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ON THE COVER

Quickly after Russia launched its "special military operation" against Ukraine on Feb. 24, 2022, the United States and its NATO allies have flooded Ukraine with financial aid and weapons. The war in Ukraine has reinforced the traditional notion that the U.S. and its NATO allies are the arsenal of democracy.

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From the Editor-in-Chief

On Feb. 24, 2022, Russian President Vladimir Putin authorized a “special military operation” and invaded Ukraine. The U.S. and NATO support to Ukraine was almost immediate, and what started as a trickle of financial and weapons support has turned into a full-fledged deluge. Almost a day doesn’t go by that America isn’t announcing another security assistance package of financial aid or weapons, or both, for hundreds of weapons to billions of dollars. The weapons range from ammunition, repair parts and supplies, to rifles, tanks and aircraft.

However, what is lost in many of those numbers is the Herculean effort it takes to supply the equipment, how hard it is and what the Army Acquisition Workforce (AAW) is doing to make it happen. As of July 7, 2023, the U.S. has committed more than \$42 billion, and thousands of weapons, munitions and supplies to Ukraine.

U.S. support to Ukraine includes:

- Over 2,000 Stinger anti-aircraft systems.
- Over 10,000 Javelin anti-armor systems.
- Over 198 155 mm howitzers and over 2,000,000 155 mm artillery rounds.
- 38 High Mobility Artillery Rocket Systems and ammunition.
- Over 500 Mine Resistant Ambush Protected Vehicles.
- One Patriot air defense battery and munitions.
- Equipment to integrate Western air defense launchers, missiles and radars with Ukraine’s air defense systems.
- Equipment to sustain Ukraine’s existing air defense capabilities.

For a full list of support, please see the fact sheet on security assistance to Ukraine at defense.gov.

As the Army acquisition executive (AAE), the Honorable Douglas R. Bush, notes in his column, Page 5, the U.S. is the arsenal of democracy. These weapons and supplies must come from somewhere, and that is where the AAE and his 32,000-strong AAW and industry partners step in. The normal low rate of production for equipment, ammunition and spare parts running at a peacetime pace must increase dramatically, not only to field needed equipment to our troops, but to feed the seemingly insatiable need of the war in Ukraine.



Nelson McCouch III
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AAW members are at the forefront of this balancing act, ensuring needed equipment, contracts, supplies and munitions are flowing to the armed forces of Ukraine while maintaining readiness at home. Doing this is tricky business and has been the AAE’s primary focus over the last year and a half. This issue focuses on what the Army is doing to support the fight in Ukraine, while continuing all the other programs and readiness requirements to ensure our Soldiers are ready. How is all that aid mentioned above getting to Ukraine? Read all about it in “Train and Aid,” Page 46. The North Alabama-based U.S. Army Security Assistance Command has facilitated the delivery of \$12.3 billion in weapons, training and materiel since the beginning of the invasion. And the King of Battle can only be king with the right weapon system and munitions. In “It’s All In The Delivery,” Page 28, learn how the Joint Program Executive for Office for Armaments and Ammunition’s mission to ship M777 howitzers into Ukraine has quickly evolved into using all the expertise and functions program management offices were established to provide, as well as how a game-changing artillery shell was successfully integrated into the Ukrainian theater of operation by Project Manager for Combat Ammunition Systems in “Wielding Excalibur,” Page 36.

As Gen. Robert H. Barrow, then commandant of the U.S. Marine Corps, famously uttered in 1979, “Amateurs talk about tactics, but professionals study logistics.” See how the professionals at Rock Island Arsenal, Illinois, unquestionably assist Ukraine and NATO member nations in Eastern Europe in countering Russian

aggression through support services, munitions and contracting in “A World Away,” Page 8.

This just scratches the surface of the superior support our Army is providing. There is much more in this issue, such as development of a self-administered antidote (like an EpiPen) that protects service members against ultra-potent opioids, the use of financial operations (FinOps) to strengthen our ability to procure cloud resources, ensure risk assessment and optimize contract management for cloud computing, and the development of the

Acoustic Hailing Device to enhance the “first level of force,” which is communication.

I trust you will read this issue thoroughly and get a true appreciation for Army acquisition and what it is doing to keep America the arsenal of democracy. As always, if you have ideas for stories, comments or an article to submit, please contact us at armyalt@army.mil. We look forward to hearing from you.

Nelson McCouch III
Editor-in-Chief



THE ARSENAL OF DEMOCRACY

Soldiers assigned to 82nd Airborne 3rd Brigade Combat Team train with the Integrated Visual Augmentation System (IVAS) in October 2022 as a part of Project Convergence 2022 at Camp Talega, California. Weapons the U.S. is sending to Ukraine range from ammunition, repair parts and supplies to rifles, tanks and aircraft. (Photo by Sgt. Thiem Huynh, Army Futures Command)

FROM THE ARMY
ACQUISITION EXECUTIVE
DOUGLAS R. BUSH



U.S. ARMY SUPPORT FOR UKRAINE

The U.S. Army is playing a vital role in the U.S. government's response to Russia's invasion of Ukraine. The effort has been going on for just over one year now. We are employing all the authorities and generous funding from Congress and working closely with our industry partners to dramatically increase production rates across the board, while also providing Ukraine with equipment from our stockpiles. Moreover, we are working with allies and partners on their production capacity to maximize our support for the war effort.



HIMARS

Soldiers from the Kansas National Guard's 130th Field Artillery Regiment train with their High Mobility Artillery Rocket Systems (HIMARS) in September 2022 at Camp Arifjan, Kuwait. (Photo by Sgt. Nicholas Ramshaw, 35th Infantry Division)

Now that we are operating at full speed, the Army has a particular focus on ramping up production of artillery and various munitions, especially, precision munitions. Systems such as Javelin, Stinger, Guided Multiple Launch Rocket System (GMLRS) and High Mobility Artillery Rocket System (HIMARS) launchers are crucial to the Ukrainian war effort. This is a significant ongoing effort that consumes much of my day.

PRODUCTION CAPACITY

Our effort began in earnest early last summer as the conflict escalated and lengthened in time. We went through a deliberate effort to start planning for the production ramp-ups that are currently underway. This included working with industry partners and securing congressional support for the billions of dollars needed to support the necessary expansion of production. Now that we are past the planning phase, we are in full execution mode.

Although some people were surprised by the initial timelines to increase production, the Army was not. These are significant and sophisticated manufacturing operations. Consider a “simple” artillery shell. There’s a fuse, the shell itself, the primer and the charges that launch it from an artillery tube. All these parts have their own detailed supply chains behind them and

are manufactured in facilities that are geographically dispersed. Therefore, it is not just the prime contractors or the Army depots; it is everything underneath them.

We have made a concerted effort to energize all these production variables across the board because we do not know how long the war in Ukraine will last. Furthermore, we are taking a maximalist approach, because in not knowing how long the war will last, we also don’t know how low our stockpiles will diminish. Regardless of the war’s duration, we must maintain supply for Ukraine, while replenishing our own stocks post-conflict.

PULLING RAMP-UP CURVE ‘LEFT AND UP’

The war in Ukraine has reinforced the traditional notion that the U.S. is the arsenal of democracy. As far as I am concerned, we are.

The Army supports this in at least three ways. The first relies on the Army’s organic industrial base, which is dedicated to conventional munitions. It turns out that the Army made a good long-term bet by investing in and maintaining our own ammunition plants. Without those investments in government-owned, contractor-operated plants, we would be lagging far behind where we are today.



JAVELIN LIVE FIRE

Soldiers with the 11th Airborne Division fire a Javelin Anti-Tank Missile System in August 2022. The Javelin is used as an anti-tank missile to disable vehicles with one round and is a key system for Ukraine support. (Photo by Pfc. Wyatt Moore, 28th Public Affairs Detachment)

Regardless of the war's duration, we must maintain supply for Ukraine.

The second part is modernizing and improving what is in those facilities. My predecessor, Dr. Bruce Jette, in partnership with then-Gen. Edward Daly at Army Materiel Command, had the foresight to begin making those improvements before the conflict started. Coupled with Congress supporting us with more than \$1.5 billion in additional funds already under contract to execute those modernizations, we are moving much faster than we thought possible. This represents a long-term investment that puts us in a position of strength today and post-conflict.

The third part is the private sector, which is a bit different. We are dependent on the private sector for producing our precision munitions. Therefore, we are working with prime contractors to ramp up their production capacity. What is different today is that we have secured congressional funding to subsidize our contracting partners to boost their production. Often, we can count on them to finance that themselves, but in the interest of speed, we are taking steps to shift the production curve left and up to get ramp-ups to happen more quickly.

ALLIES AND PARTNERS

The conflict has caused many of us to recognize the need for additional production capacity from our allies. This is something, particularly the U.S., would benefit from. Additional capacity adds redundancy by mitigating our risk of production delays due to single points of failure within the supply chain.

We are already seeing positive moves toward that end. For instance, Australia has expressed great interest in developing

precision munitions production capacity, and we are working with them to make that happen. In Europe, Poland is a leader in wanting to expand its domestic production capacity, specifically with systems such as Javelin.

There is plenty of work to go around and our allies and partners stand to benefit as much as we do. Democracies working together to develop a giant arsenal is a total win-win.

EARLY LESSONS LEARNED

So far, we have learned two major lessons from supporting the Ukraine mission. First, we must work hard to ensure that our requirements for pre-war reserves are at the right levels. Simply stated, we can manage longer production ramp-up times by having a larger stockpile at the start of a conflict. That effort is underway far above me at the Pentagon.

Even so, stockpiles are expensive to build and maintain. Some must be stored in controlled environmental conditions and others require an inspection regime. All of this requires money. These are policy questions that are being worked on at the Pentagon and on Capitol Hill.

Second, we need to think about how we plan for mobilizations. For example, perhaps our pre-positioned stocks of raw materials, such as steel for artillery shells, ought to be procured far in advance. And, possibly stockpiling in quantities greater than what we have historically maintained. It is a careful balance because excess capacity is economically inefficient. That is, having equipment sitting idle on a factory floor, but paying to maintain it, is

risky because it could be obsolete within a few years.

Yet, we have seen within our own ammunition plants instances where we did maintain machinery and production capacity that is being used today. Clearly there is a careful balance to strike when making these sorts of policy decisions.

CONGRESSIONAL SUPPORT

Congress has been very supportive of our efforts with respect to Ukraine. It has granted us some targeted and vitally important contracting streamlining authorities in the 2023 National Defense Authorization Act. This has led to dramatically reduced contracting timelines specifically for Ukraine. Of course, the Department of Defense always desires more flexible funding, but so far in the case of Ukraine, Congress has found a good balance between flexibility and carrying out its fiscal oversight responsibilities. Maintaining this support requires us to be highly efficient and 100 percent transparent with Congress.

ACQUISITION WORKFORCE

Nothing we have accomplished with Ukraine would be possible without the more than 32,000 Soldiers, civilians and contractors that make up the acquisition workforce. The machinery of my department runs through the program executive offices (PEOs) and my deputy assistant secretaries. The actual tactical work on acquisition all happens at the PEOs and the contracting centers that support them. I am very humbled to be leading this dedicated and talented team of professionals. They do all the hard work and I could not be prouder of them. The team has worked wonders this past year, but we aren't done yet and much more work lies ahead of us.





HOME AWAY FROM HOME

Soldiers deployed to Mielec, Poland, in March 2022 are provided tent accommodations with sleeping cots, lighting, electrical outlets and heating. (Photo by Lt. Col. Alan Manzo, 405th Army Field Support Brigade – Europe & Africa)

A WORLD AWAY

Acquisition professionals provide Ukraine support from America's Midwest.

by Liz Glenn and Elizabeth Urbaniak

West-central Illinois might be one of the last places one would associate with the ongoing conflict between Ukraine and Russia but, in reality, the support coming from Rock Island Arsenal, Illinois, is unquestionably assisting Ukraine and NATO countries in Eastern Europe in countering Russian aggression.

Headquartered on Rock Island Arsenal, the U.S. Army Sustainment Command (ASC) provides base life support services and transportation services, while Joint Munitions Command (JMC) provides ammunition including practice rounds, nonstandard ammunition, projectiles and mortars. Standing ready to support ASC and JMC, Army Contracting Command – Rock Island (ACC-RI) acquisition professionals are assisting at the speed of need.

SETTING THE THEATER

From the very first day President Biden began to ramp up support to neighboring NATO countries in February 2022, ASC—with the support of ACC-RI contracting expertise—has worked tirelessly in developing requirements and executing contract actions supporting operations in United States European Command (EUCOM).

ACC-RI's Power Projection and Base Readiness Directorate, which provides contracting support for ASC's Logistics Civil Augmentation Program (LOGCAP) and Enhanced Army Global Logistics Enterprise (EAGLE) program, is engaged in fast-turn, quickly evolving contract actions supporting operations surrounding Ukraine.

The ability to quickly support can be at least partially attributed to the LOGCAP strategy, which maintains a footprint supported by contractors in every combatant command across the world, allowing them to quickly act when needed.

“For decades, we have been in EUCOM helping with existing requirements and exercises as they come up,” said Rebecca Jessen, procurement operations officer at ACC-RI. “The contractor has made relationships with subcontractors in the area, so that if and when things happen, contractors can mobilize resources that they have developed.”

Quickly supporting the security assistance requirements to aid Ukraine is a prime example of LOGCAP’s capabilities in setting the theater, and the proactive ability it has provided to U.S. Army Europe and Africa during the conflict.

“We’ve had something in place since March 2020 under our STT [setting the theater plan],” said Kristine Pennock, LOGCAP procuring contracting officer. “Our performance task order was awarded September 2020, and a lot of the base camps and sites were already set up under that task order.”

Over the course of the first year of the conflict, ACC-RI’s LOGCAP EUCOM team has provided base life support to over two dozen sites from Latvia to Romania. These locations provided quality services at impressive speed to thousands of U.S. Soldiers

as they deployed to Europe to deter further Russian aggression. This included standing up over a dozen new locations, many with no previous infrastructure.

Additionally, the LOGCAP team provided services to unload the aircraft transporting all classes of materiel, as well as the infrastructure the Security Assistance Group – Ukraine needed to provide aid to Ukraine.

ACC-RI has also supported ASC’s Army Pre-positioned Stocks-2 (APS-2) mission, executing numerous requirements stationed to supply, maintain and transport equipment in and around the area. APS-2 is comprised of combined-arms, battalion-sized groups of vehicles and equipment positioned in Europe designed to equip Army regionally-aligned forces when they rotate into theater for training, disaster relief, theater security or contingency operations.

“The prepositioned stock is located in Germany and it is designed to enable units to deploy into theater and fall in on prepositioned equipment at a moment’s notice,” said Maj. Neidas Cezar, EAGLE procuring contracting officer. “The task order, in effect since 2016, is designed to issue equipment to units that came from either CONUS [within the continental U.S.] or OCONUS [outside the continental U.S.] locations.”

In February 2022, the U.S. Army ramped up the rapid response mission, with thousands of service members deploying to Germany and Poland, said Kylah Rasche, an ACC-RI EAGLE branch chief. To meet this need, APS-2 activated for the first time in its history.

Operating under an aggressive timeline with copious visibility and risk, Rasche said the APS-2 contracting team jumped into action expediently and effectively drawing materiel in support of the deployments. Hundreds of vehicles and equipment pieces from their respective APS-2 sites were pushed out to meet the needs of these service members.

Working in coordination with the APS sites, strategic support areas, ports and airports, the Red Ball Express is a transportation plan designed to deliver critical maintenance equipment and other requested supplies within four calendar days throughout the EUCOM area of operations, according to Rasche. The Red Ball Express provides transport of parts, supplies and equipment from locations throughout Europe, expediting equipment repair to support the mission. Since July 2022, more than 298 Red Ball Express missions have been completed.



LIFE, HEALTH, SAFETY

Soldiers return to their sleeping area from a dining facility tent in March 2022 at Mielec, Poland, where a full-service life support area has been established, thanks to Logistics Civil Augmentation Program contracts under the command and control of the 405th Army Field Support Brigade. (Photo by Lt. Col. Alan Manzo, 405th Army Field Support Brigade – Europe & Africa)



CHOW LINE

Soldiers from elements of the XVIII Airborne Corps deployed to Mielec, Poland, stand in line for dinner at a dining facility tent. (Photo by Lt. Col. Alan Manzo, 405th Army Field Support Brigade – Europe & Africa)

In addition, ACC-RI's stateside EAGLE contracts ramped up to quickly bring military equipment heading to Europe to a fully mission capable status and prepared it for shipment. The EAGLE team supported numerous deployments and recovery of APS-2 equipment, including a full armored brigade combat team set consisting of thousands of pieces of equipment.

Richard Schildman, ACC-RI procurement operations officer, said using the APS-2 and LOGCAP contract methods in tandem allows units that utilize tanks and armored equipment to be ready to mobilize to Europe two to three times faster than if that unit deployed equipment from the continental United States.

"What LOGCAP did was provide a place for them to live and APS provided the equipment to rapidly form combat power," said Schildman.

Overall, the Power Projection and Base Readiness Directorate has obligated nearly \$500 million to provide world-class services to service members in the field.

NATO SUPPORT

"We are getting our forces in Europe to support the training of the Ukrainian

army as well as move American forces east into Poland and other countries to do what they need to do as they have been directed," said Jessen, the ACC-RI procurement operations officer. "We are helping Ukraine fight Russia, while preventing Russia from threatening NATO allies."

The base life support elements provided by LOGCAP are intended for U.S. Soldiers but are ready to support NATO allies if needed. However, there are already some sites that are used in some fashion.

"For instance, there is a site in Poland that has had an American battalion for quite a while," said Schildman. "LOGCAP provides services, and the host nation provides services so that it is kind of a hybrid model."

"It would take too long for designated units to get their home station equipment sent from their locations into theater, so this most viable option would be to utilize the APS-2 EAGLE task order," said Cezar.

CONCLUSION

The teams have faced many challenges throughout this mission, mainly the requirements' fast pace.

"The speed of execution has been a challenge, but as a collective team we have been able to meet the challenge and execute requirements quickly," said Pennock, the LOGCAP procuring contracting officer.

"The mission is constantly changing and morphing on a daily basis."

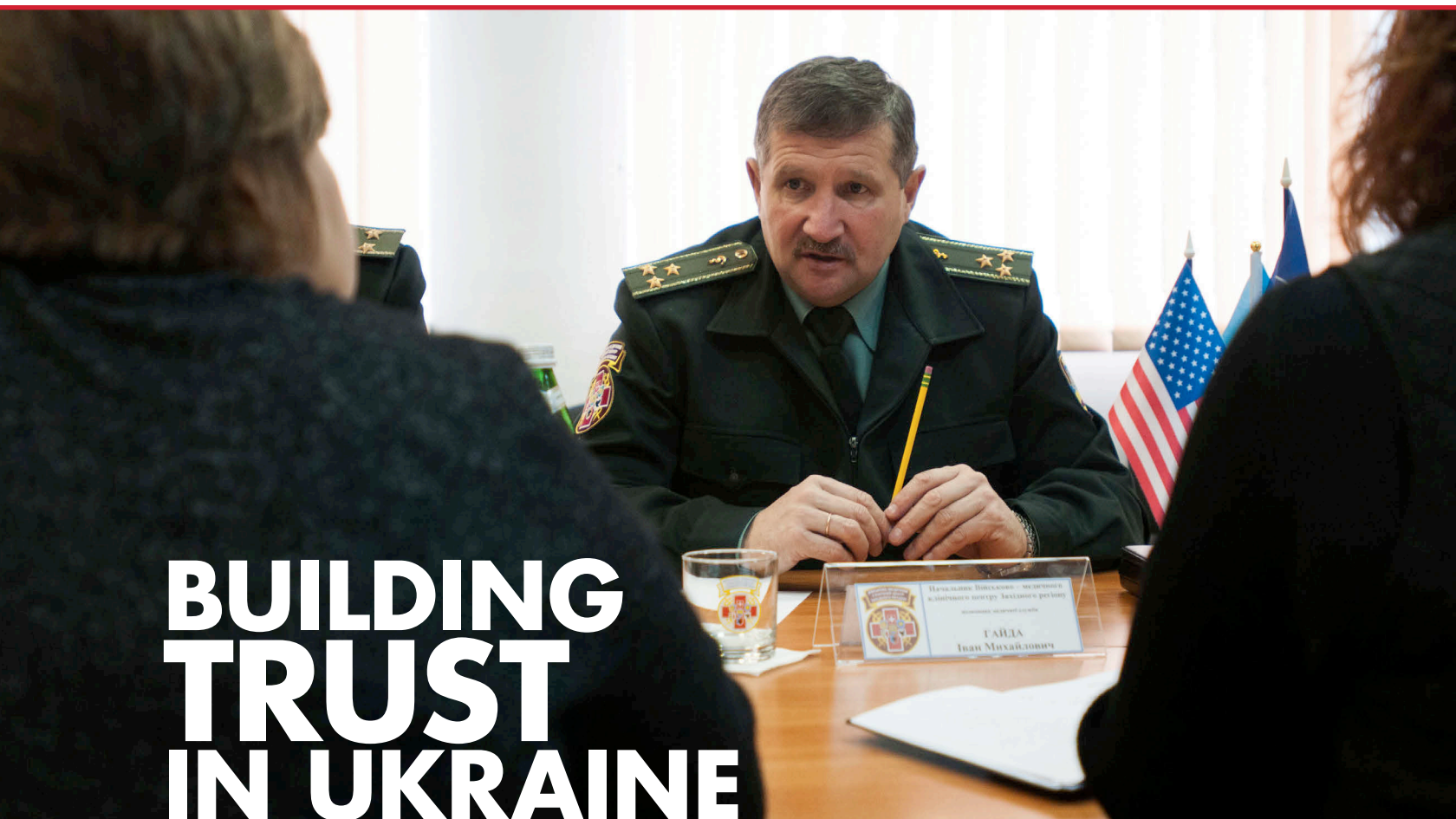
Though the support required of the ASC and ACC-RI teams meant long days and nearly constant execution adjustments, the satisfaction in providing critical services at the right time sustained and motivated the team.

"The LOGCAP program has the capability to turn around requirements within hours to days, which has resulted in logistics support areas being set up very quickly," said Pennock. "It's a success knowing that our Soldiers had a place to sleep, shower and eat, all within a timely manner."

For more information, contact Army Contracting Command – Rock Island at usarmy.ria.acc.mbx.acc-ri-pao@army.mil.

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BUILDING TRUST IN UKRAINE

Modernizing information systems with old-fashioned relationship building.

by Dan Lawton

Ukraine is a key strategic partner for the U.S., so providing assistance to help secure the region's borders, build partner capacity and improve interoperability with NATO have been crucial initiatives. As part of those efforts, the U.S. Army has led the charge behind implementing information technology (IT) and defensive cybersecurity upgrades that have been critical in the modernization of the region.

Within the Defensive Cyber Operations portfolio of the U.S. Army's Program Executive Office for Enterprise Information Systems (PEO EIS), the Allied Information Technology (AIT) product office has been the driving force behind modernizing two information systems for the Ukraine Ministry of Defence (U-MOD): the Medical Information System (MIS) and the Logistics Information System (LIS).

The Allied Information Technology product office's mission is to provide customized command, control, communications,

computers, cyber and intelligence solutions in support of partner nations' objectives to build capacity, interoperability and increase readiness in uncertain, complex and potentially hostile security environments. AIT's work is tailored to host nation requirements and coalition standards, enabling foreign partners to better secure and defend their sovereignty and security—all of which strengthens the most vital component of any relationship: trust.

BUILDING THE INFRASTRUCTURE

Under DOD's Ukraine Security Assistance Initiatives umbrella, AIT executed an expansive cybersecurity analysis of Ukraine's armed forces networks, along with its command-and-control ability. AIT's experts shared their findings with the Ukraine government and, as a show of unity, Ukraine took AIT's advice and greenlighted the network modernization efforts.

As part of the modernization, AIT provided ongoing support after the network implementation, all while assisting in establishing and initializing security policies along the way.

PRESCRIPTION FOR SUCCESS

Ukrainian army Col. Ivan Mykhaylovych Haida, director of the Military Medical Clinical Center of Western Region, discusses his hospital's capabilities and needs with officers from the U.S. Army during their visit to the military hospital in Lviv in 2017. (Photo by Sgt. Anthony Jones, 45th Infantry Brigade Combat Team)

None of that was easy to accomplish. For AIT, that process was years in the making. It began with prior IT efforts in the region that helped form a foundation built on trust, mutual respect and AIT's understanding of Ukraine's government, culture and ways of thinking—which required an extensive time commitment and a focused, dedicated effort.

“If you don't understand [Ukraine's] way of thinking, you're going to provide something that either they can't or aren't interested in using,” said David Waisanen, AIT's product lead. He also noted that if AIT did not understand Ukraine's IT infrastructure needs, that could lead to redundancy and negatively impact the partnership—which, ultimately, would harm the relationship between Ukraine and the U.S.

The importance of earning trust through relationship building was not overlooked by Chad Wilhelmi, AIT's Indo-Pacific Command project manager, who spent four and a half years in Ukraine supporting the region, prior to the most recent hostilities. The personal relationships AIT personnel formed with U-MOD and other government officials, along with sharing office space with the General Staff of the Armed Forces of Ukraine, made gaining Ukraine's trust possible.

Even with those personal relationships, there were still hurdles that stood in AIT's way. The roadblocks to overcome were significant. The keys to success, Wilhelmi explained, were maintaining a consistent presence in the region, developing relationships built on trust and being persistent as a team.

“It hasn't been easy,” Wilhelmi acknowledged. Finding and collaborating with trusted Ukrainian partners and United States European Command counterparts to fight the fight and help implement changes was critical. “That's what we did, and I think that was the difference.”

MEDICAL INFORMATION SYSTEM

By spring, the information system was tested and accepted and began operating in test mode. For the first time, MIS enabled the forces to keep an electronic database of medical records.

The AIT team installed the IT infrastructure, helped to develop security policies for the new infrastructure and assisted in implementing those policies, and have continued to provide guidance and support afterward.

Before the implementation of MIS, all records were kept on paper and were susceptible to human error. With MIS, record-keeping and appointment setting were digitized to improve efficiency while providing a layer of security when it came to protecting soldiers' sensitive personal medical records—no small feat in the modern-day digital world. The new electronic record system needed a secure location to be stored, too, which was where the AIT cybersecurity operations centers and command-and-control centers factored in.

While enhanced individual soldier record-keeping was important, MIS was about more than that; it was also about tracking the life cycle—from point of injury to hospital discharge to the statistics about all that happened afterward, including tracing follow-up care. MIS served as a document management system that could track this entire cycle, leading to better soldier care across the region—and, ultimately, a stronger and more capable force not just throughout Ukraine, but across allied nations.

LOGISTICS INFORMATION SYSTEM

Prior to LIS, the logistics process was manual and time-consuming. As Wilhelmi described it, armed forces personnel would go to a warehouse, and everything would be tracked on paper. Personnel would have to carry the item from the warehouse to the commander to be stamped—or sometimes drive 40 minutes to the commander's base for approval—wasting valuable time and energy. The new digital system eliminated all that and dramatically increased productivity and efficiency by cutting out unnecessary, archaic processes.

The benefits of LIS were felt in short order. Just like with MIS, the benefits of LIS have increased Ukraine's level of readiness and led to a better equipped and prepared force.

WHAT'S NEXT?

MIS was integrated with medical imaging and lab devices, and by late summer, two Ukrainian hospitals began adopting the information system. AIT also developed a mobile platform to allow the system to be accessed on the battlefield.

In January 2023, U-MOD took over ownership of LIS and the network, and is now helping the Armed Forces of Ukraine manage the warehouse. AIT continues to advise U-MOD in test

operational mode system capabilities and how it can be used in the future—including achieving fully operational capability—in Ukraine and, potentially, across other allied European nations.

CONCLUSION

For the Allied Information Technology product office, the IT success stories in Ukraine have been built on a foundation of trust. Before trust can be earned, patience is required—patience in the process, the bureaucracy and the learning curve.

The process of upgrading antiquated IT infrastructure is often not isolated to a specific location. These systems typically include expansion across a region, which requires extensive planning



TRACKING PATIENTS

The Medical Information System developed by AIT allows Ukrainian hospitals to track a patient from the point of injury to hospital discharge to the statistics about all that happened afterward, including tracing follow-up care. Col. Anne Naclerio, center, deputy surgeon, U.S. Army Europe, and Col. Sara Breckenridge-Sproat, regional nurse executive, Regional Health Command, Europe, speak with a Ukrainian Ministry of Defence doctor about rehabilitative services during a visit to a Ukrainian army hospital in Lviv, Ukraine, in 2017. (Photo by Sgt. Anthony Jones, 45th Infantry Brigade Combat Team)

before the implementation can even begin. Taking a long view and factoring in how quickly technology changes and should be upgraded for maximum security, on top of the existing capability efforts, is just as critical. Not thinking that way is doing a disservice to the partner and can hamper even the most longstanding relationships. Everything from implementing a virtual training environment, to providing guidance on basic network security practices like password protection, to educating on administrator tools need to be considered as building blocks to any long-term IT infrastructure plan. AIT has taken this long view approach in Ukraine to set the region up for success.

“I think this has been critical to AIT’s success in Ukraine and why they still look to us for IT,” Wilhelmi said. “We didn’t just deliver. We didn’t go there and say, ‘OK, you can do what you want with this hardware. Here you go. Good luck. Call us if you need something.’”

When it comes to where AIT can lead Ukraine in the future—and other countries across Europe—in terms of cybersecurity, IT support and building partner capacity, AIT is well-equipped and prepared for the challenge.

“Ukraine and all of Europe are so focused on cybersecurity now,” Waisanen said. “We’re doing a lot of cybersecurity cases and we’re becoming experts at it. We’re trying to become more of a center of excellence for cybersecurity for the U.S. Army.” He added that

AIT is uniquely positioned to do that because of its strong ties and relationships built with the Ukrainian government.

The AIT team was there for Ukraine from start to finish and beyond. They installed the IT infrastructure, helped to develop security policies for the new infrastructure and assisted in implementing those policies, and have continued to provide guidance and support afterward. Through persistence, presence and relationship building, allies have become more than friendly. They have become trusted partners.

For more information about PEO EIS’ AIT project office and its mission, go to <https://www.eis.army.mil/programs/ait>.

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ALL TOGETHER NOW

Ukraine Ministry of Defence leaders, the Armed Forces of Ukraine General Staff, and members of the Ukraine Logistics Forces Command, the Ukraine Special Operations Forces Command, AIT and system integrators gather at a case kickoff meeting in Kyiv in 2020. (Photo courtesy of AIT)



LIVE-FIRE EXERCISE

A Soldier from the 45th Infantry Brigade Combat Team, Oklahoma Army National Guard radios his unit notifying them the heavy machine guns manned by soldiers of the Ukrainian army's 28th Mechanized Infantry Brigade have finished firing so their fellow Ukrainian soldiers can advance on an objective during a live-fire training exercise at the Yavoriv Combat Training Center on the International Peacekeeping and Security Center, near Yavoriv, Ukraine, in 2017. (Photo by Sgt. Anthony Jones, 45th Infantry Brigade Combat Team)

DELIVERING AT THE SPEED OF NEED

How the National Advanced Surface to Air Missile System was procured for Ukraine in record time.

by Mark Talbot and Bill Trainer

When Russia invaded Ukraine on Feb. 24, 2022, many predicted a swift collapse in a “David versus Goliath” scenario. The Russian military wrought death and destruction on a scale not seen since World War II. Conflict in and around urban areas created a humanitarian crisis with millions of displaced refugees and thousands of civilian casualties. The U.S. government, along with many of our allied partners, immediately laid out plans to provide resources to Ukraine to defend against Russian aggression.

For Ukraine, the secretary of state has exercised authority delegated by the president to direct 37 drawdowns totaling approximately \$21.1 billion in defense articles and services from the Department of Defense since August 2021, in response to Russia’s preparation to launch the full-scale invasion of Ukraine and continued war. As the proponent for many of the relevant weapon systems, the Program Executive Office for Missiles and Space (PEO MS) on Redstone Arsenal in Alabama has played a key role. PEO MS was tasked with delivering more than 10,000 Javelin anti-armor systems, 1,700 Stinger anti-aircraft systems and 4,000 Tube-Launched, Optically Tracked, Wire-Guided missiles. The Army quickly delivered the first shipment of 200 Stinger missiles to Ukraine after hostilities began. Several North Atlantic Treaty Organization (NATO) partner countries also contributed war materiel to the resistance. The aforementioned assistance, combined with Ukrainian bravery and tenacity on the battlefield, have altered the strategic landscape.

THE NASAMS SOLUTION

While the ground assault largely stalled, the Russian military continued to terrorize cities with cruise missiles, rockets and unmanned aircraft systems. The Ukrainians did not possess sufficient capability to defeat these threats, thus posing an enduring vulnerability for which they turned to the international community for a solution. The National Advanced Surface to Air Missile System (NASAMS), currently an integral component

of the North American Aerospace Defense Command protecting the U.S. National Capitol Region, was well-suited for this requirement. This system consists of the Norwegian Fire Distribution Center and launchers, U.S. government Sentinel radar and the Advanced Medium-Range Air-to-Air Missile.

Congress responded to this urgent need and earmarked funds to procure two NASAMS firing units on behalf of Ukraine late in fiscal year 2022 under the Ukrainian Security Assistance Initiative. The U.S. Army immediately initiated a Building Partner Capacity foreign military sales case for NASAMS for the first two firing units, and the U.S. government has

since supplemented the initial requirement with an additional six firing units. The fact that NASAMS is a nonstandard, non-program of record capability consisting of both U.S. and Norwegian components presented a procurement challenge. Nevertheless, the mission demanded progress at the speed of need.

