

SUMMER 2023

# ARMY SUSTAINMENT

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HIP-POCKET GUIDE

TRAINING AND  
EDUCATION  
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SUSTAINMENT

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Page 6

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# RECRUITING, TRAINING, AND RETAINING **SUSTAINMENT** **SOLDIERS AND LEADERS**

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General, United States Army  
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Official:

**MARK F. AVERILL**  
Administrative Assistant  
to the Secretary of the Army  
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- Spring 24: TOPIC COMING SOON | Due: Jan. 15, 2024
- Summer 24: TOPIC COMING SOON | Due: April 15, 2024
- Fall 24: TOPIC COMING SOON | Due: July 15, 2024



**ASPB IS GOING DIGITAL**

Starting with the next issue of *Army Sustainment Professional Bulletin*, the publication will transition to a digital product. While it is bittersweet to say farewell to the printed issue after 54 years of publishing, all the same great content will be available throughout the ASPB digital footprint.

A digital-only release allows the editorial team to ensure consistent releases, as changes in the print industry have impacted the cost and timeliness of publishing.

If you have any questions, concerns, or suggestions, contact the editorial team at [armysustainment@army.mil](mailto:armysustainment@army.mil). We remain the Army's official professional bulletin on sustainment and will continue to publish timely, authoritative information on Army and DOD sustainment for the benefit of all Army personnel.

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# SUSTAINMENT talent management starts with **you**



■ By Gen. Charles R. Hamilton

The Army is undergoing its greatest transition in more than 40 years as it looks to modernize its doctrine, equipment, force structure, and skill sets to prepare for campaigning in a future

contested environment. Key to the Army's transformation is people. As Chief of Staff of the Army Gen. James McConville said, "We are in a war for talent, and when I think about the Army, it is people — every Soldier, every family member, every Department of the Army Civilian, and every Soldier for life matters."

The Army sustainment enterprise wants and needs the best of the best to work in its ranks. To do this, the Army must continue to invest in 21st-century talent management strategies to modernize training, processes, and skill sets to recruit, train, and retain the next generation of Army sustainers as it continues to grow and transform the current workforce.

**Recruit.** The Army offers more than 200 ways to serve as a Soldier

or Army Civilian, including in various scientific, technical, and professional fields across the logistics, sustainment, and installation enterprise, all necessary for the Army to accomplish its mission. There are unlimited possibilities to discover passions, pursue purpose, and build lifelong careers. Everyone is responsible for carrying this message to families, friends, and local communities as the Army seeks to win the war for talent. The Army is also working on expanding partnerships with academia, implementing industry best practices, and leveraging hiring flexibilities to strategically target, engage, recruit, and onboard talent quickly.

**Train.** As the Army moves toward a focus on data-centricity and fields new technologies, it must invest in

the training and education of the current workforce, which in turn will be tomorrow's sustainment leaders. It needs to bring the same innovation that drives Army modernization to professional development programs, formal schoolhouse education, and on-the-job training to capitalize on the unique knowledge and skill set each member of the Army team possesses in support of next-generation capabilities. Transforming and modernizing training strategies, processes, and opportunities enable the Army to meet the needs of a multidomain operations-capable and ready future force. Increasing the availability of technical skill sets, deploying existing talent more precisely, training Army manpower more robustly, and hiring the needed expertise to deliver the right talent to the right location will continue to strengthen the Army's ability to provide logistics and sustainment in support of the joint force.

**Retain.** To retain a high-quality, high-performing, and diverse workforce, leaders must continually invest in improving the quality of life for Soldiers, civilians, and families. Prioritizing improvements in housing, childcare, spouse employment, and permanent change of station moves directly affects readiness and retention efforts and is non-negotiable. But leaders can also implement smaller, simple changes to make their organizations and headquarters places of choice for the best talent. In one instance, Wi-Fi was the deciding factor for several great employees between

two organizations right next door to each other. Take time to talk with your people. Ask them what would improve their work environment, and then act. The Army retains talent by investing in people and establishing positive work environments.

With transformation comes the opportunity for growth. Leaders must ensure the Army is positioned to build the bench with the right talent, in the right position, and in the right place at the right time to meet current, surge, and future Army requirements. To do this, it needs to implement data-driven talent management processes that look holistically at a person's skills, education, experiences, and attributes to match individuals with positions where they can best contribute and grow. Ultimately, recruiting a talented workforce, investing in employee growth, and providing a safe, healthy, and secure workplace will allow the Army to cultivate and retain a trained and ready 21st-century workforce.

*Gen. Charles R. Hamilton currently serves as the commanding general of Army Materiel Command. In February 1988, he graduated from Officer Candidate School as a Distinguished Military Graduate and was commissioned as a second lieutenant in the Quartermaster Corps. He earned a Bachelor of Science in business administration from Virginia State University, a master's degree in public administration from Central Michigan University, and a master's degree in military studies from Marine Corps University. He also graduated from a Senior Service College Fellowship — Secretary of Defense Corporate Fellows Program.*

**Transforming and modernizing training strategies, processes, and opportunities enable the Army to meet the needs of a multidomain operations-capable and ready future force.**

# ACTIVE, SUSTAINED Talent Management DEVELOPS PEOPLE and Delivers the Army of 2030 & BEYOND



■ By Maj. Gen. Heidi J. Hoyle

Past editions of *Army Sustainment* have detailed initiatives that advance talent management capabilities into the 21st century, and the Summer edition doubles down to maintain the momentum built by our partners across the Army's personnel enterprise. Efforts undertaken by the Deputy Chief of Staff, G-1, Human Resources Command, and the Army Recruiting and Retention Task Force (ARTF),

among others, are operationalizing a people first mentality by helping move away from an old school industrial understanding of personnel management. In such a system, people often become equated to billet-filling cogs whose preferences and unique attributes are secondary at best.

Those of you who have served for 15 or 20 years may recall an Army reliant upon an outdated personnel management system when you first matriculated to the force. Billets and positions were managed to ensure operational capabilities, but the people executing those jobs as part of their careers were nearly an afterthought. Many Soldiers and civilians struggled to feel in control of their careers as vertical and horizontal mobility was perceptibly reduced to a transaction: cogs replacing cogs to keep the machine running. This is hopefully an unfamiliar sentiment to some younger readers, given the rightful reshuffling of priorities. This legacy approach to personnel management cuts across swaths of organizations in government and industry during that time. Thankfully, a paradigm shift has

occurred in the 21st century due to the vision and leadership of the Chief of Staff of the Army (CSA). Large organizations like the Army don't aim to manage just the person. Instead, they aim to manage and develop a person's talents and then align them with the needs of the force. When managed properly, the relationship between the individual and the organization is sustainably and mutually beneficial. By all accounts, the Army is on the right track toward that end-state thanks to strong retention numbers over the last decade, which you can learn more about in this edition's feature interview with the ARTF's Director, Maj. Gen. Deb Kotulich. Since last fall, the ARTF has tackled the most pressing human capital challenges head-on, building on the massive progress made in supporting people by the Army Talent Management Task Force since its establishment in 2016.

