program Office at Naval Support Activity Panama City, Florida, and Chief of Africa Biological Threat Reduction at the Defense Threat Reduction Agency. She was a Deputy Division Chief and Executive Officer to the Vice Director of the Joint Improvised-Threat Defeat Organization. She then served as Chief of Modeling and Simulation under the Deputy Assistant Secretary of the Air Force for Science, Technology and Engineering at the Pentagon. In July 2017, Colonel Schneider joined JPEO-CBRND as Joint Project Manager–Guardian before transitioning to her current role as Assistant Joint Program Executive Officer.

Colonel Schneider earned a Bachelor’s in electrical engineering from Marquette University, a Master’s in international relations from University of Oklahoma, and a Master’s in security studies from Naval Postgraduate School. She is a Joint Qualified Officer and graduate of Squadron Officer School, Air Command and Staff College, Air War College, the Defense Systems Management College, and Joint Forces Staff College. She is Level III Defense Acquisition Workforce Improvement Act certified in Program Management; Systems Planning, Research, Development and Engineering–Systems Engineering; and Test and Evaluation.

COLONEL KEVIN K. Pitzer

Colonel Pitzer has served as the Assistant Joint Program Executive Officer–Medical since July 2019. He coordinates joint requirements and plans with the Office of the Secretary of Defense, Joint Staff, Joint Services, Combatant Commands, and interagency partners to ensure accomplishment of the medical mission. He reinforces joint program baselines; supports Program Managers, directors, and chiefs; and is interagency lead coordinator for medical.

Colonel Pitzer graduated magna cum laude from Gannon University with a Bachelor’s in Chemistry and was concurrently commissioned a Second Lieutenant in the US Army. He entered active duty after earning a Ph.D. in Organic Chemistry at Virginia Polytechnic Institute and State University.

Colonel Pitzer’s first duty assignment was at Walter Reed Army Institute of Research; he taught at National Institutes of Health during this assignment. Additional assignments included Assistant Professor, US Naval Academy; Deputy Commander, Forensic Toxicology Drug Testing Laboratory (FTDTL), Fort Meade; Commander, FTDTL, Tripler Army Medical Center; Laboratory Operations Manager, Portfolio of Laboratory Sciences, Army Institute of Public Health, US Army Public Health Command; Deputy Commander, US Army Medical Research Institute of Chemical Defense; Chief of Staff of Walter Reed Army Institute of Research; and Director of Operations and International for JPEO-CBRND.

Colonel Pitzer is a graduate of the Army Medical Department Officer Basic and Advance Courses; Combined Arms and Services Staff School; Command and General Staff Officer’s Course; and Advanced Science and Technology Management Course. He is a Level III certified acquisition professional in both Program Management and Science and Technology Management.
JOINT PROJECT MANAGER (JPM) DESCRIPTIONS

JPM CBRN PROTECTION

JPM CBRN Protection develops, fields and sustains CBRN protection and increases mitigation capabilities for the Nation. Their focus in coordination with JPL CBRN Special Operations Forces is to unencumber the warfighter by developing a next-generation protective ensemble that reduces the physiological burden on the user and enhances protection to emerging threats. They also focus on developing contamination mitigation technologies including decontamination systems, protective coatings and barriers to significantly decrease the time required to decontaminate and reset personnel and equipment in CBRN environments.

JPM CBRN MEDICAL

JPM CBRN Medical facilitates the advanced development and acquisition of medical solutions to combat CBRN and emerging threats. Their focus in coordination with JPL Enabling Biotechnologies is to provide new and improved medical countermeasures to enable a single treatment for many threats, rapid medical countermeasure responses, genomic sequencing and the capability to diagnose CBRN threats before the onset of symptoms.

JPM CBRN SENSORS

JPM CBRN Sensors develops, fields and sustains CBRN sensors, reconnaissance systems, mobile laboratory systems and obscuration capabilities. Their focus in coordination with JPL Information Management/Information Technology is to provide integrated early warning by bringing together the products in its portfolio along with robotics and autonomous systems, decision support tools, machine learning and artificial intelligence to provide situational awareness and understanding of CBRN threats.
JOINT PRODUCT LEAD (JPL) DESCRIPTIONS

JPL CBRN SPECIAL OPERATIONS FORCES (JPL CBRN SOF)
JPL CBRN rapidly acquires and equips Special Operation and Special Purpose Forces with critical, capability-gap-filling, chemical, biological, radiological and nuclear defense equipment necessary to underwrite mission success. CBRN SOF’s focus is to further develop crucial technologies necessary to the survival and unimpeded employment of special operations forces in toxic environments and transition those technologies to other Programs of Record to enhance the capability of the Joint Forces.

JPL CBRN INFORMATION MANAGEMENT/INFORMATION TECHNOLOGY (JPL CBRN IM/IT)
JPL CBRN IM/IT provides enterprise warning and reporting, hazard prediction and decision support capabilities for the collection, analysis and dissemination of CBRN defense information. JPL CBRN IM/IT capabilities provide battlespace awareness of CBRN threats via integrated early warning, DOD accredited hazard prediction models, and consequence management, course-of-action analysis, and decision support tools. JPL CBRN IM/IT is comprised of CBRN Information System (CBRN-IS), Global Biosurveillance Portal (GBSP), Joint Effects Model (JEM), Joint Warning and Reporting Network (JWARN), and Software Support Activity (SSA). JPL CBRN IM/IT is uniquely suited to provide Joint Service CBRN defense capabilities based on expertise in modeling, simulation and systems integration, and through leveraging our partnership with the Navy’s PEO C4I and our close working relationship with the Naval Information Warfare Systems Command.

JPL CBRN PORTFOLIO RESOURCES (JPL CPR)
JPL CPR consists of eight cross-cutting functional areas that leverage executive tools and professional resources to provide products, support, and services across the JPEO-CBRND. As a customer-focused support organization, JPL CPR streamlines and executes processes for the JPMs and the headquarters. JPL CPR provides timely and quality acquisition support services to the JPMs, enabling them to focus more on providing CBRN defense solutions and capabilities to the warfighter. JPL CPR consists of the Joint Contract Management Office (JCMO), Communication Affairs Network (CAN), Integrated Product Support (IPS), Operations and International (O&I), Systems Support Directorate (SSD), Continuous Performance Improvement (CPI), Cost Estimation (CE), and Test, Evaluation and Infrastructure (TEI).

JPL CBRN ENABLING BIOTECHNOLOGIES (JPL CBRN EB)
JPL CBRND Enabling Biotechnologies (EB) combines and synergizes the Platforms for Rapid Integrated Solutions for Medical Countermeasures (PRISM [MCM]), Advanced Development and Manufacturing Capabilities (ADMC), and Defense Biologics Product Assurance (DBPAO) offices. EB provides capabilities, infrastructure, and support for accelerated medical countermeasure development, manufacturing, testing, and deployment through a network of partnerships to address known, emerging, and engineered threats. During a crisis response, EB will play a leading role in centrally integrating capabilities to progress rapidly from “Information to Injection,” including threat identification and characterization, MCM development and manufacturing, non-clinical and clinical testing, and fielding. EB brings a full suite of capabilities to support accelerated MCM development for the Warfighter, with an emphasis on efficiency and operational relevance.
Enable the investment in and development of mission-based capability sets within the portfolio through an integrated architecture of current and emerging capabilities, threats, requirements and user engagements.

- EXPERIMENTATION
- STRATEGIC ENGAGEMENT
- ENTERPRISE ARCHITECTURE
- SYSTEMS ENGINEERING
- EMERGING THREATS
- EMERGING CAPABILITIES

Strategically align policy, people, process, data and technology to enable leaders at all levels to assess and respond to the health and risks of the portfolio necessary to achieve strategic goals.

