ARMY TECHNOLOGY TRANSFER PROGRAM

2024 Annual Report

U.S. ARMY T2 TECHNOLOGY TRANSFER

APPROVED FOR PUBLIC RELEASE

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2024 Annual Report

Research and technology collaborations in support of Army modernization

Prepared by:
Office of the Deputy Assistant Secretary of the Army (Research and Technology)
Arlington, Virginia
April 2025

Executive Summary

The Army Science and Technology (S&T) enterprise identifies, develops, and demonstrates technology options that inform and enable effective and affordable capabilities for the Warfighter. Technology Transfer (T2) is essential to the Army laboratories' technology delivery mission. Army T2 is a trusted innovation pathway augmenting the unique capabilities of Army laboratories through effective research and technology partnering. Army T2 focuses on mission effectiveness, Soldier capability enhancements, and the collateral benefits to industry, academia, and the United States taxpayers.

The Army Technology Transfer Program (ATTP) supports the Army's mission by combining research, development, test, and evaluation (RDT&E) resources, capabilities, and expertise with our academic and industry partners in order to deliver technologies through various T2 partnering mechanisms. T2 partnerships ensure that the Army is positioned for critical technology discovery and maturation and enable Army laboratories to leverage private research capital in the RDT&E of game-changing technologies. These partnerships add expertise, augment capabilities, enhance facilities, and provide other resources for the exploration, development, and potential commercialization of civilian or dual-use technologies. The Army accomplishes this through T2 agreements such as Cooperative Research and Development Agreements (CRADAs) and Patent License Agreements (PLAs), which leverage an Army or joint-owned invention and commercial interest to make a manufactured commercial product that can be used or adapted for military and/or commercial purposes.

Twenty-one Army laboratories and technical centers participate in the ATTP, typically executing more than 500 new CRADAs, and over 100 patents and PLAs, annually. As of 2024, Army CRADAs executed between 2000 and 2020 generated a $36.4 billion economic impact, supported 123,000 job years, and added $17.1 billion to the Gross Domestic Product (GDP)*. In Fiscal Year (FY) 2024, Army T2 recorded 977 active CRADAs, 1,125 active patents and 159 active PLAs, and 81 new patent applications. Additionally, Army T2 had 287 active Education Partnership Agreements (EPAs), which enable Army laboratories to leverage educational institutions and academic researchers to solve Army challenges. The impact and outcomes of Army T2 partnerships are highlighted in numerous success stories and notable awards.

**TechLink. National Economic Impacts from U.S. Army CRADAs. 2025*

Contents

Research and Technology Collaborations in Support of Army Modernization

Army laboratories and technical centers use T2 agreements for partnering with commercial, academic, or other private entities. These agreements include CRADAs, licensing of Army patents, Commercial Test Agreements (CTAs), Educational Partnership Agreements (EPAs), and other agreements. T2 collaborations enhance Army's research, development, test, and engineering capabilities by leveraging the private capital of the partner, including but not limited to, personnel, services, facilities, equipment, intellectual property, or resources. T2 is vital to the Army's mission of developing new technologies and promoting technology commercialization as the Army seeks to modernize and maintain its technological advantage. Public-Private collaborations offer an innovative approach to modernization.

The Army S&T enterprise is aligned to higher level Army, Department of Defense (DoD), and National Defense strategies and priorities. The Army executes an investment strategy that delivers technology for force modernization. To support this effort, the Army is aligning its research centers and laboratories to Army priority efforts and emphasizing the Critical Technology Areas detailed in the Under Secretary of Defense for Research and Engineering's Strategic Vision. Research and technology collaborations allow Army laboratories to leverage private research capital in these game-changing technologies.

Army T2 enables Army modernization by engaging private partners in RDT&E partnerships and collaborative activities, which adds expertise, augments capabilities, enhances facilities, and provides resources for the exploration of emerging technologies. Additionally, Army T2 agreements can leverage commercial interest in technologies developed in Army laboratories through Patent License Agreements (PLAs), which include business plans to mature the patented invention into a manufactured commercial product that can be used or adapted for military and/or commercial purposes.

Army T2 Enterprise

Honorable Jesse Tolleson,
Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (Acting)

Mr. Christopher Manning,
Deputy Assistant Secretary of the Army (Research and Technology)

Mr. George Matook,
Army Director for Technology Transfer (Acting)

The Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)) is the Office of Primary Responsibility for the Army Technology Transfer Program (ATTP) and is responsible for Department of the Army policy and guidance regarding all T2 activities. These responsibilities have been delegated to the Army Director for Technology Transfer (ADTT).

The ADTT serves in the office of the DASA(R&T) and is the Army agency representative in all matters concerning T2. The ADTT monitors the ATTP to ensure compliance with DoD T2 policy and law, provides policy guidance on T2, and presides over the Army Laboratory Quality Enhancement Program (A-LQEP) T2 subpanel. The A-LQEP T2 subpanel is chartered to improve the productivity, effectiveness, and impact of the ATTP. This subpanel enhances Army T2 through policy input and feedback, providing legal clarifications, resolving business questions, and sharing best practices to optimize the impacts of research and technology collaborations on Army modernization.

The laboratory commanders or directors have the responsibility and the authority to enter into CRADAs and to license, assign, or waive rights to intellectual property (IP) developed by the organization. Each Army T2-designated laboratory has an Office of Research and Technology Applications (ORTA). ORTAs participate in the A-LQEP T2 subpanel. ORTAs are the essential focal point for collaborations between federal laboratories and external partners. The ATTP includes 21 T2-designated laboratories and centers with unique capabilities and facilities located across 23 states.

T2-Designated Laboratories and Centers Available for Partnership

ARMY MEDICAL

U.S. Army Aeromedical Research Laboratory (USAARL)	Alabama
U.S. Army Research Institute of Environmental Medicine (USARIEM)	Massachusetts

U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER (ERDC)

Headquarters	Mississippi
Coastal and Hydraulics Laboratory (CHL)	Mississippi
CHL Field Research Facility	North Carolina
CHL Joint Airborne Lidar Bathymetry Technical Center of Expertise	Mississippi
Cold Regions Research and Engineering Laboratory (CRREL)	New Hampshire
CRREL Alaska Research Office	Alaska
Construction Engineering Research Laboratory (CERL)	Illinois
Environmental Laboratory (EL)	Mississippi
EL Lewisville Aquatic Ecosystem Research Facility	Texas
Geospatial Research Laboratory (GRL)	Virginia
Geotechnical and Structures Laboratory (GSL)	Mississippi
GSL Treat Island Natural Weather Station	Maine
Information Technology Laboratory (ITL)	Mississippi

U.S. ARMY SPACE AND MISSILE DEVELOPMENT COMMAND TECHNICAL CENTER (SMDTC)

Alabama

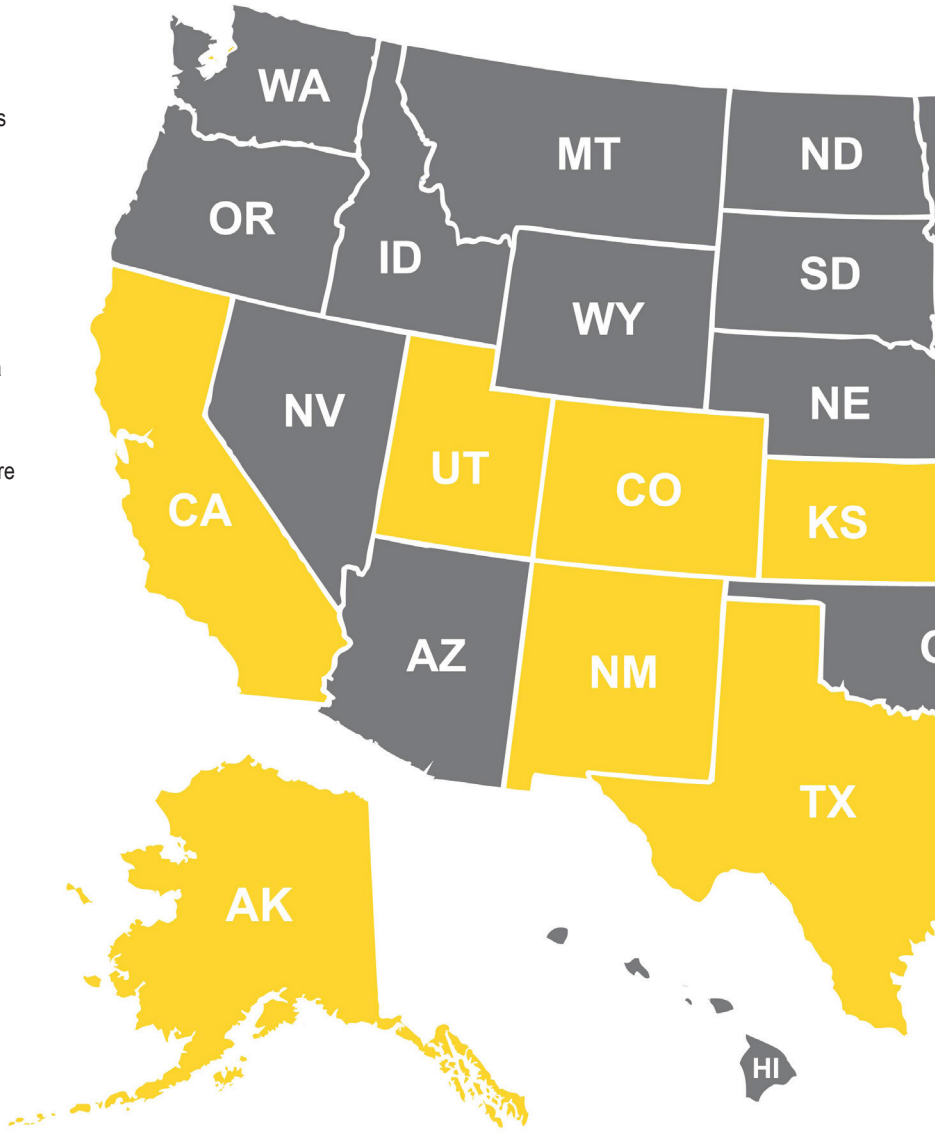
U.S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES (ARI)