The sustainment enterprise experienced a data epiphany a few years ago. There needed to be an advancement in how the Army collected, stored, analyzed, and communicated massive streams of

data across echelons. Data needed to become a readiness asset. The people enterprise has followed a parallel path, and the last few years have offered great promise for what the new talent management systems will deliver for Soldiers and their families. For them, data must help untangle the complex supply and demand dynamics that define large-scale, world-class human resource management. The Army aims to see its people holistically, including their varying preferences based on family life and the unique knowledge, skills, behaviors, and preferences (KSB-P) they bring to the force. The Army's personnel enterprise has taken the CSA's guidance and is exhaustively characterizing, understanding, and leveraging the reach and diversity of its talent pool through modernized systems and supporting processes. Putting people first becomes more than just a mantra when you operate with a clear perspective of their collective talents that drive mission readiness. "It's people first that equals readiness," said Sgt. Maj. of the Army Michael Grinston about our priorities.

This last year has allowed the Army to become more familiar with these updated abilities from which it manages careers and continually develops and retains talent. Moving forward, this will be a two-way street as the Army recognizes roles and acts upon responsibilities throughout the process. Whether you've just enlisted or commissioned or are approaching well-earned retirement, everyone has a critical role in both career and talent management, including recruiting and retention, to help deliver the Army of 2030. This means actively participating

within the process and system in place while feeling empowered to be your best professional advocate. Share your experiences and talents with others for their benefit and seek the hard jobs that will push you outside your comfort zone. To grow professionally, you must take some leaps of faith and trust that you'll learn and adapt to your new environment's demands. Actively managing your career helps you create your luck. Your talents and preferences will align with the Army's needs at the right place and time.

The Army has an exceedingly deep bench of extraordinary talent stored as names and KSB-P in its personnel systems. The Army has implemented a 21st-century, data-enabled approach to talent management and can see not only what an individual can contribute to their unit but also what development individuals need to maximize their potential. When leaders pick the right people for the Army, they consistently select the right people for their specific unit. The Army is now more effectively postured than ever to ensure it has the right people in the right place at the right time, and from that alignment, it will achieve sustained Total Army readiness.

*Maj. Gen. Heidi J. Hoyle currently serves as the Headquarters, Department of the Army Acting Deputy Chief of Staff, G-4. She has a Bachelor of Science in engineering management from the U.S. Military Academy, a Master of Science in systems engineering from the University of Virginia, and a Master of Science in national resource strategy from the National Defense University. She is a graduate of the Chemical Officer Basic Course, Combined Logistics Officer Advanced Course, United States Army Command and General Staff College, and the Eisenhower School of National Security and Resource Strategy.*

**Putting people first becomes more than just a mantra when you operate with a clear perspective of their collective talents that drive mission readiness.**

# Historical Sustainment Leaders HONORED with Gregg-Adams Redesignation

*Editor's Note: To honor the legacy of the sustainers selected to represent the Home of Sustainment, Maj. Gen. Mark Simerly has provided his comments offered during the redesignation ceremony.*



■ By Maj. Gen. Mark T. Simerly

On April 27, leaders from across the Army converged on Fort Lee, Virginia, for its formal redesignation as Fort Gregg-Adams. The redesignation honors two

exemplary Army leaders, Lt. Gen. Arthur Gregg and Lt. Col. Charity Adams, both outstanding leaders and pillars of our sustainment community. As the Commanding General of the U.S. Army Combined Arms Support Command and Senior Mission Commander of Fort Gregg-Adams, I offered the following remarks:

The service and sacrifice of Lt. Gen. Gregg and Lt. Col. Adams reflect the courage and the character of the millions of men and women who have worn this uniform and defended this nation. This historic day belongs to American Soldiers: past, present, and future.

I look forward to telling you about the two Soldiers we have gathered here to honor. Before I do, however, I would like to say a few words about the installation that now bears their name.

The area surrounding this installation has played a critical role in our Army's history. American Soldiers fought the British near here in 1781. Eighty-three years later, U.S. Army Soldiers waged the Civil War's decisive battle around Petersburg.

In 1917, the Army established Camp Lee to train Soldiers for combat in World War I and reactivated the base a quarter of a century later to prepare our Soldiers for World War II.

On this day 73 years ago, the Army redesignated Camp Lee as Fort Lee in recognition of its enduring importance to the Army and the nation.

Since then, this installation has become the home of Army sustainment. Today, we proudly

say, "Support Starts Here." On this installation, we train and educate a third of the Army every year, and we develop the concepts, doctrine, and organizations that sustain our Soldiers and defend our nation.

We excel at our mission due to the outstanding men and women who serve here, and because of the strong tradition of support we receive from our neighboring communities: the cities of Hopewell, Petersburg, Colonial Heights, and Prince George, Chesterfield, and Dinwiddie Counties. As Fort Gregg-Adams, we will continue to accomplish our mission.

And now, let me tell you about Lt. Gen. Arthur Gregg and Lt. Col. Charity Adams.

## Lt. Gen. Arthur Gregg

Arthur Gregg grew up on a South Carolina farm. At the age of 13, his father sent him to Newport News, Virginia.

In 1946, he enlisted in the United States Army. Assigned to a truck company in Germany, Pvt. Gregg quickly earned a promotion and became the unit supply sergeant.

In 1950, he completed officer candidate school, received a commission in the Quartermaster Corps, and attended the officers' basic course at Fort Lee.

Upon graduation, 2nd Lt. Gregg remained here as an instructor. During this time, he also met, courted, and married the former

Charlene McDaniel of Roanoke, Virginia.

The Gregg family served assignments at various installations at home and abroad. In 1966, he assumed command of the 96th Supply and Services Battalion at Fort Riley as it was preparing for war.

In Vietnam, Gregg's battalion helped expand Cam Ranh Bay into one of the Army's largest supply depots and a critical part of the theater logistics network. At the same time, Gregg and his team reorganized a broken tactical supply system and dramatically improved its speed and responsiveness.

In 1972, the Army promoted him to brigadier general, making him the first Black quartermaster officer to achieve that rank.

As a general officer, Gregg distinguished himself as one of the Army's finest senior logisticians. In 1977, President (Jimmy) Carter assigned Gregg as Director of Logistics for the Joint Staff.

He also approved his nomination for appointment to lieutenant general, making Arthur Gregg the first Black Army officer to achieve 3-star rank.

In 1979, Lt. Gen. Gregg became the Army's first Black officer to serve as its Deputy Chief of Staff for Logistics.

On July 24, 1981, at a ceremony held a few hundred yards from here,

**By exceeding all expectations, by breaking through visible and invisible barriers, and by doing so with courage and dignity, they offer their fellow Americans hope for a better tomorrow.**

Lt. Gen. Gregg retired after more than 35 years of dedicated service to the Army and the nation. In retirement, he has continued to support the Quartermaster Foundation and the Army Logistics Branch.

In 2016, the Army created the Lt. Gen. Arthur J. Gregg Sustainment Leadership Award to recognize outstanding sustainment leaders. Lt. Gen. Gregg was, appropriately, the first recipient.