- PORTFOLIO ANALYSIS
- PLANNING, PROGRAMMING, BUDGET
- AND EXECUTION SYNCHRONIZATION
- DATA MANAGEMENT AND GOVERNANCE
- ASSESSMENT AND PORTFOLIO INSIGHT
- COST, SCHEDULE AND PERFORMANCE TRADE-OFFS
CHEMICAL BIOLOGICAL PROTECTIVE SHELTER (CBPS)

Description: CBPS is a mobile, self-contained, rapidly deployable, chemically and biologically protected shelter system that provides a contamination-free, environmentally controlled medical treatment area. The CBPS is intended to be fielded to the US Army, US Army Reserves and US Army National Guard.

Benefits to Warfighter: CBPS allows Forward Resuscitative Surgical Teams and Role/Echelon I and II forward-deployed medical personnel to treat patients without the encumbrance of individual protective clothing and equipment in a chemical and/or biological environment.

Program Status:
- FY19
  - Type Classification-Standard and Full Materiel Release for 253 M8E1 units
  - Executed initial fielding of M8E1 variant

Projected Activities:
- FY19-FY20: Continue organic production of M8E1 systems at Pine Bluff Arsenal in support of the Army Acquisition Objective
- FY20: Follow-On Materiel Release for organically produced M8E1 systems
- FY20-FY24: Fielding of M8E1 systems

JOINT EXPEDITIONARY COLLECTIVE PROTECTION (JECP)

Description: JECP will provide modular, transportable, and versatile collective protection capabilities to the Joint Expeditionary Forces. These systems will provide a collective protection capability through tent kits, structure kits and standalone shelter systems. Per Milestone Decision Authority approval, the JECP is being developed in phases. Phase 1 systems include Tent Kit 2, Structure Kit Improved and Stand Alone Large. Phase 2 systems include Tent Kit 1, Tent Kit 3, Tent Kit Single Skin and Structure Kit Unimproved.

Benefits to Warfighter: JECP is a family of systems that 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:
- FY18: Full Material Release for Phase 1 systems
- FY19:
  - Completed Phase 2 development and production contract award
  - Achieved Initial Operational Capability for Phase 1 systems
  - Completed Phase 1 follow-on production contract award

Projected Activities:
- FY22: Milestone C Full Rate Production for Phase 2 systems
- FY23: Initial Operational Capability for Phase 2 systems
CONTAMINATION INDICATOR DECONTAMINATION ASSURANCE SYSTEM (CIDAS)

Description: CIDAS will indicate the presence and location of traditional nerve and blister chemical warfare agents and non-traditional agents on tactical vehicles, aircraft, shipboard surfaces, crew-served weapons, and individual/personnel weapons pre- and post-decontamination. In POM21, CIDAS was split into CIDAS Nerve and CIDAS Blister.

Benefits to Warfighter: Increased decontamination efficiency and reduced logistics burden (e.g. water, manpower, and decontaminants) population groups through a standardized, modular system scalable to increase capability.

Program Status:
- FY15: CIDAS Milestone B

Projected Activities:
- CIDAS Nerve
  - FY20: Milestone C Full Rate Production for Small Scale Applicators-Nerve (SSA-N)
  - FY21: Initial Operational Capability for SSA-N
  - FY22: Milestone C Full Rate Production for Large Scale Applicators (LSAs) and Large Scale Kit-Nerve (LSK-N)
  - FY22: Initial Operational Capability for LSAs and LSK-N
- CIDAS Blister
  - FY22: Milestone C Low Rate Initial Production
  - FY23: Full Rate Production
  - Continue production to support Initial Operational Capability

JOINT BIOLOGICAL AGENT DECONTAMINATION SYSTEM (JBADS)

Description: JBADS will provide the capability to conduct biological agent decontamination of the interior and exterior of C-130 Stretch (H/J/J-30) aircraft. The system will include an aircraft enclosure and aircraft decontamination units to create and maintain hot, humid conditions for biological thermal decontamination.

Benefits to Warfighter: Decontaminates biologically decontaminated aircraft to facilitate return to service and enable mission continuation.

Program Status:
- FY17: Milestone B
- FY19: Completed Delivery Order award

Projected Activities:
- FY22: Milestone C Full Rate Production and Initial Operational Capability
- FY23: Full Operational Capability
JOINT GENERAL PURPOSE DECONTAMINANT FOR HARDENED MILITARY EQUIPMENT (JGPD-HME)

Description: JGPD-HME will provide Warfighters a thorough decontaminant that is compatible with the M26 and has a significantly reduced logistics footprint for tactical vehicles, shipboard surfaces, crew-served weapons, and individual/personal weapons in hostile and non-hostile environments that have been exposed to chemical and biological agents/contamination.

Benefits to Warfighter: JGPD-HME will be used to remove, reduce, or destroy contaminants from hardened military equipment. JGPD-HME will be employed to decontaminate hazards posing threats to military operations including peacekeeping, stability, and support or consequence management operations.

Program Status:
- FY17: Milestone C Low Rate Initial Production

Projected Activities:
- FY20: Full Rate Production
- FY24: Full Operational Capability

JOINT SERVICE EQUIPMENT WIPE (JSEW)

Description: JSEW provides immediate and operational decontamination capabilities for sensitive and non-sensitive equipment that have been exposed to traditional and non-traditional chemical contamination, replacing/augmenting the M295 legacy decontamination kit.

Benefits to Warfighter: The first decontamination capability available to Warfighters that is non-destructive to sensitive equipment. JSEW will be applied directly to the contaminated surface and is capable of removing gross contamination and reducing contact hazard within five minutes without leaving a residue.

Program Status:
- FY18: Full Rate Production
- FY18: Initial Operation Capability for US Navy
- FY19: Initial Operation Capability for US Army

Projected Activities:
- FY19: Full Operational Capability for US Navy
- FY20: Full Operational Capability for US Army

MASS PERSONNEL DECONTAMINATION (MPD)

Description: The MPD will provide Warfighters with the capability to reduce the hazards associated with mass casualty decontamination efforts for protected and unprotected personnel, causalities and contaminated human remains potentially exposed to CBRN hazards.

Benefits to Warfighter: MPD reduces and limits the spread of contamination among potentially contaminated population groups through a standardized, modular system scalable to increase capability.

Program Status:
- FY19: Requirements Table Top Exercise

Projected Activities:
- FY20: Milestone A
- FY21: Milestone B
- FY23: Milestone C Full Rate Production
**JOINT SERVICE AIRCREW MASK ROTARY WING (JSAM RW) MASK PROTECTIVE UNIT 5**

**Description:** The JSAM RW variant provides head, eye, and respiratory protection against chemical and biological threats for general purpose rotary wing aircrew except the AH-64 Apache and the V-22 Osprey.

**Benefits to Warfighter:** The JSAM RW is capable of being donned and doffed while in flight and decreases thermal burden compared to legacy systems. The mask allows Warfighters to survive and maintain operations in a chemical and biological threat environment.

**Program Status:**
- FY18: Full Rate Production for US Navy and US Marine Corps
- FY19: Production Delivery Order awarded

**Projected Activities:**
- Continue production and fielding of masks in support Full Operational Capability in FY24

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**JOINT SERVICE AIRCREW MASK FOR STRATEGIC AIRCRAFT (JSAM SA)**

**Description:** The JSAM SA mask will provide individual respiratory, ocular, and percutaneous protection from chemical and biological warfare agents, and select toxic industrial chemicals for US Air Force, US Navy, US Marine Corps, and US Army strategic aircrew.

**Benefits to Warfighter:** Allows fixed-wing aircrew of non-ejection aircraft to survive and maintain operations in a chemical and biological threat environment.

**Program Status:**
- FY18: Milestone C Full Rate Production and fielding decision US Air Force E-3 and US Navy P-8

**Projected Activities:**
- FY20: Initial Operational Capability

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**JOINT SERVICE AIRCREW MASK FOR TACTICAL AIRCRAFT (JSAM TA)**

**Description:** The JSAM TA will deliver a lightweight, protective mask system providing chemical and biological head, eye, and respiratory protection for aircrew of high performance, ejection seat tactical aircraft. JSAM TA will provide the Warfighter with an integrated chemical and biological protective system designed to meet wartime expectations.