Virginia

ARI Basic Research Unit	Virginia
ARI Emerging Research Unit	Virginia
ARI Fort Cavazos Research Unit (Unit Training)	Texas
ARI Fort Leavenworth Research Unit (Leader Development)	Kansas
ARI Fort Moore Research Unit (Institutional Training)	Georgia
ARI Predictive Analytics and Modeling Research Unit	Virginia
ARI Scientific Coordination Office	Virginia
ARI Selection and Assignment Research Unit	Virginia

ARMY ANALYTICS GROUP (AAG)

California



U.S. ARMY MEDICAL CENTER OF EXCELLENCE (MEDCoE)

Texas

U.S. MILITARY ACADEMY WEST POINT (USMA)

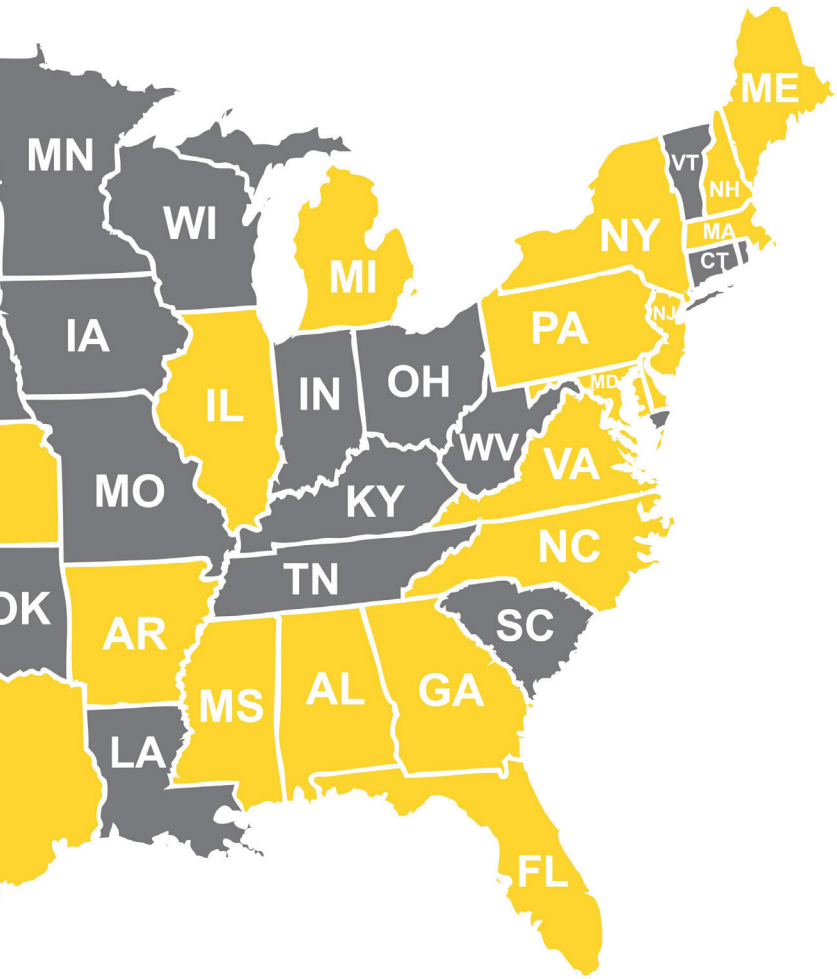
New York

JOINT PROGRAM EXECUTIVE OFFICE FOR CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR DEFENSE (JPEO-CBRND)

Maryland

U.S. ARMY CYBER (ARCYBER)

Georgia



ARMY ARTIFICIAL INTELLIGENCE INTEGRATION CENTER (AI2C)

Pennsylvania

U.S. ARMY TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT ACTIVITY (USATA) ARMY PRIMARY STANDARDS LABORATORY (APSL)

Alabama

U.S. ARMY CRIMINAL INVESTIGATION LABORATORY (USACIL)

Georgia

U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND (DEVCOM)

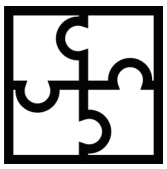
Headquarters	Maryland
Armaments Center (AC)	New Jersey
AC Watervliet Arsenal	New York
AC Benét Laboratories	New York
AC Firing Tables and Ballistics Division	Maryland
AC Rock Island Arsenal	Illinois
Army Research Laboratory (ARL)	Maryland
ARL Army Research Office	North Carolina
ARL White Sands Missile Range	New Mexico
ARL Central	Illinois
ARL Northeast	Massachusetts
ARL South	Texas
ARL West	California
Aviation and Missile Center (AvMC)	Alabama
AvMC Technology Development Directorate	Alabama, California, Virginia
AvMC Systems Readiness Directorate	Alabama, Texas
AvMC Software, Simulation, Systems Engineering and Integration Directorate	Alabama, Colorado, Hawaii
Chemical Biological Center (CBC)	Maryland
CBC Pine Bluff Arsenal	Arkansas
CBC Rock Island Arsenal	Illinois
CBC Dugway Proving Ground	Utah
Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) Center	Maryland
DEVCOM Analysis Center (DAC)	Maryland
DAC White Sands Missile Range	New Mexico
DAC Redstone Arsenal	Alabama
DAC Detroit Arsenal	Michigan
Ground Vehicle Systems Center (GVSC)	Michigan
GVSC Occupant Protection Laboratory	Michigan
GVSC Bridging Simulation Laboratory	Michigan
GVSC Freshwater Treatment and Test Facility	Michigan
GVSC Army Petroleum Laboratory	Pennsylvania
GVSC Fuels and Lubricants Research Facility at Southwest Research Institute	Texas
GVSC Rapid Evaluation Capability	Michigan
Soldier Center (SC)	Massachusetts
SC Simulation and Training Technology Center	Florida

U.S. ARMY TEST AND EVALUATION COMMAND (ATEC)

Headquarters	Maryland
Army Evaluation Center	Maryland
Aberdeen Test Center	Maryland
Cold Regions Test Center	Alaska
Dugway Proving Ground	Utah
Electronic Proving Ground	Arizona
Operational Test Command	Texas
Redstone Test Center	Alabama
White Sands Missile Range	New Mexico
Yuma Proving Ground	Arizona

2024 Army T2 Metrics

Army T2 augments Army laboratory's research capabilities through various collaborations sharing expertise, material, equipment, facilities, IP, and other resources. Army T2 also leverages interests in the commercial applications of Army patented technologies to manufacture products for commercial or military sales. Industry and academic partners can engage with the Army in many ways, including CRADAs, EPAs, Partnership Intermediary Agreements (PIAs), IP / PLAs, and CTAs. The Army engages in the following Army T2 mechanisms with a variety of partners:



