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WINTER 2023

DIGITAL TRANSFORMATION

IRREVERSIBLE MOMENTUM
The Army CIO's strategy for digital transformation

BLUEPRINT FOR INNOVATION
How one woman wrote the book on government innovation

MISSION OF CHANGE
Tragedy inspired this acquisition instructor to start a new chapter

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To contact the Editorial Office:
Call 703-664-5636/5633

Email:
armyalt@army.mil

Mailing Address:
DEPARTMENT
OF THE ARMY
ARMY AL&T
9900 BELVOIR ROAD
FORT BELVOIR, VA
22060-5567

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By Order of the Secretary of the Army:

JAMES C. McCONVILLE
General, United States Army
Chief of Staff

Official:

MARK F. AVERILL
Administrative Assistant
to the Secretary of the Army
2233305

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ARMY AL&T

WINTER 2023

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From the Editor-in-Chief

Portrayals of technology entwined with daily life in cult favorites such as "Tron," "Westworld" and, most recently, "The Peripheral" are quickly coming true. The future is less and less about hardware and more and more about software. You only have to follow the ongoing war in Ukraine to see that while physical weapons systems such as M777 howitzers, tanks and drones are still the weapons of choice, cyberattacks—including malware, phishing, denial of service and other attacks—that take advantage of software vulnerabilities, are on the rise like never before.

Everything that Army acquisition, logistics and technology does on behalf of the Soldier could—and perhaps should—include digital transformation. From artificial intelligence, augmented reality, hypersonics, cyber and electromagnetic activities to robotics, swarming, advanced materials, bioengineering, quantum information sciences, space technologies and biometrics. Everything, it seems, is going digital.

Now, to be sure, it's not as if Army acquisition just woke up and realized there was a digital transformation. Far from it. Army acquisition is in the lead for creating the very systems I mentioned above. But it's the speed of this transformation that is now taking over and getting everyone's attention, and thus the need for Army acquisition to ensure that digital transformation is baked into every aspect of acquisition.

The Army's program executive offices are the tip of the spear in this transformation and are addressing the digital aspect in everything they produce. For example, instead of forcing digital solutions onto a program, we should change the culture and inculcate the workforce to think digitally. That's what the new Office of the Deputy Assistant Secretary of the Army for Data, Engineering and Software (DASA DES) is developing with its newly established playbook. Making digital engineering a "team sport," the DASA DES playbook lays out a few key initiatives that are laser focused on driving digital transformation within the acquisition community. Read more about it in the article "Quarterbacking Digital Transformation," Page 30.

Incorporating unprecedented situational awareness enhanced by augmented reality, sophisticated mesh networking and artificial intelligence into our systems is the future. Understand how the Army is developing its first artificial intelligence and machine learning (AI and ML) operations pipeline with "Project Linchpin." This effort will deliver AI and ML capabilities to sensors for faster and more accurate decision-making, marking the future of overmatch in multidomain operations. Learn more about it in "Heard it Through the Pipeline," Page 42. And digital transformation is no accident. It takes time, planning and lots and lots of analysis.

Nelson McCouch III
@ armyalt@army.mil

Learn how the Army Chief Information Officer, Raj Iyer, Ph.D., is guiding the Army's digital transformation journey as he discusses successes with digital transformation and provides examples of Army wins with capability portfolio reviews, software acquisition, commercial services, the retirement of NIPRnet and more in "Irreversible Momentum," Page 10.

Finally, while this magazine focuses extensively on acquisition and its people, our people are more than just acquisition. Take a moment to meet Adina Peyton, a longtime instructor at the U.S. Army Acquisition Center of Excellence in Huntsville, Alabama, in "Mission of Change," Page 114. After losing her son in a police shooting, she found a new purpose—supporting first responders who experience trauma—through the nonprofit she founded in 2022 called "Getting Real About Mental Illness," or GRAMI for short.

There are many more fascinating articles in this issue, as well as extended content on our website and social media sites, and I encourage you to explore them all at **www.asc.army.mil**. If you have an idea for a story, have written one yourself or just want to comment on the magazine, please contact us at **armyalt@army.mil**. We look forward to hearing from you.

Nelson McCouch III
Editor-in-Chief

MOSA INTEGRATION
A modular open-systems approach (MOSA) uses an architecture that enables major system components to be incrementally added, removed or replaced throughout the system life cycle. The Army integrated MOSA into its requirements and sustainment strategies for the Future Long-Range Assault Aircraft (FLRAA). (Image by Getty Images)

ACCELERATING THE DIGITAL TRANSFORMATION

I am deeply committed to ensuring that the Army is prepared to meet the challenges of the 21st century, so this issue is particularly important because digital transformation underpins our efforts to build and deliver the Army of 2030 and beyond. In fact, the elements of digital transformation—software development, data, artificial intelligence and cybersecurity—are so important that I convinced Young J. Bang, my principal deputy, to bring his extensive private sector experience to our acquisition, logistics and technology team.

Fortunately, he embraced the challenge. I also hired Jennifer Swanson as the deputy assistant secretary of the Army (DASA) for data, engineering and software (DES), a newly created office within the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) focused on the adoption of digital transformation technologies and processes throughout the acquisition, logistics and technology community.

We all recognize that bringing an Industrial Age Army into the Information Age is no small task, but it is a vital one. We must preserve and expand our military advantage in the new digital operating environment. So, one of Bang's first initiatives was to establish and lead an internal Digital Transformation Forum, under the auspices of Swanson and her team. This allows the DASAs, the deputy for acquisition and systems management, and our program executive officers (PEOs) to meet regularly to implement topics central to successful digital transformation, such as workforce development and career management, software acquisition, agile contracting, data, open-systems architecture, artificial intelligence, cyber and several other key areas.

Swanson is executing several key initiatives covered in these forums. For example, in just the last six months, she and her team have:

1. Developed a Digital Foundations pilot to upskill our workforce with 100 participants across six PEOs and the Army Contracting Command providing feedback.
2. Worked with several new programs to adjust their requests for proposal (RFPs) to ensure modern software practices and data centricity are included as requirements.

3. Developed the first of three phases of the Unified Data Reference Architecture to reduce complexity, enable our products to easily share data and eliminate vendor lock; with phases two and three planned for this fiscal year. Thereafter, programs will be able to include the final reference architecture in their RFPs.

4. Led the way in obtaining senior leader decisions to no longer transition software to sustainment, paving the way for us to implement continuous integration and continuous delivery of software, which helps to ensure Soldiers get critically needed capability quickly to counter near-peer adversaries in real time.

DECISION DOMINANCE

Our aim is decision dominance for joint warfighters so they can act before the enemy. Secretary of the Army Christine E. Wormuth has made ensuring that the Army becomes more data centric and able to conduct operations in contested environments one of her top objectives. We have a ton of data, but getting secure, reliable and relevant intelligence to the point of need is a challenge. The ASA(ALT) Unified Data Reference Architecture addresses this challenge by defining a data mesh, which shifts data to a federated, decentralized approach and enables domains to process and package their raw data into a data product containing the specific information needed for command decisions. (See related article "Quarterbacking Digital Transformation," Page 30.) Sharing these decision-focused data products instead of centralizing raw data will enable rapid decision-making. This type of data decentralization is revolutionizing the way that industry operates, and we need to take the data innovations in industry and apply them to not only how we fight, but how we do business.

SHIFTING GEARS

The Unified Data Reference Architecture is expected to unify data mesh and data fabric principles and efforts, according to a 2022 request for information by the Office of the Deputy Assistant Secretary of the Army for Data, Engineering and Software. (Image by Getty Images)

There are other ways we are accelerating digital transformation. The Army acquisition community is taking advantage of all acquisition pathways and authorities provided in the last few years by Congress. One of the most promising is the software acquisition pathway, which is designed to provide rapid and iterative delivery of software capability to the joint warfighter. Currently, nine Army programs are using this pathway. To be successful, we must ensure that all associated processes are being tailored to improve the speed and quality of software delivery. Four programs are in the execution phase and planning software deliveries that meet the annual delivery timeframes. We're hoping to learn from these efforts.

TOOLS FOR TRANSFORMATION

The Army is also building new software tools to help our contracting professionals do more work, more accurately. We are getting them an entirely new contract writing system. We are also developing "bots" to help them do market research more quickly and effectively. And we are working on providing them with training tools that use virtual reality to simulate contract negotiations.

Let me also highlight the importance of the modular open-systems approach (MOSA) in achieving digital transformation. MOSA uses an architecture that enables major system components to be incrementally added, removed or replaced throughout the system life cycle, to enhance competition and innovation. For example, the Army integrated MOSA into its requirements and sustainment strategies for the Future Long Range Assault Aircraft (FLRAA).

Over the last two years, the FLRAA Project Office, along with the PEO for Aviation, invited industry, government partners and

DATA-CENTRIC MISSION
One of Secretary of the Army Christine E. Wormuth's top objectives is ensuring that the Army becomes more data centric and able to conduct operations in contested environments. (Photo by Spc. Tyler Brock, 4th Infantry Division Public Affairs)

academia to an Architecture Collaboration Working Group to help define the future vertical lift architecture framework. This framework includes the objectives and requirements that the contractor shall uphold in executing MOSA and delivering a product and capability that meets FLRAA's MOSA objectives. This process improves the government's ability to use appropriate data rights by enabling competitive, continuous upgrade and delivery of threat-based capability by using common processes, tools and standards.

As we modernize our digital environment, we are working closely and collaboratively with the Office of the Secretary of Defense and our sister services, our Army leaders and their teams—including Gen. James E. Rainey, commanding general of Army Futures Command, Lt. Gen. John B. Morrison Jr., deputy chief of staff G-6, and Dr. Raj Iyer, the Army's chief information officer for information technology reform, as well as our invaluable industry and academic partners.

CONCLUSION

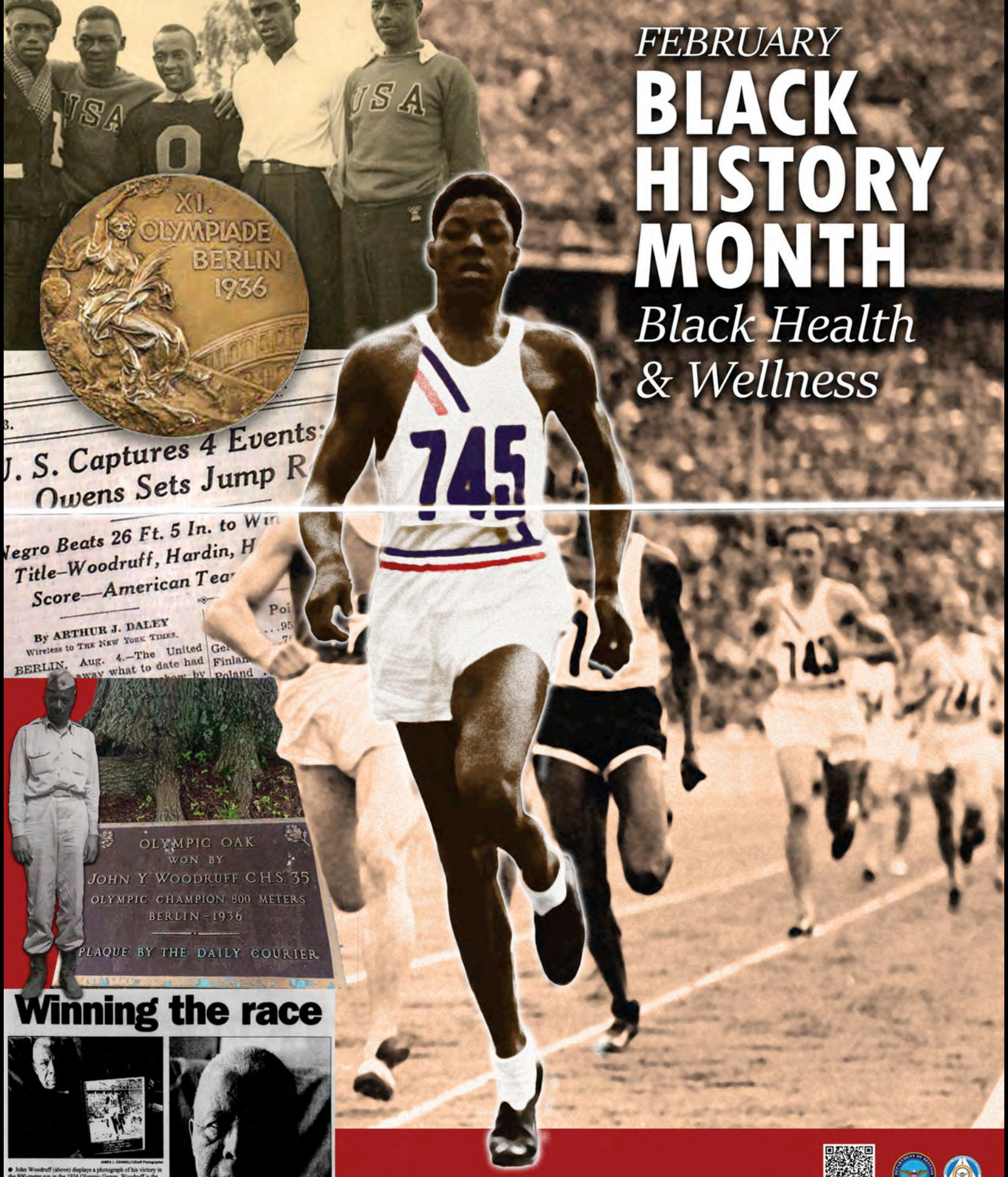
Finally, no digital transformation effort will succeed without attention to the skills and talent management of our acquisition, logistics and technology workforce. In this area, in addition to the pilot mentioned earlier, we are identifying and addressing skill gaps; providing career paths and training to support the digital skills required for success; and ensuring flexible hiring authorities are clearly understood and effectively used across the Army.

With digital transformation enabling the Army's transition to a multidomain force, we are working to ensure our ultimate goal—dominance so decisive that no adversary wants to fight us. As Sun Tzu wrote in "The Art of War," "The greatest victory is that which requires no battle."

FEBRUARY

BLACK HISTORY MONTH

Black Health & Wellness



U. S. Captures 4 Events;
Owens Sets Jump R

Negro Beats 26 Ft. 5 In. to Wi
Title–Woodruff, Hardin, H
Score—American Tea

By ARTHUR J. DALEY
Wireless to THE NEW YORK TIMES.
BERLIN, Aug. 4.—The United

Winning the race

● John Woodruff (above) displays a photograph of his victory in the 800-meter run in the 1936 Olympic Games. Woodruff is the lone surviving gold medalist from the 1936 U.S. men's track team. The ring on Woodruff's finger (right photo) is from the Track & Field Hall of Fame.

Through good and bad, 1936 U.S. gold medalist John Woodruff has never lost faith in his country

John Woodruff
1936 Gold Medal Olympian


WOMEN
Providing
HEALING,
Promoting
HOPE
Susie King Taylor
Kay Fukuda
Sharon Lane
LANE
Jennifer Moreno
MORENO
Women's
HISTORY MONTH
MARCH

TRANSFORMATION UNDERWAY
The Office of the U.S. Army Chief Information Officer is focused on driving digital transformation across the service, with a keen eye on fielding the Army of 2030. (Image by Getty Images)

IRREVERSIBLE MOMENTUM

An update from the Army CIO on the Army's digital transformation journey.

The Office of the U.S. Army Chief Information Officer (CIO) established the Army's first-ever digital transformation strategy a year ago to fuel innovation and enduring transformation to modernize the Army of 2030.

The strategy outlined the need to pivot the Army to a data-centric culture, leveraging modern technologies, such as the cloud, to enable decision dominance—a critical requirement to enable joint all-domain command and control (JADC2). Since the release of the strategy, Secretary of the Army Christine Wormuth and Gen. James C. McConville, the Army chief of staff, have continued to emphasize the importance of digital transformation in driving Army modernization. The first step in that direction was the secretary establishing a data-centric Army as one of her top six objectives earlier this year.

Wormuth most recently issued six priorities for the Army to counter the pacing challenge of China, and each of these is underpinned by digital technologies. With this support has also come support for funding the appropriate priorities. A year in, digital transformation is not just a buzzword in the Army, but one that is actively pursued by every single command, including operational units at corps and division levels. Commands are taking the opportunity to experiment and, through a campaign of learning, have started to assess how they will change warfighting doctrine. At Headquarters, Department of the Army, my office has led several reform efforts to fundamentally reform policy, processes and governance to benefit from digital transformation. A few recent successes are highlighted below.

CHALLENGES, BIG BETS

Recognizing that digital transformation requires a comprehensive reassessment of requirements, programs and policies, the office has led capability portfolio reviews to ensure our programs are on a sustainable strategic path. Chaired by Undersecretary of the Army Gabe Camarillo and Gen. Randy A. George, the Army vice chief of staff, these reviews are addressing some of the toughest challenges in the Army that we have not addressed in a long time, leaving us with a suboptimized portfolio.

The reviews are also identifying big bets that the Army can make to help accelerate transformation. We have now named this effort the Accelerate-Centralize-Transform (ACT) Now! campaign. The reviews focused on the digital technologies and processes with the greatest impact on transformation—the network, cloud, communications, data and software.

The Army is on a sustainable path to a hybrid cloud architecture through the integration of the commercial cloud called cARMY, with the Army enterprise private clouds to provide the resiliency needed for computing and storage. We will deliver a common set of services across the entire ecosystem, from the tactical to the strategic.

This is expected to result in a common operating environment, standardizing services and access to data with a cloud-native approach. This will also result in the Army aggressively eliminating on-premises data centers and reducing the number of enterprise data centers from 12 to five. Savings harvested from data center closures will flow back into additional application migrations to the cloud and future data center closures.

The updated Army Cloud Plan focuses primarily on how we operationalize our very mature cARMY cloud to support exercises and experimentation in the Indo-Pacific region, as well as support for current operations at the strategic, operational and tactical levels. The CIO team has partnered with several operational units such as I Corps, 1st Multi-Domain Task Force, U.S. Army Pacific (USARPAC), U.S. Army Europe and Africa's (USAREUR-AF) XVIII Airborne Corps and others. Together the established partnerships leverage various exercises and experimentation events to validate key cloud architectures in support of new operational doctrine, such as distributed command and control.

Establishing an enduring mission partner environment in the cloud for better integration and collaboration with our allies and partners is a top priority for the European Command theater in the 2023 fiscal year. Cloud migration activities also enabled the Army to rationalize our application portfolio through a "keep or kill" process to prevent bespoke legacy systems and other non-enterprise capabilities being lifted to the cloud. This process enabled the Army to sunset 66 business applications in the 2022 fiscal year, and a further 103 systems are expected to be sunset in the current fiscal year.

The Army has committed to going all-commercial for unclassified data. We have worked the strategy to completely revamp the Installation Information Infrastructure Modernization Program, which has been focused on installation-level IT through hardware refresh and wired networking, to a fully commercial Army-operated model using commercial services. This program is expected to almost completely eliminate the Nonclassified Internet Protocol Router Network (NIPRNet) as the only way to access controlled unclassified information. It allows for the leveraging of commercial internet service providers (ISP) and wireless technologies like 5G and WiFi for the local network, while at the same time maximizing the delivery of common services and access to the data from the cARMY cloud. This is expected to save the Army money but, more importantly, enhance user experience by enabling users to get ubiquitous access to data from any device and from any network. It will eliminate the need to be tethered to wired network drops using government-furnished equipment. Our current pilots in respect to bring your own device and virtual desktop infrastructure are the foundation for this capability. Our initial focus for this endeavor is with National Guard armories, reserve centers, recruiting centers, etc., areas that lacked attention in the past.

We expect to be fully divested of the NIPRNet by the 2027 fiscal year to coincide with the Defense Information Systems Agency's sunset of the Joint Regional Security Stacks that currently provide perimeter security defense at Army installations. The initial success we had in the previous fiscal year brought all 42 organizational networks and domains under the operational control of Army Cyber Command, and established U.S. Army Network Enterprise Technology Command as the single-service provider. This is a huge step in driving standardization of services across the Army, but also for the needed cybersecurity defense overwatch.

SEEKING SOLUTIONS
Soldiers from the 3rd Squadron, 2nd Cavalry Regiment discuss equipment challenges with Raj G. Iyer, Ph.D., chief information officer for information technology reform, during the 2022 Regimental Week Tech Demo, July 27, at U.S. Army Garrison Wiesbaden, Germany. (Photo by Candy C. Knight, 2d Theater Signal Brigade)

FIRST-RATE SERVICE

Standardized support for our 1.2 million users worldwide requires a world-class service desk powered by the best customer service management software. In the current fiscal year, the Army will implement our global service desk through the Army Enterprise Service Management Portal. That will be powered by ServiceNow, a technical management and help-desk support company. We will start by converging all the installation-level help desks into the new program in the 2023 fiscal year and then extend this to other functional help desks in the 2024 fiscal year and beyond. The ServiceNow solution will enable users and leaders to manage and monitor service-level metrics, as well as support self-service options through chatbots and other artificial intelligence tools. The Army will fully implement modules such as IT asset management, IT software management and IT operations management to give us full visibility into our network for troubleshooting end-user issues.

For classified data access, while we continue to work with DOD to shape Secure Internet Protocol Router (SIPR) 2.0, we are already on a good path to implement the National Security Agency's (NSA) Commercial Solutions for Classified strategy for more than 150,000 Army users through virtual desktop for SIPR and NSA-accredited encryption for accessing this data over any commercial network. The Army currently hosts this virtual infrastructure on-premises but expects to migrate to the cloud when appropriate encryption solutions are accredited in the cloud.

ZERO TRUST

The key to the success of commercial networking is implementing the zero trust (ZT) reference architecture to eliminate installation-level physical routers, firewalls and other hardware-based security stacks to a cloud-native secure access service edge (SASE) solution. (See "Zero Trust" on Page 26.) To facilitate the acceleration of ZT, the Army is announcing the establishment of a new Integrated Program Office (IPO) for ZT under the oversight of the CIO. IPO ZT will bring together multiple cybersecurity solutions in the Army under a single architecture, integrate best-of-breed solutions, and align implementation plans and schedules with associated funding so we have greater transparency into these efforts.

This is one of the top priorities for the current fiscal year. We expect to start with the cARMY cloud to implement and deploy SASE, then extend this common service across the enterprise and tactical. The Army also prioritized identity credential and access management (ICAM) as one of the key enablers for ZT.

In the 2022 fiscal year, the Army implemented a scalable and resilient solution called Army ICAM that we plan on federating with DOD ICAM. Army ICAM will be integrated into our priority business systems in the current fiscal year to support audit readiness in the 2024 fiscal year. My office, in partnership with assistant secretary of the Army for financial management and comptroller, has spearheaded efforts to remediate all IT notices of findings and recommendations by the end of this fiscal year for priority systems. A single identity and authorization solution will finally enable Army users to access their data from any network, while at the same time enabling attribute-based access control and segregation of duties at a granular level to support ZT.

Also, a big shift for the Army from a cybersecurity perspective is prioritizing operational technology just as important as IT. The operational technology in the Army's critical infrastructure—Industrial Control Systems, supervisory-control and data-acquisition devices, building management systems, and other controllers, plays a critical role in operating some of the world's most unique machines at our depots, arsenals, ammunition plants and ports. These have especially come under attack in recent times, leaving them vulnerable and unprotected unlike traditional IT on our networks. We established the first operational technology cybersecurity strategy last year to prioritize operational technology, and working with our partners at Army Materiel Command, established a plan to monitor the operational technology at the Army's 23 organic industrial-base sites through a security operations center as a service.

The capability includes adding sensors to Army operational technology and analytics to identify anomalous behavior and other attack vectors. The Army's initiative has been selected by the White House for $15 million in funding in the 2023 fiscal year through the Technology Modernization Fund established by President Joe Biden. The Army is the first DOD service to be selected for funding through the fund and it demonstrates our commitment to protecting critical infrastructure.

DATA FABRIC

The Army has prioritized the data fabric as a key enabler for JADC2. The data fabric can support several existing and evolving requirements, including those that were initiated from our current operations by the XVIII Airborne Corps in support of Ukraine. The data fabric is the key component of a joint common operating picture needed by our commanders for mission command and decision dominance.

This is even more important in multi-domain operations where commanders will need the data to establish options for

THE MAIN CONVERSATION

Raj G. Iyer, Ph.D., speaks to the audience at the Cyber Security Summit held in Wiesbaden, Germany, July 26. The summit brought together professionals from military and civilian backgrounds to discuss cybersecurity practices and technology that will increase readiness for the U.S. Army. (Photo by Michele Wiencek, U.S. Army Europe and Africa)

kinetic versus nonkinetic responses. The Army has deployed several prototypes—including our science-and-technology effort called Rainmaker and other existing solutions, such as Gabriel Nimbus—at Project Convergence 22 to validate the solutions, especially in contested and denied, degraded, intermittent or limited environments.

ADVANTAGE, ARMY

The Army will also assess the data fabric to see if it can meet Title 10 requirements for things like business health metrics and executive analytics that are currently performed by our Army Vantage data platform. Army Vantage saw the greatest adoption of the platform in the 2022 fiscal year, enabling data democratization to more than 38,000 users worldwide who used the platform. To date, the users have built hundreds of dashboards and analytics products enabling readiness reporting, vaccine tracking, noncombatant evacuation operations tracking from Afghanistan, contract de-obligations, and most recently was used in support of operations in Ukraine by the XVIII Airborne Corps. As the most robust data platform in the DOD, we have shown that getting a user-friendly tool to users can enable the Army to become data-centric at all echelons of the Army, not just for senior leaders.

The Army has committed to fully adopting and implementing DevSecOps. Whether this is for business systems or tactical systems, the advantages that come with Soldier-centered design and Agile software development to deliver operational capability into the hands of real users in short cycles are critical to ensuring that the eventual product meets user needs. A multiyear big-bang approach to software development has not worked well for the Army, as evidenced by some of the struggles with programs like the Integrated Personnel and Pay System – Army.

DevSecOps is also a key enabler to ZT since the software can follow a continuous authority-to-operate model, thereby eliminating the months of paperwork and the approval process before the system can be fielded. The Army CReATE DevSecOps platform, built in cARMY, is our accredited solution that can be used by Army and industry software development teams.

The Army Software Factory in Austin, Texas, an early adopter, has shown that, when CReATE is used, the applications can be in the hands of Soldiers in days instead of months. But for the Army to scale DevSecOps, we need to also reform other acquisition processes. This is where the Army will focus in the 2023 fiscal year to adopt the software-acquisition pathway and answer the question of whether the Army will ever transition a piece of software into sustainment if we accept that "software is never done."

Our biggest pilot to validate DevSecOps in the 2023 fiscal year is through the Enterprise Business Systems – Convergence program. This pilot helped my office shape the strategy for DevSecOps. Through a nontraditional acquisition process, my office leveraged a big-bang approach that would be delivered by the 2027 fiscal year. At the conclusion of this period, Enterprise Data System Catalog (EDSC) will follow a continuous-delivery and continuous-integration model that will ensure software is continually modernized and will never transition to sustainment. Most recently, the Army was able to turn around a struggling program for tuition assistance called Army IgnitEd by following Agile methodologies.

INSTITUTIONAL TRANSFORMATION

The success of digital transformation depends on how well the Army can reform our supporting institutional process. Greater centralization through the cloud requires a pivot from the historically decentralized nature of executing programs in the Army. It requires greater coordination and synchronization across stakeholders to achieve consensus-based decisions.

The Army Digital Oversight Council chaired by my office and established in the 2022 fiscal year has been the underpinning for many of the Army's hard decisions. We have shown that governance can be successful through transparency and accountability. Two of the most recent reform efforts initiated through the council that have had tremendous impact relate to cybersecurity reform and budgeting reform.

The authority to operate and connect on an Army network requires continuous monitoring. The cybersecurity reform effort is converging the risk management framework process with directive authority to improve cyberspace operations. This standardization and realignment will result in the Army reducing the number of authorizing officials and, more importantly, at the appropriate levels where risk can be better assessed and managed. In conjunction with the Risk Management Framework 2.0 streamlined process that reduces the number of controls to the minimum required for continuous monitoring, a new governance structure called the Army Cyber Risk Management Council will enable the CIO and the Army's G-3/5/7 to balance cyber risks against mission risks.

Likewise, the Army has established a new process called Army Resource Framework for IT to enable the CIO to better balance priorities within a subset of the Army's $16 billion annual digital budget by fencing funding certain budget lines for program objective memorandum 2025-2029. This will help the CIO protect funding for priority programs established through the capability portfolio review process and balance any new requirements within the portfolio with agility while not having to compete against other Army priorities, as has been the case with our former program evaluation groups. This year the process will set the foundation for eventual new digital program evaluation groups in the Army—one of the key priorities identified in the Army's digital transformation strategy.

CONCLUSION

The linchpin for digital transformation is a digital workforce that is tech-savvy and data-savvy to innovate and transform the Army at scale. Digital tools and technologies are now common, and my office has made it much easier to adopt them through accredited implementations in the cloud.

The greatest impact, however, will not be realized until these tools and technologies are operationalized by the workforce. The Army digital human capital strategy is our attempt to establish a strategy focused on the digital workforce with several priority initiatives in each area, from developing new talent models to recruiting to retention. The Army was the first service in the 2022 fiscal year to implement the Cyber Excepted Service to provide greater opportunities for recruiting and retaining top-skilled cyber talent.

While initially focused on Army Cyber Command, it is expected to be scaled across the Army in the 2023 fiscal year. The Army has also leveraged other authorities offered by Congress, such as direct-hire authority, to recruit talent from industry through nontraditional recruitment processes.

The Army is actively exploring opportunities to scale the Army Software Factory and establish the right mechanism for talent development and career paths for Soldiers and civilians. But much work remains to be done in this area and will continue to be a focus in the 2023 fiscal year and beyond.

Finally, the Army has established irreversible momentum on digital transformation in the 2022 fiscal year, and it is truly an all-of-Army effort. The imperative is clear, and the road ahead is clear. Staying on target with the priority efforts but remaining flexible to keep up with the pace of changing technology will bring the agility and flexibility needed for continuous modernization. My organization is proud to have established this transformation and remain a trusted partner for the Army in the future.

For more information, go to ***https://www.army.mil/cio****.*

RAJ G. IYER, PH.D., is the U.S. Army chief information officer for information technology reform. Prior to his current role, Iyer served as the managing director for government and public services and senior manager, technology strategy, defense and national security for Deloitte Consulting. He has held various roles in information technology within the commercial and military space. His top civilian awards and professional achievements include the Meritorious Civilian Service Award, the International William Conroy Standards Professional Award, and dozens of published peer-reviewed papers. He holds a Ph.D. in electrical engineering from the University of Texas, an MBA from the Ross School of Business, University of Michigan, an M.S. in electrical engineering from the University of Texas and a B.S. in electrical engineering from India's National Institute of Technology.

EDITOR'S NOTE

The articles that follow, from the Office of the U.S. Army Chief Information Officer, emphasize different aspects and successes of the Army's ongoing efforts in digital transformation being undertaken by that office. Technology underpins all of these efforts, and each of these programs takes on heightened importance in the fielding of the Army of 2030.

These articles can be read as a package or individually, and provide more information and context on the concepts and programs mentioned in the preceding article, by Raj G. Iyer, Ph.D.

"Digital Overhaul" on refocusing the Army's digital efforts.

"Optimizing Interoperability" on improving interoperability via data architecture and standards.

"Innovation in Cloud Acquisition" on new tools for Army enterprise cloud management.

"The Army's Data (Ad)vantage" on the successes and implications of the Army Vantage program.

"Zero Trust" on upending assumptions on what's safe behind the firewall.

DIGITAL OVERHAUL

by Patrick Scott Seybold

The Office of the U.S. Army Chief Information Officer is refocusing digital efforts in the Army for a successful future.

The United States Army is navigating a period of tremendous external and internal change. After nearly 20 years of fighting the war on terrorism, the Army is reevaluating its role throughout the world and its ability to influence national interests. In doing so, the Army of 2030 has become the focal point for modernization across the force.

Data and information are the new ammunition that will be used to dissuade, deter and fight future conflicts. To maximize the flow and use of information and data, the Army requires a robust, resilient, responsive and efficient network. It also needs the ability to collect, analyze, interpret, associate and store data and information to help support advanced capabilities, such as joint all-domain command and control, and communications in multidomain environments.

To set the conditions for the Army to create advanced capabilities, the Army is working to refocus digital efforts by conducting

DATA AMMUNITION
Data and information feed the targeting systems, order the spare parts to maintain mobility and allow for the dissemination of commander's orders to communicate and maneuver the force. (Photos courtesy of OCIO)

MULTIDOMAIN COMMUNICATION
The Army needs the ability to collect, analyze, interpret, associate and store data and information to help support advanced capabilities.

capability portfolio reviews and business process reviews. The capability portfolio reviews and business process reviews will give the Army the data it needs to make the necessary changes to acquisition processes.

The Office of the U.S. Army Chief Information Officer (OCIO) and the deputy chief of staff, G-6, are conducting a series of capability portfolio reviews in conjunction with a digital resource management overhaul that will result in a refocusing of digital efforts across the enterprise.

Also, the OCIO is conducting business process reviews to evaluate how the Army "sees and understands" digital investment decisions leveraging the planning, programming, budgeting and execution process to determine what should be managed by the enterprise versus the force. The desired outcome is to place the resourcing decisions for the Army's digital capabilities at the appropriate level to maximize the application of limited financial resources to achieve the digital capabilities needed to support the Army of 2030.

Building processes to understand how the Army buys information technology (IT) and cyber activities will have a direct and positive impact on the Army of 2030 and the digital capabilities it has available. The current IT landscape is a system of systems that must work in concert to be effective and secure. On the other hand, IT is procured and deployed in a disaggregated manner under a common set of architecture, operational and security standards. Because these two aspects are not synced, the overall IT budgets increase and potential cyber security risks are introduced through the increased surface area.

The OCIO understands that it must learn and make the appropriate changes to how the Army buys and consumes information technology resources to ensure the Army is postured for the standardized delivery of services, increased awareness of potential threat vectors and elimination of redundancies and inefficiencies. The refocusing of how the Army buys IT will help to increase the availability of limited resources that can be applied to digital transformation and deploy technologies needed for the future fight.

By securing and unifying our digital footprint, the Army ensures the warfighter has the ability to shoot, move and communicate. These abilities are dependent on universal information technology throughout our formations and a key enabler of the Army's mission. Data and information feed the targeting systems, order the spare parts to maintain mobility and allow for the dissemination of commander's orders to communicate and maneuver the force. Our digital footprint will be contested by our competitors, so having a resilient and effective digital capability increases force protection and ensures the future of a stronger Army and successful nation.

For more information, contact the OCIO Strategic Initiatives Group (SIG) at ***usarmy.pentagon.hqda-cio.mbx.sig@army.mil****.*

PATRICK SCOTT SEYBOLD serves as the Resources Division chief in the Office of the U.S. Army Chief Information Officer. His tenure with the Army includes successfully managing multiple challenging and complex projects. He holds an M.A. in procurement and acquisitions from Webster University and a B.S. in electronics management from Southern Illinois University.

OPTIMIZING INTEROPERABILITY

The Army is optimizing the interoperability of the enterprise through data architecture and standards.

by Gregory Smoots, Ph.D.

To ensure the safety of Soldiers on the ground, it is imperative that the U.S. Army increases and improves system interoperability across the enterprise. New combined efforts, initiated by the Office of the U.S. Army Chief Information Officer (OCIO) Architecture, Data and Standards Directorate, leverage the Interface Interoperability Insights Platform (I3P) to improve interoperability across Army systems and integrate joint capabilities within DOD and our partners.

The new platform ingests data from multiple platforms and combines previously siloed architecture data of the Army. I3P delivers insights into system interfaces and interoperability that influence technical architecture design through testing and certification support, DOD, joint and coalition standards adoption and procurement options. In turn, it enables faster decisions on the battlefield and closes the gap between DOD and mission-partner standards.

BETTER TOGETHER

I3P provides several capabilities that benefit the future warfighter and improve the systems and technologies used in the field. This new software assists the Army interoperability certification process by increasing efficiency and furthering insights into

DATA CAPABILITY

The Interface Interoperability Insights Platform provides several capabilities to help the warfighter perform analytics and enable interoperability. (Photos courtesy of OCIO)

future improvements. It pulls data from universal mission threads and advances systems with emerging standards to help Soldiers perform analytics that enable interoperability for our warfighters. I3P uses Federated Mission Networking (FMN) spiral ingest, gap analysis and common operating environment compliance to understand the scale of the task (the now) and manage impacts and benefits (the future). NATO's Allied Command Transformation defines FMN as "a capability aiming to support command and control and decision-making in future operations through improved information-sharing." It also pulls data from different sources and capabilities to a centralized platform to help systems integration and resolves interoperability challenges.

I3P does all this by reducing the number of duplicative and outdated systems within the investment portfolio that lack the tools and solutions to enable decision superiority. This integral software will further the Army's understanding and assist in future (technical) procurement, for example, in the Joint Systems Integration Library and recently at Project Convergence 2022, and beyond. I3P will assist the Army in visualizing technical interoperability and architecture challenges.

INTEROPERABILITY DEFINED

Army Regulation 34-1, Multinational Force Interoperability, defines interoperability as the ability to routinely act together coherently, effectively and efficiently to achieve tactical, operational and strategic objectives. Interoperability activities are defined as any initiative, forum, agreement or operation that improves the Army's ability to operate effectively and efficiently as a component of the joint force and as a member or leader of an alliance or coalition across the range of military operations.

MAKE IT LEAN

With spending always being an issue, the reduction of outdated and duplicative systems will help information technology (IT) spending and control processes to achieve a cost savings through the divestment of its legacy portfolio. This cost savings will posture the Army to acquire advanced technologies and allocate funds for current and future investments in data and the cloud as the Army develops and delivers solutions for multidomain operations.

This is huge in that system authorization has historically been a very long bureaucratic process.

With multidomain operations being the future of warfighting, I3P provides several capabilities that help Army senior leaders address knowledge gaps. I3P does this by enabling leaders to analyze information concerning standards, data and architectures to enhance decisions on the battlefield. The implementation of this initiative across the enterprise will improve data compatibility, interoperability and communications within DOD and with our joint partners.

I3P was used in Project Convergence 2022 to highlight its benefits in the field. It creates innovative ways to view operations architectures, system architectures and technical architectures to inform warfighting capabilities. I3P pulls data together concerning operations, systems and standards to help assess warfighting capabilities. These new capabilities assess technical interoperability during the Joint Capabilities Integration and Development System requirements and defense acquisition system processes.

Through a partnership with the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology, specifically the Office of the Deputy Assistant Secretary of the Army for Data, Engineering and Software, centered around technical standards management and Army interoperability, and working with program executive offices (PEOs)—the PEO for Command, Control, Communications – Tactical and the PEO for Enterprise Information Systems—the CIO addressed the lack of integration and interoperability as well as the operational and technical challenges that come with it by using I3P. Now, directorates that provide logistics, planning and staff management for the integration of programs, processes and initiatives, specifically G-3/4/5/7, will be better able to support the warfighter within the Army's future systems.