### Lt. Col. Charity Adams

I will now tell you about another legendary Army sustainer. Like Arthur Gregg, Lt. Col. Charity Adams grew up in the segregated South and endured the daily oppression of Jim Crow laws.

She proved an exceptional student, graduating at the age of 15 as class valedictorian at Booker T. Washington High School in Columbia, South Carolina, and earning a scholarship to Wilberforce University. After college, she returned to Columbia to teach high school science and math.

In July of 1942, she and 439 other women arrived at Fort Des Moines, Iowa, to attend the Women's Army Auxiliary Corps' very first officer candidate school. While much of the actual training was integrated, Adams and her Black classmates were segregated into a separate platoon. In August, graduates received their commissions in alphabetic order, making Charity Adams the first Black female officer commissioned in the Army.

As a newly commissioned officer, Adams commanded Company Eight, which received, equipped, fed, and housed hundreds of Black women training to become bakers, cooks, clerks, and truck drivers. In December of 1942, Adams and three other Black women were promoted early to the rank of first officer, equivalent to an Army captain.

In May of 1943, the Army promoted Adams to major in the newly redesignated Women's Army Corps, or WACs. In December of 1944, she was selected to lead the first, and as it turned out, the only multiracial battalion of African American and Hispanic women to serve overseas.

When it reached Birmingham, England, Adams' unit of nearly 900 women was organized as the 6888th Central Postal Directory Battalion, with orders to reduce the European theater's backlog of three million letters and packages. Operating out of dark, rat-infested warehouses, including six airplane hangars stuffed with Christmas packages, Adams' battalion worked around the clock to redirect mail to waiting Soldiers. The Army expected the job to take six months. The 6888th completed its mission in three.

In April of 1945, the 6888th relocated to Rouen, France, where Adams' Soldiers continued to provide postal support. When the Red Cross built a separate recreational facility for Black Soldiers, Adams asked her Soldiers to boycott the facility, and they

complied. When the Army formed a women's all-star basketball team, it invited several members of the 6888th to play but rescinded the invitation upon learning they were Black.

Prior to her departure from the Army in March of 1946, Adams was promoted to lieutenant colonel, making her the highest-ranking Black woman in the United States military at the time.

After her military service, Adams earned her graduate degree and married a young medical student, Stanley Earley Jr. They relocated to Dayton, Ohio, where Charity Adams-Earley became a prominent civil rights activist. She died in 2002, survived by her two children, Stanley Earley III and Judith Earley.

In 2018, the Army established a memorial at Fort Leavenworth, Kansas, to honor Adams and the 6888th. In 2019, the Army awarded the battalion with the Unit Citation Medal, and in 2022, Congress voted to recognize the battalion with the Congressional Gold Medal.

### Courage, Dignity, and Hope

Today, we recognize Arthur Gregg and Charity Adams for their courage, their dignity, and their hope. Despite growing up in a segregated nation, these two pioneers volunteered to serve that nation in uniform.

Their service, both in war and in peace, demonstrates that courage is not confined or defined by race or gender.

As a young officer, Charity Adams repeatedly took a stand against the notion of separate but equal facilities for Black and white Soldiers, and she literally bet her bars when a senior officer patronized her in front of her troops. Offered the chance to lead the first Black women's unit to deploy into harm's way, she leaped at the opportunity. During her brief but extraordinary military career, she repeatedly exceeded expectations and, to borrow her own humble words, "made it as a WAC officer."

As a young lieutenant, Arthur Gregg worked, trained, and taught in integrated units, but he was not welcome to dine at the Fort Lee Officers' Club or swim at the Fort Lee pool while he and his wife lived in segregated quarters on post.

Despite these slights, he chose Army life as his career, commanding troops in Vietnam, serving in key logistical positions around the world, and rising to become the first Black Army officer promoted to lieutenant general.

In addition to their courage, it's worth noting the dignity with which these two outstanding leaders met and overcame the various challenges in their lives.

I mentioned some examples of the racism and sexism they confronted. I also should acknowledge the challenges inherent in every leadership position, especially those associated with leading men and women in a combat zone.

Arthur Gregg and Charity Adams were exceptional leaders, in no small part because they led with dignity. They looked the part, they maintained their composure, and they led by example. In short, these two epitomize the professional qualities we seek in every leader who wears the uniform of the United States Army.

Finally, let me just say a few words about hope because hope is what I see when I consider the achievements of these two great Americans.

By exceeding all expectations, by breaking through visible and invisible barriers, and by doing so with courage and dignity, they offer their fellow Americans hope for a better tomorrow. The Army provided them with a way to serve their nation and build better lives. They seized the opportunity to be all they could be.

### Conclusion

It's been 81 years since Charity Adams was commissioned as the first Black woman in the Women's Auxiliary Army Corps, and 76 years since Arthur Gregg enlisted as an Army private. We have come a long way since then, and today's redesignation is yet another example of our nation's and our Army's progress.

The next Charity Adams and the next Arthur Gregg are out there right now, leading Soldiers with courage and dignity, setting the example for all of us, and inspiring

hope in the next generation that is the future of our Army.

That future begins right here at Fort Gregg-Adams, Virginia, where our motto remains: Support Starts Here!

*Maj. Gen. Mark T. Simerly serves as the commanding general of the Combined Arms Support Command at Fort Gregg-Adams, Virginia. He previously served as the commander of the 19th Expeditionary Support Command. He was commissioned as a lieutenant of Air Defense Artillery and awarded a Bachelor of Arts degree as a Distinguished Military Graduate from the University of Richmond. He holds a Master of Science in national resource strategy from the National Defense University and a Master of Military Arts and Sciences degree from the Army Command and General Staff College.*



# Building Strong Leaders for a Resilient All-Volunteer Force: Embracing Tomorrow's Soldiers Today

An Interview with Maj. Gen. Deborah L. Kotulich  
■ *By Mike Crozier*

From a nondescript office building mere blocks away from the Pentagon, Maj. Gen. Deborah L. Kotulich and her team are hard at work solving one of the most pressing challenges facing today's Army. Charged with leading the Army Recruiting and Retention Task Force, established in 2022 to address the challenges facing the service's ability to meet its end strength goal, Kotulich is leaving no stone unturned in her ongoing assessment of the broader accessions enterprise. A sustainer by trade who formerly commanded the 143rd Expeditionary Sustainment Command, Kotulich most recently served as the chief of staff for the Department of the Army's Support to the Naming Commission and as the Countermeasures Acceleration Group's Director of Supply Production and Distribution for vaccine and therapeutics in response to the COVID-19 pandemic. *Army Sustainment* sat down with the Recruiting and Retention Task Force's director to discuss the past, present, and future of Army recruiting as the all-volunteer force celebrates its 50th year in 2023.