The Army assigned this opportunity to PEO MS on July 28, 2022, with the expectation to deliver a comprehensive approach consisting of hardware, software, training and logistical support in a matter of weeks to support wartime requirements. Following standard acquisition timelines, however, would result in an approximately four-year wait for Ukraine to receive this

capability: two years to award a contract plus an additional two years for the defense industry to fabricate and integrate the necessary equipment. Given the urgency, PEO MS could not settle for the status quo.

Project Manager for Short and Intermediate Effectors for Layered Defense, or SHIELD, and the Search, Track, Acquire, Radiate and Eliminate, or STARE program within PEO MS immediately formed an integrated product team to address the requirement. The team included representatives from the Security Assistance Management Directorate, the assistant PEO for international affairs, industry partners, the U.S. Air Force and



SENTINEL DRILLS

Sentinel radar operators with the 188th Air Defense Artillery Regiment, North Dakota Army National Guard participate in the Global Information Dominance Experiment 3 and Architecture and Demonstration Evaluation 5 at Camp Grayling, Michigan, in 2021. The Sentinel radar is a component of the National Advanced Surface to Air Missile System. (Photo by Tech. Sgt. Amy Picard, U.S. Air Force)



TAKING COVER

Ukrainian soldiers of the 1st Battalion, 28th Mechanized Infantry Brigade take cover behind their BMP-2 armored vehicle while other soldiers rush ahead to breach a wire obstacle blocking their unit's advance during training at the Yavoriv Combat Training Center at the International Peacekeeping and Security Center, near Yavoriv, Ukraine, in 2017. (Photo by Sgt. Anthony Jones, 45th Infantry Brigade)

U.S. Navy, and the U.S. Army Contracting Command – Redstone to collaborate and forge a way ahead. The industry partners committed to maximize the use of on-hand vendor assets to deliver launchers and fire distribution centers. The Army secured equipment from existing stocks and provided an ancillary enabling kit as government furnished equipment to round out the materiel package. This approach shaved two years off the timeline by eliminating the production of new hardware. However, the challenge of quickly awarding a procurement mechanism remained.

RAPID NEW REQUIREMENTS PACKAGE

Delivering NASAMS and the associated services for Ukraine required an entirely new contract award. The

NASAMS integrated product team met daily to discuss and draft the contracts requirements package and all supporting documents. The U.S. government reached an agreement on the statement of work with industry partners in a matter of days. The combined government and industry team moved quickly within a contracting framework usually characterized as bureaucratic and glacial.

The integrated product team accomplished tasks in a few days that usually require months of painstaking deliberations. In addition to a keen focus at the execution level, stakeholder alignment among senior leaders proved essential to awarding a contract in a timely manner. The entire chain of command from top to bottom within Army Contracting Command

- Redstone, PEO MS, the assistant secretary of the Army for acquisition, logistics and technology, and the U.S. Army Security Assistance Command made this effort a top priority. All requirements were hand-carried and briefed in real time; nothing languished in a leader's inbox. Once the requirement was received from PEO MS in July, the collective team worked relentlessly to award a NASAMS contract on Aug. 26—less than a month from receipt of the requirement.

This accomplishment, however, is by no means the end of the effort. Although the Not-To-Exceed Undefined Contractual Actions provided a mechanism to initiate industry support as quickly as possible, the team continues to coordinate all support requirements, refine the

The integrated product team accomplished tasks in a few days that usually require months of painstaking deliberations.

scope of work, and finalize the contract to authorize full funding and continue support to Ukraine. Meanwhile, the same team attends to a comprehensive set of logistical details including organizing overseas training, coordinating U.S. government receipt and acceptance of hardware, transportation and logistics for our Ukrainian partners, interpreters and creating a forward-based maintenance concept.

In order to accomplish these diverse tasks, the set of stakeholders rapidly grew to include the European Command headquarters, U.S. Department of State and Offices of Defense Cooperation in multiple countries, NATO headquarters, allied military services and the U.S. Air Force Mobility Command. The U.S. government delivered Ukraine a total package approach to ensure an enduring and effective combat capability.

Rapidly delivering a nonstandard, non-program of record capability composed largely of foreign materiel to Ukraine without the benefit of either an existing contract or teaming agreement posed a complex challenge. This problem set demanded innovation and diligence combined with technical, programmatic and security assistance expertise. In addition to these competencies, keeping all senior leaders engaged and supportive of the effort with concise and consistent messaging proved the crucial factor to deliver NASAMS to Ukraine.

CONCLUSION

The PEO MS team is now leveraging the lessons learned from delivering the first two firing units of NASAMS capability to form an acquisition approach for future requirements for other partner nations expressing interest. The integrated product team is working to finalize additional NASAMS contracts associated with new foreign military sales cases while concurrently finalizing

and executing the details associated with the next six firing units for Ukraine. The realm of the possible expands significantly with teamwork, expertise and committed leadership focused on delivering capability to the warfighter at the speed of need.

For more information contact Bill Trainer, division chief, international programs, Lower Tier Interceptors & Launchers & NASAMS, at 256-842-0705 or william.j.trainer.civ@army.mil.

MARK TALBOT is a systems engineering and technical assistance contractor at PEO MS. He retired from the Army in 2016 after a diverse enlisted and commissioned career totaling nearly 30 years. He holds an M.S. in environmental engineering from the University of North Carolina at Chapel Hill, and a B.S. in environmental engineering from the United States Military Academy at West Point.

BILL TRAINER is an international program manager at PEO MS. His assignments included three tours in Germany and numerous stateside positions, as well as a deployment with the 24th Infantry Division in support of Operation Desert Storm. Following retirement from active duty, he spent 10 years as a defense support contractor before returning to government service as an Army civilian. He holds a B.S. in business from Columbia College.

GETTING IN THE **TRANCHES**

Producing small caliber ammunition
for Ukraine at the speed of war.

by Martin Seiz

READY TO GO

Pallets of ammunition, weapons and other equipment bound for Ukraine are loaded on a plane in January 2022 during a foreign military sales mission. (Photo by Senior Airman Stephani Barge, U.S. Air Force)

Since the start of the conflict in Ukraine, Product Manager Small Caliber Ammunition (PdM SCA), part of Project Manager Maneuver Ammunition Systems (PM MAS) within the Joint Program Executive Office for Armaments and Ammunition (JPEO A&A), has enabled the flow of significant product to its partners. Through 37 presidential drawdowns, small caliber ammunition, primarily in 7.62 mm and .50-caliber configurations, has moved from U.S. depots to various foreign access points. Providing this level of support has been a team effort requiring expert competencies across the Army enterprise. Further, the receipt of tranche funds, incremental payments for materiel sent, will be used to bolster our defense capabilities for the future.

A CARTRIDGE FOR EVERY NEED

With a portfolio of approximately 44 distinct cartridge types available in roughly 73 different configurations, PdM SCA offers a cartridge for every user, need or situation. The Ukrainian Armed Forces desired products capable of high rates of fire and armor penetration as the anticipated threat was large formations of troops in various models of unarmored, lightly armored and armored vehicles. With this need in mind, a few products were logical choices, including 7.62 mm cartridges intended for use against personnel and unarmored vehicles, typically fired from both dismounted infantry and vehicle-mounted machine guns. They allow the warfighter to lay down suppressive fire to enable troops to maneuver against the enemy. In addition, .50-caliber cartridges can be fired from both dismounted crew-served weapons as well as vehicle-mounted machine guns.

Lastly, .50-caliber Saboted Light Armor Penetrator (SLAP) cartridge linked with SLAP Tracers are employed in scenarios where there is a desired increase in armor-defeating capability over the other cartridge. As the name suggests, these cartridges feature a sabot design to propel a dense, tungsten projectile up to a staggering 4,000 feet per second.

MANY HANDS MAKE LIGHT WORK

The staff at the Joint Munitions Command (JMC) at Rock Island Arsenal, Illinois, orchestrates the transfer of this ammunition to Ukraine. Brian Willis, small caliber division chief at JMC, summarized the process, saying, “JMC is supporting the effort by coordinating optimal sourcing of Ukraine’s requirements, whether through on-hand theater stocks or CONUS [continental U.S.] inventory, and then working expeditiously to execute ammunition shipments in alignment with the mode of transportation, whether vessel or air.” Willis’ expert team includes logisticians for every caliber of ammunition, who then work in

WHY A SABOT?

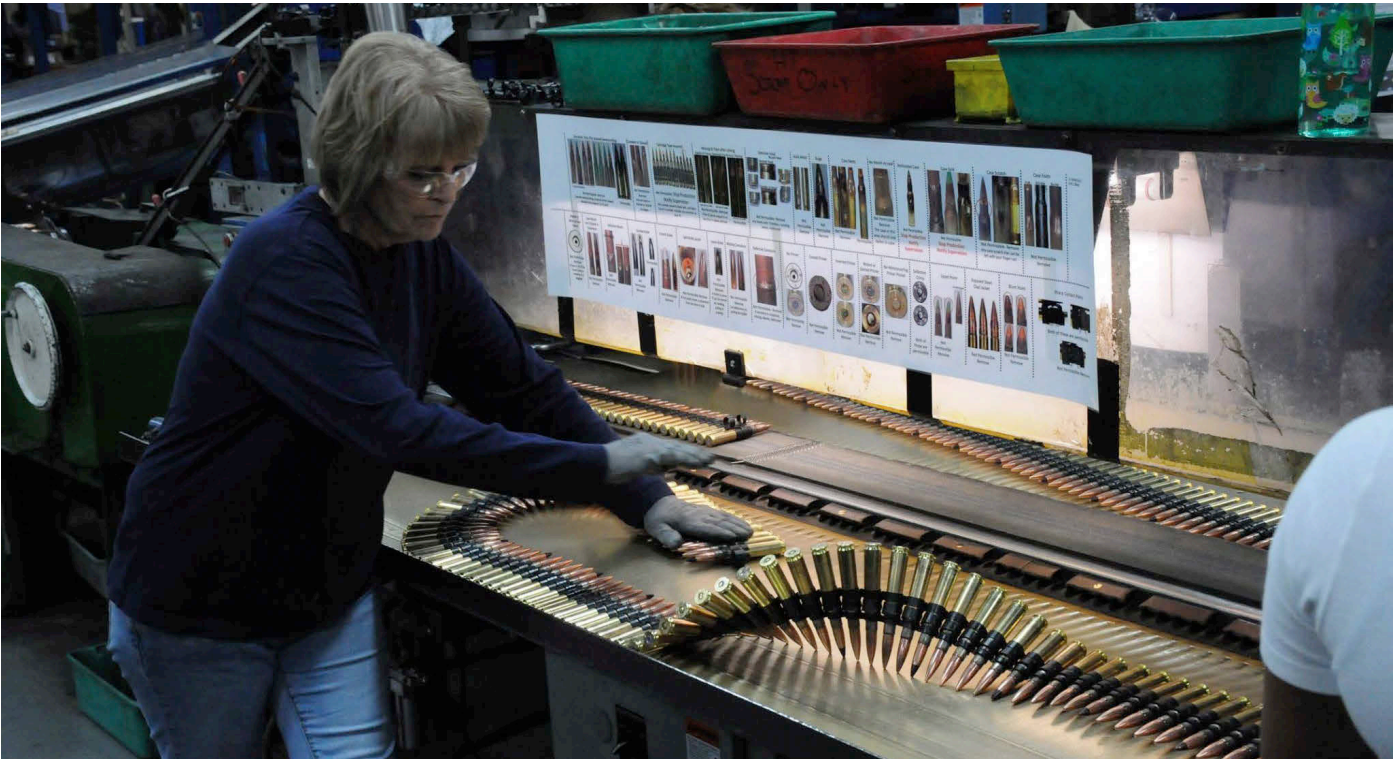
A sabot (pronounced “sah-bow”) design allows a narrow projectile to be fired through a larger diameter weapon barrel. Unlike other ammunition products, the projectile sabot is not intended to reach the target. Instead, it serves to support the projectile during firing and separates upon muzzle exit. This design must be employed judiciously because while it increases the kinetic energy delivered on target, it also increases design complexity, opportunities for failure and associated unit price.

tandem with teammates from the U.S. Army Combat Capabilities Development Command Armaments Center (DEVCOM-AC) and PdM SCA. After providing the needed material, the team receives tranche funds—payments tied to each delivery. The team balances this funding with known and emergent defense needs and adjusts future orders from the primary manufacturing site: the Lake City Army Ammunition Plant.

BIRTHPLACE OF SMALL CALIBER AMMUNITION

Lake City is a sprawling U.S. government-owned, contractor-operated facility in Independence, Missouri. Established during World War II, this site produces most national defense munitions ranging from 5.56 mm to 20 mm. Continually modernizing and maintaining a site this size is a constant challenge, but the capability is nothing short of amazing. For military customers, Lake City boasts an average annual production of 600 million cartridges with surge capacity of 1.6 billion cartridges. Depending on defense needs, such as supporting the current conflict in Ukraine, the plant is able to scale up or down accordingly. The current operating contractor, Olin-Winchester, assumed operations in fiscal year 2021 following a one-year transition period.

In order to ensure U.S. stockpiles remain robust, select tranche funds are being used to advance small caliber ammunition manufacturing capabilities. This includes reestablishing the dormant SLAP/SLAP Tracer production process at Lake City. John Middleton, DEVCOM-AC technical lead, explained, “SLAP and SLAP Tracer were last made in 2013, under a contract with Olin-Winchester, at their commercial facility in East Alton, Illinois. The USG [U.S. government] is teaming with Olin-Winchester, now operating the Lake City Army Ammunition Plant, to stand



INSPECTION

A worker checks .50-caliber linked rounds in June 2020 at Lake City Army Ammunition Plant. (Photo by Dori Whipple, Joint Munitions Command)

up [.50-caliber] SLAP manufacturing at Lake City to establish an enduring capability. This effort involves preparing legacy equipment, and relocating equipment from East Alton, in anticipation of this upcoming production.”

SLAP and SLAP Tracer ultimately will impact only a small footprint within Lake City, leveraging existing .50-caliber manufacturing space and equipment, improving manufacturing efficiency, ensuring current safety standards are met, and potentially reducing maintenance costs. The Small Caliber Ammunition team, comprised of experts across the Army enterprise, expects SLAP and SLAP Tracer production to begin in early 2025. Due in part to recent tranche funding, they will continue to provide the U.S. and its foreign partners,

like Ukraine, with the capabilities needed to achieve their mission.

For more information, go to https://www.army.mil/article/266311/jmc_ustranscom_partnership_provides_ammunition_in_record_time_to_ukraine.

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Practitioner certification in program management and in engineering and technical management. Seiz is a member of the National Defense Industrial Association and the American Society of Mechanical Engineers.

HELP FROM THE GROUND UP

by Beler H. Watts III, Mike Crossley and Ryan R. Wood

Tactical Aviation and Ground Munitions Project Office programs aid efforts in Ukraine and provide capabilities to the U.S. warfighter.



LET FLY

An M1 Abrams crew member uses a remote control optical device that provides Soldiers with a first-person point of view as a Lethal Miniature Aerial Missile System (LMAMS) flies in April 2018 at Grafenwoehr, Germany. TAGM has provided Switchblade 300 and Switchblade 600 LMAMS to Ukraine. (Photo by Sgt. Gregory T. Summers, 22nd Mobile Public Affairs Detachment)

The Tactical Aviation and Ground Munitions (TAGM) Project Office is charged with the mission to develop, field and sustain air- and ground-launched weapon systems. These systems include the Hellfire missile; Joint Air-to-Ground Missile; guided and unguided rockets; associated launchers; the Tube-Launched, Optically Tracked, Wireless-Guided (TOW) weapon system; Javelin weapon systems; Lethal Miniature Aerial Missile Systems; Precision Fires Manager and Containerized Weapons System.

Along with its ongoing mission, TAGM provides support to Ukraine through a variety of security assistance programs. These being presidential drawdown authority, by which the president can authorize the immediate transfer of articles and services from U.S. stocks, and the Ukraine Security Assistance Initiative (USAI), which is a DOD-led program to increase Ukraine's defensive capabilities through training, equipment and advisory initiatives. USAI also provides for logistics support, supplies and services; salaries and

stipends; sustainment; weapons replacement and intelligence support.

The TAGM Project Office's main effort in providing security assistance comes from the Javelin Product Office, the Rapid Capabilities Product Office and the TOW Weapon System Product Office. While providing support to the Ukraine effort, the TAGM Project Office continues to provide capabilities to the U.S. warfighter.

JAVELIN PRODUCT OFFICE

The Javelin Product Office has supplied Ukraine the Javelin missile system in support of ongoing efforts. The Javelin Product Office has supported the delivery of Javelin missiles, command launch units and support equipment under multiple presidential drawdowns.

The Javelin is a man-portable, fire-and-forget, medium-range missile with enhanced situational awareness and precision direct-fire effects to defeat armored vehicles, fortifications and soft targets in full spectrum operations. The Javelin command launch unit is the reusable

component of the Javelin. It is equipped with a day sight, night vision sight, and controls and indicators used during Javelin operation. The command launch unit also provides standalone all-weather and day and night surveillance capability.

While the Javelin Product Office continues to support current and future presidential drawdowns, the focus has shifted to the replenishment of U.S. Army and U.S. Marine Corps inventories of Javelin missiles and command launch units. The Javelin's successful use in Ukraine has generated tremendous interest in the system from global allies and partner nations. Working closely with industry partners, efforts are underway to increase production capacity, to not only replenish assets committed to Ukraine faster, but to meet the increased domestic and international demand for the Javelin missile system.

RAPID CAPABILITIES PRODUCT OFFICE

The Rapid Capabilities Product Office is an element of TAGM Project Office, which specializes in rapid acquisition, delivery of urgent needs and prototype capability integration. For the past decade, this team has fielded required capabilities to the warfighter to mitigate capability

MANY WAYS TO BUY

An M1 Abrams crew member launches a Lethal Miniature Aerial Missile System for aerial support in April 2018 at Grafenwoehr, Germany. Switchblade 300s and 600s were provided to Ukraine via multiple methods of procurement. (Photo by Sgt. Gregory T. Summers, 22nd Mobile Public Affairs Detachment)



gaps via joint urgent operational needs statements and other urgent requirements.

As part of the acquisition support for Ukraine, TAGM provided Switchblade 300 (SB300) and Switchblade 600 (SB600) lethal miniature aerial missile system munitions, as well as support equipment. Switchblade is a single-use, man-portable ground-launched direct-fire missile, capable of night and day operations, providing the operator the ability to abort the engagement, therefore minimizing collateral damage and civilian casualties.

SB300s were provided via multiple methods of procurement. The first method of procurement was part of the presidential draw-downs, where the Rapid Capability Product Office leveraged existing stock, as well as assets straight from the active production line. Coordinating across multiple commands, the systems were collected, inventoried and tested to ensure functionality. Working with industry and Army Contracting Command, the team was able to shift shipping destinations for systems coming off the production line to deliver them in support of Ukraine. The second method of procurement used by the Rapid Capability Product Office was a Ukraine Security Assistance Initiative. Collaborating with the TAGM International Directorate, the Security Assistance Management Directorate, U.S. Army Security Assistance Command and the Defense Cooperation Security Agency, the team was able to get the case implemented and awarded on contract in a short amount of time. All the systems were delivered by the second quarter of 2023.

The Rapid Capabilities Product Office also used the USAI case to procure and field SB600 systems and support equipment. This was unique, as TAGM had not previously purchased SB600 on its existing contracts. The Army Contracting Command – Redstone Arsenal was instrumental in ensuring that the contract was modified accordingly to allow the procurement of these critical munitions for Ukraine. The team continues to support multiple combatant commands worldwide, while maintaining a posture to provide the warfighter with critical capability on short notice.

TOW WEAPON SYSTEM PRODUCT OFFICE

The TOW Weapon System Product Office has supported multiple presidential drawdowns by providing materiel, transportation and documentation in support of ongoing efforts to furnish Ukraine with modern weapon systems. The U.S. Army has shipped TOW missiles for use on separately provided Humvees and Bradley Fighting Vehicles. The Tube-Launched, Optically Tracked, Wireless-Guided missile is a heavy precision assault missile optimized for performance against main battle tanks and

is also effective against buildings and field fortifications. Additionally, the TOW Product Office, as the office responsible for the Improved Bradley Acquisition System, has supported the efforts of Project Manager Medium Armored Vehicles to provide M2 Bradley Fighting Vehicles to Ukraine. The TOW Product Office will continue to support efforts to provide superior, mounted, long-range, heavy assault and anti-tank close combat missile systems as directed.

CONCLUSION

The Tactical Aviation and Ground Munitions Project Office remains dedicated to U.S. Soldiers by developing, fielding and sustaining versatile air- and ground-launched weapon systems that provide a decisive advantage in joint and multidomain operations. TAGM uses innovative technologies and continuous modernization efforts to enable Soldiers to effectively and efficiently execute their mission. TAGM continues to work to maximize readiness and harness innovative and affordable future capabilities.

For more information, go to <https://www.army.mil/peoms#org-about>.

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RYAN R. WOOD is the program officer for the Javelin Product Office. He holds a Master of Strategic Studies from the U.S. Army War College and a B.S. in mechanical engineering from Michigan State University. He holds the DAWIA Advanced certification in program management.



ON THEIR WAY

A CH-47 Chinook helicopter ferries an M777 155 mm howitzer in April 2023 on Joint Base Lewis McChord, Washington. Presidential Drawdown 7, approved on April 13, 2022, provided the first M777 howitzers for Ukraine. (Photo by Pfc. Elaina Nieves, 122nd Theater Public Affairs Support Element)

IT'S ALL IN THE DELIVERY

JPEO A&A program management offices provide Ukraine with M777 howitzers, 155 mm ammunition and ongoing support during an evolving mission.

by Chris Hatch, Chris Ayoub and Jeff Lee

The number of M777 howitzers that have been provided to Ukrainian Armed Forces (UAF) and the number of 155 mm rounds that have been fired during the past year of combat is well documented. What is less known is the ongoing support being provided to Ukraine to ensure continued M777 effectiveness, and the partnerships being developed.

As the number of different weapon systems being provided by the United States and international partners continues to grow, Ukrainian Armed Forces frequently cites the capability being provided by the Joint Program Executive Office Armaments and Ammunition (JPEO A&A), telling new stakeholders that in addition to the “kit”—the hardware they are providing (in this case M777 and ammunition)—they require enduring capability to ultimately defeat Russia. This article will discuss some of the capabilities being provided, and how JPEO A&A is now looking to parlay these capabilities into long-term partnerships.

KITS ENSURE MISSION CAPABILITIES

The first call came April 13, 2022, when Presidential Drawdown 7 was approved with the requirement for 18 M777 155 mm towed howitzers (12 Army and six U.S. Marine Corps) to be provided to support Ukraine. JPEO A&A's Program Manager for Towed Artillery Systems (PM TAS) immediately sent field service representatives and subject matter experts to work with donor units to ensure their howitzers were fully mission capable or to document any discrepancies so issues could be resolved before transfer to Ukraine. As of July 7, 2023, 198 M777 have been committed to Ukrainian Armed

Forces. The M777's transportability capabilities were key to the rapid response, as six howitzers can be loaded into a C-17 to quickly deliver overmatch cannon artillery firepower wherever it is needed.

RDC-U READY

The M777 was the first sustainable weapon or vehicle that was donated by the United States to Ukraine, and with that came several firsts. Chief among those was the standup of multiple capabilities at the staging and retrograde site in Poland now known as the Remote Maintenance and Distribution Center – Ukraine (RDC-U). A core team of experts was quickly established, helping to conduct

What started out as a call to ship M777s into Ukraine has quickly evolved.

limited technical inspections, maintain and repair equipment and establish and support various tele-maintenance functions with Ukraine. Initial engagements with Ukrainian Armed Forces were analogous to middle school dances, but over

time evolved to a true partnership that is a credit to the enterprise team. For the M777 alone, three group chats with various levels of technical expertise run concurrently to support Ukrainian Armed Forces operations day and night. Weekly touch points



FIRE AWAY

U.S. Soldiers assigned to 2nd Cavalry Regiment fire an M777 howitzer during a live-fire exercise in April 2023 at the 7th Army Training Command's Grafenwoehr Training Area, Germany. (Photo by Markus Rauchenberger, Training Support Activity Europe)

are conducted via video with Ukrainian Armed Forces personnel at various depot facilities and field units to identify and rectify issues.

The other primary function of the RDC-U is to generate traditional demand-based spare part requisitions based on group chats and tele-maintenance activities with Ukrainian Armed Forces. Recognizing that the lead times associated with fulfilling demand-based requisitions were often not fast enough to maintain high operational availability, a JPEO A&A push package concept was developed to compliment demand-based requisitions. Starting with historical parts demand data,

brainstorming sessions were conducted with M777 experts to predict component failure rates based on reported and projected battlefield operations. Combining these projections with input received from Ukrainian Armed Forces, push package lists were developed and bulk orders for projected high demand components were placed so spare parts could be strategically pre-positioned closer to the battle to decrease system downtime, increasing operational availability.

The resulting push packages are being sourced from the original equipment manufacturer, the U.S. government organic supply system, and U.S. organic

industrial base partners. Consisting of parts valued at approximately \$40 million, push packages have been crucial in maintaining materiel availability for the current high intensity battle. It is truly a joint effort from across the U.S. Army acquisition and sustainment enterprise that has enabled the sustainment mission for Ukraine.

As the war in Ukraine progressed, Congress approved various authorities giving the enterprise additional tools to ensure the capability required to maintain the ongoing operations tempo could be sustained. The sustainment contract used to provide M777 spares has received



INTO THE BREECH

A U.S. Army cannon crew member assigned to 2nd Cavalry Regiment checks an M777 towed 155 mm howitzer in March 2023 during Exercise Dynamic Front 23 at Oksbol, Denmark. (Photo by Sgt. 1st Class Theresa Gualdarama, 117th Mobile Public Affairs Detachment)

expedited approvals to increase the contract ceiling cost required to ensure the parts continue to flow. Defense Priorities and Allocations System authorities have been used to work with industry to prioritize its defense work to significantly shorten production lead time for critical spares. A temporary waiver to the Stratton Amendment, which restricts the export of technical data for large-caliber cannon technology, has also been granted. This waiver has allowed the enterprise to now seek second sources for critical high demand cannon components.

As part of the transition from kit to capability, the JPEO A&A team planned and executed multiple echelons of M777 maintenance events during summer 2022. Initial training events consisted of operator and field level training, and then transitioned to a near depot level training course, as Ukrainian Armed Forces were very quick to grasp all training aspects. Each course's duration varied, requiring the new equipment training team to spend several months at the Grafenwoehr Training Area in Germany, training approximately 80 students. The JPEO A&A team also conducted multiple precision guided munitions

training events, instructing over 75 students on the employment of precision munitions, which have proven to be a difference maker on the battlefield. Each training event was conducted as an eight-hour program of instruction, condensed to align with Ukrainian Armed Forces operational needs. There were common themes throughout the training events: appreciation from UAF personnel, relationships built between student and instructor, and UAF introduction to the support available at the RDC-U to aid in sustaining weapon systems.

The severe operations tempo and concept of operations being used in Ukraine have resulted in challenges never seen in the almost 20 years the M777 has been in the field, including significant usage in Afghanistan and Syria. These challenges have resulted in some creative solutions to field issues. The team at the RDC-U is backed up by additional personnel stateside helping to quickly redesign components and implement new approaches to improve operational availability. The JPEO A&A team has leveraged existing partnerships with partner nations under the M777 Memorandum of Understanding and Project Arrangement to



PACK 'EM IN

U.S. Marines and Airmen guide an M777 towed howitzer into a U.S. Air Force C-17 at Marine Corps Air Station Cherry Point, North Carolina, in 2021. The M777's easy transportability was key to the rapid supply of Ukraine. As many as six M777s can be loaded into a C-17. (Photo by Cpl. Lauren Salmon, 2nd Marine Aircraft Wing)

The M777 was the first sustainable weapon or vehicle that was donated by the United States to Ukraine.

rapidly develop and prototype an alternate design for a safety critical component now undergoing qualification for urgent release. Critical repair procedures for various subassemblies have been created and shared with Ukraine, which has allowed for howitzers that have been battle damaged to be restored.

To provide a full set of capabilities, a comprehensive suite of technical documents has been provided to facilitate operation, maintenance, repair and sustainment of the M777. This technical suite consists of existing technical manuals, custom-developed quick guides focused on critical tasks, historical safety messages, white papers and tailored procedures to address Ukraine-unique issues.

Lessons learned sessions with other program offices has allowed this “secret sauce” to be replicated for other weapon systems, ammunition and vehicles that have been donated to Ukraine. On various occasions, Ukrainian Armed Forces have applauded the work the JPEO A&A team has done, stating that the M777 support construct should be replicated for all weapons and vehicles, as it has resulted in consistently higher operational availability compared with other donated systems.

PARTNERING BETWEEN PARTIES

JPEO A&A now conducts monthly engagements with Ukrainian Logistics Command, meeting outside of Ukraine, maintaining a high level of communication for ongoing operations, which has resulted in more of a partnering relationship between parties. Workshops conducted by the Security Assistance Group – Ukraine have brought together various government agencies, current industry partners and potential new industry partners from Eastern Europe. The goal of these workshops is to discuss a phased approach to provide depot-level repairs closer to the frontline and ultimately transition capability to Ukrainian industry. The capability developed would support donated howitzers, including the local manufacture of spare parts and a potential new system production build as Ukrainian Armed Forces transition to fewer types, but larger quantities of NATO systems.

CONCLUSION

What started out as a call to ship M777s into Ukraine has quickly evolved into using all the expertise and functions that program management offices were established to provide. In just over a year, tremendous capability has been provided to an armed force previously unfamiliar with U.S. and NATO systems to establish effective brigade combat teams, all while prosecuting a war. JPEO A&A is now looking at how to transition that capability into new partnerships, strengthening key alliances while growing the arsenal of democracy.

For more information, please see the website at <https://jpeoaa.army.mil/Project-Offices/PM-TAS/> or you can email us at usarmy.pica.peo-ammo.list.pm-tas-opscell@mail.mil.

CHRIS HATCH is the acting program manager for PM TAS at JPEO A&A. He holds an M.S. in management of technology from Stevens Institute of Technology and a B.S. in mechanical engineering from Manhattan College. He holds the DAWIA Advanced certification in program management.

CHRIS AYOUB is the Ukraine project lead and acting deputy program manager for PM TAS. He holds a B.S. in mechanical engineering from Rutgers University and the DAWIA Advanced certification in program management.

JEFF LEE is product support manager and supervisory logistics management specialist at PM TAS. He holds a Master of Engineering in systems engineering from Stevens Institute of Technology; an M.A. in leadership and management from Webster University; and a B.S. in industrial engineering from Rutgers University. He is a Defense Acquisition University Senior Service College Fellowship graduate.



UP FOR THE CHALLENGE

As the Radford Army Ammunition Plant (RFAAP) site integrator, Brooke Jones' duty is to ensure the operating contractor is executing according to their contract. Doing so involves overseeing complex relationships, such as intersecting roles and responsibilities among multiple Army organizations at both the headquarters and plant levels. In her role, she facilitates communication and knowledge as a "boots-on-the-ground contributor" to the Project Director Joint Services (PD JS). "There is a strong multiagency team onsite that truly functions as a team to ensure the government's interests, and thereby the warfighter's interests, are the target focus," Jones said.

RFAAP is the core propellant-manufacturing facility for DOD, capable of producing mass quantities of chemical energetics-driven weapons or propellants made from a variety of ingredients to support direct fire, indirect fire and rocket applications.

When she describes her work to others, Jones said people always seem surprised at how passionate she is. "It is my honor to serve my country with the strengths that I have, in the best way I know how. It is invigorating to be able to find solutions to challenging problems that help provide warfighters with the energetics they need for the variety of circumstances they face."

Jones worked as a DOD contractor, specializing in energetics research, development and production, within the National Technology and Industrial Base for two decades before crossing over to government service a year ago. "The excitement and pride I feel to work for the competent people that I once referred to as 'customers' is truly an honor. Since the passion I have for this industry has not faded in the past 20 years of my career, I am encouraged that I will remain committed for the next 20 years," she said. "Staying focused on finding the best encompassing solution for all stakeholders is a challenge I willingly and gratefully accept."

Jones said the experiences during her first year with PD JS have been broad and challenging. Immediately upon assuming the position, she had the opportunity to be heavily involved in a government-owned contractor-operated (GOCO) facility-use extension negotiation at Radford that ended up changing the existing multiyear contract type. The follow-on to that change meant she had to work through the growing pains of the first year of implementing a new contract structure at Radford with the operating contractor. "It has been a wild ride!" she said.

"I serve my God, my children and my country with the same steadfastness, focus and 100 percent effort."

BROOKE JONES

COMMAND/ORGANIZATION: Joint Program Executive Office for Armaments and Ammunition, Project Director Joint Services

TITLE: Radford Army Ammunition Plant site integrator

YEARS OF SERVICE IN WORKFORCE: 1

EDUCATION: B.S. in mining and minerals engineering, Virginia Tech



RFAAP

At Radford Army Ammunition Plant in Radford, Virginia, Brooke Jones is the “boots-on-the-ground contributor” to the Project Director Joint Services. (Graphic by RFAAP)

“It is incredibly important to ensure that you are well-versed and competent in your field of work,” Jones explained. “Knowledge allows you to be an asset to your team and arrive at the solution expediently. Sharing that knowledge through action and open communication makes you a valuable teammate.”

“The best career advice I could give is to read—read contracts, read technical papers, read FAR [Federal Acquisition Regulation] clauses, read scopes of work—then read everything again,” she said.