**Benefits to Warfighter:** Allows fixed-wing aircrew of high performance ejection seat tactical aircraft to survive and maintain operations in a chemical and biological threat environment.

**Program Status:**
- FY19: Milestone C Full Rate Production

**Projected Activities:**
- FY21: Initial Operational Capability
- Continue production and field masks in support of Full Operational Capability in FY24
M41A1 PROTECTIVE ASSESSMENT TEST SYSTEM (PATS)

Description: The M41A1 PATS enables quantitative protective mask fit assessment and validation. The legacy M41 PATS critical electronic parts are no longer being manufactured. Modernization is necessary to overcome shortage of calibration and repair maintenance parts and sustain capability for man-mask fit testing.

Benefits to Warfighter: The M41A1 PATS enables man-mask system fit factor testing to provide a “go/no-go” check of mask fit on the user, which includes the U.S. Army, Surety Sites and DoD Components.

Program Status:
- FY19: Type Classification / Materiel Release

Projected Activities:
- FY20:
  - Contract award
  - Production and fielding in support of the Army Acquisition Objective

JOINT SERVICE GENERAL PURPOSE MASK (JSGPM)

Description: The JSGPM is an above-the-neck chemical and biological protective respirator that protects against battlefield concentrations of chemical and biological threat agents, toxins, toxic industrial materials and radioactive particulate matter. Includes the M50 (ground use), M51 (ground vehicle use), M53 (Special Forces), and M53A1 (domestic and military use).

Benefits to Warfighter: Allows Warfighters to survive and maintain ground operations in a chemical and biological threat environment.

Program Status:
- FY08: M50/M51 Milestone C Full Rate Production and Type Classification

Projected Activities:
- M50/M51
  - FY20: M50/M51 US Army Full Operating Capability
- M53A1
  - FY20: Type Classification / Materiel Release and First Unit Equipped
  - Continue production and fielding of M53A1 masks to meet the requirement in FY23
UNIFORM INTEGRATED PROTECTION ENSEMBLE FAMILY OF SYSTEMS (UIPE FOS)

Description: The UIPE FoS will provide a broad spectrum of users with individual, percutaneous protective equipment that can be employed in a contaminated environment with no or minimal degradation in performance. UIPE FoS will seek to address the broader scope of the UIPE Initial Capabilities Document, to include protection from operationally relevant traditional, non-traditional, and advanced CBRN and toxic industrial materials threats likely to be encountered during joint force operations. In POM21, UIPE was split into three lines: UIPE Air, UIPE General Purpose and UIPE Glove.

Benefits to Warfighter: Provide individual protective capabilities through reduction of physiological and psychological burdens associated with the weight, bulk, thermal strain, and encumbrance of wearing CBRN protective gear.

Program Status:
• FY17: UIPE FoS Milestone A
• FY19: Completed UIPE Land (now known as General Purpose) Schedule Decision Point

Projected Activities:
• UIPE Air
  – FY20: Milestone C Low Rate Initial Production
  – FY21: Full Rate Production
  – FY22: Initial Operational Capability
• UIPE General Purpose
  – FY21: Milestone B
  – FY23: Milestone C Low Rate Initial Production and Full Rate Production
• UIPE Gloves
  – FY21: Program begins
NEXT GENERATION DIAGNOSTICS SYSTEM (NGDS) INCREMENT 1

Description: The NGDS Increment 1 rapidly analyzes clinical and environmental samples for biological pathogens. Analysis results may be used for Food and Drug Administration (FDA)-cleared biological pathogen diagnosis and identification. The biological warfare agent Warrior Panel (anthrax, plague, tularemia, Q fever, Ebola and Marburg) is cleared by FDA for use with blood culture, whole blood and sputum samples to aid in human diagnosis. The Sentinel Panel includes targets for anthrax, tularemia, Q fever, Ebola, Marburg, *Yersinia pestis*, *Burkholderia pseudomallei*, *Burkholderia mallei*, *Brucella sp*, *Brucella melitensis*, *Rickettsia prowazekii*, Eastern, Venezuelan, and Western encephalitides, Orthopox, Variola, ricin, botulinum, and training assays.

Benefits to Warfighter: NGDS will be employed in US Army (Role 3), US Air Force (Role 3) and US Navy (Role 2 and 3) deployable Combat Health Support units, with applicability to routine healthcare at higher echelons. NGDS will support accurate patient treatment, force health protection and CBRN situational awareness.

Program Status:
- FY17: FDA Clearance and US Air Force fielding initiated
- FY18: Full Rate Production Decision

Projected Activities:
- FY19: US Army Initial Operational Capability
- FY21: US Navy Full Operational Capability

NGDS 2 CHEMICAL DIAGNOSTIC DEVICE (ChemDX)

Description: NGDS 2 ChemDx will provide an FDA-cleared capability to identify and diagnose exposure to traditional and non-traditional chemical warfare agents by diagnosing a decrease in acetylcholinesterase levels in an individuals’ blood, indicating exposure to chemical nerve agent.

Benefits to Warfighter: NGDS 2 ChemDx provides the far-forward, individual warfighter with an immediate medical diagnostic capability to diagnose potential nerve agent exposure before symptoms present themselves. This capability will inform medical treatment and Commander force protection decisions, increasing individual and unit survival.

Program Status:
- FY19: Other Transaction Authority contract awarded to MRI Global to develop prototypes and conduct preliminary performance testing

Projected Activities:
- FY21: Milestone B
- FY23: Milestone C and FDA clearance

NGDS 2 MAN PORTABLE DIAGNOSTIC SYSTEM (MPDS)

Description: NGDS 2 MPDS will provide a simple, portable FDA-cleared capability that can be used in far-forward and austere battlefield environments for diagnosis of infectious diseases and biological warfare agents in symptomatic individuals. The MPDS will provide earlier patient diagnosis and improve decision support for treatment and evacuation, in order to help mitigate the effects of exposure to unknown infectious disease and biological agents.

Program Status:
- 2018: Other Transaction Authority contract awarded to Cepheid, Inc.
- Currently developing a prototype device and three diagnostic assay panels

Projected Activities:
- FY21: Milestone C
- FY22: FDA clearance
- FY23: US Special Operations Command Initial Operational Capability
**RECOMBINANT BOTULINUM VACCINE A/B (rBV A/B; VAC BOT)**

**Description:** Botulinum toxins are the most potent, naturally-occurring toxins in the world and are odorless, tasteless, and invisible to the human eye. If untreated, exposure to botulinum toxin has a mortality rate of one hundred percent. There are currently no FDA licensed vaccines, rapid medical diagnostics, or real-time warning or detection systems for use against aerosolized botulinum toxins. This vaccine protects against exposure to botulinum toxin serotypes A and B.

**Benefits to Warfighter:** Protects the Warfighter against aerosolized exposure to botulinum toxin serotypes A and B eliminating weaponized botulinum A and B as a threat.

**Program Status:**
- Engineering and Manufacturing Development
- FY19: FDA granted Orphan Drug Designation resulting in cost reductions incentives

**Projected Activities:**
- Consistency lot manufacturing data
- Initiate Phase 3 Clinical Trial

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**FILOVIRUS VACCINE (FiloV)**

**Description:** FiloV is developing filovirus vaccines for the DoD to protect against aerosolized exposure to Sudan, Ebola, and Marburg viruses. The initial developmental increment will provide an effective prophylactic against the threat of Marburg viruses (MARV). Follow-on incremental development efforts will provide protection against aerosolized exposure to Sudan virus (SUDV) and Ebolavirus (EBOV).

**Benefits to Warfighter:** Provides Warfighters protection against aerosolized exposure to Sudan, Ebola and Marburg viruses.