CONCLUSION

Future systems and Soldiers will benefit from I3P. Integration of I3P, in developing warfighting systems, will benefit Soldiers on the ground by enabling early and real-time approval of systems. This is huge in that system authorization has historically been a very long bureaucratic process. In its current state, I3P gives the Army the capability to develop technical architectures in an innovative way to increase systems interoperability based on approved joint and DOD standards. This capability will enhance the Soldier's information and decision-making superiority in the field.

I3P will successfully close the gap between DOD and mission-partner standards by creating system interoperability. I3P will provide insights into the systems that are being created and developed and allow for early implementation into the mission. Using a tank as an example, I3P will help units integrate communications systems during the development phase, connecting the tank to existing systems, ground systems, and DOD and mission-partner systems. This level of integration is a game changer. Now, with I3P, known and approved systems can be considered during system creation to allow for a cohesive flow throughout the acquisition process. The gap between DOD and partners, mission requirements and system requirements is being closed through the employment of I3P by using interoperability technical assessments.

The OCIO works to enact the improvements provided by I3P to support the overall mission of the Army. This initiative will create a more cohesive flow of data throughout the enterprise and between the DOD and our partners. Our Soldiers on the ground will benefit from their leaders' ability to make decisions in real-time during the early development stage and having systems connected allowing for earlier use in the field. I3P will accelerate the Army's digital transformation and help the Army reach its technological goals.

For more information, go to ***https://www.army.mil/cio****.*

GREGORY SMOOTS, PH.D., serves as the deputy director chief, standards and compliance in the Architecture, Data and Standards (ADS) Directorate in the Office of the U.S. Army Chief Information Officer. He received his Ph.D. in engineering and M.S. in engineering and industrial management from The George Washington University. Before joining ADS, he served with the 480th Intelligence Support Command, United States Air Force; Information Forces Command, United States Navy; and the Digital Warfare Office, Naval Operations (N2N6) Command, United States Navy.

NEW INSIGHTS

I3P ingests data from multiple platforms and combines previously siloed architecture data of the Army to deliver insights into system interfaces and interoperability that influence technical architecture design.

A MODERN ARMY

Leveraging new tools, platforms and processes, the Army aims to modernize its workforce, become a more data-centric organization and deliver a secure, globally dominant cloud ecosystem across the enterprise. (Photos courtesy of OCIO)

INNOVATION IN CLOUD ACQUISITION

by Paul B. Puckett III

ECMA is continuously driving data, software and process transformation to deliver a secure, globally dominant cloud ecosystem to create a digitally focused Army.

Technology is changing the way we live, work, do business and fight on the battlefield. As part of the Army Digital Transformation Strategy, the Office of the U.S. Army Chief Information Officer (OCIO) is taking a fresh approach to cloud acquisition and modernization. Leveraging new tools, platforms and processes like the Cloud Account Management Optimization (CAMO), Cloud Modernization Approval Process and Code Resource and Transformation Environment (CReATE), the Army aims to modernize its workforce, become a more data-centric organization and deliver a secure, globally dominant cloud ecosystem across the enterprise.

TRACK THE CLOUD

CAMO is a new contracting tool that offers mission owners a dashboard that provides advanced analytics and cost-tracking capabilities. It is a one-stop shop for efficient cloud cost estimation. Using CAMO, the Army's cloud customers can rapidly field industry leading tools like Amazon Web Services and Microsoft Azure.

"Let's say, for example, you're a DOD unit and you want to field a certain cloud-hosted application. You estimate the cloud compute and storage costs will be $1 million and you put those million

dollars on your cloud CAMO account. You can then use the CAMO CloudTracker tool to track your actual spend against that $1 million," said CAMO Product Manager Nate Cost. If that unit starts to go over the estimated amount, they will be able to track this information in their CAMO account via the CloudTracker tool and make the necessary adjustments.

"CAMO allows its customers to accurately see their cloud spend and usage in near-real time, and gives them the ability to take action by supplementing funds and optimizing their cloud usage," Cost added.

Beyond the fiscal benefits, the CAMO CloudTracker tool also allows users to track their cloud storage to maximize efficiency. Since CloudTracker is hosted in cARMY, the Army cloud, it can also deliver insight on application usage. If, for example, an application is spending processing power over the course of a weekend, CloudTracker can identify overuse and recommend dialing resources back on days where processing power is not needed. By optimizing cloud usage, cARMY can create cloud computing power efficiencies and focus computing power on where the warfighter needs it most.

THE PATHWAY

The Cloud Modernization Approval Process (CMAP) is the Army's new cloud modernization policy. It offers Army customers at all echelons a basis for mapping their cloud migration efforts. It provides a step-by-step path that documents everything from cloud readiness to data center closure, and facilitates the consolidation of the Army's legacy IT portfolio. CMAP ensures standardization by reducing complexity and providing developer guides and coding standards. Lastly,

SECURE SOFTWARE

CReATE accounts for application security earlier in the software development life cycle, allowing the Army to deliver cloud tools to the warfighter much faster.

CLOUD POWER

Cloud Army can create cloud computing power efficiencies and focus computing power by optimizing cloud usage.

> "CAMO allows its customers to accurately see their cloud spend and usage in near-real time and gives them the ability to take action by supplementing funds and optimizing their cloud usage."

it provides architecture templates to reduce design costs and environment complexity.

"When customers first approach us, we put them through the CMAP intake process. From there, we run them through a detailed course on what they'll need from inception to twilight. That mission owner will then get a tailored set of instructions and a phased approach specific to their needs," said Pushparani Jayapal, chief, Cloud Enablement Division, Army CIO.

The Enterprise Cloud Management Agency (ECMA), a field operations agency within the OCIO, has migrated 45 applications from milCloud 2.0 to cARMY in fewer than 100 days through the CMAP process. ECMA is also supporting the Program Executive Office for Enterprise Information Systems to tailor CMAP and accommodate their needs, along with other big projects, like using CMAP in gearing up for a data center closure in 2022.

RAPID CLOUD SECURITY

CReATE enables Army software teams to get secure, resilient and scalable applications in the hands of their users more quickly. CReATE provides a suite of development, security and operations tools, services and pre-built paths to production.

"As an example, in support of the Army Data Plan, cARMY and CReATE are maturing in capability to enable rapid software development and interoperability natively in the cloud that meets immediate warfighter needs," said Lauren Pavlik, chief, Data And Software Division, Army CIO.

CReATE accounts for application security earlier in the software development life cycle, allowing the Army to deliver cloud tools to the warfighter much faster. In today's environment, security must be at the forefront of application and platform development. It also must be woven into every step of the software development process and delivered continually.

The Army Futures Command Software Factory, a primary stakeholder and partner with CReATE, has been using the environment since 2021 and today has more than 13 applications that have gone to production using one of the CReATE authorized pipelines for continuous delivery and deployment. The CReATE platform has allowed for Software Factory application teams to take an application from final testing to production, passing all security controls, within as little as three weeks, albeit dependent on the complexity of the application and system. Currently, CReATE stakeholders are from over 20 different organizations, which include more than 2,500 users and 300 projects.

CONCLUSION

The Army is modernizing its technological landscape every day. As technology advances at lightning pace, data and data sets are the digital ammunition of the future. ECMA, within the OCIO, is continuously driving data, software and process transformation to deliver a secure, globally dominant cloud ecosystem to create a digitally focused Army.

PAUL B. PUCKETT III was the director of the Enterprise Cloud Management Office at the Office of the U.S. Army Chief Information Officer from 2019 to 2022. He served as the principal adviser to the CIO and other senior Army leaders on the Army's cloud strategy. He holds an M.S. in systems engineering from The George Washington University and a B.S. in computer management information systems from Liberty University.

THE ARMY'S DATA (AD)VANTAGE

The Army's powerful data ingestion and analysis platform is seeing wider adoption and creating data-driven decisions across the service.

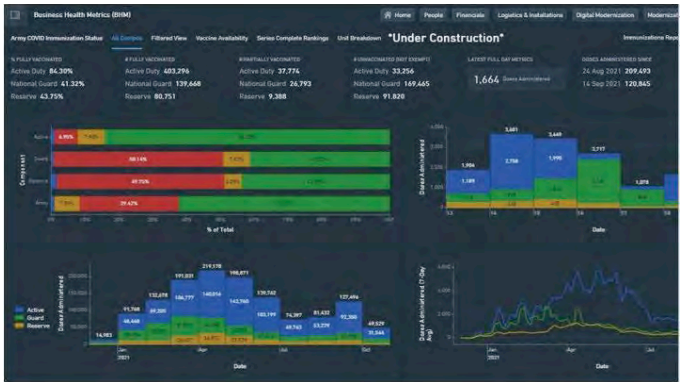
by Lt. Col. Terry Joiner

Army Vantage is a flexible data platform that gives Soldiers the capability, using its curated suite of tools, to create a custom common operating picture that can track essential functions and enable analysis. From their Vantage dashboards, Soldiers can pull data from new and legacy systems across the enterprise to track everything from budget and flight hours to troop movements and equipment, thereby furthering the Army secretary's data-centricity objective.

"Our aim with Army Vantage is to provide a self-service system enabling command teams and leaders at all echelons to fully see themselves in all readiness areas by connecting data from a multitude of systems onto one platform. These efforts have operationalized data and we continually see increased adoption, more tailoring of existing data and reports, and an increase in time that staffs have to solve the hard problems with the support of data," said Lt. Col. Laura-Jane "LJ" Freeland, product manager for Army Data Platform at the Program Executive Office for Enterprise Information Systems.

Users across classification levels can now access comprehensive Armywide data, analysis and trends to make more informed decisions. Before the advent of Army Vantage, deployments had to be tracked with little to no integration across systems. These different systems made it nearly impossible to stitch together a common operating picture during a deployment. This fragmented data environment meant Soldiers had to resort to phone calls and

DATA-CENTRIC CAPABILITY
The Army Vantage data platform gives Soldiers the capability to create a custom common operating picture that can track essential functions and enable analysis. (Image by Getty Images)



HAVING THE AD(VANTAGE)
During the COVID-19 pandemic, Army Vantage was instrumental in helping military leaders gain accurate insight into Soldier immunization rates, as well as tracking the Army's COVID-19 vaccine inventory worldwide. (Image provided by the author)

emails to track the movement of critical units. As a result, units had to manually enter data into Excel spreadsheets and PowerPoint slide decks to track movement and do resource planning. This manual process consumed hundreds of staff hours entering, formatting and validating that data. In a dynamic forward operating environment, the most up-to-date Excel spreadsheet or PowerPoint is often stale before the information is distributed across formations.

On a recent deployment, the 82nd Airborne Division experienced this ground truth. Units were tasked to capture data from new sources at the edge, including data from partner nations, to inform operational decisions. No system existed for this type of mission. Once Vantage was deployed, Soldiers from what is often called "America's Contingency Corps" were able to solve this problem in days. Army Vantage's no-code application builder helped Soldiers configure a transportation management tool to integrate real-time updates from tactical-edge devices and gave Soldiers the ability to track and execute logistical tasks from a single, connected mission command environment.

Army Vantage also facilitates transparency for critical readiness resources like the Army Working Capital Fund. Army Vantage recently became home to the fund's $12 billion portfolio. Finance professionals can now engage with four different dashboards on Army Vantage to review the daily cash balance and monitor demand and inventory. This level of visibility informs purchase decisions and provides critical insight into what readiness should look like.

Soldiers can pull data from new and legacy systems across the enterprise to track everything from budget and flight hours to troop movements and equipment.

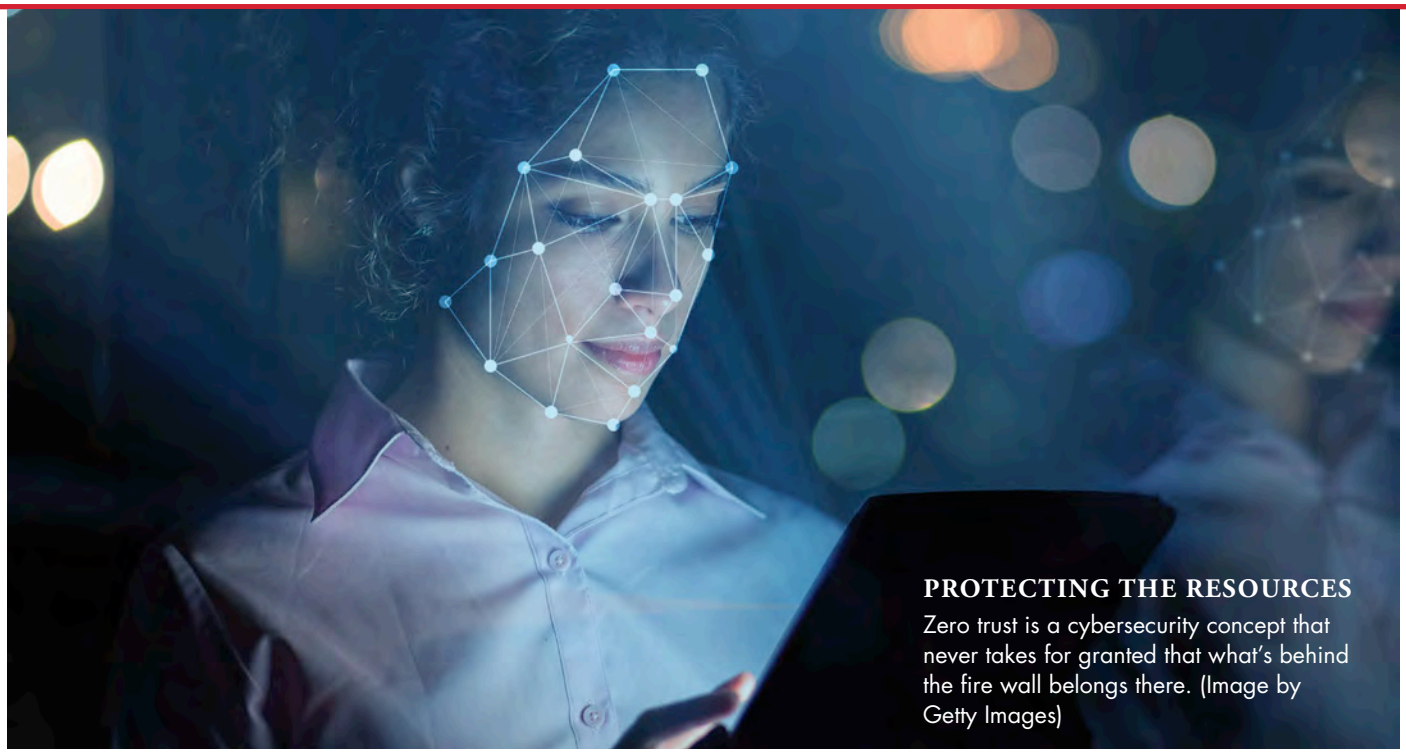
During the COVID-19 pandemic, Army Vantage was instrumental in helping military leaders gain accurate insight into Soldier immunization rates, as well as tracking the Army's COVID-19 vaccine inventory worldwide. Mission owners used the Army Vantage dashboard to filter and visualize data across the enterprise. They viewed data on the Army's worldwide inventory of COVID-19 vaccines and cross-referenced it on a map with geographic areas where Soldiers still needed to be vaccinated.

"With the help of the Army Vantage team, we were able to accurately portray total Army COVID-19 vaccination data in under three weeks; no other capability can compare," said Kyle Jette, lead data scientist for Army Vantage.

With more than 350,000 users, the Army is aiming for widespread adoption of Army Vantage as it moves from a pull to a push-based data and workflow philosophy. With Vantage, Soldiers can build the tools they need on the fly, in rapidly evolving environments, at every stage of deployment.

For more information, go to ***https://www.army.mil/cio****.*

LT. COL. TERRY JOINER has been a member of the United States Army for more than two decades. He began his career as a private and later became a commissioned officer and signaleer, where he managed Army information systems. He was previously a future operations plans chief at Fort Meade, Maryland, with Joint Forces Headquarters, Department of Defense Network. He currently serves as a Strategic Initiates Group deputy chief for the Office of the U.S. Army Chief Information Officer.



PROTECTING THE RESOURCES
Zero trust is a cybersecurity concept that never takes for granted that what's behind the fire wall belongs there. (Image by Getty Images)

ZERO TRUST

The Army is moving forward aggressively to implement changes that upend the assumption that everything behind a firewall is safe.

by Ron Lee

The Army calls its unified network plan multidomain operations. It is the ability to operate, compete and, if necessary, fight and win in all domains, which include air, land, sea, space, and the everchanging and dynamic arena of cyberspace. The Army must be ready to address the evolving operational threat environment to transform its capabilities to fight and win in the multidomain operational battlespace. A key component to this lies within transforming the Army's digital environment as laid out in the Army Digital Transformation Strategy.

Secretary of the Army Christine Wormuth signed The Army Digital Transformation Strategy in October 2021. The strategy establishes the vision and strategic guidance to transform digital technologies and build the workforce required to achieve the overall Army mission. There are three primary objectives:

- A digitally enabled, data-driven Army propelled by digital transformation.
- Organized and mission-aligned digital investments providing greater value to the Army.
- A tech savvy, operationally effective workforce partnered with a robust network of allies, industry and academia.

ZERO TRUST ENVIRONMENT

These objectives are leading the Army toward a zero trust environment. Zero trust (ZT) is the term for an evolving set of cybersecurity paradigms focused more on data and resources. ZT does not assume anything. It leverages "attributes" to determine access to resources, i.e., user, location, device, etc. Christopher Joseph, division chief of the Policy and Risk Governance Division in the Office of the U.S. Army Chief Information Officer, said that a key pillar of the ZT initiative is to prioritize protecting data, not just networks and servers like in the past.

"The overall purpose is to improve our cybersecurity posture to ensure Army data and systems are available to the warfighter," Joseph said. "We must do better. The enemy adapts extremely fast in this dynamic technology environment. We have to take it to the next level, and ZT allows us to do that."

Zero trust is not a single, plug-and-play security solution or something that can be simply purchased off the shelf, according to Joseph. "This new architecture must be carefully phased in and integrated with existing capabilities to avoid disruptions while achieving the goal of improved security."

LOCK IT DOWN
A key pillar of the zero trust initiative is protecting data. (Image by Getty Images)

The Army is moving forward aggressively to implement zero trust concepts. This effort began with the Army establishing an authoritative source directing the use of these new principles and drafting guidance to organize a working group to provide direction and information exchange across Army ZT efforts.

The DOD Zero Trust Reference Architecture version 2.0 defines seven "pillars" of zero trust. A pillar is a grouping of capabilities that organizes the range of activities necessary to achieve zero trust. The seven pillars are user, device, network and environment, application and workload, data, visibility and analytics, and automation and orchestration.

The Army is assessing existing capabilities for alignment with the DOD Zero Trust Reference Architecture. For example, the user pillar is focused on identifying the people operating within our network. An example of the work involved here is establishing a database of all users and having the capability to properly authenticate who they are when they log in to an IT system. The Army has done much work in this area through its Army's Identity, Credential and Access Management capability, which includes a directory of users called the Army Master Identity Directory and its Enterprise Access Management Service – Army authentication service used to verify user identities.

Likewise, the application and workload pillar focuses on ensuring enterprise applications are tested internally and externally and can be made available to staff securely over the internet. An example of an Army effort is this pillar is the work being done with its Coding Resources and Transformation Ecosystems (CReATE) cloud environment. CReATE is a development, security and operations environment that uses tools and processes to enable secure software development.

The key is implementing these changes in a secure and approved manner, in accordance with cybersecurity policies. DevSecOps is part of the application and workloads pillar of the DOD ZT framework. It is imperative that these interoperable capabilities work together to create a manageable enterprise, thus maximizing the Army's current investments in this space.

CONCLUSION

"Zero trust is a continuous journey," Joseph said. "Right now, we are following the guidance put out by the Department of Defense CIO Zero Trust Portfolio Management Office. Based on that guidance, we have certain capabilities targeted to be online by [fiscal year 2027]. However, we know that it doesn't stop there, and we will continue to modify and evolve as needed beyond [fiscal year 2027]."

*For more information, contact **usarmy.pentagon.hqda-cio.list.armyz-twg@army.mil**.*

RON LEE is a 20-year Army veteran of military broadcast journalism and public affairs. Following his time in the military, he earned an M.S. in public affairs management and a B.A. in communications, both from the University of Maryland University College. He's worked as a public affairs specialist for the Program Executive Office for Soldier at Fort Belvoir, Virginia, and the District of Columbia National Guard before becoming an instructor of advanced public affairs and strategic communications at the Defense Information School at Fort Meade, Maryland, for two years. He recently worked strategic communications for U.S. Army Communications-Electronics Command Software Engineering Center, and now serves in a similar role with the Office of the U.S. Army Chief Information Officer.

CHRISTOPHER L. WALTSAK

COMMAND/ORGANIZATION: Program Executive Office for Intelligence, Electronic Warfare and Sensors (PEO IEW&S) Project Manager Intelligence Systems and Analytics

TITLE: Product support manager

YEARS OF SERVICE IN WORKFORCE: 12

YEARS OF MILITARY SERVICE: 4

DAWIA CERTIFICATIONS: Advanced in life cycle logistics, Practitioner in program management

EDUCATION: B.S. in business administration from University of Management Technologies, associate degree in business administration from Brookdale Community College

AWARDS: Commanders Award for Civilian Service (2018), Civilian Service Achievement Medal (2018), PEO IEW&S Army Superior Unit Award (2015)

LEARN BY EXAMPLE

Christopher Waltsak is no stranger to Army acquisition.

Both of his parents worked for the Army in some capacity—his father last served as an integrated logistic support manager for Project Manager Warfighter Information Network – Tactical in a career that lasted 47 years, and his mother worked as an administrative assistant at the U.S. Army Communications-Electronics Command (CECOM) Software Engineering Center—at Fort Monmouth, New Jersey. In his younger years, he worked at Denny's across the street from the now-closed Fort Monmouth military base and can recall "always running into [and being recognized by] senior acquisition and military personnel" in and around town. For most of his life, government personnel were his role models, and he learned by their example. So no one was too surprised when he pursued a career with the Army—first as an active duty Soldier and later with the Army Acquisition Workforce.

"I walked out of the Army and into the JCALS [Joint Computer-Aided Logistics System] Program Manager Office in 1998," said Waltsak, ending four years of active-duty service and beginning his new program manager role as a government contractor lead fielder addressing special projects for the Air Force's Program Manager JCALS. "They hired me because I was leaving the military and the company valued Soldier professionalism and work ethics."

Waltsak gained and applied most of his logistics knowledge and expertise during his years as a program manager. He worked on programs like the CECOM Generator RESET Program and, as a logistics management specialist in 2006, he set up the logistics branch for Distributed Common Ground System-Army—the Army's primary system for intelligence, surveillance and reconnaissance processing and exploitation of data from all sensor modalities and dissemination of intelligence information about the threat, weather and terrain at all echelons.

Eight years of experience as a project manager and then being in the right place at the right time prepared him for his next position as a government civilian. "When the Readiness Management Division chief was on a special task for three months and the LOG [logistics officer] chief position was vacant, I covered all RMD [research management decisions] and LOG business while he was away," said Waltsak. "When he returned, he offered me the LOG chief job with an eventual plan for me to take his place once he retired."

In 2010, Waltsak entered the acquisition workforce as a government civilian logistics branch chief and said the best part about working as an acquisition professional in a project manager office is that he never has the same day twice. "There is always a new challenge, and a problem that is outside the lines that I have to figure out," he said of the complexities he faces daily. Waltsak transitioned to Readiness Management Division chief and product support manager (PSM) in 2012, and then assumed

CAREFUL COORDINATION
Waltsak, center, and his team review artificial intelligence and the role PM IS&A will play in its implementation and the potential way forward with Jess Stock, far right, PM IS&A chief system engineer, at Aberdeen Proving Ground, Maryland, in August. (Photo courtesy of Christopher Waltsak)

his current role as PSM in 2015. "Being a PSM is one of the best positions a logistician can hope for, and I challenge all logisticians to aspire to be one."

As a PSM, Waltsak is ultimately responsible for establishing sustainment strategies for intelligence systems that adhere to Army policy, regulation and statute. He is now supporting Project Manager Intelligence Systems and Analytics (PM IS&A), within the Program Executive Office for Intelligence, Electronic Warfare and Sensors, to pivot from legacy intelligence systems to next-generation capabilities that will enable the transition to a modern enterprise data architecture with powerful artificial intelligence and machine-learning analytics.

"Depending on the capability being acquired, such as a new tactical vehicle or antenna, I may have to plan for decades of sustainment," he said. His goal is to enable the Soldier in the field to complete their mission while maintaining cost effectiveness for the taxpayer. "It may sound boring, but when you are trying to support the team tasked with the middle-tier acquisition for Tactical Intelligence Targeting Access Node [TITAN], it takes a lot of creative thinking." TITAN is the Army's next-generation intelligence, surveillance and reconnaissance ground station—enabled by artificial intelligence and machine learning—to process sensor data received from space, high altitude, aerial and terrestrial layers.

Waltsak is hoping to soon secure a 179-day tour as a deputy project manager or an assignment as a Department of the Army system coordinator for the assistant secretary of the Army for acquisition, logistics and technology for developmental training. "I believe both positions would be a terrific opportunity to further my knowledge of the acquisition process," he said.

He stressed the importance of not only furthering his own knowledge, but that of others within the organization. "When we have new personnel, civilian or Soldier, my door is always open," he said. Besides offering them a block of instruction on each program, his best advice is to learn the other guy's rule book. "Don't be afraid to read other disciplines' regulations and policies. Understanding where they come from allows you to be more effective in achieving both your project manager and your goals." He added that regulations can be changed—and should be—if you make an educated argument, as the Army and acquisition field change every day. "Project managers are challenged to be more agile in their acquisition, and it's our job to challenge those regulations to be flexible enough to meet the Army standard, while delivering capability in time for Army need."

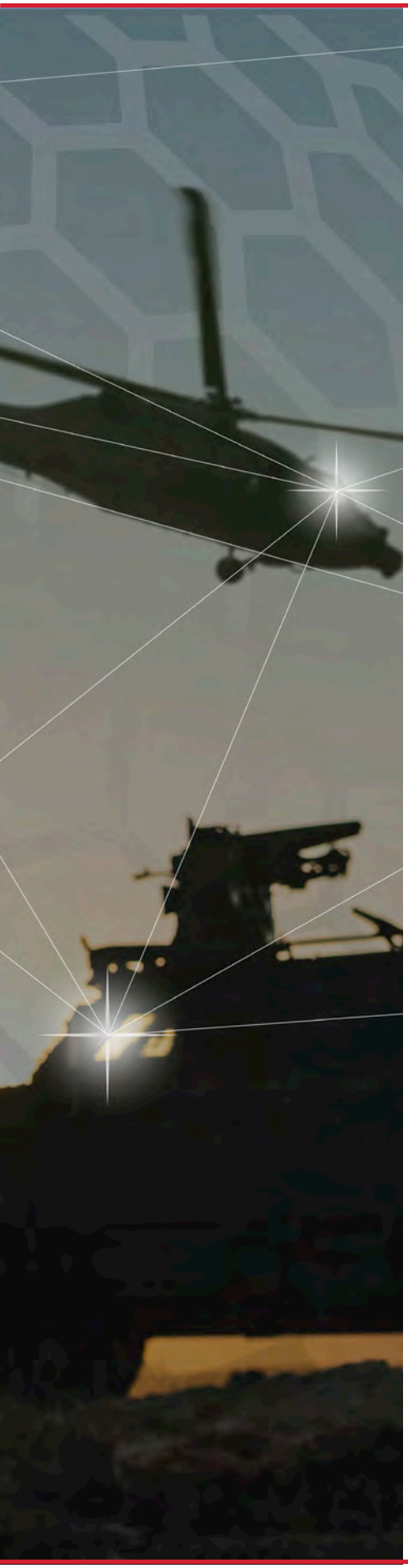
Outside of work, Waltsak is a dedicated father. "Unfortunately, my wife passed away shortly after my daughter was born—so with every decision I make, I have her in mind and how my decisions affect her. She watches and learns from me, so I have to lead by example," he said. "And I must be doing something right, since my daughter is now in high school and by all accounts, much smarter than her dad."

Waltsak brings that same "learn-by-example" concept to work. He believes when a person's perception is reinforced by someone they respect—and look to for guidance and support—that will have the greatest influence in their decision-making process and path forward. "Try to make the right decisions, learn from your mistakes, own them and be a better acquisition professional in the future."

—CHERYL MARINO

DATA-CENTRIC VISION

Within DOD, the vision has unequivocally been cast for a combined and joint force capable of seamless warfighting across all domains: sea, air, land, space and cyberspace. This data-centric force empowers leaders and Soldiers with the right information at the right time to attain decision dominance at all echelons. (Photo by Michael Fridley, DASA DES)



QUARTERBACKING DIGITAL TRANSFORMATION

The newly established DASA DES office is developing a playbook with a few key initiatives that are laser focused on driving digital transformation across the acquisition community.

by Darren LeBlanc

As the Army delivers its next-generation capabilities, the rivals of the United States are paying close attention. And, with the rapid progression of enabling technology, the global threat landscape is changing at an unprecedented rate. To maintain competitive advantage in the worldwide battlespace, the Army needs to rapidly modernize platforms, weapons systems and even business practices. This is a holistic change that will require meticulous attention to gaining efficiencies through digital technologies; it requires empowerment of a highly trained digital-first workforce; and at times a complete reworking of our institutional thinking and processes.

THE ARMY NEEDS DIGITAL TRANSFORMATION

Digital transformation is the adoption of advanced digital technology and the associated cultures and practices necessary to improve efficiency, reduce cost and cultivate innovation. With the recent release of DOD's digital modernization strategy and the Army's digital transformation strategy, the Army is primed for wholescale adoption of digital transformation throughout the acquisition force. Jennifer Swanson, the recently appointed deputy assistant secretary of the Army for data, engineering and software (DASA DES), is chartered with just that task. Her office is developing a new playbook focused on three digital transformation technologies: data centricity, modern software development and digital engineering.

DATA CENTRICITY

For most of the past two decades the Army has operated within a network-centric paradigm. Programs lived or died by whether they were network centric. Being net-centric meant your system was interconnected to other systems by a communications

network. But this proved difficult as networks were built for specific purposes, for specific customers and for specific applications, as the development followed the funding streams (the term "stovepipe" comes to mind here). Soldiers found themselves needing to navigate the disparate networks (instead of The Network) to accomplish mission objectives. For example, logistics, medical and command-and-control systems all had their own separate networks, with different transport hardware, routing protocols, security and data standards. Getting data from one network or application to another often required costly integration work.

Fast-forward to today and the vision has unequivocally been cast for a combined and joint force capable of seamless warfighting across all domains: sea, air, land, space and cyberspace. This describes a simplified and flattened communications pathway with data as the prized commodity; it describes a connectivity that is entirely agnostic to specific transport systems where the right data is accessible to the right consumer at the speed of mission. According to a working definition recently approved by the Secretary of the Army Christine Wormuth:

"The data-centric Army employs advanced lethality, survivability and tempo—empowers leaders and Soldiers with the right information at the right time to gauge risk, optimize combat power, fully employ national means and attain decision dominance at all echelons. Leaders leverage analytics to understand, visualize, describe, direct, lead and assess. In real time, the Army learns, adapts, generates and sustains forces with integrated decision-driven analytic capabilities."

The ability to achieve this vision requires a robust and secure unified network as a starting point, and a commitment to the centrality of data. At its core, data-centricity is a paradigm in which data is an open resource, accessible and consumable by any trusted, networked application without time-consuming and expensive data integration efforts. With access to all the data, leaders make evidence-informed decisions at speeds previously not possible. Data-centricity is the first shift in this digital revolution, and it's a big one.

Key Effort: Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) Unified Data Reference Architecture.

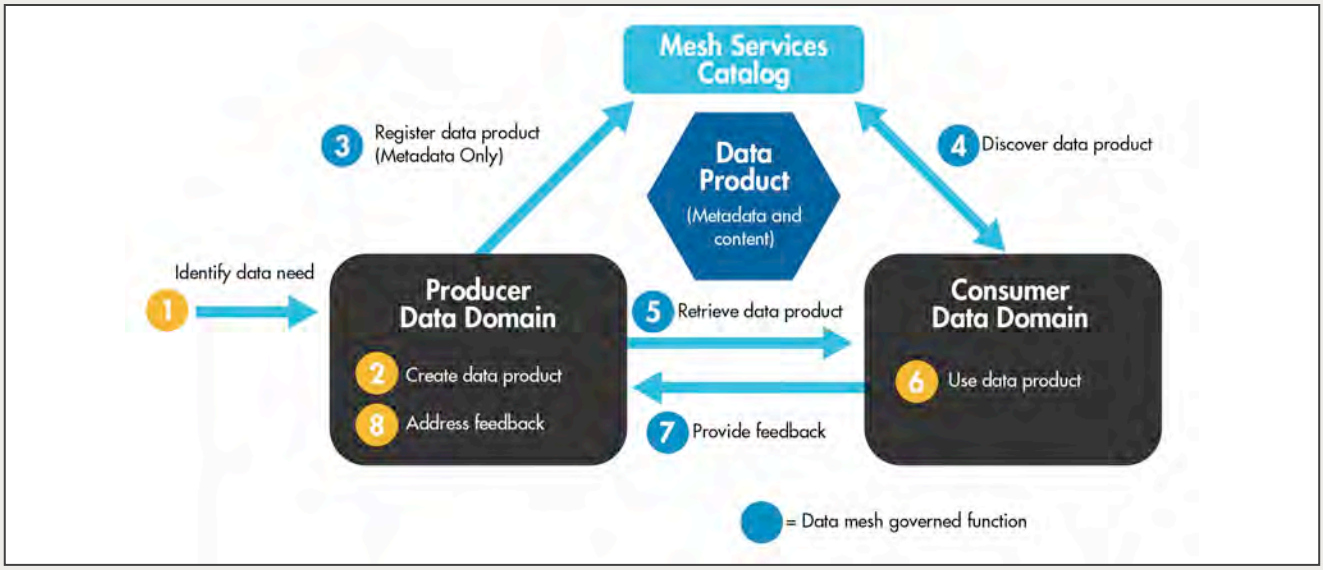
Data centricity requires some set of standards to define how data is packaged and understood. DASA DES is defining a unified data reference architecture in the 2023 fiscal year that will govern acquisition of data-centric capabilities throughout ASA(ALT). This will give program managers and industry partners architectural guidance for producing, sharing and consuming Army data. The unified data reference architecture enables digital transformation by adding data mesh to converge existing data fabric and platform efforts.

A NEW STRATEGY

Programs need a common playbook for digital engineering to ensure that system representations are consistent, reusable, able to be integrated with one another and traceable to operational needs. When everyone on the team is running the play properly, the efficiencies are exponential. (Photo by Staff Sgt. Sean K. Harp, Defense Imagery Management Operations Center)

FROM DATA FABRIC TO DATA MESH

In recent years, much has been made of the data fabric concept, and rightfully so. The data fabric is an architecture that facilitates the end-to-end integration of various data environments, providing machine-enabled unification and integration of data from disparate sources. The data fabric streamlines sharing of data between users and applications. The problem arises for the Army, however, when we try to scale a data fabric to cover all the needs of *every* user in *every* domain (e.g., intelligence, logistics, etc.). The data needs of an intelligence specialist would be different from those of a logistician. There are so many types of data that creating a single uber-fabric to centrally manage everything is unwieldy. And even if it were technically feasible to accommodate every user and every data type, the volume of data then traversing that fabric would make it quite crowded.



DATA MESH SHARES DATA PRODUCTS

A data mesh is a decentralized data architecture that organizes data by a specific business domain, according to IBM. By providing more ownership to experts in those domains, the data can be more effectively managed by those with the expertise. The data mesh concept specifies standards by which data can be packaged (the data product) and labeled (the metadata) to be consumed by an external consumer. (Graphic by Dan Andrew, DASA DES and USAASC)

First defined by Zhamak Dehghani in 2019, the data mesh concept simplifies this problem by specifying standards by which data can be packaged (the data product) and labeled (the metadata) to be consumed by an external consumer. Instead of a crowded, centralized data platform, the data mesh calls for a decentralized architecture that keeps the storage and ownership of the data within its originating domain. Since domains have the expertise in their data, policies about governance, documentation and access are more efficiently managed at that level.

Consumers have an efficient catalog system that tells them where to pull the data they need and how to provide feedback directly to the data owners so products can be updated on user needs. With data mesh, the intel specialist has seamless access to intel data in the intel data fabric, but now also can locate and consume standardized data products from the logistics team, or any other domain participating in the data mesh architecture.

MODERN SOFTWARE DEVELOPMENT

Data, however important, is useless if we don't take advantage of it. Now more than ever industry, academia and Soldiers themselves are solving critical problems leveraging data with modern software. But the Army isn't fully modernized in how it approaches software development, deployment or maintenance. "Sure, gone are the days when the software development team would mail a CD-ROM to the operations team to deliver a new application, but we are far from having every application developed and deployed through a modernized pipeline," said Chad Claussen, director of digital transformation technologies in DASA DES.

Migration to Agile software practices is important because of the pace of change experienced by our warfighters. The legacy development methodology (i.e., waterfall) that we have lived in for decades takes too long to deliver and too frequently misses the target by the time the software is delivered. Major DOD programs average five to seven years from requirements to delivery. But with modern software development practices, things are changing.

At the direction of the undersecretary of the Army and the vice chief of staff, DASA DES is co-leading one line of effort in the Network Capability Portfolio Review to focus on software

FROM WATERFALL TO AGILE DEVELOPMENT

The waterfall methodology has been around for a while and it is straightforward: Collect all the requirements up front, build the cascading schedule of sequential phases, and set it all in motion. Completion of one phase triggers the next until the full-featured product is developed and tested.

There are still some limited use cases for waterfall development, for instance when you are given all the requirements up front and aren't allowed to communicate with the user, as is the case with some classified programs. Unfortunately for the Army, requirements change, Soldiers have new mission needs, and the enemy gets a vote. The old way of business, so to speak, has us way too far down the field before we can cut left or right in response to an adversary's movement, or any change in user needs.