As a new Army civilian, Jones will obtain her DAWIA level certifications for her career field in the future. She has also recently enrolled in the Joint Program Executive Office for Armaments and Ammunition (JPEO A&A) mentor program, which she said she is very much looking forward to. JPEO A&A, which is comprised of seven project offices, is the single manager for conventional ammunition. It is responsible for the development, procurement and fielding of lethal armaments and ammunition providing joint warfighters and allied partners overmatch capabilities. Types of work within the JPEO include integrating budgets, acquisition strategies, research and development and life cycle management across all armament and ammunition families.

Jones, who was also a 13-year Army spouse, said, “I am extremely grateful. I have two young children, ages 10 and 8, who have overcome many challenges in their young lives. Their perseverance and determination have made me a woman of strong faith who is extremely grateful for each day.”

“Whether my kids are playing baseball, softball, diving, dancing or academically competing, I am there supporting them in every way I can,” she said. “My deepest desire is to raise these children to become the extraordinary contributors to the world that they are designed to be—to instill a strong work ethic, good sportsmanship and a focus on others is my objective each day.”

“I serve my God, my children and my country with the same steadfastness, focus and 100 percent effort. It is who I am and how I live both at home and at work. To be good at your craft, your life and your duty, you must work at it—study, read, listen and act—all while being respectful of others,” Jones said. “This is how I challenge myself to be each and every day.”

—*HOLLY DECARLO-WHITE*

WIELDING EXCALIBUR

The Project Manager for Combat Ammunition Systems leads the charge to get precision projectiles to Ukraine.

by Maj. Christopher J. Noll and Maj. Porter W. Riley

Like the mythical Arthurian sword of the same name, the 155 mm M982 Excalibur projectile is a crucial weapon. The projectile allows commanders at all levels to strike high-value enemy targets far behind the front lines with precision, while adding little to no burden to the actual cannoneers. This advanced capability allows the Ukrainian Armed Forces (UAF) to increase the risk they pose to their enemies while simultaneously decreasing the risk to their troops. But, as with any leap forward in combat technology, there is a lot of collaboration, forethought and work behind the scenes to ensure that battlefield execution can occur seamlessly.

To enable the successful use of the M982 in the Ukrainian theater of operations, the Project Manager for Combat Ammunition Systems (PM CAS), part of the Joint Program Executive Office for Armaments and Ammunition at Picatinny Arsenal, New Jersey, first coordinated with the Headquarters, Department of the Army (HQDA) to assess the feasibility of using M982s in Ukraine and gain approval to provide the Portable Electronic Fire Control System (PEFCS) to serve as the M982 fire control solution. Second, PM CAS coordinated with Joint Multinational Training Group – Ukraine (JMTG-U) and the deployed M777 howitzer battery from the 5e Régiment d'artillerie légère du Canada, Royal Canadian Artillery, to provide precision guided munitions training to the Ukrainian artillery before M982s arrived in theater.

Third, PM CAS worked with Joint Munitions Command (JMC) and the U.S. Army Tank-automotive and Armaments Command (TACOM) to ship Excalibur projectiles and PEFCS to the staging area before being moved into theater by the Ukrainian



ARTHURIAN LEGEND

The mythical Excalibur was the sword of King Arthur. (Photo by Getty Images)

The M982 Excalibur projectile has equipped the UAF with sophisticated and lethal capability.

army. Finally, PM CAS, in conjunction with the U.S. Army Combat Capabilities Development Command Armaments Center (DEVCOM-AC), has developed a trusted relationship with the Security Assistance Group – Ukraine (SAG-U) to ensure

updated best practices are shared and vital battlefield feedback is received to further refine the Excalibur projectile. The relationship with SAG-U has spawned a knowledge hub for Excalibur employment and a responsive logistical train for PEFCS repair.

FEASIBILITY AND FIRE CONTROL

In the initial stages of the Russian-Ukrainian conflict, it was apparent to PM CAS leadership that the U.S. would supply the preponderance of artillery support to Ukraine. In support of that outcome, PM CAS tasked the Product Manager for Precision Attack Cannon Munitions (PdM PACM) to conduct a feasibility analysis for provisioning Excalibur projectiles months before the projectile appeared on an official presidential drawdown. PdM PACM immediately assembled a team in conjunction with DEVCOM-AC service members, acquisition professionals and technical experts to execute the task. Because of the robustness



FIRING LINE

U.S. Soldiers assigned to 2nd Cavalry Regiment fire an M777 howitzer during a platoon live-fire exercise in October 2022 at Grafenwoehr Training Area, Germany. (Photo by Spc. Ryan Parr, Training Support Activity Europe)

of the Excalibur projectile, the team concluded that if necessary conditions were met, then Excalibur would work in Ukraine and provide a force multiplying capability for the Ukrainian Armed Forces. Initially, the PACM team worked with Program Manager Towed Artillery Systems, which previously donated M777 howitzers. Simultaneously, the team used DEVCOM-AC's close working relationship with U.S. Space Command to derive a process that allowed the donation of Excalibur projectiles and addressed all national security concerns.

Lastly, the team worked with HQDA G-3/5/7 and G-8 to gain an understanding at the senior leadership levels that PEFCS was a crucial enabler for any precision-guided munition donation. PEFCS presented the optimal solution to enable the Ukrainian artillery to employ precision artillery fires since it is a standalone, portable precision artillery fire-enabling fire control system.

The Excalibur allows commanders at all levels to strike high-value enemy targets far behind the front lines with precision.

PRECISION FIRES TRAINING

As the conflict in Ukraine continued and it became clear that Excalibur projectiles would be donated, the PdM PACM team began working with the Joint Multinational Group Ukraine before the official donation to get precision fires training added to the existing Ukrainian Armed Forces artillery training classes. Training the UAF presented unique challenges but was a crucial step to ensure that the projectiles could be employed immediately upon arrival in theater. Once the team secured space on the UAF training calendar, it was incumbent that the PM CAS New Equipment Training Team work closely with DEVCOM-AC to streamline the Excalibur and PEFCS training package to comply with JMTG-U and UAF operational constraints.



MIGHTY MYTH

The Excalibur round, named after a mythical sword, helps mitigate risk to friendly forces and citizens. (Photo by Jay Johnson, Pexels)



CLOSE INSPECTION

A U.S. Army Soldier inspects an M982A1 Excalibur round prior to it being loaded into an M777 howitzer for a live-fire training event in June 2020 on Fort Polk, Louisiana (now Fort Johnson). The Excalibur projectile allows Ukrainian forces increased firepower while decreasing the risk to their own troops. (Photo by Staff Sgt. Ashley Morris, 3rd Brigade Combat Team, 10th Mountain Division)

Once the team successfully crafted the training package, we faced our next obstacle: Because Excalibur had yet to be officially named on a presidential drawdown, the team lacked a mechanism to satisfy foreign disclosure requirements and to provide training materials to the UAF. To clear this hurdle, PdM PACM worked with Joint Multinational Group Ukraine and the Royal Canadian Artillery to ensure that the training was delivered in a timely manner.

LOGISTICS AND ONGOING SUPPORT

Once the Excalibur projectile was officially named on a presidential drawdown, moving the munitions from U.S. Army and U.S. Marine Corps stocks to theater was straightforward, with the assistance of JMC. Once PM CAS, in conjunction with PM Ammunition (U.S. Marine Corps), identified the lots of Excalibur that would be used to source the presidential drawdown requirements, Joint Munitions

Command executed its mission of moving the munitions seamlessly. Unfortunately, because PEFCS is not a U.S. Army end item, there was no simple mechanism for moving them into theater.

In response to this challenge, PdM PACM worked with TACOM, and before the execution date established by the presidential drawdown, developed an executable process for moving PEFCS from Picatinny Arsenal, New Jersey, to the shipping

The relationship with SAG-U has spawned a knowledge hub for Excalibur employment and a responsive logistical train for PEFCS repair.

facility and getting them on military transport flights to Poland, where they were received and staged by the Rapid Deployment Capability Ukraine (RDC-U) for final movement into theater. The RDC-U was not only crucial for the initial push of PEFCS into Ukraine, but it also served along with the Security Assistance Group – Ukraine as critical enablers connecting technical experts at Picatinny Arsenal to the front lines and allowing near-real-time troubleshooting for both the Excalibur and PEFCS. The PM CAS team also relies on the RDC-U to alert them if repair parts are needed for the PEFCS, which enables the Ukrainian Armed Forces to maintain full mission capability regarding precision artillery.

CONCLUSION

The M982 Excalibur projectile has equipped the UAF with sophisticated and lethal artillery capability. Excalibur's demonstrated precision reduces the need for massing fires. It enhances the safety of Ukrainian forces and civilians in the area of operations while still offering a reliable and highly effective solution to engage intended targets. The successful integration of this technology into the Ukrainian theater of operations required forethought, collaboration and significant work behind the scenes to ensure seamless battlefield execution. PM CAS was pivotal in coordinating with various departments and agencies, including HQDA, JMC, JMTG-U and the Royal Canadian Artillery, to assess the feasibility of utilizing the M982s, provide precision guided munitions training to the Ukrainian artillery, and ship projectiles and fire control systems to theater.

The continuing support provided by PM CAS and DEVCOM-AC ensures that troops on the front lines are kept informed of best practices and have access to a world class logistical train. Overall, the successful integration of the M982 Excalibur projectile into the Ukrainian Armed Forces has posed a higher risk to the adversary while simultaneously mitigating risk to their citizens and forces.

For more information, go to the Product Manager Precision Attack Cannon Munition webpage: <https://jpeoaa.army.mil/Project-Offices/PM-CAS/Organizations/Precision-Attack-Cannon-Munitions>.

MAJ. CHRISTOPHER J. NOLL is the project officer for the 155 mm Cannon-Delivered Area Effects Munition Armor projectile and an assistant program manager for Product Manager Precision Attack Cannon Munitions with Project Manager Combat Ammunition Systems, assigned to JPEO A&A at Picatinny Arsenal. He earned his MBA in systems acquisition management from the Naval Postgraduate School and holds the DAWIA Professional certification in contracting and the Practitioner certification in program management.

MAJ. PORTER W. RILEY is the project officer for the 155 mm Cannon-Delivered Area Effects Munition Dual-Purpose Improved Conventional Munition Replacement projectile and an assistant program manager for PdM PACM at Picatinny Arsenal. He earned his M.S. in systems engineering management from the Naval Postgraduate School and served as an artillery officer for nine years before joining the Army Acquisition Workforce in 2020.



BUILDING AN ARSENAL OF DEMOCRACY

A product office supports efforts in Ukraine through nontraditional sources.

by Stacy Poto and Raymond Nulk

The United States has committed tremendous resources in security assistance to Ukraine “since the beginning of Russia’s unprovoked ... invasion on February 24, 2022,” according to a U.S. Department of Defense Ukraine fact sheet dated July 7. A huge share of this national assistance is often provided through domestic stocks and industrial production, which can apply stress through the national industrial and technology supply chain. The Product Director for Special Ammunition and Weapon Systems (PdD SAWS) under the Project Manager for Maneuver Ammunition Systems (PM MAS), part of the Joint Program Executive Office for Armaments and Ammunition

at Picatinny Arsenal, New Jersey, sources critical munitions from nontraditional defense materiel supply chains and makes them available to support our National Military Strategy to help offset this production supply stress.

ORIGIN OF PDD SAWS

PdD SAWS was established in 2008 by the Principal Deputy Assistant Secretary of the Army for Acquisition, Logistics and Technology to procure all non-standard ammunition for the U.S. Army and in support of all government agencies. PdD SAWS’ original name was PdD Non-Standard Ammunition (PdD NSA). Non-standard ammunition is ammunition that is NOT type classified, materiel

release, in U.S. inventory or U.S. safety tested, however the ammunition is comparable in performance to U.S. standard rounds and often less expensive. PdD SAWS office is responsible for overseeing the acquisition of over 400 non-standard munitions and mortar weapons including, but not limited to, small, medium and large caliber ammunition, rocket propelled grenades, hand grenades, aviation rockets, flares, anti-tank guided missiles and inert items. PdD NSA’s name transitioned to PdD SAWS as the office began procuring non-standard mortar weapons in addition to managing non-program of record 120 mm tank ammunition in support of foreign military sales (FMS) cases.

DESTROY, DEFEAT, DISRUPT

Washington National Guard Soldiers with 81st Stryker Brigade Combat Team take part in Table VI certification live fire at Yakima Training Center, Washington, April 21-23. The role of field artillery is to destroy, defeat or disrupt the enemy with integrated fires to enable maneuver commanders to dominate in unified land operations. (Photo by Staff Sgt. Adeline Witherspoon, 122nd Theater Public Affairs Support Element)

CURRENT AND EVOLVING MISSION

PdD SAWS emphasizes reliable and responsive support to ongoing FMS with our allies and international partners, while also ensuring that the U.S. industrial base remains strong in support of the National Military Strategy. With the advent of the invasion, PdD SAWS has been responsible for the increased procurement and delivery of thousands of non-standard indirect fire munitions along with non-standard 155 mm high explosive complete artillery ammunition.

PdD SAWS ensures reliable, safe and effective non-standard ammunition through a process of applied technical general specifications combined with visual and physical inspections of the ammunition. Broad technical parameters are installed within a base contract containing product-oriented specifications or details which are required as part of any delivery order. Within those general specifications are requirements and criteria for visual and physical review of workmanship, markings applied to the ammunition as well as packing and shipping materials, in addition to the requirements and criteria for ballistic testing of every lot of ammunition.

Leveraging the well understood and proven legacy design of foreign-produced

PdD SAWS provides a tremendous value to the taxpayer.

ammunition made since the Cold War era lends itself to the ease of manufacture, with the use of multiple non-domestic suppliers working to achieve steady production rates. This procurement strategy results in lower-cost, higher-volume production of safe and reliable ammunition at a fraction of the cost of conventional ammunition. While oriented to support FMS cases and other national governmental needs, the use of this strategy ensures that the ammunition being provided to our allied nations does not impact readiness or affect domestic production for standard ammunition.

PdD SAWS—in support of Ukraine and using our skills for non-standard ammunition procurement—supports brokered arrangements and government transactions with partner nations. PdD SAWS provides assessments and evaluations of steeply discounted costs, as well as donations of non-standard ammunition, including non-standard equipment leveraging integral non-standard ammunition.

CONCLUSION

PdD SAWS provides a tremendous value to the taxpayer, while also strengthening the economic and diplomatic bonds with the partner nations who manufacture non-standard items. For our coalition partners, PdD SAWS provides a highly effective tactical and training alternative to standard ammunition weapon systems since our partners are already familiar with the legacy systems, thereby decreasing the time to fielding. The office provides an exceptional balance of safe, reliable and effective ammunition and small mortar weapons systems, while using the

diversity of nontraditional foreign suppliers to provide a lower-cost production base and surge capacity as it is needed.

For more information, go to <https://jpeoaa.army.mil/Project-Offices/PM-MAS/Organizations/PD-Special-Ammunition-and-Weapons-Systems>.

STACY POTO is the deputy product director, Special Ammunition and Weapon Systems at JPEO A&A. She has an MBA in accounting from the University of Phoenix and an M.S. in contract management from the Naval Postgraduate School. She holds the DAWIA Advanced certification in program management and is a certified DOD contracting professional.

RAYMOND NULK is a defense support contractor with Blue Skies Inc., a subcontractor to SAIC. He retired from the U.S. Army as a colonel and he holds an M.S. in business analytics from Boston University, an M.S. in strategic studies from the U.S. Army War College and a B.A. in natural sciences from Johns Hopkins University. He holds the DAWIA Advanced certification in program management, and in business and financial management, and the Practitioner certification in test and evaluation.



CHARLOTTE MOWCZAN

COMMAND/ORGANIZATION: Program Executive Office for Combat Support and Combat Service Support, U.S. Army Combat Capabilities Development Command, Ground Vehicle Systems Center Systems Engineering Directorate

TITLE: Systems engineer

YEARS OF SERVICE IN WORKFORCE: 5

DAWIA CERTIFICATIONS: Practitioner in engineering and technical management

EDUCATION: M.S. in engineering, Purdue University; B.S. in materials science and engineering, Wayne State University

AWARDS: Department of the Army Civilian Service Achievement Medal (2019)

TIES THAT BIND

As a systems engineer, Charlotte Mowczan analyzes organizational systems to find more efficient ways of doing things—taking a project from conception to completion. But at the end of the day, according to her, it's not just about completing a project, it's also about leadership style and delivery.

“My greatest satisfaction is hearing people say I've made their job easier by having clear instructions and easy access to resource materials that they can reference,” she said. “Which makes all the difference in boosting team morale, driving motivation and ultimately a successful final product.”

Mowczan leads a variety of projects within the Program Executive Office for Combat Support and Combat Service Support (PEO CS&CSS), producing common templates and processes that improve system engineering deliverables that support the acquisition process and ultimately provide capabilities to the warfighter. In this role, she works with many people—and personalities—both inside and outside her organization, so effective communication and good interpersonal relationships are a high priority. “I really pride myself on the network of people that I've built up over the years that either I can offer help to or seek help from if needed.” The first step in building these relationships, she said, is a clear self-awareness before you can recognize and address the actions of those you work with.

According to Mowczan, the importance of relationships is reinforced through the joint PEO Ground Combat Systems (GCS) and PEO CS&CSS Leadership Development Program, and she has strived to make interpersonal improvements as a result of the class. “I had the opportunity to meet with both Maj. Gen. Brian Cummings [retired] and James Schirmer, deputy program executive officer [PEO GCS], and they both emphasized the importance of having and showing empathy, as well as building personal relationships,” she said. The material is basic, but a refresher for recognizing that simple things like saying “I understand,” or just listening when someone is speaking, can go a long way toward resolving issues. “For me personally, taking that moment to show some empathy and acknowledge someone's frustration can help build a connection with that person, versus launching into problem solving mode.”

Mowczan began her career with the Army Acquisition Workforce after hearing of an opportunity at the Detroit Arsenal through a friend. “I started as a systems engineer for the Armored Multi-Purpose Vehicle [AMPV] program and worked on the Systems Engineering Plan [SEP] update for Milestone-C,” she said. SEP provides a foundational

“My greatest satisfaction is hearing people say I've made their job easier.”



CAPABILITIES COLLABORATION

Mowczan (center) brainstorming on improvement projects across several organizations at an offsite summit in June 2019 at Lawrence Technological University, Southfield, Michigan. (From left) Jal Singh, chief information officer, PEO Ground Combat Systems, and Steve Cengeri, C4ISR program officer, PEO Ground Combat Systems. (Photos provided by Charlotte Mowczan)

engineering approach for all technology-based programs, with Milestone-C being the point of making a recommendation or seeking approval to enter the production and deployment phase. “I really enjoy systems engineering work because the time spent on it can contribute to the success of a project.” She said presenting an idea typically inspires thought processes from others. There is nothing at all to lose by putting forth your concepts, even if they’re not perfect. It’s always better than not presenting anything at all.

Mowczan also believes forming good interpersonal relationships in the workplace can harvest a more “at ease” environment for promoting the presentation of ideas. And for sustaining those relationships, integrity is greatly valued. “The most important lesson I’ve learned over the course of my career is to have integrity. Do what you say you’re going to do when you promise to do it,” she said. This builds trust, motivation and a positive work environment.

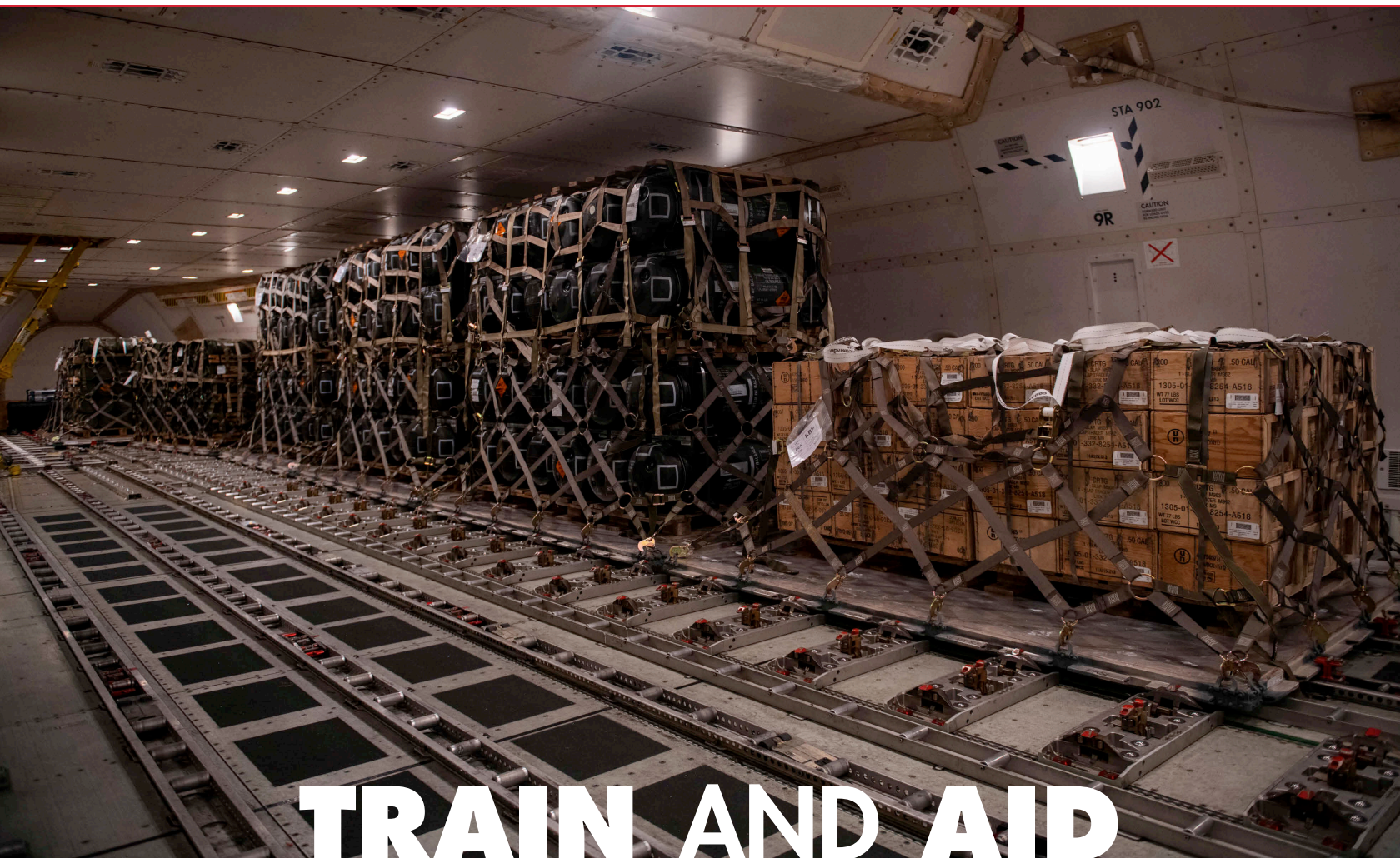
Organizing events that bring people together for a work-related or social cause to build better relationships, and just to have some fun is something she’s done much of both inside and outside of work.

“People outside of work know me for establishing get-togethers and hosting parties,” she said. During the pandemic, she was able to set up some fun, inspirational and motivating online discussion-style events for co-workers and friends to keep lines of communication open.

“I have really enjoyed bringing people together at work by hosting online events to meet and talk about anything from our favorite college football team to best-loved Halloween decorations. With the return to in-person gatherings, I’ve organized some smaller events like lunches out and a going away party for our group supervisor—who was, and still is, an amazing mentor for me personally—with a fun activity at Top Golf in Auburn Hills, Michigan. The whole group had a really fun time cheering each other on,” she said.

Mowczan believes that building interpersonal relationships outside of work can produce better relationships inside the workplace and lead to healthy communication, debate and sharing of ideas—an integral part of her role as an acquisition professional. Sharing things about yourself on a personal level exposes some vulnerability and builds trust between people, which carries over to the workplace. “Someone may give you more latitude or have more confidence in what you’re doing since they know you personally,” she said. “I think building personal relationships at work helps with doing the actual work.”

—**CHERYL MARINO**



TRAIN AND AID

USASAC facilitates multibillion-dollar military aid packages to Ukraine at unprecedented speeds, while also fostering organizational change.

by Adriane Elliot

While no one knows how the war in Ukraine will end, one thing is certain: Support from the international community has been key in bolstering Ukraine's dogged resistance, shaping the course of the Russian-Ukraine war. According to the Kiel Institute for the World Economy, the European Union and its countries have provided the most total aid (combined military, financial and humanitarian), while the United States has by far provided the most in military aid.

As of July 7, the United States has committed more than \$42 billion in security assistance to Ukraine since the beginning of the Biden administration, including more than \$41.3 billion since the beginning of Russia's unprovoked invasion Feb. 24,

2022. Of that, the North Alabama-based U.S. Army Security Assistance Command (USASAC) has facilitated the delivery of \$12.3 billion in weapons, training and materiel since the beginning of the invasion, and approximately \$13.23 billion since Russia seized Crimea in 2014.

MOVING AID TO THE BATTLEFIELDS

USASAC leads the Army Materiel Command's (AMC) security assistance enterprise by developing and managing security assistance programs and foreign military sales cases to build partner capacity, support combatant command engagement strategies and strengthen U.S. global partnerships. USASAC's portfolio currently includes over 6,500 foreign military sales cases worth more than \$217 billion for 137 countries.

WEAPONS LOADED

Pallets of ammunition, weapons and other equipment bound for Ukraine are loaded on a plane during a foreign military sales mission, Jan. 24, 2022. Since 2014, the U.S. has committed billions in assistance to Ukraine, including security and non-security assistance. (Photo by Tech. Sgt. J.D. Strong II, U.S. Air Force)

With hundreds of employees spread across the globe, the command is ensuring the urgent delivery of multibillion-dollar aid packages to Ukrainian battlefields, around the clock and at unprecedented speeds.

“The security assistance the United States provides to Ukraine is enabling critical success on the battlefield against Russian forces and demonstrates our resolve to support our allies and partners,” said USASAC Commanding General Brig. Gen. Brad Nicholson. “USASAC in coordination with the security assistance enterprise is working extremely hard to fulfill Ukraine’s priority security assistance requests, delivering weapons from U.S. stocks when available, and facilitating the delivery of weapons by allies and partners when their systems better suit Ukraine’s needs.”

Despite the U.S. government’s repeated attempts to streamline the foreign military sales process, it was not uncommon for



MILITARY MINDSET

SATMO’s Doctrine Education Advisory Group in Kiev, weeks before the February 2022 Russian invasion, from left: Lt. Col. Rob Nesbit, Maj. Justin Kush, Capt. Vladimir Makarov, and Master Sgt. Brad Watts. (Photo courtesy of USASAC)

foreign military sales cases to take months or years to deliver. But with a whole of government approach and the urgency of Europe’s biggest armed conflict since World War II, Nicholson said USASAC has proven agile and responsive in crisis, speeding materiel to the battlefield within days and weeks in some cases.

He said this can be attributed to both expertise and collaboration.

USASAC is known as the center of gravity for AMC’s security assistance enterprise, but it is heavily dependent on the coordination and support of the AMC life cycle management commands: Army Contracting Command, Assistant Secretary of the Army for Acquisition, Logistics and Technology, as well as other DOD agencies and U.S. industry. With extensive coordination, the materiel that makes its way to Ukrainian war zones includes hundreds of thousands of items like anti-armor systems, unmanned aerial systems, artillery, rocket systems, armored personnel carriers and other wheeled and track vehicles, body armor, munitions, medical supplies and protective equipment. These weapons and equipment are being provided via multiple streams including presidential drawdown authority; foreign military sales and foreign military financing; excess defense articles; DOD’s Ukraine Security Assistance Initiative; third party transfers and international military education and training. Of its more than 6,500-case portfolio, USASAC has 199 implemented cases worth more than \$9.65 billion with Ukraine.

“Ukraine remains a key regional strategic partner that has made significant strides in modernizing its military and increasing its interoperability with NATO,” said Nicholson. “We will continue to work to ensure it receives the equipment it needs to defend itself and to promote regional stability and democratic values.”

CHANGING MILITARY MENTALITY

In addition to facilitating the delivery of multibillion-dollar military aid packages to Ukraine, one Army command has provided a lesser-known asset with extraordinary impact. The Security Assistance Training Management Organization (SATMO) supplied Ukraine with a Doctrine Education Advisory Group (DEAG), headquartered in Kiev from 2016 up until three weeks before Russia’s invasion in February 2022. SATMO provides advanced and specialized training, professional military education, and tactical level expertise to allies and partners worldwide.

The DEAG was activated to support their armed forces’ struggling transition from deeply entrenched post-Soviet mindsets and processes to a force capable of NATO integration. It was comprised of highly skilled U.S. Army officers,

numbering between four and six Soldiers at a time, who advised at the operational level to revamp doctrine and professional military education.

“There was minimal teaching in the traditional sense of standing in front of a classroom,” explained Lt. Col. Rob Nesbit, former detachment commander for the DEAG. “The reality is that there is far more advising of senior Ukrainian leaders which, in an abstract way, is teaching. Having said that, what we modeled to the Ukrainians is effective long- and mid-range planning, and professionalism.”

If that sounds simple, Nesbit said it’s not. And he should know. Leading the DEAG until weeks before the invasion and continuing to consult at the start of the war, Nesbit has spent the majority of his life as an active-duty Army officer—37 years and counting—with multiple combat deployments under his belt. He is currently the deputy of current operations (G33) for the U.S. Army’s XVIII Airborne Corps at Fort Liberty, North Carolina (formerly Fort Bragg).

“Creating a climate for organizational change, altering the way a group has been thinking for generations, is a much bigger feat than teaching someone to follow orders or execute a task,” he said.

It’s a complete cultural shift, notoriously difficult even in the best of circumstances, and even more so considering the rigid, top-down style of leadership that was a remnant of Ukraine’s Soviet roots. This is in sharp contrast to the American military’s “mission command” doctrine, which delegates decision making to subordinates wherever possible, minimizing detailed control, and empowering lower-level initiative.

Despite the challenges, Nesbit began to witness a hopeful shift as senior Ukrainian officers, recognizing the value of standardizing planning, began using the long-range forecasting and preparation that is a hallmark of successful organizations.

The DEAG mission supported the Armed Forces of Ukraine, the National Guard Ukraine, the National Defense University, and to a lesser extent the Air Assault/Airborne Forces and Ukrainian Marine Corps and was a crucial test of what the future holds for a strong, independent Ukraine and regional stability throughout Europe.

“Within the realm of great power competition, the DEAG was really a component of U.S. and NATO efforts to counter Russian influence, not just in Ukraine but throughout Europe,” said

Nesbit. “The importance of the mission rested in its ability to set conditions that enable the Ukrainian military to serve alongside Euro-Atlantic partners in the future.”

CONCLUSION

Col. Dan Miller, the former chief of the Office of Defense Cooperation at the U.S. Embassy in Kiev, described the DEAG’s work as leading edge, most notably its “development of new, NATO-interoperable doctrine and reforms to the professional military education system. This represents vital first steps to creating the sustainable and irreversible change needed for Ukraine to progress on its desired path to NATO membership.”

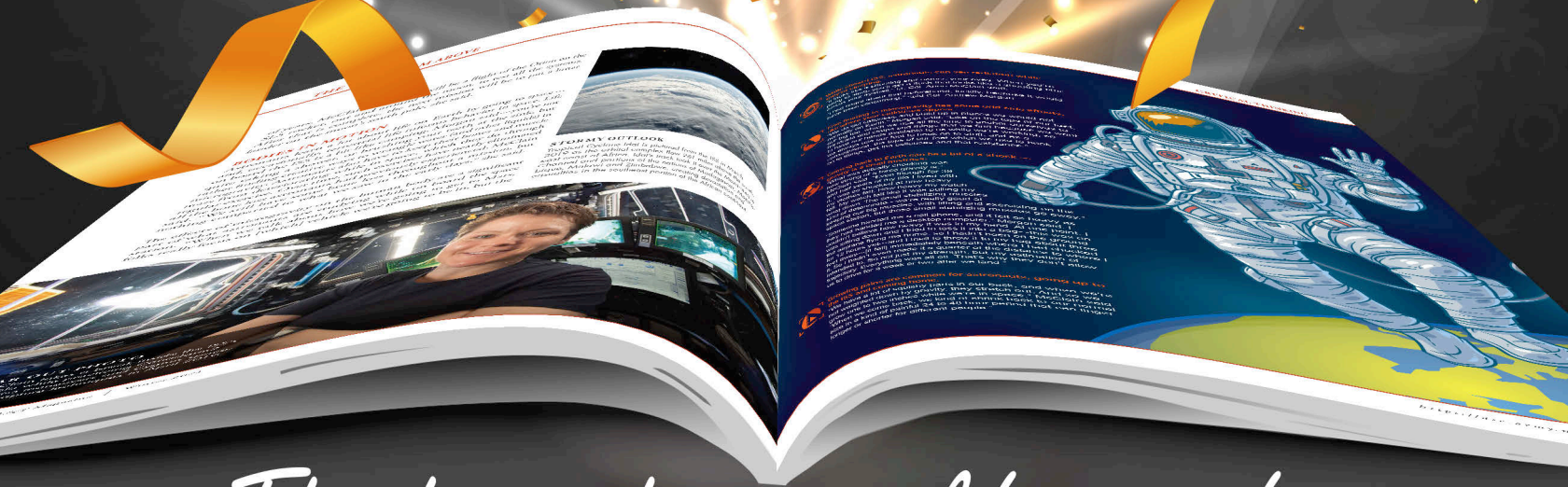
No one knows how the story ends, but the beginning was clear. The world watched in awe as a much smaller, lesser equipped Ukrainian military used extraordinary resolve and overwhelming allied support to defy the odds against Russia.

“We won’t know the full impact of the DEAG and other international support,” said SATMO’s Ukraine Foreign Assistance Specialist Pat Macri, “but we’re confident that it aided our partner and will continue, long after this war has ended, to provide tremendous benefit.”