**Program Status:**
- Continued support of the partially qualified Filovirus Animal Nonclinical Group (FANG) MARV and SUDV enzyme-linked immunosorbent assays (ELISAs)
- Continued support of the Walter Reed Army Institute of Research (WRAIR)/Janssen EBOV Phase 2 clinical trial
- Maintenance of the validated FANG EBOV ELISA
- Complete MARV natural history study and animal development work

**Projected Activities:**
- Complete qualification of the MARV and SUDV FANG ELISAs
- Complete nonclinical Ebola acute inflammatory response investigation study
- Continued support of the FANG EBOV ELISA and Filovirus Well Characterized Challenge Material
- Complete and close-out the WRAIR/Janssen EBOV Phase 2 clinical trial
- Responsibly shelve current Filovirus Vaccine Program investments
RECOMBINANT PLAGUE VACCINE (rF1V)

Description: *Yersinia pestis* (plague) is a bacteria that causes a life-threatening disease that is nearly always fatal in its pneumonic (spread by aerosol) form if left untreated. Plague can spread from person-to-person with close contact. There are no FDA licensed vaccines for use against aerosolized plague. This vaccine protects against aerosol exposure to plague.

Benefits to Warfighter: Protects the Warfighter against aerosolized exposure to plague, eliminating weaponized plague as a threat.

Program Status:
- Engineering and Manufacturing Development
- FY16: FDA granted Orphan Drug Designation resulting in cost reductions incentives

Projected Activities:
- End of Phase 2 Meeting with FDA
- Initiate Phase 3 Clinical Trial

SOMAN NERVE AGENT PRETREATMENT PYRIDOSTIGMINE (SNAPP)

Description: SNAPP contains the FDA-approved pretreatment drug, pyridostigmine bromide (PB) tablets, for protection against the chemical warfare nerve agent soman. SNAPP can be used when operating under threat of exposure to nerve agents. The program is currently undergoing modernization efforts to extend viable storage conditions and increase military operational utility.

Benefits to Warfighter: Increases the effectiveness of nerve agent treatments.

Program Status:
- 2003: FDA approval
- FY17: FDA approved five year controlled room temperature shelf life
- FY19: FDA approved repositioning fielded PB from refrigerated to controlled room temperature
- FY19: Initiated contracting actions for SNAPP shelf-life modernization efforts

Projected Activities:
- FY20: Contract award for SNAPP shelf life modernization efforts
- FY22: Submit supplemental New Drug application to FDA to expand military operational utility

WESTERN, EASTERN, VENEZUELAN EQUINE ENCEPHALITIS VACCINE (VAC WEVEE)

Description: Provides an effective prophylactic agent to immunize the Warfighter against Venezuelan equine encephalitis. Additional development could provide immunity against Eastern and Western equine encephalitides. The vaccine is intended to be used in an active vaccination program and will be administered as either a two- or three-dose series.

Benefits to Warfighter: Protects Warfighters against aerosolized alphavirus (including Venezuelan, Eastern and Western equine encephalitides) for which there is no currently licensed vaccine or therapeutic.

Program Status:
- Two investigational new drug submissions
- Initiation of two Venezuelan equine encephalitis Phase 1 clinical trials

Projected Activities:
- CDD Validation
- Investigational New Drug submission by Defense Threat Reduction Agency
- Initiation of Venezuelan equine encephalitis Phase 1 clinical trial by Defense Threat Reduction Agency
- Completion of three Phase 1 clinical trials
- FY21: JPEO-CBRND internal pre-Milestone B down-select
- FY22: Defense Threat Reduction Agency internal pre-Milestone B down-select
- FY23: Milestone B

ADVANCED ANTICONVULSANT SYSTEM (AAS)

Description: The AAS will treat seizures caused by exposure to nerve agents. The AAS, injected intramuscularly, will consist of the drug midazolam in an autoinjector. The AAS will be a replacement for the fielded Convulsant Antidote for Nerve Agent (CANA), which contains diazepam. Midazolam is more watersoluble and terminates nerve agent-induced seizures more quickly than diazepam. AAS will not eliminate the need for other protective and therapeutic systems.

Benefits to Warfighter: The AAS will provide life-saving anticonvulsant medical countermeasures against chemical nerve agents.

Program Status:
- 2018: Midazolam in vials for status epilepticus granted FDA approval
- FY19: AAS listed on DoD Priority list through the Medical Product Acceleration Committee as top priority for FDA Center for Drug Evaluation and Research and FDA Center for Devices and Radiological Health under Public Law 115-92
- Program working to correct manufacturing deficiencies to re-file complete New Drug Application

Projected Activities:
- FY20: Manufacturing process qualification
- FY21: New Drug Application to FDA submission
- FY22: FDA approval and Initial Operational Capability
ALTERNATIVE AUTOINJECTOR (AUTOINJ)

Description: The Alternative Autoinjector (AUTOINJ) effort is focused on providing reliable sources of FDA approved nerve agent antidote autoinjectors in order to prevent reliance on a single-source supplier and ensure product is available when needed. Current alternative autoinjector efforts expand the industrial base for autoinjectors containing atropine, atropine and 2-PAM, and diazepam.

Benefits to Warfighter: Provides near- and long-term reliable sources for nerve agent antidote autoinjectors across the US government enterprise. Autoinjector efforts will integrate future countermeasures in development, modernize existing delivery platforms, and meet current FDA guidelines for drug delivery devices.

Program Status:
- FY17: Emergency Use Authorization granted for Atropine Autoinjector
- FY18: FDA approved Atropine Autoinjector

Projected Activities:
- FY22: Complete Atropine Autoinjector FDA post-marketing commitments
- FY22: Diazepam Autoinjector FDA approval (CANA replacement)
- FY23: Atropine and 2-PAM Autoinjector FDA approval (ATNAA supplement)

ANTIDOTE TREATMENT NERVE AGENT AUTOINJECTOR (ATNAA)

Description: FDA-approved intramuscular injection of atropine and 2-PAM in a single autoinjector for treatment after onset of nerve agent poisoning symptoms.

Benefits to Warfighter: ATNAA improves survival to nerve agent exposure by reducing secretions and improving respiration.

Program Status:
- FDA approved
- Supporting sustainment activities and monitoring inventory levels in conjunction with Joint Staff and Defense Logistics Agency
- Supporting post-approval regulatory activities with Sponsor’s representative and US Army Medical Research and Development Command

Projected Activities:
- FY20: Conduct ATNAA post-approval human factors validation study
COUNTERMEASURES FOR MULTI-DRUG RESISTANCE-BACTERIAL (CMDR-B)

Description: CMDR-B will deliver post-exposure medical countermeasures to treat service members exposed to bacterial threats engineered to defeat current antimicrobial countermeasures. CMDR-B therapeutics will be administered to exposed Warfighters while under direct medical observation.

Benefits to Warfighter: Provides therapeutic solutions to counter traditional, emerging and engineered biological threats.

Program Status:
- FY16-18: Other Transaction Authority Award Medical Countermeasures for multidrug resistant bacteria

Projected Activities:
- FY19: Milestone B
TPOXX PROPHYLAXIS AGAINST SMALLPOX

Description: TPOXX is an FDA-approved therapeutic for smallpox disease. Currently, smallpox post-exposure prophylaxis is provided through vaccination, which is only useful if provided within five days of exposure; however smallpox disease may manifest up to 17 days after exposure. TPOXX studies are being conducted to extend use for post-exposure/pre-symptomatic prophylaxis against smallpox disease.

Benefits to Warfighter: A post-exposure prophylaxis treatment during this period could reduce or eliminate clinical smallpox disease, keeping the Warfighter in combat.

Program Status:• FY19: Other Transaction Authority contract awarded for development of TPOXX as a smallpox prophylaxis medical countermeasure

Projected Activities:• Expanded Human Safety Study in 400 patients to support dosing up to 28 days
• Non-human primate studies of monkeypox to demonstrate prophylactic efficacy and effects of TPOXX on vaccination
• Supplemental New Drug Application submitted the FDA for license extension expected in FY23.
• Product is already in the strategic national stockpile.

IMPROVED NERVE AGENT TREATMENT SYSTEM (INATS) (CENTRALLY ACTING AND OXIME)

Description: INATS is an enhanced treatment regimen to counter the effects of nerve agent poisoning. INATS is a two-component program that includes a more effective oxime reactivator to replace the currently fielded drug (2-PAM) and adds a new centrally acting drug which increases survival and reduces effects on the central nervous system.