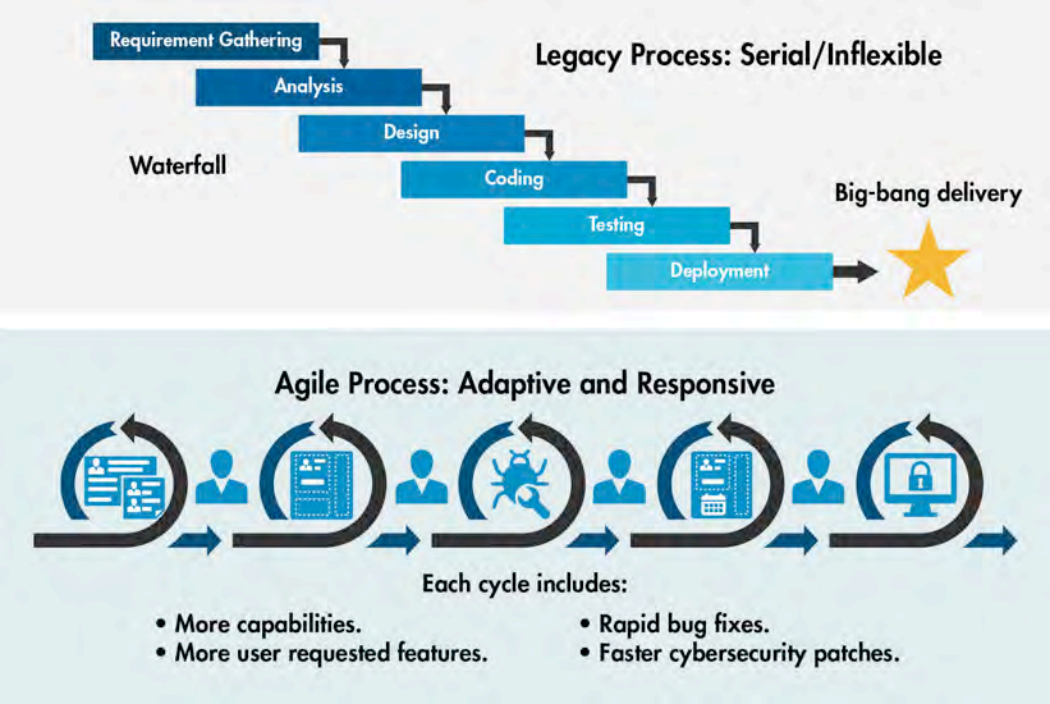
Agile methodology, in contrast, is built around the tenet that we may not be able to get all the information up front; the developers may need to be responsive to customer feedback, technology changes or global threats. So instead of creating a plan for solving the whole complex problem up front, the problem is split into achievable tasks with immediate testing, delivery and feedback. Keeping the customer in the loop throughout the process helps ensure the product that gets delivered is what the user actually needs at that time.

There are a variety of Agile frameworks (e.g., Kanban, Extreme Programming, etc.), but the most popular is Scrum. Coined by Hirotaka Takeuchi and Ikujiro Nonaka in an article in Harvard Business Review in 1986, the moniker is sports analogy to stress teamwork in confronting complex problems. In Scrum, the team works together in two- to four-week sprints to implement a new functionality and collect customer feedback for future cycles.

AGILE VS. DEVSECOPS

DevSecOps (development + security + operations) is another modern software development practice that is largely complimentary to Agile. Whereas Agile is focused on frameworks for managing the development and delivery of software (e.g., Scrum with guidelines like two- to four-week development sprints), DevSecOps is more of an internal philosophy focused on breaking down the barriers between the development team (the ones writing the code), the security team (the ones doing security) and the operations team (the ones deploying and managing the code). Both DevSecOps and Agile offer improvement in efficiency but with different key focus areas.

One key feature commonly associated with DevSecOps is a continuous-integration, continuous-delivery pipeline (see "Heard It Through The Pipeline," Page 42). In legacy development models, multiple engineers would produce code, then work at the end of the development process to integrate their features, test everything and pass the whole build to the operations team (which could then take anywhere from hours to weeks to deploy it). With a continuous-integration, continuous-delivery pipeline, as much of the process is as automated as possible. Features are continuously integrated and available to the rest of the team to reduce bugs. Security and testing are embedded in each step of the process, and incremental builds are continuously delivered as often as possible.



WATERFALL VS. AGILE
There are key differences between incremental, stepped development and continuous iterative development with Agile, and benefits of moving from the legacy waterfall method to an Agile cycle process. (Graphic by Tracy Bannon, DASA DES and USAASC)

modernization. The goal of the review is to ensure that the Army is aligned to achieve digital transformation—and a big part of this process has been making sure that everyone understands how their area needs to change to accommodate Agile software practices. For instance, requirements are now being written more broadly so teams can decompose the larger requirement into smaller chunks that can be built and tested in just a few weeks. The test community is making provisions for authorizing deployment at a minimal viable product instead of waiting to test at the end of the development. Units are being mobilized earlier to provide feedback throughout the process shaping the iterative development. One of the biggest shifts comes for logisticians: In an Agile construct, there is simply no such thing as software sustainment—it is always being updated based on users' feedback and changing needs.

Key Effort: Agile Engagement Program

As of the beginning of the 2023 fiscal year, DASA DES has launched an initiative to help programs tailor industry-leading practices (e.g., DevSecOps and Agile) to the specific DOD environs (e.g., Army acquisition, contracting, test and evaluation). The first of many pillars of this program will consist of connecting some ASA(ALT) teams working on software programs with qualified Agile coaches and leaders from DOD programs with a successful track record of Agile development to facilitate coaching and mentorship.

Key Effort: Upskilling the ASA(ALT) workforce for Agile, digital-first mentality

With more than 100 participants from six program executive offices and ASA(ALT) in an initial pilot, upskilling addresses how the Army will hire, retain, train and deploy the digital workforce of the future. This includes a human-centered, design-based program to ensure training for key roles in the program offices and building digital career paths for civilians that include education and rotational assignments outside the government.

DIGITAL ENGINEERING

With Agile development, the Army is building the right things and getting them to Soldiers faster, but faster development

For most of the past two decades the Army has operated within a network-centric paradigm. Programs lived or died by whether they were network centric.

also means an increased reliance on a digital ecosystem in the engineering process. From remote-control tanks to resilient communications networks, Soldiers rely on complex systems of systems that comprise interconnected and mutually dependent parts. Each time one of these individual components gets upgraded, the dependencies and interfaces are put on trial to make sure they were understood and documented well. In an analog system, tracking these requirements is cumbersome. But with digital engineering, the Army's goals become achievable.

The challenge for ASA(ALT) is to get everyone speaking the same digital language, so we can understand each other. It's one thing to gain efficiencies if all systems in one platform are neatly and systematically defined, but it's another thing altogether to deliver every ASA(ALT) system with digital models that can be shared and leveraged by integrators, testers and logisticians.

Taking this down a level further, this means establishing and integrating models that describe each aspect of a complex system and making sure all our systems leverage the same underlying data structures and pull from the same authoritative sources of truth. This process is called model-based systems engineering, which is an important subset of digital engineering.

Programs across the Army have realized benefits and are increasing their use of digital engineering but need a common playbook to ensure that system (and subsystem) representations are consistent, reusable, able to be integrated with one another, and traceable to operational needs. Much like in the game of football, when everyone on the team is running the play properly, the efficiencies are exponential.

Key Effort: Model-Based Systems Engineering Style Guide

As part of a larger plan for adopting digital engineering practices across ASA(ALT), DASA DES is developing a style guide for ASA(ALT) to be released this fiscal year. This style guide will enable programs adopting model-based systems engineering to do so in a uniform way to maximize the value to the Army. The style guide is being developed in close coordination with other service components and Army organizations to ensure maximum interoperability and commonality across DOD.

CONCLUSION

The Army is making significant investments in digital transformation because achieving a digitally enabled and data-driven land component requires decisive action. It involves setting the stage for data centricity; it involves transitioning across-the-board to modern software development and leading practices for digital engineering; and it involves the important work of training, coaching and mentoring along the way.

As Swanson put it, "The role of DASA DES is part quarterback and part cheerleader. We are focusing on providing key enabling guidance and architectures, but also coaching and mentorship to programs out on the front lines fighting the good fight each day." The Army is expecting these investments to pay dividends as the acquisition force embraces digital transformation through the ranks.

For more information contact the Office of the DASA DES, ***dasa-des@army.mil****.*

DARREN LEBLANC is a senior technical adviser with CommNet, supporting DASA DES. In his current role, he helps the Army analyze and solve complex problems related to digital transformation. He holds a B.S. in engineering from Messiah University and has done interdisciplinary graduate work at Harvard Business School, Stevens Institute of Technology and Western Seminary.

TRAINING WITH INDUSTRY (TWI)

The Army's Training With Industry (TWI) program is a one-year work experience training program designed to take selected officers out of the military environment and expose them to the latest commercial business practices, organizational structures and cultures, technology development processes, and corporate management techniques.

Eligibility Criteria

This opportunity is open to active component acquisition officers in the rank of lieutenant colonel who are eligible for rotation in the summer assignment cycle. Majors should be key development position complete and competitive for promotion. Discuss with your branch manager to find out if you are a good fit for this program.

FY24 ANNOUNCEMENT DATES

Announcement Opening: Mid-June 2023
Announcement Closing: Early-Aug. 2023
Applicant Selection Notification: End of Sept. 2023
Program Start: June - Sept. 2024

NOTE

Winter cycle movers can request curtailment through their branch managers to compete for this fellowship.

UNITED STATES ARMY DACM
DIRECTOR, ACQUISITION CAREER MANAGEMENT OFFICE

CONTACT: Lt. Col. KEN ELGORT | *TWI PROGRAM MANAGER* | kenneth.p.elgort.mil@army.mil

ASC.ARMY.MIL/WEB/CAREER-DEVELOPMENT/PROGRAMS/AAC-TRAINING-WITH-INDUSTRY

ON THE MOVE
Soldiers from the 362nd Mobile Public Affairs Detachment conduct squad movements during a field training exercise in Rochester, New Hampshire, in August 2020. New tools being developed by ERDC will equip Army geospatial engineers to develop better terrain analysis products using new remotely sensed data, enabling leaders to better plan troop movements through various types of terrain in unfamiliar areas. (Photo by Staff Sgt. Ray Boyington, 362nd Mobile Public Affairs Detachment)

SUPERIOR SITUATIONAL AWARENESS

ERDC is developing enhanced terrain-processing tools to improve Soldiers' maneuver capabilities and far more.

by Chris Kieffer

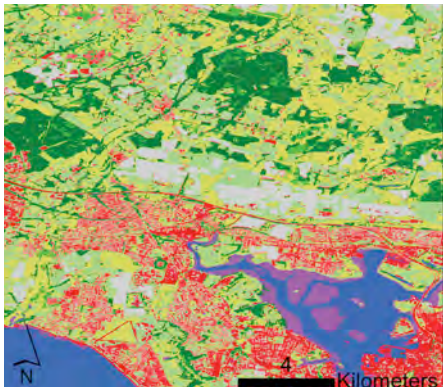
It's 2025, and U.S. forces are encamped on the outskirts of a dense rain forest.

A team of geospatial engineers studies maps that depict the surrounding terrain as they plan a troop movement that must keep the unit concealed. These maps will be used to guide where and how to move troops, such as the best path Soldiers can take and remain hidden underneath trees, or available routes where Humvees can be driven or where helicopters can safely land.

Suddenly, a commander bursts into the room and halts their progress. She tells them the situation is fluid. The area of interest has shifted significantly and she needs a new plan in two hours.

It's a complicated task. The new area is unfamiliar, and there is no existing map that details where its tree canopy is thick enough to cover the troops, where its tree trunks are spaced far enough apart to support the maneuver or where it contains hidden wetlands that should be avoided. And producing this terrain analysis by hand using traditional methods could take a full day's work, delaying the start of the operation.

Instead, the engineers upload the latest satellite imagery into a suite of Enhanced Terrain Processing tools developed by the U.S. Army Engineer Research and Development Center (ERDC). Within minutes, they have the land-cover map they need. Possessing a detailed understanding of the nearby terrain and forest cover, the engineers can quickly get back to work on producing a revised route for the maneuver to enable mission success.



Water Permanent
Shrub / Scrub / Sparse Vegetation
Trees Deciduous
Trees Evergreen
Wetland / Perennial Water

Built Up (Dense)
Built Up (Light)
Bare Ground
Vigorous Vegetation

GROUND, COVERED
One of the applications in ERDC's Enhanced Terrain Processing tool set can take two satellite images of an area—one from the summer and one from the winter—and rapidly process them to create a detailed land-cover map that highlights the location of various features such as water, vegetation, deciduous and evergreen trees, wetlands and built-up areas. (Images courtesy of ERDC)

GROUND TRUTH

When planning an operation, military leaders must quickly know that the information on their maps hasn't changed. For example, a grove of trees may no longer be present, what was once agricultural land may now be overgrown, or a dry plain may have been overtaken by a flood. However, extracting this information from newer satellite imagery is a lengthy and complicated process.

ERDC's Enhanced Terrain Processing effort is developing a series of tools to solve this problem. These tools allow Army geospatial engineers to rapidly process new remotely sensed imagery from a variety of sources and use it to analyze current terrain conditions. (The official name of the program is Tactical Geospatial Information Capabilities – Enhanced Terrain Processing. Enhanced Terrain Processing is one of four projects under that larger umbrella and also the name of this tool set.)

Within minutes, geospatial engineers can produce a land-cover classification map that highlights the location of a variety of features, such as vegetation, evergreen or deciduous trees, wetlands, farms and built-up areas. Other tools rapidly identify the location of forests and water, tree density and crown diameter, terrain ruggedness and optimal mobility corridors, among many other features.

"Creating foundational geospatial data, such as land-cover maps, takes time—anywhere from a few hours to a few days depending on which technique you are using, what you're trying to produce, and the size of your area of interest," said Nikki Wayant, research geographer at ERDC's Geospatial Research Laboratory and task lead for the Enhanced Terrain Processing effort.

YOU NEED IT WHEN?

ERDC is providing several tools that automate these processes—producing information that is more accurate and of better resolution, and doing it more quickly than with traditional methods. They can also combine information in new ways to provide analysis products that depict optimal cross-country terrain routes, available helicopter landing zones or areas of cover and concealment, just to name a few.

"In the past, people had a couple of days to put something out," Wayant said. "The fact of the matter is, currently, the geospatial engineer does not have the days they would need to create a very well-thought-out geospatial product. Their commanders do not always understand the amount of time it takes, so they are like, 'I need this in 30 minutes.' And the geospatial engineers are just doing the best they can with the tools they have, and it's not always the most accurate. And so they have to give it with a

GANG'S ALL HERE
Developers from ERDC's Enhanced Terrain Processing effort demonstrate two of their newly developed tools to Sgt.1st Class Jung Hong from the Army Geospatial Center's Military Support Team. With Hong are, from left, Kristofer Lasko, Ph.D.; Brendan Hoover, Ph.D.; Daniel O'Neill; Sarah Becker, Ph.D., and Andrew Griffin. (Photo by ERDC)

lot of caveats. Or it does take them several days to walk through the process to create all of these products. Now the geospatial engineers can do them so much quicker, and they can trust them more."

This matters because when a unit begins its maneuver, it doesn't want to send a tank to an area that has been recently overgrown with trees or a Humvee to a spot where a rainstorm saturated the soil enough that it will not currently support the vehicle's weight.

"Being able to have more up-to-date information means it is more likely for a mission to be completed," Wayant said. "It allows us to plan a mission faster and more accurately, making sure it is able to be completed, but also making sure we can bring Soldiers home safely."

CONCLUSION

Many of these tools will be formally tested during the maneuver, support, sustainment, and protection integration experiments capability demonstration in May at Fort Leonard Wood, Missouri. They should be available to Army geospatial engineers by fiscal year 2024 or 2025.

ERDC's Enhanced Terrain Processing team works in close collaboration with the Army Geospatial Center's Military Support Team, which is made up of geospatial engineers who have field experience. This allows the ERDC team to thoroughly vet the tools it is developing and ensure they are meeting Soldier needs and expectations.

And the effort continues to evolve, using advances in machine learning to combine information in new ways and provide new capabilities, like automatically extracting buildings and roads from images or determining the density of trees within a forest.

"We're trying to take advantage of all of the progress being made in other disciplines such as computer science and using that to solve some of the geospatial problems we are facing today," Wayant said.

"One of the things I think that makes Enhanced Terrain Processing so successful is the diversity we have in terms of skill sets," Wayant said. "We have geographers, we have computer scientists, we have physicists. We have foresters. So we are able to combine all of the knowledge and science behind all of the disciplines together to create these products."

For more information and to learn more about ERDC's Enhanced Terrain Processing tools, listen to an interview with Nikki Wayant on the "Power of ERDC Podcast" at ***https://poweroferdcpodcast.org/enhanced-terrain-processing/****, or search for "Power of ERDC" in all major podcast players. You can send information requests to* ***ERDCinfo@usace.army.mil****.*

CHRIS KIEFFER is a communications specialist with the U.S. Army Engineer Research and Development Center. He spent more than a decade as a reporter and editor with the Northeast Mississippi Daily Journal and Oxford (Mississippi) Eagle newspapers. Kieffer holds an M.S. in journalism from Columbia University and a B.A. in journalism from the University of Mississippi.

AUGMENTED VISION

Spc. Mitchell Mcneil, assigned to 82nd Airborne, 3rd Brigade Combat Team, trains with the Integrated Visual Augmentation System as a part of Project Convergence 2022 at Camp Talega, California, on Oct. 11. During Project Convergence, many systems are tested to determine how future command-and-control capabilities can be integrated with all-service multinational partners. (Photo by Sgt. Thiem Huynh, Army Futures Command)

HEARD IT THROUGH *THE PIPELINE*

The Army is developing its first artificial intelligence pipeline to deliver AI and ML capabilities for faster, more accurate decision-making.

by Cheryl Marino

A revolutionary initiative called Project Linchpin is developing the Army's first artificial intelligence and machine learning (AI and ML) operations pipeline. The capability aims to solve the problem of continuous training, integration and delivery of AI and ML at the speed required for multidomain and large-scale combat operations.

The initiative, which is a collaboration between Army Futures Command's Artificial Intelligence Integration Center, U.S. Army Combat Capabilities Development Command Army Research Laboratory, and the Program Executive Office for Intelligence, Electronic Warfare and Sensors (PEO IEW&S), is considered a pre-program activity with the first use case focused on the Army's suite of modernized sensor systems (satellites, optics, signals receivers, etc.) that will take shape in the next one to two years. It not only allows the Army to establish the necessary infrastructure for AI-enabled systems, but the project also provides a mechanism to create new industry partnerships and foster a competitive environment for third-party integration into Army programs.

For the Soldier, the capability is an invisible backend that is equipped and manned by technical analysts using specialized tools. A Soldier at the tactical edge receiving a sensor feed and leveraging AI would be able to identify enemy equipment in time and space (e.g., differentiate between a tank or a bus); be given enemy course of actions based on terrain, time and space; receive real-time alerts about enemy situation or movement and, with a human in the loop, send messages to the commander and warfighter for action. Current apps would still be used to conduct missions, but now with a little AI

sprinkled on top to improve the output of the app itself (e.g., find the needle in the haystack in seconds or minutes not weeks, months or years).

Mark Kitz, program executive officer for IEW&S, said that enabling those same tools and systems with AI and ML capabilities is a game changer. "Today, our sensors collect far more data than human analysts can exploit and analyze manually. AI and ML models can be trained to detect objects and alert analysts to possible targets in a way that can close the gap on the amount of data we process, and how commanders and decision-makers see the battlefield. Making sure we have the infrastructure and a pipeline to facilitate that delivery is a key component for mission success."

IT'S ALL IN THE DELIVERY

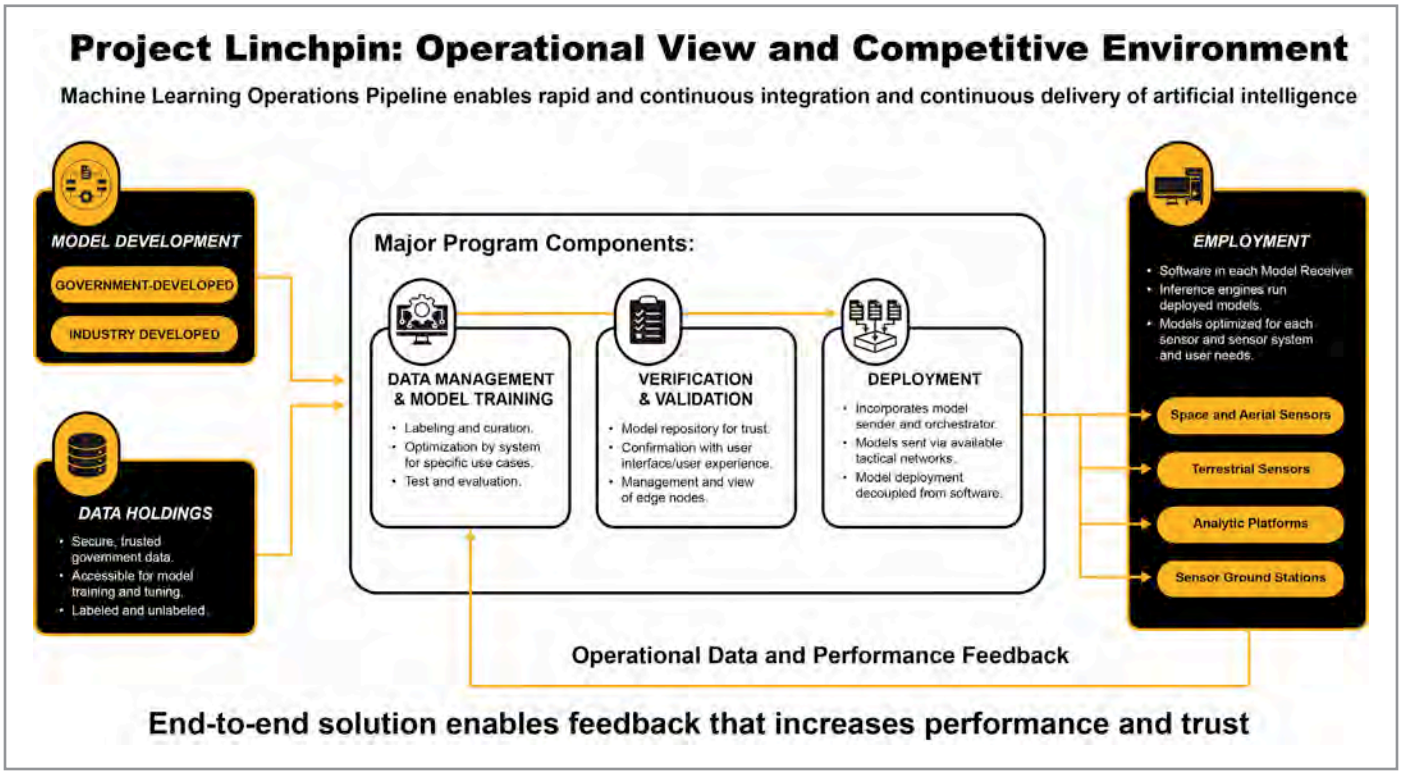
The concept of Project Linchpin is just like software pipelines used on cellphones for operating systems and apps. User data is provided back to the software developer, which helps generate the next iteration of patches, security upgrades and features. Both the software pipeline and the AI and ML pipeline require an infrastructure to enable that feedback and delivery—with a few key differences. Project Linchpin's plan will establish this infrastructure and an environment that will allow successful deployment of AI and ML capabilities to intelligence, cyber and electronic warfare sensor systems, like high-altitude aerial platforms that capture imagery and other signals using an end-to-end pipeline. The delivery of these AI and ML capabilities is critical as it supports the work intelligence analysts do and will lead to faster and more accurate decision-making.

"These sensors gather all the information used to understand the operational environment in all domains, including imagery, video and signals," said Bharat Patel, product lead for Project Linchpin, part of Project Manager Intel Systems and Analytics (PM IS&A) within PEO IEW&S. "The goal of the sensor AI pipeline is to deliver trained algorithms [i.e., models] to sensors and sensor data-processing platforms." For example, AI aboard future aerial sensors could assess battle damage to increase situational awareness of enemy forces and critical infrastructure on the battlefield, and new intelligence ground stations could automatically correlate and detect targets to alert decision-makers for more rapid targeting.

Col. Christopher Anderson, project manager for IS&A, said that there are dozens of examples to demonstrate the capability. "It would be like looking at Google Earth's satellite imagery and quickly being able to identify all of the Ford F-350s in Maryland," he said. "Normally an analyst has an area of interest assigned to them, and they have to look for a bunch of things; it could be enemy equipment, friendly forces, schools, etc. The analyst zooms in, out, rotates imagery and stares at the screen for hours. With AI, systems can quickly [within seconds] help Soldiers identify objects of interest that can be turned into intelligence for faster decisions and give Soldiers those hours back to work on more important tasks and analysis."

Project Linchpin, denoting the name of the pin that keeps a wheel on its axle, organizes all the components needed to deliver these leap-ahead AI and ML capabilities to

ACQUISITION STRATEGY
Product lead for Project Linchpin Bharat Patel, second from right, goes over acquisition strategy with PEO IEW&S headquarters staff Oct. 11 for the Association of the United States Army Annual Meeting and Exposition in Washington. Staff accompanying Patel are, from left, Mardel Wojciechowski, division chief, Contract Planning; Steven Rothenberg, contract planning; Mike Schwartz, chief engineer and System of Systems Engineering Division chief; and Steve Gunther, division chief, Program Acquisition and Cost Efficiencies. (Photo provided by PEO IEW&S)



HOW IT WORKS

Project Linchpin's operational view and competitive environment displays how a machine learning operations pipeline enables rapid and continuous integration and continuous delivery of artificial intelligence. (Graphic by PEO IEW&S and USAASC)

sensor systems. For PEO IEW&S, an operational pipeline helps solve the problem of delivering AI that Army sensor systems need to maximize their capabilities.

SENSORY PERCEPTION

Like smartphone sensors, Army sensors (satellites, optics, signals receivers, etc.) collect, process and analyze information instantly. They are used on land, under water, on aerial platforms and in satellites for things like explosive-detection systems, chemical warfare detection, missile systems and target and weapon seekers to gather all the information used to understand the operational environment and make collected data available to analysts through a feedback loop.

"Today, human analysts use tools to process, exploit and analyze the information to create intelligence. This intelligence is disseminated to decision-makers and commanders that can drive operations, inform targeting and support tactical, operational and strategic decisions," said Patel. The only limitation is how much of the data that analysts can process. The more data that can be consumed and processed, the more complete the picture of the operational environment becomes. "When more advanced sensors are developed and fielded by PEO IEW&S, the volume of the data will grow exponentially," Patel said.

PIPELINE EXPRESS

According to Maj. Nick Bono, Department of the Army systems coordinator in the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (OASA(ALT)), it's the feedback loop within a machine learning operationalization (MLOps) management pipeline that ensures the delivery is continuous and performing.

"The pipeline is really an infrastructure that allows technical and functional teams to integrate and deliver AI and ML models to sensor systems," Bono said. "This is an environment that accounts for live data in the operational environment and feedback from Soldiers using these tools and systems to keep

improving the performance of the AI." Within the pipeline, data scientists will interact with components that manage sensor data to train models, as well as test, evaluate, verify, optimize and deploy them onto the systems.

"Each one of those steps is a critical part of the process to ensure Soldiers trust the AI that is helping them," Bono said. "Today, there is so much data that analysts can't process all of it. To provide the most accurate and complete assessments of the operational environment, PEO IEW&S recognized that the process of delivering AI and ML capabilities to sensors continuously and rapidly is just as important as the models themselves."

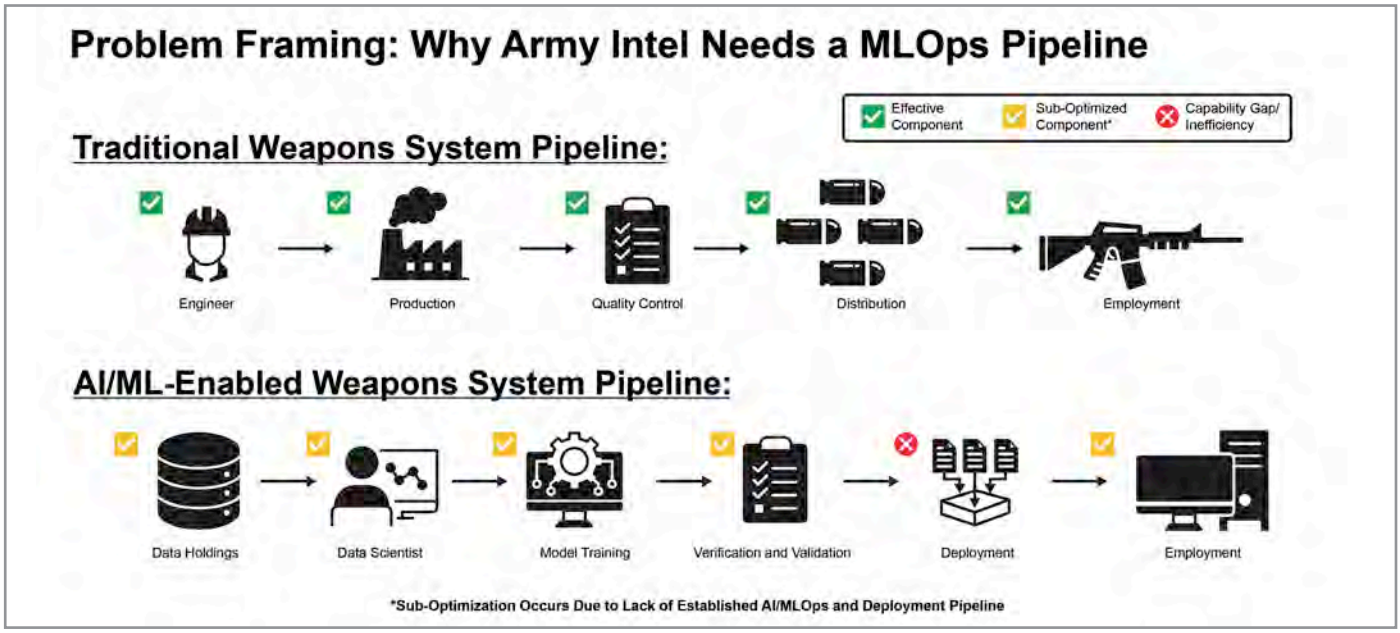
Kitz noted the importance of this investment. "Linchpin is the right name because this is a hard problem for an absolutely vital product." Recognizing the need for a solution that focuses on the Soldier is a model for early adoption and acceleration in the use of AI for sensor systems, he said. "Soldiers have to understand where AI and ML models come from, how they are trained, that they are ready to perform their tasks and that Soldier feedback is baked into the entire process. With a pipeline like this, we're delivering trust."

DOLLARS AND SENSE

AI is unique from software in that there must be continuous integration and continuous delivery to systems. AI and ML capabilities require "pipelines" for delivery. Project Linchpin will result in a program of record for the Army's first MLOps pipeline that manages all the unique aspects of AI and ML projects. As new algorithms are developed for specific tasks, and existing algorithms are trained on new data, the pipeline integrates and delivers them at the speed required for multidomain operations.

Emerging AI- and ML-enabled systems and the algorithms and models they use are expensive, but "consolidating the 'development and deployment pipeline' under a single program of record creates efficiencies that reduce costs," Patel said. "It reduces the burden on individual programs that employ AI to manage their own pipelines and mitigates redundancy in like efforts for the broad range of sensors that may collect similar data types or use similar models."

The pipeline also creates an opportunity for industry partners to compete, and for the Army to select the best capabilities. Since sensor AI requirements are continuous, and change with the operational environment, there is a constant need to identify and integrate new models. "Using the Adaptive Acquisition Framework to employ the most flexible acquisition and contracting strategies will allow a competitive environment for industry," said Kitz.



GOING WITH THE FLOW

The differences and benefits between a traditional weapons system pipeline versus an AI- and ML-enabled weapons system pipeline. (Graphic by PEO IEW&S and USAASC)

"It also allows an opportunity to transition the Army's own S&T [science and technology] investments in AI and ML capabilities directly into a program of record. Competition and effective use of S&T efforts all contribute to cost savings."

DEMONSTRATED ABILITIES

The Army already possesses some of the tools and components required for an end-to-end solution. Initiatives like Arcane Fire demonstrated the ability to deliver AI to programs during Project Convergence 22 and other experiments. Patel said that future development will focus on key tasks like data management, continuous integration and continuous delivery, test and evaluation, quality control, explainability (also referred to as interpretability) and trust.

PEO IEW&S has laid the ground for Project Linchpin to be successful, having worked with the Office of the Secretary of Defense's Project Maven—the DOD's most visible artificial intelligence office, designed to process imagery and full-motion video from drones and to automatically detect potential targets—since 2018, to understand how to deliver AI capabilities to the Army.

CONCLUSION

Project Linchpin aims to provide an AI infrastructure. "The goal is to create a complete and efficient AI and ML development and delivery pipeline for sensor programs within PEO IEW&S to provide needed capability while managing cost and risk." said Kitz. "And it has the potential to create a new, dynamic marketplace for industry partners to compete and deliver the best tools, algorithms and models." He said that, pending OASA(ALT) concept approval in fiscal year 2023, a campaign of learning and formal initiation of Project Linchpin would follow. After that, an S&T transition plan could be implemented along with future contract activities.

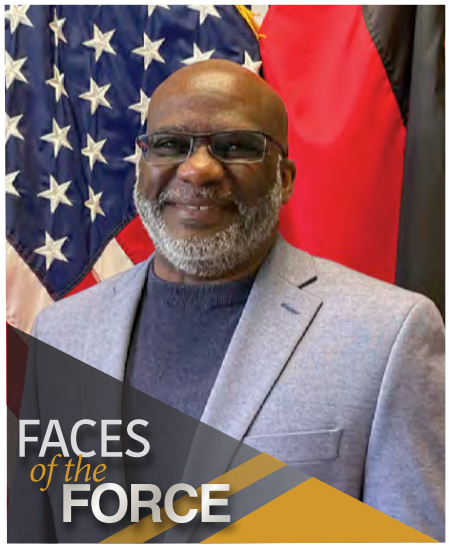
In terms of overmatch, Anderson compares AI and ML capabilities to the advantage night vision provided the Army when it was first fielded. "You can make a direct comparison in that night-vision goggles and optics allowed the Army to 'see' where there was no visibility. AI and ML capabilities for sensors, like object detection, provide overmatch by going one step further—AI allows sensors that can see to detect, recognize and identify. They can perform functions that only human eyes could do, but they can do it faster and at scale across the entire battlespace." Project Linchpin is critical because it provides the mechanism to continuously deliver that advantage to sensors so the Army can make decisions faster than its adversaries and enable targeting and overmatch with long-range precision fires and other effects.

THE FUTURE OF UAS

A Jump 20 Group 3 unmanned aerial system takes off on Oct.13 at San Clemente Island, California, during Project Convergence 22. At Project Convergence, all U.S. military services, as well as international partners, are experimenting with distributed sustainment of unmanned aerial systems over extended distances in a maritime environment. (Photo by Spc. Collin MacKown, 14th Public Affairs Detachment)

*For more information, go to **https://peoiews.army.mil/** or contact Larry Glidewell at **larry.d.glidewell.ctr@army.mil**.*

CHERYL MARINO provides contract support to the U.S. Army Acquisition Support Center at Fort Belvoir, Virginia, as a writer and editor for Network Runners Inc. and Army AL&T magazine. She holds a B.A. in communications from Seton Hall University and has more than 20 years of writing and editing experience in both the government and commercial sectors. In addition to corporate communications, she is a feature writer and photojournalist for a biannual New Jersey travel magazine.



STEPHEN B. FULLER

COMMAND/ORGANIZATION: Army Contracting Command, Headquarters 409th Contracting Support Brigade

TITLE: Contract specialist

YEARS OF SERVICE IN WORKFORCE: 10

YEARS OF MILITARY SERVICE: 23

ACQUISITION CERTIFICATIONS: Professional in contracting

EDUCATION: M.A. in human resource management, Webster University; M.A. in procurement and acquisition management, Webster University; B.S. in business management studies, University of Maryland

SHARE THE KNOWLEDGE

Choices made today will affect the future, so choose wisely—then pass the experience and knowledge along to someone else so that they can make better life choices, too.

This is the advice that Stephen Fuller said he would give to anyone in or outside of work, especially junior acquisition personnel. "The choices we make today—positive or negative—will decide your success or failures for years after the decision," he said. "I coined this phrase as a United States Army recruiter when I counseled young men and women on career development. My mentorship abilities began early in my career, and to see these men and women join the Army under my influence was my most outstanding achievement."

Fuller began his career with the Army as an active-duty Soldier, serving 23 years before joining the Army Acquisition Workforce (AAW) a decade ago. Currently, he is the lead contract specialist procuring complex repair and renovation projects—like the maintenance of family housing quarters for Grafenwoehr and Garmisch, part of U.S. Army Garrison Bavaria, Germany, and building a facility for after-action reports for the urban operations site—on behalf of the Construction Branch, 928th Contracting Battalion, 409th Contracting Support Brigade. In his contract specialist role, Fuller reviews and prepares pre- and post-award documents before soliciting a requirement to the industry. He also analyzes price proposals to ensure the best value for the government, and provides business advice and assistance to the customer, technical teams and the contracting officer representative involved in developing the requirements package and related contracting issues.

"My greatest satisfaction is being part of an organized team that supports each other in achieving its mission and organizational success," he said. "Additionally, I enjoy sharing my professional and personal knowledge with Soldiers and civilians entering the Army Acquisition Workforce. To hear a 'thank you' or see the smile on their face is the best feeling ever."

His rewarding active-duty experience as a recruiter, Fuller said, allowed him to mentor and coach Soldiers and civilians on a professional and personal level. "The most rewarding point in my AAW career is having leaders around me who value my strengths and suggest areas to improve." He said that, since his acquisition career began, the workforce "surrounded him with the best contracting officers," who took a personal interest in his acquisition career.

Fuller's contracting career began one year after he retired from active duty. "The Air Force hired me as an intern under the Pathways Program, which consisted of earning my master's degree in procurement and acquisition management and learning about types of contracts, negotiation techniques and pricing strategies, while applying these theories to the acquisition workforce," he said. "After completing my intern position, the Air Force placed me under its Copper Cap developmental program, and my developmental stage began with procuring large specialized construction and architectural

DAILY REVIEW
Fuller is reviewing his daily workload with contracting officer Sigrid Kahlert, at her office at the Regional Contracting Office in Grafenwoehr, Germany in March. (Photo courtesy of the 409th Contracting Support Brigade)

and environmental projects. Being part of the AAW has been an excellent opportunity to be supported by a team that trained and mentored me to reach my acquisition 'aha!' moment."

But, according to Fuller, becoming a member of the AAW did not come easily. "Before I retired from the Army, a colleague had informed me of the acquisition program. I began applying to the program in 2011, and finally became part of the Army Acquisition Workforce in 2018, after countless times submitting my resume on USA Jobs," he said. "I believe I was selected when another candidate declined a position in Grafenwohr, Germany—it goes to show the competitiveness of the AAW program."

Fuller said that, once he was finally able to join the acquisition workforce, he began taking advantage of relevant training opportunities. He earned his DAWIA Professional certification in contracting and intended to further his credentials, but COVID-19 had other plans. "I was one course shy of completing the program; however, because of the events of COVID-19 and various policy cancellations, I did not finish the program, so I recently enrolled in the new Construction Contracting Credential Program. This program provides me with the knowledge and associated skills to perform various construction disciplines." He said his supervisor recommended the program to him, and he would recommend it to anyone in the contracting workforce, to acquire valuable skills and knowledge necessary for advancing one's career, or helping others become more proficient in their professional fields. "It allows me to stay competitive and focused on the fundamentals," he said.