For more information on USASAC and how its security assistance missions support U.S. foreign policy, go to www.army.mil/usasac or to learn more about SATMO, go to www.army.mil/satmo.

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PARTNER NATIONS

Spc. Charles Ramirez, an infantryman assigned to 1st Battalion, 8th Cavalry Regiment, aims a simulated Javelin Anti-Tank System during Karelian Lock 23 on Pahkajarvi Training Area, Finland, May 30, 2023. Javelin systems have been part of the support sent to Ukraine. (Photo by Spc. Jacob Nunnenkamp, 2nd Armored Brigade Combat Team, 1st Cavalry Division Public Affairs)



SECURITY DETAILS

ASA(ALT) actions to support Ukraine exemplify effort to build capacity at speed and scale.

by James Treharne, Ph.D., and James Stocks

It has been over a year since Russia invaded the sovereign nation of Ukraine in February 2022. The Army is a major part of a massive DOD effort, along with a large coalition of partner nations, to provide security assistance to Ukraine. The United States and its allies and partners remain steadfast in their commitment to support Ukraine and its fight for democracy, sovereignty and territorial integrity.

The mission of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) is to continuously modernize the Army, as part of the joint force, through rapid and timely delivery of Soldier capabilities that deter adversaries and win our nation's wars. Each day, dedicated members of ASA(ALT), at both headquarters and program executive offices (PEOs), focus on ensuring that the enterprise seeks, develops, fields and sustains effective capabilities that provide unmatched advantage across the competition continuum. While delivering the Army of 2030 is the primary focus, ASA(ALT) is also a significant contributor to Army efforts to build the capacity and capability of allies and partners. The massive and rapid response to the Ukraine crisis provides an example of these efforts to build capacity at speed and scale.



TRAINING TANKS

Ukrainian troops move into position during the field training exercise portion of Rapid Trident, Sept. 12, 2018, at the International Peacekeeping Security Center near Yavoriv, Ukraine.

(Photo by Staff Sgt. Ryan Sheldon, U.S. Army National Guard)

ROLLING OUT A RESPONSE

As of July 7, 2023, the United States has committed more than \$42 billion in security assistance to Ukraine since the beginning of the Biden administration, including more than \$41.3 billion since the beginning of Russia’s unprovoked and brutal invasion on Feb. 24, 2022. Some of the systems, vehicles and equipment include:

- 155 mm howitzers.
- High Mobility Artillery Rocket Systems and ammunition.
- High Mobility Multipurpose Wheeled Vehicles.
- Javelin anti-armor systems.
- Stryker armored personnel carriers.
- Abrams tanks.

For a complete and detailed list of support, please see the Ukraine fact sheet at [defense.gov](https://www.defense.gov).

AUTHORITIES

To execute this important national security mission, ASA(ALT) relied on existing and expanded congressional authorities. The first was the Presidential Drawdown Authority (PDA). This authority allows the Army to deliver equipment by drawing from U.S. Army resources, such as an Army unit, including active duty, Reserve or National Guard. The Army could also draw from existing stocks or delivery orders on existing contracts. Using the PDA allows the Army to deliver equipment to Europe quickly.

The second authority ASA(ALT) leveraged was the Ukraine Security Assistance Initiative. This authority allows the Army to procure capabilities for Ukraine from industry. This generally

With the full support of Congress, the Army is making substantial long-term investments in the industrial base.

presents less of a readiness impact, especially in the short term. However, the materiel may not be delivered for years because of production lead times. While this may not immediately affect their current operations, it sends a strong message of our government's long-term commitment to supporting Ukraine.

SUCCESS AT SCALE

ASA(ALT) has both the experience and skillsets to execute the presidential draw-down process, but has not done so at the scale and speed of the current effort, which dwarfs previous efforts in terms of quantity, value and timelines for completion. Additionally, many assumed the initial surge efforts early in the conflict would be sufficient, but the pace and scope of the support has continued at a high level for over a year. Through the commitment and dedication of ASA(ALT)'s workforce, there have been several key reasons for the current success.

ASA(ALT) relies on strong, competent, innovative leaders from its headquarters down through its PEOs and program management offices, as well as from teammates across the Army. ASA(ALT) and Army Materiel Command are essentially performing their wartime mission



READY FIRE

A paratrooper assigned to 3rd Brigade Combat Team, 82nd Airborne Division installs Multiple Integrated Laser Engagement System (MILES) gear on a Humvee at the Joint Readiness Training Center on Fort Polk, Louisiana (now Fort Johnson), April 19, 2023. MILES gear includes sensors that simulate the reception of enemy fire for training purposes. (Photo by Spc. Rognie Ortiz Vega, 49th Public Affairs Detachment)

to generate and sustain combat capability. Acquisition leaders received guidance while facing many unknowns and uncertainties and rapidly developed solutions to complex problems.

One of the most important enablers of success is the existing relationships that leaders, at all levels, have established and maintained across Army commands and staffs, as well as with their counterparts at higher and adjacent commands and staffs. These existing relationships based on streamlined communications, grounded

in familiarity and trust, enable the Army to rapidly adjust to changing demands and compressed timelines.

While ASA(ALT) has much experience providing materiel support to partners and allies, the critical nature of Ukraine response required organizational agility and the formation of a dedicated rapid response team. ASA(ALT) headquarters formed a "smokejumper team." Like those who fight wildfires, our smokejumpers were highly trained professional leaders of planning and action. They were formed



HIMARS EXERCISE

A High Mobility Artillery Rocket System (HIMARS) from 3rd Battalion, 197th Field Artillery Regiment fires a Reduced Range Practice Rocket during a live-fire exercise at McGregor Base Camp, Las Cruces, New Mexico, April 15, 2023. (Photo by Spc. Devin Bard, 3-197th Field Artillery Regiment Public Affairs)

with expertise across ASA(ALT) and included direct participation from PEOs and program offices as required. The team's depth and breadth of acquisition, security assistance, sustainment, budgetary and financial expertise were essential to execute this mission. This team was given senior leader intent for execution and team members were empowered to make decisions to facilitate rapid planning. Teaming and agile leadership were instrumental to success in providing support to Ukraine.

Clear channels of communication were essential within ASA(ALT) headquarters, as well as with PEOs and teammates in the Army G3/5/7, G8, Army Budget Office, Assistant Secretary of the Army for Financial Management and Comptroller and Army Materiel Command. The presidential drawdown process became a fast-paced, tense and rigorous two-week drill that required continual flow of information within the Army and

to leadership in the Office of the Secretary of Defense. Success in the DOD enterprise was due largely to a well-managed battle rhythm among stakeholders and constant communications at multiple levels within the enterprise. Speed and tempo were dependent on collaborative multiagency relationships and direct access to, and frequent touch points with, senior leaders to facilitate rapid decision making.

A key challenge to the team was having good data to underpin key drawdown decisions. Ensuring the data was of sufficient quality was a constant issue and source of much effort. To be high quality, data must meet the VAULTIS goals: visible, accessible, understandable, linked, trustworthy, interoperable and secure. ASA(ALT) must continue to invest in expertise to ensure its workforce has the skills and tools to leverage data for decision making.

Many assumed the initial surge efforts early in the conflict would be sufficient, but the pace and scope of the support has continued at a high level for over a year.

The COVID-19 pandemic highlighted the importance of a stable and robust organic and commercial industrial base. The Ukraine support has reinforced the fact that the Army's military readiness depends on a healthy, responsive and modern defense industrial base. ASA(ALT) leadership has made the industrial base a strategic priority—with the full support of Congress, the Army is making substantial long-term investments in the industrial base. In the meantime, as the secretary of the Army and the chief of staff of the Army recently reported, “The Army is working closely with the Office of the Secretary of Defense and our industry partners to rapidly increase production capacity and transform our processes from vulnerable supply chains to a more resilient supply fabric.”

A key element of responsive to partner demand is ensuring we proactively manage technology security and export control measures to ensure we can provide meaningful capability to partners while maintaining our technological edge. Systems should be designed and built with the mindset that they will likely be exported to an ally or partner nation. This is not a new requirement, but it is often traded away when faced with cost and schedule constraints. However, in a crisis, exportability can become a critical limiting factor that even relatively unconstrained resources can solve in the timeline required.... time once traded can't be reclaimed. Like building for reliability, the Army must design and build exportability features in from the beginning.

A key factor to success was the recognition that ASA(ALT) must operate within DOD established processes while ensuring its own internal processes for presidential drawdowns were efficient, effective, collaborative and transparent. ASA(ALT) worked on

a two-week battle rhythm to receive, analyze and respond to DOD requests for materiel support. Coordination and approval processes operated on both unclassified and classified networks. At any given time, the Army was working on three different drawdown requests. ASA(ALT) continually refined its process and procedures to ensure requests were acted upon expeditiously and senior leaders were provided sufficient and timely analysis to support their decision making.

CONCLUSION

Over the last year, the Army acquisition enterprise has planned and executed their mission well to support Ukraine security assistance as a significant contributor to Army efforts to build capacity and capability due to the detailed planning, diligence and leadership of its workforce, while operating under tight timelines and resource constraints. As we continue to execute, ASA(ALT), and the broader Army enterprise, must institutionalize what has been learned; capture the appropriate information in policy and regulations; and, where appropriate, recommend statutory changes to ensure it remains strategically and operationally responsive to the needs of our nation.

For more information about ASA(ALT), go to <https://www.army.mill/asaalt>.

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PREPARE FOR LAUNCH

U.S. Soldiers with the 2nd Cavalry Regiment launched the Puma unmanned aircraft system at the Grafenwoehr Training Area in Germany on March 17, 2023. (Photos by Spc. Orion Magnuson, U.S. Army)

SECURITY ASSISTANCE SYNERGY

by *Eric Mehaffey*

Supporting the Ministry of Defence of Ukraine and the United States Army security assistance initiatives, the Project Manager Uncrewed Aircraft Systems (PM UAS), within the Program Executive Office for Aviation, identified key focus areas that contributed to deliberate and efficient delivery of capability. For example, PM UAS secured approximately \$300 million across multiple foreign military sales cases in support of the delivery of over 500 Puma Uncrewed Aircraft, associated ground equipment and support services to enable the national defense of Ukraine. Not an easy task, the project office overcame barriers to rapidly field a critical capability to our partner nation. To deliver capability quickly to Ukraine, the key areas of emphasis for PM UAS were streamlining

contracting processes, identifying innovative solutions with industry partners and harnessing synergy across the Army security assistance enterprise.

STREAMLINING PROCESSES

Security assistance efforts supporting the Ukrainian Armed Forces demonstrated that project management activities are not limited to consecutive activities for delivery of capabilities. Instead, execution of a variety of tasks in parallel is imperative to field capability as quickly as possible. For example, the successful staging of documents to execute actions concurrently accelerated delivery of capabilities to our foreign partners. Specifically, PM UAS met Ukraine's urgent requirements by executing case and

Project Management Uncrewed Aircraft Systems answers the call for Ukraine urgent requirements.

contract development activities in parallel to the security assistance process for executing solutions and delivering services to foreign partners.

Additionally, the aviation materiel enterprise utilized technical expertise to coordinate with the original equipment manufacturer for system interoperability requirements, production priorities, throughput capacities, field service representative (FSR) support services and delivery schedules and overcame training site challenges. The result of these efforts was the delivery of urgent capability in the fastest way possible.

RELATIONSHIP WITH INDUSTRY PARTNERS

Collaboration across the defense enterprise enabled development of innovative solutions and mitigated challenges fielding the urgent requirements. Fostering effective relationships with industry partners was essential to deliver capabilities to the government of Ukraine as it defends its homeland. These aggressive timelines reminded us that industry partners offer unique insights for leveraging new weapon systems, technologies and innovations. It is crucial that our partners and allies

are fielded the latest capabilities at the speed of innovation to stay ahead of the enemy threats.

TOTAL PACKAGE APPROACH

Continuous communication with the Army security assistance enterprise was essential for ensuring program success and meeting the urgent requirements of Ukraine’s armed forces. For the new weapons systems, the team provided a total package approach consisting of spare parts, contractor logistics support, new equipment training, and FSR support services. The total package approach satisfied Ukraine’s urgent requirements to train, employ and sustain its weapon systems.

In short, PM UAS established a stakeholder working group comprised of the Security Assistance Management Directorate, U.S. Army Security Assistance Command, the Joint Consolidation Point, industry partners and the Office of Defense Cooperation at the U.S. Embassy in Kiev to respond quickly to emerging requirements. This team’s actions facilitated the rapid delivery of critical capabilities through streamlining both acquisition and contracting processes. Again, the security assistance process greatly benefited from

our industry partners who offered unique insights that effectively leveraged new weapon systems, technologies and innovations addressing the dynamics of emerging threats on the modern battlefield.

CONCLUSION

PM UAS successfully expedited an extensive process that delivered Uncrewed Aircraft Systems to the Ukrainian Armed Forces. As demonstrated through the streamlining of processes, relationships with industry partners, and the deliberate synergy across the enterprise, the Army will deliver capability quickly and reliably in support of our partners and allies.

For more information, go to www.state.gov/u-s-security-cooperation-with-ukraine/.

ERIC MEHAFFEY is the PM UAS International Program Office assistant program manager, supporting U.S. Army security assistance initiatives for the Program Executive Office for Aviation. He holds a B.S. with a technical management focus from Embry-Riddle Aeronautical University and an Associate of Science with a focus in uncrewed aircraft systems from Cochise College.



PUMA TAKES FLIGHT

A Puma lifts off at Grafenwoehr Training Area in Germany on March 17, 2023. PM UAS supported the delivery of 500 Puma unmanned aircraft systems to the government of Ukraine by streamlining contracting processes, identifying innovative solutions with industry partners and harnessing synergy across the Army security assistance enterprise.



COMBAT TECH

Soldiers from 1st Stryker Brigade Combat Team, 2nd Infantry Division wear upgraded Integrated Visual Augmentation System goggles while sitting atop Stryker armored vehicles preparing for a movement-to-contact urban raid exercise in August 2022 on Joint Base Lewis-McChord, Washington. The exercise was part of a two-day demonstration event hosted by the Program Executive Office for Ground Combat Systems with the aim of integrating Soldier feedback into the development of new military combat technology. (Photos by Spc. Chandler Coats, 5th Mobile Public Affairs Detachment)



I PROMISE IT'S NOT A TEST

Four program executive offices team up with Soldiers to run the Army's most modern platform, communications and data interface programs of record through the paces.

*by Lt. Col. Nicholas Breen, Capt. Max Meinert
and David Morris, Ph.D.*

On a hot August day at Joint Base Lewis-McChord, Washington, Soldiers from 3rd Platoon, Bravo Company, 1st Stryker Brigade Combat Team, 2nd Infantry Division stressed their operational limits to see what capabilities the Army's most modern programs of record offered. The combined kit from the Program Executive Office for Ground Combat Systems (PEO GCS); PEO Command, Control and Communications – Tactical (PEO C3T); PEO Intelligence, Electronic Warfare and Sensors (PEO IEW&S) and PEO Soldier provided a cool breeze through the fog of war. Data radios, vehicle cameras and augmented reality headsets gave the platoon unprecedented situational awareness, increasing its lethality and allowing for better informed tactical decisions.

“The situational awareness that leaders are able to gain and maintain with minimal effort greatly enhances our ability to operate,” said Sgt. First Class Kyle Williams, rifle platoon sergeant for 3rd Platoon.

The vehicle excursions hosted every two to three years by PEO GCS are prototyping events that test mature technologies ready for fielding. The intent is to reduce platform integration risk, cost and schedule, and ultimately to get mission-enhancing technology into the hands of Soldiers as soon as possible. Vehicle Excursion 3 (VE3) incorporated multiple PEO capabilities into a system-of-systems suite of equipment, taking the next step in providing unified data and communications on platforms at the forward edge. “We realized early in the planning process for VE3 that the combat platforms presented a unique challenge, as separate markets or end users on the platform had different needs,” said Bob McNeill, project lead for the PEO GCS integration office. “The platform crew, dismounts and the formation are all hungry for data, and there is not a unified effort to tie all of these technologies together at the platform level outside of the vehicle excursions.” Picture your

car dashboard, sensor and infotainment system being developed by separate entities without a clear plan on how it would all function together. Then you can quickly grasp how we've approached integration in the past.

Some key platforms and products Soldiers leveraged at VE3 were:

- The Stryker Double V-Hull A1.
- The Integrated Visual Augmentation System (IVAS) (based on civilian augmented reality technology).
- Enhanced Night Vision Goggle – Binocular.
- Power On-The-Move.
- A Universal Battery Charger.
- A 360-degree camera system for use by both crew and dismount subsystems.
- Assured position navigation and timing systems.

“VE3 presented the IVAS program an opportunity to validate its capability in a larger ecosystem of mature programs of

record while cutting cost for platform integration of participating programs,” said Col. Troy Denomy, project manager for the PEO Soldier IVAS.

CONCEPT OF OPERATIONS

3rd Platoon, Blackhorse Company was selected to conduct VE3 and to provide Soldier inputs to identify critical operational issues. 3rd Platoon was given five weeks of new equipment training prior to executing team-, squad- and platoon-level training exercises over a two-week period. Soldiers were issued IVAS headsets and Tactical Scalable Manet (TSM) handheld voice/data radios. TSM is a new waveform allowing data sharing between vehicle and dismounted users, automatically relaying both to extend range throughout a unit. Vehicles were equipped with mounted TSM radios, 360-degree situational awareness camera systems, and additional charging equipment for Soldier-worn batteries. The training scenarios were focused on offensive operations in urban terrain that transitioned to consolidation and establishment of a defense. Each iteration involved troop-leading procedures and some incorporated rapid changes of mission during execution caused by updates to the enemy's disposition.



PREPARE ACCORDINGLY

Soldiers wear upgraded IVAS goggles while preparing to storm the objective building during the vehicle excursion exercise in August 2022 on Joint Base Lewis-McChord.

After-action reviews and human factors psychologist interviews followed each scenario to capture Soldier feedback. Soldiers reported issues and recommended improvements to reshape systems before fielding:

- TSM radios had limited range and short battery life but were reliable and clear. The limited range is a mixed blessing—they do not reach as far as the current Single Channel Ground and Airborne Radio System, but the limited range decreases their electromagnetic signature, making them more difficult for the adversary to detect on the battlefield.
- IVAS provided superb thermal vision and revolutionary mission command capabilities, but the current cabling restricted Soldier movement, and the large goggles are not compatible with current weapons optics. The IVAS heads-up display is specifically relevant at the platoon level and below because it does not require the user to look down at a smartphone.
- Power On-The-Move had connector issues that caused repeated system reboot. Because of this, Soldiers avoided using it.
- The Universal Battery Charger quickly charged batteries from the Strykers. It is a much-needed capability, especially as future systems increase battery dependence. This increased dependence will tie infantry platoons closer to their power generation and increase fuel consumption as engines will need to run more frequently.
- 360-degree cameras were found to be most useful by vehicle crews to maintain situational awareness and security in urban terrain.

The overall conclusion was that with some additional work to tweak final designs, the IVAS, new Tactical Assault Kit (TAK) mission command software, and network system of systems tested during VE3 will allow Stryker Brigade Combat Teams and warfighters to compete and win on the battlefield of the 21st century. The accurate and automatically updating common operating picture created by IVAS and the newest mission command software, TAK, allows platoon leaders and company commanders to better synchronize and rapidly maneuver their combat power.

It also allows higher headquarters to passively track the progress of operations. Instead of commanders and staffs at every echelon spending a significant amount of time working to gain and

maintain situational awareness, that time can be devoted to anticipating and shaping the future fight. Pushing their operational capability demonstrated that every squad leader having access to a better common operating picture than a Desert Storm-era battalion commander allows them to take disciplined initiative to accomplish their mission. It increases the ability of the Army to exploit the inherent strengths of its noncommissioned officer corps and junior officers. The tactical advantages provided by improved versions of these systems will far outweigh the disadvantages.

Picture your car dashboard, sensor and infotainment system being developed by separate entities without a clear plan on how it would all function together.

VEHICLE EXCURSIONS AND MITIGATING RISKS IN MODERNIZATION

The Future Combat Systems era of modernization is often cited in Army circles as a monolithic “top-down” institutional failure, given its reliance on unproven technology and the risk associated with “leap-ahead” technologies. As the Army allows its leap-ahead technologies to mature independently in the current modernization effort, a “bottom-up” approach of proving individual technologies before adoption avoids the previous failures of immature systems. However, a focus on individually maturing new capabilities creates a risk in unity of effort, synchronization and integration. These are particularly critical to the tightly interwoven constrained spaces of ground combat platforms. Several efforts can mitigate these risks:

- First are the PEO-level integration shops. Project Lead Capability Transition and Product Integration Office is the O6 level integration shop for PEO GCS, established in October 2020. Similar integration activities



STORM READY

A Stryker armored vehicle fires its .50-caliber machine gun while storming an objective during a vehicle excursion event in August 2022 on Joint Base Lewis-McChord.

(with slight mission distinctions) exist at PEO Aviation in the Aviation Mission Systems and Architecture Project Office, at PEO IEW&S in their Integration Directorate, and at PEO C3T in the Project Manager for Interoperability, Integration and Services. PEO Soldier is currently standing up its own version. Without the integration stakeholder communities' efforts across program lines and communicating on cross-portfolio funding opportunities, no one would be minding the wheel on the bottom-up approach.

- Additionally, PEO GCS is developing reference implementation architectures starting with current state and extending to mid- and long-term milestones toward the modernization goals of Army 2030 and beyond. A key element is the modular open systems approach

(MOSA) and the PEO GCS instantiation GCS Common Infrastructure Architecture, aka the “digital backbone.” To understand what this means, picture a networked flip phone, handheld GPS unit, handheld digital organizational assistant, and many other devices being what you take into combat. These are all yesterday’s technologies and yesterday’s methods of integrating systems. A digital backbone such as is found in an interconnected smart home, touch screen smartphone or modern electric vehicles, is the direction MOSA will take us.

- Another element is the physical integration space—the Standardized A-Kit / Vehicle Envelope (SAVE), recently signed by the Army acquisition executive, Douglas R. Bush, which provides a common physical space, environment and interface characteristics for radios,



NECESSARY PREPARATIONS

Soldiers with 1st Stryker Brigade Combat Team, 2nd Infantry Division wear upgraded IVAS goggles while sitting inside a Stryker armored vehicle preparing for a movement-to-contact urban raid exercise in August 2022 on Joint Base Lewis-McChord.

computers and other new technology. Led by PEO GCS and co-developed by all the PEOs represented at VE3, SAVE will enable more rapid modernization, because new SAVE-compliant systems will already be compatible with SAVE-compliant vehicles.

- The final key effort mitigating integration risks are the vehicle excursions. An important distinction and unique value of vehicle excursions is the focus on mature technologies. While Project Convergence and other technology demonstration events have proven valuable at demonstrating what is in the art of the possible, vehicle excursions operate in a post-Project Convergence environment with mature technology—answering the question, “What are we really going to fund for modernization, how does it all connect, and does it work as advertised?” Installing multiple systems on platforms in an operational environment quickly brings out the technical and programmatic “warts,” allowing much faster redesign more affordably, while providing a government-owned technical data package at the system-of-systems level at the end of the

vehicle excursion. Most importantly, the Soldier feedback received at vehicle excursions is the only Soldier touch point for ground platforms at the system-of-systems level before nonrecurring engineering. This final “gut check” ensures that information dimension nonrecurring engineering funding is improving access to relevant real-time information and reducing cognitive load, truly making Soldiers more lethal on the battlefield.

CONCLUSION

The pace of modernization and rearmament is accelerating across the globe. System-of-systems integration, standardization and mature prototype excursions are critical enablers to accelerate our own modernization. The lessons learned from VE3 will improve modernization of information dimension systems as the Army moves toward Army 2030. The tactical benefits of new systems need to outweigh the overall cost of using them in terms of added Soldier load, reliability, ease of use, training time, access to training and sustainability. Future vehicle excursions will continue to bring this type of wisdom into the Army acquisition process.

LT. COL. NICHOLAS BREEN, product lead for PEO GCS Ground Combat Platform Integration, has an M.A. in liberal arts from Johns Hopkins University, a B.A. in political science from the University of Nebraska, and will be attending the Eisenhower School for Senior Service College. He served as an assistant product manager at PEO Soldier, has served on the staff of the assistant secretary of the Army for acquisition, logistics and technology, and is currently serving as the product lead for integration of C5ISR products onto ground combat platforms.

CAPT. MAX MEINERT is the outgoing company commander for Bravo Company, 1st Stryker Brigade Combat Team, 2nd Infantry Division. He has a B.S. in military history from the U.S. Military Academy at West Point. He commissioned as an infantry officer in 2013 and is in the process of transitioning to strategist. He has served in the 1st Battalion, 508th Parachute Infantry Regiment, U.S. Army Europe G-5, Special Operations Joint Task Force – Afghanistan, 1-2 Stryker Brigade Combat Team and the Stryker Warfighters’ Forum.

DAVID MORRIS, PH.D., is a network integration engineer and the lead for MITRE support to PEO GCS assisting with combat vehicle modernization. He holds a Ph.D. and an M.S. in electromagnetics with a minor in communications, and a B.S. in electrical engineering from the University of Michigan.



THE FINOPS REVOLUTION

By adopting the financial operations framework, the Army can control and predict costs while maximizing the benefits of cloud computing.

by Robert J. Schadey

CLOUD STORAGE FACILITY

Digital data is stored on servers at off-site locations, maintained by a third-party provider who is responsible for hosting, managing and securing data stored on its infrastructure. (Photo by Manuel Geissinger, Pexels)

In 2018, then-Secretary of the Army Ryan McCarthy made a significant decision to support the migration of the Army’s finance and logistics systems from on-premises data centers to commercial cloud computing facilities. Since then, the cloud revolution has taken firm hold across the service, bolstered by the establishment of the Enterprise Cloud Management Agency in March 2020 and the recent publication of updated guidance within the Army Cloud Plan 2022.

One of the seven strategic objectives of the plan is to provide cloud cost transparency and accountability. To prevent underutilized services and unexpected, avoidable costs, the plan says the Army will use “a combination of enterprise-provided

common services and cloud consumption tracking for all cloud consumers.”

One still evolving cloud financial management discipline that’s slowly being adopted by the federal government, including the Army, is financial operations—coined FinOps. FinOps is an evolving cloud financial management discipline and cultural practice that enables organizations to maximize business value and collaborate on data-driven spending decisions, employing cross-functional teams to work together to maintain financial control while also ensuring rapid delivery of capability. The concept of FinOps helps organizations manage their spending on cloud infrastructure and services responsibly. It is a way of tracking and

managing variable costs. This makes it easier for program, technical and financial teams to work together and make intelligent choices about the most efficient use of funds.

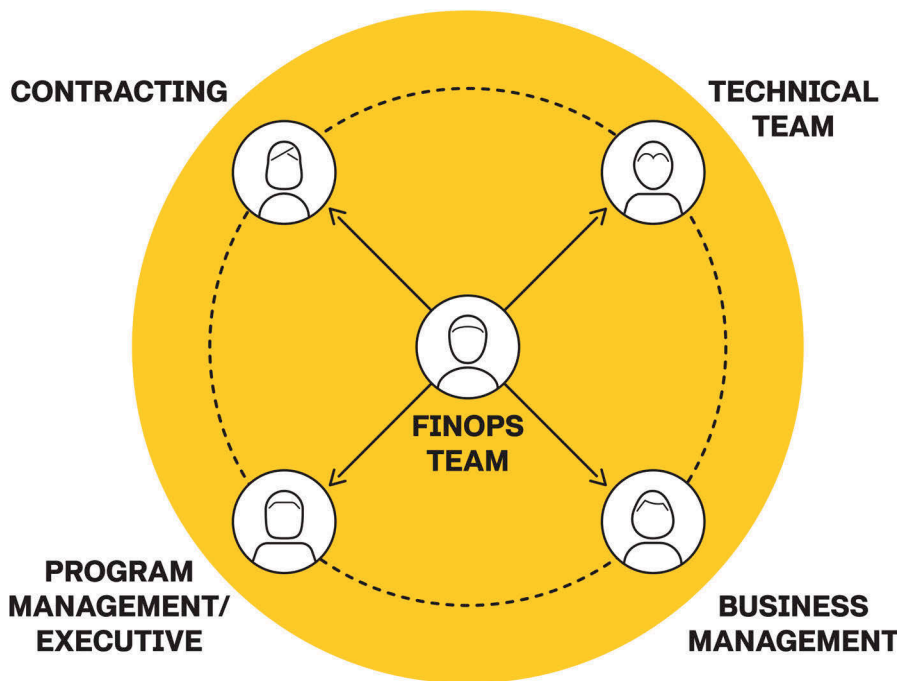
The Program Executive Office for Enterprise Information Systems (PEO EIS), which migrated the Army’s massive General Fund Enterprise Business System (GFEBS) to the cloud in 2020 and has conducted several more migrations since then, has put a FinOps framework and practice in place over the past two years. Through this framework, the Army is now effectively monitoring and managing cloud infrastructure and services contracts related to cloud computing. This has proven to reduce costs, improve performance and maximize strategic cloud modernization objectives.

To manage the service’s cloud infrastructure budget in years to come, the Army needs the agility and scalability that the FinOps revolution provides.

EVOLUTION BEFORE REVOLUTION

As cloud computing has become more widespread in both the public and private sectors, organizations have begun looking for ways to leverage cloud services. The goal is to maximize both technological and cost potential. Cloud-based applications enable real-time collaboration among stakeholders, resulting in more efficient operations. Collaboration on cloud infrastructure and services can be accomplished through the built-in tools of cloud infrastructure service providers. These applications give users visibility into their cloud infrastructure to track, manage and optimize their cloud costs.

At a higher level, organizations need to implement cloud-based contract vehicles, such as the Army’s Cloud Account



TEAM PLAYERS

The FinOps team works with cross-functional teams to maintain financial control while also ensuring rapid delivery of capability. (Graphic by the FinOps team, PEO EIS)

Management and Optimization (CAMO) or DOD’s Joint Warfighting Cloud Capability and financial management solutions, to maximize the benefits of cloud computing. FinOps has become a framework for organizations to better manage cloud infrastructure and service costs.

FinOps aligns cloud computing business objectives—such as increasing organizational agility and improving customer experience—with financial goals like reducing capital expenditures and optimizing operational costs. It is a method that helps organizations save money on cloud infrastructure services by promoting collaboration and finding ways to innovate more efficiently.

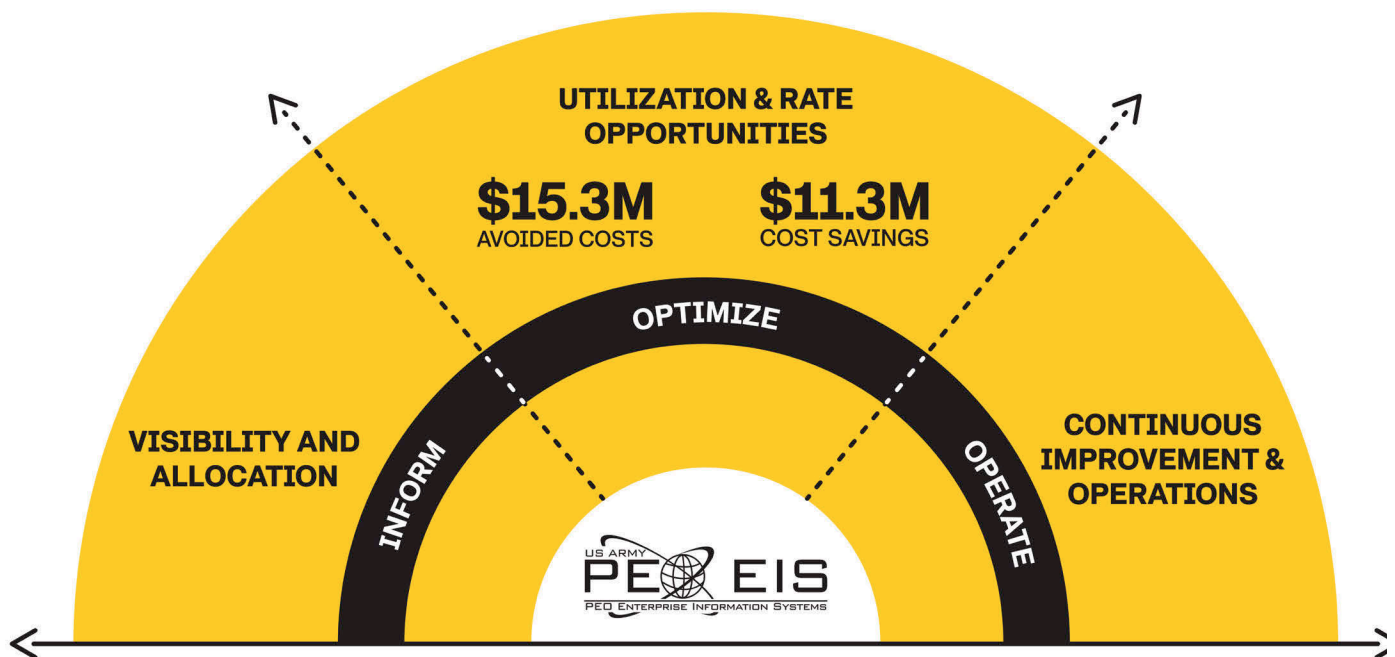
FinOps brings together people from different departments to work on cost-cutting decisions. It breaks down organizational silos and the traditional budgeting process to make the process more efficient. By leveraging collaboration and continuous improvement for efficiency and innovation, FinOps helps organizations

optimize the cost of cloud infrastructure services and manage the entire economic cycle of cloud computing.

To address the complexities of the cloud computing landscape, FinOps methods and tools are continually evolving. While some organizations have their own FinOps teams, others use third-party vendor services and tools to help with cloud financial management.