Benefits to Warfighter: INATS contains a centrally acting component that readily crosses the blood-brain barrier providing greater central nervous system protection against nerve agent exposure. Combined with a broader spectrum improved oxime, INATS will provide service members greater survivability on the modern battlefield.

Program Status:• FY19: INATS-Oxime Phase I Clinical Safety Trial complete

Projected Activities:• FY20: Conduct INATS-CA Pre-Investigational New Drug meeting and Initiate Phase I Clinical Safety Trial
• FY20: Conduct INATS-Oxime Type A meeting with FDA
• FY21: Complete INATS-CA Phase 1 clinical trial
• FY23: Obtain Emergency Use Authorization for INATS-CA in a vial

RAPID OPIOID COUNTERMEASURE SYSTEM (ROCS)

Description: ROCS will develop and field an FDA-approved therapeutic medical countermeasure to treat an opioid poisoned Warfighter. The current FDA-approved opioid medical countermeasures are inadequate as soldier-carried treatments. ROCS will deliver a 10 mg naloxone autoinjector as a rescue therapeutic to reverse the immediate respiratory effects of opioid exposure.

Benefits to Warfighter: ROCS allows impacted service members to remain ambulatory in order to move to higher levels of care.

Program Status:• FY19: Approved as Middle Tier Acquisition program
• FY19: Contract awarded to Kaléo, Inc. for development and FDA approval

Projected Activities:• FY20: Good manufacturing practices manufacturing of 10 mg naloxone autoinjectors
• FY20: Submit Investigational New Drug Application
• FY21: Conduct bioequivalency clinical trial, human factors study and submit New Drug Application
• FY22: FDA approval
• FY22: Initiate Rapid Prototype Fielding
AEROSOL VAPOR CHEMICAL AGENT DETECTOR (AVCAD)

Description: The AVCAD will provide Joint Forces a man-portable system to detect and identify aerosol and vapor chemical threats. It will include a wireless remote alarm and networking capability.

Benefits to Warfighter: AVCAD provides a man-portable, sensitive aerosol and vapor chemical detection capability.

Program Status:
- Completed Technology Maturation and Risk Reduction
- Milestone B
- Awarded Engineering and Manufacturing Development contracts
- Completed Preliminary Design Review and Critical Design Reviews

Projected Activities:
- FY19-20: Hardware Manufacturing
- FY20: Engineering and Manufacturing Development Record Test
- FY21: Milestone C
- FY23: Full Rate Production and Initial Operational Capability

ANALYTICAL LABORATORY SYSTEM (ALS) MODIFICATION WORK ORDER (MWO)

Description: The ALS MWO integrates a common suite of commercial- and government-off-the-shelf components onto a user-specific platform. The system will provide field confirmatory analysis to support identification of chemical and biological materials in environmental samples. Information produced by the system will assist decision-makers with managing and/or mitigating the effects of a CBRN attack or disaster. This effort addresses immediate readiness and safety issues resulting from system obsolescence.

Benefits to Warfighter: The ALS MWO addresses ALS Increment 1 obsolescence issues and will optimize the Warfighter’s ability to analyze data by providing enhanced human factors and engineering controls, a larger shelter and work space, upgraded software, larger databases to help identify unknowns, and improved process flow integration.

Program Status:
- Currently in fielding (National Guard Bureau Civil Support Teams, US Army Reserve 773rd Civil Support Team, and the US Marine Corps’ Chemical Biological Incident Response Force)

Projected Activities:
- FY22: Full Operational Capability
CBRN DISMOUNTED RECONNAISSANCE SETS, KITS AND OUTFITS (CBRN DR SKO)

**Description:** The CBRN DR SKO system provides detection, identification, sample collection, decontamination, protection from, marking, and hazard reporting of CBRN threats. It is composed of handheld, man-portable detectors that identify potential weapons of mass destruction and precursors. It also supports dismounted reconnaissance, surveillance, and CBRN site assessment missions to enable more detailed CBRN information reports for commanders. System Enhancement Packages (SEPs) will be developed and fielded to meet updated requirements.

**Benefits to Warfighter:** CBRN DR SKO 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. SEPs will provide enhanced detection, protection, and situational awareness.

**Program Status:**
- FY17-FY18: US Army Explosive Ordnance Disposal design and Non-Traditional Agent refresh
- FY17-FY19: Increment 2 Analysis of Materiel Solutions
- FY18: US Marine Corps CBRN Full Operational Capability

**Projected Activities:**
- FY23: US Army Explosive Ordnance Disposal Full Operational Capability
- FY24: US Marine Corps Explosive Ordnance Disposal Full Operational Capability

CBRN SENSORS INTEGRATION ON ROBOTIC PLATFORMS (CSIRP)

**Description:** CSIRP is a rapid prototyping and fielding effort focused on miniaturizing and integrating modular CBRN sensor solutions with unmanned aerial system and unmanned ground vehicle programs of record. CSIRP enhances situational awareness across all echelons of command to enable freedom to maneuver on the battlefield.

**Benefits to Warfighter:** CSIRP allows Warfighters greater freedom to maneuver and operate on the battlefield and provides increased decision space for Commanders at all echelons.

**Program Status:**
- FY19: Four Other Transaction Authority sensor integration contracts awarded

**Projected Activities:**
- FY20: Fielding/training for Sub-T unmanned aerial system reconnaissance kits
- FY20: Integrate JCAD with unmanned aerial system
- FY20-21: Integrate chemical sensor with Man Transportable Robotic System Increment II
COMPACT VAPOR CHEMICAL AGENT DETECTOR (CVCAD)

Description: The CVCAD is a lightweight, low-burden chemical vapor detector (chemical warfare agents, toxic industrial chemicals, and confined space hazards) that will perform continuous monitoring and provide immediate warning of an unsafe environment to inform force protection decisions.

Benefits to Warfighter: CVCAD alerts Warfighters to the presence of chemical vapor hazards and is applicable to man-worn and unmanned applications.

Program Status:
- Pre-Milestone A
- FY19: Tabletop Exercise

Projected Activities:
- FY20: Joint Contract Award
- FY21: Milestone A
- FY21-FY23: Technology Maturation and Risk Reduction

ENHANCED MARITIME BIOLOGICAL DETECTION (EMBD)

Description: The EMBD is a technology refresh to the Joint Biological Point Detection System used by the US Navy. It provides improved detection capability while increasing reliability and maintainability and lowering support costs.

Benefits to Warfighter: EMBD improves the Warfighter’s confidence of biological detection.

Program Status:
- FY18: Milestone B and Engineering and Manufacturing Development contract award

Projected Activities:
- Rapid Agent Aerosol Detector Preliminary Design Review
- Live agent testing
- FY20: Milestone C and Program Risk Process
- FY23: Initial Operational Capability and Full Operational Capability

CAPABILITIES TO ENABLE NUCLEAR, BIOLOGICAL, CHEMICAL (NBC) THREAT AWARENESS, UNDERSTANDING AND RESPONSE (CENTAUR)

Description: CENTAUR achieves the requirements for CBRN Integrated Early Warning (IEW) outlined in ONS 17-22580 by putting into action the CBRN IEW concept. CENTAUR provides a combination of point and standoff chemical and biological sensors as well as force protection sensors, data analytics, and data visualization on a common operating picture. The CENTAUR common operating picture provides threat information specific to US Forces Korea, Eighth Army, and US Army Garrison Camp Humphreys.

Benefits to Warfighter: CENTAUR provides improved situational awareness, understanding, and decision support for commanders; actionable analytics to facilitate timely detection, collection, and identification of nuclear, chemical, and biological events; minimizes the operational impacts to the Warfighter by reducing false alarm rates; and integrates CBRN sensor information for local and regional networks improve information sharing with command and coalition partners.