According to Fuller, mentoring and sharing knowledge doesn't stop once he leaves the office. "Most of my friends know that I mentor and counsel veterans outside of work," he said. "I share substantial knowledge with military personnel and veterans at the Department of Veterans Affairs [VA] and military transition assistance; the breadth of my knowledge extends to aiding in resume writing, VA claims and the appeals process." And according to Fuller, taking care of Soldiers and his work as a VA claims agent will continue after he retires from the federal government.

Fuller said the most important lesson he's learned is that contracting changes daily, and you should always be learning and improving. "Forget the process you have learned at your last duty station—when PCSing, learn your gaining unit processes," he said. (PCS, short for "permanent change of station," is used as a verb for the process of a military member moving to a different, permanent duty station.) "I apply it at work by supporting my leaders and contracting officer every day."

There is much knowledge and guidance that Fuller has acquired from his years of experience and on-the-job training that he applies to everyday life, but he said the best and most crucial advice was from his father. "He said, 'Stephen, listen to older people; they know.' It took me a few years to understand it, but I caught on and I have applied this advice to mold me throughout my training and experience in the Army and Army Acquisition Workforce." Fuller said he has also listened to and taken the advice from leaders, supervisors and subordinates. "Listening to and understanding one's point of view has made me a noticeably confident person."

—CHERYL MARINO

HANDOVER CEREMONY

U.S. Army Maj. Gen. Michael D. Turello, right, commanding general of Combined Joint Task Force – Horn of Africa, greets Gen. Samson Mwathethe, chief of Kenyan Defense Forces, during a helicopter handover ceremony at Embakasi Barracks, Kenya, on Jan. 23, 2020. (Photo by Tech. Sgt. Ashley Taylor, Combined Joint Task Force – Horn of Africa)

ALE FILLS FMS TRAINING GAP

New online resource gives FMS workforce a technical edge.

by Tim Hanson

Digital transformation is more than just technology—it is also a cultural transformation. The need for technical training within the Army foreign military sales (FMS) workforce has been around for many years. How individuals receive that information and participate, however, is changing.

Both the Defense Security Cooperation University (DSCU) and the Office of the Deputy Assistant Secretary of the Army for Defense Exports and Cooperation (DASA (DE&C)), have curricula that are helpful for understanding the basics of the security assistance mission at the DOD and Army levels. They fall short when it comes to specific daily tasks within organizations, according to Kyle Crawford, chief of the U.S. Army Security Assistance Command's (USASAC) Foreign Military Sales Operation Training Division.

USASAC recognized this training gap and created a tool called Agile Learning Environment (ALE), by which the workforce can access training and reference material relevant to their daily tasks.

"We took steps to stand up a dedicated FMS Operational Training Division to focus on our core workforce and the technical tasks that those personnel perform every day," Crawford said. "This was the genesis of our division, and as we looked at our mission, we landed on milSuite as the tool of choice. It was available, easy to learn and something we could immediately start to use."

The Army's milSuite platform is an outlet for DOD workforce to connect, collaborate and learn from one another via a suite of products, including milBook, milTube, milWiki and milUniversity. These tools are like what individuals use in their daily lives

SUPPLIES TO AFRICA
A shipment of M4A1 rifles arrived in Dakar, Senegal, on Jan. 21, 2022. ALE is currently tailored toward USASAC country program managers, central case managers, logistics management specialists and specific supply technicians. (Photo by the author)

but reside in a Common Access Card-enabled environment to help share information within and among DOD organizations.

"We then used a combination of these tools to build a portal for the workforce. Here, they can access specific training and reference material to their specific job," Crawford explained. ALE provides a platform for the workforce to connect and collaborate dynamically on specific issues.

"Sometimes I'll receive questions that may be beyond my current experience or are assigned tasks by external agencies in which the role of the country program manager (myself) is not clearly defined," said Greg Rogers, country program manager for Africa Command Regional Operations. "The ALE discussion forum is a venue that enables country program managers to post questions that subject matter experts may then be able to provide experience or insight toward for best practices."

Rogers added that ALE helped him with his transition back into the security assistance arena when he joined USASAC in October 2021. Rogers had previous experience as a training case manager at an implementing agency, but he had not used the Defense Security Assistance Management System in four years. ALE provided numerous refresher videos that helped Rogers refamiliarize himself.

Currently, the ALE is tailored toward USASAC's country program managers, central case managers, logistics management specialists and specific supply technicians.

"Each of these functional positions generated a list of key tasks that they perform on a recurring basis," Crawford said. "These tasks were then used in building specific regional operations mission-essential task lists, which is the foundation of the Agile Learning Environment." In addition, each task has training material available to help users accomplish that specific initiative.

"The Agile Learning Environment provides me accurate instructions that are easy to understand and follow. Everything is easily accessible and searchable, which helps in reducing errors," said

"We took steps to stand up a dedicated FMS Operational Training Division to focus on our core workforce and the technical tasks that those personnel perform every day."

Alena Zayats, central case manager for Africa Command Regional Operations.

Zayats added that ALE has improved her daily productivity since its implementation in the spring because it allows her to access relevant training, processes and guidance in one location.

"Along with meeting the on-demand needs of the workforce, ALE also offers a calendar of scheduled instructor-led training, or ILT, events that are coordinated to enhance the regional operations' technical proficiency," Crawford added.

While the USASAC FMS Operational Training Division focuses on assisting the country teams within the regional operations workforce, Crawford believes ALE has the capability to become a high-powered knowledge management tool for the entire Army FMS workforce.

MILSUITE TO THE RESCUE

USASAC decided to use the milSuite platform "as the tool of choice. It was available, easy to learn, and something we could immediately start to use," said Kyle Crawford, shown receiving an honor in 2019 from Maj. Gen. Jeffrey Drushal, then the USASAC commander. (Photo by the author)

"The current structure of the tool allows for sharing information that is common to multiple organizations, but it is set up in a way that allows individual organizations to tailor elements specific to their internal processes and procedures," Crawford said. "It is adaptable to the uniqueness of each Army organization involved in the FMS mission set."

The Agile Learning Environment is changing the way the Army Materiel Command security assistance enterprise operates, increasing the availability of information and training necessary to execute the mission, he said.

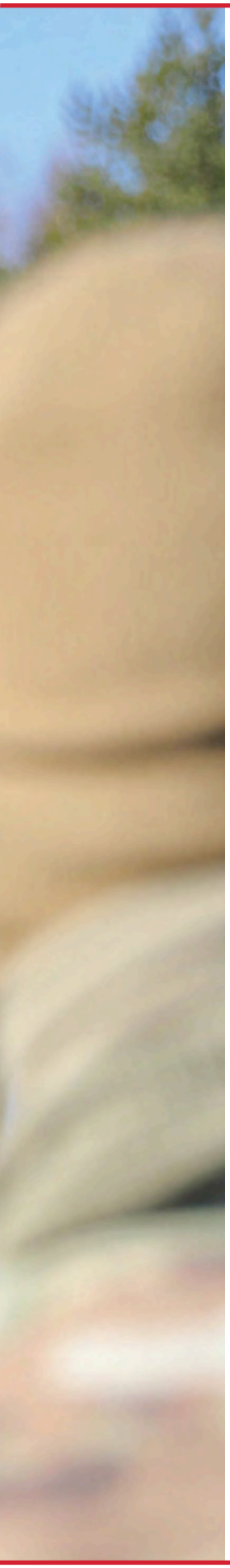
"From my experience, in the past, the transfer of knowledge across the Army FMS enterprise had largely been conducted via on-the-job training with seasoned professionals. ALE provides a first-stop resource of information, training and user perspective on specific tasks in real time. It allows you to search within the tools to quickly find what you need, when you need it, which adds a ton of efficiency to the process," Crawford concluded.

For more information contact PEO Missiles and Space at (256) 876-0714 or go to: ***www.msl.army.mil****.*

TIM HANSON is a public affairs specialist for the U.S. Army Security Assistance Command. He served in the U.S. Army as a broadcast journalist before earning a B.A. in broadcast management from the University of Texas at Arlington. Hanson continued his broadcast career as a multimedia journalist for a local CBS affiliate, WHNT News19, in Huntsville, Alabama.

IN BRIEF

First Lt. Kelsea Krauss, assigned to 4th Air Defense Artillery Regiment, briefs Soldiers on an upcoming exercise during Saber Strike 22 at Kazlu Ruda Air Base, Lithuania. The direct release of digitized software puts new capabilities into the hands of Soldiers in as little as half an hour. (Photo by Staff Sgt. Clinton Thompson, 118th Mobile Public Affairs Detachment)



AGILE SOFTWARE DEPLOYMENT

Leveraging existing tools to expedite software capabilities to the warfighter.

by Justin Neal and Scott Gill

The emphasis on providing capability to the warfighter faster and more efficiently has long been a focus of acquisition reform and policies. However, many of our legacy processes and tools for taking that capability from final design to deployment have either underperformed or been underused.

The 2019 National Defense Authorization Act formally added the Army Integrated Air and Missile Defense to the DOD Agile Pilot Program. This not only meant that the software development approach had to evolve, but that the software deployment processes had to adapt to support this Agile development approach because existing, traditional methods of software delivery were not keeping up with the faster development.

Physically transferring the digital data slowed down the entire process, so the engineers at Integrated Fires Mission Command (IFMC) decided to implement a new, digital distribution process using an existing life cycle management tool.

The Windchill Product Lifecycle Management (PLM) software from PTC, a Boston-based computer software and services company, is a data management tool that allows real-time collaboration between geographically distributed teams. After a new release process was approved, the IFMC team began using Windchill PLM to securely deliver software to Soldiers.

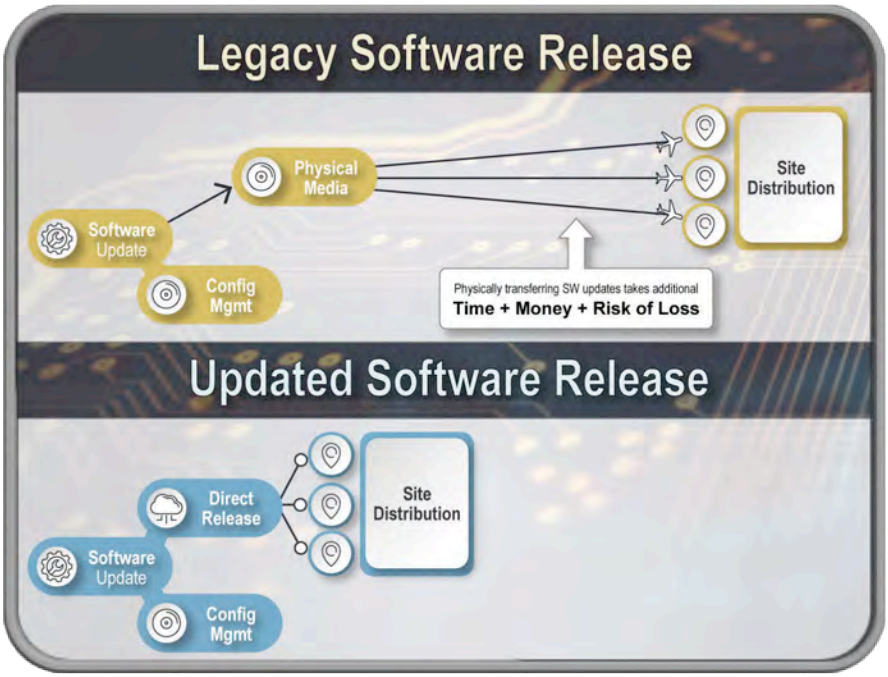
Historically, these software deliveries required physical media (i.e., compact discs, Blu-ray) shipments to theater, taking days and often weeks for media to arrive, risking media damage and loss. The direct release of digitized software to the warfighter greatly reduces the time and cost to get software updates to the field, putting new capabilities into the hands of our Soldiers in as little as half an hour.

The IFMC Project Office has leveraged the digitization and deployment of Forward Area Air Defense Command and Control software upgrades and information-assurance vulnerability alert updates to the warfighter both inside and outside the continental United States, including both the U.S. Pacific Command and the U.S. Central Command areas of responsibility via Windchill PLM.

MATCHING CADENCE

Software media created for and by the IFMC Project Office is digitized. The digitization of tangible software media enables both a permanent archive in Windchill PLM and provides transmission capability to external partners. Once the media is digitized, it is uploaded to IFMC's Windchill PLM-controlled product data library, which serves as the permanent software repository for the IFMC Project Office. When directed by leadership, the digitized software can be copied to external, access-controlled project folders accessible to partners, such as the fielded units, who will receive notifications once new software is added to their inbox. These project folders also serve as a permanent data library cloud, enabling the warfighter to download additional copies as needed, eliminating the requirement to keep hard copies.

"[This] has enabled me to quickly receive updates to operational software," said Chief Warrant Officer 2 John Bearth, 3rd Combat Aviation Brigade. "[It] improves timeliness and availability by electronically delivering software, security updates and patches to unit-level system administrators to help increase software readiness and protect against cybersecurity threats."



A NEED FOR SPEED

Physically transferring the digital data slowed down the entire process. Engineers at IFMC used Windchill PLM to securely deliver software to Soldiers. (Graphic by IFMC)

Currently the IFMC Project Office is using Windchill PLM for unclassified software; however, digitization and transmission capability exist for classified software as well. The Secure Internet Protocol Router Network (SIPRNet), Army Research Lab Safe Site, and Secret Defense Research and Engineering Network are currently being used to disseminate classified software to support ongoing software deployments, but each distribution method has its limitations. In order to better support ongoing and future IFMC software deployments, Windchill PLM and other classified deployment capabilities are in the process of implementation across as many areas of operation as possible.

Existing, traditional methods of software delivery were not keeping up with the faster development.

QUICK DELIVERY
Integrated Fires Mission Command implemented a new, digital distribution process to securely deliver software to Soldiers. (Photo by Sgt. 1st Class Claudio Tejada, 94th Army Air and Missile Defense Command)

CONCLUSION

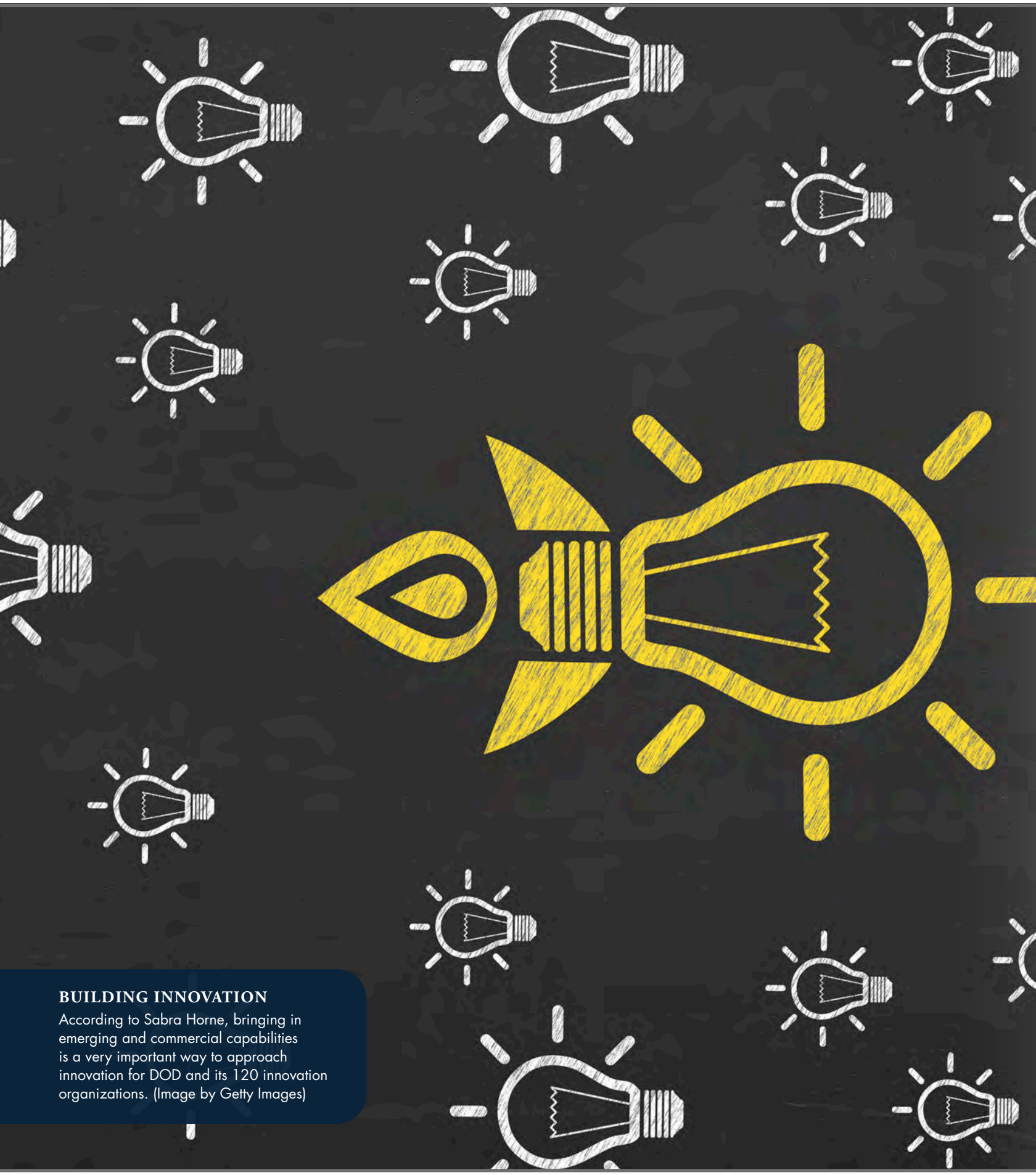
Rapid software development requires equally fast software delivery to provide relevant capability. As the Army and its programs focus on the bigger picture of rapid acquisition and rapid capability deployment, those tasked with executing these programs must consider the best process to streamline delivery of capability to the warfighter. Integrated Fires Mission Command's use of an existing tool has opened new opportunities for rapid software deployment and hopes to continue growing this capability for future programs and uses.

Lessons learned from the Forward Area Air Defense Command and Control and information-assurance vulnerability alert transmissions to the warfighter will enable the IFMC Project Office to enhance the life cycle sustainment of the future Integrated Battle Command System-fielded units, joint IBCS integration efforts, and IBCS international customers. The capability needs of the Army show no signs of decreasing, so IFMC will continue to lean forward in all aspects of improving rapid capability delivery tools, techniques and processes.

For more information contact PEO Missiles and Space at (256) 876-0714 or go to ***www.msl.army.mil****.*

JUSTIN NEAL is an engineer assigned to the IFMC Project Office within the Program Executive Office (PEO) for Missiles and Space, serving as the technical data management lead. He holds an M.S. in systems engineering and a B.S. in mechanical engineering from the University of Alabama in Huntsville. He is DAWIA certified Practitioner in engineering.

SCOTT GILL is a systems engineering and technical assistance contractor and configuration management lead from Intrepid Inc. supporting the IFMC Project Office within PEO Missiles and Space. He holds an MBA from Trident University International and a bachelor of business administration from the University of Cincinnati. He is Project Management Professional certified.



BUILDING INNOVATION
According to Sabra Horne, bringing in emerging and commercial capabilities is a very important way to approach innovation for DOD and its 120 innovation organizations. (Image by Getty Images)

BLUEPRINT FOR INNOVATION

After setting up an innovation hub at CISA, Sabra Horne wrote a how-to book for other government organizations.

by Michael Bold

Two years into her stint working for the Cyber and Infrastructure Security Agency, Sabra Horne's boss asked her what innovation would look like at CISA.

"The goal was to really figure out how do we bring in new capabilities, do things differently in a way that would help us get our mission accomplished much more efficiently, effectively—and I'll be honest, just less painfully," she said in an October 2022 interview with Army AL&T.

The mission of CISA—a component agency, along with the Transportation Security Administration (TSA), the Federal Emergency Management Agency (FEMA) and five others within the Department of Homeland Security (DHS)—is as vital as it is daunting. It's the operational lead for .gov cybersecurity and coordinator of the nation's private sector cyberdefense and emergency communications, as well as being responsible for securing critical infrastructure against threats. And with just 2,400 employees (2,200 in 2019, when Horne began working on the idea), CISA was limited in how much it could ask of its workforce in creating an innovation hub. "You can't ask these people who are working so very hard to do additional things," she told Army AL&T. "So how am I going to get resources to help us do things differently?"

The answer for CISA, she discovered, was to pursue partnerships within DHS and throughout government, especially with DOD—the Defense Innovation Unit, NavalX and AFWERX, the premier innovation efforts of DOD, the Navy and the Air Force, respectively—and with external partners such as BMNT, Carnegie Mellon University's Computer Emergency Response Team and Crius Technology Group.

But while such partnerships worked for CISA, would they work for other agencies? How could staff create conditions within an organization to make innovation possible? The issue, she realized, was that there was no blueprint to follow for a government organization seeking to pursue innovation. So she decided to write one.

AN INNOVATION GUIDEBOOK

"Creating Innovation Navigators," published in June by BMNT, the Palo Alto, California-based consultancy where Horne now works as entrepreneur-in-residence, "is the book that I wish I had been given when I was asked to stand up something in innovation within CISA," she said, "because I didn't understand innovation. I knew nothing about innovation."

The book is a companion to a training course of the same name that BMNT created for public sector innovators, although the book can stand alone as a teaching tool, Horne said. It consists of eight modules, each of which contains sample cases and practical exercises to gain practice in building an innovation effort. The book also includes an extensive set of appendices providing detailed steps for building and measuring progress along an Innovation Pipeline; a glossary of common government innovation language and resources for further study. The book brings together BMNT approaches and is based on lessons learned by BMNT and important innovators such as company CEO Pete Newell, a retired Army colonel who formerly ran the Army's Rapid Equipping Force; Steve Blank, the Stanford University adjunct professor who created the Lean Startup movement; Steve Spear, a senior lecturer at the Massachusetts Institute of Technology's Sloan School of Management, and others.

Horne came to Washington in the years following Sept. 11, 2001, eager to help prevent another attack against the United States. Before that she was senior executive editor at Thomson Reuters and received a Master of Public Administration degree from the Harvard Kennedy School. Before joining CISA, she worked at the National Security Agency, was the director of the Office of Communications at the U.S. Department of Justice's Office of Justice Programs and worked at the Office of the Director of National Intelligence not long after its standup in 2005.

ORGANIZATIONAL INNOVATION

When most people think of government innovation, they think of the space program, the military and the work of startups based in Silicon Valley, Boston, Austin, Texas, and across the country supplying DOD with wild new technologies that can be deployed on battlefields around the world. But most government

INTO THE UNKNOWN

"Innovation is inherently about not knowing exactly what's going to happen," says Horne.

innovation, Horne said, doesn't involve technology. Rather, it involves finding new and better ways for government agencies to accomplish their missions.

"For DOD, so much about innovation and its 120 innovation organizations, bringing in emerging and commercial capabilities is a very important way to approach innovation," she said. "But for the rest of the U.S. government, finding and deploying widgets around the world is not usually central to their mission."

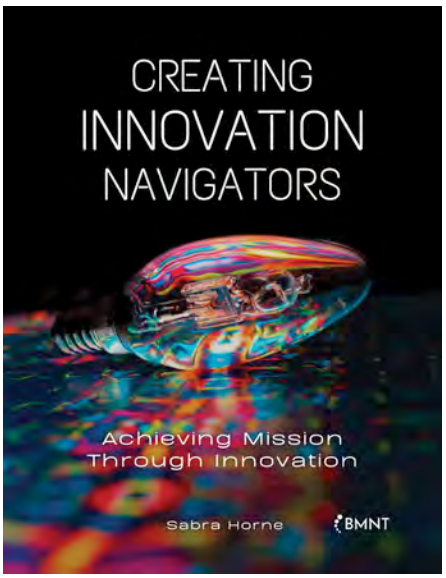
Among the successes for the CISA Innovation Hub was vastly reducing the time it took to hire new people. Working with CISA human resources, the hub was able to change some basic policies and sped up hiring time from eight months to six weeks.

The Innovation Hub worked with BMNT—a Silicon Valley innovation consultancy and early-stage tech incubator that was established in 2013 by two former Army colonels, Pete Newell and Joe Felter—to develop Hacking for Homeland Security, modeled after BMNT's Hacking for Defense (H4D) program. Today, Hacking for Defense is taught at more than 50 American universities, including the U.S. Military Academy at West Point, the U.S. Air Force Academy and the Naval Postgraduate School, and at universities in the United Kingdom and Australia. The Hacking for Homeland Security program sets loose teams of students to find solutions for real-world problems from TSA, FEMA and CISA.

INNOVATION PIPELINE

The Innovation Pipeline is a disciplined, repeatable and scalable means to introduce and manage disruptive innovation. It gathers problems an organization faces, whether emerging or persistent, identifies solutions to those problems and provides a pathway for solution adoption in five steps. (Graphic courtesy of BMNT)

The Innovation Hub also used a simplified type of procurement contracting called commercial solutions openings, which are significantly faster than traditional Federal Acquisition Regulation (FAR)-based contracting, to acquire a technology that AFWERX had been using. "Crius was a black box capability that the Air Force used on foreign battlefields to unify communications. ...We were able to use that same technology and deploy it domestically to ensure that we were able to unify communications and elevate emergency communications."



THE BOOK

"Creating Innovation Navigators" was published in June by BMNT, where Horne now works as entrepreneur-in-residence. (Image courtesy of BMNT)

But government organizations starting innovation efforts can easily "get dragged down into what we call 'innovation theater,' " Horne said. "It's an intellectually interesting topic that may not really result in any activities related to mission. But if you stay focused on how we achieve mission and how do we do things differently and use different capabilities and do different ways to achieve the goal, that is the essence of what we're talking about."

Most government innovation doesn't involve technology.

The book discusses how to build innovation organizations; the necessary functions and resources for innovation; ways to measure progress, with metrics to show impact within an organization, and how to communicate successes. And it features BMNT's core operating system, the Innovation Pipeline. "The Innovation Pipeline is a macro-level framework to think about how to get things accomplished using innovation in government," Horne said. The Innovation Pipeline is a five-step process that takes the user from gathering problems to transitioning to operational capabilities that are scalable and repeatable. It can be used with any existing innovation techniques, such as Lean or Scrum.

CONCLUSION

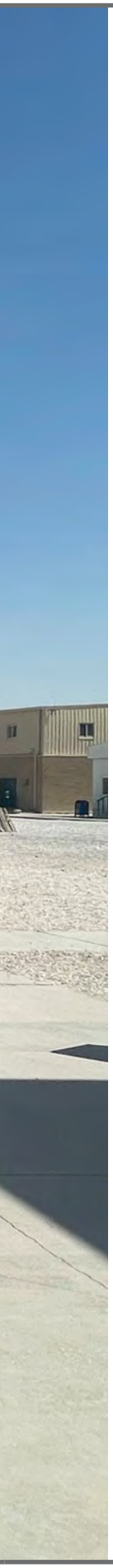
Having a blueprint and metrics to show what's working and what isn't is something Horne and BMNT developed at CISA. "Innovation is inherently about not knowing exactly what's going to happen," Horne said. "You can plan and create structures and processes that will help you achieve something, but you don't always know how it's going to turn out. So, you have to constantly review and check and measure how your efforts are going."

In the end, Horne writes in the book, "Innovation is about bringing positive change to an organization: finding new ways to approach old tasks and being willing to challenge the status quo to find better, more efficient, faster, cheaper or less painful processes that will improve the organization's outcomes."

MICHAEL BOLD provides contract support to the U.S. Army Acquisition Support Center. He is a writer and editor for Network Runners Inc., with more than 30 years of editing experience at newspapers, including the McClatchy Washington Bureau, The Sacramento Bee, the San Jose Mercury News, the Dallas Morning News and the Fort Worth Star-Telegram. He holds a Bachelor of Journalism from the University of Missouri.

ASSUMPTION OF DUTIES

ACC-A assumed command from Army Reserve Element on Oct. 22, 2021, at Al Udeid Air Base, Qatar. ACC-A is responsible for closing out the contracts supporting U.S. forces in Afghanistan. (Photos by Sgt. Roxanne Olivares, 160th Signal Brigade)



CLOSING OUT AFGHANISTAN

As the Afghan government collapsed and the U.S. departed, ACC-A came up with novel solutions to pay the Army's bills.

by Maj. Justin Berry and Maj. Matthew Szarzynski

The world watched in disbelief as it witnessed the fall of Afghanistan on Aug. 15, 2021. The government collapsed so quickly that U.S. forces on the ground were racing to evacuate personnel and equipment to various safe havens. What the world didn't see were the many second- and third-order effects of the rapid collapse and withdrawal. One of those was what happened to all the contracts awarded over the past 20 years to enable combat operations in Afghanistan.

Following the attacks of Sept. 11, 2001, the U.S. Army quickly deployed to Afghanistan to begin combat operations. That speed placed a great demand on U.S. military logistics systems to support these deployed combat forces.

The U.S. Army has a robust and capable logistics system, but there are limitations to what it can provide organically. During contingency operations, there is an urgent need to use contracting capabilities that provide flexible and innovative solutions outside the traditional supply chain to accomplish the mission. The military relied on government contracting support throughout the war in Afghanistan to help fill capability gaps that the logistics system could not organically provide.

When coalition forces first started operations in Afghanistan, there was a small logistics footprint because of the hostile environment within the country. An immediate and urgent need arose to establish contracts with local vendors to provide support for ongoing military operations. These early contracts included necessities such as bottled water, power generation, dining facilities and fuel for both ground and air assets. As these areas became more stable, contracting enabled the establishment of base camps that provided robust services.

Each country or area of operations was assigned to a deployed contracting unit. Afghanistan was aligned to Army Contracting Command – Afghanistan (ACC-A), the contracting support brigade

END OF AN ERA
The ACC-A team poses for a group photo at the conclusion of its deployment in February at Al Udeid Air Base, Qatar.

responsible for developing, administering and ultimately closing out the contracts supporting U.S. forces in Afghanistan.

ACC-A and the local military unit, also known as the requiring activity, had to work together to identify mission requirements that could only be solved through contracting. Together, they determined which vendors could execute the multitude of contracts that were required to continue the mission. The vendor base in Afghanistan varied greatly throughout the course of the war. As a general example, local Afghan vendors provided basic services and supplies such as construction materials, gravel and bottled water. At the other end of the contracting spectrum were the large multinational corporations, names unrecognizable to most Americans, but that provided fuel and basic life support such as lodging, food, water, electricity, heating and air conditioning. ACC-A built and maintained a list of local vendors that could be quickly mobilized in case of an emerging contracting requirement.

As is true with all contracting for goods and services, the requiring activity had to forecast its potential contracting needs and coordinate these requirements through its own internal validation process. After the validated requirements were approved by the local command, the requirements package was then routed to the appropriate contracting office that supports the area of operations. The designated contracting office reviews the requirements package and coordinates with the resourcing manager to ensure there is available funding to execute the contract action. The local contracting office follows

> "The novel challenges we faced made this an exciting mission, with a fast pace. We overcame many hurdles head-on as we crushed the workload and passed the baton."

its internal procedures to award the contract, and the available funding is obligated at that time to cover the anticipated costs of the contract. The local contract unit either generates a task order on an existing contract vehicle or writes a new solicitation and eventual contract award.

As a contract is executed, a background process occurs to ensure the contract is completed to standard within the terms and conditions of the contract. A designated government representative, also known as a contracting officer representative, monitors contract performance and ensures that the contractor adheres to the terms and conditions of the contract. When the terms and conditions are fully met, the contracting officer reviews the contractor's invoice and submits payment to finance. Finance then pays the vendor using the originally set aside amount.

Following payment, the contracting officer then verifies that the vendor was fully paid for the services rendered. The government tends to award large contracts for commodities such as fuel and obligate a large amount of funds in advance. These funds are attached to these contracts and cannot be used for any other requirements until it is fully paid out. The obligated contract funding is checked for consistency after final payment, and any unspent funds are returned to the U.S. government for other requirements. This background process is referred to as contract closeout. If all of these processes take place, then a contracting officer completes an administrative action to close out the contract. Closed contracts are archived for a period of six years, as required by law, in case a vendor submits a future claim, which is a written assertion from a vendor seeking relief, monetary or otherwise.

This system in place worked for normal steady-state operations. Following the collapse of Afghanistan, the requiring activity redeployed and had no need for new goods or services. ACC-A was then charged with both identifying which contracts were still needed and which ones needed to be closed as soon as possible to avoid incurring additional costs to the government. ACC-A also had to identify which contracts were fully performed and which vendors were owed money for services rendered.

THE CONTRACTING UNIT

ACC-A was originally located in Bagram, Afghanistan, but because of the changing situation through the summer of 2021, the command relocated to Qatar and performed over-the-horizon support from there. The team was comprised of Department of the Army civilians and Soldiers.

Following the collapse of the Afghan government, the mission of ACC-A changed from executing contracts for emerging requirements to quickly closing out the contracts that were in place supporting over 20 years of war. Because of this situation, the Army had to take immediate action to ensure that all vendors were paid what they were owed by the U.S. government and close all available contracts as soon as possible. Because of this unusual situation, the small 15-member team had to work together to develop novel processes and procedures to get after this unique problem set.

PROBLEMS, PROBLEMS

The first problem we faced was to determine how many contracts were remaining to close out. The headquarters of Army Contracting Command, located in Huntsville, Alabama, was instrumental in doing research into digital contract files across 20 years to determine workload. This research resulted in the identification of over 30,000 contracts requiring closeout. An automated closeout script for contracts over 6 years old was executed by Army

IN THE KNOW

Master Sgt. Kerry Dubose, ACC-A contracting officer, provides a detailed, hands-on demonstration of contracting systems to the Defense Security Cooperation Management Office – Afghanistan director, Brig. Gen. John Reim, in February.

TRANSFER OF RESPONSIBILITY
ACC-A officially deactivates as a unit and the colors are cased before deploying home on March 10 at Al Udeid Air Base, Qatar. ACC-A was deactivated after a successful mission handover to the 408th Contracting Support Brigade.

Contracting Command, which reduced this workload down to 1,000 contracts. This closeout script assisted greatly, but there needed to be a tracking mechanism for the remaining 1,000 contracts.

We developed a master contract tracker that provided status by category for each contract action. This tracker provided the dollar amount of the contract, past payments made by finance, and updates on where the contract was in the close-out process. This document was shared with all relevant key stakeholders to show the progression of the mission and quickly identify friction points. As the mission matured, it was identified that some actions would not be properly closed with the vendor being paid in full. This situation was a result of the contractor being unresponsive or that the contractor filed a claim with the Armed Services Board of Contract Appeals (ASBCA). The ASBCA claims process is lengthy and causes a long litigation period to be fully adjudicated. The contract tracker not only kept an ongoing common operating picture, but it also served as an archive for incoming contracting officers.

The second problem was currency conversion. Following Afghanistan's collapse, the U.S. Treasury placed the Taliban on the Office of Foreign Assets Control Sanction List, making it impossible to pay Afghan contractors in their local currency, Afghanis, via electronic fund transfer. This change meant that we could no longer pay local vendors in their local currency and these vendors would have to establish bank accounts outside of Afghanistan to receive contract payments. Many vendors faced obstacles, as foreign banks were resistant to setting up accounts for Afghan businesses. We streamlined this process by creating a tutorial on setting up bank accounts in other countries and provided a list of countries with banking institutions that would work with Afghanistan registered businesses.

The third problem was the communication between finance, resource management and the contracting office. Geographic separation between finance, located in the United States, and the contracting office initially caused confusion and delays that prevented vendors being paid. We stood up the fiscal triad, which included legal, contracting and resource management, to work through these issues. Weekly meetings with the finance office led to resolution of ongoing payment issues and provided instructions to the vendors to ensure timely payment. Once this coordination and communication occurred, there were far fewer payment issues and contracts were rapidly closed.

The fourth problem that we faced was the enduring workload. As the mission evolved, it became clear that we would not be able to close all of the enduring workload because of its complexity or the possibility of a future claim. The addition of an enduring tracker to the master tracker detailed all contract actions that would require future work from the gaining contracting unit. The contract tracker not only kept an ongoing common operating picture, but it again served as an archive for incoming contracting officers.

"The novel challenges we faced made this an exciting mission, with a fast pace. We

Following the collapse of the Afghan government, the mission of ACC-A changed from executing contracts for emerging requirements to quickly closing out the contracts that were in place supporting over 20 years of war.

overcame many hurdles head-on as we crushed the workload and passed the baton," said Lt. Col. Jay S. Vandenbos, Regional Contacting Center – Afghanistan and 900th Contracting Battalion commander.

CONCLUSION

Col. Frankie J. Cruz, ACC-A and 414th Contracting Brigade commander, said: "Our team was successful during this historic deployment in closing theater support contracts with direct integration with DSCMO-A [Defense Security Cooperation Management Office – Afghanistan] and due to the support and collaboration across the joint and Department of the Army staff, U.S. Army Finance Command, and Army Contracting Command headquarters staff assistance to resolve unique challenges resulting from the fall of Afghanistan."

This unique mission allowed us to capture many lessons learned and best practices for the acquisition workforce to use in the future. One example of that is the development of a 10-step process that details how to enable contracting systems to change from local currency to U.S. dollars. ACC-A shared this technical 10-step process with the greater contracting community and it was also submitted to the Joint Staff Lessons Learned Information System as part of their best practices.

This mission also validated the ability for a contracting unit to provide over-the-horizon support. Having the customer colocated with both the contracting office and resource managers allowed for this model's success. If the operational environment does not allow for contracting forces on the ground, there is the possibility for contracting professionals to provide support to an area from other locations.

Because of the unique and unprecedented situation of the collapse, we developed many novel processes and procedures to accomplish our mission. As a result, our team closed over 950 contracts in only six months. The remaining contracts were transferred over to the 408th Contracting Support Brigade, located in Kuwait, who will finish the contract closeout for Afghanistan. ACC-A was deactivated on March 10, 2022, upon the successful mission handover with the 408th Contracting Support Brigade.

For more information, go to ***https://www.army.mil/article/254964/acc_afghanistan_successfully_completes_contracting_mission****.*

MAJ. JUSTIN BERRY served as the executive officer and operations officer for ACC-Afghanistan from October 2021 to March 2022. He now serves as logistics civil augmentation program team leader for 414th Contracting Support Brigade located in Vicenza, Italy. He received his MBA from Trident University International in 2012. He holds the DAWIA Professional certification in contracting and the Practitioner certification in program management.

MAJ. MATTHEW SZARZYNSKI served as a contracting officer and executive officer for ACC-Afghanistan from September 2021 to March 2022. He serves as an assistant program manager within the Program Executive Office for Intelligence, Electronic Warfare and Sensors at Aberdeen Proving Ground, Maryland. He received his Masters of Geological Engineering from Missouri University of Science and Tech in 2014. He holds the DAWIA Professional certification in contracting.