FINOPS FORECASTS

FinOps helps organizations better forecast their cloud spending and plan for future investments by delivering a unified view of all cloud costs across services, accounts and resources. It provides visibility into usage trends, cost trends and budget forecasts, allowing organizations to track their spending and adjust their budgets accordingly. FinOps can provide actionable insights and optimization recommendations to help organizations identify areas for cost savings and better manage their



CONTINUOUS MONITORING

By using FinOps to continuously monitor cloud expenses, PEO EIS has maximized the value of cloud infrastructure resources and services for the Army. (Graphic by the FinOps team, PEO EIS)

cloud investments. For example, a FinOps team may determine that services are over-provisioned on a specific type of compute resource and recommend scaling back the number of resources used to save costs.

Among FinOps' key benefits are improved utilization of the cloud's resources—including compute power, memory and network—and reduction of costs traditionally associated with dedicated hardware in legacy IT environments. FinOps also:

- Enables better-informed decision-making to reduce waste associated with inefficient resource purchases.
- Provides better visibility of cost and utilization of resources across all departments, allowing for easier management and optimization.
- Offers increased ability to adapt quickly through faster deployment times.
- Increases transparency and accountability with detailed metrics collection.
- Ensures improved communication among departments.
- Features assessment process automation for faster settlement timelines.
- Provides real-time insights powered by artificial intelligence algorithms.

FinOps' key performance indicators offer empirical proof, boosting compliance levels.

FINOPS AT PEO EIS

Between 2019 and 2021, PEO EIS successfully migrated its GFEBs, Army Enterprise Systems Integration Program Hub, and Logistics Modernization Program to the cARMY cloud.

After several months of struggling to budget for the variable cloud service costs accurately, PEO EIS team members devoted resources to implementing best practices to improve cloud consumption—specifically via FinOps.

Cloud computing contracts are often easier to manage with the proper tools. PEO EIS put FinOps in place to effectively manage cloud computing contracts by integrating various technologies, processes and best practices. One of the critical components FinOps recommends is leveraging robotic process automation. Leveraging automation in cloud computing helps

application owners save time, reduce costs and execute service-based contracts more efficiently.

Another way FinOps has helped PEO EIS manage its cloud contracts is via cost optimization and expense management techniques. The framework enables optimized spending by creating and managing budgets, optimizing resource use, setting up alerts and analyzing cost trends.

By using FinOps to continuously monitor cloud expenses, PEO EIS has maximized the value of cloud infrastructure resources and services for the Army. In fiscal year 2022, the organization avoided \$15.3 million in cloud infrastructure costs and achieved \$11.3 million in cost savings. The financial benefits were generated by intelligent procurement and optimization actions implemented across the organization on the CAMO contract vehicle.

Leveraging FinOps tools that provide utilization visibility can help organizations calculate the financial risks of storing resources and data in the cloud. In the case of PEO EIS, the



THE FUTURE OF FINANCIAL MANAGEMENT

Financial operations are no longer handled the old-fashioned way. The federal government, including the Army, is slowly adopting FinOps—an evolving cloud financial management discipline that helps organizations manage their spending on cloud infrastructure and service responsibly. (Photo by Tima Miroshnichenko, Pexels)

FinOps journey is just the start of a revolution in modernizing cost accountability within the Army.

ARMY ADOPTION OF FINOPS

To monitor and manage cloud computing contracts effectively, the Army needs to shift its culture toward FinOps. By adopting this framework, the Army can control and predict costs while maximizing the benefits of cloud computing.

Besides achieving automation and cost optimization, FinOps can help the Army manage cloud contracts through policy management. Army organizations can embed governance rules and guardrails within their cloud contracts, automating compliance, reducing errors and optimizing cloud services. FinOps also offers reporting capabilities that can aid in contract management. Army organizations can review reports on their cloud resources and spending in real time, helping them make more informed decisions when building, modifying and monitoring their cloud services. With FinOps, the Army can ensure its cloud contracts are optimized and compliant, enabling leaders to make more informed decisions and get the most out of their cloud services.

Through cloud FinOps, the Army can improve visibility and control over budgeting and financial management by tracking and managing its IT infrastructure requests for planning, programming, budgeting and execution (PPBE). This can make the PPBE process more efficient and provide deeper insights into spending patterns to identify areas where budget cuts or adjustments can be made.

By adopting FinOps, the Army can control and predict costs, improve performance and maximize the benefits of cloud computing with the contract structures in place. The Army's transition to cloud

The goal is to maximize both technological and cost potential.

computing through FinOps will modernize how it manages its IT infrastructure while improving responsiveness, transparency and cost efficiency. The Army can rapidly build and deliver applications using multiple funding types and budgetary models. This is done by taking advantage of cloud financial management and the agility and scalability offered by multi-vendor cloud infrastructure services.

The Army's future budget management will likely become more efficient and cost-effective as cloud computing solutions become prevalent in DOD solutions. Adopting FinOps will enable the Army to understand its spending, track usage and optimize costs by leveraging cloud computing services appropriately. Additionally, cloud computing will enable the Army to use next-generation technologies and services, such as machine learning and artificial intelligence, to automate and streamline financial processes. FinOps will help the Army increase visibility into its financial data, allowing it to better understand the costs associated with its operations and make smarter decisions. Finally, FinOps can help the Army save time and money by automating manual processes and reducing the overhead associated with traditional budget management.

CONCLUSION

By leveraging the power of FinOps, the Army can develop more effective methods for tracking and managing cloud

computing-related contracts to reduce costs and improve security. For example, the Department of the Army can use FinOps to strengthen its ability to procure cloud resources, ensure risk assessment and optimize contract management for cloud computing. Properly structured contracts incorporating FinOps accountability will increase cost efficiency and data security. FinOps also can create better metrics for the Army to effectively monitor and manage cloud computing-related contracts, resulting in better budgeting and resource allocation—enabling more funds to be applied toward innovations like artificial intelligence and machine learning.

As the Army continues to scale and operationalize the cARMY cloud in support of Soldiers during a period of fiscal constraint, leaders would do well to embrace the FinOps framework.

For more information on FinOps, go to <https://www.finops.org>.

ROBERT J. SCHADEY is the assistant program executive officer at the Program Executive Office for Enterprise Information Systems at Fort Belvoir, Virginia. He holds an M.S. in computer science and cybersecurity from Capitol Technology University. He also earned an M.S. in national security and resource strategy from the National Defense University.



MEAGAN CLAVEL

COMMAND/ORGANIZATION: Mission and Installation Contracting Command, Fort Knox

TITLE: Contract specialist

YEARS OF SERVICE IN WORKFORCE: 1

EDUCATION: Master of Education in guidance and counseling, curriculum and instruction, University of West Florida; B.A. in psychology from The Baptist College of Florida

SLOW IS SMOOTH, SMOOTH IS FAST

Meagan Clavel isn't afraid to try new things. Whether it's at home or at work, she will never hesitate to roll up her sleeves and do what must be done or take on something new or extra whenever necessary.

While her husband, Joseph, a Kentucky National Guardsman, was deployed to Africa, she's had to hold down the fort in his absence as a "pioneer woman"—maintaining their log cabin home and the land it sits on—while working full time and caring for their 4-year-old daughter. That may sound simple enough when all is running smooth, but in the fall of 2022, she was faced with some unexpected challenges. A lack of rainfall caused enduring drought conditions across Kentucky, and the Clavels' well was reduced to dangerously low levels.

With Joseph away, Clavel was tasked with replenishing the cabin's water supply, and fast, before they were left without running water at their home. "It's a 7-mile drive to [neighboring] Kentucky Junction to get enough water to fill the cistern," she explained of the water hauling process with which many in urban areas may not be familiar. A cistern, or holding tank in the ground, is connected to a house like regular plumbing, but the water isn't replenished from city pipes. When the water level is low, "We have to bring water to the cistern when our well does not supply enough." It's not the most convenient process, but it had to be done.

"I hope this great effort on my 'frontier' reflects in my work to illustrate my diligence to pursue until completion and attention to detail," she said. Because when faced with dire circumstances or big decisions, according to Clavel, the action taken shouldn't be rushed just to get it done faster; impulsive decisions will only slow things down. So, for her, a more focused, systematic approach hastens the process of keeping things running smoothly. And she said she handles chores at home in the same way she would tackle projects at work.

Clavel joined the Army Acquisition Workforce one year ago as a contract specialist with Mission Division 2 at the Mission and Installation Contracting Command (MICC), Fort Knox, Kentucky, where in a short period of time she has learned quite a bit about the contracting process from pre-award to post-award. "I assist the requiring activity with the process of attaining supplies and services. I also draft, evaluate and monitor documents in accordance with procurement laws and regulations," she said. In addition to negotiating, procuring and processing the administrative actions necessary to acquire contracted resources, Clavel has developed a clear understanding of pricing techniques, market trends and supply sources of goods and services the military needs to operate.

To gain an even greater understanding of her position and responsibilities, she is currently enrolled in Defense Acquisition Workforce Improvement Act (DAWIA) CON 1300V



A HEAVY LIFT

Clavel, hauling water in July. When her well does not produce enough water, she drives to a neighboring town to replenish the supply, ensuring that her family has running water at their home. (Photos provided by Meagan Clavel)

Contract Award training, where she is on track to be certified in contracting by end of fiscal year 2023.

Though the acquisition process can be tedious, she said her greatest satisfaction is being a part of the Army Acquisition Workforce, since it “offers the gift of continued learning” with every new challenge. “Each day there is a new task with a new ‘puzzle’ to solve,” something she said she is all too familiar with as a former elementary schoolteacher, where over the years she taught all subjects to third, fourth and fifth graders.

Clavel said she enjoyed teaching, but after seven years, she felt it was time for a change. “I began searching for an opportunity that would challenge me, while also providing great benefits and a chance to

continue using the knowledge and skills I gained while in the classroom.” It wasn’t long before she found her current job as a contract specialist purely “by accident” while searching USAJOBS for a position that seemed applicable to her skill set. “I’m so grateful the MICC saw the potential in me, too,” she said. “I have been with MICC-Fort Knox for just over one year and enjoy being proactive, assertive and detail-oriented,” attributes she’s practiced during her teaching career as well as on the home front. “Our family is very patriotic, and any opportunity I am allowed to help the U.S. Army continue to run efficiently is a great blessing to me!”

Much like teaching, Clavel said at this point in her career, she is just trying to absorb as much information as possible. “Having come from a different career field, everything in contracting is new and exciting. I have an amazing team that actively mentors me so that I will be able to perform my duties to the best of my ability.” Through the encouragement of her team support system, she said she plans to pursue the next step in her career as a warranted contracting officer once she has a more firm understanding of the acquisition field. “Passing the Back-to-Basics (CON) contracting courses and exam are required for me to continue in this job,” she said. Continuing with her training would bring her closer to attaining certification as a warranted contracting officer.

Though she hasn’t been in her position very long, she said she has had the opportunity to offer some small advice to junior acquisition personnel. “Mostly, I remind them that this field constantly changes, and it’s easy to get overwhelmed, but one of my DAU [Defense Acquisition University] professors said, ‘Slow is smooth, smooth is fast,’ and that has stuck with me. It reminds me that it is better to complete each step correctly the first time than to

have to come back later and fix a mistake due to rushing.”

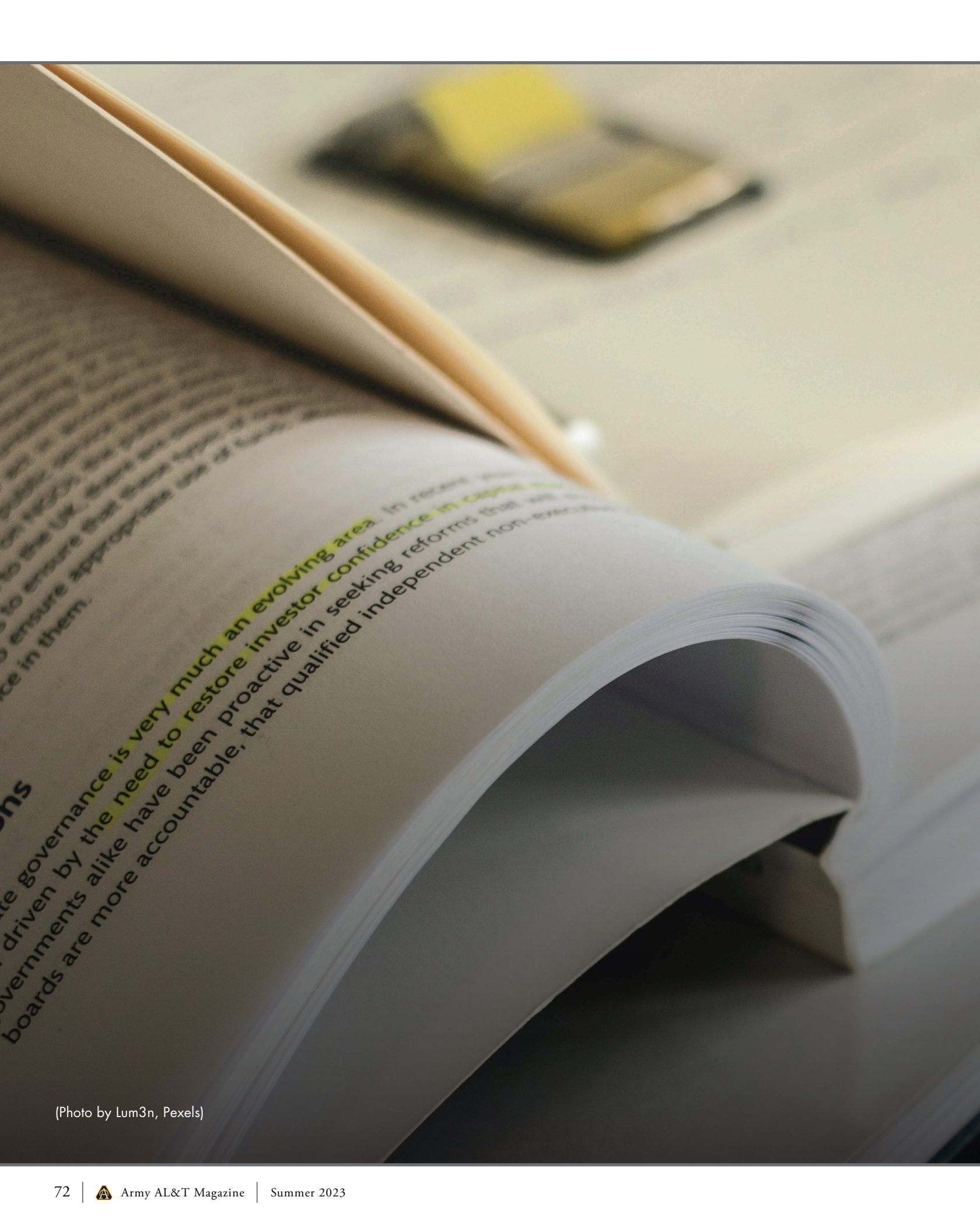
Perhaps the most important lesson Clavel has learned from her own experience is to “go the distance.” And, she added, be kind and be diligent. “Be kind because you never know the struggle someone may be carrying with them. It never fails to amaze me how far a little kindness can go to brighten someone’s day or to progress the contract along that much smoother. Be diligent and take every opportunity to invest in your education. No knowledge is ever wasted. If you’re not sure of something, look it up, ask questions—seek the answer, seek the knowledge—go the extra mile to get it right.”

—*CHERYL MARINO*



HOMECOMING

Clavel and her 4-year-old daughter welcome her husband, Joseph, a Kentucky National Guardsman, home from deployment in September. He has been deployed to Africa for most of 2022.



ns

te governance is very much an evolving area. In recent years, governments driven by the need to restore investor confidence in capital markets have been proactive in seeking reforms that will ensure that they are more accountable, that qualified independent non-executive boards are more accountable, that qualified independent non-executive

(Photo by Lum3n, Pexels)

HOLDING TO ACCOUNT

Army Contracting Command offers new training to get civilians and Soldiers up to speed on contract administration.

by Stephanie Brown

Reviews, audits and investigations tied to DOD contracts have identified a need for improved and increased focus on contract administration and oversight. Because of years of focusing on contract awards and obligation rates, and a reliance on external agencies for contract administration, Army Contracting Command (ACC) has not fully exploited its ability to add value to Army readiness through effective contract administration.

Proper contract administration and oversight decrease cost and operational risk as well as ensure that the government gets what it's paying for under its service and supply contracts. To address these areas for improvement, the Contract Administration Training Center (CATC) was established in 2021 at Army Contracting Command – Rock Island, Illinois (ACC-RI). The CATC mission is to train civilians and Soldiers in contract administration, specifically in the acquisition functional areas of contracting, government quality assurance and government property administration.

Before the establishment of the CATC, Contract Administration Services (CAS) training was executed as Contingency Contract Administration Services (CCAS) and served primarily as a pre-deployment training. CCAS was a two-week training that was all classroom and practical exercise based. Additionally, the trainees were not exposed fully to all three functional areas during classroom instruction: contracting, quality assurance and government property. CATC's redevelopment of this training and some of the objectives of the three-pronged approach includes increased engagement, cross-training of all three acquisition functional areas and information retention. This is done by instructing the whole on all three acquisition functional areas, incorporating the use of current, active contracts and task orders, as well as

executing real-world events such as on-site quality assurance surveillances and property management system analyses.

The CATC aims to add value to Army readiness through effective contract administration, train personnel in methods for holding contractors accountable, obtain value for the warfighter and raise proficiency levels in contract administration for acquisition professionals.

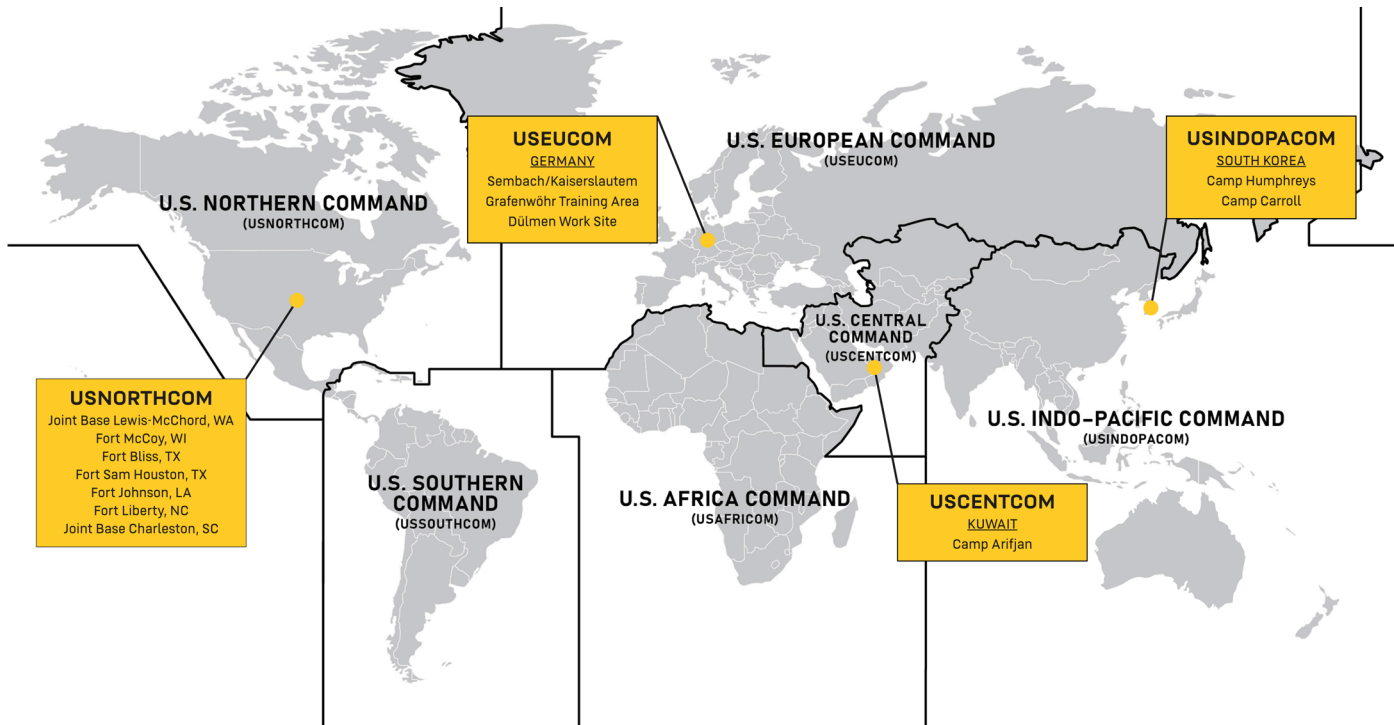
At ACC-RI, in the center's Power Projection and Base Readiness (PP&BR) Directorate, which handles the large, complex and highly visible Logistics Civil Augmentation Program and Enhanced Army Global Logistics Enterprise (EAGLE) program, the training has been a game changer, according to Amber Caulkins, PP&BR director.

"CATC has spotlighted areas of improvement, highlighted what is right in terms of contract administration, and has set the stage for success for many of the contracts being administered thus far out of my directorate," said Caulkins. "Often we focus on the immediate need of the contract award, but it's time to shift our mindset and focus on what proper contract administration can do for us, and that is exactly what CATC brings to the table."

Katie Olson, EAGLE branch chief, said the training events have opened doors for active communication and listening among teams and fostered an environment between active-duty members and civilians to build cohesiveness and comradery.

"We have seen a change in the program oversight and engagements to ensure our contractors are performing to their requirements," Olson said. "If areas of concern do arise, our teams are able to communicate and properly document areas for

Overall, this training approach quickly builds trainees' confidence and skills so they can immediately apply robust administration on all of their contracts.



U.S. ARMY CATC Footprint – Global View

PUTTING INTO PRACTICE

The map details the installations or locations that Contract Administration Training Center instructors have traveled to execute the hands-on portion and execution phase of training. (Graphic courtesy of Contract Administration Training Center)

improvement and how to monitor performance going forward. Ultimately, the CATC training is a great tool to improve our ability to build and empower individuals to be part of the team.”

In addition to the enhancements to ACC-RI contract administration and the ACC enterprise as a whole, supported units and customers benefit through improved readiness as well as gaining a better understanding of how their contractors are executing their contract requirements. The key customers and supported units are ACC itself, Army field support brigades and battalions throughout the continental United States and outside the continental United States contracting support brigades.

During its first year in place, the CATC team provided 13 course offerings to over 400 personnel. This included multiple two-week,

in-person course offerings, virtual through Microsoft Teams, and most recently through the execution of mobile training teams.

A THREE-PRONGED, IMMERSIVE APPROACH

The importance of this training cannot be understated. As Col. Lynda Armer, ACC-RI military deputy director, explained, the Federal Acquisition Regulation requires that contracting officers perform property administration and ensure compliance with contractual quality and safety requirements on their service contracts.

“Ultimately, acquisition professionals complete the course with the skills to hold contractors accountable to perform in accordance with the terms of the contract, producing overall savings and improved readiness for the Army,” Armer said.

The team provides training in the acquisition functional areas of contracting, quality and property that cover contract administration overviews; roles and responsibilities; contract receipt and review; nonconformance reports; the contract performance tracking tool; property management system analysis outcomes; and government property accountability procedures. This instruction includes classroom briefings, systems walk-throughs and hands-on training.

To prepare trainees for this, the CATC takes a three-pronged, immersive training approach in which trainees are engaged in an active ACC-RI contract. In the first phase, trainees complete foundational modules online as a prerequisite to the on-site course. These modules were developed by ACC and are hosted on the Defense Acquisition University portal.

In the second phase, trainees spend one week in the classroom with focused training on the essentials they need to perform contract administration. This includes functional training from specialized instructors and mission-specific training of the contract led by the procuring contracting officer (PCO), culminating in a PCO delegation of contract administration to the class. The class prepares trainees for contract administration through in-depth

reviews of the contract documents and contractor procedures. The trainees also develop quality and property surveillance checklists and complete a contract receipt and review.

Following the foundational and focused training, trainees spend one week on-site at the place of performance, leading administration of their delegated contract. This consists of the class conducting in-briefs and out-briefs with the requirement's owner and contractor as well as working one on one with the contracting officer's representatives (CORs).

"Trainees are delegated administration on an active, large, complex service contract," said Armer. "The hands-on approach to learning leaves trainees with the knowledge and confidence to conduct contract administration of any service contract."

This process evolves into the trainees becoming de facto trainers to the on-site CORs, conducting surveillance of both quality and property processes and, when available, conducting a property damage or loss investigation. The week concludes with the trainees providing performance feedback to the requirement's owner and the contractor. The out-brief includes recommendations to the requirement's owner to obtain the right outputs at the right



CAS CLASS, ACC-RI

Class picture for the September 2021 Contract Administration Services course offering at Army Contracting Command — Rock Island. (Photo by Liz Glenn, ACC-RI Public Affairs)

"Ultimately, acquisition professionals complete the course with the skills to hold contractors accountable to perform in accordance with the terms of the contract, producing overall savings and improved readiness for the Army."

cost and identifies areas of success and improvement (as applicable) tied to contractor performance.

Maj. Oscar Delgadoveana, a contracting specialist with the Mission and Installation Contracting Command at Fort Campbell, Kentucky, who took the training in April 2022 with a focus on the EAGLE contract at Fort Johnson, then called Fort Polk, said it not only prepared him to assume duties as an administrative contracting officer, but it also provided him with a deeper understanding and appreciation for quality assurance and property administration.

"As a student that relies heavily on real-world application to retain information, I found the course curriculum to be phenomenally structured," Delgadoveana said. "The practical exercises and hands-on portion of the class helped me gauge my understanding of the material by allowing me to apply the new skill set on Fort Polk's EAGLE contract."

Maj. Neidas Cezar, EAGLE program procuring contracting officer, who took the CAS training in September 2021 at Joint Base Lewis-McChord, Washington, has assisted the CATC staff three times for the on-site (at the contract place of performance) portion of the course. Incorporating a PCO, who also participated as a trainee, has been value added to the program of instruction. Specifically, he has been able to assist in mentoring, advising and leading the trainees throughout the two weeks of instruction, as well as assisting the instructors in providing context and real-life examples during the classroom portion. This has also served as an opportunity for him to actively oversee some of the contracts he is responsible for administering.

"As a CATC alum, I've learned all of the contract and regulatory limitations, processes, as well as required documentation for surveillances and execution of performance feedback or nonconformance reports," Cezar said. "I now get the opportunity to augment CATC by reinforcing the information I learned in training, as well as providing my firsthand knowledge of the EAGLE program."

Overall, this training approach quickly builds trainees' confidence and skills so they can immediately apply robust administration on all of their contracts. Trainees recognize the importance and applicability of the training to the tasks being performed, adding much value to the acquisition professionals deploying to varying sites.

CATC has a full schedule for the remainder of fiscal year 2022 and has begun developing its fiscal year 2023 schedule. For more information regarding CATC, contact usarmy.ria.acc.list.contract-admin-training-center@army.mil.

STEPHANIE BROWN is the branch chief for the Contract Administration Training Center at U.S. Army Contracting Command – Rock Island (ACC-RI). Before her current role, she served as a procuring contracting officer (contract specialist prior to that) for the Power Projection and Base Readiness Directorate at ACC-RI for over a decade, supporting complex service contracts within the U.S. Central Command area of responsibility. She holds a B.A. in marketing from Western Illinois University, and she is a DAWIA certified DOD contracting professional.



AHD NET

A Soldier from the 8th Theater Sustainment Command at Joint Base Pearl Harbor-Hickam, Hawaii, operates the watercraft mounted Acoustic Hailing Device during the new equipment training event held in June 2021. (Photo by Bryan Miller, instructor, New Equipment Training and Media Production Branch)

CAN YOU HEAR ME ?

Acoustic Hailing Device allows Soldiers to communicate effectively at distance with local populace.

by Karen Andreeko, Lt. Col. USA (Ret.), Brett Grosshans, DBA, Lt. Col. USMC (Ret.), Derek DeReiter, Tinesha Nicholas and Fred Willecke

Today's operational forces conduct military operations across a wide spectrum, spanning the gamut from defense support to civil authorities, to peacekeeping and humanitarian assistance, to major combat operations. Operational commanders ask their warfighters to operate under conditions requiring versatile, rapidly deployable forces with the ability to communicate with the local populace at great distances. The Acoustic Hailing Device (AHD), managed by Project Manager Close Combat Systems (PM CCS) as part of its intermediate force capability mission for the Army, within the Joint Program Executive Office for Armaments and Ammunition, provides the Army with a standoff communication capability. This capability has been expanded, with congressional support, to other DOD and government agencies, which optimizes the use of U.S. taxpayer dollars.

THE CHALLENGE

Through the many years of contingency operations, there existed a need to communicate intelligibly over great distances (300-500 meters). Compounding the task was the language barrier created by differing dialects and combatants intermingled with noncombatants. The safety of our warfighters necessitated an increase in the standoff distance between our forces and combatants and noncombatants. This increased distance now requires the ability to determine intent at distances beyond effective small arms range.

THE SOLUTION

Acoustic Hailing Device, or AHD, provides our warfighters the ability to communicate at extended or long-range distances while

offering the means to warn those wishing ill intent. Having the ability to communicate before a possible escalation begins means we are working with the local population and not against it, ultimately helping to achieve a positive rapport. Communicating at these greater distances in local dialects helps to ensure force protection needs are addressed while providing a means to deter, mitigate and defeat threats to civilian populations.

The multifaceted team tasked to provide the capability to the user included:

- Genasys Inc., the primary industry partner of the Army for this technology.
- The U.S. Army Combat Capabilities Development Command (DEVCOM) Armaments Center and the Product Director, Combat Armaments and Protection Systems (PD CAPS), both out of Picatinny Arsenal, New Jersey.
- The Army Nonlethal Scalable Effects Center at Fort Leonard Wood, Missouri.

The AHD offers a hailing and warning function that produces directional sound waves to project warning tones and intelligible voice commands up to distances of 300 meters over land and 500 meters over water. The system can be mounted via a stationary tripod or on a vehicle to offer mobility and flexibility of maneuver. There are multiple options to communicate: a microphone, prerecorded messages on an MP3 player, or a warning tone.

Translation can be achieved by voice over microphone or pre-recorded messages. All aid the warfighter in providing a means to communicate before an escalation of force is required, depending on the scenario, to effectively counter personnel encroaching within a specific area or situation. “The AHD is a tool the commander can use to apply combat power more efficiently—using force only when necessary,” said Col. Russell Hoff, PM CCS.

DOD and the Army have procured AHDs to fulfill the approved requirements for units within the military police, Army watercraft, psychological operations and transportation communities. Extensive platform integration efforts ensured that installation kits were engineered for

each specific vehicle and vessel in order to mount the AHD. These Army communities were eager to fill their communication gaps, but other priorities across the Army reduced the available funds. However, in fiscal year 2022, Congress reprioritized \$20 million for the AHD program, allowing the Army to procure an additional 500 systems.

THE BENEFIT

The Army’s strategy is to “pure fleet” all Army units that were previously fielded the AN/TIC-43 variant AHD with the latest version of the AHD, the AN/TIC-44 (V)1, using the additional 500 systems. Pure fleetting permits standardization across all Army forces, providing a consistent system for training, and

reducing the sustainment burden. By limiting the spares to those required for one system configuration, it reduces the cost required for inventory management in sustainment. In addition, it mitigates the risk of what could be an eventual issue of diminishing manufacturing sources and material shortages. Accordingly, pure fleetting eliminates having to incur the cost of executing a design change or procurement and conducting an effort to update AN/TIC-43s to a new configuration in the future.

The newer variant is of smaller form and provides improved access to the MP3 player and system controls. This allows the operator greater standoff from the system itself, a necessary capability as the speaker could become a target. “Regardless of the operation, if it involves people, clear communication is paramount to safely accomplishing goals,” said Donald Gerspach, the acting central action officer at the Army Nonlethal Scalable Effects Center. “With the AHD, in either form, the user can be assured their communications are being heard.”

The Army’s strategy will allow for turning in the older AN/TIC-43 systems to an Army depot to undergo a complete tech inspection, be repackaged, and be made available to the other services and other government agencies that have expressed an interest in receiving them. A cost benefit of \$16 million will be realized for DOD and the other government agencies. Additionally, the Army will realize demilitarization cost savings by making the older systems available for use.

The coordination for this broad approach has been facilitated by the Joint Intermediate Force Capabilities Office (JIFCO) in its role as the executive agent for DOD. JIFCO is tasked, via a joint process, to identify requirements and coordinate the

Service/ Organization	Quantity Requested	Intended Use
U.S. Marine Corps	146	Escalation of Force Mission Modules
U.S. Navy	200	Escalation of Force Mission Modules
U.S. Air Force	12	Contingency and Domestic Operations
U.S. Coast Guard	100	Escalation of Force Operations
Drug Enforcement Administration	46	Special Response Teams
Federal Bureau of Investigation	116	SWAT and Crisis Negotiations Teams
TOTAL Systems: 620		

AGENCY REQUESTS, PROPOSED USAGE

The 2023 agency requests and proposed usage for the Acoustic Hailing Device. The U.S. Army will realize demilitarization cost savings by making the older systems available for use. (Graphic courtesy of PM CCS)

planning, programming and funding of intermediate force capabilities. This is a win-win for the military, government agencies and the American taxpayer.

PREVIOUS USES

The versatility of the system is emphasized during scenarios like search and rescue as well as humanitarian relief efforts, adding value to an already capable technology. Whether enhanced communication is being used to interrogate intent in a military operation, or to locate people, or to provide direction in a disaster area, the AHD has the potential to save lives without causing harm to people, the environment or the infrastructure. The AHD is a simple concept that enhances communications for many. The early versions were used during the aftermath of the Haiti earthquake in 2010; police departments working to contain violent riots; and as a means to keep hostiles and non-hostiles alike away from sensitive areas in theater. The benefits to so many across the military and non-military spectrum showcase what this system has to offer.