977
CRADAs
$5.4M Revenue

287
EPAs

928
CTAs
$10.8M Income

12
PIAs

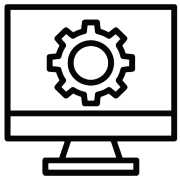
110
New Invention Disclosures

81
Patent Applications Filed

78
Patents Issued

1,125
Total Active Patents

159
Active License Agreements
$622,000 Income



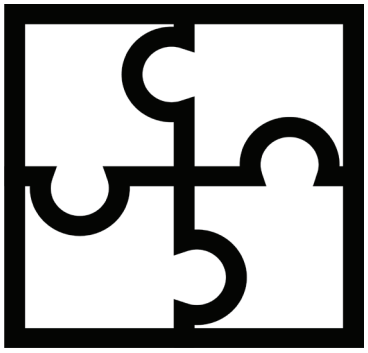
17
Active Software Licenses
$65,146 Income

Cooperative Research and Development Agreements (CRADAs)

A CRADA allows the laboratory and the partner to provide personnel, services, facilities, equipment, IP, or other resources with or without reimbursement (funds are not paid to the non-federal party) toward the conduct of specified research and development (R&D) efforts consistent with the mission of the laboratory. However, CRADAs may not include a procurement contract or cooperative agreement. CRADAs augment Army research capabilities and expand the defense industrial base. CRADAs provide an easy way for Army laboratories to engage in research and technology collaborations with private partners. Both the Army and the partner may benefit from a CRADA in a variety of ways.

BENEFITS TO THE ARMY AND PARTNERS:

- Accelerate technology maturation;
- Solve specific technical challenges;
- Access Army laboratory facilities and equipment;
- Mutually beneficial discovery and innovation;
- Create new teams and professional connections;
- Reduce technical risk of new technology development;
- Leverage external expertise, ideas, investment and resources;
- Share resulting technical data, demonstrations, innovations, inventions, and prototypes;
- Expand the defense industrial base to include non-traditional defense contractors;
- Leverage commercialization potential of inventions developed under the CRADA;
- Access partner's means of advanced development, manufacturing, and commercialization; and
- Share resources and capabilities to accelerate technology development and defray R&D costs.



CRADAs

FY22	FY23	FY24
1,811	1,040*	977
$33.5M Revenue	$5.88M* Revenue	$5.4M Revenue

* Army CRADAs and CRADA revenue significantly decreased in FY23 due to the Medical Research and Development Command transition to Defense Health Agency.

Educational Partnership Agreements (EPAs)

EPAs enable Army laboratories to partner with educational institutions and academic researchers.

BENEFITS TO THE ARMY:

- Cultivate educational and research opportunities in Science, Technology, Engineering, and Mathematics (STEM) programs relevant to Army S&T efforts;
- Involve faculty and students as an extension of resources to Army laboratories to solve essential Army challenges;
- Provide academic teaching opportunities for Army scientists and engineers (S&Es), attract talent, and form relationships with the next generation of S&Es; and
- Leverage academic research methods to solve Army challenges.

USE CASES FOR ACADEMIC PARTNERS:

- Loan or allow students and faculty to use laboratory equipment and facilities;
- Provide technical assistance to academic institutions, which can enhance teaching and research;
- Involve students and faculty in research projects side by side with Army S&Es;
- Receive loaned or transferred surplus Army scientific equipment for student and faculty for academic research; and
- Aid in the educational experience of students of all levels by providing a mechanism by which those can benefit from the staff expertise and unique facilities and equipment at Army laboratories.

EPAs

FY22	FY23	FY24
285	260*	287

* Army EPAs decreased in FY23 due to the Medical Research and Development Command transition to Defense Health Agency.

Commercial Test Agreements (CTAs)

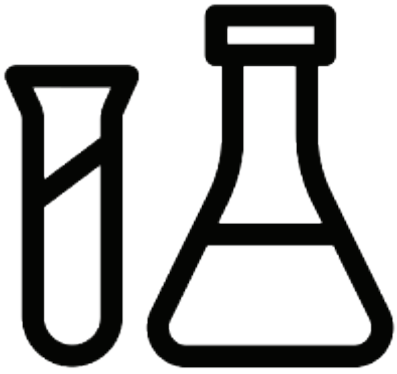
CTAs allow Army laboratories to provide testing services for a fee to a private partner. CTAs provide access to unique, world-class Army laboratories, test capabilities, and facilities.

BENEFITS TO THE ARMY:

- Reduce costs by providing facilities or services for a fee;
- May transfer test materials, equipment, models, computer software, data and other technologies;
- Increase return from equipment and facilities investments; and
- Government purpose use of the testing data depending on terms in the agreement.

USE CASES FOR NON-FEDERAL ENTITIES:

- Access to unique test facilities and equipment;
- Access to Army expertise through test feasibility; developing test requirements; conducting test planning, scheduling, and budgeting; designing, building, and installing test hardware and equipment; and acquiring, processing, and analyzing test data;
- Army laboratory may provide samples, drawings, information, equipment, materials;
- Results of tests performed under a CTA will not be disclosed to third parties without the consent of the customer; and
- Use of resources is on a noninterference basis of the laboratory supporting its mission and must not constitute undue competition with the private sector.



CTAs

FY22	FY23	FY24
455	500	928*
$14M Income	$11.8M Income	$10.8M Income

* In FY22 and FY23, this metric included only newly executed CTAs. In FY24, the number reflects both newly executed and total active CTAs, contributing to the increase.

Intellectual Property (IP) and Patent License Agreements (PLAs)

Army laboratories generate inventions in the course of R&D projects. The laboratory ORTA promotes T2 training to laboratory S&Es, including how to recognize, identify, report, and file for patent protection. IP plays an important role in the Army's ability to modernize its weapons systems, maintain technological overmatch, and support long-term sustainment. PLAs are the mechanism for continued development and commercialization of Army inventions. Each Army laboratory maintains a patent portfolio to market inventions by its S&Es. When licensed and commercialized, the inventions benefit consumers with new or improved products.

BENEFITS TO THE ARMY:

- Leverage commercial interest including profit incentives and willingness to take risks for product development, manufacturing, marketing, and selling Army technologies;
- Enhancements from products made by industry using licensed Army technologies resulting in military sales;
- Contribute to U.S. defense manufacturing and economic growth. For example, a recent economic impact study conducted by TechLink reported sales from Army license agreements exceeding $6 billion; and
- Royalties are shared between the inventor and the laboratory.

USE CASES FOR LICENSEES:

- Profits and sales of new products and services, including both commercial and U.S. military sales;
- Potential for outside investment funding directly related to the licensed Army technology; and
- Potential royalties from sublicensing the licensed Army technology.





FISCAL YEAR	New Invention Disclosures	Patent Applications Filed	Patents Issued	Total Active Patents	Active License Agreements
FY22	121	118	118	1,517	220 / $2.5M Income
FY23*	129	85	91	1,139	130 / $695K Income
FY24	110	81	78	1,125	159 / $622K Income

* Army Patents and PLAs significantly decreased in FY23 due to the Medical Research and Development Command transition to Defense Health Agency.

Partnership Intermediary Agreements (PIAs)

A PIA is an agreement between an Army laboratory and an agency or entity funded or chartered by state or local government. A partnership intermediary engages in activities to increase the likelihood of successful marketing and formation of commercial partnerships between Army laboratories and non-government organizations.

BENEFITS TO THE ARMY:

- Market Army technologies and capabilities;
- Conduct outreach events;
- Perform market research for Army-developed technologies;
- Find licensees and assist them with business plans;
- Increase T2 to commercial partners and technology transition to Army customers; and
- Advocate, connect, inform, and facilitate linkage to manufacturers, small businesses, apprentice programs, etc.