CHRISTOPHER 'MICHAEL' UPTON

COMMAND/ORGANIZATION: U.S. Army Combat Capabilities Development Command, Ground Vehicle Systems Center (Post-Senior Service College Fellowship broadening assignment)

TITLE: Division chief, systems engineering planning and management

YEARS OF SERVICE IN WORKFORCE: 23

YEARS OF MILITARY SERVICE: 10

DAWIA CERTIFICATIONS: Advanced in program management, Foundational in engineering and technical management

EDUCATION: MBA, Lawrence Technological University, B.S. in engineering management, United States Military Academy, West Point

AWARDS: Army Engineer Association Bronze de Fleury Medal (2021), Department of the Army Meritorious Civilian Service Award (2021), Department of the Army Civilian Service Achievement Medal (2016), Army Superior Unit Award (Program Executive Office Combat Support and Combat Service Support 2014), Meritorious Service Medal (2001)

LASTING IMPACT

Albert Einstein once said, "Try not to become a man of success, but rather try to become a man of value." This resonated with Christopher "Michael" Upton. So he customized it a bit and came up with a quote of his own: "Try not to focus on leading a life of success, but rather leading a life of significance." Something he has done and continues to do on a daily basis.

"I apply this to work—and home—by holding onto and living out my values to the best of my ability. I try to focus my thoughts and actions each day toward leaving a lasting impact that goes beyond me, focusing on others and living a life of purpose," he said.

Life lessons and experience have greatly weighed into Upton's "significance" versus "success" viewpoint. "I have learned several life lessons that are important, making it hard to prioritize just one," he continued. You have to "meet people where they are at, not where you want them to be, retain a learning mindset, learn from successes and failures, be consistent—especially in who you are, diversity of thought is important—and last but not least, Army acquisition is a team sport; we have to capitalize on each other's strengths."

Upton is employed by the Program Executive Office for Combat Support and Combat Service Support (PEO CS&CSS), but is currently serving on a broadening assignment as a division chief within the U.S. Army Combat Capabilities Development Command's (DEVCOM), Ground Vehicle Systems Center's Systems Engineering Directorate. He brings a program management perspective to the organization, while learning about early innovation adoption for technology integration and transition to product managers and the Army's ground systems. "Two of my immediate focus areas are the analysis of applying systems engineering across [Detroit Arsenal] and the development of a synchronized digital engineering strategy for the organization, he said. "These initiatives will result in the organization's ability to develop, field and sustain the world's best ground systems at a faster pace, with the most up-to-date capabilities."

But for Upton, there's more to it. The Army Acquisition Workforce (AAW) provides a special environment of camaraderie, much like he experienced while on active duty. "Joining the AAW brought me closer to the military and that 'way of life,' which I desired, and opened up more opportunities than I ever imagined."

While serving active duty, Upton attended the Aviation Captains Career Course, which included presentations on various functional areas—such as acquisition—that could be pursued beyond operational units. "At that time, I thought I would always serve in operational units, but a few years later I transitioned from active duty to working as a defense industry contractor, and it was then that I started to understand and appreciate Army acquisition and the role of Department of the Army civilian," he said. "Although my time as a contractor allowed me to stay connected to the military, I still felt a calling to serve in a greater capacity." So he applied for and accepted a position as an assistant product manager in the product directorate for Army Watercraft Systems.

FIELD OF STUDY

Upton reflects on President Abraham Lincoln's famous Gettysburg Address in May at the Gettysburg National Cemetery. (Photos courtesy of Christopher "Michael" Upton)

"Most people outside of our industry are fascinated to learn about the role of acquisition, and find it interesting to hear about the equipment I get to support and sometimes drive."

Upton said he and his team take periodic visits to the training site at Fort Custer, Michigan, where Army Reserve and National Guard Soldiers are trained on new equipment. He had the opportunity to not only see—but drive—the Army's new Light Capability Rough Terrain Forklift (LCRTF) 5K, the High Mobility Engineer Excavator (HMEE) and the T-9 Medium Dozer. "I did not realize how fast the HMEE could move [over 50 mph] and how much of a workhorse the T-9 Dozer was," he remarked.

If asked for the most important points of his career, he'll give you five. Starting with joining the Army Acquisition Workforce in the first place. Then, taking the risk to apply for a job two levels above his (then) current position, finding mentors, volunteering to rotate from deputy product director for Army Watercraft Systems to deputy product manager for Combat Engineer and Material Handling Equipment, and finally, applying for and completing the Defense Acquisition University Senior Service College Fellowship (SSCF). The SSCF enabled him to take on his current broadening assignment as division chief and form strong bonds with peers across the Army enterprise.

"Completing SSCF made me more competitive for centralized selection boards and lists and allowed me to gain a greater understanding of acquisition, national and defense strategies, and best practices in leadership."

After serving as an assistant product manager, Upton said the next "typical" position was program officer and then deputy product director or manager. "Despite fear of the unknown and self-doubt of my readiness, I took a risk, applied and got selected for a deputy product director position." It was a risk worth taking, he said. He attributes much of his confidence and motivation to the support that his mentors, family and trusted advisers provided along the way. In 2023, Upton will take command of Product Manager Bridging, within Project Manager Force Protection, PEO CS&CSS, after having been selected for the position during the centralized selection list process.

Upton believes that finding mentors—as well as mentoring others—supports continual learning. "My mentors helped me develop a realistic [yet achievable] career road map, identify and close training gaps in order to grow and advance in my career and also offered different perspectives."

Understanding the benefits of a solid support system, Upton takes pride in giving advice to any associate, especially junior acquisition personnel. "I frequently stress that junior acquisition professionals should take care of their people—team, integrated product team—never stop learning, and perform at their best level and good things will follow."

Upton applies the same set of values both in and outside of work. On the job, his greatest satisfaction comes from leading outstanding professionals, who are committed to serving the Army and the nation, helping them find their purpose and reach their full potential. Outside of work, his goals are the same. A leader, coach and family man, Upton volunteers weekly and serves as a small group leader for high school students at his church, and also volunteers as a coach for a recreational soccer team. "I intentionally focus on work-life balance for my family and work team." Whether it's professional or personal, doing something to make a difference in your own life and the lives of others is not only successful—it's significant.

—CHERYL MARINO

ROCS TEST
Sgt. 1st Class Elijah Williamson, the U.S. Army Medical Test and Evaluation Activity test officer, takes notes as a test player practices administering the Rapid Opioid Countermeasure System (ROCS) autoinjector on a simulated casualty in June 2021 at Camp Bullis Military Training Reservation, Texas. (Photo by Jose Rodriguez, U.S. Army Medical Center of Excellence)

SWIFT ANTIDOTE

JPEO-CBRND counters high-potency opioid exposure across multiple domains with a unique rapid acquisition approach.

by Erik Heine

Synthetic opioids such as fentanyl are a class of drugs used for pain management. However, the illicit and widespread use of these drugs caused the U.S. to declare opioids a public health emergency in 2017. Because of this opioid crisis, there is a large influx of illicit drugs into the country. This has placed military members—Coast Guard and National Guard, for example—at risk of opioid exposure during drug interdictions or site exploitation missions.

One of the most potent opioids military forces may be exposed to is carfentanil, a high-potency opioid that is lethal, even at very low doses, if medical treatment is not provided within minutes of exposure. Carfentanil is about 100 times more potent than fentanyl and about 10,000 times more potent than morphine. If a Soldier were to breathe it in unwittingly or get it on their skin, even a freckle-size amount could kill them. The Joint Requirements Office (part of the Joint Chiefs of Staff, J8 Directorate) for Chemical, Biological, Radiological and Nuclear Defense (CBRND) identified a critical need to deliver a medical countermeasure that can reverse the effects of accidental or intentional opioid exposure for first responders and military personnel who support civilian law enforcement.

The Joint Project Manager for CBRN Medical's Rapid Opioid Countermeasure System program team was chartered to develop a medical countermeasure to treat the effects of high-potency opioids via an autoinjector. The aim of the treatment was to prevent fatalities and allow military personnel and first responders who have been exposed to remain ambulatory,

to evacuate to a higher echelon of care. The program team achieved the rapid development and fielding of a 10-milligram (mg) naloxone autoinjector using these novel approaches: Public Law 115-92, which "authorize[s] additional emergency uses for medical products to reduce deaths and severity of injuries" resulting from CBRN exposure, as well as the middle-tier of acquisition pathway and other-transaction authority agreements, both of which provide for rapid prototyping.

A FIRST FOR JPEO-CBRND

Industry-average medical development timelines can exceed a decade and cost upward of a billion dollars to mature a product from discovery through Food and Drug Administration (FDA) approval and commercialization. To combat this, the program team spearheaded a $36 million program to deliver a military medical capability using the middle-tier of acquisition pathway, the first DOD medical program to do so. The middle-tier pathway is used to fill a capability gap with a technology that has a level of maturity that allows for rapid prototyping within five years of program start. Middle-tier acquisition programs are not subject to conventional Federal Acquisition Regulation; instead, the pathway is intended for prototyping and rapid development and fielding.

For developing the autoinjector capability, the middle-tier acquisition pathway was determined to be the most expedient. This allowed the use of a draft capability-development document that served as the requirements document for the program and did not require validation from the Joint Requirements Oversight Council before obtaining approval from the Protection Functional Capability Board. It's estimated that by using this pathway, the overall acquisition process was accelerated by at least 18 months.

TO THE BATTLEFIELD

A test player prepares to use a naloxone autoinjector during a training exercise in June 2021 at Camp Bullis. The naloxone autoinjector is a rescue treatment that will counteract the adverse effects from exposure to opioids. (Photo by Jose Rodriguez, U.S. Army Medical Center of Excellence)

The program team delivered more than one capability, treatment and prophylaxis, with a device that can serve both military and first responders around the world.

The team used the middle-tier pathway by identifying naloxone as the "gold standard" for treating an opioid overdose. The FDA had approved the use of up to 10 milligrams of naloxone as a safe and effective way to treat opioid overdose. A 2 mg naloxone autoinjector was already commercially available but did not meet military requirements for treatment of highly potent opioids (e.g., carfentanil) and provided electronic voice instructions for civilian patients, unnecessary in a combat situation. In addition, DOD science and technology organizations had determined through animal studies that a single 10 mg dose would allow rapid treatment of high-potency opioids on the battlefield or in other scenarios requiring rapid countermeasures, while also allowing exposed individuals to retain mobility and survive the initial exposure and evacuate to a higher echelon of medical care.

REGULATIONS, REGULATIONS, REGULATIONS

Next, the program team developed a regulatory strategy to receive FDA approval of the 10 mg naloxone autoinjector. A regulatory strategy captures the necessary information required to demonstrate safety and efficacy of the product. Using Public Law 115-92, the team met with the FDA to gain feedback. Public Law 115-92 authorizes the FDA to provide DOD assistance to expedite the development and review of products that could diagnose, treat or prevent serious or life-threatening diseases or conditions facing U.S. military personnel. If the FDA recognizes that priority presented by DOD is needed, this can result in critical medical products getting to the warfighter faster. The feedback from the FDA provided validation that the program would be able to meet the five-year timeline for middle-tier acquisition.

LEADING THE WAY

To set the program up for success, the program team conducted market research to identify candidates that could be repurposed for a 10 mg naloxone autoinjector. The team also needed to know if there were companies that already were producing FDA-approved autoinjectors that met the newly updated and stringent engineering and quality requirements.

CLOSE UP
Rapid Opioid Countermeasure System naloxone autoinjector. (Photo courtesy of Kaléo Inc.)

Having to seek FDA approval for a new autoinjector would require costly studies, which would dramatically increase the developmental cost and schedule. The program team conducted online research, contacted potential performers using requests for information, and canvassed the Medical CBRN Defense Consortium and an other-transaction authority agreement consortium.

To further accelerate product development, the program team needed a flexible contracting mechanism that was mutually beneficial to both the government and industry partners. Using other-transaction authority promoted increased competition by

REAPING THE REWARDS

In recognition of their efforts and building upon previous recognition by the assistant secretary of the Army for acquisition, logistics and technology and the Edison Awards, the JPM CBRN Medical Rapid Opioid Countermeasure System (ROCS) product team received the 2022 Military Health System Research Symposium annual award for outstanding program management (team). This award recognized outstanding medical product program management, highlighting team accomplishments in further maturing medical research and development or commercial efforts. The team was recognized for addressing and minimizing the program's developmental risks; managing cost, schedule and performance; and adhering to all applicable regulatory requirements.

The award was presented to Saumil Shah, the assistant product manager for the Chemical Defense Pharmaceuticals product office, within the Joint Project Manager for Chemical, Biological, Radiological and Nuclear Medical, in Frederick, Maryland. Upon receiving the award, Shah commended the team, saying, "Using innovative strategies, the Rapid Opioid Countermeasure System program team accomplished its goals ahead of schedule and under budget, and satisfied demanding criteria in both the defense department acquisition and FDA regulatory processes."

"Additionally, the program experienced zero cost overruns during the entire development effort. This could not have happened without an experienced and highly proficient matrixed team, combining functional expertise ranging from acquisition analysts, contracting specialists, financial experts, logisticians, regulatory specialists, legal counsel, technical subject matter experts and program managers."

A WINNING TEAM
JPM CBRN Medical's Rapid Opioid Countermeasure System (ROCS) product team receives the 2022 Military Health System Research Symposium award for Outstanding Program Management (Team) in September at Fort Detrick, Maryland. (Photo by Adam Lowe, JPEO-CBRND Public Affairs)

attracting nontraditional companies that might not ordinarily have the wherewithal to navigate the often difficult Federal Acquisition Regulations. Other-transaction authority agreements allow for discussion and collaborations with and between companies during certain parts of the agreement process.

Through source selection, the team selected Kaléo Inc. as the performer based on its prior success in development of the FDA-approved 2 mg naloxone autoinjector. This allowed the program team to accelerate the development of a 10 mg naloxone autoinjector. During development, the FDA requested additional studies to demonstrate the safety and efficacy of the 10 mg dose. Kaléo was able to successfully complete the studies within the contract timeline because of its regulatory experience and expertise. The program team worked with Kaléo to deliver the product under budget, five months ahead of contract schedule, despite numerous challenges presented by the COVID-19 global pandemic and additional FDA requirements.

(See related article in the Fall 2022 issue of Army AL&T, "Not-So-Secret Weapon," Page 15.)

FAST TRACK

When the FDA requested more detail on the efficacy of the drug, the program team and Kaléo used that opportunity to make the product even more valuable—using it for prevention, or prophylaxis. The prophylaxis indication would allow the use of the product when entering an area contaminated with high-potency

If a Soldier were to breathe in carfentanil unwittingly or get it on their skin, even a freckle-size amount could kill them.

opioids. These studies also support FDA fast track designation. That status enabled priority review of the new drug application.

Typically, review of an application takes 12 months; however, under priority review, the FDA commits to reviewing the application in six months. In February 2022, six months after submission, the FDA approved the 10 mg naloxone autoinjector new drug application, providing military personnel and chemical-incident first responders with a new capability for both the treatment and prophylaxis protection against high-potency opioids.

Using a streamlined acquisition authority, an innovative contracting vehicle and enhanced engagements with the FDA, the program team decreased cost and schedule for the development and FDA approval of a 10 mg naloxone autoinjector, and in record time—under four years. The program team delivered more than one capability, treatment and prophylaxis, with a device that can serve both military and first responders around the world.

MEETING THE DEMAND

Even before FDA approval, there was a demand for the 10 mg naloxone autoinjector from specialized units at high risk for opioid exposure. In early 2022, U.S. Special Operations Command requested expedited use of the 10 mg naloxone autoinjector in response to a potential threat overseas.

In March, the assistant secretary of defense for health affairs approved the investigational 10 mg naloxone autoinjector expanded-access protocol, followed shortly by FDA approval. By using already-manufactured product that was excess material from the development effort, the program team quickly supported the request. The delivery of the 10 mg naloxone autoinjectors closed two capability gaps: DOD's urgent need to address weaponized opioid exposure risks and provide access to a lifesaving medical countermeasure to combat exposure to high potency opioids.

CONCLUSION

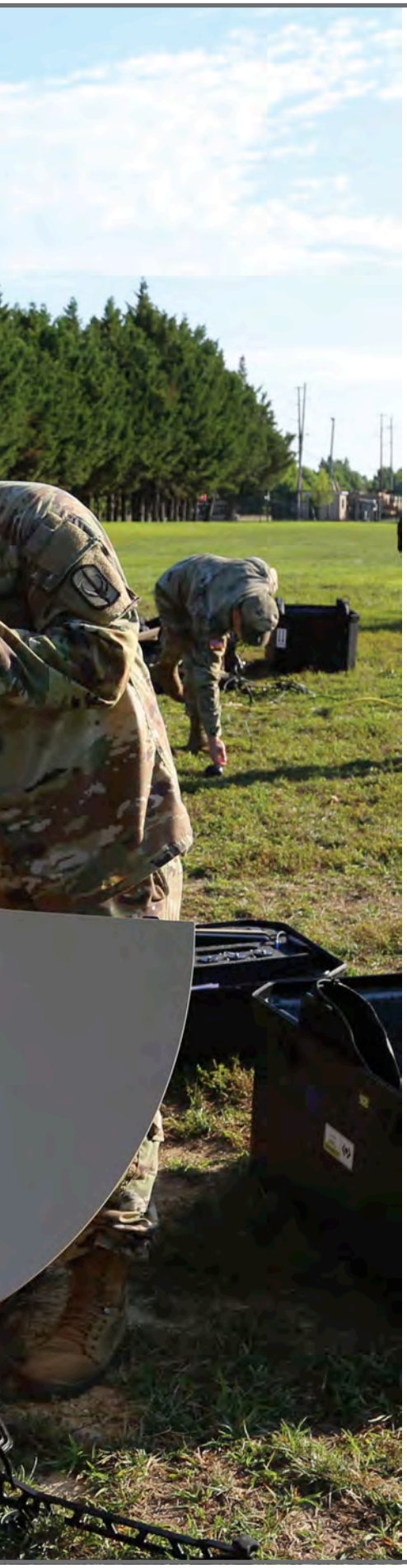
The Rapid Opioid Countermeasure System provides a "rescue therapeutic" capability for initial treatment at the point of exposure, as well as a product that can be used as a prophylaxis. It provides an FDA licensed and approved medical product to support the required attributes necessary for treatment of opioid exposure, and to reverse or significantly mitigate the effects and negative impact of opioid exposure.

With the delivery of the 10 mg naloxone autoinjector, and by promoting research that led to better opioid therapeutics, the program team has increased warfighter readiness, reduced operational risk to potent opioid threat exposure, and taken a major step forward in protecting and maintaining the readiness of the joint force as well as North Atlantic Treaty Organization forces.

For more information, go to ***https://www.jpeocbrnd.osd.mil****.*

ERIK HEINE supports the Joint Project Manager for Chemical, Biological, Radiological and Nuclear Medical at Fort Detrick, Maryland. He is a Project Management Professional and holds a bachelor's degree in business administration from James Madison University.

SMALLER IS BETTER
Soldiers from the Delaware Army National Guard 198th Expeditionary Signal Battalion – Enhanced (ESB-E) train on the Scalable Network Node, which is part of the unit's modernized smaller, lighter, faster ESB-E equipment set, in New Castle, Delaware on Aug. 9. (Photo by Amy Walker)



A PIVOT TO SMALLER, *FASTER*

Newly modernized ESB-E network equipment set enables warfighter formations to meet the rapid pace of a near-peer fight.

by John W. Gillette, Maj. Mathew Miller and Amy Walker

It began with a pivot.

In 2018, the Army made a calculated move away from large, static forward command-post operations, such as those seen in the conflicts in Iraq and Afghanistan, and to smaller, more deployable and dispersed command posts, which better suit a fight against sophisticated potential adversaries in Europe and the Pacific. This pivot spurred the Army to modernize its expeditionary signal battalions to make them, and the units and command posts they support, more mobile, survivable and lethal.

The newly modernized Expeditionary Signal Battalions – Enhanced formations (ESB-E), provide or augment global network connectivity for other units that don't have such robust, easy-to-deploy network communications equipment organically in their formations. By the end of fiscal year 2022, the Project Manager (PM) for Tactical Network, assigned to the Program Executive Office for Command, Control, Communications – Tactical (PEO C3T), completed fielding six of these critical new signal units.

The fielding of the Delaware Army National Guard 198th ESB-E at New Castle, Delaware, in August, marked the first Guard unit to be converted to an ESB-E. On the current timeline, the Army plans to convert three more units in fiscal year 2023 and will continue fielding several ESB-E packages per fiscal year until all of the expeditionary signal battalions have been upgraded to the baseline capability.

MAJOR UPGRADE

PM Tactical Network provides Scalable Network Node new equipment training to Soldiers from the 307th Expeditionary Signal Battalion at Schofield Barracks, Hawaii, on April 7 as part of the conversion of the unit to a modernized ESB-E formation. (Photo by Maj. Kenisha Wilkerson, PM Tactical Network, PEO C3T)

SMALLER, LIGHTER, FASTER

In today's complex global environment, U.S. forces must be able to rapidly deploy and "fight tonight" when conflicts arise. On the battlefield, units need to be constantly on the move if they want to survive indirect fires or increase lethality through more covert offensive missions. The new smaller, lighter, yet more capable ESB-E network equipment set enables these formations to meet the rapid pace of a near-peer fight. The reduced size and system complexity of the transit-case-based equipment set enables ESB-Es to significantly increase their network support to other units with more network nodes and less manpower, while reducing transportation requirements by over 60 percent.

The current equipment set leverages both high-capacity line-of-sight (radio) and beyond-line-of-sight (satellite) network transport systems to enhance units' primary, alternate, contingency and emergency (PACE) communication plans. Having multiple path options to transport data increases network resilience in contested and congested network environments, keeping Soldiers and their commanders connected. Resilient network connectivity enables uninterrupted global data exchange and mission command, providing commanders with the information they need to make rapid informed decisions on fast-paced dynamic battlefields.

The modular ESB-E network tool suite is also tailorable and scalable to enable these units to support a wide variety of mission sets and formations, from small early-entry command posts to full division-sized tactical operations centers. Now, with little or no notice, small four-man teams, versus entire platoons, can rapidly deploy on commercial airlines with this smaller, lighter network equipment to support operations anywhere in the world.

As technology advances, the Army will continue to make the ESB-E kit even more intuitive and easier to use, decreasing training requirements, expense and unit burden.

LINE OF SIGHT

Soldiers set up a Terrestrial Transmission Line of Sight Radio on Oct. 3 in Baumholder, Germany. (Photo by 44th ESB-E)

SOLDIER FEEDBACK LOOP

The key to the success of the Army's signal battalion modernization effort continues to be the ongoing feedback the service receives from each unit. This feedback is used to inform decisions to modify elements such as Soldier-centric design changes to the equipment, basis of issue and training and fielding improvements. Unit input is also critical to modernization efforts that integrate emerging technologies into the network, such as high-throughput, low-latency multi-orbit satellite communication capabilities.

Direct observations from operational units enable the Army to assess and modify maturing technologies before final fielding efforts, creating efficiencies in time and cost, while getting new capabilities into the hands of Soldiers faster to retain overmatch against tech-savvy threats.

The agile ESB-E acquisition and fielding approach aligns with the Army's two-year iterative network modernization capability-set design and fielding process, enabling the service to enhance the ESB-E baseline capability in future capability sets if Soldier feedback warrants it, or when emerging commercial technologies become mature enough to be procured.

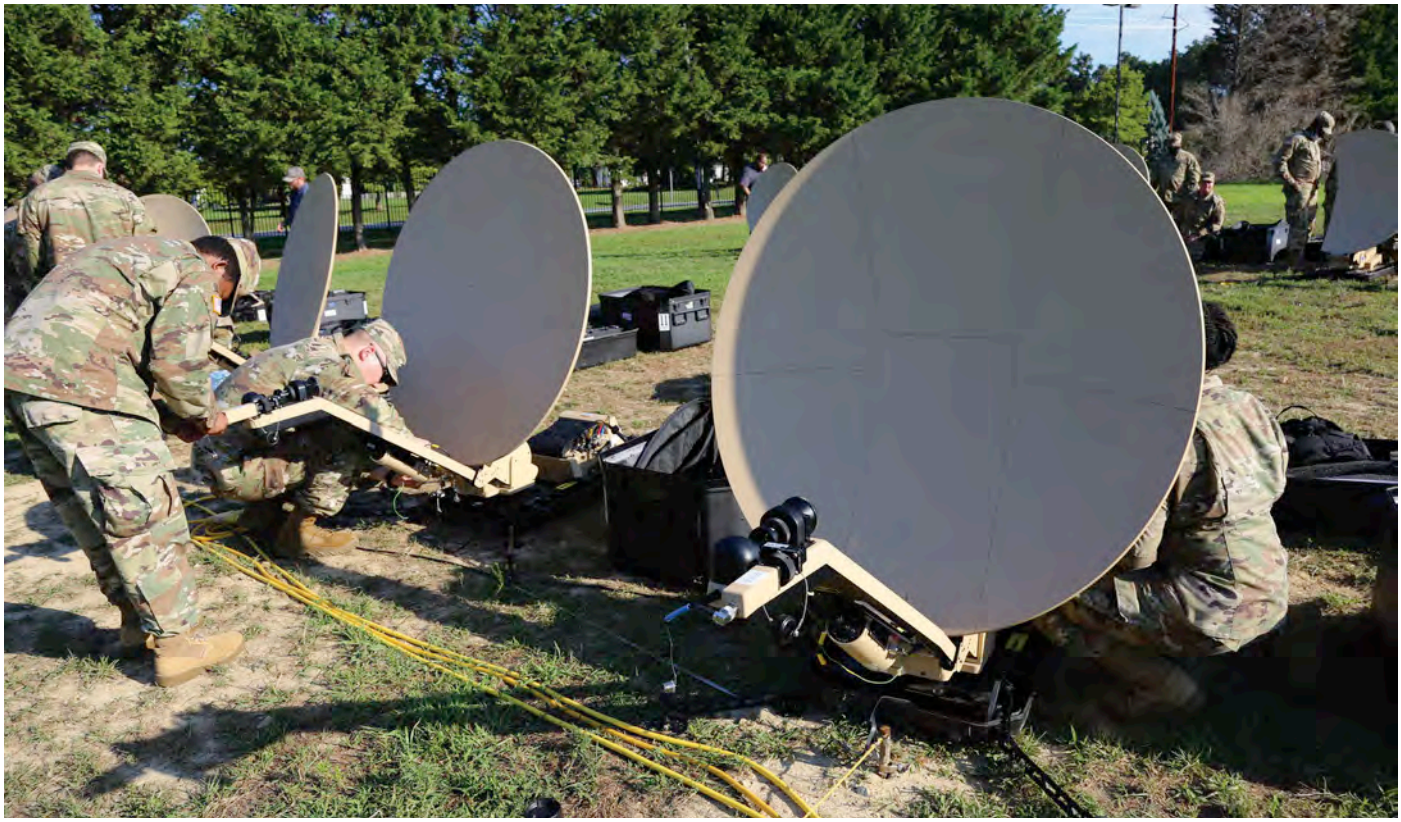
In line with the Army's capability-set development, the service leverages a DevSecOps process—including early and often industry collaboration, informed experimentation in operational and laboratory environments, and ongoing Soldier input from training, field exercises, and real-world unit support—to inform decisions on continual ESB-E modernization, design, unit formation, and tactics, techniques and procedures.

CONTINUOUS LOOP

In support of these efforts, PEO C3T continues to work as a holistic team with industry partners, the operational units, the Army's Network Cross-Functional Team and the C5ISR Center, both assigned to the Army Futures Command. Since the conclusion of the first ESB-E pilot in 2019, this team-of-teams continues to leverage an ongoing Soldier feedback loop, listening intently to Soldier input, and then reaching out to the science and technology community and industry for solutions based on common faults, and implementing those solutions and adjustments.

Following the first ESB-E equipped in 2020—the 50th ESB-E at Fort Bragg, North Carolina—the PM Tactical Network never stopped putting unit observations to work to address operational challenges.

One of the biggest changes the team made based on ESB-E feedback concerned new equipment training and fielding. In the past, Soldiers were narrowly focused on certain military occupational specialties, and each Soldier was trained according to their specific specialty, such as a satellite terminal or baseband operator and



FIRST IN CLASS
Delaware Army National Guard 198th ESB-E is the first Army National Guard unit to be fielded with this new scalable and tailorable network equipment set. (Photo by Amy Walker)

maintainer. The Army now cross-trains ESB-E Soldiers on baseband equipment and satellite terminals together, and on multiple beyond-line-of-sight and line-of-sight network transport systems. This enables Soldiers to become proficient on different systems in the equipment set, and it increases operational readiness and flexibly, enabling ESB-Es to cover more missions with less manpower.

Soldiers also requested that additional training in signal theory be added into the new equipment training. To address this, PM Tactical Network went directly to the U.S. Army Signal School to obtain high-level overviews that included instruction on how to employ and develop strong PACE plans. Since the ESB-E tool suite is easy to use, the actual new equipment training to set it up and operate is relatively short. The bulk of the training focuses more on troubleshooting common issues based on root cause data collected from across all of the ESB-Es.

The project office is also working on the development of systems-of-systems training materials that will provide an app-based user guide to support delta training beyond the initial new equipment training. Step-by-step instructions will review the setup, operation, maintenance and interoperability of each of the ESB-E systems. The app will provide Soldiers with on-demand digital training and troubleshooting assistance, both in the field and at home station, regarding the proper configuration and integration of network equipment in support of ESB-E missions.

As technology advances, the Army will continue to make the ESB-E kit even more intuitive and easier to use, decreasing training requirements, expense and unit burden.

EMERGING TECHNOLOGIES

Looking forward to future network modernization capability sets, the Army is leveraging Soldier feedback and lessons learned

from ESB-Es and other units that are supporting real world operations, training and experimentation efforts in Europe and the Pacific. These efforts include the use of evolving high-throughput low-latency capabilities that leverage commercial satellite constellations in the low Earth orbit and medium Earth orbit, which will increase signal path diversity and enhance network resiliency even further. Upcoming pilots in these theaters will assess multi-orbit high-throughput low-latency capabilities that automate PACE, to enable optimum network transport that is seamless to the user, so Soldiers can focus on the fight and not the network.

While the Army continues to provide more network capability and increased signal path diversity, it is looking to reduce the amount of physical equipment needed to do so, keeping cost and unit burden at acceptable levels. This equipment reduction will be achieved in numerous ways, including an increase in equipment virtualization or by potentially using a "family of terminals" approach that leverages existing portfolio options to support a wide variety of evolving requirements versus delivering a new network terminal to support every new requirement as it has been done in the past. The Army is also looking at commercially managed satellite service business models to more affordably keep up with the accelerating speed of technology advancement, while reducing resource and budget burdens, equipment obsolescence and other sustainment challenges.

The key to the success of the Army's signal battalion modernization effort continues to be the ongoing feedback the service receives from each unit.

Together, Army network stakeholders are providing significant and lasting contributions in support of the Army's network modernization capability-set development and fielding efforts, directly enhancing the way the Army exchanges data during the most challenging, limited, congested and contested network environments with increasing network resiliency and security. As technology marches forward without end, the Army will continue to modernize its network, relying heavily on feedback from the ultimate end user—the Soldier on the battlefield.

For more information, contact the PEO C3T Public Affairs Office at 443-395-6489 or ***usarmy.APG.peo-c3t.mbx.pao-peoc3t@mail.mil****.*

JOHN W. GILLETTE is the product manager for Mission Network, at the PM Tactical Network, assigned to PEO C3T. He is directly responsible for the modernization of the Army's Tactical Network Transport, which provides both at-the-halt and on-the-move networking, keeping highly mobile and dispersed forces connected to one another and to the Army's global information network. Gillette earned an M.S. in counseling and leader development from Long Island University, a B.A. in sociology from the University of Delaware and an associate degree in science from the Valley Forge Military College. He is a 2018 graduate of the Defense Acquisition University Senior Service College Fellowship and a 1999 graduate of the Army Command and General Staff Officers Course at Fort Leavenworth, Kansas. He holds the DAWIA Advanced certification in program management.

MAJ. MATHEW MILLER is the assistant product manager for the Scalable Network Node for Product Manager Mission Network, within PM Tactical Network at PEO C3T. He earned an M.S. in systems engineering management from the Naval Postgraduate School and a B.S. in exercise science from Towson University.

AMY WALKER has been the public affairs lead at PM Tactical Network for 13 years and served in public affairs at PEO C3T for the previous two. She has covered a majority of the Army's major tactical network transport modernization efforts, including Army, joint and coalition fielding and training events worldwide. She holds a B.A. in psychology with emphasis in marketing and English from the College of New Jersey.

STAFF SGT. CHRISTOPHER J. JUNGNICK

COMMAND/ORGANIZATION: Theater Contracting Center, 409th Contracting Support Brigade

TITLE: Contract specialist

ACQUISITION CAREER FIELD: 51C

YEARS OF SERVICE IN WORKFORCE: 2

YEARS OF MILITARY SERVICE: 13

ACQUISITION CERTIFICATIONS: Certification pending, contracting professional

EDUCATION: Associate degree in general studies, Barton County Community College

EXPERIENCE SPEAKS FOR ITSELF

Live and learn. Cliché as that may sound, all too often it's reality.

Staff Sgt. Christopher J. Jungnick can attest to this. He may be fairly new to the Army Acquisition Workforce, but as a noncommissioned officer (NCO) for 13 years, he's traveled abroad, acquired useful new skills and learned valuable interpersonal communication methods that he did not anticipate, which have been of benefit for each assignment he's held thus far.

"My career has taught me many valuable lessons, but my top one would be that there is a difference between talking *to* someone, compared to talking *at* them," he said. "I often use this to help drive conversations and help others feel included to provide input, instead of listening and executing." He said this became apparent during his time at Mihail Kogălniceanu (MK) Airbase in Romania, during team discussions pertaining to emerging requirements that allowed for a better decision-making process, which in turn made it easier to complete the contract action.

He has found that verbal exchanges are far more effective when there is transactional communication, rather than a mechanical presentation of ideas, along with some flexibility, empathy and acceptance—to further inspire a dynamic exchange of ideas. "I have learned that problem-solving and decision-making aren't necessarily the same thing every time," he said. "They do go hand in hand quite often, but certain situations need one to be resolved first before moving on."

Jungnick joined the Army Acquisition Workforce two years ago as a contract specialist within the Facilities Maintenance Division at the Theater Contracting Center (TCC), 409th Contracting Support Brigade (CSB), where he was responsible for contract actions ranging from minor construction to preventative maintenance on Garrison equipment. He has since been reassigned to 901st Contracting Battalion, 418th CSB at Fort Hood, Texas. He said that aside from supporting Soldiers, his biggest satisfaction is to "see real progress on building renovations and other construction projects [road, roof, storm sewer system repairs] as time goes on."

According to Jungnick, there are many opportunities in Army acquisition to become more proficient in your area of expertise. The one he chose to apply for was the military occupational specialty 51C program, a critical career field that provides significant career and educational opportunities for both active and reserve NCOs interested in training to be contracting professionals.

"It seemed like a unique opportunity to work with a diverse group of people and skill sets," he said. "The thought of coming into this field and learning a new skill set to overcome challenges was something I looked forward to. Then it was a waiting game to receive information for the next steps and formally start my time as a contract specialist."

MISSION ACCOMPLISHED
Jungnick, right, poses with colleagues outside of the Theater Contracting Center on Kleber Kaserne, Kaiserslautern, Germany after completion of the Operation Allies Refuge/Operation Allies Welcome mission. With Jungnick are, from left, Daniel Ellis, Staff Sgt. Franc Ouedraogo, Sgt. 1st Class William Yongue, Lt. Col. Alicia Burrows and Maj. Jonathan Marshall. (Photo by Karla Candelaria, TCC, 409th CSB)

Jungnick said he may be "very early into his Army Acquisition Workforce experience," but he learns something new every day and his years of experience as a Soldier speaks for itself. During his Army career he's participated in joint task force and humanitarian aid programs that exposed him to different styles and methods of contracting. "I have had a few highlights in a short time that I would consider to be important points even as my time in the field continues, like assisting the regionally aligned forces in MK Airbase, Romania; Operation Allies Refuge; Operation Allies Welcome; and the mentorship I've received from countless professionals within the TCC and 409th CSB." He said these missions really helped him understand the capability of providing assistance, even at a moment's notice to help those in need.

"There was also an opportunity presented to watch an "empty parking lot" turn into temporary housing and process hundreds, if not thousands, of displaced people," he said. "Ultimately, I would have to say that the biggest takeaway is learning how to adapt in an ever-changing situation."

Jungnick said given his training and hands-on field experience, he doesn't feel as though he's "missed out on anything." Yet, there is ongoing training available, which he does take advantage of when relevant.

"We are consistently conducting training at the unit level within the TCC and every class has its own way of adding value." He said the training varies from small classes such as conducting closeouts, updating and validating funding, and refresher training on procurement systems to bigger classes that focus on updates to policy and changes within the regulations. "The group of potential instructors bring a lot of experience and diversity to the classes, and they offer their perspective to help others understand the information," he said.

Jungnick feels that although experience is extremely important, training is a great way to learn new things and open doors to new opportunities. Which is why he participated in the Contingency Contracting Administration Service (formerly CCAS, now CAS) class in February 2020.

"I wanted to learn and understand a broader function of the Army Acquisition Workforce," he said. "My expectation was to learn as much as I could and become familiar with the CCAS program." He said from the class he learned that CCAS or CAS, a technical aspect of contracting, is used more often than most would think, and the program consists of multiple agencies and personnel working together to achieve the same desired outcome. "I learned a lot of new ways to conduct the administration of contracts," he said. "I haven't been able to directly apply the skills and knowledge that I learned in the course [to acquisition], but it has helped shape decisions and drive discussions during real world and training events. This has enabled others to move forward with actions and reduce friction." He said the course helped him understand that each person is responsible for how much they learn within the Army Acquisition Workforce and also that opportunities are unlimited within this field. "I would recommend this course to anyone who has an interest in learning about a major program, not only the Army, but others that services and agencies use."

Jungnick said his favorite thing about being a part of the acquisition workforce is meeting new people and hearing about their experiences. "There are so many different people with unique experiences," he said. "Hearing about those experiences and being able to relate on a personal level really helps bring people closer in the workplace."

—CHERYL MARINO

TIGHT CORNER

Soldiers from the 82nd Airborne execute Battle Drill 6 during the limited user experiment at Fort Bragg, North Carolina, in June 2021. This event included nine squads of service members conducting live-fire qualification and other training exercises. (Photos courtesy of the Program Executive Office for Soldier)

BIG MOVES FOR SMALL ARMS SYSTEMS

Authorities in the mid-tier acquisition pathway drove the rapid development of new Soldier weapons.

by Maj. Jamin D. Williamson

A small arms ammunition configuration study conducted in 2017 identified a capability gap requiring the infantry squad to deliver increased energy on target and at range using small arms weapons. This study underpinned the initiation of the Next Generation Squad Weapon (NGSW) program with the goal of defeating current and emerging peer and near-peer threats. The successful use of the rapid fielding path middle tier of acquisition (MTA) enabled the Army to execute the first individual weapons and caliber upgrade since the fielding of the iconic M16 during the Vietnam War era. The MTA strategy paved a path for small arms development that will allow the Army to field a major capability years earlier than possible using a more traditional approach.