CONCLUSION

The Acoustic Hailing Device in either form may be considered an enhancement to the first level of force, which is communication. When communication is better heard and better understood, fewer people are likely to be injured because of confusion and misunderstandings. While most may see the AHD as “just another loudspeaker,” the added capabilities the system brings to the force helps to keep the operator out of harm’s way by increasing the standoff, helping to reduce the confusion through the translation application, and effectively bringing to the user a friendly communication device enabling clear, directional, long-range voice projections. The pure fleet strategy allows AN/TIC-43 to be reutilized by other services and government agencies to address similar capability gaps. The AHD program provides the capability that has been extended by congressional support to other DOD and other government agencies, which optimizes use of U.S. taxpayer dollars.

For more information, contact Karen Andreeko at karen.l.andreeko.civ@army.mil, or go to the PM CCS website at <https://jpeoaa.army.mil/Project-Offices/PM-CCS>.

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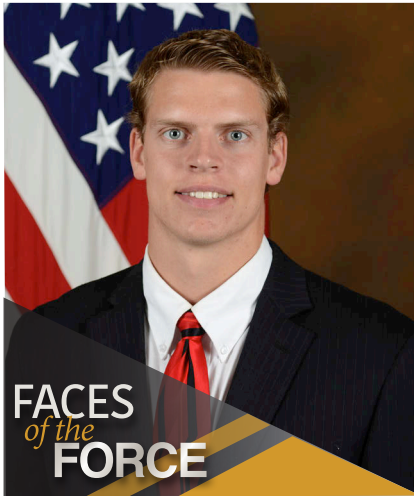
for non-lethal systems. She holds a B.S. in health and human services administration from the University of Scranton and is DAWIA certified Advanced in program management.

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DEREK DEREITER is a team leader for PD CAPS in the Protection Systems portfolio. He started with PM CCS in 2008 and has been working for the PM office for the last 14 years. He started working for the government in March 2003 as an engineer for DEVCOM Armament Center (formerly ARDEC). He brings with him five years of private industry experience working in a manufacturing environment as a project engineer and holds a B.S. in materials science and engineering from Lehigh University.

TINESHA NICHOLAS is the supervisory program management engineer within PM CCS, where she is responsible for leading a diverse portfolio consisting of explosive handheld hazard detection systems, a family of grenades, intermediary force capabilities and nonstandard equipment. She has over 21 years of service as a civilian engineer and program management engineer for the U.S. Army and holds an M.S. and a B.S., both in electrical engineering, from the New Jersey Institute of Technology.

FRED WILLECKE is the chief of product support at PM CCS since August 2018. He holds a Master of Systems Engineering with master’s certificates in systems supportability engineering and systems engineering and architecting from Stevens Institute of Technology and a B.A. in political science with a minor in naval science from Villanova University. He is Green Belt certified in Six Sigma and DAWIA certified Advanced in life cycle logistics and a Practitioner in test and evaluation.



JACOB SISKO

COMMAND/ORGANIZATION:

Army Futures Command; U.S. Army Combat Capabilities Development Command; Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance and Reconnaissance Center

TITLE: Team lead

YEARS OF SERVICE IN WORKFORCE: 7

DAWIA CERTIFICATIONS: Practitioner in engineering and technical management

EDUCATION: M.S. in electrical and computer engineering, University of Delaware; B.S. in security and risk analysis, Penn State University

AWARDS: Team award for quarter one, fiscal year 2023 for the Readiness Engineering portfolio in the C5ISR Center (2023), Certificate Of Achievement For Exceptional Service (2020), Special Act Or Service Award (2019), employee of the month for the Space, Terrestrial and Communications Directorate (2018)

THE GOLDEN RULE

From an early age, we learned the golden rule—treat others as you would want to be treated—one of the most basic philosophical principles, tweaked in various ways by different groups to guide our actions in a variety of situations. For most adults, it’s unspoken common knowledge, but is it common practice?

It is for Jacob Sisko.

Sisko, who is the team lead at the U.S. Army Combat Capabilities Development Command Control, Communications, Computers, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) Center, spends a lot of time in group settings both in and outside of work. He always ensures that others are treated with the same brand of respect and consideration that he would hope to receive in return.

“One of the most important things I’ve learned is to treat people how you want to be treated,” he said. “I try to make connections and build strong relationships with my coworkers and leadership because you never know when they may be able to help you or how you may cross paths with old colleagues in the future. Being able to maintain healthy relationships has helped me in my career progression and increased my ability to get work accomplished.”

Sisko’s team GAMET, the Global Autonomous Mitigation and Evaluation Team, is comprised of 30 contractor and civilian personnel who support the counter Unmanned Aircraft Systems (UAS) mission. More specifically, his team supports the commercial off-the-shelf UAS Exception to Policy Army Board—which pre-approves all UAS (or drone) activity in the Army. The process, he said, focuses on cyber vulnerabilities and mitigation strategies to reduce risk for UAS activity. He also provides vulnerability assessments and mitigations for the systems to securely activate and operate them in the field. “We support the whole cycle, from acquiring, building and assembling, and ensuring the UAS is airworthy and secure,” he said.

Sisko spent the first two years of his Army career in the Chief Information Officer, G-6 Army Knowledge Leaders (AKL) Program, where he received extensive on-the-job training, skills-based rotational assignments, mentorship and formal instruction. He learned techniques for facilitating decision-making through improved flexibility and adaptability, and the integration and synchronization of people, processes, tools and the organization. After successfully completing the program’s training requirements, he transferred to the C5ISR Center at Aberdeen Proving Ground, Maryland, where he joined the Army Acquisition Workforce. “What appealed to me about the work was the rapidly changing environment that I supported and how we were responsible for developing innovative technologies and capabilities to meet the needs of the warfighter,” he said. The C5ISR Center conducts research and development to empower the warfighter by discovering, developing and rapidly delivering innovative technologies that enable decisive lethality through information dominance in multidomain operations.

“I think the most important points in my career with the Army Acquisition Workforce have been the professional development opportunities, because they provided me with training to enrich and build upon my leadership skills, as well as develop new relationships and make connections within the Army and DOD,” said Sisko, who maintains a “team player” mentality, always advocating the golden rule strategy. “I have benefited greatly from the Civilian Education System (CES) courses, Emerging Enterprise Leader Program courses, and most recently, the Inspiring and Developing Excellence in Acquisition Leaders (IDEAL) program, which has helped me get to where I am today.”

Sisko, who strongly believes in continued learning, completed the IDEAL course in

July. “I saw it as an opportunity to challenge myself,” he said. His expectations for the course were to learn and interact with other leaders within the Army and to take home new skills and knowledge that could also be applied to his work environment and daily life.

Sisko found that the weekly themes presented by the IDEAL program really held his interest and were useful in his leadership role. “Two highlights from the course were the ‘Crucial Conversations’ lessons as well as the ‘Getting Things Done’ lessons. ‘Crucial Conversations’ taught me how to successfully navigate difficult conversations with others when the stakes and emotions are high, and ‘Getting Things Done’ taught me how to more effectively plan and manage my time, and execute my to-do lists,” he

said. “I would recommend this program to any early- or mid-level employee who takes initiative and has the drive to be a leader and seeks professional development opportunities to improve upon their leadership skills. If you are open-minded and enjoy self-reflection, this is a great opportunity for you.”

Through experience and continued training, Sisko has honed his leadership and team building skills, and gained a keener sense of self-awareness—putting him in an even better position to pass along advice to others. Of all the advice he has shared with junior acquisition personnel, he recommends being proactive and taking advantage of opportunities when they become available “because it gets harder to find the time to complete the necessary courses and desired programs as your career progresses.”

For Sisko, being a team player and practicing the golden rule doesn’t stop at the end of the workday. “Outside of work, [friends and family] know that I like to go to the gym and play sports, and that I am an easygoing, kind person,” he said. “What it has in common with my work is that I am a team player who gets along well with others, and I am usually calm and collected even during stressful situations”—something he has found to be of benefit no matter who he is with or what he is doing. “Remaining calm under pressure not only keeps you focused, but makes you feel more connected to others and better able to control your thoughts to find better, more well-thought-out solutions.”

—*CHERYL MARINO*



IDEAL TIME FOR A BREAK

Sisko, far right, and his IDEAL program colleagues take a break from the program curriculum at Topgolf in Huntsville, Alabama, on July 19, 2022.



(Graphic by U.S. Army)

LEASE OR BUY?

The SaaMS pilot will study the Army's potential use of a commercially leased network equipment and bundled services model.

by Lt. Col. Mark Scott, Tyler J. Cook and Amy Walker

In today's complex geopolitical landscape, the Army needs to deliver resilient network connectivity to multiple disparate locations globally in support of diverse and continually changing missions. U.S. forces must always be prepared to fight across different fronts, terrains and climates, such as those in Europe, the vast islands of the Pacific or frozen Arctic landscapes. Simultaneously, DOD must sustain this vast arsenal of network equipment across the force and constantly modernize it to keep pace with technology and ensure success against sophisticated adversaries. This comes with a heavy price tag.

One way the Army is looking to overcome these challenges is through innovative new business models, including satellite communications (SATCOM) as a managed service (SaaMS), which the Army is preparing to pilot this summer. The SaaMS pilot will inform decisions on the service's potential use of a commercially leased SATCOM network equipment and bundled services model, which would be flexible and tailorable to changing mission needs.

This model is in stark contrast to the current way of doing business—testing, procuring, fielding, sustaining and modernizing the entirety of the Army's tactical network equipment across the force to support readiness for a myriad of mission requirements, as well as procuring expensive and limited satellite bandwidth and airtime. To ensure readiness at all times, the Army has to support the entire force with a wide variety of satellite terminals and sufficient bandwidth to meet the requirements of different missions around the world. Contrarily, a SaaMS model could potentially provide bundled equipment, services and bandwidth, on an as-needed basis, with the scalability to expand or contract as missions change, helping to reduce on-hand inventory, satellite airtime and cost.

Close partnerships between Army units; the Program Executive Office for Command, Control, Communications – Tactical (PEO C3T); the Army Futures Command's Network

Cross-Functional Team and the C5ISR Center; Training and Doctrine Command and numerous Army and industry stakeholders are enabling deployed Soldiers in Europe and the Pacific to experiment with evolving network technologies to successfully operate and exchange critical data in limited and constrained network environments with increasing network resiliency and security, while enhancing the network for distributed operations. Army network modernization pilots and experimentation in these areas of operations are enabling distributed command and control through tactical edge cloud access and resilient automated-primary, alternate,

contingency and emergency (Auto-PACE) communications. The more signal pathway options that exist for data to travel through, the more resilient the network becomes. A SaaMS business model could also help improve PACE communications by providing access to emerging multi-orbit high throughput, low latency SATCOM services.

PILOT DESIGN

Product Manager for Unified Network and Capabilities Integration's Project Manager Tactical Network at PEO C3T, in collaboration with the U.S. Space Force, released the SaaMS pilot quote request to

industry in February with quotes due in April, and the pilot contracts awarded directly following source selection. On the current timeline, the Army will begin the six-month SaaMS pilot this summer. The SATCOM coverage areas will include the continental U.S., the European and the Indo-Pacific areas of responsibility and will be supported by Army units during existing training exercise schedules in these locations.

The scope of this SaaMS pilot includes six months of turnkey, end-to-end managed subscription services to support connectivity to commercial teleports and internet services to enhance the units' SATCOM capability and PACE communications.

The pilot will assess varying degrees of service models in support of a leased end-to-end global network via satellites, including tailorable features such as terminals, use of airtime, security compliance, logistics and repair.

At the start of service, units will receive new equipment training and use the service for six months. The intent is not to create a separate SaaMS evaluation event, but to enable the units to use the capability as they see fit and roll it into their existing training events. Once the six-month service contract is up, the leased terminals go back to the contractor. There may be opportunity to extend the SaaMS pilot contracts if warranted.

LEANING ON INDUSTRY

As the Army continues to rapidly modernize the unified network leveraging commercially available solutions while concurrently enhancing network resiliency and security, the service is looking to industry to not only deliver the newest innovative solutions but to provide ideas that could support this new business model. These solutions must support units



GOING GLOBAL

Staff Sgt. Jamie Ewell, assigned to 2nd Cavalry Regiment, assists Sgt. Diego Fonseca with operating the AN/PRC-163 radio during Sergeants Time Training in October 2022 at the Grafenwoehr Training Area, Germany. The SaaMS pilot coverage area will include European areas of responsibility and will be supported by Army units during training exercises. (Photo by Sgt. Randis Monroe, Training Support Activity Europe)

This model is in stark contrast to the current way of doing business.

that may need to operate in dispersed locations with varying SATCOM requirements. Industry can help by:

- Providing a business model based on various levels of data usage.
- Ensuring current and future cybersecurity compliance.
- Simplifying operation for non-Signal Soldiers; provide easy-to-use Soldier-centric designs.
- Reducing physical footprint (size, weight and power).
- Increasing resiliency and flexibility of the Army's tactical SATCOM network.
- Providing scalability with changing mission requirements.
- Enabling an affordable, sustainable and accelerated life cycle.
- Meeting current and evolving cyber and transmission security requirements as new threats are identified.
- Providing realistic cost information to inform affordability assessments.

The SaaS pilot will ultimately inform decisions on establishing managed subscription services that encompass current and emerging SATCOM capabilities being used in private industry. After the initial six-month pilot, the Army will write an assessment report that will inform future SaaS efforts. SaaS would not be a one-size-fits-all model, but a modular, scalable and flexible approach that could tailor to a wide variety of different missions and threats.

CONCLUSION

The Army is accelerating the potential use of a SaaS business model not only through the pilot, but by concurrently leveraging lessons learned from efforts of other U.S. service branches in

the managed services realm across DOD, including efforts by the U.S. Navy and Marine Corps.

The Army needs to understand how quickly and effectively SaaS can scale as mission needs ebb and flow in a rapid multidomain operational environment. Partnering with industry, coupled with support from operational units using leased commercial equipment and services during existing training exercises, will help the service deliver, integrate, train and sustain flexible resilient solutions that optimally support changing mission needs.

For more information, contact the PEO C3T Public Affairs Office at 443-395-6489 or usarmy.APG.peo-c3t.mbx.pao-peoc3t@mail.mil. To read the 2021 Army Unified Network Plan, go to <https://go.usa.gov/xMSNz> or follow PEO C3T at <http://peoc3t.army.mil/c3t> and <https://www.facebook.com/peoc3t>.

LT. COL. MARK SCOTT is the product lead for Unified Network Capabilities for Integration, assigned to Project Manager Tactical Network within the Program Executive Office for Command, Control, Communications – Tactical (PEO C3T). He earned an M.S. in acquisition and procurement management from Webster University and an M.S. in systems engineering management at the Naval Postgraduate School and a Government Contracting Certification. He also earned a B.A. in marketing from Mississippi State University. He is DAWIA certified Advanced in program management and holds the Army additional skills identifier of Space Enabler.

TYLER J. COOK is the assistant product manager for science and technology integration, assigned to PEO C3T's Project Manager for Tactical Network, Product Lead for Unified Network Capabilities and Integration. He holds a Master of Engineering in systems engineering from Stevens Institute of Technology and a B.S. in mechanical engineering from Penn State University. He is a DAWIA certified Practitioner in program management and in engineering.

AMY WALKER has been the public affairs lead at Project Manager Tactical Network for over 10 years and was the public affairs lead 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.

THE PATH FORWARD

OPERATION PATHWAYS LEADS TO INTEROPERABLE MULTINATIONAL COMMUNICATIONS

From Hawaii to Southeast Asia to Australia, the multinational exercise Operation Pathways is providing far-reaching opportunities to strengthen joint capabilities while preparing for emerging near-peer threats in the Pacific area of operations.

The annual exercise is the ideal backdrop to assist the Army with its current path to make the division the unit of action as part of the Army of 2030, which will reduce complexity at brigade and below echelons and free up maneuver forces to operate unencumbered and conduct on-the-move operations. As with all exercises and ongoing operations, the Army will use Soldier feedback garnered from Operation Pathways to also inform the network of 2030 design.

The 25th Infantry Division (25th ID) at Schofield Barracks, Hawaii, is serving as the division unit of action for Operation Pathways and is operating the Integrated Tactical Network (ITN) suite of capabilities as the network transport for the event.

Since its introduction to Soldiers in 2019, the ITN has been providing secure but unclassified and encrypted mobile network communications that increase communications mobility, flexibility and resilience. The ITN is comprised of both military and commercial technologies and includes several varieties of software-defined tactical radios, commercial phone technology and small satellite terminals. ITN radios deliver applications through the Nett Warrior user device to consolidate the air, ground and fires pictures into a single common operating picture.

In a multinational exercise, it is critical to ease communications restrictions among coalition partners while still protecting sensitive information, which is why the Army is considering operationalizing a secure but unclassified-encrypted (SBU-E) environment.

“The SBU-E addresses the need to cut the line between having a secret, Type 1 encrypted network to a network that is still encrypted, still very safe, but will allow us to better interoperate with our mission partners,” said Col. Shermooan Daiyaan, Project Manager for Tactical Radios (PM TR). “In the Pacific and EUCOM [European Command] theaters, this is absolutely vital because we will never fight alone.”

PM TR, under the Program Executive Office for Command, Control, Communications – Tactical, is the program of record for the ITN suite of capabilities.

Operating SBU-E allows for data transmission from Soldiers at the edge with radios up to division headquarters, even in a disconnected, intermittent, limited environment, because the ITN allows for communications to transmit on multiple commercial pathways—critical for Soldiers’ primary, alternate, contingency and emergency plan.

The 25th ID is also employing cross-domain solutions to exchange sensitive data between various levels of classifications. This is a proof of concept that has been operationalized by the 25th ID, allowing the division to pull SBU-E position location information from subordinate units in the Philippines throughout Salaknib, the Philippine Army-led, U.S. Army Pacific-sponsored bilateral exercise portion.

Furthermore, while experimenting with the tactical cross-domain solution during the exercise, engineers with PM TR developed an innovative solution that allowed for a two-way common operating picture versus the one-way common operating picture currently employed by the 2nd Brigade Combat Team of 25th ID. With this solution, the higher headquarters within the exercise, I Corps and U.S. Army Pacific, have visibility of the 25th ID headquarters common operating picture down to the tactical edge.



RADIO JUNGLE

A Soldier with the 25th ID conducts low-cost, secure but unclassified-encrypted radio experimentation during a jungle situational training exercise in support of Operation Tiger Balm, held in Hawaii as part of Operation Pathways. The Army is considering radio options that are sufficient for platoon and below and is collecting Soldier feedback on several candidate radios to complete market research. (Photo courtesy of the Singapore Army)

In addition to division as unit of action experimentation, Operation Pathways is helping the Army inform its fiscal year 2025 network designs. One of the most exciting experiments during the exercise featured a high frequency (HF) ground radio, which in March achieved the longest waveform “shot” achieved to-date across the Pacific.

“The 25th ID successfully completed an approximately 8,000 kilometer HF shot by employing the PRC-160 HF Manpack radio with the LDD [Last Ditch Data] waveform to communicate from Fort Magsaysay, Philippines to the division main at Schofield Barracks,” Daiyaan said. “That’s well beyond any HF shot with this radio that we are aware of.”

Given the success of this waveform shot, the PM TR team plans to attempt further shots from the U.S. to the Philippines.

The Tiger Balm portion of Operation Pathways, held in Hawaii, provided another perfect scenario for the Army to exercise critical radio technologies by preparing tactical units to execute small unit tactics in a controlled environment. During their jungle situational training exercise, Soldiers with the 2nd Infantry Brigade Combat Team, 25th ID exercised low-cost, single-channel radios that operate over SBU-E. The radios are part of a current market research effort to identify options for radios that facilitate command-and-control operations at the platoon

level and below and provide significant cost savings to the Army.

“We have a million-person Army, which means we need to make sure we have the right mix and quantities of radios at echelon,” Daiyaan said. “Some of those radios have different use cases, but we’re asking ourselves, ‘Is that correct for the next fight?’ Many of those were built for a fight that may have passed.”

Experiments for the culminating Operations Pathway biennial exercise Talisman Sabre, held in Australia this summer, will further refine the experiments conducted in the exercises leading up to it. The entire Operation Pathways exercise will help inform the first fielding for the ITN at the division level, beginning with the 82nd Airborne Division, followed by the 101st Airborne Division (Air Assault).

Preparing to conduct operations across a noncontiguous archipelagic operating environment in a multinational exercise will require secure and robust communications up and down echelons.

“Soldier feedback will continue to drive everything we are doing to meet division as unit of action requirements,” Daiyaan said. “Leveraging all of the data we’re collecting on the SBU-E network, our cross-domain solutions, radios and various resilient waveforms is keeping the momentum strong to meet any challenges we may face as we drive towards the Army of 2030.”

—KATHRYN BAILEY



SETTING A-PACE

A Soldier from the 101st Airborne Division (Air Assault) Signal and Intelligence Support Company configures equipment and devices for use on the network using automatic primary, alternate, contingency and emergency (A-PACE) prototype capabilities, while establishing communications inside a bunker on Mihail Kogalniceanu Airbase, Romania, in January. (Photo by Pfc. Matthew Wantroba, 101st Airborne Division)

IN THE OPERATIONAL 'LAB'

Experts from PEO C3T explain how the global operational landscape is shaping Army network modernization.

by Amy Walker

The Army is leveraging the global operational landscape and ongoing multinational training exercises—such as those in the European and Indo-Pacific areas of responsibility—as real-world “laboratories” to rapidly enhance network resilience, security and capability, and to keep ahead of potential challenges, including electronic warfare and cyber threats.

To optimize data exchange in denied, disrupted intermittent and low bandwidth network environments, the Army is accelerating experimentation and the use of Army science and technology and commercial prototype capabilities worldwide. These efforts will support the rapid and continued integration of emerging technologies into the U.S. Army’s unified network to successfully combat increasingly sophisticated enemies. Soldier feedback will inform both current network modernization designs and operational concepts, and those supporting the Army of 2030 and beyond.

As noted in the Army Data Plan, “The right data, at the right time, at the right place will enable faster and better decisions at echelon—to out-think and out-pace any adversary.”

In this light, experts from the Army’s Program Executive Office Command, Control, Communications – Tactical (PEO C3T) answer questions on their organization’s recent efforts in leveraging the global operational landscape for ongoing network modernization. Nicole Aderton serves as the deputy product manager for Tactical Mission Command, at Project Manager Mission Command; and Anthony Day serves as the assistant product manager for portfolio integration for Product Manager Unified Network Capabilities and Integration, at Project Manager Tactical Network (PM TN).



BUILDING BETTER BANDWIDTH

A Soldier from the 307th Expeditionary Signal Battalion – Enhanced, 516th Signal Brigade sets up a Scalable Network Node at Joint U.S. Military Advisory Group, Thailand, and Camp Red Horse in Thailand during the unit’s participation in Exercise Cobra Gold 2023. The Soldiers are providing critical network access and support, allowing American and allied partners to communicate securely. (Photo by 311th Signal Command (Theater) Public Affairs)

How is the Army using this new construct of leveraging existing global training exercises as part of network modernization and the acquisition of new systems and programs?

Day: The opportunity to test and evaluate prototype technologies through real-world exercises provides the Army with invaluable insight into a capability’s effectiveness in a realistic operational environment. Executing hands-on testing with Soldiers earlier in the development process ensures that issues can be identified sooner, and capabilities adjusted with a substantially lower total life cycle cost and schedule impacts, compared to making changes during or after production. By leveraging already planned global training exercises, we have access to field testing environments on a much larger scale with greater frequency than would traditionally be available.

Aderton: The Army’s updated training construct has enabled the program offices to directly engage our coalition partners and

unravel critical interoperability challenges. PEO C3T’s initiative to provide on-the-spot development during these exercises results in faster development and delivery of capabilities compared to the traditional process. Our developers work directly with the warfighters and coalitions partners to close operational gaps.

How are the Army’s “operational laboratory” efforts enhancing network resilience through agnostic multi-band multi-orbit and enhanced primary, alternate, contingency and emergency (PACE) communications plans, including terrestrial communications? What are some examples of these efforts?

Day: As the Army moves away from counterinsurgency missions, and with what we are learning from the European geopolitical landscape and the pivot to the Pacific, the threat is very different; we face much more sophisticated adversaries. Therefore, the service is focused on resiliency in its transport options.

"By leveraging already planned global training exercises, we have access to field testing environments on a much larger scale with greater frequency than would traditionally be available."

One way the Army is enhancing network resiliency is through automated diversity in transport agnostic communications, significantly increasing the number and variety of network communication pathways available to units. The more pathway options that can be leveraged for data to travel through, the more resilient the network becomes.

PM TN has been working with 101st Airborne Division (Air Assault) in Europe to demonstrate a new software capability known as "Seeker," a signal pathway diversity solution that provides the unit with an auto-PACE capability for satellite, terrestrial and line-of-sight communications. During the unit's exercises, Soldiers did not know they had periodically lost their primary and alternate signal paths until after the event had ended because of the seamless transition between communications (transport options) that Seeker provided during the exercises. Additionally, the Project Manager Tactical Network recently completed real-world testing in Hawaii of a next-generation tropospheric scatter transmission capability that provides a high-throughput, non-satellite communications beyond-line-of-sight

capability to units in geographically dispersed locations, which is exceedingly relevant in the Indo-Pacific environment.

In layman's terms discuss the Army's efforts to enable distributed command and control and tactical edge cloud access.

Day: The Army is enhancing the network to support cloud access experimentation and pilot efforts, which will inform future enhancements of cloud-based mission command and data sharing from distributed locations. PM TN is supporting a pilot called Agnostic Zone Transport Enabling Cloud Access, which extends the regional hub node and Global Agile Integrated Transport infrastructure into the cloud. By extending the network security boundary into a cloud environment, this enables units to securely access their home station resources at the tactical edge using existing transport options, with fewer signal hops, less bottlenecks and ultimately quicker access, without sacrificing security or capability. This effort is currently supporting I Corps initiatives to operationalize distributing command and control in the Indo-Pacific environment.

Aderton: The Army's distributed command and control and tactical cloud access enables commanders to make decisions at the speed of need. Access to data is no longer limited to just on premises or locally deployed tactical systems. With robust tactical networks and cloud enabled services, units are postured to access persistent data with fewer tactical systems deployed and managed to support mission at distant locations.

How does a tactical data fabric enable access to the right data for the right users?

Aderton: Tactical data fabric enables access to various data beyond just a particular warfighting mission area; it "stitches" together a variety of information sources and unique data formats. Let's take logistics data for example. Through the data fabric—or the Product Manager Tactical Mission Command-developed Command Post Computing Environment (CPCE) Tactical Data Fabric (CTDF)—we can ingest data sets necessary to execute logistics status reporting and to provision the logistics status and sustainment running estimate tools with the tactical and enterprise data sets required to achieve the required sustainment functions and features in CPCE. CTDF enables the ingress, curation, normalization and storage of sustainment data sets providing commanders with real time combat power status.

Discuss the partnership between Army units, PEO C3T, the science and technology (S&T) community and industry, and the significance of that. How is Soldier feedback specifically shaping capability development?

Day: Close partnerships between Army units, PEO C3T, the Army Futures Command's Network Cross-Functional



SOLID GOLD

U.S. Army Lt. Gen. Xavier T. Brunson, I Corps commanding general, receives a brief in March on Cobra Gold 23 by members of the 201st Expeditionary Military Intelligence Brigade at Camp 31, Lopburi, Thailand. Cobra Gold demonstrates ongoing readiness to operate throughout the region in support of allies and partners to ensure a free and open Indo-Pacific. (Photo by Sgt. Michael Ybarra, 7th Infantry Division)

Team and the Army S&T communities, Training and Doctrine Command and numerous Army and industry stakeholders are enabling deployed Soldiers to experiment with evolving network technologies to successfully operate and exchange critical data in limited and constrained network environments with increasing network resiliency and security, while enhancing the network for distributed operations.

Obtaining direct user feedback helps PM TN and the Army to ensure capability will meet the needs of the Soldier, which aren't always clearly articulated in the documented requirements. The partnership enables PEO C3T and the S&T community to focus research, development, and test and evaluation investments on critical needs; guides industry's internal

development efforts towards capabilities the Army wants to buy; and it provides Army units with opportunities to share their input on the tools they will use every day. As in the previous example, the 101st Airborne Division in Europe is informing the continued development of Seeker as they provide suggestions on which new features would be most beneficial in the next version of the software.

Aderton: The Army's campaign of learning paradigm opens the aperture to various partnerships for the materiel developer community. Soldier requirements and feedback are foundational to what our product offices deliver. Through our development, security and operations efforts, we partner with units in mitigating and solving operational challenges with our systems. We are hand-in-hand with the

Soldiers. We also work closely with our capability developers and S&T partners, collaborating on the modernized capabilities to deliver to the force.

How are these efforts enhancing coalition interoperability?

Day: PM TN is committed to developing modular capabilities that support plug-and-play applications in different configurations based on varying mission needs. By separating software from hardware through ongoing initiatives such as modem virtualization, we can employ common capabilities on both new and existing platforms. This allows for units with different baselines of equipment to still have access to the same modernized capabilities. Support for common interfaces and data standards facilitate



ARMY OF 2030 AND BEYOND

Soldiers from the 3rd (United Kingdom) Division support the U.S. Army multinational Warfighter Exercise (WfX) 23-4, at Fort Hood, Texas (now Fort Cavazos) in April and continued to build upon advancements in the implementation of an expeditionary interoperable coalition mission partner environment to meet current network, intelligence, fires and sustainment objectives and those of the Army of 2030 and beyond. (Photo by Amy Walker, Project Manager Tactical Network, PEO C3T Public Affairs)

interoperability between the Army and the other DOD services, and between the Army and commercial capabilities that may be more widely available to our international partners.

Aderton: The collaboration with Soldiers, S&T community and industry further enhances our material development. These efforts minimize “stovepipe” solutions and reduce development iterations by collaborating on the standards and protocols that hinder interoperability. Some of the challenges with interoperability are often the result of varying technical standards, protocols and policies. As the Army modernizes the network, it’s vital that product offices fielding materiel solutions are aligned.

Final thoughts?

Day: One of the key benefits to these rapid prototyping and experimentation efforts is the opportunity to fail. Through traditional acquisition pathways, the Army might invest many years and a significant amount of funding before discovering that a capability does not meet the needs of the Army as originally intended. With these alternative pathways, the Army can leverage the Special

Operations Command fail fast mentality to potentially learn that lesson much sooner and at a greatly reduced cost, allowing for a quicker pivot to a different technology that better meets the needs of the Soldier, and reducing the overall impact to the Army.

For more information, contact the PEO C3T Public Affairs Office at 443-395-6489 or usarmy.APG.peo-c3t.mbx.pao-peoc3t@mail.mil. Go to <https://go.usa.gov/xMSNz> for the 2021 Army Unified Network Plan or follow PEO C3T at <http://peoc3t.army.mil/c3t> and <https://www.facebook.com/peoc3t>.

AMY WALKER has been the public affairs lead at Project Manager Tactical Network for over 10 years and was the public affairs lead at Program Executive Office Command Control Communications-Tactical 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.



AI ASSISTANT

Lt. Col. Robert Solano used ChatGPT to help write and edit this article. Some acquisition professionals are already using language models to complete tasks in their daily personal lives. (Photo by Zaira Solano)

CHATGPT IN DOD ACQUISITIONS



| The opportunities and risks of advanced language models.

by Lt. Col. Robert Solano

As artificial intelligence continues to advance, large language models like ChatGPT have the potential to revolutionize the way defense acquisition and contracting are performed. With the ability to generate human-like text, language models can automate many of the repetitive and time-consuming tasks involved in procurement, such as document preparation, research and communication. As with any new technology, there are also risks associated with the adoption of large language models in the defense industry. These risks include potential security breaches, bias in decision-making and unintended consequences. In this article, we will explore both the opportunities and the risks associated with the use of advanced language models like ChatGPT in defense acquisitions and contracting.

ChatGPT is an artificial intelligence language model, which is a computer program designed to generate text based on user input. Although there are many language models, ChatGPT has received the most attention recently for its ability to generate human-like text with remarkable accuracy. ChatGPT was developed by OpenAI, a research organization dedicated to creating and promoting friendly artificial intelligence. OpenAI trained the model using an artificial intelligence technique called reinforcement learning from human feedback. This training process involved inputting large amounts of data into the computer program and then providing the program feedback and adjustments to improve its performance. ChatGPT was trained on a substantial amount of text estimated to be more than 300 billion words.

ChatGPT's ability to understand and generate coherent and meaningful text has made it a popular tool, attracting more than 1 million users in just one week after its November 2022 release. By January, it was estimated to have reached 100 million monthly active users, making it the fastest-growing consumer application in history.

HOW ADVANCED LANGUAGE MODELS WORK

Advanced language models like ChatGPT are developed using sophisticated artificial intelligence computer programming techniques. Developers feed vast amounts of text data into computer programs that analyze and process the information. The data comes from a variety of sources, such as books, articles and web pages. The output of the computer program is another type of computer program called a language model, which is capable of understanding and generating human text.

Teams of data scientists and engineers then adjust the model through a process called training and fine-tuning. They adjust the data and the parameters that the model uses to make calculations, so that it can make increasingly more accurate predictions or decisions on new text data. They repeat the process millions of times until it can accurately predict the next word with high probability. Once the model is trained and fine-tuned, it can be used to perform various language tasks. For example, it can be used to generate coherent and realistic text, answer questions and summarize large amounts of text.

Most users access ChatGPT through a simple and free text prompt on a web browser, while companies like Microsoft have begun integrating AI into their software services. Microsoft recently announced a multiyear, multibillion-dollar investment in OpenAI and will deploy ChatGPT models across its consumer and enterprise products like Bing search engine and Microsoft Teams. This investment is estimated to be valued over \$10 billion and highlights the growing demand for advanced language models.