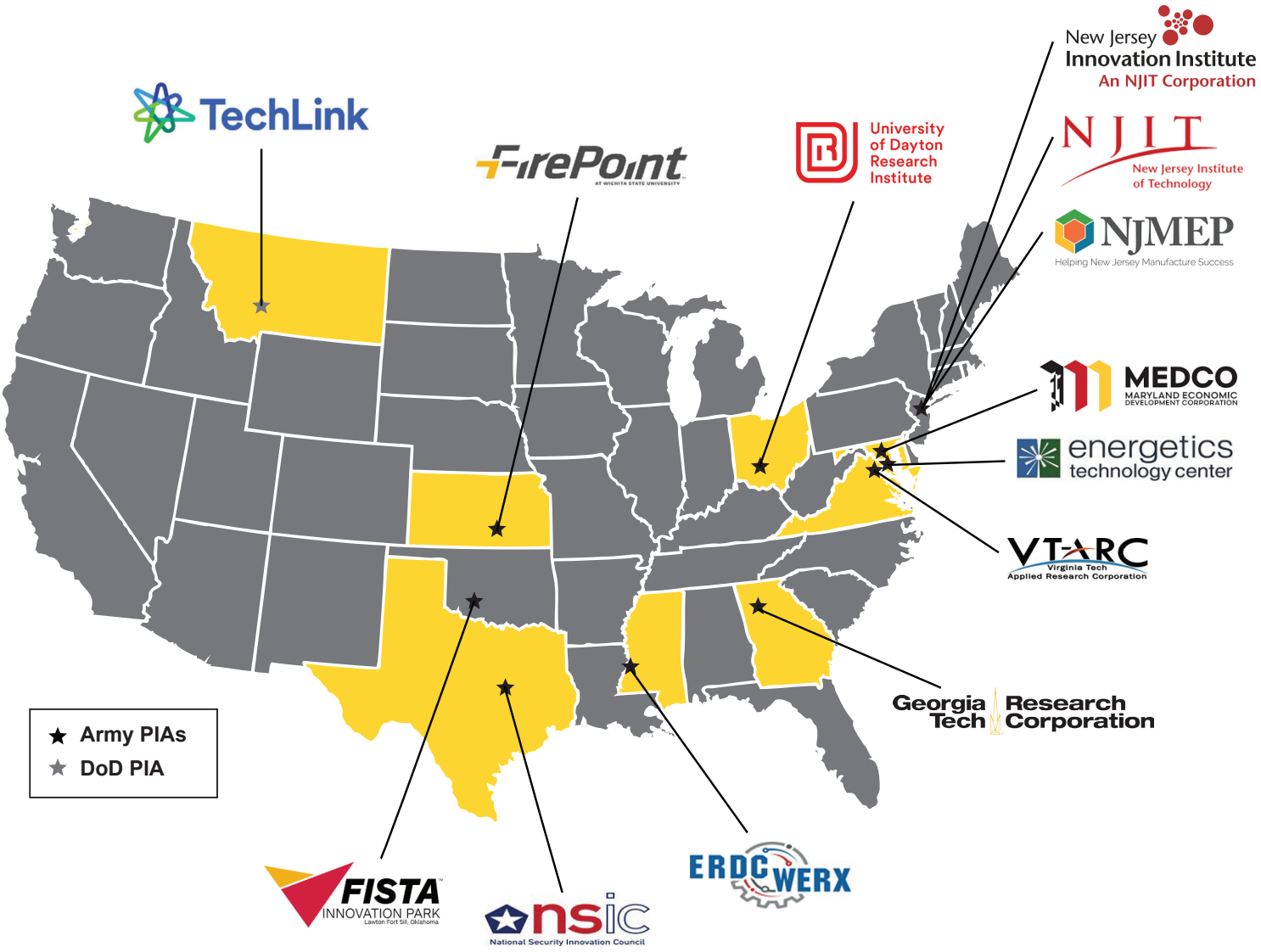
USE CASES FOR NON-FEDERAL ENTITIES:

- Facilitate an understanding of Army needs and interests;
- Find partners to leverage Army technologies and promote technology licensing and CRADA opportunities;
- Research and evaluate markets, help create opportunities for designs and prototypes of Army technology and promote manufacturing capabilities; and
- Facilitate the brokering of license agreements between the Army laboratories and industry, academia, and non-profits.

PIAs

FY22	FY23	FY24
10	7	12

Army and DoD PIA Locations



DoD PIA

DoD PIA – TECHLINK

In 1999, TechLink became the Department of Defense's first national Partnership Intermediary for Technology Transfer. Since then, TechLink has helped realize impact by improving DOD's overall success in Technology Transfer (T2) and Transition (T3) by facilitating license and cooperative R&D agreements between DOD laboratories and U.S. companies. TechLink's primary activity is to assess R&D and intellectual property across DOD labs, market those inventions to U.S businesses, then guide companies and DOD labs through the licensing and/or cooperative R&D agreement process.

TechLink helps realize the impact generated and expected from over $20B in DOD basic research investment by connecting innovation from DOD labs to the National Security Industrial Base / Innovation Ecosystem in a cost-effective manner, ensuring an increased return on investment (ROI) to the DOD and the U.S. taxpayer by:

- Brokering valuable DOD T2 agreements that support the warfighter and U.S. economy
- Producing an unmatched national marketing program engaging with industry
- Bolstering the entire DOD research enterprise by generating revenue for the DOD laboratory system

TECHLINK T2 PARTNERSHIPS IN ACTION

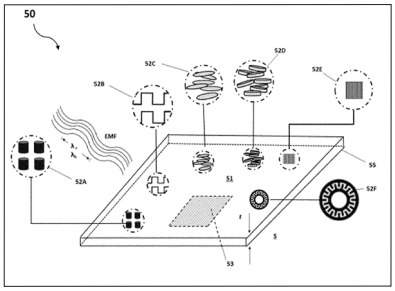
In FY 2024, TechLink assisted Army laboratories with 20 technology transfer agreements, including 10 patent license agreements, 5 CRADAs, and 5 other agreements (e.g., limited purpose CRADAs, material transfer agreements, other contracts). Examples of TechLink support to Army laboratories in FY24 include facilitating the licensing of a biological sampling tool developed by Army researchers at DEVCOM Soldier Center to a private company, aiming to prevent the spread of illnesses in food service environments. This collaboration exemplifies TechLink's commitment to transitioning Army innovations to the commercial sector, enhancing public health and safety.

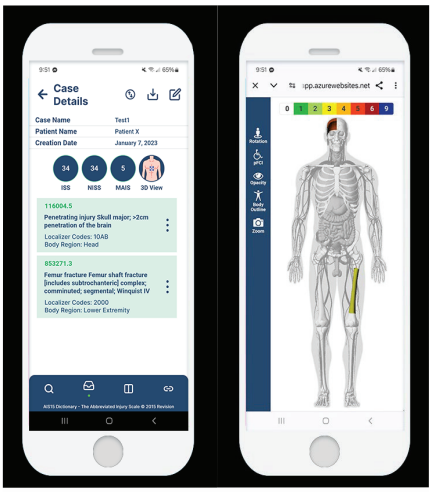
TECHLINK TECH TRANSFER UNIVERSITY

The TechLink Tech Transfer Foundations course was launched in the fall of 2022 and three cohorts have been completed to date. The content in this course is geared toward those new to the ORTA profession and is a great opportunity to gain best practices for conducting T2 within their laboratories. ORTAs learn various approaches for successfully engaging with stakeholder groups, such as S&Es, legal counsel, and industry partners. The in-person capstone event allows participants to engage with other ORTAs and T2 professionals from across the DoD, learn from T2 experts and T2 Service leads, and work in small groups on collaboration and commercialization partnering scenarios. In 2024, there were 18 Army enrollees representing 12 different laboratories.

FY24 Army Technology Transfer Program Success Stories

T2 agreements help to leverage shared research interests, capabilities, expertise and identify research products (e.g., inventions, innovations, knowledge) which may have commercial or public value. The success stories that follow in this report provide examples of how T2 is supporting Army modernization.





Revolutionizing Drone Flight: DEVCOM ARL's New Patent Could Keep UAVs in the Air Indefinitely

A New In-Flight Recharging System Aims to Overcome Electric Drones' Biggest Limitation—Battery Life

U.S. Army Combat Capabilities Development Command Army Research Laboratory, based in Adelphi, Maryland, recently received a patent for a new drone tethering system, (serial #US2024286773) designed to extend drone capabilities by creating new recharging systems using other UAVs.

The system is designed to eventually allow for in-flight recharging of UAVs using a central "power bank" drone that could charge up multiple flight mates, similarly to how an air refueling plane like a KC-135 Stratotanker can restock combat planes, extending their mission timelines and making them more survivable in mid-air.

Basically, the idea is to make drones fly longer, removing one of the largest challenges of electric flight- battery life. The US military has clearly been interested in extending effective flight length of UAVs, investing in or whitelisting many long-range drones. As most drones are electrically powered, they struggle over long distances, where gasoline, diesel, or aircraft-fuel powered UAVs can fly further.

However, if they could charge while in flight, the potential for electrically powered drones to be used in longer term, fixed positions for applications like surveillance or communications could exponentially increase, giving the US military more flexibility in dynamic operating environments. A drone could be a movable watch tower, or a completely flexible communications antenna system that could be remotely piloted to where it's needed and left there to be automatically recharged by UAV.