***The Army's Deputy Chief of Staff, G-1, Lt. Gen. Douglas Stitt, has asserted that the Army Recruiting and Retention Task Force's charter is to "look at our recruiting and retention enterprise and tear it down to the studs" in all things policy and procedure. In your first 90 days as the Recruiting and Retention Task Force's director, what existing strengths or weaknesses did you and your team identify and prioritize? What surprised you?***

After the Secretary of the Army determined that the service needed an organization uniquely focused on the recruiting and retention problem set, I took the helm as the Recruiting and Retention Task Force's director in October of 2022. The recruiting enterprise had been built in the Industrial Age for the Industrial Age — agility wasn't necessarily inherent in its existing structure. When I came on board, I was immediately impressed by how the Army focused its modernization efforts and resources into this distinct space. Off the bat, we ran several design thinking workshops to bring in academic, industry, and other government agency perspectives to help us think big

about 1) how we advertise and market the Army and 2) the end-to-end recruiting process. What we got from all that was a rather exhaustive list of the policies, incentives, and processes needing revamping or transformation to move the entire accessions enterprise forward. What surprised me most was the notion that nothing was new to our recruiters, especially those sergeants major and master sergeants with 20 or 30 years of experience. They've indeed seen it all, so we found it imperative from day one to leverage that expertise for the Army's benefit and create a playbook of what works, what doesn't, and what will work in the future.

***In 2005, the Army missed its recruiting goal by the widest margin in roughly 20 years, yet it rebounded massively just one year later to reach its accessions goal. The Army, and the other services, seem to find themselves in a similar position today. How is the Army Recruiting and Retention Task Force working alongside its personnel counterparts to repeat this success?***

The current environment is our primary focus, but we're certainly operating from a place of historical awareness. There are some circumstantial similarities between 2005-2006 and the present day, but they're not exactly the same, and certain factors that impact today's recruiting landscape are outside of our control. That's just the reality of the situation. We've studied Generation Z and know what they want: passion and purpose. We also know that there's a perception of joining the Army that denotes time away from family and friends while putting your life on hold. Basically, military service is not viewed as a springboard. While I saw it as such when I began my Army journey in 1985, we must understand the new population who will make up the current Army and that of 2030 and beyond. In the broadest sense, the country is in a much different place in 2023, and Generation Z doesn't have a deep understanding of the Army and who we are as an organization. We have assessed this as a knowledge and relatability gap that we're embracing and are laser-focused on closing. If you don't know an organization, you can neither relate to it nor see yourself becoming a part of it in any capacity. Beyond understanding this younger generation, we must also invest in them. Initiatives like

the Future Soldier Prep Course allow us to invest in America's young adults who want to serve in the Army but need extra help. The Secretary and Chief of Staff hold the line that we will not lower our standards and sacrifice quality for quantity. Programs like that are certainly new, but the approach to solving these challenges is not. This is where having that historical perspective certainly helps us.

***Retention figures do not seem to strictly mirror recruiting, as the Army has recently boasted a strong retention rate. Why is that the case? Can you offer more targeted insight into how the logistics branch retains talent?***

The two are related but not inextricably linked. We are pleased that our retention rates are higher than in the last ten years. The Sergeant Major of the Army makes a great point when he asserts that Soldiers have a good experience when they're in the Army, so they decide to stay. That's a huge positive we need to understand and figure out how to build upon. This reflects the level of effort from leaders at echelon to meet Soldiers where they are as the Army has evolved — and continues to evolve — over time. I believe much of this derives from the Army's emphasis on the family. Years ago, the adage held that if you wanted a family, the Army would issue you one. Now, though, that's completely flipped on its head, as we believe that the strength of our Army is our Soldiers, and the strength of our Soldiers is their families. The bottom line is this: if we want to retain Soldiers, we must recognize that quality of life for them and their families matter. On the logistics branch side of the equation, we're seeing high and consistent job satisfaction because Soldiers in varying jobs are doing the thing they were trained to do. If you're a mechanic, you're working on systems; if you're a cook, you're feeding Soldiers. Regardless of the environment or scenario, they do their jobs and enjoy their work.

***The majority of the Army's logisticians are part of the National Guard and Reserve. Additionally, the Reserve's recently developed campaign slogan — "It's Your Time" — lends credence to the notion that there are nuanced differences between the active and reserve components the***

***general public may not be tracking. With this in mind, how do recruiting and retention efforts differ across components?***

Organizationally speaking, U.S. Army Recruiting Command (USAREC) is focused on recruiting for the active and reserve components. There are roughly 9,000 recruiters at USAREC, and approximately 10% are active reserve NCOs from Compo 3. The National Guard, on the other hand, is structured very differently, as they recruit for themselves with 54 distinct organizations to cover all states and territories. The Army relaunched "Be All You Can Be" as a reintroduction to the American people to close that knowledge and relatability gap that I mentioned earlier, and each component is doing what it can to best describe the possibilities of an Army career. There are differences across the components, which should undoubtedly be communicated and made clear to folks curious about how they can get the most out of their time serving their country. For instance, if you're in the Reserve, then chances are you can drill within about 90 minutes of home. Notions of putting your life on hold then become a bit hyperbolic. So we must ensure people clearly understand what service does and does not denote. The Army has more career fields than any other employer, so there's almost nothing you can't do or that we couldn't find for you across all the components. Serving in the Army encompasses so much more than what you might see just in movies, of course, and it's on us to make sure Generation Z has a clear picture of that reality. From medical specialties to domestic disaster recovery support, I believe everyone can find their purpose in the Army regardless of their interests.

***What have you learned from studying Generation Z so closely?***

We know Gen Z wants purpose and passion; they want connection and to be part of a team that will make a difference. I think our analyses also uncovered the reality that we need to reach out to these folks not just in high schools but college campuses and beyond. For example, we know more young men and women are choosing to go to college, but many aren't completing their studies for a host of reasons and would benefit from joining our

Army team. I think this helped us reframe and reanalyze existing policies to ensure those who want to serve can access the Army. Take, for example, the Army Loan Repayment Program, which initially was only open to a few specialties. At the beginning of fiscal year 2023, we opened it to over 30 specialties, making the program more appealing.

*The Army's most recent and visible programmatic developments, such as the Battalion Command Assessment Program (BCAP) and Career Intermission Program (CIP), aim to best select, train, and retain our future leaders while offering Soldiers flexibility to best manage their careers. How do you rate their collective success as they contribute to our end strength?*

Those selection processes have helped us re-engineer how we identify our future leaders, and they've successfully made sure we're evaluating the whole person and not just what we see on paper. We're leveraging that success in other areas, too, including recruiting. With this in mind, we're looking at different ways to select talent from the NCO corps to be recruiters and drill sergeants using the BCAP model to identify the knowledge, skills, and behaviors necessary for those positions. The CIP program, while still fairly new since its inception several years ago, is an effort to meet Soldiers where they are in their lives and, depending on what's going on, don't feel like they need to leave the Army to take care of some family matters or for some other form of advancement, be it for academic or spiritual reasons. CIP creates flexibility where there previously was only rigidity, so someone can take some time away from the Army and come back, able to pick up where they left off.