Program Status:
- Fielded at Busan Pier 8 and US Army Garrison Camp Humphreys

Projected Activities:
- FY20: Full Rate Production
- FY24: Full Operational Capability
**CBRN INTEGRATED EARLY WARNING (IEW) ENHANCED CAPABILITY DEMONSTRATION (ECD)**

**Description:** CBRN IEW is the concept of collecting threat data from disparate CBRN sensors and other data elements to provide commanders with CBRN information about the battlespace in response to a specific mission. The ECD works with the Services to identify and experiment with new components, tools and other capabilities to improve the CBRN IEW baseline configuration.

**Benefits to Warfighter:** The CBRN IEW ECD is shaping the future of CBRN early warning by influencing the development of material solutions and capabilities to achieve the Warfighter vision of CBRN IEW.

**Program Status:**
- CBRN IEW ECD is funded through FY21

**Projected Activities:**
- FY19: Perceptive Dragon 3 Exercise
- FY20: CBRN IEW Demonstration at Osan Air Base

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**JOINT BIOLOGICAL TACTICAL DETECTION SYSTEM (JBTDS)**

**Description:** The JBTDS is a lightweight, man-portable, battery-operated system that will detect, collect, and identify biological warfare agents in near-real time. JBTDS supports force protection and maximizes combat effectiveness by enhancing medical response decision-making. When networked, JBTDS augments existing biological detection systems to provide theater-wide biological warfare agent detection and warning.

**Benefits to Warfighter:** The JBTDS’ ability to detect, collect, and identify biological warfare agents at very low concentrations gives Warfighters additional time to make decisions and take action to prevent or reduce the risk of exposure.

**Program Status:**
- FY16: Critical Design Review
- FY17-19: Biological Point System Assessment
- FY19: Begin Developmental Testing and Finalize Engineering and Manufacturing Development

**Projected Activities:**
- FY19-FY20: Risk Reduction testing, Integration of Technologies, and Record Testing
- FY21: Logistics Demonstration and Operational Assessment
- FY22: Milestone C

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**JOINT CHEMICAL AGENT DETECTOR (JCAD) — M4A1**

**Description:** The JCAD is a fielded chemical point detector that is lighter and smaller than the previously fielded detectors, has lower operating costs, and does not contain a radioactive source. The JCAD detects, identifies, and alerts a user to the presence of chemical warfare agent vapors in time to take protective measures.

**Benefits to Warfighter:** The JCAD is a compact chemical warfare agent point detector that protects Warfighter life and health by providing enough warning to take any necessary protective measures.

**Program Status:**
- Continued fieldings and exchange

**Projected Activities:**
- Continue supporting exchange and urgent need fieldings
- FY22: Full Operational Capability
JOINT CHEMICAL AGENT DETECTOR (JCAD) — SOLID LIQUID ADAPTER (SLA) KIT

Description: The JCAD-SLA is an Additional Authorized List item for the M4A1 JCAD that enables solid and liquid chemical sample analysis. The adaptor includes a probe that heats upon insertion into a heated inlet and solid and liquid detection algorithms.

Benefits to Warfighter: The JCAD SLA augments the currently fielded chemical vapor detection capability by providing trace (non-visible) detection of fourth generation agents, VX, pharmaceutical based agents, and explosive chemicals.

Program Status: FY19-20: Production Verification Test

Projected Activities: FY20: Logistics Demonstration and Provisioning

MAN-PORTABLE RADIOLOGICAL DETECTION SYSTEM (MRDS)

Description: The MRDS will provide increased radiological and nuclear detection, localization, presumptive identification, and field-confirmatory identification capabilities that are networked to provide situational awareness at the tactical level.

Benefits to Warfighter: MRDS increases the Warfighter’s awareness of radiological threats at the tactical level.

Program Status: FY17: Capability Production Document signed

Projected Activities: FY20: Test Article Delivery and Full Rate Production

JOINT PERSONAL DOSIMETER-INDIVIDUAL (JPD-IND)

Description: The JPD-IND records and retrieves a service member’s radiation exposure from occupational to tactical levels. It provides a joint solution to increase capability and reduce life cycle costs, as well as addresses Operation Tomodachi lessons learned for common, interoperable equipment with adequate sensitivity and common units of measure.

Benefits to Warfighter: JPD-IND will be a National Voluntary Laboratory Accreditation Program that will allow dose of record to be obtained for a Warfighter’s medical records.

Program Status: FY18: Production Qualification Testing

Projected Activities: FY20: Conditional Materiel Release (in support of Army Operational Needs Statement)

Projected Activities: FY20: Follow-on Operational Test and Evaluation
MULTI-PHASE CHEMICAL AGENT DETECTOR (MPCAD)

**Description:** The MPCAD is a two-man portable system for the collection, identification, and quantification of chemical warfare agents and other hazardous compounds in all phases of matter. It is comprised of two components, an analyzer and a collector. MPCAD is accelerating the solid and liquid detection capability to field a partial capability faster.

**Benefits to Warfighter:** MPCAD provides a higher fidelity analysis of samples collected in the field than the currently fielded detectors to enable Commanders to make more informed decisions.

**Program Status:**
- Technology Maturation and Risk Reduction complete
- FY18: Milestone B and two Engineering and Manufacturing Development contracts awarded
- FY19: Capability Development Document approved and Contractor Development Testing started
- FY19-20: Critical Design Reviews

**Projected Activities:**
- FY20: Engineering and Manufacturing Development testing
- FY21: Milestone C/Limited Rate Initial Production Decision (solid and liquid)
- FY22: Milestone C/Limited Rate Initial Production Decision (vapor)
- FY22: Solid/Liquid detection capability production contract award
- FY23: Vapor detection capability production starts

NON-TRADITIONAL AGENT DEFENSE (NTA DEFENSE)

**Description:** The NTA Defense program assesses existing and new portfolio capabilities against NTAs and other emerging threats to develop dedicated initiatives and projects to transition information, technologies, and capabilities into acquisition programs across all commodity areas. NTA Defense activities inform JPEO-CBRND portfolio capability assessments against emerging threats to aid with identifying portfolio gaps and investment opportunities.

**Benefits to Warfighter:** NTA Defense activities ultimately decrease the risks Warfighters face from emerging threats. Additionally, the NTA Defense program enables rapid prototyping activities to quickly adapt to and better understand performance against emerging threats.

**Program Status:**
- Hosted interagency/international pharmaceutical-based agent detection workshops resulting in list of detection gaps and potential project areas
- Conducted market survey of commercial-off-the-shelf pharmaceutical-based agent detection technologies to identify candidates for test and established online user-customizable survey tool for JPEO partners
- Baselining performance of commercial-off-the-shelf and government-off-the-shelf detection technologies against pharmaceutical-based agents
- Conducting market survey of sampling equipment and techniques that could enhance performance of currently fielded pharmaceutical-based agent detectors

**Projected Activities:**
- Improve fielded detection technology by developing and testing prototypes of a miniaturized version that has expanded threat capability (pharmaceutical-based agents and Fourth-Generation Agents)
- Test sampling equipment and technique candidates identified in market survey
- Develop, test, and obtain user feedback on a containment system and delivery mechanism for a sprayable decontamination slurry
NUCLEAR, BIOLOGICAL, CHEMICAL RECONNAISSANCE VEHICLE (NBCRV) SENSOR SUITE UPGRADE (SSU)

Description: The NBCRV SSU is the CBRN reconnaissance configuration variant of the Stryker Combat Vehicle, which is a high-speed, high-mobility, armored carrier. The NBCRV SSU is a system of CBRN detection, warning and biological sampling equipment on a Stryker vehicle. It detects chemical, radiological and biological contamination in the immediate environment.

Benefits to Warfighter: The NBCRV SSU supports the Warfighter by performing NBC reconnaissance. It also locates, identifies, marks, samples and reports nuclear, biological, and chemical contamination on the battlefield.