While we're probably still a few years off from seeing the tether vision fully realized, the future range of drones could be massively increased if they didn't have to land to recharge, making this an exciting promise of things to come.

Original Article: *Revolutionizing Drone Flight: U.S. Army's New Patent Could Keep UAVs in the Air Indefinitely*

DEVCOM ARL Invents Electromagnetic Skin to Enhance Stealth for Airplanes, Vehicles & Equipment

Most external surfaces for vehicles, aircraft, and equipment are made of conductive materials like metal. The electromagnetic properties of these surfaces are usually reflective, with 180-degree phase shift and zero transmission (i.e., light and sound waves reflect off the surface and do not travel through the object). The good news is that these surfaces easily satisfy mechanical, structural, and thermal requirements, and can provide the electromagnetic basis for components mounted above them.

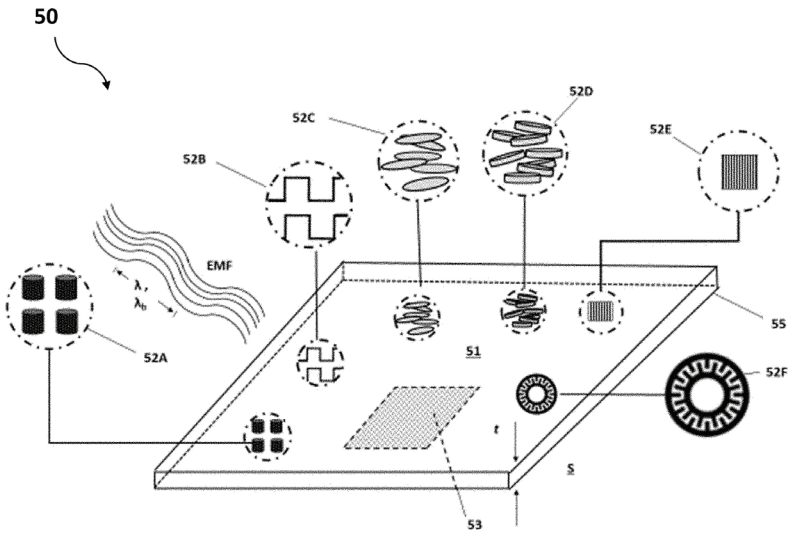


FIGURE 1A

The bad news? These materials can exhibit additional electromagnetic properties. But current methods to add properties use bulky or rigid materials, and cover only smaller areas (not the whole object or vehicle). These methods also result in coverings functional only at low frequencies (e.g., UHF or less). By modifying how objects interact with electromagnetic waves, they can become less detectable by radar systems, which can enhance stealth capabilities.

Fortunately, an alternative has been developed by researchers at the U.S. Army Research Laboratory. Army researchers developed a thin, pliable electromagnetic skin that can enhance, block, absorb, or bend waves of electromagnetic radiation. The highly conformal electromagnetic skin can be altered for at least one electromagnetic property of a surface and is customizable to any dimension and geometric shape.

Companies can license the technology from the Army. TechLink guides businesses through the technology evaluation and licensing process — at no cost — and licensing terms and fees are negotiable. Businesses that license the technology may also have access to testing data and opportunities to pursue collaborative research with the Army.

DEVCOM C5ISR Center Leverages CRADAs to Mature CMOSS Architecture

The U.S. Army Combat Capabilities Development Command (DEVCOM) Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance and Reconnaissance Center (C5ISR Center) developed and managed C5ISR/Electronic Warfare (EW) Modular Open Suite of Standards (CMOSS) delivers on the DoD intent to create an open systems architecture standard by which small businesses and large primes can compete.

CMOSS reduces the size, weight and power footprint of C5ISR systems by enabling integration and hardware sharing for communications, position, navigation and timing (PNT), mission command, and EW capabilities. CMOSS allows for rapid technology insertion to keep pace with emerging needs, permitting capabilities that are innovative, yet unanticipated, to be quickly implemented using well-defined components with open interfaces. The components are commonly referred to as “cards.”

C5ISR Center has executed multiple Cooperative Research and Development Agreements (CRADAs) with various industry Partners to engage in technical collaboration concerning new trends, technologies, techniques, and problems in research and development (R&D) that may be applicable to CMOSS, thus expanding its knowledge of the latest R&D done by industry, and furthering industry’s understanding of the unique R&D needs of the US Army. The CRADAs allow access to and exchange of technical data and equipment between C5ISR Center and industry Partners for the purpose of studying, designing, prototyping, and testing systems to evaluate and mature CMOSS.

The CRADAs have increased CMOSS adoption by industry Partners, matured the CMOSS architecture, and increased the number of CMOSS commercial off the shelf products available to US Army programs. The CRADA Partners have also leveraged the C5ISR Center labs for integration, testing, and demonstrations of CMOSS systems.

The success of these partnerships demonstrates the power of collaboration between C5ISR Center and industry to drive innovation and advance the US Army’s CMOSS capabilities. C5ISR Center plans to continue CMOSS CRADA activities and welcomes new industry partnerships on CMOSS efforts.

CMOSS, and the CRADAs that help enable it, support a leap ahead in US Army warfighting capability. CMOSS equipment easily enables multi-mission equipment sets, reduces technology development cycles, allows for continuous introduction of new capability, and significantly reduces sustainment costs and equipment downtime. The capability revolution enabled by these CRADAs greatly improves the ability of industry and government to work together in delivering C5ISR technologies, and the industry/government fusion realized via these CRADAs has facilitated provisioning of game changing technologies to our Warfighters.

DEVCOM CBC Completes Agreement to Support Military Working Dog Training

The signing of a new memorandum of agreement highlights how the U.S. Army Combat Capabilities Development Command Chemical Biological Center (DEVCOM CBC) is supporting the future of the U.S. Army. The MOA initiated new policing and training requirements for the Army's military working dog (MWD) program. The agreement directs that DEVCOM CBC will provide narcotics training aids, technical knowledge, and scientific expertise to all military working dogs within the Department of the Army.

DEVCOM CBC has a history of supporting Army initiatives involving canines, including the fight against COVID-19, decontamination, explosives detection, wearables and more. Throughout these interactions, the Center has been keen on identifying and focusing its efforts on the changing needs of the Army.

The MOA outlines the responsibilities of distributing the narcotics training materials and coordinating training and support for MWDs. DEVCOM CBC will be integral to the training efforts as a point of contact for training results and future enhancements. All the work DEVCOM CBC performs under this agreement will support Army priorities and provide key benefits to the Army.

The agreement will redefine the capabilities of MWDs, their handlers, and their trainers by providing greater access to training aids and intrinsic industry knowledge for the Army's MWD teams by delivering the Center's specialization in the Chemical, Biological, Radiological, Nuclear, and high yield Explosives (CBRNE) field. This collaboration marks a significant milestone in the long-standing partnership between CBC and the Army's MWD teams. It sets the stage for a groundbreaking initiative that will provide invaluable scientific and technical knowledge to enhance the capabilities of all MWDs. "We're not only assessing current mission requirements, but we're also identifying potential future threats and how that can be addressed," said DEVCOM CBC contract scientist Jenna Gadberry. "We've learned that the military working dogs can detect threats at far lower levels than previously identified, so we want to continue investing in that."

The collaboration of the scientific community and the operational capabilities of Soldiers in the field puts the Army ahead of the curve on potential CRBNE threats to enable a more proactive approach to defense. "There are so many ways to push the envelope on working dogs in the research and development area. The sky is the limit, and we believe it is a great investment because more applied science for working dogs will only enhance our military working dog teams," said Gadberry.

Original Article: *Army Lab Completes Agreement to Support Military Working Dog Training*

DEVCOM DAC Visual Anatomical Injury Descriptor (VisualAID)

The Visual Anatomical Injury Descriptor (VisualAID), developed by the DEVCOM Analysis Center (DAC), is a web-based analytic tool designed to serve as a centralized repository for analysts to code injuries from experiments, test and combat events using the Advancement of Automotive Medicine (AAAM) anatomical-based Abbreviated Injury Scale (AIS). VisualAID was created to standardize the coding and visualization of AIS-coded medical cases. Analysis products derived from either Warfighter theater events or modeling and simulation, utilizing VisualAID, are shared with the Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC) Program Management Office (PMO) and other trauma analysis researchers to inform Army materiel solutions.