REVOLUTIONIZING REALITY

As artificial intelligence advances, language models like ChatGPT will revolutionize defense acquisitions and contracting by automating repetitive and time-consuming tasks. (Image by the author)

OPPORTUNITIES AND USE CASES

Although ChatGPT is currently the industry leader in language models, other companies are catching up. In the near future, we can expect greater access to these language models and more integration with many of the software tools that we are already familiar with. As they become more advanced, language models also will be tailorable to specific styles, genres and domains (like DOD acquisition). Some people speculate that language models will become the “calculators of writing.” They predict that, similarly to how we rely on calculators to do most of our mathematical calculations today, in the future we will rely on language models to do most of our writing.

I recently surveyed a group of acquisition officers to gather their perspectives on how language models could be employed in defense acquisitions. Their feedback proved to be informative, with several noteworthy insights shared. For instance, some expressed interest in integrating AI or ChatGPT into the contract writing system to help draft performance statements of work or to write requirements. Others felt that ChatGPT could aid in market research to identify innovative solutions for addressing capability gaps. Another potential application mentioned was using ChatGPT’s analytical power to develop realistic and attainable requirements and criteria for source selection. Furthermore, some suggested that ChatGPT could be used to assist with writing standard forms, including single acquisition management plans and test and evaluation master plans, as well as to help foreign vendors navigate systems like SAM.gov and Procurement Integrated Enterprise Environment.

It is worth noting that some acquisition professionals are already leveraging ChatGPT to increase their productivity, albeit not for official purposes. They are using it for personal projects, research and idea generation. One officer used ChatGPT to find recent Government Accountability Office reports and to simplify technical language into more accessible terms. Another officer used ChatGPT to create a notional statement of objectives for a potential prototype project, which they found to be highly useful. One officer’s spouse even used ChatGPT to write her resume, which turned out better than if her partner had written it. Finally, many appreciated ChatGPT’s simplicity and efficiency in providing quick, accurate answers.

I have personally used ChatGPT to assist in writing articles like this one, holiday messages to my workforce, promotion speeches, social media posts, sympathy cards, love notes to my wife and even a book. This saved me hundreds of hours and resulted in better products than I could have ever done myself. My personal

experiences and the previous comments highlight that ChatGPT and similar language models have huge potential to transform the nature of writing in defense acquisition.

RISKS

Despite the potential opportunities and use cases, there are also risks associated with the adoption of large language models in defense acquisition and contracting. The first major risk is the handling of confidential or sensitive information, as language models are not specifically designed or tested for safeguarding controlled or classified data. This can result in security breaches or the dissemination of inaccurate information.

If language models are used to generate government documents, it will also be important to review existing policies regarding records retention laws. These policies dictate how long certain types of records should be retained. The use of language models may change the way documents are created and stored, potentially impacting compliance with these policies.

Language models also can generate text that contains biases, inaccuracies or other errors that could compromise the government's credibility or integrity. This is why any text generated by language models must be carefully reviewed and validated before use. As a result, network security policies often block access to ChatGPT and similar language models, slowing its adoption in the defense industry. However, some companies are looking into customizing language models specifically for government teams by fine-tuning their models with vast amounts of government-related data. Despite still being in early development, the integration of ChatGPT into Microsoft products like Office 365 and Microsoft Teams will likely be the first time many government users encounter language models.

Outside of government offices, the widespread adoption of language models by industry partners is expected to improve their efficiency in program management and contracting operations. The use of language models can significantly improve the speed and efficiency of administrative tasks, such as drafting meeting minutes and submitting contract proposals. The automation of information gathering and proposal writing can help level the playing field for small businesses and nontraditional contractors, who may not have the same resources as larger contractors.

Language models could make it easier for vendors to respond to government solicitations, leading to a greater volume of bids and more desirable competition. The increase of solicitations received by the government may overwhelm the already short-staffed

contracting workforce. As such, it is important for the government to start considering how to effectively manage the potential influx of proposals and ensure the evaluation process remains fair and thorough.

The use of language models by offerors also raises some risks in the contracting process. Offerors can use language models to optimize their responses to government requirements and increase their chances of winning contracts, giving an advantage to vendors who use language models. This may lead to contract awards going to offerors who have the best artificial intelligence models, rather than those who provide the best value to the government.

To address these risks, our contracting professionals will need to have a firm understanding of how language models compile and present information. They also will need to use the same language model technology to assist in market research, summarizing lengthy proposals or identifying risk areas. As offerors become more efficient with the response process, our contracting professionals will need to leverage resources to maintain an equal level of efficiency.

CONCLUSION

Large language models have the potential to improve efficiency and productivity across various industries, including the government sector. While the widespread adoption of these models in the government may lag behind the commercial sector, industry partners are likely to adopt the technology first and use it to assist with proposal writing and contracting processes, making it easier for offerors to respond to government solicitations and leveling the playing field for small businesses and nontraditional vendors. It is important for acquisition professionals to consider both the opportunities and risks involved and to use the technology responsibly and securely.

For more information, follow Lt. Col. Robert Solano on LinkedIn at <https://www.linkedin.com/in/therobertsolano>.

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(Image by Getty Images)



ARMOR FOR THE ARCTIC

The U.S. Army prepares to receive a new cold-weather all-terrain vehicle for Arctic operations—but is an armored version needed?

by Kelly Sowell

It's 8 a.m. on a cold December morning in Fairbanks, Alaska. The outside temperature without windchill is well below minus 40 degrees Fahrenheit and together, with the windchill, can cut through protective wear numbing body parts in a matter of minutes. Frostbite on exposed skin can occur in five to 10 minutes. It'll be another two hours until sunrise, and there will be a little over four hours of daylight for today. Soldiers under these conditions need to exercise extreme care to successfully reach the end of the day. It's no different for equipment.

For all things automotive, it's also a rough start to an incredibly short day. Temperatures overnight have dropped to minus 50 degrees Fahrenheit. Metal, plastic, electrical wires, fuel and all other automotive component characteristics have changed. Metal and plastic are now brittle, wires no longer want to bend and fuel lines freeze. Vehicle systems, much like their human counterparts, react differently to these freezing temperatures. Getting vehicles to start under these extreme conditions is challenging enough, but then the vehicles themselves still have to support Soldiers and their missions wherever they may lead. The vehicle that can perform under these conditions also needs to be extreme. Enter the Cold Weather All-Terrain Vehicle (CATV), one of the U.S. Army's newest additions to meet the Arctic challenge.

Alaska itself is a land of extremes. At a little over 570,000 square miles, Alaska is bigger than the next three states, Texas, California and Montana, combined. It's a region of extreme temperatures, with summers that can reach 90 degrees Fahrenheit and winters that can bottom out to minus 60 degrees Fahrenheit or colder. Alaska is 1,824 miles from the North Pole, and as such, has

extreme changes in daylight. In line with its size, Alaska has over 3 million lakes, its own mountain ranges and has the largest forest of any state. For the diverse terrain and challenging weather conditions during summer and winter, the CATV is suited for the extreme.

In August 2022, the Army announced a new vehicle for Arctic regions and started making preparations to take delivery of the CATV. The CATV will renew the Army's capability to conduct operations in extreme cold weather on the frozen tundra of Alaska and other cold regions within the continental United States. The CATV will be unarmored and unarmed, having the primary mission of transporting people and material supporting missions across unforgiving terrain in temperatures down to minus 50 degrees Fahrenheit. The CATV will replace the Small Unit Support Vehicle (SUSV), which was also unarmored and unarmed. With the Army's interest in expanding capability and deterrence in the Arctic, the CATV is part of increasing the Army's ability to operate in the Arctic.

The current CATV configuration can partner with allied nations in the Arctic but is limited to peacetime operations in an uncontested environment. But with its unarmored crew cab, it may not be the right capability that enables Army Alaska units to employ a credible, capable force that can deter potential attacks. Its role as part of a capable force in the first line of defense is limited with its unarmored crew compartment. Armored capability and transitioning the CATV vehicle to a more capable weapons platform as part of a first line of defense formation comes with some potential tradeoffs.



(Photo by Staff Sgt. Matthew Winstead, United States Army Alaska)

As the CATV becomes heavier it's plausible, with the increase in ground pressure exerted by the vehicle, that there will be limitations in mobility—such as a change in center of gravity, decreased range, decreased speed and reduced CH-47 sling load capability (for a decoupled vehicle only)—in the terrain types the CATV was developed to traverse. In addition, with the heavier weight, there will be an increase in sustainment costs as driveline, suspension and frame components, if not replaced with a heavier duty part, will potentially wear out sooner. With increased wear and tear on vehicle components, it's logical that units will have to keep a larger store of on-hand parts for replacement to maintain readiness.

The CATV is suited for the extreme.

WHY THE CATV?

The CATV is a modern replacement for the vintage 1980's SUSV, which is experiencing sustainment issues and increasing parts obsolescence. The SUSV family of vehicles provided extreme cold weather capability operating throughout Alaska and other U.S. cold weather regions in all weather conditions in all types of terrain. Although SUSVs were fielded in the mid-1980s as modification table of organization and equipment-authorized vehicles within the then 6th Infantry Division (Light), meaning they could be deployable, the SUSV family of vehicles were transitioned to and maintained as table of distribution and allowances-authorized vehicles, which are not deployable, with unit funding for sustainment support. The sustainment costs for refurbishing SUSVs increased beyond affordability limits between 2003 and 2019. The increase in price per vehicle was mostly because of the lack of parts necessary for the rebuild. Lack of parts drove more in-house, one-off fabrication and quickly escalated costs beyond supported funding. Army units resorted to using older SUSV parts to repair and replace parts on other SUSVs. This sustainment strategy could only support the SUSV until fiscal year 2022, after which it would become unsustainable regardless of supported costs.

The Army Requirements Oversight Council approved the CATV requirement as a replacement for the SUSV on April 15, 2019. Stephen Miller, a former U.S. Marine Corps ground combat and aviation officer, wrote about the Army Cold Weather All-Terrain Vehicle BvS10 BOWOLF in Armada International following its

Association of the United States Army conference presentation in October 2022. According to Miller, with the new CATV, the Army will have a vehicle with an updated powerplant boasting 285 horsepower and improved speed up to 40 mph and more than a 620-mile range.

CATV's performance capabilities include an all-terrain vehicle with a 4 km per hour amphibious swim. It is helicopter (CH-47 Chinook) sling load capable, and similar to the SUSV, the new CATV vehicle halves can be decoupled and recoupled. The new CATV light body crew cab has increased crew and cargo capacity over the SUSV, and replacement parts are more readily available.

In its updated requirements the Army required a vehicle that would be globally responsive, providing transportation for up to a nine-person element, emergency medical evacuation, command-and-control capability, and general cargo transportation in on- and off-road environments under a wide range of otherwise impassable terrain, including frozen ice, snow and muskeg conditions to support year-round training, as well as conducting Homeland Defense, Defense Support of Civil Authorities and search-and-rescue mission sets. The new CATV is extreme cold weather capable and has a 10,000-pound payload and a reconfigurable interior modular design supporting transportation up to a nine-person element, emergency medical evacuation, command-and-control capability, and general cargo transportation.

TESTING ON THE WAY TO PRODUCTION

Market research indicated up to eight vendors that had commercially available systems. Two vendors, BAE Systems and an Oshkosh-Singapore Technologies (OSH-ST) partnership, had systems that met most of the requirements. The identified systems improved on the existing SUSV by having a modern and sustainable design, improved powertrain performance and increased electrical network capability.

Procured through a shared cost other transaction agreement, BAE and OSH-ST delivered two vehicles each, one general purpose variant and one cargo variant, to the U.S. Army Cold Region Test Center at Fort Greely, Alaska, for prototype testing in June 2021. Testing was broken down into two phases. Phase I, from June to October 2021, included mobility, payload and robotic swim testing. Completing Phase I testing allowed each vendor to submit production proposals. Phase II, from November 2021 to January 2022, was extreme cold weather testing with scheduled Soldier touch points including operational vignettes and specific tasks such as towing, sling load preparation and extreme cold weather recovery. Both testing phases were used to assess

the vendors' vehicles. In August 2022, the U.S. Army announced BAE as the selected vendor to produce up to 163 CATVs. BAE will start deliveries in 2023 supporting a first unit equipped date in late fiscal year 2023.

As the Army prepares to take delivery of the new CATV, renewing its capability to conduct operations in extreme cold weather on the frozen tundra of Alaska and other cold regions within the continental United States, should there be a planned armored-version CATV in the future extending additional crew protection and vehicle survivability beyond the CATV's current capability?

FUTURE REQUIREMENTS

From the U.S. Army Regaining Arctic Dominance, part of the Army's Arctic Strategy released in January 2021, "the Army will field a Multi-Domain Task Force-enabled division and adjust our Alaskan-based brigade combat teams to regain the U.S. Army's Arctic dominance." The strategy also stated that multidomain formations must be able to converge their effects with the rest of the joint force as well as allies and partners.

The Army must enable Army Alaska units to employ a capable force posture that is credible to deter potential attacks and be that first line of defense. In addition, Army Alaska units must be capable to partner with allied nations that share the Arctic region. Army Alaska units must be able to use effective and suitable equipment to conduct operations in the Arctic beyond a set of specialized equipment sets. U.S. Army Alaska units must have equipment that can partner with other capabilities in formations that can perform their missions and withstand the extreme cold weather environment. This capability must increase the Army's ability to operate in extreme cold weather and be adaptable to how the Army plans to generate, posture, train and equip Army Alaska units in a multidomain task force.

To take full advantage of Alaska-based world-class training facilities, U.S. Army units must have capable program of record equipment sets as part of their organic structure coupled with adequate sustainment funding. Because multidomain task forces are forward-stationed, unit formations must be capable to perform their missions at the onset of need regardless of weather conditions. As Alaska has the least number of roads per square mile than any other state, the Army must also strike a balance due to mobility concerns as conditions in summer months pose challenges to wheeled vehicles because of thawing conditions on the tundra. Part of addressing this balance point supports removing some Army units' Stryker platforms. CATV procurement in its current configuration supports ensuring continued air mobility

to the extent possible, which is critical to its listed operations and mission sets.

ENABLING CATV TO DO MORE

With the added armor, CATV could still support year-round training, as well as conduct the previously mentioned mission sets, provided it has a road network or maintains some level of sling load capability. In addition, it would become an armored personal carrier, protecting against any small arms and artillery fire. From BAE, the armored CATV is capable of supporting anti-armor and air defense missile systems, mortar systems and remote weapon stations that can be integrated with weapons up to M2 .50-caliber. Also, with added armor, CATV would become a much more capable vehicle in the first line of defense and in combat unit formations.

To decrease peacetime sustainment costs, it may be more prudent to procure a limited number of armored cabs and store them at points of need, keeping the lighter body on a portion of the current CATVs for the bulk of its mission sets. Army Alaska units will need a number of armored CATVs to conduct unit training relative to their first line of defense mission, as well as conducting and sustaining driver's training in order to maintain crew proficiency and situational awareness on the differences between the unarmored and armored vehicle types. More important to the overall CATV capability is transitioning the CATV to a program of record with a full materiel release. With that transition will be the identified sustainment costs that will be critical to support the CATV fleet for its service life.

CONCLUSION

Delivery of the CATV in fiscal year 2023 is necessary to replace the aging SUSV fleet in its current role and use in U.S. Army Alaska units and other cold region locations. The program office will procure CATV quantities up to the Army Requirements Oversight Council requirements and support the CATV through a contracted logistic support arrangement that is program office funded at first and will eventually transition to unit funding.

However, looking deeper into the U.S. Army Arctic Strategy and the current CATV limitations, it may be necessary to go a step further and start the procurement action for an armored CATV or similar system. Buying a completely new system doesn't fully leverage the current CATV procurement, but it is an option, albeit a more expensive one for which the Army may not have the facilities and other infrastructure to support once it takes delivery of the entire fleet of CATVs. The retrofitted armor cab option on the current CATV would take full advantage of the current

CATV procurement action while keeping costs lower than procuring a new CATV-like armored solution. The armored CATV option would extend additional crew protection and vehicle survivability beyond the CATV's current capability and further enable U.S. Army Alaska units to employ a capable force posture that is a more capable first line of defense and a more credible deterrent for potential attacks. In addition, Army Alaska units would be a more capable partner with allied nations that share the Arctic region. A balanced armored and unarmored CATV approach would make the overarching Arctic strategy a more capable platform.

For more information, contact Rae Higgins at rae.a.higgins.civ@army.mil or 586-282-5175 at the Public Affairs Office, PEO Combat Support and Combat Service Support, Detroit Arsenal, Michigan.

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LIMITED MISSION

A CATV traverses a steep grade obstacle at the Cold Region Test Center, Alaska. The CATV can partner with allied nations in the Arctic but is limited to peacetime operations in an uncontested environment. (Photo provided by Product Management Office Multi-Mission Protected Vehicle Systems)



DETERRENCE UPGRADE

A CATV travels cross-country at the Cold Region Test Center, Alaska. An armored version of the CATV would give Army Alaska units the ability to deter potential attacks. (Photo provided by Product Management Office Multi-Mission Protected Vehicle Systems)



SUCCESS FASTER

DOD and the Department of Health and Human Services' ability to achieve success during the COVID-19 pandemic using an other transaction authority strategy was the use of the Medical CBRN Defense Consortium. DOD was able to secure personal protective equipment and solicit advanced research and manufacturing for 100 million doses of a COVID-19 vaccine. (Photo by 1st Lt. Angelo Mejia, 3rd Infantry Brigade Combat Team, 25th Infantry Division)

ACCELERATING SUPERIORITY

How OTA consortia are delivering for defense acquisition and our warfighters.

by Al Abramson, Brig. Gen. USA (Ret.)

From an acquisition standpoint, the Army's modernization efforts have made one thing crystal clear: other-transaction authority (OTA) agreements have been a pivotal tool. In the wake of the 2020 Defense Department Directive, "The Defense Acquisition System," which includes the goal to "deliver capability at the speed of relevance," the OTA model has quickly become the service's main acquisition strategy to provide cutting-edge technology capabilities within the initial six cross-functional teams. This accelerated model has enhanced the Army's highest priority modernization efforts, giving our warfighters a decisive edge on the battlefield.

For the Army's top priority, long range precision fires, the authority has been especially helpful in rapidly delivering technology prototypes for key programs including the Precision Strike Missile, the Strategic Long-Range Cannon, the Extended Range Cannon Artillery, the Long-Range Precision Guidance Kit and the Extended Range 155 mm projectile.

More so than any other branch of service, the Army quickly adopted the use of OTAs and continues to be the largest user within DOD: The Army's OTA usage increased by 500 percent between fiscal years 2017 and 2021, and in that time, the Army awarded more than 1,700 OTAs valued at nearly \$11 billion, as reported by GovCon Wire. DOD OTA obligations increased 75 percent in fiscal year 2019 and have increased more than 700 percent since fiscal year 2015, according to the Center for Strategic and International Studies.

The growth in the use of OTAs makes sense. "OTAs allow for greater speed, flexibility and access to small and nontraditional vendors," Under Secretary of the Army Gabe Camarillo said during a speech at the Potomac Officers Club Annual Army Summit in Virginia last year. These attributes are imperative for a military facing increased near-peer and peer competition across each of the five domains.

There is, however, one benefit to the use of OTAs that Camarillo left out—DOD-sponsored consortia facilitate the collaboration among government, industry and research institutions across important technology areas, like energetic materials, missile technologies, 5G spectrum and more.

A first-of-its-kind report, published by the George Mason University (GMU) Center for Government Contracting, provides key insights into consortia and their critical role in delivering OTA benefits. Specifically, researchers explored data and survey results of 12 different consortia to learn how they enhance innovation, expand the defense industrial base and accelerate the acquisition process for DOD partners.

ENHANCED INNOVATION

In their report, “The Power of Many,” co-authors Stephanie Halcrow and Moshe Schwartz acquired data from 12 of the 42 existing OTA consortia to learn more about their best practices and benefits. One of the key points of interest was how consortia enhance innovation under the OTA model. The answer, according

to Halcrow and Schwartz, is through strongly promoting collaboration and communication between government and industry.

The report cites the activities of the National Armaments Consortium (NAC), one of the nation’s oldest and largest consortiums with over 1,000 members including traditional, nontraditional and academic organizations. The NAC regularly holds collaboration events with its partners, the Department of Defense Ordnance Technology Consortium, the Aviation and Missile Technology Consortium, and the Naval Energetic Systems and Technology program.

First, the government presents its technology requirements directly to a roomful

of industry partners. Between fiscal year 2019 and 2021, each event held by the NAC and its partners saw an average of 45 requirements briefed to an average of 477 industry participants, according to the GMU report.

Second, government representatives brief the requirements, and interested industry counterparts conduct one-on-one meetings to dive into the need, offer suggestions and raise any concerns. In fiscal year 2019 to 2021, each NAC event resulted in an average of 222 one-on-one meetings between government and member organizations.

Ultimately, the report concluded, “These events, where industry and government can discuss requirements—even before requirements are firmly set—foster an innovation ecosystem where information flows between industry and government, resulting in more informed requirements and solutions.”

EXPANDED INDUSTRIAL BASE

Conversations surrounding OTAs tend to highlight the authority’s flexibility and speed, but these are byproducts of a much larger innovation strategy. The ability to establish a venue for government and industry to collaborate on complex issues and challenges is its number one priority. Paramount to these benefits, however, is the built-in requirement for “significant participation from nontraditional defense contractors.” Other transactions are designed to expand DOD’s access to—and to attract—innovative companies and small businesses. Companies without the desire or the resources to contract with DOD are under the more cumbersome, deliberate Federal Acquisition Regulation-based acquisition strategies.

GMU’s The Power of Many report highlighted the impact of the consortia model in supporting efforts to expand the



PUT TO THE TEST

Extended Range Cannon Artillery is tested at Yuma Proving Ground, Arizona, in December 2022. OTA agreements have been especially helpful in rapidly delivering technology prototypes for key long range precision fires programs. (Photo by Mark Schauer, U.S. Army Yuma Proving Ground)

industrial base. Across the 12 participating consortia, researchers found 77 percent of their membership is made up of nontraditional defense contractors. Going one step further, researchers identified more than 4,500 companies that do not traditionally work with DOD and are participating in those same consortia.

Even more significantly, nontraditional defense contractors are not sitting on the sidelines but, instead, are actively driving innovation for America's warfighters. According to GMU's researchers, 70 percent of awards from the 12 participating consortia went to nontraditional contractors as the prime contractor. For example, Monte Sano Research Corp., a nontraditional small business based in Huntsville, Alabama, received a \$49 million contract award this past November to develop a prototype of the Supersonic Ramjet Artillery Missile through the Aviation and Missile Technology Consortium based at Army Contracting Command – Redstone Arsenal.

Examples like this provide insight into the consortium-based OTA rapid prototyping model. Consortia help bring innovative nontraditional defense contractors and small businesses into the industrial base and provide opportunities for them to collaborate with the government and receive awards. In turn, the nontraditional defense contractors help deliver innovative technology prototypes to give our warfighters a decisive edge on the battlefield.

ACCELERATED ACQUISITION: OPERATION WARP SPEED

Another benefit of OTA consortia is they provide the government with the ability to “respond to unexpected emergencies and rapidly identify sources of supply and scale procurement critical items when time is of the essence.” The best example of this is the most famous success story of the OTA—Operation Warp Speed and the project's efforts to deliver a COVID-19 vaccine from concept to delivery, as quickly as possible.

“Early in the days of the pandemic, the government needed to reach the breadth of the pharmaceutical industry, determine vaccine capability and capacity, and contract at ‘warp speed,’ ” according to the report. The authors credited the DOD and the Department of Health and Human Services’ ability to achieve success with an OTA strategy was by using the Medical CBRN Defense Consortium (MCDC). Leveraging the MCDC’s members, DOD was able to secure desperately needed personal protective equipment and solicit white paper proposals on advanced research and manufacturing for 100 million doses of a COVID-19 vaccine.

The GMU report makes clear that the “MCDC published the solicitation on June 9, 2020, and received 11 white papers. DOD awarded four agreements (Novavax, Pfizer, Sanofi, and Janssen Research and Development). The first agreement on behalf of Operation Warp Speed was awarded within 27 days of the solicitation, and the fourth in less than two months. The first COVID-19 vaccines were administered in December 2020.”

Operation Warp Speed, with the support of MCDC, was a herculean effort made possible by our nation’s ability to collaborate, innovate and develop solutions to our most pressing problems. Warp Speed leadership also stated that the program’s success would not have come so quickly without the consortium-based OTA. Gen. (Ret.) Gus Perna, chief operating officer of Operation Warp Speed put it best, “Warp Speed would not have gone at warp speed if it was not for the consortium.”

CONCLUSION

As the global geopolitical environment heats up, the use of OTAs by the Army and other service branches will continue to increase, and with good reason. The authority is critical to rapidly developing new technology prototypes that meet the present and future needs of our warfighters.

At the same time, DOD-sponsored consortia will continue to play a pivotal role in developing these technologies. DOD can count on consortia to do what they have always done—promote collaboration, grow the industrial base to include more innovative nontraditional defense contractors, and accelerate acquisition at the speed of relevance.

For more information, go to <https://www.nacconsortium.org>.

AL ABRAMSON, BRIG. GEN. USA (RET.), serves as the vice president of customer engagement for the National Armaments Consortium. Before that, he served in the military for 30 years in positions within the continental United States as well as overseas. He culminated his career while serving in a dual-hatted role, serving as the joint program executive officer for Armaments and Ammunition, and the commanding general for Picatinny Arsenal, New Jersey. He holds an M.S. in chemistry from Johns Hopkins University; an M.S. in national security and strategic studies from the Naval War College; an M.S. in strategic studies from the Army War College; and a B.S. in chemistry from Virginia State University.

RANGING IN ACQUISITION



*For want of a nail the shoe was lost.
For want of a shoe the horse was lost.
For want of a horse the rider was lost.
For want of a rider the message was lost.
For want of a message the battle was lost.
For want of a battle the kingdom was lost.
And all for the want of a horseshoe nail.*

—Anonymous

This centuries-old proverb teaches an important lesson: Each person plays a critical role in success and every minor detail counts.

That's **Lesson #1**—every Army Acquisition Workforce professional plays a part in what the Soldier wears, carries or operates.

Many lessons have been learned since the proverb was first seen in the 13th century; since the establishment of the U.S. Army and the United States in 1775 and 1776, respectively; and most recently in the last few decades as we've experienced prolonged conflict, a pandemic and faced emerging threats. The lessons keep coming (some repeating), but it's important to capture, reflect on and institutionalize those lessons.

LESSON #2: THE QUICK PIVOT

For the last 20-plus years, we've been focused on minimum sustaining rates to maintain critical industrial capability and ensure the viability of a fragile industrial base. We've watched major industry segments move significant manufacturing capacity offshore and more recently experienced major supply chain disruptions compounded by the lingering effects of COVID-19.

We maintained minimum levels of production just to keep factories and suppliers operating. The discussion was rarely about how quickly you can ramp up production, but rather how few can we buy and still keep the factory, industry segment, etc., viable.

Then a quick pivot to the Russia-Ukraine war, where we are now at more than 40 presidential drawdowns—which allow for the speedy delivery of defense articles and services from DOD stocks to foreign countries in response to unforeseen emergencies—to meet immediate battlefield needs, while we also need to quickly replenish our equipment stocks. We're doing this at a time that we've seen a reduction in budget and a larger emphasis on total cost. Where in the previous decades we were in an environment of stretching our programs and trying to keep things moving, we're now having to surge in response to urgent needs and quickly ramp up production. We've had to be responsive and execute a variety of tasks simultaneously.

LESSON #3: IN CASE OF EMERGENCY, BREAK GLASS

2020 brought the biggest curveball, the COVID-19 pandemic. The Army, along with the rest of the world, faced resulting supply chain challenges. While our relationship with our industry



RAMP IT UP

Previously, the Army could stretch out programs. Now, we have to surge in response to urgent needs. (Photo by Dori Whipple, Lake City Army Ammunition Plant, May 2022)

partners has always been critical to mission success, we realized even more so during the pandemic that that collaboration would be key. Critical thinking was kicked into high gear: Actions had to be taken to protect critical infrastructure, and considerations had to be made with regards to working with what was seen as vulnerable foreign suppliers.

The COVID-19 pandemic required our workforce to innovate, incentivize and utilize all the authorities at our disposal, including some new ones we had to figure out as we went. We had to trust that our workforce understood their craft and practices, and ultimately had the ability to be effective at warp speed.

LESSON #4: “DON’T FORGET NOTHING”

This first standing order for the Army Rangers is one I always keep in mind, especially in my role as the Director of Acquisition Career Management (DACM). And to me it’s the most important—important that we train, experience and remember.

I’ve experienced a lot throughout my Army career, and through every small part I’ve played, through every pivot and emergency, my team of acquisition professionals figured it out and were

We realized even more so during the pandemic that that collaboration would be key.

successful. That’s not to say there weren’t failures along the way, but those failures were learning experiences and ultimately a part of our path to success.

I hope you and our future Army Acquisition Workforce professionals experience success, too. I believe success can be accomplished through fundamentals, experience, confidence, and supportive and engaged management. My office—the DACM Office—is assisting in this effort by implementing on-demand training through credentials, reinforcing basic skills and empowering the supervisor and employee to determine the right training at the right time.

The U.S. Army is a learning organization. Just like we have a stockpile of materials, we need to have a stockpile of training. One way we are offering that is through Udemy, an online training platform. We have leveraged Udemy to offer our workforce a customized digital training pathway to help meet the vision of having a digitally transformed Army. Udemy also has a variety of other training courses available at any time for our workforce. We must always do our job today but also incorporate deliberate planning for the future.

CONCLUSION

It’s a testament to the quality and resilience of our exceptionally talented Army Acquisition Workforce that the old English proverb has really never impacted us. It’s clear our workforce is well trained, agile and has the acquisition acumen and tools to execute tasks and do the job at hand, whatever that may be. We’re working hard to capture all the lessons learned from current operations so that we can get off to a running start on the next emergency. It all comes down to doing the job with everything you’ve got. And we’re here to help with that. 🙌🙌



ROBERT ANDERSON

COMMAND/ORGANIZATION: Contracting Detachment Bravo, 906th Contracting Battalion, 411th Contracting Support Brigade

TITLE: Contracting officer

YEARS OF SERVICE IN WORKFORCE: 8

YEARS OF MILITARY SERVICE: 15

DAWIA CERTIFICATIONS: DOD contracting professional

EDUCATION: B.S. in professional studies, business and management from Excelsior University

AWARDS: Various unit, overseas and personal achievement awards from 2008 to present. Of those his highest achievements include four Army Commendation Medals, the Air Force Commendation Medal and seven Army Achievement Medals

MAKING IT HAPPEN

Whether stateside or overseas, Army units arrive to training or joint exercises with other countries expecting that all the amenities are staged and ready for use. What they don't know or understand, said Staff Sgt. Robert Anderson, is that there is a military occupation specialty (MOS) within the U.S. Army working behind the scenes making sure it all happens. As a contracting officer with Contracting Detachment Bravo, 906th Contracting Battalion, 411th Contracting Support Brigade in South Korea, Anderson said, "Most Soldiers have never heard of our MOS, but when I explain how we assist them, and talk about the opportunities and the places we can travel and support, I usually grab their attention very quickly."

"We procure items for the warfighter so they can maintain their 'Fight Tonight' mission on Kunsan Air Base," said Anderson. "Being here is a unique experience for an Army contracting officer. On the peninsula of South Korea, the Army has the overall procurement authority. However, we not only procure items for Soldiers here, but our main customer is also the Air Force's 8th Fighter Wing and subordinate units."

Anderson has supported Air Force units as an Army contracting Soldier for more than five years, first at Joint Base Elmendorf-Richardson in Alaska, and now in his current station at Kunsan Air Base, South Korea. "Being able to operate in a joint environment is a great satisfaction for me. Not only am I able to affect our Soldiers by providing them with the mission-essential equipment needed to complete their mission, but also give support to our sister branch, the United States Air Force," Anderson said.

Acquisition sparked his interest after he overheard a few noncommissioned officers (NCOs) he worked with in the motor pool talking about a new career field "where you buy things for the military," he said. "As a couple other NCOs mentioned it, I began to research it." What sealed the deal for him to transfer was when his former company commander and operations NCO changed over to acquisitions. "I reached out and began putting a packet together so I could submit for acceptance," he said.

Anderson initially joined the Army as a 91D generator mechanic and served under the Forward Support Company of the 20th Engineer Battalion, 36th Engineer Brigade. "I enjoyed my mechanic job and I loved fixing things, however, it wasn't as fun putting the equipment back together after I got it running again," he said. "I thought about it, and couldn't see myself working as a mechanic well into my 50s or 60s."

His first few years as an Army acquisition Soldier was at Redstone Arsenal, Alabama, working in supply procurement. "I bought things as easy as cellphone equipment and services to robotic parts, to services required to monitor an endangered animal on our government installation," he said. "The thing that most appealed to me was the opportunity to travel in this field." In addition to regular duty station assignments, Anderson has had the opportunity to travel to Kuwait, Kwajalein Atoll, Thailand and Malaysia for his job.



AN ARMY FUTURE

Anderson reenlisted in Alaska on top of Flattop Mountain in 2019, where he was given the Oath of Enlistment by Air Force 2nd Lt. Lauren Mitchell. (Photo courtesy of 673d Contracting Squadron, Joint Base Elmendorf-Richardson, Alaska)

“Everywhere I’ve been, there’s not an exact ‘how to’ manual. It’s not like a mechanic job where you can look in a technical manual and read exact steps on how to fix something or break it down,” he said. That’s why, for him, the opportunity for mentorship is the most important part of the acquisition career field. “When I came into this field, I was put on a team with another brand-new acquisition Soldier and given some work. It was new for the civilians we worked with to have us there and some never served, so many were unaware how to mentor or work with us military members,” Anderson said. So, he created a living document he frequently updates with websites and helpful information. “I give it to all our newly accessed acquisition Soldiers,” he said. “This career field is something you learn over time and not overnight, but if I can provide a good starting point, it’ll hopefully spark the learning intake a little faster for our new members.”