*The Army has designated 15 major cities as priority recruiting markets through the end of this year. How can Soldiers serving near those metropolitan areas or maintaining local ties contribute to the greater recruiting effort?*

Our greatest assets and ambassadors are our Soldiers, and they have some great stories about overcoming adversity and achieving things they never thought they

could achieve. These are extremely compelling, and we want people to share them. To enable this, we established hometown recruiting leave and the Soldier Referral Program, so Soldiers can engage with potential recruits at home or elsewhere and use a special leave code for that time. Not only will they not lose leave, but they can also gain promotion points and earn a recruiting ribbon. At a foundational level, the Army Enterprise Marketing Office has done a fantastic job updating GoArmy.com, making it easier than ever to point an interested friend or family member to learn more about career opportunities and life in the Army. If they can't find what they're looking for there, they can call the GoArmy.com help center and immediately speak to one of our teammates who either served or retired about their service, which I think is extremely powerful.

*The Army celebrates 50 years as an all-volunteer force this summer. What are you most excited about for the next 50 years?*

I'm excited to see the Army continue to develop strong leaders. That's one thing that we are uniquely qualified to do. We want to recruit, train, and retain people who can meet complex challenges head-on, often with imperfect information, and apply decision-making skills to overcome, achieve, and win any mission as part of a broader team. For 50 years, the all-volunteer force has been a winning model, and we intend to keep it that way while advancing the Army as the greatest fighting force in the world. Everyone can play a huge role in describing the benefit of an all-volunteer force — Soldiers, families, civilians, and Soldiers for life.

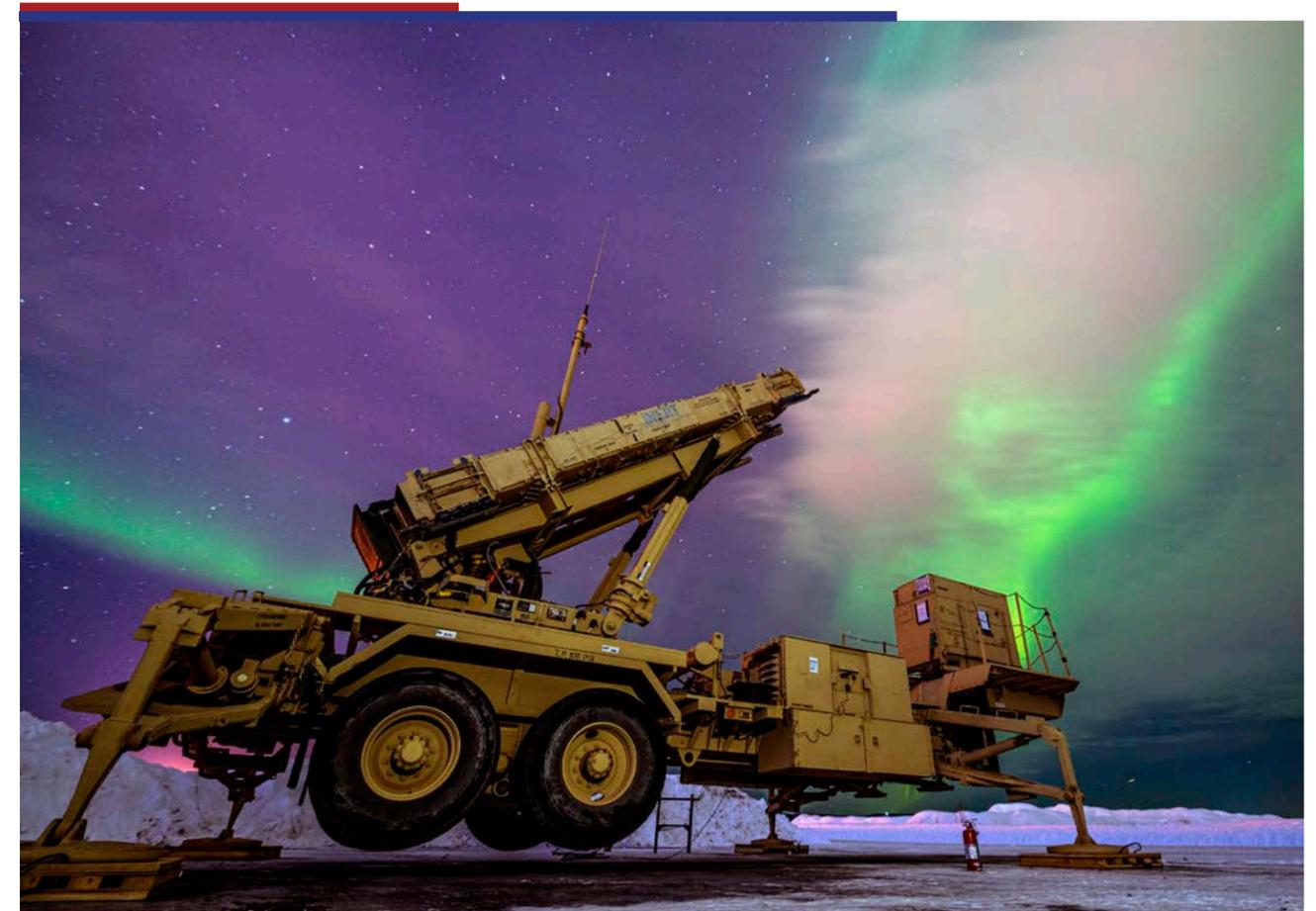
*Mike Crozier is a strategic analyst in the Army G-4's Logistic Initiatives Group. He holds bachelor's and master's degrees from Georgetown University, Washington, D.C.*

*Featured Photo  
Maj. Gen. Deborah L. Kotulich, Army Recruiting and Retention Task Force Director, administers the oath of office to commissioning officers from Fordham University on May 19, 2023, at Fordham University's Rose Hill University Church, Bronx, New York. (Photo by Lt. Col. Kamil Sztalkoper)*

# Setting the Theater

The Challenge for America's Theater Army

■ By Maj. Nathan Davis



The Army is experiencing a substantial change in its operating environment. The Army of the past 20 years has mainly operated unmolested with significant and consistent forward-deployed formations entrenched in theaters around the globe. It has been nested with allies and partners, able to move freely and essentially at will to respond quickly to contingencies or crises while predominantly focusing on counter-insurgency operations. The Army of tomorrow will have fewer forces deployed. It will be a challenge to maintain the ability to deploy rapidly at, or before, time of need in support of strategic competition, integrated deterrence, and large-scale combat operations (LSCO) as directed by the National Defense Strategy. Building and maintaining the flexibility and responsiveness essential to supporting this strategic shift and modernization requires re-energizing and retraining largely dormant organizational skill sets like setting the theater.

Setting the theater is a joint function tasked to the geographic combatant commands (GCCs) but primarily executed by the Army service component commands (ASCCs) or theater armies as one of their seven functions assigned in Army Techniques Publication (ATP) 3-93, Theater Army Operations, heavily supported by their assigned theater sustainment command (TSC) and Army Materiel Command (AMC). Setting the theater is key to maintaining dominance and overmatch across crisis, competition, and conflict. However, joint

doctrine does not define the term or holistically describe what it entails, and Army doctrine provides at least six vague and disparate explanations that further confuse those ultimately responsible for executing this arduous responsibility. In general terms, the function of setting the theater is defined as a continuous shaping activity composed of the broad range of activities necessary to set the conditions within an area of responsibility (AOR) for the Army and joint forces to execute strategic plans or operations. The broad range of activities provides access to the ports, terminals, airfields, bases, infrastructure, and capabilities necessary to establish favorable conditions for Army and joint forces to rapidly execute GCC priorities across the full range of multidomain operations. The actions taken to set the theater determine the strategic options available to achieve our national objectives. But what tasks are required to provide that access, are they universal across GCCs, and who should be executing them specifically? Joint doctrine, as the linchpin between national-level guidance to tactical-level execution, needs to be revised to answer these questions.