WHY MTA

The NGSW program was authorized to use the MTA authorities, which are not subject to traditional Joint Capabilities Integration and Development System (JCIDS) and DOD Directive 5000.1, "The Defense Acquisition System." The mid-tier approach was established by Congress in the National Defense Authorization Act for Fiscal Year 2016 as a pathway to "to fill a gap in the DAS [Defense Acquisition System] for those capabilities that have a level of maturity to allow them to be rapidly prototyped within an acquisition program or fielded, within five years of MTA start," according to DOD Instruction 5000.80, "Operation of the Middle Tier of Acquisition (MTA)."

The 2018 National Defense Strategy focused the breakdown of U.S. force capabilities in comparison to near-peer competitors. Ultimately, the NGSW program was established to meet emerging threats with increased lethality and replace the M4A1 and M249 as well as the legacy optics used by the close combat forces. The Army has tried and failed multiple times to replace the M16. The Stoner 63, Advanced Combat Rifle, Objective Individual Combat Weapon (XM29) and the XM8 are just some examples of the multiple failures since the M16 was first fielded.

HEADS UP
A Soldier from the 10th Mountain Division conducts a mobility event with a rifle prototype from SIG Sauer at a Fort Drum, New York, Soldier touch point event. Incorporating Soldier feedback early and often ensures operational relevancy and accelerates prototyping of the weapon systems.

Why did these previous programs ultimately fail? One could argue they lacked a comprehensive, rapid and flexible acquisition strategy with clear operational requirements. Unlike previous M16 replacements, the mid-tier pathway enabled the NGSW team to prototype and field in three to five years instead of the traditional technology maturation and engineering process leading to production and fielding, which often takes a decade. The team also started with realistic requirements at the outset without the lengthy approval staffing process associated with a major capability acquisition. However, these schedule efficiencies did not replace due diligence with respect to cost and technical performance parameters. The comprehensive plan required multiple products to be synchronized under the MTA authority to produce lethality within a three-year timeline. This aggressive NGSW timeline led to an outcome determination to transition from prototyping to fielding in less than two years and fielding to begin in less than five years from the outset of the program. Using traditional major capability acquisition, the program would likely be at least two to three years behind by the time NGSW goes into production and operational testing under the MTA process.

PROGRAM HISTORY

The MTA strategy used the rapid prototyping authority to develop mature technologies within an extremely aggressive timeline. In 2018, the Army issued a competitive prototype project opportunity notice and awarded fixed amount, competitive other-transaction authority agreements to five small arms vendors. These small arms industry partners included Textron, General Dynamics, FN America, PCP Tactical and SIG Sauer. The awards were the result of multiple industry days to gain insight on the current technologies and production capabilities required to support future capability developments. By 2019, the Army issued an additional prototype project opportunity notice for subsequent prototyping efforts to Textron, General Dynamics and SIG Sauer to produce prototype rifles, automatic rifles and 6.8 mm cartridges to support a series of prototype tests.

EYES ONLY

NGSW prototype fire control from the winning vendor Vortex Optics will serve as the primary optic for the NGSW rifle and automatic rifle for the close combat force.

WINNING BID

SIG Sauer will produce the XM5 rifle and the XM250 light machine gun for the close combat force.

The prototype test would feature a series of technical and environmental evaluations as well as limited user evaluations to support the Soldier-centric designs.

The 6.8 mm projectile was never in the Army's inventory and was a key developmental component of the rapid prototype program. Lake City Army Ammunition Plant, a government-owned, contractor operated ammunition military industrial installation in Missouri, is the primary producer of small arms ammunition for the military. Project Manager Maneuver Ammunition Systems, in conjunction with the Army Combat Capabilities Development Command Army Research Laboratory and Lake City, spearheaded the development and production of government projectiles for testing and continued prototyping as part of the competitive competition resulting from the prototype project opportunity notice awards. This strategy for early Lake City involvement paid dividends for development of ammunition facilities and timely investments to scale production to meet Army demand for training and future operations.

Reduction of Soldier aim error to increase probability of hit—or, improving Soldier aim—is an additional capability illustrated in the small arms ammunition configuration study. In 2018, to meet this capability, a Defense Ordnance Technology Consortium effort was initiated to test integration of an overlay display, laser range finder and ballistic calculator into a direct view optic to produce a corrected aiming point (disturbed reticle). This was the ignition of the NGSW-Fire Control. An additional Defense Ordnance Technology Consortium effort to ensure the systems meet military specifications led to a full and open competition in fiscal year 2020 that included NGSW-Fire Control bid samples and Soldier feedback. By April 2020, the Army awarded L3Harris

The NGSW program was established to meet emerging threats with increased lethality and replace the M4A1 and M249 as well as the legacy optics used by the close combat forces.

Technologies and Sheltered Wings Inc., which does business as Vortex Optics, a fixed-amount other-transaction agreement for prototyping as part of the NGSW program.

MTA RAPID PROTOTYPING

In May 2020, the NGSW team started a comprehensive rapid prototyping competition to determine and select the best value solution to replace the M4A1 and M249 and the legacy rifle combat optic and machine gun optics. The NGSW team and competing industry partners were guided by a tiered capabilities matrix, developed by the Soldier Lethality Cross-Functional Team. The tiered capabilities matrix, a non-JCIDS document, was critical to define a series of prioritized requirements to inform the competition. The tiered capabilities matrix requirements approach allowed industry to use trade-space analysis when prototyping systems to optimize systems for the warfighter. A trade-space analysis conducts an analysis to prioritize trades on system capabilities based on technology performance, schedule and cost. The tiered capabilities matrix added flexibility for the cross-functional team and NGSW team to work with industry to rapidly design a Soldier-centric system. Industry had a broad-tiered approach with flexibility and trades not generally present in a traditional capabilities development document.

LIVE FIRE
A Soldier fires the SIG Sauer rifle prototype during mobility testing at Fort Drum, New York, in August 2020.

The objective for the NGSW team was to incorporate Soldier feedback early and often to ensure operational relevancy, increase Soldier acceptance and accelerate prototyping of the weapon systems. The prototype Soldier touch point events included close combat force Soldiers from 10th Mountain, 82nd Airborne, 101st Airborne, 75th Ranger Regiment as well as the participants from the United States Marine Corps, Special Operations Forces and the Army Marksmanship Unit. The team also included the new equipment training teams from U.S. Army Tank-automotive and Armaments Command early in the process to provide a head start with system familiarization and training. In total, 691 Soldiers, Marines and special operators conducted over 5,000 hours of testing to inform the NGSW program through the first phase of prototyping. All collected test data was transparent to the vendors, which allowed continued iterative prototyping to improve future designs.

At the conclusion of initial weapons and ammunition prototype testing, the NGSW team made a strategic decision to separate decision points for the fire control from the weapons and ammunition. Modifying the acquisition strategy was ultimately

a risk-reduction measure that allowed flexibility to ensure capabilities would be delivered to the warfighter rapidly. Fire control represented a mature technology that had the potential to immediately increase Soldier lethality on legacy weapons. Separating the programs increased flexibility by enabling the Army to field fire control separately, which provided an opportunity to deliver early lethality capabilities to the force ahead of the weapons. This decision also enabled greater synchronization with the projected weapons and ammunition production schedule because the production lead times for the NGSW-Fire Control are greater than the weapons and ammunition.

A second round of weapons and ammunition prototype testing started in early 2021, which allowed the vendors to improve their design based on the feedback loop from the previous testing. The Soldier touch point effort would occur concurrently with over 100 technical tests conducted by Army Test and Evaluation Command. The Soldier touch point schedule consisted of five events for the weapons and ammunition that focused on mobility, controllability and user acceptance. The culminating event was a limited user experiment at Fort Bragg, North Carolina, where Operational Test Command executed the test events on behalf of the NGSW team. This event included nine squads of Soldiers, Rangers and Marines conducting live fire qualification, individual lanes, team live fires and a force-on-force situational training exercise. The team planned and executed these events over a six-month timeline ensuring transparency of data collection while analyzing emerging results from the Army Test and Evaluation Command technical testing. Fire control executed an equally rapid test schedule consisting of four Soldier touch point events focused on interoperability, shooter performance, target detection and user acceptance. The results from all the Soldier touch points totaled over 20,000 hours of Soldier feedback, which proved invaluable in shaping system designs. These Soldier assessments—technical test data from over 100 sub-tests, including 1.5 million rounds of 6.8 mm ammunition—was used to assess overall system performance and inform the selections.

TRANSITION TO AGREEMENT AND CONTRACT AWARD

Following the conclusion of prototype testing, the Army acquisition executive approved the NGSW team to transition the program from MTA rapid prototyping authority into MTA rapid fielding for fire control and for weapons and ammunition. The team also successfully executed source selection activities resulting in an award for fire control, and weapons and ammunition. In January 2022, NGSW awarded Vortex Optics a 10-year follow-on production other-transaction agreement for fire control with a ceiling of $2.7 billion. Three months later, in April, the team awarded SIG Sauer a 10-year Federal Acquisition Regulation-based contract for weapons and ammunition production with a ceiling of $4.5 billion. The team was not only successful in achieving the best value for the government, but also in ensuring favorable intellectual property rights to ensure Lake City had the ability to prepare for and manufacture ammunition stockpiles to the warfighter. For this rapid timeline from prototyping to award, the NGSW team was required to concurrently conduct test events, staff rapid fielding approval documentation and work to award contract to ensure a blistering pace required to maintain the program schedule.

CONCLUSION

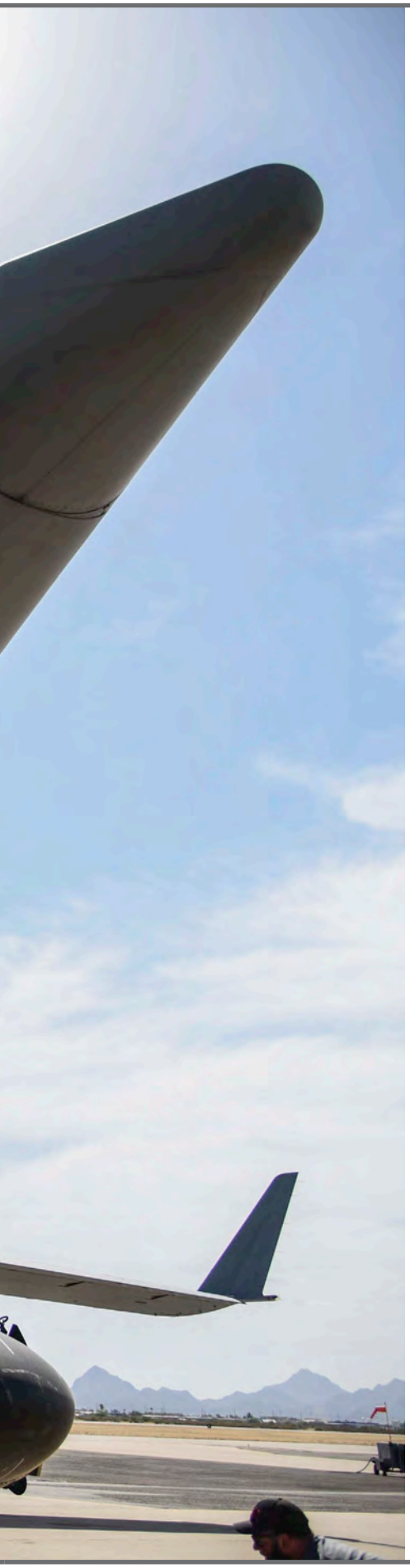
Over the next year, the NGSW team will remain focused on this rapid process by conducting additional tests to ensure system performance and reliability leading to an operational test event and subsequent fielding. Rapid acquisition and operational requirement development using MTA authorities are the true drivers for the rapid development of a comprehensive small arms system. The fire control and weapons are currently synchronized to test and field as a system. The end state is a system that provides increased lethality, range and accuracy while maintaining mobility by leveraging the most modern lightweight small arms technologies. Fielding is currently planned for 2023.

For more information, go to: ***https://www.peosoldier.army.mil/Equipment/Equipment-Portfolio/Project-Manager-Soldier-Lethality-Portfolio/Next-Generation-Squad-Weapons-Program****.*

MAJ. JAMIN D. WILLIAMSON is an assistant product manager for Next Generation Squad Weapons, PEO Soldier at Picatinny Arsenal, New Jersey. He holds a J.D. from Florida Coastal School of Law, an M.S. in operational studies from the United States Army Command and General Staff College and a B.S. in political science from Indiana State University. He is an acquisition officer who previously served as an armor officer.

ON TO UKRAINE

An Mi-17 helicopter is loaded onto a C-17 Globemaster III aircraft at Davis-Monthan Air Force Base, Arizona, on June 9. The aircraft was pulled from storage at the Aerospace Maintenance and Regeneration Group there and air-transported to Slovakia to be picked up by Ukraine. MASPO has facilitated the delivery of a total of 18 aircraft in support of Ukraine. (Photo by Airman 1st Class William Turnbull, U.S. Air Force)



BUILDING PARTNERSHIP CAPACITY THROUGH AVIATION

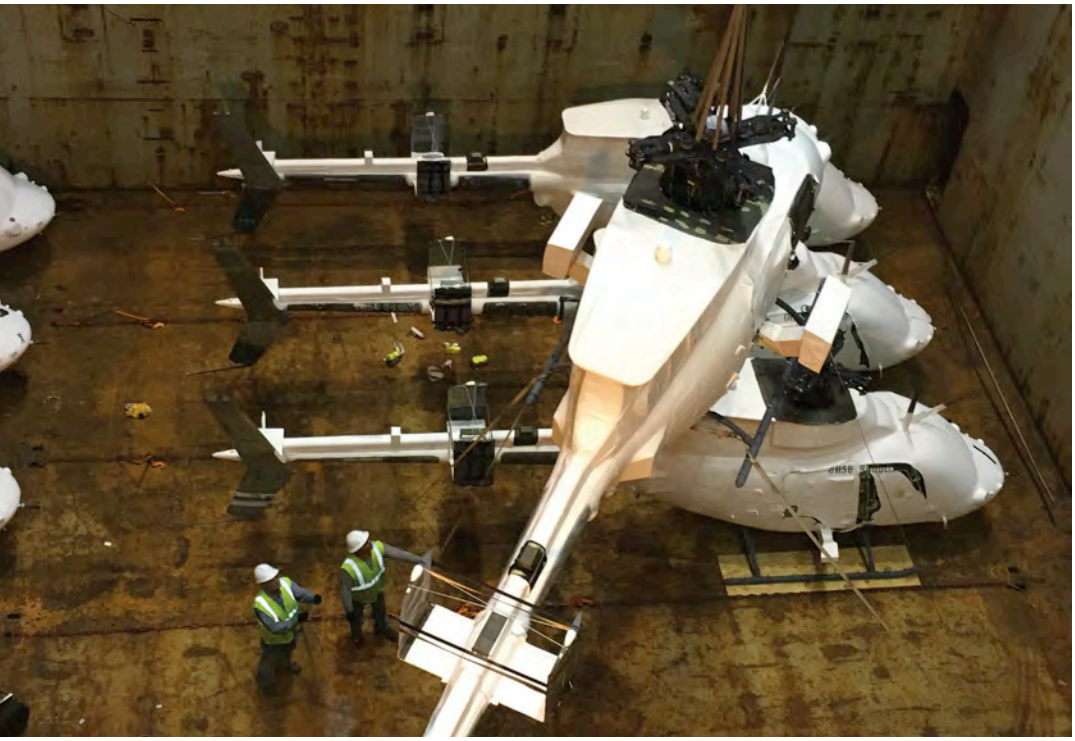
MASPO provides aviation capabilities that meet allied and combatant command priorities and build international partnerships in the process.

by Wayne R. Hudry, Ph.D., and Andy Greer

Equipping, modernizing and empowering allied and partner nations with rotary wing capabilities is a vital U.S. Army security assistance mission. When U.S. allies and partners manage their own internal and external threats, it reduces the risk to our warfighters and frees up U.S. forces for operations elsewhere. Furthermore, allies outfitted with aviation capabilities support the U.S. in achieving operational and tactical agility, and help set the conditions for the arrival of U.S. forces in the event it becomes necessary by facilitating access to remote or otherwise denied areas.

Building and supporting our allies' capabilities serve as a significant deterrent to conflict. When allies are trained and equipped with affordable, U.S.-endorsed aviation assets, our partners can respond to any threat or crisis immediately. The addition of reliable and robust rotary wing assets provides U.S. partner nations the capability to conduct humanitarian assistance, disaster relief, counterterrorism, counterinsurgency, stability and other military operations.

Many of America's allies and partners, such as Kenya, Greece and Bosnia and Herzegovina, have combatant command-endorsed rotary wing requirements, yet they cannot use U.S. standard Blackhawk (UH-60), Apache (AH-64), Chinook (CH-47) and Future Vertical Lift platforms because of economic realities. Responding to these realities, DOD created a small project management office, under the umbrella of the Army's Program Executive Office for Aviation, to provide cost-efficient, non-program of record rotary wing aircraft to our partners and allies.



FROM THE U.S. TO GREECE
OH-58 Kiowa helicopters are craned out of the hull of a ship at Port Volos, Greece in May 2019, part of a MASPO delivery, building partner capacity. (Photo courtesy of MASPO)

LOADED FOR LEBANON
MD-530FF Advanced Precision Kill Weapons System aircraft loaded inside a Boeing 747 bound for Beirut, Lebanon in November 2021. By providing these assets and capabilities, the U.S. strengthens partnerships and solidifies allies around the world. (Photo courtesy of MASPO)

In 2010, the then-undersecretary of defense for acquisition, technology and logistics issued an acquisition decision memorandum designating the Army as the lead service for DOD acquisition of Mi-17 and any other "nonstandard rotary wing aircraft." From this memorandum the Non-Standard Rotary Wing Aircraft Project Management Office was formed and later became the Multi-National Aviation Special Project Office, known as MASPO.

MASPO's mission is clear: Develop, deliver and support nonstandard rotary wing aircraft for DOD and allied countries, or as directed by the Office of the Secretary of Defense in support of overseas contingency operations. The MASPO mission elevates the warfighting capabilities of our nation's allies and improves international relations with each country supported.

A UNIQUE MISSION

This unique mission includes providing total package helicopter acquisition, sustainment and support on an international scale. MASPO sets the standard for aircraft maintenance, modifications, overhauls, full life cycle systems management and assures the enhanced safety and airworthiness for the multiple aircraft types operated by our allies.

"This team is a juggernaut," said Col. Tim McDonald, the MASPO project lead. "Once they receive a mission, they are innovative and unstoppable in getting the capabilities to where they are needed."

Initially created to procure, sustain and support Mi-17 helicopters for operations in Afghanistan, MASPO's mission has steadily evolved to include 16 different types of aircraft supporting 29 countries around the globe. To meet the needs of our partners, the aircraft portfolio expanded to include AH-6, UH-1, AW-139, Bell 407,

WRAPPED, RESTED AND READY
An Mi-17 aircraft is sealed for storage at Davis-Monthan Air Force Base in December 2021. MASPO, working with the Defense Security Cooperation Management Office — Afghanistan, choreographed the retrieval of 30 aircraft and related tools and equipment from Afghanistan, and coordinated the storage and staging of the recovered aircraft for future use. (Photo courtesy of MASPO)

Bell 412, AH-1 Cobra, OH-58 A/C/D, AW-119 and MD-530F aircraft. MASPO's global portfolio is nearly 400 aircraft, as foreign military sales programs grow to meet the increasing demand for U.S.-endorsed rotary wing capabilities.

CAREFUL COORDINATION, SAFE RETURN AND UNPRECEDENTED FLEXIBILITY

One of MASPO's signature accomplishments is the thoroughness with which the project office conducted its original mission throughout the past decade. The MASPO team demonstrated flexibility in the support of aviation combat operations in Afghanistan from the building and supporting of Afghan combat power to the drawdown of troops and retrograde operations. Over a 10-year period, MASPO delivered more than 200 aircraft to Afghanistan and provided more than 400 personnel who performed daily maintenance and kept the aircraft flying in the combat theater.

As NATO forces began withdrawal from Afghanistan, MASPO's mission continued as the Afghan government still needed aviation support. MASPO conceptualized and implemented a comprehensive, multiphase over-the-horizon sustainment approach for the Afghan rotary wing fleet. MASPO established three separate over-the-horizon sites outside of Afghanistan and out of harm's way to ensure the aircraft were maintained to standard and the workforce was safe. Upon completion of routine maintenance, heavy repairs and overhauls, the aircraft were returned to Afghanistan to support combat operations.

"This team is a juggernaut. Once they receive a mission, they are innovative and unstoppable in getting the capabilities to where they are needed."

As the withdrawal from Afghanistan accelerated, MASPO ensured that all sustainment personnel were safely evacuated. Despite the chaos and confusion that resulted from the fall of the government of the Islamic Republic of Afghanistan, MASPO deployed personnel and coordinated the retrieval of multiple aircraft and in excess of 500 tons of aviation repair parts, special tools and ground-support equipment. Working with Transportation Command, MASPO coordinated airlift, rail-haul, line-haul and sealift transportation to the United States. The team employed planes, trains, automobiles and ships to bring these warfighting assets back home and staged them for future use by the United States or our allies. The team also maintained accountability of 10 aircraft going through combat-related repairs and overhauls in three separate Eastern European countries. MASPO was an essential player in the whole-of-government approach to properly disposition the aircraft and equipment while providing stewardship for U.S. taxpayer funds.

READY FOR DEPARTURE
Two of six MD-530FF Advanced Precision Kill Weapons System aircraft shown at Redstone Arsenal, Alabama in October 2021. The aircraft were developed, delivered and continue to be supported by MASPO within PEO Aviation. (Photo courtesy of MASPO)

With the aircraft safely back in U.S. possession, they became available to support our allies and other governmental agencies. When the White House released a presidential directive that included rotary wing assets in support of Ukraine, MASPO once again rose to the challenge, working with the Department of the Army to provide insight and support in delivering the recovered helicopters, parts and tools to our Ukrainian allies to combat Russian aggression. Through MASPO's relentless efforts, those aircraft are now involved in combat operations in Ukraine.

FROM CONCEPT TO COMBAT-CAPABLE IN RECORD TIME

Another one of MASPO's building partner capacity success stories took place in Lebanon. In the fall of 2021, the team delivered six highly modified MD-530F helicopters to the Lebanese Armed Forces Air Force. The fielding marked the final milestone of a $100 million effort to develop and integrate the Advanced Precision Kill Weapon System onto the commercial MD-530 platform. This resulted in a new light attack platform with guided-rocket capability. The Advanced Precision Kill Weapon System is a federated network consisting of a weapons management system, multifunction displays, electro-optical and infrared sensors and guided rockets, all assimilated into a glass cockpit.

While the system was being developed, tested and integrated into the MD-530 cockpit by Redstone Arsenal's Prototype Integration Facility, MASPO optimized time by concurrently facilitating pilot qualification training, aircraft maintenance training and armament technician training to arm, maintain and operate the advanced weapon system. With trained aircrew members and an airworthy platform, MASPO arranged a successful live-fire event at Yuma Proving Ground, Arizona, to prove the competency of the crews and to validate the combat effectiveness of the enhanced aircraft. While the standard appropriated funds for acquisition cycle can take eight to 12 years, MASPO accomplished the task from concept to combat-capable within three years.

In 2023, MASPO is committed to expanding global aviation reach by initiating and growing strategic alliances and increasing allied speed to combat operations. Sixteen aircraft are already scheduled for delivery to international partner countries worldwide. MASPO remains ready to support countries that want to expand their warfighting capabilities by offering affordable rotary wing options backed by the United States.

CONCLUSION

MASPO serves as an ambassador for the United States by developing, delivering and supporting non-program of record rotary wing aircraft, excess defense articles, militarized versions of commercial aircraft or their sustainment worldwide by providing cost-effective, highly capable and affordable aviation capabilities that meet allied and combatant command priorities and build international partnerships in the process. Empowered by the Office of the Secretary of Defense, the secretary of the Army and PEO Aviation, each of MASPO's aircraft deliveries, hardware modifications and enhancements enables the warfighting capabilities of our international partners and solidifies strategic relationships. Through these strategic interactions, MASPO contributes to the defense of the United States, our allies, and promotes U.S. strategic interests worldwide.

*For more information, contact Col. Tim McDonald at **timothy.d.mcdonald2.mil@army.mil**, 256-313-2515 or Wayne Hudry, Ph.D., at **wayne.r.hudry.civ@army.mil**, 256-876-7262.*

WAYNE R. HUDRY, PH.D., is deputy project lead for the Multi-National Aviation Special Project Office. He holds a Ph.D. in industrial and systems engineering from the University of Alabama in Huntsville, an M.S. in electrical engineering from New Mexico State University, an M.A. in business from Central Michigan University and a B.S. in engineering from the U.S. Military Academy at West Point. He is a 2014 graduate of the Senior Service College Fellowship.

ANDY GREER is a member of the operations team of the Multi-National Aviation Special Project Office. He earned an M.A. in military operational art and science from the Air Force Air Command and Staff College and a B.A. in organizational communication from the University of Alabama, where he commissioned into the Army as an aviation officer in 1992. While in the Army, he commanded at both the company and field grade level, including the Army Aviation Officer Basic Course. He retired from active duty in 2017 as a senior Army aviator, having earned the Combat Action Badge, the Air Assault Badge and Airborne Badge.

HOW (NOT) TO CONTRACT SOFTWARE DEVELOPMENT

Lessons learned from a failed contract for All-Army CyberStakes.

by Maj. John Rollinson and Maj. Shane Kohtz

LESSONS LEARNED

Hackers and other malicious threats lurk online, necessitating products capable of thwarting these attacks. Contracts to develop such products can and will terminate if the product is deemed unacceptable. This shouldn't be seen as a contracting failure but, rather, a lesson learned on how to successfully pursue software development contracts in the future. (Photo courtesy of 405th Army Field Support Brigade – Europe and Africa)

In February 2021, the Army Cyber Institute (ACI) at West Point requested the contracting officer at the U.S. Army Mission and Installation Contracting Command to pursue a termination for default on a contract to develop "novel challenges" for All-Army CyberStakes (AACS)—an annual cybersecurity competition. Because of the short timeline and COVID-related budget reductions, the termination meant there would be no competition that year. Although at first glance this is a contracting failure, we argue that aside from a risky timeline, the process worked mostly as it should (the Army did not pay for an unacceptable product). From this perspective, we offer our lessons learned on how to successfully pursue software development contracts in the future.

THE ALL-ARMY CYBERSTAKES CONTRACT

Hosting a cybersecurity competition of the size, duration and caliber of AACS is a significant undertaking. While the ACI has resident technical expertise, it does not have the depth of experience or personnel to produce the necessary content—50 self-contained, cybersecurity puzzles across six subject areas ranging in difficulty from tutorial-like to solvable by only the most capable of cyber experts. In contrast to other cyber-related training contracts, the content is the only part of the contract, and all material becomes the property of the ACI. The ACI then manages the IT infrastructure and underlying platform for the competition and serves the content using internal resources.

SOFTWARE DEVELOPMENT BEST PRACTICES

The Army continues to emphasize the importance of programs adopting industry best practices for software development. DODI 5000.87, "Operation of the Software Acquisition Pathway," directed that "programs will require" software teams to use software best practices, such as Agile or Lean development methods. The instruction also cleared DOD programs in the software acquisition pathway from following the legacy Joint Capabilities Integration and Development System's requirement-generation process to become less rigid and accelerate software development. The paradigm shifts in software acquisition approaches highlight the importance of Agile and iterative software development; however, as the ACI experienced, the standard Federal Acquisition Regulation (FAR) contracting process remains a serial process that encourages legacy software development methods.

SETTING THE STAGE FOR SUCCESS

Two of the most critical phases for a software effort are acquisition planning and contract administration. Accurate cost estimates, iterative deliveries, logical contract structure and detailed data rights are inherent to a successful acquisition plan. The government technical experts play a vital role in evaluating a vendor's proposal, deliveries and communicating issues during the contract administration phase. The following ACI lessons learned may assist acquisition professionals in managing the cost, schedule and performance of future software efforts.

Acquisition Planning:

The standard FAR-type contracts require deliberate planning up front, which is somewhat counter to the iterative approach necessary for software development. There are five lessons learned when planning for software design, development and testing.

Break the independent government cost estimate (IGCE) into components as much as possible. An IGCE for a software development effort with varying degrees of complexity should estimate the amount of time and effort necessary to complete each software item, which is known as "work-based costing." In ACI's case, the cost estimate should have focused on each software challenge instead of a blanket cost estimate for a software team developing for a block of time known as "level of effort costing." The approach assists in the comparison of our assumptions about cost with submitted proposals.

- Require the vendor to deliver early and deliver often. The high frequency allows for more objective monitoring of progress and product quality, and the iterative approach will prevent significant rework before final delivery.
- Sequence each capability or feature as a separate contract line-item number (CLIN) in the contract (with

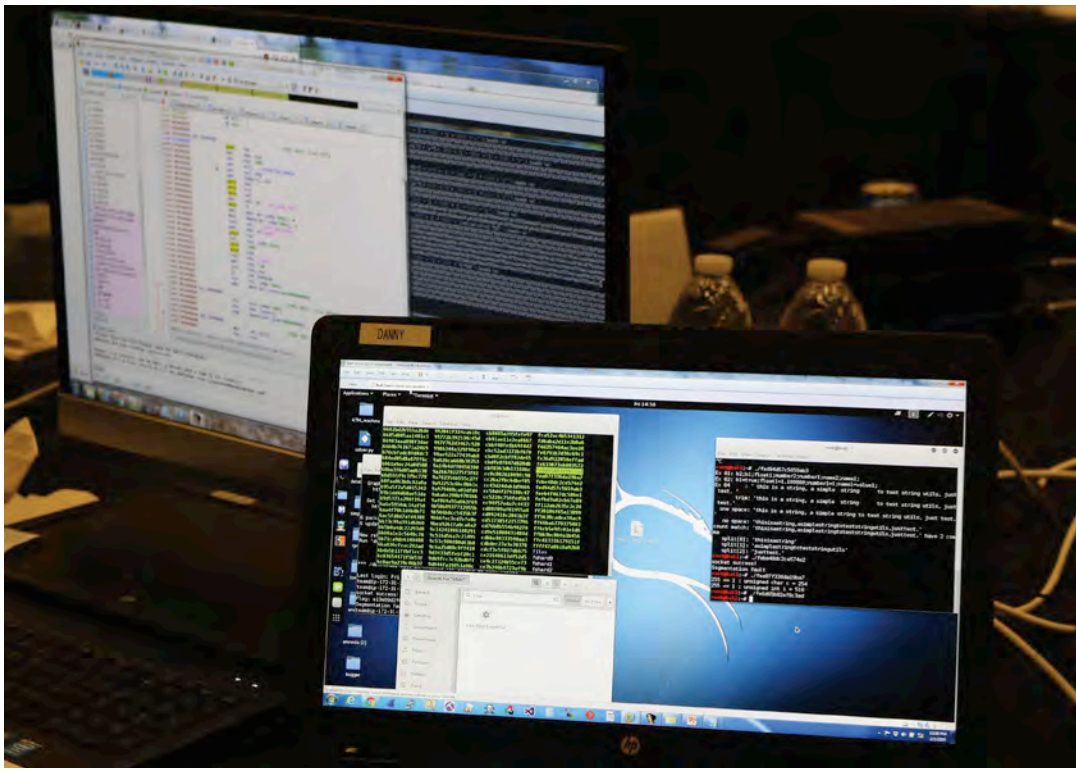
Software contracts must be written for failure because the software will 'break' and have issues.

appropriate quantities if multiples of the same "capability" are required, such as three binary challenges of medium difficulty, as well as breaking out proposed challenge descriptions). This gives the government additional flexibility and ensures our costs accurately reflect what we are receiving.

- Ensure the deliverables (CLINs) are priced logically in a fixed-price contract. The CLINs on the AACS contract had the same price despite different levels of complexity for each development phase.
- Clearly identify data rights for every software development effort. The government maintains unlimited rights of data (software code) the vendor develops for the first time on contract (Part 27 - Patents, Data and Copyrights | Acquisition.gov). Government contractual expectations for data are critical for final delivery or potential termination.

Contract Administration:
ACI noticed significant issues during the contract administration phase, which eventually led to contract termination. Four administration actions are necessary for success on a software development contract.

- Proposal technical screening is a critical activity for a successful software contract. The ACI screened out one company that would have clearly been out of its technical depth, but the chosen contractor gave good answers to key technical questions. In particular, challenge "lazy" pricing schedules (every CLIN proposal price was the same despite variable costs and difficulty). Major discrepancies between IGCE and proposed pricing most likely reflect misunderstandings or differences in underlying assumptions about the requested product.
- "Trust but verify" is critical and requires a technical representative with adequate time and resources to review the contract deliverables. Some technical red flags to look for: failure to read the contract (deliverables in wrong format); vendor methodologies or technical approaches inappropriate for the problem; immature internal processes that spill into the contract relationship (claims of "miscommunication," "confused" deliveries, passing blame to others, etc.).
- Trust but verify again, again and again. The software world is complex and copyright violations occur, as the ACI observed during the development phase. It is important to check compliance with licensing terms of the components *and dependencies* of the delivered software. The AACS software vendor had issues of not



COTS APPROACH TO PROBLEM SOLVING
At All-Army CyberStakes events, competitors use a variety of open source and commercial off-the-shelf tools to reverse engineer programs and find vulnerabilities as part of solving the challenges. (Photo courtesy of the Army Cyber Institute)

just plagiarism from unlicensed sources, but several instances of failing to comply with the terms of open source licenses such as providing the exact source code used (GNU General Public License) and failing to include mandatory acknowledgments (Apache License, Version 2.0). Vendor use of outside code, after making statements of internal development, is an immediate red flag and must be taken to the contracting officer.

- Good communication—keeping the contract officer, contract officer representative and any technical advisers on the same page is critical, both to ensure we pay promptly for correct deliverables and for ensuring performance concerns are articulated accurately (from a technical perspective) and correctly (from a contract law perspective).

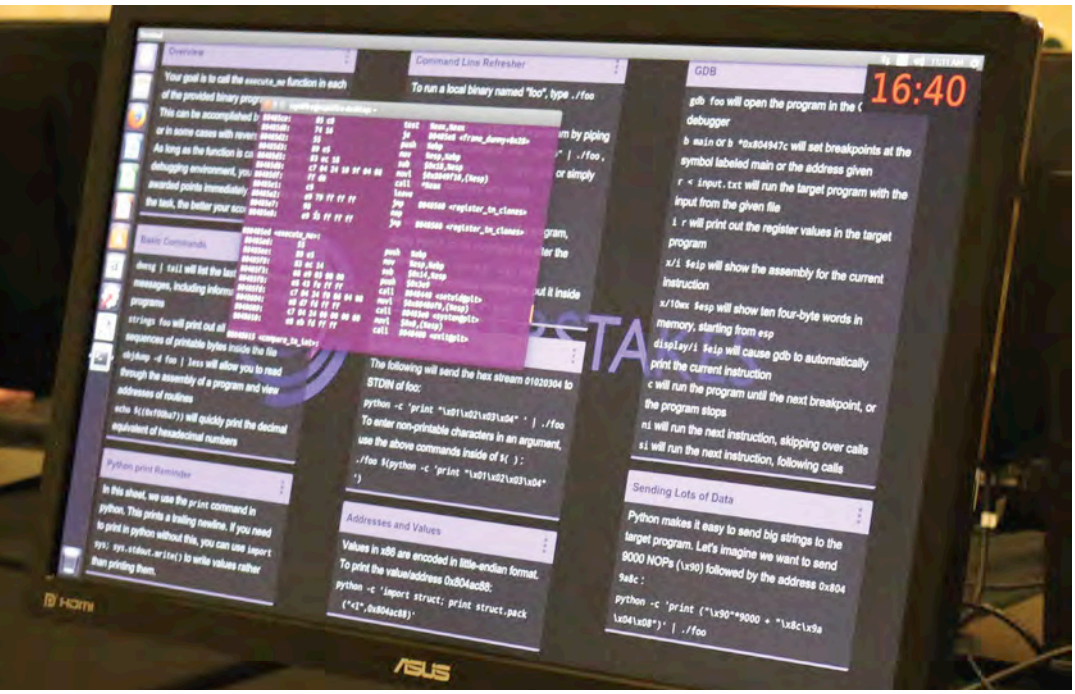
The paradigm shifts in software acquisition approaches highlight the importance of Agile and iterative software development.

WHEN THINGS GO WRONG

Drive toward the idea that a "failed contract" is not a "contracting failure" when dealing with software. Software development fails—a lot—so this potential outcome is almost an expectation for software contracts. The government should not only be comfortable with terminating a contract and restarting it, but also should be approaching every software contract with this as an expected part of both the time and final cost estimate. Software development iterations are a necessary reality, and the ACI recommends the following steps when things go wrong.