His advice to junior acquisition personnel: Be patient. “It took a few years for me to fully grasp the overall acquisition process,” he said. “Providing exercise support and having a real-world, fast-paced environment is where things clicked for me and the whole acquisition process began to come together, and I understood it more. I also learned a lot once I arrived at my current duty station, Kunsan Air Base, because at the time I was the most experienced acquisition Soldier in the office and the team seemed to gravitate to me for assistance, when needed. It forced me to get in the FAR [Federal Acquisition Regulations] and research things more extensively before providing my guidance.”

ANDERSON’S TAKEAWAYS:

1. **Hands on experience is invaluable** – Reading how to do this job helps, but physically doing it is extremely beneficial because there are so many variables with each procurement.
2. **Slow is smooth, smooth is fast** – Take your time while working through an acquisition so you don’t have to modify it multiple times on the back end.
3. **Everyone interprets differently** – A good thing in our field, because having multiple aspects on how something is viewed or understood assists with creating good contracts and providing the warfighter the supplies and services they need to complete their mission.

Anderson has supported exercises including the U.S. and Malaysian army exercise Keris Strike 2022, and the first ever contracting detachment exercise evaluation last April. “The exercise support was an amazing experience, but the team evaluation allowed me to teach, train and mentor our newly accessed contracting officers and NCOs,” said Anderson of the contracting evaluation developmental experience.

The most important lesson Anderson has learned through his military career is: “Time is precious. On and off the job. No one is guaranteed tomorrow. The work will always be here.”

“I had a platoon sergeant in my prior MOS when I was a mechanic who would always tell us, ‘Do what you have to do, so you can do what you want to do,’” he said. “His name was Johntay Mitchell, he’s now a first sergeant, but his one statement has stuck with me for almost 10 years now. Both of my kids have heard it more than a couple times, too,” said Anderson speaking of his son Braylen, 13, and daughter, Aubrey, 8. “It explains so much in one small phrase. The faster you complete your responsibilities the faster you can relax and enjoy your own personal time however you choose to.”

—*HOLLY DECARLO-WHITE*



LOCATION-BASED CHALLENGES

Service members face a host of location-based challenges to their service, from spousal employment to dual military couple co-stationing, from child care to the high cost of living and available housing. (Photo by George Pak, Pexels)



THE ARMY GOES **LOCATION INDEPENDENT**

The Army has a 'remote' chance of retaining its best talent, by fixing location-based problems with work opportunities that aren't location based.

by Col. Kristin Saling

The COVID-19 pandemic threw the world into chaos. Faced with a worldwide lockdown where proximity to anyone meant the risk of contagion, businesses and institutions reliant on an in-office workforce suddenly found themselves struggling to figure out how to continue work when working out of the office was either impossible or risky. And the DOD cubicle farms that seemed perfectly efficient up to this point were now massive obstacles to safety and productivity.

However, during this time, the Army and DOD began to innovate. Launched into figuring out new ways of doing work, the Army pushed out more digital technology and collaboration tools in the first six months of quarantine than it had since the advent of the internet. And now, three years later, many folks departed the office and haven't gone back, and are beginning to understand in a way that wasn't clear before, maybe they shouldn't go back. Returning to long commutes, stuffy offices and cubicle farms holds little appeal, but even less so for service members where being tied to a location means making a trade-off between career progression and other considerations. By decoupling jobs and location, the Army can reduce this trade-off.

Service members face a host of location-based challenges to their service, from spousal employment to dual military couple co-stationing, from child care to the high cost of living and available housing, from staying near resources essential to those in the Exceptional Family Member Program to facing the hassle and expense of commuting. Many of these challenges can be reduced or eliminated by untethering service members from their locations. Then all that remains is the challenge of teaching an organization that prizes in-person meetings and "butts in seats" how to become more location independent.

MISSION COMMAND AND DISTRIBUTED WORK

Despite the sudden prevalence of these concepts in conversation, remote work, telework and distributed teams are not new. They aren't even new for the Army. The Army has battalions and brigades spread across small posts in Korea and Germany and operated out of distributed combat operation posts in Iraq, Afghanistan, the Horn of Africa and other locations. Many officers can recount stories of commanding some or all of a small post miles from the flagpole, including signing for buildings and equipment, managing services and garrison functions, and



DISTRIBUTED WORK

The benefits of distributed work. It may not be for everyone, but can be corrected with performance management, mentorship and training. (Graphic by Jimmy Blain, Army Talent Management Task Force, and USAASC)

providing command guidance, sometimes as young captains and even lieutenants.

The entirety of Field Manual (FM) 6-0 and Army Doctrine Publication (ADP) 6-0, both titled “Mission Command,” were written expressly to help leaders exercise command and control over often distributed forces to accomplish missions. In the article “Understanding Mission Command,” James D. Sharpe, Col. USA (Ret.) and Thomas E. Creviston, Lt. Col. USA (Ret.), revisited this and emphasized, “The doctrinal terms decentralized execution, decentralization, and empowering agile and adaptive leadership, all imply the same thing—distributed leadership.”

ADP 6-0 “Mission Command” applies a framework that empowers subordinate decision-making and decentralized execution appropriate to the situation that is completely applicable to current methods of working in distributed teams. It was designed for unpredictable and ambiguous environments, and relies on trained, experienced, trusted teams being able to operate independently on a shared understanding of the commander’s intent.

The principles of mission command are:

- Create competence.
- Establish mutual trust.
- Ensure shared understanding.
- Provide clear intent.
- Issue mission orders.
- Prioritize and incentivize disciplined initiative.
- Accept risk.

Commanders who read and apply these principles know how to lead in a distributed environment, whether it’s in a forward combat environment or spread over multiple locations while state-side. One could argue that it also provides principles that should apply to an in-person environment, but in-person environments don’t force the issues of trust, competence and disciplined initiative the way remote and distributed work does.

Distributed work is not for everyone. Not all work can be taken completely online, not all people possess the communication skills, understanding of intent, and disciplined initiative needed to work on a distributed team, and not all commanders possess the traits and behaviors needed to enable this kind of work.

Distributed teams often reveal these failings. The good news is that they can be corrected with performance management, mentorship and training.

LOCATION INDEPENDENT SOLUTIONS FOR LOCATION DEPENDENT PROBLEMS

John O’Duinn, a renowned expert on distributed teams and distributed work, does not categorize jobs by “remote” or “in-person.” Instead, he focuses on the ties to a location, categorizing jobs as “location-dependent” or “location-independent.” This method of classifying jobs places less focus on the individual receiving the treatment and more emphasis on the nature of work, and how much that work should be done tied to a particular location. Some jobs are tied to particular locations, e.g., jobs involving specialty equipment and machinery such as service depots. Some jobs are tied to the location of the team and the services provided. However, only about 40 percent of Army active-duty positions are at the brigade combat team level and below. A large portion of the Army operates in staff positions working digitally, and those jobs can to a great degree be separated from full-time presence at a given location, even if periodic in-person work and travel are required.

Location-independent work and distributed teams also support the retention of individual talent.

Matching these jobs to competent, disciplined, motivated and communicative individuals has the potential to alleviate a large number of location-based challenges that service members face, many of which drive them to exit service:

- **The Married Army Couples Program (MACP).** MACP was established in 1983 and provides Soldiers the opportunity to be stationed together while fulfilling the Army’s mission. About 22,000 active component Soldiers are currently enrolled in the program. If both service members are assigned to a duty location supporting the service member whose position is more



LOCATION, LOCATION, LOCATION

Some Army positions are tied to particular locations, such as jobs requiring the use of specialty equipment or machinery. But a large portion of the Army operates in staff positions working digitally, and they can be separated from full-time presence at a given location. (Photo by Konrad Ciezki, Pexels)

location dependent, the number of stationing options greatly increases.

- **The Army Exceptional Family Member Program (EFMP).** EFMP identifies service members with family who have special medical or educational needs requiring support from qualified specialists. This can sometimes make it difficult for a service member to progress their career. Allowing the service member to rotate into location-independent positions can increase opportunities for stabilization and continuity of care while reducing turbulence in the lives of family members.
- **Dual professional couples.** Surveys show over a third of all Army married couples are made up of two professionals. Even though there have been increases to programs to support employment to military spouses, this population remains critically unemployed or underemployed. For three years in a row, this has been the second highest reason cited in the Department of the Army Career Engagement Survey for service members being likely to depart the Army. Location-independent positions, both for service members and professional spouses, allow stability for those in existing jobs or can even allow service members to relocate to support a spouse building a professional portfolio and reputation.
- **Compassionate reassignments.** A compassionate reassignment allows a service member to get a permanent change of station (PCS) to another duty station in response to a family emergency, hardship or other situation where the Soldier's presence is warranted. A service member who meets qualifications for location-independent work can be moved and remain assigned to their current position, or remotely assigned to a new location, to better enable the compassionate action request.
- **Talent alignment to undesirable locations.** This is a benefit well understood by industry, and one that U.S. Army Human Resources Command (HRC) is realizing as the command hires software engineers, data scientists and other technical talent not usually available in a remote location such as Fort Knox, Kentucky. Location-independent work allowed the command to both retain talent and make these new hires that might otherwise balk because of family and lifestyle considerations.

Remote work, telework and distributed teams are not new. They aren't even new for the Army.

Location-independent work and distributed teams also support the retention of individual talent. A service member qualified for a distributed team might take a position remotely where they otherwise might have opted out of the Army to remain in a particular location, to be close to family or a support network, to maintain school locations, or to provide their family general relief from the stress of a permanent change of station. Regardless of the reasoning behind a service member's interest in stability or location, recruiting talented individuals into distributed teams may allow the Army to retain individuals who might otherwise choose other opportunities. It also allows the leaders of distributed teams to create a competitive environment for competent talent to seek these opportunities.

THE WAY AHEAD

Remote work programs are still nascent for the active-duty force. The Army is updating policies and regulations to include remote and telework status as duty status updates, and defining the processes for selecting, managing and caring for its remote workforce. Still, the Army adds new organizations to the lists of distributed teams daily. Current organizations piloting programs include Army Futures Command, V Corps, U.S. Special Operations Command, the Army Talent Management Task Force, U.S. Army Human Resources Command (HRC), and more. New commands express interest regularly in remote work to retain talented individuals, prompting additional pilots and planned expansion to the effort.

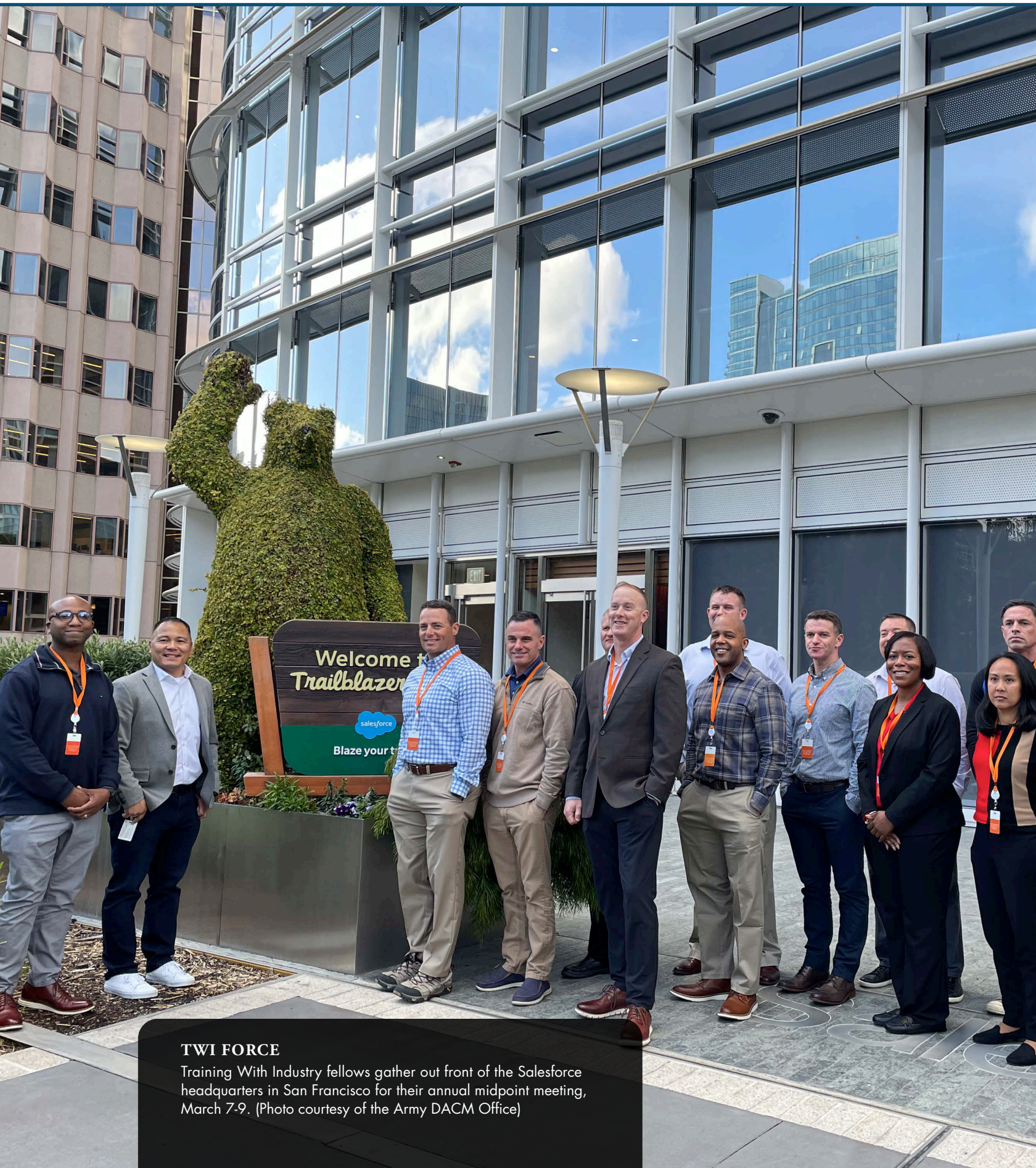
As one major said shortly after HRC announced digital permanent change of station opportunities for remote workers a year ago: "Yesterday, while in my senior rater counseling, we were going over my career timeline. ... He said that I should keep an open mind about positions with jobs I want in locations that wouldn't work for my family because of this program. He said he wouldn't be surprised if within the next five years, [technical branches] across the Army would be doing this."

CONCLUSION

While we've only looked at one benefit of remote work and distributed teams to service members here, it is a critical one. Even though these programs are nascent, the nature of work and the support of families has proven essential to maintain the trust necessary to continue supporting an all-volunteer force. DOD must continue to embrace solutions like distributed teams and location independence, or else force individuals to decide between supporting their career or supporting their family. While Soldiers personally embrace selfless service and sacrifice, if we ask them to sacrifice needed support for their families, they will find opportunities to serve elsewhere.

For more information contact the U.S. Human Resources Command Public Affairs Office at 502-613-4211 or Col. Saling at 808-783-3279 or Kristin.c.saling.mil@army.mil.

COL. KRISTIN SALING is the director of Army Human Resource Command's Innovation Cell and serves as the principal adviser to the commanding general on leading technologies and business practices in the people enterprise. She previously served as the acting director of Army People Analytics for the assistant secretary of the Army for manpower and reserve affairs. She holds an M.S. in systems engineering from the University of Virginia and a B.S. in operations research and systems analysis and an active-duty commission from the United States Military Academy at West Point.



TWI FORCE

Training With Industry fellows gather out front of the Salesforce headquarters in San Francisco for their annual midpoint meeting, March 7-9. (Photo courtesy of the Army DACM Office)

HALFWAY THERE

TWI fellows travel to San Francisco to learn a business's best practices and compare notes at midpoint meeting.

by Rachel Berry

The 2023 Training With Industry (TWI) fellows descended upon the Salesforce headquarters in San Francisco from March 7-9 for their annual midpoint meeting. The meeting is a critical part of the program, where the TWI fellows gather from across the country at one host company to “deep dive” that company and learn firsthand about its best business practices, as well as share their yearlong experiences with one another.

TWI is a work-experience program that provides competitively selected officers in Army acquisition extensive exposure to managerial techniques and industrial best practices within corporate America. Brian Winters, a former TWI fellow and the Proponency and Analysis Division chief in the Office of the Director of Acquisition Career Management (DACM), stewards the TWI program and attended the midpoint session.

“Over the 30-plus years that the Army Acquisition Workforce (AAW) has participated in the Training With Industry program, we have endeavored to adapt the program to meet the intent of our AAW senior leaders, the changes in Army modernization priorities, and the professional development needs of our officers,” Winters said.

The schedule of events for the midpoint is developed in part by the fellow currently at the hosting company. The fellow uses their knowledge to create a midpoint schedule that includes senior leadership briefings, an organizational overview and a tour of the host facility. Past midpoints have been hosted at Amazon in Seattle and Sig Sauer in Newington, New Hampshire.



Salesforce is a cloud-based software company that provides customer relationship management software and applications focused on sales, customer service, marketing automation, e-commerce, analytics and application development. Some of its software products include Tableau, Slack, Mulesoft and Salescloud.

FROM EVERY ANGLE

Col. Ryan Ocampo, Salesforce's TWI fellow, designed the midpoint event schedule to ensure the fellows learned about Salesforce's business from multiple angles. During these briefings, members of Salesforce teams shared information about the company's business practices and corporate strategy, and also spoke on topics such as digital transformation and applying artificial intelligence.

During the digital transformation discussion, Peter Coffee, Salesforce's vice president for strategic research, discussed lessons learned by Salesforce to become agile and apply technological solutions to problems—a timely topic for the TWI fellows and the Army. He encouraged the fellows to “build a culture of experiments where you can move forward instead of trying to avoid failures.” Coffee also said team size can be a great indicator of agile performance. He shared that the best practice for agile teams is to be small enough to be fed with two large pizzas. This ensures everyone on the team has a defined role for the project and can really own the project. He also encouraged the team structure to include a diverse group of people who give regular feedback, celebrate team wins, and measure the results of the team. Regarding agility, he suggested avoiding the use of the term “project,” as that indicates there is a beginning and an end, whereas you should strive to have continuous transformation. Coffee used powerful examples to illustrate his points. One was where someone started building a pyramid and halfway through decided to make it a cube instead.

This example was particularly resonant with the fellows who are familiar with the Army's intent to implement more agile processes. Coffee's guidance was to regularly engage with those who will use the product to ensure the practicality of the end product.

THE SALESFORCE STRATEGY

Later in the schedule, Jim Cavalier, Salesforce's senior vice president, Office of the CEO, explained the corporate strategy that Salesforce uses, the V2MOM, which stands for vision, values, methods, obstacles and measures. Salesforce uses this structure for both its corporate strategy and its employee performance program.

Cavalier explained this model ensures there is focus, alignment, transparency, agility and accountability for decisions made within the organization. Following this presentation, the fellows completed a “future-casting” exercise using the V2MOM model for the TWI program, with the prompt of how the TWI program can transform the Army. Participants were split into four teams and used a front page template as the V2MOM canvas. The facilitators used Army AL&T magazine as the publication for the activity. The headline of the paper was, “The Vision for the TWI Program,” and the subsequent stories on the front page represented the methods and measures. Notating the values and obstacles helped inform both the vision and measures of the activity. The fellows then presented their front page to the group and included industry best practices they want to bring to the Army. Discussion included transformed leaders, modernization capabilities, larger pool of industry participation and maximization of time.

Also during the midpoint event, Ocampo arranged a briefing from Raymond Gobberg and Roshan Jessani of the Defense Innovation Unit (DIU), a DOD organization based in Silicon Valley, to discuss their unique approach to the DOD acquisition process. DIU utilizes a streamline acquisition process to rapidly develop prototypes and to field commercial solutions to address national security challenges. The process includes an initial white paper stating how the problem will be addressed. If the pitch is accepted, then the company will attend a Shark Tank-like session to further explain its product. In the final phase, multiple companies are invited to demonstrate their prototypes, which is when the final prototype is decided. The fellows and the DIU team then had a discussion on how this organization can be expanded to other projects within DOD.

For the rest of the midpoint session, the fellows shared their experience with their partner organizations, including company overviews, industry best practices, training opportunities and leadership mentoring.

Universally across the program, the fellows have a sponsor within the organization who assists them with navigating and networking within the organization. A lesson learned from many of the fellows was to find a mentor among the senior leaders early in the program, which will then open more doors and opportunities within the organization for the fellow. The fellows' experiences range from rotating across different departments and projects to staying with one organization for an in-depth experience. Another requirement within the program is to create a training plan, with goals and objectives, to assist prioritizing developmental

opportunities. These training activities vary from pre-command courses to internal training opportunities within their organizations. Most of the TWI experience is a fellow-driven approach as they work to achieve their goals and objectives. Since TWI partner organizations vary across industries, including manufacturing, professional services and technology, every fellow presented a unique experience.

TWI PARTNER ORGANIZATIONS

Microsoft Corp. fellow, Lt. Col. Jonathan Talis, led a biweekly call with other Microsoft fellows from other services to network and learn from one another. They also created a manual for future fellows to reduce the fellowship acclimation process. Another benefit to his experience was the veteran community at Microsoft who were supportive and inclusive of the fellows. Overall, he was impressed by Microsoft's ability to "hire well and those who have intellectual curiosity."

Lt. Col. Benjamin Hormann, a fellow with Ford Motor Co., traveled with his sponsor, a regional manager, to various Ford plants to oversee manufacturing output. With this metrics-driven approach, Hormann observed that leaders have front line or engineering experience to best lead and hit the metric goals. Hormann was tasked to lead a technology forum to bring in innovative ideas from across different sectors within Ford.

Moonshots Capital fellow, Lt. Col. Christopher Mitchum, had the unique experience of working closely with the company's two founders and quickly learned the life cycle of the venture capitalist sector. As the two founders are veterans, Mitchum witnessed how they valued companies with veteran experience and mentored these leaders as their companies grow. Through his fellowship, he had the experience of working with DIU and understanding its process from the industry side.

Lt. Col. Lendrick James, a fellow with General Dynamics, was given freedom to explore different sectors and network with senior leaders. He was afforded the opportunity to participate in mock interviews to gain experience and solicit feedback on these skills. Another experience gained was attending industry conferences to network with other companies and expand communication skills working at the General Dynamics booth.

At McKinsey Global, Col. Andra Moore was afforded a diverse range of experiences including working with retail clients, completing a negotiation course, Korn Ferry leadership coaching, and a front row seat to see how McKinsey collaborates with senior leaders in industry. Moore looks forward to bringing

efficiency work techniques gathered from her experience. For example, when developing work content, she was encouraged to begin the product and then ask for feedback when it was 20 percent completed. She said this differed from her Army experience, where you usually have a finished product then receive feedback. This approach ensured the work vision was maintained, and less rework was required. "McKinsey treated me like one of their own, celebrating my promotion and created a very inclusive experience," Moore said.

CONCLUSION

"Today we don't just focus on industry partners that are major defense contractors," Winters said. "Some of our most interesting and valuable industry partners aren't major players in the DOD industrial base, but provide a unique opportunity based on their creative approach to solving problems or their leadership in their marketplace. As a result, our officers have the ability to learn how innovative and successful companies make important decisions and incentivize their leaders. On the other side of the equation, I believe that our industry partners continue to benefit from having some of our most experienced and capable [Army Acquisition Corps] officers as a part of their 'formation' for approximately 10 months."

The TWI program is a yearlong assignment with partners across the manufacturing, technology and services industry including Deloitte, Ford, 3M, Salesforce, General Dynamics and more. Applications open in the summer and those who are interested in this unique experience are encouraged to speak with their branch manager and then assignment officer on next steps.

For more information about TWI and how to apply for the fiscal year 2024 program, go to <https://asc.army.mil/web/career-development/programs/aac-training-with-industry>.

RACHEL BERRY was formerly 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.

ON THE MOVE



PROGRAM EXECUTIVE OFFICE FOR AVIATION

1: RETIREMENT CAPS 52-YEAR CAREER

Al Abejon, center, accepted his certificate of retirement from retired **Lt. Gen. Bill Phillips**, left, during a May 8 ceremony at Redstone Arsenal, Alabama, while **Col. Burr Miller**, Aviation Mission Systems and Architecture project manager, looked on. Abejon previously retired from the Army in 1997 after serving for 26 years as a Soldier. He then worked as a systems engineering and technical assistance contractor for six years, before starting his Army civilian career at the Program Executive Office (PEO) for Command, Control and Communications–Tactical, where he managed the Blue Force Tracking Aviation program in 2003. He joined PEO Aviation in 2013 to lead efforts for aviation integration and demonstration during the Army's biannual network integration evaluations. Abejon retired as director of PEO Aviation's Combat Aviation Brigade Architecture Integration Lab, a role he held since 2019, and closed out a 20-year civilian career for a total of 52 years of combined service to the Army. (Photo by Peggy Meagher, PEO Aviation)



2: PM UAS CELEBRATES RETIREMENT

Col. Scott Anderson, right, accepted his retirement certificate from **Maj. Gen. Robert Barrie**, the program executive officer for Aviation, at a Jan. 20 ceremony at Redstone Arsenal. Anderson, who served as the project manager for the Unmanned Aircraft Systems Project Office, retired after 30 years of service. (Photo by David Hylton, PEO Aviation)



3: PROMOTION TO SENIOR EXECUTIVE SERVICE

Rodney Davis, the deputy program executive officer for Aviation, center, accepted his Senior Executive Service plaque from **Maj. Gen. Robert Barrie**, PEO Aviation, during a promotion ceremony May 1 at Redstone Arsenal. Davis' wife, Sharina Davis, was also on stage for the occasion. (Photo by David Hylton, PEO Aviation)



4: DEPUTY PM CELEBRATES RETIREMENT

Kelvin Nunn, left, accepted his certificate of retirement from **Maj. Gen. Robert Barrie**, program executive officer for Aviation, during a Jan. 27 farewell ceremony held in his honor at Redstone Arsenal. Nunn joined PEO Aviation in 2003 in the Utility Helicopters Project Office before moving to the Non-Standard Rotary Wing Aircraft Project Office and then working as chief of staff at PEO Aviation headquarters. He retired as the deputy project manager for Fixed Wing and closes out his civilian career with 36 years of service. (Photo by Tracey Ayres, PEO Aviation)

5: SWARTZ HONORED AT PROMOTION

Col. Seth Swartz smiled as his family attached his new rank insignia during his promotion ceremony April 7 at Redstone Arsenal. Swartz, a product director with the Utility Helicopters Project Management Office, was promoted by **Maj. Gen. Robert Barrie**, program executive officer for Aviation, who hosted the ceremony. (Photo courtesy of PEO Aviation)

6: CHANGE OF CHARTER AT UH-60M

Col. Calvin Lane, left, presented the charter for the UH-60M Helicopter Product Office to incoming product director **Lt. Col. Nathan Greer** during a March 9 change of charter ceremony at Redstone Arsenal. Greer, who assumed leadership of the office from **Col. Joseph Alexander**, previously served as a product lead in PEO Aviation's Multi-National Aviation Special Project Office. Alexander, who served as the product director since July 2020, took command of the Redstone Test Center on March 23. (Photo by Paul Stevenson, PEO Aviation)





PROGRAM EXECUTIVE OFFICE FOR ENTERPRISE INFORMATION SYSTEMS

1: FMS-ACES WELCOMES NEW PRODUCT LEAD

Kevin Curry, left, Defense Integrated Business Systems (DIBS) project manager, welcomed **Kelly Rutherford** as product lead for DIBS' newest product office, Foreign Military Sales – Army Case Execution System, at a Feb. 27 assumption of charter ceremony in Arlington, Virginia. (Photo by Paul McKellips, PEO EIS)

2: NEW PRODUCT LEAD FOR E-ICAM

Sergio Alvarez, left, the acting project director for Enterprise Services, presented the charter for the Enterprise – Identity, Credential and Access Management product office to incoming Product Lead **Kyle Tucker**, right, while **Leslie Clemente**, then-acting deputy director for Enterprise Services looks on at a Feb. 28 assumption of charter ceremony at Fort Belvoir, Virginia. (Photo by Cecilia Tueros, PEO EIS)

3: ASSUMPTION OF CHARTER AT IPPS-A FCO

Col. Robert “RJ” Mikesh, left, Integrated Personnel and Pay System – Army (IPPS-A) project manager, presented the charter for the IPPS-A Future Capabilities Office, formerly known as IPPS-A Increment II, to incoming product manager **Lt. Col. Ryan Martin** at an April 6 assumption of charter ceremony in Arlington, Virginia. (Photo by Laura Edwards, PEO EIS)

4: NEW CIO FOR PEO EIS

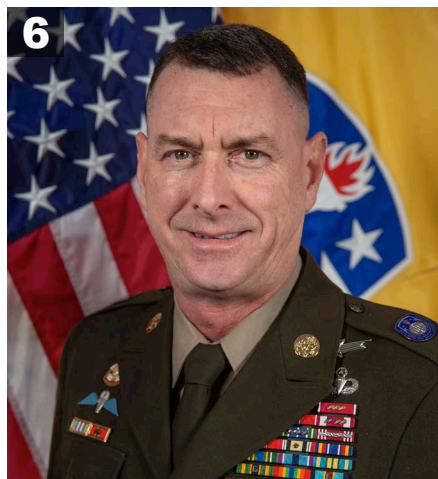
Michael Chappell was appointed as the PEO EIS chief information officer for the recently formed Chief Information Office directorate in March at Fort Belvoir, Virginia. Chappell is an 18-year industry veteran who will help PEO EIS innovate and transform into a more agile organization.

U.S. ARMY SECURITY ASSISTANCE COMMAND

5: USASAC WELCOMES NEW CSM

Command Sgt. Maj. Stephen A. Burnley was welcomed during a change of responsibility ceremony conducted by the U.S. Army Security Assistance Command (USASAC) at Redstone Arsenal, Alabama, on Dec. 16, 2022, while bidding farewell to departing **Command Sgt. Maj. Sean Rice**. Burnley comes to USASAC after having served as the command sergeant major for the Fires Center of Excellence at Fort Sill, Oklahoma, and will serve as the fifth command sergeant major in USASAC's 57-year history.

“I know that it is always a privilege to lead, and that the USASAC mission has never been more important to the joint force or to the U.S. Army,” Burnley said. “Whether increasing allies’ and partners’ defense capability or providing support in peace or in conflict, this command is critical to safeguarding our nation’s security interests. I come hungry and ready to join the expert team of civilians and Soldiers who serve in this great organization, here and around the world.”



6: NEW CSM AT SATMO

Command Sgt. Maj. Robert Allen was welcomed during a change of responsibility ceremony conducted by the U.S. Army Security Assistance Training Management Organization (SATMO) on Jan. 20, bidding farewell to **Command Sgt. Maj. Tom Dow**. U.S. Army SATMO Commander **Col. Andrew Clark** hosted the event as Allen assumed the duties of his new role during a time-honored ceremony at the unit's headquarters at Fort Liberty, North Carolina.

7: HONORED IN RETIREMENT

Command Sgt. Maj. Sean Rice, right, the former senior enlisted leader for the U.S. Army Security Assistance Command, was honored by retired **Maj. Gen. Rodney D. Fogg**, former Army Materiel Command deputy chief of staff, G3, during Rice's March 17 retirement ceremony at Redstone Arsenal, Alabama. Rice retires with 35 years of service to the Army and nation.

"As I leave, I want to thank everyone for the support and counsel you provided me, that allowed me to be all I can be," Rice said. "It was more than a slogan for me back in 1988. I took it to heart. And I prayed a lot that with each assignment, each opportunity that I would do just that, or give others the same counsel that was given to me, so they too could be better than they ever dreamed." (Photo by Tim Hanson, USASAC)

THE CHIEF OF STAFF OF THE ARMY ANNOUNCES THE FOLLOWING OFFICER ASSIGNMENTS

Maj. Gen. Robert L. Barrie Jr., program executive officer, Program Executive Office for Aviation, Redstone Arsenal, Alabama, to Deputy for Acquisition and Systems Management, Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology, Washington.

Brig. Gen. Edward H. Bailey, commanding general, Medical Readiness Command, Pacific/Deputy Director, Defense Health Region Agency Indo-Pacific, Defense Health Agency, Honolulu, Hawaii, to commanding general, United States Army Medical Research and Development Command and Fort Detrick, Fort Detrick, Maryland.

Brig. Gen. Wayne E. Barker, deputy program executive officer, Program Executive Office for Intelligence, Electronic Warfare and Sensors, Aberdeen Proving Ground, Maryland, to program executive officer, Intelligence, Electronic Warfare and Sensors, Aberdeen Proving Ground, Maryland.

THE CHIEF OF STAFF OF THE ARMY ANNOUNCES THE FOLLOWING OFFICER PROMOTIONS

Gen. Charles R. Hamilton, currently serving as commanding general, United States Army Materiel Command, Redstone Arsenal, Alabama.

Brig. Gen. Gregory S. Johnson, currently serving as the adjutant general of the United States Army, United States Army Human Resources Command/Commanding General, United States Army Physical Disability Agency/Executive Director, Military Postal Service Agency, Fort Knox, Kentucky.

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

Gen. Edward M. Daly completed more than 35 years of service and concluded his distinguished career as commanding general, United States Army Materiel Command, Redstone Arsenal, Alabama.

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“Nothing we have accomplished with Ukraine would be possible without the more than 32,000 Soldiers, civilians and contractors that make up the acquisition workforce.”

—**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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