In the Army, AMC leads setting the theater efforts at the strategic level and delineates these efforts into three bins: assuring the Army's strategic power projection capability, forward positioning Army pre-positioned stock (APS), and building shared capabilities and capacity with allies and partners through foreign military sales. Power projection, also referred to as force projection, is defined

in ATP 3-35, Army Deployment and Redeployment, as "the ability to project the military instrument of national power from the United States or another theater in response to requirements for military operations" and encompasses a range of processes including mobilization, deployment, employment, sustainment, and redeployment. Per Joint Publication (JP) 4-05, Joint Mobilization Planning, military departments provide trained and ready forces, prepare mobilization plans, and plan to sustain those forces while committed to a GCC's AOR. Deploying forces conduct mobilization and movement to forward theaters in conjunction with and supported by military departments and functional combatant commands like Transportation Command. Then, per JP 3-35, Deployment and Redeployment Operations, supported GCCs, through their service component commands, execute joint reception, staging, onward movement, and integration activities in preparation for employment. Mobilization, deployment, and reception are well defined in joint and Army doctrine and have been well exercised and applied practically across the mature theaters we've been operating in for the last 20 years. However, is this framework clear, rehearsed, and executable across all GCC AORs?

One theater that stands out as significantly different is Northern Command (NORTHCOM), the GCC responsible for the North American theater encompassing Canada, Mexico, the Bahamas, the



Soldiers and Marines load into CH-47F Chinook helicopters from B Company, 1st Battalion, 52nd Aviation Regiment, Feb. 28, 2020, at Fort Wainwright, Alaska. (Photo by John Pennell)

Virgin Islands, Puerto Rico, and the U.S. homeland, including the 48 contiguous states and Alaska. NORTHCOM and its subordinate commands are responsible for planning, organizing, and executing homeland defense and civil support missions. While the NORTHCOM AOR is home to the preponderance of U.S. military forces, defense infrastructure, and defense industry assets, unlike a forward GCC theater like European Command (EUCOM), Indo-Pacific Command (INDOPACOM), or Central Command (CENTCOM), the commander of NORTHCOM does not have operational control (OPCON) of forces in the AOR, does not own the installations, and cannot prioritize resource allocation in capability and infrastructure development.

### What is the challenge?

There are three main challenges

with setting the theater in the homeland. First is access in terms of legal authority to conduct coordination and the command-and-control structure within the Army to enable deliberate planning. Second is force structure since Army North (ARNORTH) needs more organic assigned subordinate forces capable of completing necessary tasks. Third is resourcing, including acquiring the necessary equipment, developing infrastructure, and building resiliency.

Even within the Department of the Army, ARNORTH, ASCC to NORTHCOM, and its theater Army does not have OPCON of Army forces in the homeland and does not retain authority over installations or facilities. ARNORTH is sourced with tailorable forces to meet emerging requirements as the needs arise. However, a lack of assigned forces stymies their ability

to exercise foresight and facilitate preparatory action to build capacity or develop capabilities. The currently assigned TSC is a predominantly reserve component force and is not operationally available until mobilized, preventing the planning and execution of the GCC's daily operational requirements to set the theater. Moreover, while forces in the contiguous 48 states are largely service retained and managed by the Army's Forces Command, forces in Alaska are not. This further complicates integration and collaboration efforts to build consensus on priorities for resource allocation and capacity and capability development. This leaves responsibility for integration across GCCs and even across elements within the Army service component to adjudication by the joint and Army staffs at the time of need, an arduously slow and politically sensitive process.

Additionally, where EUCOM, INDOPACOM, and CENTCOM have executed LSCO, enabling them to refine their theater requirements, allocate resources, and build capacity and capability while maturing their theater, NORTHCOM has primarily executed defense support of civil authorities (DSCA). Per JP 3-28, Defense Support of Civil Authorities, DSCA is support provided by federal military forces in response to a request for assistance from civil authorities for domestic emergencies and chiefly encompasses localized crisis response operations in a community, state, or region. While DSCA helps build our nation's resiliency and collaboration on crisis-level events, homeland defense requires significantly larger applications of military capabilities and operations. Furthermore, exercises to tease out true requirements for resources and capability development in the homeland have not occurred at the level they have been employed in forward theaters. Moreover, forward GCCs have existing relationships with allies and partners enabled by the Department of State (DOS) and bolstered by bilateral and multilateral agreements further reinforced through decades of military training exercises and cooperation. Unlike overseas, where GCCs rely on DOS to serve as an integrator, in the homeland, NORTHCOM must integrate with Canada, Mexico, and the Bahamas, and with 52 different state and territorial governments, tribal governments, and federal agencies, each with multiple state and local derivatives.

While much of the homeland, particularly the lower 48 contiguous

states, can be said to be mature, developed, and capable of adapting and responding to support contingency requirements at times of need, even with the administrative challenges already discussed, Gen. Glen D. VanHerck, Commander of NORTHCOM, recently pointed out that more than half of his AOR lies in the Arctic. The challenges with setting the theater in the Arctic are significantly more complex as there is a noteworthy lack of infrastructure and clear policies to encourage collaboration and afford access. Historically the military has mitigated capability and capacity constraints by outsourcing to commercial and industrial solutions, but the Arctic does not have a mature and robust commercial or industrial base. Policies need to be implemented to better build consensus among key stakeholders and prioritize development to overcome the tyranny of distance, extreme environmental constraints, and capacity limitations.

### Challenges Compounded by a Contested Environment

The DOD and each subordinate service have conducted significant research to analyze threats and vulnerabilities to the defense industrial base and sustainment operations in a forward theater out to the tactical edge. The Joint Concept for Logistics, published in 2015, considers how an evolving joint logistics enterprise could better support joint operations in a future characterized by the challenge of meeting continuous strategic requirements with constrained military resources

while simultaneously exploring how to adjudicate those resources dynamically and responsively on a global scale. The Joint Concept for Logistics codifies 24 capability requirements and specifies four related to protecting from or responding to attacks on the logistics information network. Still, they focus on supply chain management activities and need to address the requirement for the same level of awareness, protection, and response in transportation or mobility. The Center for Strategic Leadership's Integrated Research Project on Contested Deployment in April 2022 states external support and increased coordination with local, state, and federal authorities will ensure fort-to-port mobility.

These studies are just a couple of the substantial research efforts conducted in recent years to analyze threats and vulnerabilities to elements of the defense industrial base and the conduct of sustainment operations in a forward theater. They pay particular attention to the increased risk of experiencing contested environments in forward operating areas and the traditional global commons between the strategic support area and those forward areas of operation. However, very little analysis has been conducted on the threats and specific vulnerabilities to tertiary nodes and networks linked to critical sustainment dependencies capabilities like shipping and transportation here in the homeland.