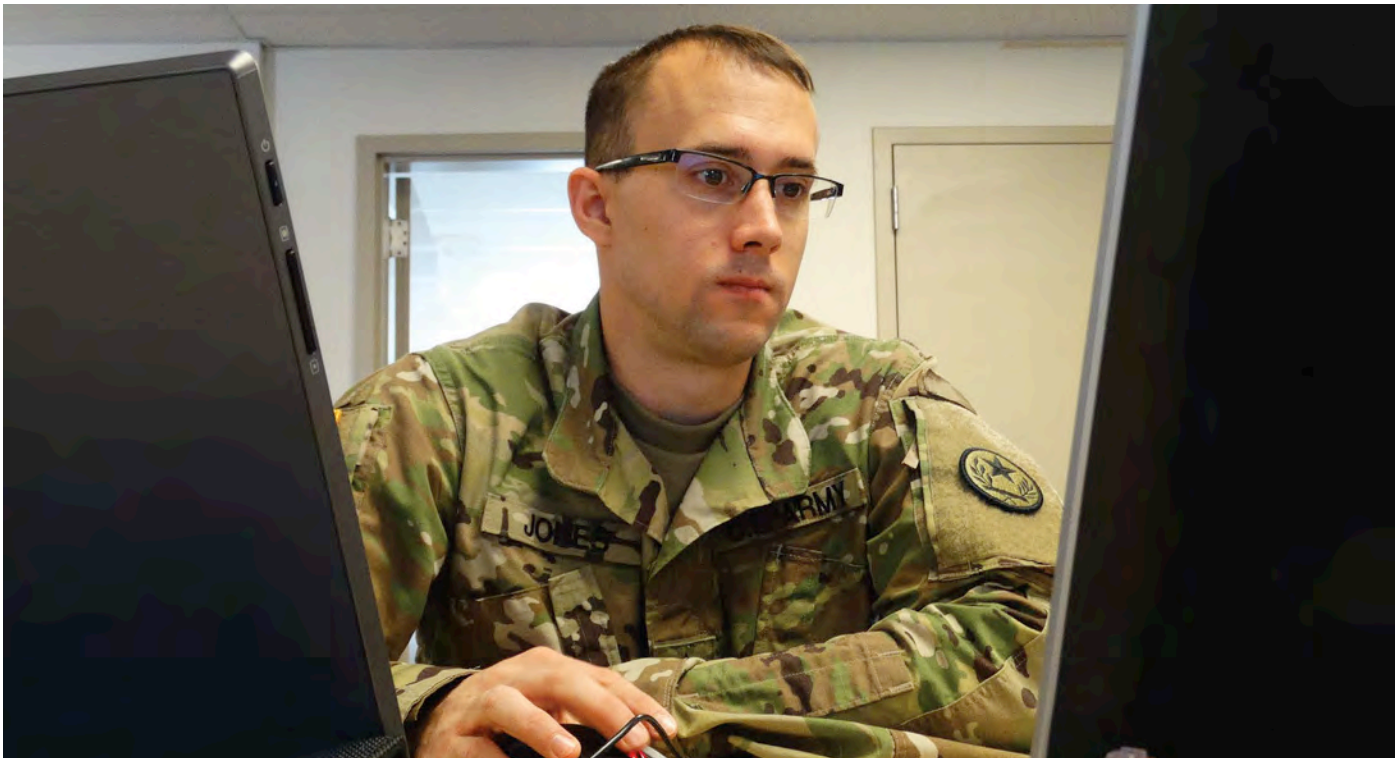
Hold to the contract, particularly deadlines. Software estimates are notoriously inaccurate and early missed deadlines are likely to compound, not disappear.

- Talk early and often across the government side of the contract team. Early issues will expand and create more issues that will likely be more costly and time consuming as the contract progresses.
- Know the contracting and software development processes and be prepared to execute a rebid or award to next bidder.
- Do not pay for substandard work, which is beneficial as it keeps the money available for getting the product done correctly.
- Salvage and mandate delivery of any data from the vendor after contract termination. Discretion



ALWAYS A CHALLENGE

As part of the training goal of All-Army CyberStakes, competitors are given hints and tutorial information to solve easier challenges and prepare them for the more difficult ones that comprise the main competition. (Photo courtesy of the Army Cyber Institute)



TEAM EFFORT

Staff Sgt. Brian Jones, an intelligence analyst with the 102nd Information Operations Battalion, monitors his workstation to counter the Red Team's efforts to hack into his system during an exercise. The Army emphasizes the importance of programs adopting industry best practices for software development, with programs including software teams to use software best practices. (Photo by Maj. Ray McCulloch, 102nd Information Operations Battalion)

lies with the contracting officer for material delivery after termination. Even though the AACS did not occur, the vendor developed some challenges that would have been useful ACI training aids, if delivered.

CONCLUSION

As counterintuitive as it may seem, ACI's largest lesson from this failed contract is that software contracts must be written for failure because the software will "break" and have issues. This means changing government cultural expectations and understanding software acquisitions will often need more than one attempt. The government must hold contractors accountable for the quality and timing of deliverables and remain flexible to rapidly switch contractors when there is a failure to meet contractual expectations. To move in that direction, the contracting team and customer must communicate clearly and work together throughout the process to ensure the project is successful—even when an individual contract award is not.

*For more information, contact the authors at the Army Cyber Institute at **john.rollinson@westpoint.edu** or **shane.kohtz@westpoint.edu**.*

MAJ. JOHN ROLLINSON holds an M.S. in computer science from Carnegie-Mellon University and a B.S. in mathematical sciences and computer science from the U.S. Military Academy at West Point. He is currently serving as a research scientist at the Army Cyber Institute at West Point.

MAJ. SHANE KOHTZ earned an MBA with a focus on systems acquisition management from the Naval Postgraduate School and a B.S. in human geography from the U.S. Military Academy at West Point. He holds the DAWIA Practitioner certification in program management and currently serves as a cyber research manager at the Army Cyber Institute at West Point.

FROM THE DIRECTOR OF
ACQUISITION CAREER MANAGEMENT
RONALD R. RICHARDSON JR.

DIGITAL TRANSFORMATION AND THE ARMY ACQUISITION WORKFORCE

> The transformed workforce will be digital-forward, understanding the role of data across the multidomain battlespace.

For the U.S. Army, 2023 is the year of digital transformation.

That's the message that Young Bang, the principal deputy to the assistant secretary of the Army for acquisition, logistics and technology (ASA(ALT)), conveyed at the forum "Digital Transformation: Supporting Army Modernization," during the Association of the United States Army Annual Meeting and Exposition in October.

This transformation will have a big impact on how the Army Acquisition Workforce does business. A digitally transformed Army cannot happen without a digitally transformed Army Acquisition Workforce (AAW). "To enable faster delivery of capabilities to our warfighter, we must drive towards open systems that are interoperable [and] interchangeable and plug-and-play," Bang said.

To support digital transformation, we must reskill and upskill our workforce. Companies in banking, the automotive sector and nearly every other industry have become technology companies—in effect, software companies. They are digitally transforming, as the Army must. Much of our workforce is involved in software-intensive programs. For those professionals who aren't, you almost certainly have software embedded in your products. The story of Army modernization in 2023 is a story of software development, interoperability and continuously iterated and integrated software products. Software is pervasive across all areas of Army acquisition, and there are many layers and levels to that software. That will only increase.

A DIGITAL-FORWARD WORKFORCE

My priority for the next year is accelerating the digital transformation of the workforce. The transformed workforce will be digital-forward, understanding of the role, uses and manipulation of data seamlessly across the multidomain battlespace. Having a

TRANSFORMING IN 2023

Digital transformation will have a big impact on how the workforce does business. A digitally transformed Army cannot happen without a digitally transformed workforce. (Image by Getty Images)

baseline understanding of how software functions within modular, open-systems architectures, in the systems-of-systems that will integrate Soldiers and materiel, and how those interoperate, will promote the digital transformation so critical to our Soldiers against pacing threats.

"Our software development process and approaches must be modernized to enable smaller, faster, incremental delivery of capabilities and drive" toward continuous integration and continuous deployment, Bang said.

Providing the training to do that will be central to enabling our Army Acquisition Workforce to support this mission. The Defense Acquisition University is working on building out knowledge areas and credentials in software development, DevSecOps, artificial intelligence (AI) and cybersecurity that will be available at the foundational level.

My office is also expanding or tailoring some of our training and development programs to allow for more targeted focus in science, technology, engineering and math (STEM). For example, our Leadership Excellence and Acquisition Development (LEAD) program now includes an infusion of unique digital technology experiential and training opportunities, (i.e., IT, cyber, AI and human systems integration). "The Army is going to scale the heck out of AI," Bang said.

We are also partnering with academic institutions and industry, many of which are currently leading the way in the digital transformation space, in an effort to learn from and leverage their best practices. We recently launched a new digital transformation training course at Carnegie Mellon University's Heinz College of Information Systems and Public Policy in Pittsburgh (see "First Digital Transformation Training," on Page 105).

In addition, we're sponsoring a two-week-long digital data user's skill-development course for our midgrade professionals, so that they better understand how to identify which data methods and tools can be used to solve problems. These training opportunities were made possible because Section 8080 of the "Consolidated

DIGITAL TRANSFORMATION DISCUSSION
Young Bang, principal deputy ASA(ALT), said that 2023 is the year of digital transformation for the U.S. Army, at the "Digital Transformation: Supporting Army Modernization" forum during the Association of the United States Army Annual Meeting and Exposition in October. (Photo courtesy of ASA(ALT))

Appropriations Act, 2022," allocated $50 million to be available through the Defense Acquisition Workforce Development Account for "recruiting and training the Department of Defense artificial intelligence-literate acquisition workforce."

TRAIN EARLY, OFTEN

Acquisition professionals do not need to wait for these training opportunities to become available to begin expanding their knowledge of software innovation, data and AI. Each Army acquisition functional leader has published continuous learning point guidance, much of which includes digital transformation-related training opportunities. I encourage workforce professionals to review these standards, work with their supervisors and update their individual development plans in the Career Acquisition Management Portal/Career Acquisition Personnel and Position Management Information System (CAMP/CAPPMIS) to account for these training goals.

The DACM Office also provides tuition assistance for individual courses or toward STEM-related degrees for those who prefer to go that route. Our Acquisition Tuition Assistance Program provides tuition, laboratory and technology fees, within limits, to workforce civilians, military occupational specialty 51 contracting (51C) noncommissioned officers, and flexible length and renewable-term technical-appointment employees in DOD laboratories designated as science and technology reinvention laboratories (STRLs). The STRL program is "a new workforce-shaping pilot program that provides the STRL lab directors the authority to dynamically shape the mix of technical skills and expertise," according to DOD.

The Naval Postgraduate School (NPS) has a renewed focus on STEM in three tracks—engineering, program management and contracting. For officers, Advanced Civil Schooling provides an opportunity to pursue advanced degrees in STEM, whether it's through attending NPS or a school of choice. That deep knowledge will be critical to the workforce. "We often constrain technology because we don't understand it or are unimaginative on how to employ it," Bang said.

All of these efforts will enable a new vision for our workforce to modernize in line with industry and in advance of our adversaries. This will look like quickly gathering and conveying data to leaders to enable their decision-making, better consumption of data between systems and a flattened and simplified architecture. Our use of a continuous learning model, and a well-educated and well-trained workforce, is what will get us through 2023—the year of digital transformation for the Army.

FIRST DIGITAL *TRANSFORMATION* TRAINING

Critical transformation begins with the Army Digital Data Leader's Course.

by Marko Nikituk and Stefanie Pidgeon

DEEPLY INGRAINED DATA

Data has become so ingrained in what we do each day that it's often taken for granted. The Army Digital Data Leader's Course reinvigorates the subject and highlights how far the science has come and describes how far, and how quickly, it will advance in the future. (Image by Getty Images)

Professionals from across the Army Acquisition Workforce attended the first offering of a digital transformation training course at Carnegie Mellon University's Heinz College of Information Systems and Public Policy in Pittsburgh Sept. 19-23. Digital transformation is a critical focus area for the U.S. Army, the Army's senior acquisition leaders and the Army Acquisition Workforce.

The course, called the Army Digital Data Leader's Course, is the first of a series of offerings planned over the next year specifically targeted to Army acquisition professionals. The Army Director of Acquisition Career Management (DACM) Office, in coordination with the Army Futures Command's (AFC) Army Artificial Intelligence Center (AI2C), sponsored the training.

EQUIPPED FOR THE FUTURE
In supporting the Army's Digital Transformation Strategy, training for current and future Army acquisition leaders will equip them with the knowledge and tools that are essential to the 21st century Army. (Photo by Getty Images)

Young Bang, principal deputy assistant secretary of the Army for acquisition, logistics and technology (ASA(ALT)), said that "2023 is the year of digital transformation for the Army," on Oct. 11 during a forum at the Association of the United States Army's Annual Meeting and Exposition in Washington. "We must simplify and accelerate getting the necessary data to commanders to enable their decision-making." Bang said that simplifying and flattening the Army's data architecture will result in more effective and efficient data-driven decisions. This course will help workforce professionals meet that intent.

TO MEET AN URGENT NEED

As the Army moves out to implement its Army Modernization Strategy and to support the Army Digital Transformation Strategy, training for current and future Army acquisition leaders will equip those leaders with the knowledge and tools that are essential to the 21st century Army. "Senior Army leadership is committed to this strategy," said Melvin Johnson, Ph.D., chief of the Mission Equipment Division, Systems Readiness Directorate at the Combat Capabilities Development Command's (DEVCOM) Aviation and Missile Center. "This course was designed to provide key leadership with a working knowledge of the current state of industry's state-of-the-art data concepts and best practice examples, providing insight into the inherent value locked in data, and the power of unlocking that value," he said.

Also attending the training were acquisition professionals from ASA(ALT), the program executive offices and DEVCOM.

Allen Waldran, associate director of the Prototype Integration Facility at the DEVCOM Aviation and Missile Center's Software, Simulation, Systems Engineering and Integration Directorate, said the course helped him understand how that data is stored, accessed and used. "Data has become so ingrained in what we do each and every day, that we often take it for granted. This training reinvigorates the subject and highlights how far the science has come and describes in great detail how far, and how quickly, it will advance in the future."

Waldran is currently in a leadership role that involves a lot of data and data analytics-type activity. But he said that the course expanded his awareness of the vast environment around data. "The amount of data collected and stored in the most mundane activities is almost unimaginable; this course helped me

understand that vastness," he said. "Data science knowledge will affect how we design systems to allow our warfighters to remain safe in the field and enhance the effectiveness of their missions."

MADE POSSIBLE BY

The new training originated in the "Consolidated Appropriations Act, 2022," in which Congress mandated that the military services enhance the digital capacity of the workforce. The DACM Office leveraged Defense Acquisition Workforce Development Account (DAWDA) funds to cover the training. This training, coupled with other efforts involving data-tools acquisition and project improvement efforts that the acquisition community is pursuing, will lead to the ability to leverage artificial intelligence tools that enhance Army programs and formations.

Over the next year, the Army DACM Office will sponsor a series of weeklong Army data leader courses intended for Army acquisition professionals. It aims to improve data-driven decision-making across all domains, from human resources and training to research development and engineering, to build awareness of enterprise data management efforts focused on increasing data quality and usability, and to provide executive-level understanding of the enterprise data management components and best practices.

Concurrently, the Army DACM Office will sponsor a two-week digital data user's skill development course for midgrade acquisition professionals to better understand how to identify problems that might be solved with data methods, such as which data methods and tools are most appropriate for each problem and where the Army faces the most pressing data issues. This training, along with the acquisition of better tools, directly support and will enable realization of the vision set by the Army and Army acquisition executive's focus on digital transformation.

CONCLUSION

"The amount of data coming at our warfighters can be overwhelming," said Waldran. "Having more people exposed to the science will help those designing and building complex systems to help the management and visualization of that data."

For more information about the Army DACM Office and its initiatives for the Army Acquisition Workforce, go to ***https://asc.army.mil/web/dacm-office.***

MARKO NIKITUK is the chief of analysis and planning in the Army DACM Office, where he oversees the Career Acquisition Management Portal, DAWDA and an operations research cell focused on providing talent management analysis. He has an M.S. in information technology management from the Naval Postgraduate School and a B.S. in electrical engineering from the U.S. Military Academy at West Point. He holds the DAWIA Advanced certification in program management and the Practitioner certification in engineering technical management. He possesses certificates in finance from Harvard Business School and in digital data leadership from Carnegie Mellon University. He has more than 35 years of service in U.S. Army infantry, Army acquisition, in industry and as an Army civilian.

STEFANIE PIDGEON is the communications branch chief in the U.S. Army Acquisition Support Center's DACM Office. She has worked in strategic communications and public affairs for the Department of Defense and U.S. Army for more than a decade. She holds a master of mass communication degree in integrated communications from the University of South Carolina, and a bachelor of music education from Winthrop University.

TRANSFORMATIVE TRAINING

Professionals from across the Army Acquisition Workforce attended the Army Digital Data Leader's Course at Carnegie Mellon University's Heinz College of Information Systems and Public Policy in Pittsburgh, Sept. 19-23. This is the first offering of a series of digital transformation training courses planned over the next year, specifically targeted to Army acquisition professionals. (Photo courtesy of the DACM Office)

WELL-DESERVED AWARD
Commemorative plaques are presented to the four inductees (and family members of the deceased recipients) at the Army Acquisition Hall of Fame award ceremony held Oct. 12 in Washington. The plaques will be hung in an Army Acquisition Hall of Fame display in the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology's hallway in the Pentagon. (Photo by the author)

ARMY ACQUISITION HALL OF FAME INAUGURAL CLASS

Event commemorates contributions of legendary Army acquisition professionals.

by Stefanie Pidgeon

During all the hustle and bustle of the 2022 Association of the United States Army (AUSA) Annual Meeting and Exposition in Washington, the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) set aside a room for a very special induction ceremony. The standing-room-only event commemorated the contributions of legendary Army acquisition professionals, both living and deceased.

The first four inductees to the Army Acquisition Hall of Fame were honored at the Oct. 12 ceremony. The Honorable Kevin Fahey, along with family members of the late John Shipley, Claude M. Bolton Jr. and Maj. Gen. Harold J. "Harry" Greene, were in attendance to accept the awards.

The Army Acquisition Hall of Fame was established to recognize and honor acquisition professionals who have made significant and enduring contributions in support of Army acquisition and the joint force. Lt. Gen. Robert L. Marion, principal military deputy to the ASA(ALT), led the effort. "It has been my honor to work in Army acquisition and be part of such a professional and dedicated workforce," he said. "We in the Army Acquisition Workforce have a strong sense of heritage, honor and pride. This Army Acquisition Hall of Fame will strengthen that sentiment."

"These four inaugural Army Acquisition Hall of Fame recipients represent what is truly remarkable about the Army and Army acquisition," said the Honorable Douglas R. Bush, assistant secretary of the Army for acquisition, logistics and technology and the Army acquisition executive. "They represent decades of quiet and noble service, often behind the scenes, to our great and grateful nation. They represent commitment and sacrifice, loyalty to the mission as well as those with whom they served."

The Honorable Gabe Camarillo, undersecretary of the Army, provided remarks during the ceremony. Camarillo previously served as the principal deputy ASA(ALT), helping to lead and supervise Army modernization programs, procurement, logistics, and research and development investment. The Army Acquisition Hall of Fame "is very important because of the work that the acquisition workforce in our Army does. It is one of the most, if not the most, versatile workforces you'll find anywhere in the federal space and certainly in the Army," he said. "It performs a role that requires expertise that is really unmatched anywhere in DOD." When speaking about the four award recipients, Camarillo said, "We are all enriched by the example they set for all of us."

HALL OF FAME HONOREES

The first four honorees were inducted into the Army Acquisition Hall of Fame on Oct. 12 during a ceremony at the 2022 AUSA Annual Meeting and Exposition in Washington. Kevin Fahey, center, along with the family members of John Shipley, Claude M. Bolton Jr. and Maj. Gen. Harold J. "Harry" Greene were in attendance to accept the awards. From left, Gabe Camarillo, Lt. Gen. Robert L. Marion, Linda Bolton, Kevin Fahey, Sue Myers, Ph.D., Dr. Dan Shipley and Douglas R. Bush. (Photo by the Office of the Undersecretary of the Army)

Bush and Camarillo presented the Army Acquisition Hall of Fame award to the recipients.

Linda Bolton accepted the award on behalf of her late husband Claude M. Bolton Jr., whose leadership was pivotal in providing quality warfighting capabilities at the height of Operations Enduring Freedom and Iraqi Freedom. "His point was always to make sure that the people at the pointy end of the sword, military and civilian, were given the best chance to make things happen safely and bring things home as they should've been," she told the audience. "As he would've said, he was only doing his job."

Fahey was recognized for being instrumental in the development and delivery of lifesaving mine- and improvised explosive device-resistant vehicles, contributing significantly to saving lives. "It was an unbelievable career," he said. "I worked on some extraordinary programs—Stryker, MRAP [Mine-Resistant Ambush Protected], bombs, you name it. … But it's really about the people that you get to work with."

The current Army Acquisition Workforce comprises approximately 32,000 Army acquisition professionals—military and civilian—from scientists and engineers to accountants and program managers who turn Army requirements into products and services, managing everything from cradle to grave. They are charged with a critical mission to cultivate innovation, design the impossible and provide Soldiers with what they need to be successful.

Sue Myers, Ph.D., (Col., USA Ret.) accepted the award on behalf of her late husband, Maj. Gen. Harold J. "Harry" Greene. Greene was responsible for intelligence, electronic warfare and sensors solutions during Operations Enduring Freedom and Iraqi Freedom. She said that Greene would've agreed that the Army Acquisition Workforce deserved this recognition. "It was his great pleasure to serve with you and learn with you and try to help carry the Army forward."

John L. Shipley, who died last year, was represented by his son, Dr. Dan Shipley. He said his father was a quiet man but knew that his work was all about the mission. "He always said it didn't matter if people were in harm's way or the hallway. He tried to treat them the same way because it was about the mission, the warfighter," he said. John Shipley pioneered the concept of aligning requirements, resourcing and acquisition with direct user feedback to deliver the safest and most lethal special operations aviation force in the world.

At the conclusion of the ceremony, plaques were unveiled that will be hung in an Army Acquisition Hall of Fame display in the hallway of the Office of the ASA(ALT) in the Pentagon, scheduled in 2023.

For more information, view a recording of the Army Acquisition Hall of Fame ceremony at: ***https://www.dvidshub.net/video/861140/ausa-2022-army-acquisition-hall-fame-asa-alt-induction-ceremony****. For information about the Army Acquisition Hall of Fame, along with biographies of the recipients, go to:* ***https://asc.army.mil/web/hall-of-fame****.*

STEFANIE PIDGEON is the communications branch chief in the U.S. Army Acquisition Support Center's DACM Office. She has worked in strategic communications and public affairs for the Department of Defense and U.S. Army for more than a decade. She holds a master of mass communication degree in integrated communications from the University of South Carolina and a bachelor of music education from Winthrop University.

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JAMES M. DAVIS

COMMAND/ORGANIZATION: U.S. Army Mission and Installation Contracting Command – Installation Readiness Center

TITLE: Contract specialist

YEARS OF SERVICE IN WORKFORCE: 6

YEARS OF MILITARY SERVICE: 19

DAWIA CERTIFICATIONS: Professional in contracting

EDUCATION: B.A. in history, University of Texas at San Antonio

HERE TO STAY

When it came time for James Davis to transition from the Army into civilian life, he realized that acquisition wasn't just a waypoint in his career—it was a destination.

Davis served 19 years in the Army, starting out as a field medic in Germany and then becoming an ear, nose and throat (ENT) specialist so he would be eligible for promotions. While serving as an ENT tech, he was selected for the Green to Gold program, which provides active-duty enlisted Soldiers an option to earn a degree and receive a commission as an Army officer in two years. After obtaining his B.A., Davis was commissioned as a medical service officer to command Army Reserve medical logistics companies, which required traveling and managing teams in Afghanistan, Africa, Albania, Bosnia, Iraq, Kosovo and Qatar.

When he decided to leave active duty, Davis joined the Army Reserve. While interviewing for civilian jobs, the Army activated him as a project officer to stand up two new Reserve area-support medical companies in New Mexico because of his unique experience. He juggled the responsibilities of his job with Reserve training, a stint in Qatar and a young family for three years … until his life was turned upside down. While working out one day, Davis broke his leg and, during treatment, doctors discovered he had a serious underlying medical condition. For Davis, the diagnosis meant his active-duty career was over, and he transferred to the Warrior Transition Battalion to make the shift to civilian life.

Enter the Army Acquisition Workforce.

During a 16-month internship, Davis tried his hand at contracting. When he made the transition from Soldier to civilian, he joined the Mission and Installation Contracting Command (MICC) at Joint Base San Antonio-Fort Sam Houston (JBSA-FSH), Texas, as a contract specialist for the energy and environmental division. There, he focused on contracts for environmental remediation projects at numerous Army depots across the United States. He also supported cooperative agreements with civilian organizations, such as Ducks Unlimited, to create buffer zones between military facilities and civilian property. He transferred to the MICC-FSH Installation Support Division to work on more complex and varied requirements but, still, Davis had a desire to take his services to the next level. He wanted to gain experience in the formal source selection process, which competitively negotiates contracts valued at $10 million or more.

Davis got his wish. He transferred to the command's Installation Readiness Center (IRC) Full Food Service Division and landed an assignment worth $222 million. "It was the largest food services contract the center had in two years," he said. The division serves all 50 states and procures a wide range of food services, including dining facility attendants, cook support, cashiers, bussers, cleanup, facility management and more. The contract, which he worked to adjust to $109 million, was for dining services and facilities at Fort Lee, Virginia. After that, he supported similar food services contracts for Fort Carson, Colorado, and Fort Devens, Massachusetts.

VITAL SERVICES
Davis at the MICC-FSH Installation Readiness Center in San Antonio, where he is part of a team that provides contracting support for Army dining facility food services. (Photo by Ryan L. Mattox, Mission and Installation Contracting Command Public Affairs)

"We opened a new dining facility at Fort Devens for the first time in 20 years," Davis said. "Previously, they had local restaurants provide catering and even used rations to feed people. As a 19-year Army veteran, I know how important it is to have meals that are good for you and taste good. I like being part of the team that provides contracting to support the force with the best dining facility food services possible."

The best part about the assignment for Davis was exposure to the source selection process. "I had zero experience doing source selections," he said. "It was intimidating because I was told they are a big deal with opportunities for contractors to protest." He got through this critical phase of the pre-award procurement process, ending up with a contract that represented the best value. "It was good to get the first one out of the way," he added. "Now, I am not intimidated, and I am more comfortable awarding contracts."

The process is extensive, starting with a requirements package from the installation that describes the number of dining facilities needed, statistics on food consumption and the volume of people the facilities support. "We build a solicitation that details the requirements and location, outlines instructions for vendors to submit proposals, and describes how they will be evaluated," Davis said. After vendors submit proposals, he involves small business, legal and technical specialty teams to evaluate them, drawing down the contenders to the lowest price, technically acceptable proposals. Then he prepares and presents his rationale during the source selection process to determine the winner, conducts negotiations and builds the contract. "So far, the source selection authority has not disagreed with any of my recommendations," Davis said.

The request-to-award timeframe for these indefinite-delivery, indefinite-quantity food services contracts is 15 to 18 months, but Davis and his colleagues are hoping to get that down to 12 months. He is part of the IRC's effort to streamline the major contracting process by shifting to a category management model. Category management is the practice of buying common goods and services as an organized enterprise to improve the efficiency and effectiveness of acquisition activities. The aim is to standardize contract requirements for food services and build templates that the contracting team can tailor to individual installation needs. "We have done this type of contracting for years and can show customers what works and doesn't work, getting to a better product more quickly," he said.

Recently, Davis received a promotion within the IRC to be a contracting team lead for base operations, where he will serve as a contracting officer and lead a team of five people. He is studying to obtain a warrant so he can obligate government funds up to $50 million, and the challenge suits him just fine. It is helping him establish a lifelong career in the San Antonio area, which was his goal when he transitioned out of the Army so he could remain close to family.

"The best advice I ever received was from my first trainer during my internship at MICC-FSH," Davis said. "He told me that acquisition is a really good job because there are 20 different organizations that have the contracting career series in the San Antonio area alone. He also said that it's a great career field, and I won't ever have to worry about having a job." Davis agrees. "There is good career progression in acquisition, and I love it that I can support Soldiers and civilians," he said.

—TERESA MIKULSKY PURCELL

OCCUPATIONAL HAZARD
After her son was killed during a late night standoff with police, Adina Peyton was inspired to start a nonprofit organization to provide mental health services to first responders who experience trauma on the job. (Photo by Getty Images)

MISSION *of* CHANGE

After Adina Peyton lost her son in a police shooting, she found a new purpose—supporting first responders who experience trauma.

by Ellen Summey

Rapid mood swings, paranoia, increased agitation, abusive behavior, risk-taking, inability to perform basic daily tasks, loss of touch with reality—these are some of the warning signs of an acute mental health crisis. It is estimated that one in five adults in the U.S. lives with some form of mental health disorder, and the symptoms may vary widely, depending on the particular diagnosis. When those people don't receive adequate treatment or support—and even sometimes when they do—some may eventually spiral into a full-blown mental health crisis. If a bystander or witness dials 911 and first responders haven't been trained to safely and appropriately intervene, the results can be tragic.

SIGNS OF TROUBLE

It was a Friday afternoon when Adina Peyton, a longtime instructor at the U.S. Army Acquisition Center of Excellence in Huntsville, Alabama, realized that her son Brad Pugh was struggling. Pugh, 41, had come to spend the weekend with his mom, and it didn't take her long to see that something was bothering him. "I noticed that he was not right on Friday, but by Monday, he was manic. 'Mom, they're out there. Mom. Mom,' " she recalled him saying. Pugh had struggled with substance abuse and mental health disorders for years, but he had built a successful plumbing business and was residing in a sober living environment nearby at the time. Things had been looking up, but Peyton said a family issue had seemed to precipitate a sudden mental decline for Pugh.

"Brad, I've got to work," she told her son repeatedly, as he paced in and out throughout the day. Peyton had started teaching a new online course from her home that Monday. By

the end of the workday, she had become frustrated by his interruptions and asked him to leave. When Peyton went to bed that night, she had no idea that her son had taken her unloaded handgun and climbed onto the roof of a local restaurant, where he would soon have a standoff with police.

"He took my pistol, which wasn't loaded and hadn't been since I bought it, and he climbed up on top of Ted's Bar-B-Q. As I was sleeping, there were camera crews from three different news stations—the whole neighborhood was cordoned off. He was up on the roof, in the cold, probably wondering where I was," she said in an interview with Army AL&T.

Police knocked on her door at around 1:30 a.m. Nov. 17 to tell her what was going on, but Peyton said officers asked her not to go out to the scene, perhaps fearing that could worsen the situation if Pugh was angry that she asked him to leave her home earlier. So she waited. When the police came back to her house about 90 minutes later, Peyton said they told her that her son had been involved in an accident. "When they stammered and told me what happened, I said, 'What do you mean, there was an accident?' [The officer] said, 'Ma'am, there will be a complete investigation.' In that moment, it hit me. 'Oh, no. I'm going to have to fight this fight.' "

TELL THE STORY
Peyton sits with a sign she made to share the story of her son's death during a mental-health crisis in November 2021, in Huntsville, Alabama. (Photo courtesy of Adina Peyton)

MENTAL HEALTH RESOURCES

The U.S. Army and DOD provide a number of mental health resources for service members, civilian employees, veterans and family members. In the case of any potentially life-threatening mental health emergency, **dial 911**. For emotional distress or suicidal thoughts, contact the 988 Suicide and Crisis Lifeline. **Call or text 988** or go to **988lifeline.org**.

- The Real Warriors Campaign aims to end the stigma associated with mental health care and provides free, confidential resources for those who have a mental health concern. Go to www.health.mil/RealWarriors.
- The Psychological Health Resource Center is available 24/7 and trained staff can help with access to mental health care and community resources. Go to www.health.mil/PHRC or call 866-966-1020.
- The Military Crisis Line provides text-messaging services and online chat for all service members and veterans. Call 1-800-273-8255 option 1, send a text to 838255, or go to https://www.veteranscrisisline.net/get-help/chat.
- TRICARE offers mental health care to all enrollees. Go to https://www.tricare.mil/CoveredServices/Mental/GettingMHCare.
- Military OneSource can provide access to confidential mental health care providers in your community. Go to www.militaryonesource.mil or call 1-800-342-9647.

For additional resources for service members, veterans and their families, go to https://www.mentalhealth.gov/get-help/veterans.

A PLEA FOR ACCOUNTABILITY

What came next was all over the news in Huntsville. Peyton learned that her son had been shot 16 times by seven officers while attempting to run from the police that night. When local officials didn't answer her questions, she showed up and gave the City Council a piece of her mind. She made signs. She put up billboards. She marched on Washington. She told Pugh's story to anyone and everyone who would listen, and she demanded accountability.

One day, about eight months after the shooting, as Peyton drove through her neighborhood and passed the place where Pugh was killed, she felt a familiar rush of emotions and thought, "This must be what PTSD feels like." At that moment, she said, "Something clicked and I thought about those seven police officers who shot my son, and I wondered how they processed that, and how they felt when I was on the news all the time, pleading, crying and demanding transparency."

That was the start of something new for Peyton. She began thinking of the Soldiers she had taught over the years. Many of them had come to her classroom very shortly after returning from a war zone and she noticed some who struggled with trauma. She knew that many Soldiers enter law enforcement after leaving active duty, and as the two groups became enmeshed in her mind, she began to visualize her new mission. She decided to call a truce.

> One in five adults in the U.S. lives with some form of mental health disorder, and the symptoms may vary widely, depending on the particular diagnosis.

GRAMI FUTURE

Peyton, left, founded a nonprofit organization, "Getting Real About Mental Illness," or GRAMI for short, in January 2022 to provide mental health services to first responders. She and Don Webster, the community relations officer for Huntsville Emergency Medical Services Inc., spoke at a press conference in Hunstville in July, where they shared their hopes for the future of GRAMI. (Photo by Steve Babin)

For her next step, Peyton "made amends with everyone at the City Council," and founded a nonprofit organization to provide mental health services to first responders.

A NEW START

Peyton named the fledgling organization "Getting Real About Mental Illness," or GRAMI for short. Founded in January 2022, it aims to "change the cultural mindset toward and the treatment of those with mental illness by providing education and financial resources to first responders who interact with them and destigmatizing mental illness among the public," according to the GRAMI website.

Peyton, as executive director, has worked nonstop to build bridges within the first responder community, drafting agreements with private mental health care providers and securing funding to cover treatment up to $1,000 for those in need. She held a press conference in July, officially launching the nonprofit and sharing her vision of "helping the people that are taking care of us."

Don Webster, the community relations officer for Huntsville Emergency Medical Services Inc., also spoke at the press conference and shared his hopes for the future of GRAMI. "There's not a lot of help out there [for first responders]," he said. "I hope

HOW TO HELP

The National Council for Mental Wellbeing offers a five-step action plan for bystanders who need to intervene in case of a mental health or substance abuse challenge. The organization offers free training and certification in its Mental Health First Aid course, which is a one-day session available in many locations across the country. The five steps in the plan can be implemented in any order, and they are as follows:

A – Approach, assess for risk of suicide or harm. Keep the person's privacy and confidentiality in mind, but try to find a way to start the conversation. If the person does not wish to talk to you, encourage them to confide in another trusted person.

L – Listen nonjudgmentally. It's important to let the person share without being interrupted unnecessarily. Try to listen with empathy, even if the person says things with which you do not agree.

G – Give reassurance and information. Be prepared to offer a sense of optimism and some helpful facts after the person shares with you.

E – Encourage appropriate professional help. Offer to help the person find which types of professional help may be available to them. The sooner they can get the appropriate support, the better their chances of a full recovery.

E – Encourage self-help and other support strategies. These are the other resources beyond professional care. Help them think through their own personal support system, try to identify local programs that may be relevant, and talk about creating a self-care plan.

Of course, these steps may not be effective for everyone or every situation. If a person is behaving erratically, or is thinking of self-harm or harm to others, call 911 immediately. To find a Mental Health First Aid course near you, go to **https://www.mentalhealthfirstaid.org/take-a-course**.

this will provide more in-depth counseling and opportunities for them to debrief, defuse or whatever the case may be."

CONCLUSION

"This was my destiny," Peyton said of founding the nonprofit. "It all comes back to the men and women I've served for 41 years—I've seen the damage, the trauma they've experienced, and I've seen the detrimental impacts on their families, careers and education. When it happened to me and I felt that trauma, after trying to process and grieve, I was able to see that I could do something about that for first responders."

Meanwhile, Peyton has continued teaching at the Army Acquisition Center of Excellence, and said this experience has changed the way she interacts with her students. "There is no fear anymore. I always try to demonstrate in my classes that family is truly first. I like to have a good time, and if you ask anyone I ever taught, they'll vouch for that," she chuckled. "I try to bring real life into the classroom and I teach with storytelling. Now, especially, I remind my students to look out for each other, and that it's OK to talk about when you're not doing well."

*For more information about GRAMI, go to **https://gramius.org** or email **Gettingrealaboutmentalillness@gmail.com**.*

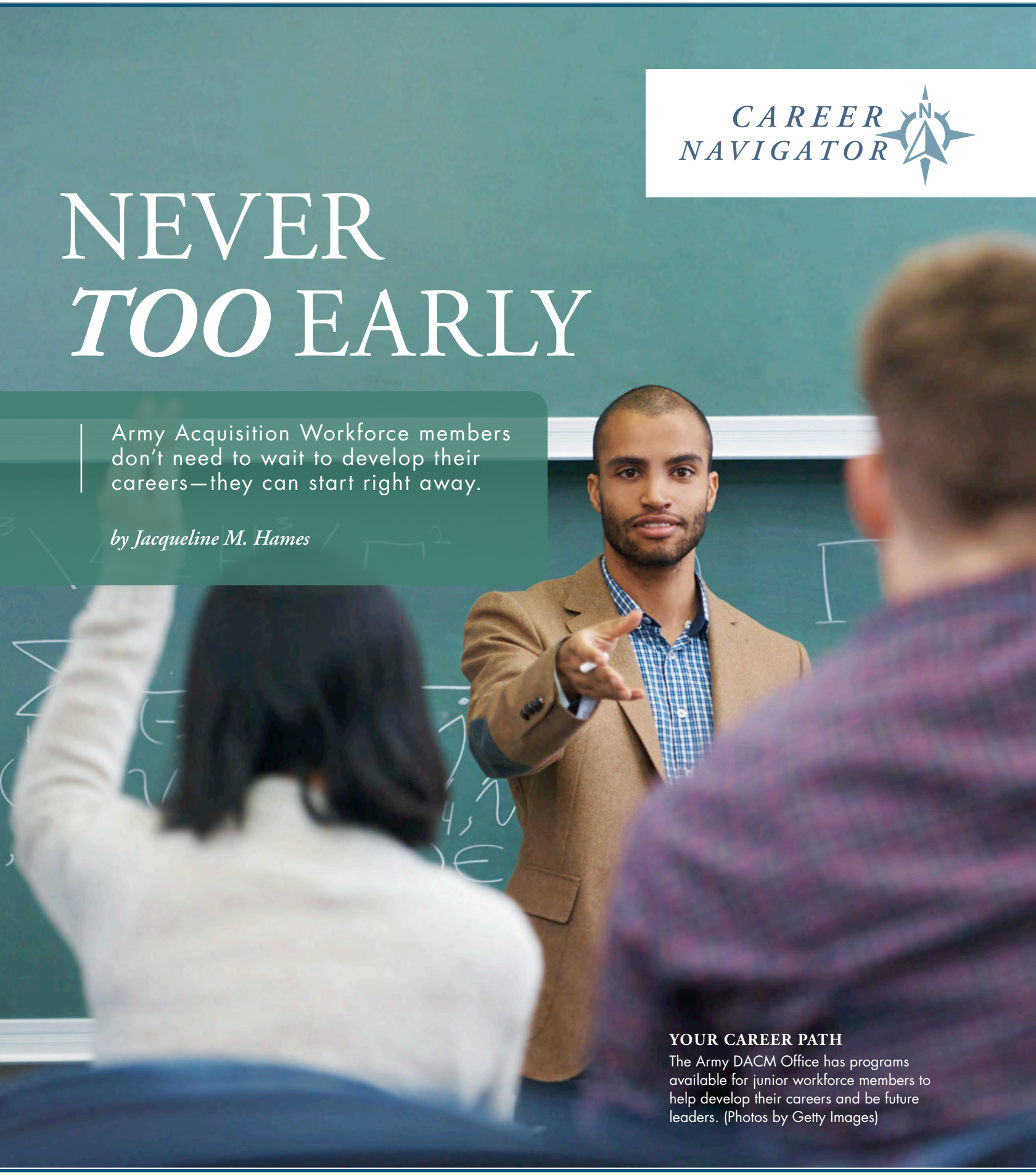
ELLEN SUMMEY provides contract support to the U. S. Army Acquisition Support Center at Fort Belvoir, Virginia, as a communications project manager for SAIC. She holds an M.A. in human relations from the University of Oklahoma and a B.A. in mass communication from Louisiana State University. She has earned the Accreditation in Public Relations and Military Communication, is certified as a Project Management Professional, and has more than 18 years of communication experience in both the government and commercial sectors.