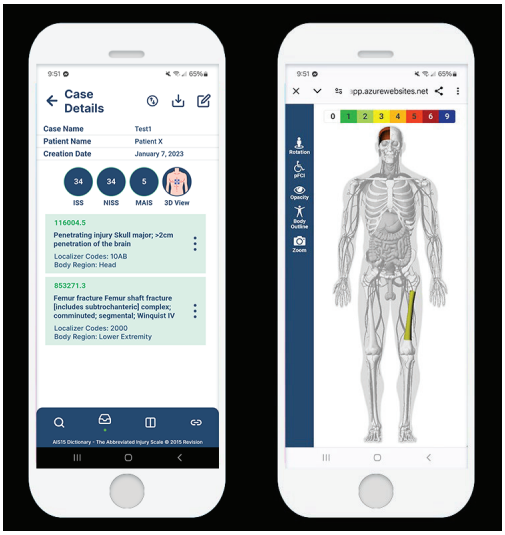


Figure 1. Screenshot of AIS coding (left) and the resulting VisualAID diagram when using AAAM's digital dictionary mobile application.

The AIS Dictionary is an injury coding resource maintained by its developer and copyright holder, AAAM. The Cooperative Research and Development Agreement (CRADA) between DAC and AAAM is aimed at facilitating the development of sharable and comparable injury data for both military and non-military applications using the DAC-developed VisualAID analysis tool. In March 2024, VisualAID was integrated into AAAM's digital dictionary (Figure 1).

The transition of VisualAID from DAC to AAAM provides standard data collection and distribution of comprehensive injury data across the DOD, while also removing government responsibility of software maintenance. It also facilitates the standardization of AIS coding across multiple fields of research to better understand and characterize mechanisms of injury to the human body. These datasets will provide consistent analysis products to inform future Warfighter protection concept decisions.

DEVCOM GVSC CRADA for testing COTS Atmospheric Water Generations Systems

The DARPA Atmospheric Water Extraction (AWE) Program and the DoD have identified a need to evaluate the performance of commercially available systems and devices that produce potable water from atmospheric humidity. This evaluation is needed to standardize the test data and conditions so systems can be fairly compared and to develop a benchmark for the state of the art commercial performance of these systems. The data from these evaluations will be used to assess the level of performance improvement of new technologies and systems such as those being developed by the DARPA AWE Program.

The Commercial off the Shelf (COTS) Atmospheric Water Generation System (AWG) testing will be coupled with Independent Verification and Validation (IV&V) provided by subject matter experts to verify the reported water output, water quality, energy efficiency and Size, Weight and Power (SWaP) metrics for the COTS devices. U.S. Army DEVCOM Ground Vehicle Systems Center managed the COTS AWG testing by the Army Test Center and Defense Health Center - Aberdeen at Aberdeen Proving Grounds.

The IV&V team published a Request for Information (RFI) on Sam.gov which garnered the interest of 5 vendors to submit their systems for testing. A Cooperative Research and Development Agreement (CRADA) was drafted to allow the vendors to loan the government their systems for testing in exchange for the data collected during testing.

Testing was conducted at Aberdeen Test Center, located on Aberdeen Proving Ground, Maryland from 5 June 2024 through 25 July 2024. Systems arrived 5-7 June 2022, with inspections, training, and setup occurring 10-13 June. Environmental chamber testing occurred between 17 June 2024 and 11 July 2024 and outdoor environmental testing was conducted from 15 to 23 July 2022.

Systems were tested at various temperature and relative humidity conditions in two phases: 1) Inside Environmental Chamber and 2) Outside at ambient weather conditions. Environmental chamber testing was comprised of 12 days at various conditions, followed by 6 days of outside ambient testing. Each test day consisted of 8 continuous operation for 8 hours. During outdoor testing, temperature and humidity readings were recorded every half hour, for a total of 16 measurements, and the averaged values reported for the given day. The results provided independent government data on the high and low operating temperature limits, maximum water production capability, water production at 10 different combinations of temperature and humidity, the energy required to produce a gallon of water, an evaluation of the actual production rate vs the vendors published production rate, system size, system weight and the system water quality.

DEVCOM SC's Hydration Flow Meter Helps Prevent Dehydration in Soldiers

Researchers at the U.S. Army Combat Capabilities Development Command Soldier Center (DEVCOM SC) have invented a personal flow meter to measure water consumption. The invention, which has been licensed to an industry partner, will serve to help prevent dehydration in the nation's warfighters. Preventing dehydration is important since it can impact Soldier health and performance. Monitoring and understanding hydration status of warfighters can help prevent heat exhaustion and heat stroke.

DEVCOM SC engineers Michael Wiederoder, Ph.D. (project lead), Eric Brack (project lead), Matt Hurley and Andrew Connors invented the device to specifically meet the needs of the nation's Soldiers. Existing products didn't provide the level of accuracy needed by warfighters, and some products require large batteries, which are impractical for Soldiers on the move.

"The flow meter is a handheld device with an inlet and outlet that connects to tubing that is currently used by Soldiers to drink from a hydration bladder they carry in their backpacks," said Wiederoder. "Inside the device there is a water-wheel-like piece with fins that rotates as water passes through. There are magnets on the wheel that can either generate electricity or pass by a sensor that can correlate the volume of water consumed with the number of rotations by the wheel."

Wiederoder explained that the flow meter tracks water consumption. The flow meter also helps Soldiers know when the filter needs to be changed, which is important because Soldiers often need to drink water that is available to them in their environment, making proper filtering essential.

The DEVCOM SC team 3D printed multiple iterations of two different flow meter designs and test their performance. The result is a compact, accurate device that can be manufactured with low-cost components, and since it is self-powered it can be used without the need for batteries.

A patent was issued in 2022 and a license agreement was executed in 2024 with HydroSmart, LLC, Ohio-based company that develops fluid consumption and hydration monitoring and management solutions for consumer, healthcare and military markets.

The technology also has potential to eventually benefit the general public, becoming a useful tool for athletes or anyone participating in physical activity. There is also the potential for other military and medical applications.

Original Article: *DEVCOM Soldier Center's Hydration Flow Meter Helps Prevent Dehydration in Soldiers*

DEVCOM SC's Industry Day Cultivates Partnerships

DEVCOM SC recently hosted an event to encourage collaborative efforts with industry and academia. The event showcased DEVCOM SC's research efforts to potential industry and academic partners who are interested in supporting the Soldier Center's mission. DEVCOM SC is committed to discovering, developing, and advancing science and technology solutions that ensure America's warfighters are optimized, protected and lethal.

"The innovative efforts of our world-class scientists and engineers, combined with our numerous collaborations with academia and industry, enable us to work to overcome the challenges facing warfighters," said Douglas Tamilio, director of DEVCOM SC. "Our collaborations help accelerate the process of getting the latest and best technologies into the hands of our warfighters. Industry Day provides our organization with an excellent opportunity to connect with potential partners."

A total of 339 people from a variety of organizations – including industry, academia, Department of the Army, Department of Defense, and other Federal Government entities – participated in the DEVCOM SC event.

"Industry Day served as a platform for industry and academia attendees to gain insights into the challenges and capability gaps faced by warfighters," said Yoojeong Kim, Ph.D., who serves as the lead for DEVCOM SC's Innovation and Outreach Team. "It also provided an opportunity for DEVCOM SC to engage with innovators from diverse sectors, fostering collaboration and partnership."

The event provided information and enabled discussions between DEVCOM SC and industry/academia through presentations from the director and from associate directors, as well as one-on-one exchanges on a wide variety of topics. The event also provided attendees with concrete information on how to work with the Soldier Center.

DEVCOM SC subject matter experts provided poster presentations of leading areas of research, detailing the important work being done by DEVCOM SC for the warfighter. Interaction with potential partners helped inform them of the center's goals and challenges and also provided an opportunity to share knowledge and capabilities to help advance DEVCOM SC's science and technology efforts.

Original Article: *DEVCOM Soldier Center's Industry Day Cultivates Partnerships*

ERDC's Innovation 2 Market: Facilitating Partnerships, Education, Collaborations, and Market-Driven Commercialization

The US Army Engineer Research and Development Center's (ERDC) Innovation 2 Market (I2M) program addresses critical needs in ERDC's technology transfer process: accelerating the transition of innovative technologies from the lab to the market and fostering stronger connections with industry that extend beyond military applications.