The Military Surface Deployment and Distribution Command cur-

rently contract with more than 700 commercial carriers for highway shipping requirements alone. While they have made headway in placing contract obligations requiring those vendors to increase their cybersecurity posture, they may not extend to externalities like shipping scheduling software, third-party vendor applications, or commodities, assets, and capabilities that enable vendor services. The National Military Strategy identifies that a key adversarial objective is delaying the U.S. military's ability to respond through mobilization, deployment, and follow-on sustainment. Historical vulnerability analysis and threat assessments have focused on kinetic threats against critical infrastructure and cyber-related threats and vulnerabilities to defense

networks and the defense industrial base. However, suppose the objective is no longer defeating U.S. action but simply delaying response capabilities long enough to allow adversaries to execute initial objectives or to achieve quick strategic gains. In that case, the vulnerabilities to these additional supply chain components need to be analyzed and mitigated.

### Proposed Solutions

Overseas initiatives include establishing bilateral or multilateral diplomatic agreements that grant U.S. forces access to the ports, terminals, airfields, bases, and capabilities within an AOR. This same whole-of-government approach is needed to address the ever-evolving complexity of planning for the defense of the homeland

in the North American theater. Advantages created by setting the theater include understanding and leveraging unified action partner capacity, maximizing the use of APS, leveraging multinational capacity, and establishing the conditions for operational contract support. While this effort is largely enabled in forward theaters by collaboration between the DOD, DOS, and partners and allies across the globe, here at home, there must be a central integrator not only identified and tasked but empowered and resourced with the appropriate forces, resources, and authorities to enable success. The Department of Homeland Security cannot work independently of the DOD, nor can it succeed when working independently of state and local authorities.



Green Berets assigned to 10th Special Forces Group (Airborne) use a snowmobile to exit the tarmac after loading equipment on a U.S. Air Force C-130 Hercules with the 731st Airlift Squadron for movement north of the Arctic Circle in support of Exercise Arctic Edge 2022 at Fairbanks International Airport, Fairbanks, Alaska, March 2, 2022. (Photo by Staff Sgt. Anthony Bryant)

NORTHCOM, already identified as the lead integrator for DOD support to homeland defense, should be empowered and resourced. The nebulous command and authority arrangements particular to the Arctic should be resolved and streamlined to enable a more agile and flexible response to the growing capabilities of strategic pacing threats. This will reinforce unity of effort and increase capabilities to anticipate and adapt to conventional, unconventional, and hybrid threats across all domains to shape the security environment better.

ARNORTH should be empowered through authorities and command-and-control to have access to serve as the ground force integrator across the entire theater and fully resourced with requisite forces, equipment, and infrastructure designed to perform setting the theater's core competency tasks. The Army is open to current force structure design methodology and should take this opportunity to design new, tailorable formations with essential capabilities maximizing the ability to meet requirements while minimizing excess or waste across headquarters and commands. Fully acknowledging that maintaining OPCON of all forces and capabilities necessary to defend the homeland is untenable, minimum engagement packages already designed and requested should be sourced and assigned in future force management decisions. Lastly, just as setting the theater in forward AORs is substantially augmented and enabled by pre-positioning critical equipment and

supplies, the Army should ensure the right types of pre-positioned stocks dedicated to homeland defense. For example, the Arctic imposes unique challenges to individual survivability. Forces mobilized from the lower 48 states may not have appropriate cold weather gear organically provided, and having a pre-positioned stock will enable rapid issue during reception operations.

Additionally, the Arctic imposes durability and resiliency challenges to energy storage and distribution equipment. Things as simple as vehicle batteries or electrical harnesses will have different durability than in warmer climates. Having a stock of parts or components designed to winterize common equipment will significantly contribute to the speed and efficiency at which the Army can deploy and become operational in this harsh environment.

### Conclusion

The Army Operating Concept, Win in a Complex World, asserts the Army must be able to set the theater, provide strategic agility, and maintain freedom of movement and action during sustained high-tempo operations in austere environments. Planning and conducting operations to defend the homeland requires global integration and a layered approach. Still, it must involve a concerted and collaborative effort across the governments, agencies, departments, and services operating in the homeland. While specific exercises and training events such as annual regional certification exercises test our ability to respond

quickly in times of crisis, we can do more by integrating shaping operations specific to setting the theater requirements into future exercise training objectives. It can no longer be assumed integration and collaboration forced by necessity at the time of need after a crisis or conflict begins will suffice. Collaboration must be nested across federal, state, territorial, and local entities operating in partnership with private industry to refine the threat picture, identify capability gaps, mitigate through coordination in capability development, and build and enhance interoperability. This will ultimately enable NORTHCOM and the joint force to achieve the objectives of the National Military Strategy to enable NORTHCOM and the joint force to deter adversaries and deny and defeat threats across all domains. ARNORTH, as America's theater army, must have the access, force structure, and resources to meet the complexities of our changing global environment.

*Maj. Nathan Davis currently serves as chief of plans in the U.S. Army North G-4, Joint Base San Antonio, Texas. He received his commission as an ordnance officer from Stetson University, Florida, with a bachelor's degree in business management. He is pursuing a Master of Public Administration from the University of North Carolina at Chapel Hill.*

**Featured Photo**  
*The northern lights glow behind a Patriot M903 launcher station assigned to 5th Battalion, 52nd Air Defense Artillery Regiment, during Exercise Arctic Edge 2022 at Eielson Air Force Base, Alaska, March 5, 2022. (Photo by Senior Airman Joseph P. LeVeille)*

# RSOI

## Suite of Tools

Delivering Logistics, Lethality to Europe

By Lt. Col. Oliver Stolley and Capt. Daniel McCall

Europe is the most complex and mature theater of military operations in the world, with more than 44 sovereign nations, each having sophisticated and enforced regulatory oversight for managing the transport of military goods and personnel. Therefore,

Europe presents unique logistics challenges for military planners attempting to deliver combat-credible forces at the right time and place. Over the past 75 years, the world witnessed the Cold War buildup of U.S. force structure and subsequent drawdown, only to find a resurgent and aggressive Russia. The reduction of organically

assigned units to Europe from 1991 to 2005 included the deactivation or redeployment of two corps and two division headquarters plus sustainment enablers.

Russia's invasion of Ukraine definitively altered the operational environment here in Europe. Instead

of predictable rotations of regionally aligned forces (RAF), units received short notice orders after the Russian incursion to deploy in support of Assure and Deter. The 21st Theater Sustainment Command (TSC) responded to this transition by developing the reception, staging, onward movement, and integration (RSOI) suite of tools to help units rapidly deploy into and sustain operations within Europe. The RSOI suite of tools established a community of practice for knowledge management that enhanced the operationalization of deployments by transforming how the 21st TSC processed, maintained, and disseminated information.

### New Operational Environment

The operational environment in Europe changed after Russia's incursion into Ukraine. Before this event, continental U.S.-based units rotated into the European theater according to predictable planning cycles. Global force management prescribed deployment of RAF, and the joint exercise life cycle forecasted incoming units participating in exercises. Planners within the 21st TSC and inbound units understood deployment preparation planning and execution details in advance and had ample time to prepare per standardized procedures.