Program Status:
- FY18: Full Operational Capability and Initiate Program
- FY19: Other Transaction Authority contract award

Projected Activities:
- FY20: Prototype Delivery
- FY20: Joint Warfighter Assessment 2020
- FY21: Enhanced Prototype Delivery
- FY21: Developmental Testing

RADIOLOGICAL DETECTION SYSTEM (RDS)

Description: The RDS replaces the DoD's legacy Radiation Detection, Indication and Computation (RADIAC) survey meters. RDS will provide a capability to measure alpha, beta, gamma, neutron and low-energy X rays and will be networked with radios and GPS.

Benefits to Warfighter: The RDS will provide Warfighters with an understanding of their total exposure to various types of radiation.

Program Status:
- FY18: Production Decision for Increment 1 (U.S. Army only)
- FY19: Limited Rate Initial Production Contract Award

Projected Activities:
- FY20: Urgent Materiel Release for Increment 1
- FY20: Test Article Delivery
- FY20: Multiservice Operational Test and Evaluation (all Services)
- FY20: Full Rate Production for Increment 2 (all Services)

REACTIVE-CHEMISTRY ORTHOGONAL SURFACE AND ENVIRONMENTAL THREAT TICKET ARRAY (ROSETTA)

Description: ROSETTA is a low cost detector ticket, similar to the fielded M8 paper, with improved capability to classify liquid hazards on a surface. It provides an orthogonal detection capability within the M256 Chemical Agent Detector Kit.

Benefits to Warfighter: ROSETTA quickly detects hazards and gives the Warfighter additional confidence of a liquid chemical hazard.

Program Status:
- FY17-19: Market Research Testing & User Engagement
- FY19: Development Contract Award

Projected Activities:
- FY19-22: M256 Engineering Change Proposal
- FY20-21: Development test
- FY22: Production Contract Award
SCREENING OBSCURATION MODULE (SOM)

**Description:** The SOM provides a man-portable mountable and dismountable medium-area visual screening obscuration capability. The SOM degrades the ability to detect targets in the visual and near infrared region of the electromagnetic spectrum. The SOM utilizes miniaturized obscuration generator technology to produce an effective visual obscuration cloud to screen against enemy forces.

**Benefits to Warfighter:** The SOM increases Soldier protection levels of maneuver and platform survivability by degrading an enemy’s ability to detect US targets.

**Program Status:**

**Projected Activities:**
- FY21: Conduct Limited User Test at Fort Carson, CO
- FY20: Milestone C
- FY21: Initial Operational Capability
- FY23: Full Operational Capability

UNIFIED COMMAND SUITE (UCS)

**Description:** The UCS is a fully integrated mobile communications suite composed of a communications platform and a Command vehicle that is self-sufficient and highly interoperable by integrating commercial- and government-off-the-shelf military communications hardware. UCS provides communications interoperability with Federal, State, local and military emergency response elements. In addition to providing contingency response to WMD & CBRNE threats, the UCS can be used to support natural disaster response and high-profile political, cultural, and athletic events.

**Benefits to Warfighter:** UCS provides a critical reach back capability for Incident Commanders assessing an incident scene and advising responders. It also facilitates civilian responders’ access to DoD information. UCS satisfies the critical Key Performance Parameter of directed reach back communications for the Analytical Laboratory Modification Work Order and other Civil Support Team systems.

**Program Status:**
- FY17-FY19: Block 2 upgrades included modernization of mandated upgrades to:
  - Microsoft Server 2012
  - Microsoft Windows 10
  - Communication-on-the-move system
  - Radio cross-banding system
  - Secondary reach back system

**Projected Activities:**
- Continue capability upgrades to:
  - Prevent commercial off-the-shelf obsolescence
  - Comply with DoD network requirements
CHEMICAL BIOLOGICAL AIRCRAFT SURVIVABILITY BARRIER (CASB)

**Description:** The CASB provides a lightweight, low-cost, expendable, negative-pressure enclosure that will protect the interior of multi-service aircraft (MH-47, CV22, MC-130) capable of airlifting/exfiltrating chemically or biologically contaminated personnel, equipment, and cargo. CASB preserves the aircraft for continued unrestricted operations without the need for extensive decontamination.

**Benefits to Warfighter:** CASB reduces the time and logistical burden required for extensive decontamination and helps maintain force readiness by preventing or limiting Warfighter and multi-service aircraft exposure to chemical and biological threats.

**Program Status:**
- FY20: Milestone C, Full Rate Production Decision

**Projected Activities:**
- FY21: Initial Operational Capability
- FY22: Full Operational Capability

JOINT HANDHELD BIO-AGENT IDENTIFIER (JHBI)

**Description:** The JHBI will provide handheld bio-identification systems to US Special Operations Command for rapid and accurate identification of organisms at the point contact for multiple different mission types. Initiated as a replacement and capability upgrade over the RAZOR system.

**Benefits to Warfighter:** Lowers burden of portable biological detection capability and improves Warfighter awareness of the presence of biological agents by rapidly and accurately identifying threats with a handheld polymerase chain reaction device.

**Program Status:**
- Primary development complete
- Manufacturing test articles for contractor verification testing and algorithm optimization
- Fielded the following systems: Genedrive v1, Genedrive v2, and two3
- Integrated/automated sample preparation (three9-ISP) system in development
- Final three9-ISP system demonstrated

**Projected Activities:**
- FY20 (three9-ISP):
  - Development Test/Operation Test
  - Milestone C
  - Full Operational Capability
  - Transition to all Services

UNIFORM INTEGRATED PROTECTION ENSEMBLE INCREMENT 1 (UIPE INCR1)

**Description:** UIPE Increment 1 provides a protective system that can be tailored based on the expected threat level. UIPE will fully integrate CBRN protections into an ensemble that is identical in fit and form to the combat uniform. It will include ancillary equipment, mask-helmet integration, and protective boots and gloves and will negate the need for separate protective ensemble components.

**Benefits to Warfighter:** UIPE Increment 1 reduces the physiological and psychological burdens associated with the weight, bulk, thermal strain, and encumbrance of wearing CBRN protective gear, increasing warfighter operational performance in a CBRN environment.

**Program Status:**
- Currently in production

**Projected Activities:**
- FY20: Production complete
- 174,000 ensembles fielded to US Special Operations Command
CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR INFORMATION SYSTEM (CBRN-IS)

Description: CBRN-IS is an enterprise environment providing timely, fused, and easily accessible information to the Joint Warfighter, CBP Community of Interest, and civil and international partners. Using Service Oriented Architecture, CBRN-IS collects and disseminates appropriate data, makes relevant CBRN services and information available in real-time, and can be easily integrated with “net-centric” tools and services. CBRN-IS Enterprise Web Services approach provides increased interoperability, reduced integration cost, and more readily accessible CBRN tools and information. CBRN-IS supports implementation of Integrated Early Warning (IEW) capabilities that allow users to access netted sensor information, data fusion, disease modeling, biosurveillance data, source term estimation data, incident management tools, and planning and analysis capabilities.

Benefits to Warfighter: CBRN IS provides a collaborative cloud-hosted environment that allows users to collect and disseminate CBRN warning and reporting data, provide detailed CBRN hazard predictions, aid in decision support, and make relevant CBRN defense information available in near-real-time. CBRN IS makes decision aids accessible through a web browser, simplifying interoperability, reducing integration and deployment costs, and increasing cybersecurity protection.

Program Status: • Production and Deployment

Projected Activities:
• Updated Joint Warning And Reporting Network Sensor Manager Integration
• FY20: Combined Enterprise Regional Information Exchange System (CENTRIXS)-Korea Implementation and Deployment
• FY20: US Air Force New Equipment Training Completion and Full Operational Capability
• FY21: CENTRIXS-Japan Implementation
• TBD: BICES Implementation

GLOBAL BIOSURVEILLANCE PORTAL (GBSP)

Description: GBSP is a mature, unclassified, web-based system capable of providing a near real-time common operating environment in support of civilian-military coordination at the strategic, operational, and tactical levels. Although originally designed for US Special Operations Command Force Health Protection and medical disciplines, it has strong capabilities to support CBRN and emergency/consequence management communities. GBSP users leverage a versatile group structure which allows for compartmentalized information sharing between the DoD, US Government interagency entities, and in the future with foreign partner nations.