I2M centers around a free, annual, in-person event. In 2024, this was supplemented by the launch of a quarterly webinar series targeted to specific industry sectors aligned to featured technology bundle. These initiatives create a comprehensive platform for continuous engagement, featuring:

- Technology presentations by ERDC researchers
- Panel discussions and signing ceremonies highlighting successful partnerships
- Structured networking opportunities
- Educational sessions on intellectual property and collaboration with ERDC

INNOVATION2MARKET

LEVERAGE ERDC INNOVATIONS TO ELEVATE YOUR BUSINESS

I2M is a key element in the radical transformation in ERDC's approach to technology transfer, aiming to accelerate the pace, increase the volume, and enhance the quality of ERDC technology transfer to industry and other government agencies, through:

- Implementing a market-based approach, transitioning from "technology push" to "market pull," and aligning innovations with market needs and addressing the Army's and nation's requirements
- Fostering an innovative culture throughout ERDC by spotlighting researchers and their technologies
- Pursuing forward-thinking deal-making and outreach activities with an agile, business-friendly platform

I2M is about more than transferring technology, it is about developing partnerships and creating lasting relationships that expand the ERDC technology development ecosystem. I2M has increased engagement with industry partners, enhanced ERDC's visibility, increased researcher involvement in outreach, and led to new collaborations in the form of CRADAs and licenses.

I2M is expected to generate a consistent flow of high-quality applications and license agreements. By filling the "funnel" and providing clear communication and guidance, I2M keeps participants engaged and accelerates their progress through the technology development process. It clarifies partnership mechanisms, allowing businesses to assess ERDC innovations' market potential more efficiently.

USMA an Army of Knowledge Management

United States Military Academy (USMA) is committed to supporting the Army in staying at the cusp of knowledge management best practices. This requires real and continuing collaboration with industry partners who share USMA's objectives and/or deploy technology well-equipped for the knowledge management gaps the Army faces.

USMA and Lockheed Martin Corporation (LM) have enjoyed a robust partnership in developing technology relevant to contemporary conflict. USMA and LM partner through a CRADA to support multiple projects in line with LM's role as a prime contractor for DOD and USMA's efforts to serve as a nexus for Army intellectual capital. A key component of ensuring that the Army maintains its status as a leader in innovation is ensuring that its knowledge management infrastructure is not only reliable but also, forward-thinking. USMA faculty work at the cutting edge of knowledge management and visualization.

COL James Enos (USMA) and John Hall (Lockheed Martin) have developed new models for enhancing our understanding of model-based systems engineering. USMA personnel such as COL Enos demonstrated cutting-edge understanding of knowledge innovation. Their effort to improve knowledge management includes advancement from documents-based systems engineering to model-based systems, as well as a project-based dashboard capable of tracking completion for engineers to track the days necessary to complete any given task. In the vital work of knowledge management, West Point and Lockheed Martin demonstrate how public-private partnerships can advance vital Army interests in staying at the tip of the spear in a knowledge economy.

COL James Enos in West Point's Department of Systems Engineering saw a gap in the operations of the Notional Air Defense System (NADS), a mobile system for tracing and shooting down ballistic missiles. NADS allows early warning notification, provides protection over critical infrastructure, and enhances warfighters' awareness of action on the battlefield. COL Enos and his team developed a block definition diagram to represent Lockheed's representation of NADS. Historically, Lockheed Martin has utilized paper engineering documentation for representing both the physical architecture and the underlying logic of NADS. Through utilizing Systems Modeling Language (SysML), West Point's team in collaboration with Lockheed applied Model-Based Systems Engineering (MBSE) to enable NADS to have increased prowess in its capabilities to analyze, verify, and act on adversarial ballistic missiles. MBSE facilitated a legible representation of the physical architecture of NADS using block definition diagrams. This increases NADS capabilities for digital interoperability.

FY24 Army Technology Transfer Program Highlights

ARMY CRADA ECONOMIC IMPACT STUDY

TechLink at Montana State University conducted an Army CRADA impact study on 4,816 CRADAs executed between 2000 and 2020. The study found sales of products and services resulting from the CRADAs, including follow-on R&D contracts, sales of directly related products by licensees, royalties received by licensors, and sales by spin-out partners totaled $15.6 billion. Over the same period, these collaborations contributed an estimated $36.4 billion to the U.S. economy, supported 123,000 job years, and added $17.1 billion to the GDP*.

T2 TRAINING FOR SCIENTISTS AND ENGINEERS

Historically, T2 training availability varied across the Army S&T enterprise and was offered to S&Es on an as-needed basis, with voluntary participation. In 2024, a new policy memorandum issued annual T2 and intellectual property (IP) training criteria. This training applies to T2-designated laboratory personnel, including S&Es, ORTA, and legal staff. A Technology Transfer Innovator Training class is offered on-demand on the Army T2 website (https://www.t2.army.mil/T2-Training). The material covers invention reporting, financial incentives, and various research partnering mechanisms. The training raises awareness of statutory and regulatory requirements related to patenting and licensing laboratory technologies. It also builds trust in the role of R&D partnering to augment discovery, research, engineering, and testing within their technical mission space, and encourages personnel to reach out to the ORTA for T2 support.

TechLink. National Economic Impacts from U.S. Army CRADAs. 2025

Distinguished Awards in Technology Transfer

Federal Laboratory Consortium for Technology Transfer (FLC)

FEDERAL LABORATORY CONSORTIUM FOR TECHNOLOGY TRANSFER (FLC)

The FLC was organized in 1974 and formally chartered by the Federal Technology Transfer Act of 1986 to promote and strengthen T2 nationwide. The FLC is now a nationwide network of more than 300 federal laboratories, agencies and research centers that fosters commercialization best practice strategies and opportunities for accelerating federal technologies from out of the laboratories and into the marketplace.

The FLC's mission is to promote, educate, and facilitate federal T2 among its member laboratories and institutions so they can easily reach their commercialization goals, and create social and economic impacts with new innovative technologies. The FLC provides various resources, education and training, tools, and services to ensure federal laboratories are better able to create partnerships, navigate the commercialization process, and achieve market success.

FY24 FLC Awards – Army Winners

The FLC recognizes outstanding work in accomplishing T2 from the national laboratories to the public and private sectors with several prestigious awards. The FLC Awards Program annually recognizes federal laboratories and their industry partners for outstanding T2 achievements. The FLC's 30 plus years of advancing T2 would not have been possible without the creativity and dedication of the federal scientists and inventors recognized through the FLC Awards Program.

Each year, the FLC presents numerous awards to federal laboratory employees, including Technology Transfer Innovation, Impact, Excellence in Technology Transfer, Interagency Partnership, State and Local Economic Development, Rookie of the Year, Outstanding Technology Transfer Professional, Outstanding Researcher/Small Team, Harold Metcalf, and Laboratory Director of the Year. The FLC awards are ranked as some of the most prestigious honors in the T2 field.

In FY 2024, the Army received two FLC Awards: a Rookie of the Year Award and an Impact Award.

ERDC Wins Rookie of the Year Award

This award recognizes the efforts of an individual FLC laboratory technology transfer professional who has demonstrated outstanding work in the field of technology transfer and is new to technology transfer, with three years (or less) experience in a federal technology transfer position.

MELISSA KEEN: ADVANCING INNOVATION THROUGH LEADERSHIP, COMMUNICATION, AND OUTREACH

Melissa Keen has rapidly emerged as a leader in technology transfer. Since joining the Office of Research and Technology Transfer (ORTT) at the U.S. Army Engineer Research and Development Center (ERDC) in August 2021, she has already earned three awards: a Civilian Service Achievement Medal for outstanding performance as a Technology Transfer Officer, an ERDC award for Outstanding Innovation in Research and Development for the Submersible Matting System (SUBMAT), and an ERDC Award of Excellence for tremendous leadership, dedication, and contributions to the Research and Development 2024 (RD24) workshop.

Keen's command of contractual language and organizational strategy was essential for streamlining the invention disclosure processes and intellectual property (IP) management. She launched several ERDC "firsts," including pursuing new agreement types and advertising technologies on Sam.gov. She also holds key leadership and communication roles at ERDC and was invited to join the Emerging Leaders Group (ELG) in 2022. The significance of Keen's contributions to technology transfer advancement is reflected in her impressive and wide-ranging achievements supporting ERDC's seven laboratories.

Among other accomplishments, Keen developed ERDC's first fillable invention disclosure form via PDF, increased provisional patent application use, and created an improved patent licensing workflow. She has been instrumental in simplifying and strengthening ERDC's technology transfer process. In doing so, Keen has proven excellent and effective at timely and varied negotiations. Her standout achievements include completing an urgent agreement with the Federal Emergency Management Agency (FEMA) within one day for disaster-relief facility use, negotiating and executing a SUBMAT exclusive license, and finalizing a high-priority Cooperative Research and Development Agreement (CRADA) within just five weeks, rather than multiple months.