CAREER NAVIGATOR

NEVER *TOO* EARLY

Army Acquisition Workforce members don't need to wait to develop their careers—they can start right away.

by Jacqueline M. Hames



YOUR CAREER PATH
The Army DACM Office has programs available for junior workforce members to help develop their careers and be future leaders. (Photos by Getty Images)

Beginning a new career can be an intimidating process. As with any milestone change in life—graduate school, marriage, children, moving to a new location, etc.—there's quite a bit to plan. What do you want out of your job? How do you want to contribute to the company? What things are required or expected of you?

Navigating these questions and the inevitable learning curve that comes with new transitions is difficult, but it isn't something civilian Army Acquisition Workforce members need to do alone.

The Army Director of Acquisition Career Management (DACM) Office has programs available for junior workforce members to help develop their careers: The Acquisition Leadership Challenge Program-Beginnings (ACLP-B), the Defense Civilian Emerging Leader Program (DCELP) and the Acquisition Tuition Assistance Program (ATAP).

JUST AS YOU START

Starting any new career is a little nerve-wracking. Learning the office culture, business rules and other implied codes of conduct can be difficult. That's where the ACLP-B comes in—it is a two-day course designed to help new hires in the GS-07 to -11 range transition into career civil service under the general DOD umbrella and Army acquisition. The program's goal is to mitigate the frustration and misunderstanding that new civilians may experience when entering the workforce, said Darrell E. Whitehurst, ALCP-B program manager in the DACM Office, Workforce Development and Engagement Division.

The program is focused on building a "solid foundation for effective and efficient acclimation into the workforce," he said. It provides participants with some basic "rules of engagement" to give them an idea of the social, cultural and legal expectations within the workforce—including differences between the generations on office-appropriate attire, communication styles and behavioral guidelines.

"The ALCP-B training will ensure that people can communicate with their supervisors through a common language and help develop leaders who value individual styles and behaviors, creating a future leadership corps more capable of critical thinking and problem-solving, teamwork and collaboration, and creativity and innovation," Whitehurst said. Participants complete three credentialed assignments during the course that will provide insight on how to apply their unique personalities to multiple leadership development opportunities, he added.

The DACM Office ALCP program manager coordinates directly with organizational acquisition points of contact and acquisition career management advocates to recruit participants, Whitehurst said. Organizational acquisition points of contact are an "on-site resource for acquisition information. They are trained to respond to questions from their organizational acquisition personnel," according to "Managing Your Acquisition Career."

ACLP-B is one part of the larger ACLP, and as workforce members progress, they can sign up for Parts I, II and III to help develop leadership skills at every phase of their career. Reach out to your lead organizational acquisition point of contact for course offering dates of interest and nomination.

ONCE YOU'RE SETTLED

Good leaders share a few consistent qualities: They are self-aware, communicate clearly and never stop learning. And if a workforce member would like to achieve a leadership position, it is important to cultivate those traits—DCELP can assist with that.

DCELP is a leader development program for GS-07 to -12 civilians (and equivalent broadband) that consists of four one-week-long immersive seminars that share team building strategies, enhance communication skills, promote self-awareness and strengthen leadership capabilities. "The program focuses on five learning objectives: Know self, express self, build teams, lead people and understand the DOD," said Kristine Faria, an acquisition education and training manager in the DACM Office, Workforce Development and Engagement Division. Participants will

Not sure who your organizational acquisition point of contact is—or where to find out?

We're here to help. Check out the listing of points of contact on milSuite (CAC-enabled):
https://www.milsuite.mil/book/docs/DOC-640236.

Have other burning questions about career development training? Ask an acquisition career manager on the Career Acquisition Management Portal (CAC-enabled):
https://apps.asc.army.mil/camp/index.cfm?fuseaction=support.helpRequest.

engage in reflection exercises, mentoring, peer and individual coaching, team and individual presentations, leadership assessments, networking opportunities, experiential activities and a final capstone project.

"DCELP is a special program. Participants include Army civilians as well as civilians from the other services and from defense organizations," Faria said. "This diversity allows participants to network with other emerging leaders from across DOD." Two cohorts are offered each year—one for the acquisition, human resources and financial management functional communities and one for all other functional communities. "Being part of this special cohort [acquisition, human resources and financial management] provides Army acquisition participants the opportunity to build relationships not only with other emerging leaders, but specifically with other leaders in the defense acquisition community," she said.

Faria emphasized the importance of the application process and course prerequisites when workforce members are considering the DCELP program. "DCELP applicants must have completed the appropriate Civilian Education System [CES] course for their grade. For GS-07 through GS-09 or equivalent pay band, the course is CES Basic. For GS-10 through GS-12 or equivalent, the course is CES Intermediate," she explained. "Every year we have people who want to attend DCELP, but they can't apply because they're missing the CES prerequisite. If you're interested in developing your leadership skills, now is the time to talk to your local training officers about getting a seat in a CES course."

FUTURE LEADERS
Junior civilian Army Acquisition Workforce members who would like to achieve a leadership position can get assistance and education through DACM Office programs.

Every year, the DACM Office sends out notifications to workforce members that the program is open for application through social media, the DACM Hot Topics publication, and via organizational acquisition points of contact and the acquisition career management advocates, she added. The next application window will open in spring 2023.

"Upon completion of the program, the intention is for participants to return to their organizations with tools and strategies that they can use to successfully manage the challenges they will encounter as future DOD leaders," Faria said.

CONCLUSION

As workforce members progress through their careers, it may be helpful to take courses or earn certifications related to their jobs for a more in-depth look at their area of interest. But sometimes the pursuit of higher degrees can be cost prohibitive. ATAP can help civilian employees—as well as Functional Area 51 Contracting employees and noncommissioned officers—fund their education.

According to the website, ATAP will provide funding of $2,000 a course, up to $12,500 for a master's degree and $10,000 for a bachelor's degree, or individual business or acquisition-related courses per fiscal year. Fees exceeding those limits are the responsibility of the ATAP participant. Be sure to monitor the website for the upcoming application announcement.

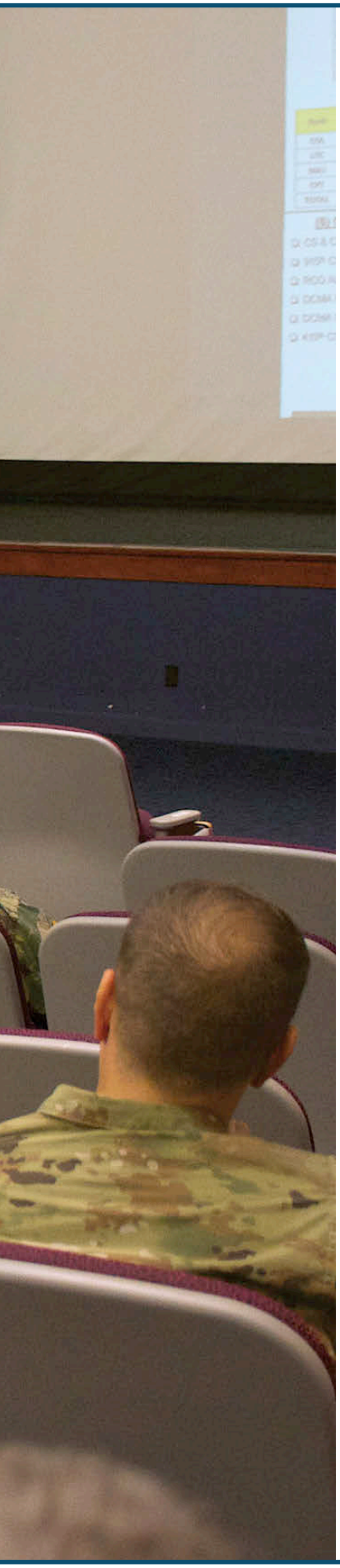
Workforce members who create a solid foundation for their career as a junior employee will be better equipped to achieve their career goals and navigate what can sometimes be a confusing workplace environment. Make sure you get a head start and consider the DACM Office's junior programs.

For more information on DACM civilian programs or acquisition career development opportunities, go to ***https://asc.army.mil/web/career-development/civilian****.*

JACQUELINE M. HAMES is an editor with Army AL&T magazine. She holds a B.A. in creative writing from Christopher Newport University. She has more than 10 years of experience writing and editing news and feature articles for publication.

MOVING FORWARD

Maj. Gen. Rodney Faulk, commander of the 99th Readiness Division and the Army Reserve senior proponent adviser for acquisition, talks to a Soldier during the question-and-answer session of the Acquisition Training Summit on Aug. 19 at Fort Belvoir, Virginia. (Photos by Staff Sgt. Christopher Tobey, 356th Broadcast Operations Detachment, U.S. Army Reserve)



BACK IN THE SADDLE

Guard and Reserve acquisition Soldiers return to in-person training to begin a new, Back-to-Basics era.

by Spc. Antonio C. Rodriguez

More than 200 Army Reserve and National Guard Soldiers from acquisition units across the United States and from forward-deployed locations, attended the hybrid 2022 Reserve Component Acquisition Training Summit, Aug. 19-21. It was the first time in three years that this annual training event was conducted in person, as a result of the COVID-19 pandemic. Over 130 Reserve and Guard Soldiers attended the event and more than 60 participated virtually.

Participants received career-enhancing training that covered a wide variety of acquisition-related topics, including educational and credentialing policy, project management and branch-specific modernization plans. The mass training event was intended to ensure that best practices and resources were shared across the acquisition career field.

"Acquisition Soldiers work behind the scenes developing the next capability of the warfighter," said guest speaker Scott Greene, chief of the Strategies and Communications Division for the Director of Acquisition Career Management Office at Fort Belvoir, Virginia, where the annual summit takes place. "Opportunities like this summit bring Soldiers together to figure out how they can enable that warfighter."

Greene, who briefed about acquisition credentialing under Back-to-Basics, informed Soldiers about the changes going on in the defense acquisition framework. New Defense Acquisition Workforce Improvement Act certification standards took effect Feb.1, simplifying certification levels and more closely tying them to position requirements versus employee grade.

MODERN ARMOR

Capt. Kim Pierre-Zamora, right, a reservist attached to the Program Executive Office for Soldier, briefs prototypes of next-generation body armor during the 2022 Reserve Component Acquisition Training Summit held in August at Fort Belvoir, Virginia.

"Acquisition certification training is really moving to lifelong learning and elective learning," Greene said. "The responsibility relies more on the individual, as well as supervisors, to know specifically what [courses] they need to take to get certified."

BACK TO BASICS

While the overall objective of Army acquisition hasn't changed, the need to modernize the career field and the systems was a theme throughout the conference.

"In the Army Reserve, we only have 300 acquisition Soldiers [enlisted and officer]," said Col. Keith G. Harley, acquisition adviser to the chief of the Army Reserve and the director of the Acquisition Integration Office. "It's a small community," he said. "Bringing them all together in one place is very vital to their career development."

> "Do the very best you can with your present job, be a good teammate and you'll be in demand."

Acquisition professionals (51A and 51C military occupational specialties, acquisition career field) support virtually every part of the Army. "From cutting the grass to feeding the Soldier, to developing the weapon systems for the warfighter, it falls under the acquisition umbrella," Harley said. "We may not be boots-on-the-ground lethality … but everything the Soldier wears or uses, acquisition is touching it first."

MODERNIZATION FOR 2035

Acquisition Soldiers are involved in the entire modernization process, from product and contract development to awarding the contract and fielding the equipment to the Soldiers. This positions acquisition professionals in a particularly vital role for

the 2035 Army Modernization Strategy. "Acquisition Soldiers are helping to define what the requirements are—what do those weapons systems look like, where are those weapons systems going," Harley said. "Start to finish, and cradle to grave."

Some of the systems associated with the Army's modernization strategy that were showcased at the summit included the new Modular Scalable Vest, the Ballistic Combat Shirt and the Ballistic Pelvic Protector. "We are scaling back the amount of weight we're putting on the Soldier," said Capt. Kim Pierre-Zamora, a reservist attached to Product Manager Soldier Protective Equipment at the Program Executive Office for Soldier. "We're also giving them that same or increased level of protection."

Pierre-Zamora presented prototypes of the next generation of body armor and outlined the improvements of the new systems. She described how previous versions of body armor often limited the Soldier's movement and made it harder for them to perform their combat roles. "Essentially we made the Soldier a turtle with the IOTV [Improved Outer Tactical Vest] and the IBA [Interceptor Multi-Threat Body Armor System]," Pierre-Zamora joked. "We covered them so much it caused a lot of musculoskeletal issues." Those issues often lead to Soldiers not wearing their body armor properly or sometimes not even wearing it at all.

The Modular Scalable Vest (MSV) can be more quickly and precisely adjusted to fit Soldiers better than the IOTV. The shoulders of the new vest provide unrestricted arm movement while still protecting the Soldier from shrapnel. The Ballistic Pelvic Protector is easier to connect, disconnect and store out of the way. "It's that purpose-driven design," said Pierre-Zamorra. "We're trying to make sure our protective equipment works *with* the Soldiers instead of against them."

One unique feature of the new body armor is that it allows the Army to repurpose some of the ballistic plates from the previous versions. "When we're looking at new equipment, we're making sure that it works for Soldiers and the Army's budget," said Pierre-Zamora. There are many as-yet unused IOTVs in Army storage centers across the country. "We're cutting down the unused and test-ready IOTV plates into the MSV shape that will fit in the new MSV shell," Pierre-Zamora said. "When we reuse equipment that has not been used and does not ballistically degrade, we are saving the Army millions of dollars."

CONCLUSION

In addition to ensuring that current best practices and resources are shared across the acquisition career field, as the Army transforms and modernizes, "One of the things about the Acquisition Training Summit that is so valuable to the acquisition Soldier is networking," said Harley. "Networking with peers, networking with senior leaders … that linkage is just critical."

"We only do this once a year," said Maj. Gen. Rod Faulk, commander of the 99th Readiness Division and the Army Reserve senior proponent adviser for acquisition. "It's a great opportunity for professionals to network and share their best practices. Also, to enhance their knowledge base in what resources are available and what techniques are successful." Faulk led one of the key sessions on the first day of the conference, introducing the summit and outlining expectations for the Reserve component workforce. He advised Reserve Soldiers to think big and keep improving every day.

"One of the things we talked about was leaning forward and taking new challenges," said Faulk. "Not sitting back and being comfortable in the job that you're in today. Do the very best you can with your present job, be a good teammate and you'll be in demand because you're always giving your best effort." He encouraged acquisition Soldiers to use their training to acquire what they need to be successful on the battlefield. If the Army is going to be able to meet its mission in the new multidomain environment, Faulk said, "We need these folks to be 1000 percent on target!"

"Our motto in the Reserve is 'Ready Now, Shaping Tomorrow,' " he said. "We have to be ready now. At the same time, we have to evolve our concept of warfare and make sure that we're able to meet future foes on a future battlefield and dominate."

For more information, contact Col. Keith G. Harley, Office of the Chief of Army Reserve, Director of Acquisition Integration Office, ***keith.g.harley.mil@army.mil****.*

SPC. ANTONIO C. RODRIGUEZ, of Dallas, is assigned to the 356th Broadcast Operations Detachment. He joined the Army Reserve in 2017 as a mechanic. He re-enlisted and completed the Defense Information School in March as a 46S military occupational specialty public affairs specialist.

FRONT MEANS BACK, BACK MEANS FRONT
The backwards bike is no easy task for the TWI fellows during the Deloitte Greenhouse tour on Sept. 21 at the Deloitte offices in Rosslyn, Virginia. (Photos by the author)

DELOITTE DAY

Training With Industry fellows learn how professional services company does business.

by Rachel Berry

During the summer of 2022, several Army acquisition officers moved across the country and exchanged their uniforms for business suits—and perhaps a few T-shirts. This was part of a year-long assignment working in organizations like Rolls-Royce, Deloitte, Ford Motors, Salesforce, Boeing and other organizations—all part of Army acquisition's Training With Industry (TWI) program. The TWI program is a one-year work-experience training program designed to take selected officers out of the military environment and expose them to the latest commercial business practices, organizational structures and cultures, technology development processes, and the latest corporate management techniques.

These acquisition officers came together on Sept. 21 at the Deloitte offices in Rosslyn, Virginia, to take a deep-dive look into how the company operates as a professional services firm, providing audit and assurance, consulting, risk and financial advisory, risk management, tax and related services. The firm's work includes responding to industry and government's need for solutions on complex problems, including how 5G would impact both sectors. Since the TWI fellows are placed at different types of organizations, including manufacturing, technology products, etc., the day was an opportunity to discover more about this specific business sector. The event was also designed to provide opportunities for the TWI fellows to network with one another. Through these conversations, best practices were shared on how the TWI fellows have navigated their program so far, including how to network within their company and what kind of work they have observed.

Lt. Col. Aron Hauquitz, the TWI fellow placed at Deloitte, coordinated the day along with members of the Deloitte team. The agenda included conversations with senior company leaders about conducting business with the government, a "business chemistry" exercise,

presentations on human capital and technology trends, and tours of the company's interactive meeting centers for human capital and technology challenges.

Throughout the morning, the TWI fellows learned about Deloitte's work from leaders across their defense organization. The company hosted a panel of five former military professionals who now lead projects at Deloitte, to discuss how industry and government work together to solve problems. Maj. Bill Perez, one of the TWI fellows in attendance, found the panel very insightful. He said that it's "not every day you get to ask a senior leader for their opinion. It was a rare and good opportunity." He also noted that Deloitte was "in tune with the acquisition process and subsequent challenges that officers face, because of the complexity of the acquisition process."

Deloitte facilitated a work personalities exercise that's part of their Business Chemistry framework, a personality workshop designed by the company to guide teams on how to work together. The TWI fellows completed a pretest to slate them into one of the four personality types: Pioneer, Guardian, Driver and Integrator. The TWI fellows were then grouped according to their dominant type and completed an exercise as a team. The facilitator used this exercise to display how the personality types work and how different types can best work together. TWI fellow Lt. Col. Michael Keatley observed that the "exercise is beneficial to become more self-aware and can increase your ability to work with people different from you."

Every year, Deloitte conducts comprehensive surveys to capture and create reports on the current human capital and technology trends that industry can use to prepare for challenges and opportunities. Researchers shared insights with the TWI fellows and led discussions on how these topics will impact the TWI fellows' future command positions, including designing a solution by determining what outputs you want and then figuring what inputs can make that happen. Part of Deloitte's human capital trends initiative focused on how work has changed since the COVID-19 pandemic. The 2022 technology trends that are most affecting industry included data-sharing made easy, block

FELLOWS FORMATION
TWI fellows line up in front of the Veterans Wall on Sept. 21 at Deloitte in Rosslyn, Virginia.

chain and using artificial intelligence to enhance cybersecurity. Lt. Col. Jed Zaffke found the technology trends to be "the most interesting section of the day," as they are aligned to his TWI fellowship goal to learn how industry fosters innovation that can then be applied back to the Army.

Later in the afternoon, the TWI fellows toured two of Deloitte's interactive meeting spaces: the Deloitte Greenhouse and the Deloitte Cyber Internet of Things Lab. In the Greenhouse, tour guides demonstrated different meeting tactics that encourage creativity and problem-solving. One example included two bikes—one normal model and one designed backwards. When you pedal the second bike to go forward, it applies the brakes. If you turn to the right, it goes left. Every operation of the bike works in the opposite way one would expect. The TWI fellows got to take turns trying to ride the backwards bike, which demonstrated how hard it is to decondition our brains. Deloitte uses this backwards bike at the beginning of meetings to encourage people to come with open minds and not resort to solving problems the way you always have. This tour was Maj. Jon Talis' "favorite part of the day," as he aspires to bring "these best practices back to the (Army) organization" and encourage creative problem-solving in his future command.

The fellows have since returned to their TWI assignment location but, thanks to this engagement, they are now connected and will continue to network throughout their time in the program. They are expected to gather again in early 2023 for their midpoint trip and share what they have learned at their individual companies and take another deep dive into a different company. Once the TWI fellows complete their TWI assignment, they will return to the Army prepared to bring industry insight into their next assignment.

For more information on the Training With Industry program, go to ***https://asc.army.mil/web/career-development/programs/aac-training-with-industry****.*

RACHEL BERRY is a communications analyst at the U.S. Army Acquisition Support Center Office of the Director of Acquisition Career Management. She holds a master of professional studies in industrial/organizational psychology from the University of Maryland, Baltimore County and a B.S. in hospitality management from James Madison University.

IT'S JUST CHEMISTRY

Lt. Col. Aron Hauquitz, left, and Maj. Jonathan Talis, TWI fellows, work together as pioneers during the business chemistry exercise on Sept. 21 at the Deloitte offices in Rosslyn, Virginia.

DISCUSSIONS UNDERWAY

TWI fellows, from left, Lt. Col. Lenny James, Maj. Ben Hormann, Lt. Col. Ken Elgort and Lt. Col. Bart Brimhall, discuss leadership implications during the Human Capital Trends presentation on Sept. 21 at the Deloitte offices.

FULLY ENGAGED
Cheryl Bielamowicz, left, a systems engineer from PEO Soldier, represented the Army Acquisition Workforce at Branch Week. (Photos courtesy of Maj. Timothy Demerath, USAASC)

A WAR FOR TALENT

Army acquisition brings guns to compete for future talent at West Point's Branch Week.

by Lt. Col. Camille N. Morgan

Army branches competed for the attention of hundreds of cadets at the U.S. Military Academy at West Point's annual Branch Week, Sept. 6–9. The U.S. Army Acquisition Support Center's Director of Acquisition Career Management (DACM) Office and the Program Executive Office (PEO) for Soldier brought out the guns—prototypes—to the so-called war for talent. But only for display and informational purposes. DACM Office and PEO Soldier acquisition professionals engaged one-on-one with cadets sharing information and demonstrating equipment that provides a high-level overview of what impact a career in Army acquisition can have on the Army and on the warfighter.

CLEARING THE FIRST HURDLE

The U.S. Army is in a fight for talent, and acquisition has to compete with the Army's other career fields, or branches, and functional areas for a limited pool of talent. Because an Army Acquisition Functional Area 51 (FA 51) career cannot begin until the officer is in their sixth or seventh year of service—a hurdle that no other branch has to clear—participating in events like Branch Week at West Point is a first opportunity to plant the seed in the minds of future officers in hopes they will consider the profession later in their Army careers.

Indeed, a career in Army acquisition can be a long and fulfilling one. Opportunities run the gamut, from ensuring the delivery of quality capabilities and providing the right product or service to the right place at the right time, to working with joint and international

ON DISPLAY
Branch Week participants pose with the Next Generation Squad Weapons and the M16 rifle replacement displayed by PEO Soldier. Displays like this help plant the idea of becoming an FA 51 officer in the future.

partners as well as industry and academia to develop, acquire, deliver, sustain and safely dispose of weapon systems.

This year's Branch Week provided cadets access to the Army's 17 basic branches and three functional areas, including Functional Area (FA) 51, acquisition. Approximately 870 cadets engaged with Army acquisition professionals at the FA 51 booth and viewed examples of how the acquisition workforce supports modernization priorities at the Soldier level.

FINAL CHOICES

Branch Week marks the final opportunity for firsties (seniors or first class) to finalize their preferences, referred to as rankings, that will be used to place them into one of the 17 Army officer branches. Cows (juniors or second class) also spend the week talking to branches that interest them in order to start narrowing down their rankings. For plebes (freshmen or fourth class) and yearlings (sophomores or third class), the week is geared toward getting educated on their career options for the future.

The FA 51 presentations emphasized the vast number of opportunities in the

The U.S. Army is in a fight for talent, and acquisition has to compete.

THE LINEUP

The Soldier Lethality team brought squad weapons for display, including the Next Generation Squad Weapon rifle, Precision Sniper Rifle, Squad Designated Marksman Rifle, Multi-purpose Anti-armor Anti-personnel Weapon System recoilless rifle, and the M17/M18 handgun.

workforce for long-term career paths all the way to general officer, as well as master's and doctoral degree funding, managing multibillion-dollar DOD and Army acquisition programs, or leading contracting detachments, among many others. Acquisition offers dozens of assignment locations to choose from, as well as opportunities for continued service after the initial active-duty service obligation and post-captain key development assignment.

Thanks to equipment provided by PEO Soldier, cadets were drawn to the FA 51 booth to talk and ask questions about all of the small arms systems on display, particularly the Next Generation Squad Weapons—the replacements for the M4 carbine and the M16 rifle, as well as the M249 squad automatic weapon light machine gun, and the Fire Control System.

The static displays piqued Cadets' interest and provoked conversation. That was especially true of the Next Generation Squad Weapons introductory chart. Cadets showed most interest in the M4A1 rifle's replacement, as many are closely following the timeline for this critical Army modernization effort, which supports the Army's Soldier lethality priority and the Army's close combat forces.

The ability to share information about these systems and put their development, testing and acquisition into perspective as it relates to Army acquisition provided context to the Cadets as they consider Army acquisition as a future career choice in the Army.

CONCLUSION

Officers are accessed into FA 51 through a semiannual voluntary transfer incentive program (VTIP) board at their sixth or seventh year of service. Officers may be accessed before completion of their key development assignments through early accessions into the talent-based career alignment (TBCA). During TBCA or early assignment placement, the Army agrees to place an officer in FA 51 upon successful completion of a follow-on assignment and key developmental assignment. Critical to accession as a FA 51 officer is demonstrated successful leadership performance in the appropriate key developmental position in the grade of captain, as outlined in the Department of the Army Pamphlet 600-3, "Officer Professional Development and Career Management."

For more information about career opportunities in Army acquisition, go to ***https://asc.army.mil/web/recruitment****.*

LT. COL. CAMILLE N. MORGAN is a proponent officer for the Proponency and Analysis Division at the Army Acquisition Center of Excellence. She is instrumental in Army talent management and military recruiting. In support of the Army's people first philosophy, she has undertaken the most comprehensive reform of military recruiting through Talent Based Career Alignment and Direct Commissioning for the Army Acquisition Workforce. She earned an M.S. in management and leadership from Webster University and a B.S. in business marketing from Morgan State University. She holds the DAWIA Professional certification in contracting.

ON THE MOVE

U.S. ARMY ACQUISITION SUPPORT CENTER

ARMY AL&T EDITOR HONORED IN RETIREMENT

Margaret "Peggy" Roth, writer and editor for Army AL&T magazine, retired in the fall, following a distinguished career in journalism. Roth began her career in 1978, writing about federal housing and urban development policy news in Washington, and then covered topics from local government to regional health care for daily newspapers in Virginia. Thereafter, she spent eight years with Army Times Publishing Co., where she grew from staff writer to special sections editor, responsible for the magazine and tabloid inserts for Army Times, Navy Times and Air Force Times. In 1997, Roth took her skills to The Washington Post, where she worked as a copy editor and writer for more than a decade, winning industry awards for her headlines and contributing periodic feature articles for the Post as well.

Roth joined the U.S. Army Program Executive Office for Soldier as a contract writer and editor for SAIC in 2008. She found her home with the United States Army Acquisition Support Center (USAASC) in 2010, where she has since worked as senior editor and writer for Army AL&T magazine, supporting the mission of the assistant secretary of the Army for acquisition, logistics and technology. Her many professional accolades include multiple reporting awards from the Virginia Press Association and the Maj. Gen. Keith L. Ware Award for best news feature article. In December, Roth was awarded the Commander's Award by USAASC Director Ronald Richardson Jr. in recognition of her outstanding contributions to the organization during her tenure. (Photo by USAASC)

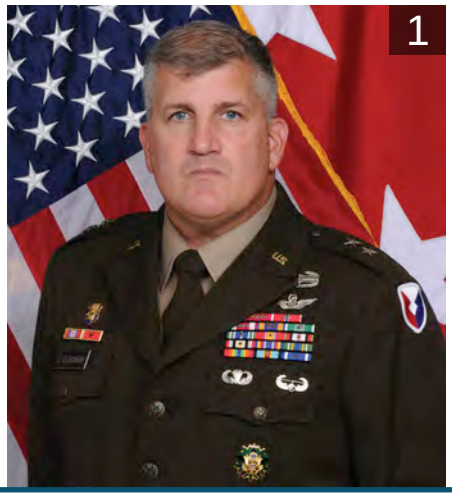
U.S. ARMY AVIATION & MISSILE COMMAND

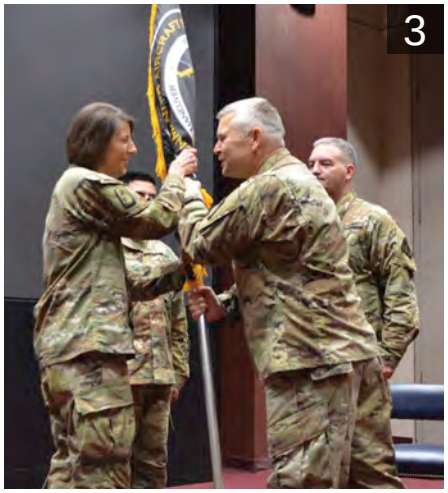
1: NEW AMCOM COMMANDER WELCOMED

Maj. Gen. Tom O'Connor assumed command of the U.S. Army Aviation and Missile Command from outgoing commander Maj. Gen. Todd Royar on Aug. 12. O'Connor previously served as the deputy commanding general of operations for Eighth U.S. Army in South Korea, and as the deputy commander of the U.S. Army Aviation Center of Excellence. He was commissioned a second lieutenant in Army Aviation in 1994.

2: NEW CHIEF OF STAFF FOR AMCOM

Col. Aaron Martin assumed duties as the U.S. Army Aviation and Missile Command chief of staff in August, replacing outgoing chief of staff Col. David Almquist. Martin previously served in the 2nd Combat Aviation Brigade in the Republic of Korea. His leadership roles have ranged from platoon leader to brigade commander.





PROGRAM EXECUTIVE OFFICE FOR AVIATION

3: CHANGE OF CHARTER AT UAS

Col. Danielle Medaglia, left, accepts the Unmanned Aircraft Systems (UAS) project office colors as the incoming project manager, from the Program Executive Officer for Aviation Maj. Gen. Rob Barrie during a Sept. 15 ceremony at Bob Jones Auditorium on Redstone Arsenal, Alabama. The outgoing project manager, Col. Scott Anderson, right, received the Legion of Merit from Barrie in recognition of his accomplishments while serving as the UAS project manager since September 2018. (Photo by Paul Stevenson, PEO Aviation Public Affairs)

PROGRAM EXECUTIVE OFFICE FOR COMBAT SUPPORT & COMBAT SERVICE SUPPORT

4: PM FP LEADERSHIP CHANGE

Kyle M. Bruner, right, assumed leadership of the project manager for Force Projection (PM FP) in a July 5 ceremony held at Detroit Arsenal, Michigan. The outgoing project manager, Col. Shane M. Sullivan, not pictured, has been assigned to the U.S. Army Acquisition Support Center, where he serves as deputy director. The program executive officer for Combat Support and Combat Service Support, Brig. Gen. Samuel L. "Luke" Peterson, center, presented the charter. Shon Severns, left, deputy PM FP, served as acting PM until Bruner assumed leadership. (Photo courtesy of U.S. Army Garrison-Detroit Arsenal)

5: CHANGE OF CHARTER AT PATRIOT

Lt. Col. John A. Dickson, the new Patriot Ground Support Equipment product manager, accepts the charter from James "Jay" Edmonds, deputy project manager, Integrated Fires Mission Command Project Office, during a change of charter ceremony on July 25 at Redstone Arsenal, Alabama. Dickson assumes the responsibilities from outgoing project manager George J. Mitchell. (Photo by Nathaniel T. Pierce, PEO MS)

PROGRAM EXECUTIVE OFFICE FOR ENTERPRISE INFORMATION SYSTEMS

1: CHANGE OF CHARTER AT IPPS-A

Ross Guckert, left, program executive officer for Enterprise Information Systems (PEO EIS), presented Col. Robert "RJ" Mikesh with the charter for the Integrated Personnel and Pay System – Army (IPPS-A) project management office at a change of charter ceremony on Sept. 30 at Fort Belvoir, Virginia. Mikesh assumed the role previously filled by outgoing project manager Col. Rob Williams. (Photo by Laura Edwards, PEO EIS)

2: ASSUMPTION OF CHARTER AT GCSS-ARMY

Kevin Curry, center left, Defense Integrated Business Systems project manager, presented the charter for the Global Combat Support System – Army (GCSS-Army) product office to Erik Scott, center right, at an assumption of charter ceremony on Aug. 17 at Fort Lee, Virginia. Scott assumed the role of GCSS-Army product director two months after the departure of the previous product director, Lt. Col. William Reker. Randy Goertz, left, and Ken Ellison, right, served as proffers at the ceremony. (Photo by Vamin Cha, PEO EIS)

PROGRAM EXECUTIVE OFFICE FOR MISSILES AND SPACE

3: CHANGE OF CHARTER

Brig. Gen. Francisco J. Lozano, left, assumed duties as the new program executive officer for Missiles and Space (PEO MS) as he accepted the guidon from Lt. Gen. Robert L. Marion, principal military deputy to the assistant secretary of the Army for acquisition, logistics and technology, during a change of charter ceremony at Redstone Arsenal, Alabama, on Aug. 11. The outgoing PEO, then-Maj. Gen. Robert A. Rasch observed the transition. (Photo by Henry Norton, PEO MS)

THE CHIEF OF STAFF OF THE ARMY ANNOUNCES THE FOLLOWING PROMOTION:

Lt. Gen. Robert A. Rasch Jr. is currently serving as director of Hypersonics, Directed Energy, Space and Rapid Acquisition for the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology at Redstone Arsenal, Alabama.

THE CHIEF OF STAFF OF THE ARMY ANNOUNCES THE FOLLOWING RETIREMENTS:

Brig. Gen. William M. Boruff completed more than 35 years of service and concluded his distinguished career as program executive officer for the U.S. Army Joint Program Executive Office for Armaments and Ammunition, and commanding general of Picatinny Arsenal, New Jersey.

Lt. Gen. Flem B. "Donnie" Walker Jr. completed 35 years of service and concluded his distinguished career as deputy commanding general and chief of staff of the U.S. Army Materiel Command at Redstone Arsenal, Alabama.

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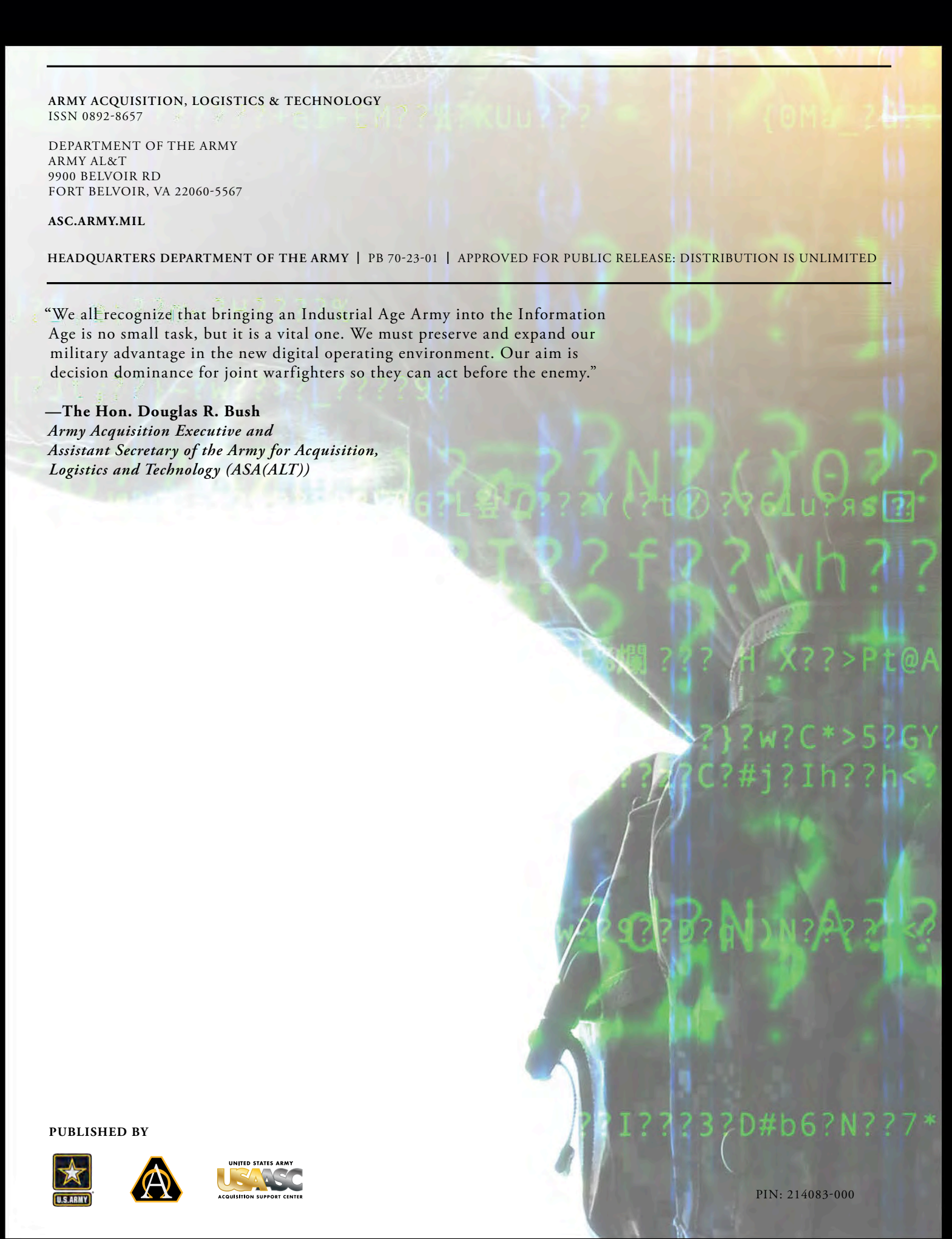
"We all recognize that bringing an Industrial Age Army into the Information Age is no small task, but it is a vital one. We must preserve and expand our military advantage in the new digital operating environment. Our aim is decision dominance for joint warfighters so they can act before the enemy."

—The Hon. Douglas R. Bush
Army Acquisition Executive and
Assistant Secretary of the Army for Acquisition,
Logistics and Technology (ASA(ALT))



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