Benefits to Warfighter: GBSP improves situational awareness of potential CBRN hazards, allowing warfighters and public health personnel worldwide to identify health risks early, and to quickly respond to, limit, or eliminate the risks of those threats to the joint force.

Program Status: • Production and Deployment

Projected Activities:
• Five Eyes/NATO Role-based access
• Mobile application enhancements
• Common Access Card/Personal Identity Verification multifactor authentication logon
• FY20: Full Operational Capability and Hacking 4 Defense project
• FY21-22: Total Package Fielding and Talisman Saber 21
JOINT EFFECTS MODEL (JEM)

Description: JEM is a web-based software application that models and simulates the effects of CBRN weapon strikes and incidents. JEM accurately models and predicts the time-phased impact of CBRN and toxic industrial hazard (TIH) events and effects. JEM integrates with operational and tactical command and control systems and communicates with associated weather and intelligence systems.

Benefits to Warfighter: JEM provides warfighters the only DoD operational tested and accredited modeling capability that predicts high-fidelity downwind hazard areas and effects associated with the release of CBRN and TIH. Its models provide enhanced situational awareness of the battlespace and deliver near-real-time hazard information. JEM provides critical information to the decision-makers working to minimize CBRN and TIH effects on current operations and save lives.

Program Status:
• Production and Deployment

Projected Activities:
• Continued US Army deployment on Capability Set 11/12 and Command Post Computing Environment
• Fielding to US Air Force and National Guard Bureau Contingency Response Elements on milCloud
• Continued support for deployment on milCloud
• Deployment of JEM on command and control systems for US Navy (Consolidated Afloat Networks and Enterprise Services (CANES)) and US Marine Corps (Joint Tactical Common Operational Picture Workstation (JTCW))
• Renew Foreign Military Sales case with Canada
• FY22: Full Operational Capability

JOINT WARNING AND REPORTING NETWORK (JWARN)

Description: JWARN is a computer-based application integrating CBRN data and sensor information into joint and service command and control systems for battlespace situational awareness. JWARN takes the place of manual processes for reporting an incident, generating a hazard plot, and warning affected forces.

Benefits to Warfighter: JWARN significantly reduces the time from discovering an imminent CBRN threat to being able to warn forces on the ground. In less than two minutes, JWARN can provide enhanced situational awareness throughout the area of operations, directly supporting execution of warfighter battle management tasks.

Program Status:
• Production and Deployment

Projected Activities:
• FY20:
  – JWARN transitions from locally-hosted to cloud-hosted
  – US Navy Operational Test
  – US Marine Corps Operational Test
  – US Navy and US Marine Corps Fielding Decisions
• FY22: Full Operational Capability
DEFENSE BIOLOGICAL PRODUCT ASSURANCE OFFICE (DBPAO)

Description: DBPAO provides characterized, standardized, high quality biological assays and reagents to the DoD, first responders, and other government agencies. DBPAO products support fielded biological agent detection capabilities as well as research and development of new technologies. The DBPAO Targeted Acquisition of Reference Materials Augmenting Capabilities (TARMAC) initiative is also involved in identifying emerging threats throughout the world. The DBPAO provides a unique capability to rapidly convert worldwide emerging threat data into products that help protect against biological threats.

Benefits to Warfighter: DBPAO provides a capability for early detection of a biological agent or emerging and reemerging infectious disease outbreak and enables treatment of exposed Warfighters. DBPAO facilitates bio-defense assay and reagent requirements to support programs for other US government organizations, including the Department of Homeland Security, US Capitol Police, National Institute of Allergy and Infectious Diseases, and US Secret Service. DBPAO assays are used daily in DoD and civilian government facilities in the US and overseas.

Program Status:
- DBPAO will continue to integrate and consolidate DoD reagents (i.e., antibodies/antigens) and biological warfare agent detection requirements, and will continue the TARMAC initiative to compress the discovery-to-decision time frame and provide awareness and understanding of the baseline biological threat footprint.

Projected Activities:
- Facilitate transition of new biodefense technologies and coordinate their advanced development, efficient production, and timely distribution.
- Generate and analyze next generation sequencing data from pathogens of biodefense interest to ensure the detection portfolio is capable of detecting emerging and re-emerging threats.

DEPARTMENT OF DEFENSE ADVANCED DEVELOPMENT & MANUFACTURING CAPABILITIES FACILITY (DoD-ADM)

Description: The DoD-ADM allows the DoD to quickly develop and manufacture medical countermeasures to protect and treat US forces in the event of a CBRN event or an infectious disease outbreak. The ADM is a contractor-owned, contractor-operated facility that fills a critical infrastructure gap in the nation’s medical countermeasures manufacturing capacity. The DoD-ADM is a state-of-the-art biopharmaceutical manufacturing facility that utilizes both single-use and stainless steel manufacturing technologies. The facility is 183,000 square feet and is complaint with both the Food and Drug Administration’s current Good Manufacturing Practices and the Center for Disease Control and Prevention’s Biological Safety Level 3 requirements.

Benefits to Warfighter: Provides an agile, robust, and sustainable US-based facility that is capable of rapidly developing and manufacturing medical countermeasures for the warfighter.

Program Status:
- The facility is operational and available for medical countermeasure product development

Projected Activities:
- Develop and establish FDA known technologies and capabilities at the DoD-ADM via the execution of Chemical Biological Incident Preparedness Response funds.
- Transition from direct sustainment via a dedicated sustainment contract to contractor self-sustainment through Food and Drug Administration countermeasure product development.
JOINT MOBILE EMERGING DISEASE INTERVENTION CAPABILITY (JMEDICC)

Description: JMEDICC is a platform geared towards execution of clinical trials in a filovirus outbreak setting in order to obtain data to support potential Interim Fielding Capabilities approval and licensure by the Food and Drug Administration. JMEDICC has a fixed hub site at the Fort Portal Regional Referral Hospital in western Uganda that can be extended to conduct field clinical trials throughout Uganda. This effort enhances clinical research for filovirus treatments in a country at risk of outbreaks through prepositioned staff, infrastructure, logistics, and pre-approved Investigational New Drug study protocols.

Benefits to Warfighter: JMEDICC facilitates rapid medical response to an emerging infectious disease outbreak.

Program Status:
- Integrated into Ugandan Ministry of Health filovirus outbreak response plan
- Clinical Investigational New Drug protocols for medical countermeasures pre-approved through U.S. and Ugandan regulatory bodies

Projected Activities:
- Obtain data supporting approval of medical countermeasures used during emergencies

PLATFORMS FOR RAPID INTEGRATED SOLUTIONS FOR MEDICAL COUNTERMEASURES (PRISM)

Description: PRISM is a toolbox of capabilities that will standardize discovery, design, manufacturing, and/or testing processes to streamline creation of medical countermeasures. PRISM will also adapt some of these technologies to support a rapid response capability. Advanced Development and Manufacturing of Antibody Technologies (ADAMANT), the first capability implemented under PRISM, is a monoclonal antibody (mAb) platform. It will be used to respond to threats, provide interim fielding candidates early in development; and bring mAb medical countermeasures from discovery to licensure and fielding economically. ADAMANT is being established at the ADM facility.

Benefits to Warfighter: PPRISM accelerates medical countermeasure delivery to the Warfighter. It also adapts a subset of capabilities and technologies to support a rapid response capability for novel and emerging threats.

Program Status:
The PRISM Office is maintaining close partnerships with key stakeholders to coordinate the establishment of critical capabilities necessary for ensuring ability to rapidly respond to current and emerging threats while enabling the advancement of MCM development of our medical partners.

Projected Activities:
Continue to develop new capabilities against threats at the ADMC, adding to our toolbox of technologies which currently includes monoclonal Antibodies, DNA, cell culture, and will include new technologies which have the ability and utility to be effective against various threats. PRISM Office will also be involved in a series of Live Fire Tests, to include the Talisman Saber exercise with PACOM to exercise our Rapid Response abilities.