As an ELG and Strategic Communications Group member, Keen is uniquely positioned to enhance ERDC's presence in the technology community and promote better communication across the institution for coordinated technology transfer success. In these roles, Keen has helped plan several industry events, served on panels, facilitated roadshows for ERDC labs, compiled Ignite — the ORTT quarterly technology transfer newsletter — and mentored new employees.

In 2024, SUBMAT received the U.S. Army Corps of Engineers' prominent Innovation of the Year Award. Once the technical team with industry partner Nearshore Logistics determined they should engage with ORTT to protect its new IP, Keen volunteered to guide the inventors through the technology transfer and IP protection process. In the past three years, Keen has processed more than 70 agreements and amendments to facilitate ERDC partnerships and has received and managed one-third of the total invention disclosures submitted by ERDC innovators since 2022.

The impact of Keen's extraordinary service is profound. She excels at interdepartmental and interagency collaboration, delivering numerous benefits and successes to ERDC. She has become an exemplary mentor to interns and other employees and an ace planner for ERDC's highest profile events. Keen's exceptional leadership, communication, and mastery of technology transfer mechanisms help bolster ERDC as a technology powerhouse.

ERDC Wins Impact Award

Honors FLC member laboratories whose technology transfer efforts have made a tangible lasting impact on the populace or marketplace ranging from a local to global scale.

FIRO: AGILE RESERVOIR MANAGEMENT SAVES MILLIONS THROUGH SMART FORECASTING

The Problem: In an era of increasing water scarcity and unpredictable weather patterns, the U.S. Army Corps of Engineers (USACE) needs improved data that reflects real-time weather conditions and forecasts to more efficiently manage the 400-plus dams it operates across the country. The challenge is exacerbated by growing competition for limited water resources, financial constraints for new dam construction, and increasing complex weather patterns.

The Solution: The U.S. Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory has pioneered Forecast-Informed Reservoir Operations (FIRO), a revolutionary water management strategy that harnesses cutting-edge weather and streamflow forecasts to optimize reservoir efficiency. Instead of maintaining a fixed water level, FIRO introduces a flexible “FIRO space” in a reservoir, that allows operators to adjust water levels based on forecasted conditions — retaining more water for supply when forecasts show dry conditions and releasing more water before a large storm. FIRO boosts water supply reliability, enhances flood risk management, improves environmental flow management, increases infrastructure efficiency, and adapts better to weather extremes.

The Tech Transfer Mechanism: The FIRO team employed innovative means to bridge research and operational implementation. They represent a unique collaboration among federal agencies (USACE, National Oceanic and Atmospheric Administration, U.S. Bureau of Reclamation), academic institutions, and local water agencies. Once Cooperative Research and Development Agreements (CRADA) were signed and pilots were conducted, USACE districts began incorporating FIRO principles into official water control manuals, codifying the new approach. Along the path to implementation, the FIRO team conducted significant research, screening, testing, and updating to build stakeholder confidence and show real-world impact.

The Impact: USACE is now evaluating FIRO’s applicability for its more than 400 dams. Some systems, like the 14-dam system in Oregon’s Willamette Valley, are exploring FIRO for complex, multi-reservoir operations. In Northern California, FIRO implementation at Lake Mendocino and Lake Sonoma produced impressive water conservation results valued at $29 million in 2024 for 58,000 homes. In Southern California, FIRO implementation at Prado Dam conserved $6.1 million worth of water for 12,200 homes in 2024. These successes showcase the technology’s ability to adapt to different types of dams and climates. FIRO represents a significant advancement that optimizes the balance between flood control, water supply, and environmental needs, addressing the complex challenges of modern water management.

DEVCOM AC Inventors Receive Thomas Edison Awards for Combustible Cartridge Casing Invention

Four inventors from the U.S. Army Combat Capabilities Development Command (DEVCOM) Armaments Center shared Thomas Edison Patent Awards from the Research and Development Council of New Jersey at an awards ceremony at Bell Works in Holmdel, N.J. for an invention for the production of combustible cartridge casing material.

Armaments Center inventors Nikolaos Ioannidis, Viral Panchal, Francis Sullivan and Philip Abbate shared the award with Costas Gogos and Zohar Ophir from the New Jersey Institute of Technology (NJIT) and Ming Wan Young from NJIT's Polymer Processing Institute (PPI). The group was recognized for its contributions to Patent No. 11,780,141 B1 "Continuous Process for Producing Foamable Celluloid," which was granted by the U.S. Patent and Trademark Office on Oct. 10, 2023.

The patent is for a novel manufacturing technology enabling continuous production of foamed celluloid, a fast-burning, moisture-resistant and dimensionally stable new material for combustible cartridge casing and other next-generation ammunition systems. The technology provides a safe, consistent, and environmentally friendly process for continuous manufacturing, and represents a significant technological advancement over traditional celluloid manufacturing methods.

The inventors can be seen discussing their invention in the video here:
https://vimeo.com/1027401479/5fd5dafc5d?share=copy

Original Article: *Armaments Center Inventors Receive Thomas Edison Awards for Combustible Cartridge Casing Invention*

DEVCOM SC Team Wins Major General Harold J. Greene Innovation Award

David Colanto, Ph.D., Jason Parker, Ph.D., and Damian Kubiak of the U.S. Army Combat Capabilities Development Command Soldier Center, or DEVCOM SC, won the prestigious Major General Harold “Harry” J. Greene Team Innovation Award in the warfighter category. The innovation award recognizes advances in research and development leading to technologies that enhance Soldier performance and readiness.

The team’s innovative efforts have led to the development of helmets that provide improved ballistic protection, while reducing the physical burden on the head by approximately 40 percent and by reducing bulk by 50 percent. The reduction in weight and bulk increases Soldier mobility and, therefore, Soldier lethality. The team’s work has been transitioned to industry through Cooperative Research and Development Agreements.

DEVCOM SC, in conjunction with its partners in industry, supported research leading to advances in polymers and processing that helped make the improved helmet possible. DEVCOM SC transitioned the technology to Program Executive Office Soldier, or PEO Soldier, which recently fielded the new helmet.

“The innovative efforts of our world-class scientists and engineers, combined with our numerous collaborations with academia and industry, enable us to work to overcome the challenges facing warfighters,” said Douglas Tamilio, director of DEVCOM SC. “The DEVCOM SC team winning the Major General Harold J. Greene Award reflects our commitment to developing technologies that ensure our warfighters are protected, optimized and lethal.”

To win the award, the team took a distinctive approach to a complicated problem.

“We were developing our unique way of preforming and consolidating a helmet,” said Kubiak. “We had the opportunity to work with some very new, higher performing materials and applying our new process. We were able to demonstrate increased protection without the need to add weight. The Soldier gets a much better helmet (higher level of ballistic protection) without making it heavier.”

The team faced difficult challenges developing a helmet that offered more protection while also reducing weight/bulk. However, the team is dedicated to serving the warfighter and persevered through many difficult engineering challenges.

“It is extremely fulfilling that the team’s breakthrough innovation in the lab transitioned to enhance head protection and positively impact the warfighter,” said Colanto.

Original Article: *DEVCOM Soldier Center Team Wins Major General Harold J. Greene Innovation Award*

Army Technology Transfer Program Plans for FY25

INTELLECTUAL PROPERTY PORTFOLIO VALUATION

The Army T2 team will work to quantify the estimated value of the corporate S&T IP portfolio. With this knowledge, we aim to treat the portfolio more like a corporate asset for analytics, promotion, and licensing opportunities. We believe that S&T outcomes should not only reflect the work we do for Soldiers but also represent the long-term asset of IP. While it is not the primary outcome, IP can and should be positioned as an Army contribution to technical risk mitigation, cost efficiency for PMs, and, with successful licensing, an economic contribution to the Nation.

CRADA OUTCOME REPORTING

The Army Technology Transfer Program plans to integrate outcome-based metrics into the execution of CRADAs to enhance the effectiveness and strategic impact of these partnerships. In October 2024, we began curating data fields focused on measurable outcomes to assess the real-world benefits of collaborations with industry and academia. These metrics will focus on key areas such as realized purposes, intended research results/ products, measurable transitions, type of transition, commercialization, lessons and unintended results, and predictable mission impact. Metrics will assess how CRADAs contribute to Army innovation, the attributes of successful CRADAs, and types of CRADAs that have the largest impacts. Implementing outcome-based metrics will improve decision making, resource allocation, and accountability, leading to more efficient and productive partnerships. Additionally, these measures will help identify high-performing collaborations and optimize future agreements, ultimately accelerating the delivery of advanced capabilities to soldiers.