By contrast, in response to Russia's aggressive posture, on Feb. 2, 2022, the Army began rapidly deploying forces into Europe as part of the Assure and Deter mission set under Enhanced Vigilance Activities. Over the next three weeks, the 82nd Airborne Division deployed

approximately 5,000 Soldiers, and the 18th Airborne Corps established a forward-deployed headquarters in Wiesbaden, Germany. Furthermore, the Russian incursion on Feb. 23, 2022, prompted the Secretary of Defense to order the deployment of a U.S. response force. The advanced party for the 1st Armored Brigade Combat Team (ABCT), 3rd Infantry Division, deployed on Feb. 28, 2022, and the trail party arrived on March 5, 2022. Within 10 days, an unscheduled ABCT was in Europe, in addition to the RAF ABCT. Within four weeks, the European theater had received an influx of approximately 12,000 Soldiers.

The rapid deployment of multiple units to Europe not previously forecasted forced the 21st TSC to reassess how it assists units deploying into theater. These unforecasted, short-notice deployments revealed the inadequacy of current systems and processes to assist multiple units deploying simultaneously. While the maturity of the European theater ensures resources and capabilities abound, it also poses severe constraints due to overlapping legal, environmental, and regulatory requirements. The rapid deployments made existing deployment checklists infeasible and accelerated units' timeframes for learning how to conduct operations in Europe. Maj. Gen. Mark Simerly discusses this phenomenon in the Fall 2022 issue of *Army Sustainment Professional Bulletin* article, "Deploy Tonight: Deployment Process Issues." He writes the threat of large-scale

combat operations (LSCO) and an incumbent need for rapid deployments mean the Army "must rebuild our operational deployment capability." The transition to a more dynamic operational environment necessitated a more responsive and anticipatory approach for receiving units into the European theater of operations.

### RSOI Suite of Tools

The approach adopted by the 21st TSC emanated from reexamining what is essential for units arriving into the theater. Rapid deployments place intense demands upon commanders and their staffs, who must quickly initiate planning. Prompt acquisition of pertinent information is vital. This enables the development of accurate running estimates, which Field Manual (FM) 5-0, Planning and Orders Production, describes as "critical to effective planning." With its enhanced methods for sharing information, the Army 365 initiative offered the 21st TSC an excellent opportunity to improve the speed and efficiency of providing inbound units with the resources and coordination they need to initiate planning. This capability and the 21st TSC's need for a holistic end-to-end product, including an easy reference handbook, resulted in the RSOI suite of tools.

Employing Microsoft (MS) Teams under Army 365 as the host platform, the RSOI suite of tools is a solution for adapting to expanding operational requirements. This Army 365 MS Teams page allows the 21st TSC to easily clone and tailor the information layout for every inbound unit. The

RSOI suite of tools consolidates resources into a single platform easily accessible at echelon to units deploying into theater. In support of this initiative, the 21st TSC distribution management center (DMC) created an RSOI handbook to serve as a comprehensive quick reference guide for deploying into theater. The result is a quickly accessible digital and hard copy guidebook to assist action officers at echelon with coordinating subject matter expert support. Within each unit MS Teams page, units can access the 21st TSC theater concept of sustainment, contact rosters, a proposed Annex F (deployment order), and numerous planning resources.

The 21st TSC gives unit leadership full ownership rights and invites them to manage unit pages as necessary, with the content and task list fully customizable. Unit ownership is a crucial element of the site functionalities that assist in managing pre-deployment tasks. Instead of deciphering an Excel spreadsheet full of requirements, units can assign individuals directly to tasks already built into the MS Planner management tool. Based on the deployment timeframe — 180, 60, or 10 days — the Planner tab in the RSOI suite of tools offers a system whereby units can more efficiently execute and track the completion of pre-deployment tasks. Unit leadership can monitor progress by category, action officer, or suspense date from a board or calendar view. The current limitation is that the MS Planner function is a subjective reporting method and does not receive direct

feed from systems of record with a readiness visualization. The long-term objective is to link sustainment systems of record and create supporting dashboards to illustrate units' readiness and ability to deploy to a theater of war.

### Limited User Test

The RSOI suite of tools has produced excellent results since the 21st TSC initiated its limited user test in April 2022. As of April 2023, the DMC had released the suite of tools to 11 brigades, and the three that recently arrived in theater consisted of an ABCT, an infantry brigade combat team, and a division sustainment brigade. This diversity of unit types generated valuable feedback. Their inputs reinforced the importance of 21st TSC planners integrating the RSOI suite of tools when making initial contact with units. This provides deploying brigades an entry point for gaining the resources and support necessary to begin planning their deployments. One brigade planner underscored its significance by outlining the inclusion of resources into their initial mission analysis and subsequent planning sessions. Some units have asked for resources in the RSOI suite of tools as early as 12 months before deploying. Others requested membership in pages belonging to other units to gain access to the tools, which hastened the 21st TSC creation of pages for those specific units.

The RSOI suite of tools enhances collaboration by providing a space where planners across theater can work with their counterparts from

incoming units. They can share and simultaneously work on products, submit requests for information, and host operational planning teams. This further enhances the operationalization of European deployments by facilitating the collaborative dialogue that FM 5-0 defines as the catalyst that produces new ways of thinking and innovative solutions. Accelerating the flow of useful information and the responsiveness of coordination across the sustainment warfighting function has intensified the operational momentum of deployments to Europe.

### Benefits of the RSOI Suite of Tools

Leaders from the tactical to the strategic level have voiced interest in the benefits of the RSOI suite of tools, as evidenced by platoon and company leadership comprising 50% or more site members. It is important to note these results were only possible because the 21st TSC fundamentally changed how it shares information. For incoming units, it was no longer a matter of being present for a single pre-deployment brief or included in an email distribution. The resources and means of coordination are now available to units and planners at any time. This fundamental change closes the gap in the effective management of the simultaneous arrival of multiple units into Europe. The collaborative space brought together sustainment planners across theater due to the growing recognition of its effectiveness in facilitating coordination and producing shared understanding. The outcome is

planners can support multiple units quickly and align resources to enable their entry into theater.

### Continued Development

The 21st TSC is actively working to improve the RSOI suite of tools. This includes developing instructional videos, implementing quick response codes for unit pages, and applying MS Power BI functions to enhance data processing and management within the RSOI suite of tools. Beyond sustainment, this approach has broader operational potential, and it could become an all-encompassing suite of tools capable of synchronization across the warfighting functions if widely adopted. Such efforts will utilize Army 365 to the fullest. However, these refinements are only evolutionary.

In his article, *Driving Readiness at Echelon*, Gen. Charles Hamilton describes measures the sustainment community must prioritize to maintain the strategic advantage. He highlights the need to “revolutionize our approach to data-enabled sustainment operations.” In support of this endeavor, the ultimate goal of the RSOI suite of tools is to link its collaborative capabilities with systems of record and reporting. For instance, the current MS Planner deployment checklists rely on self-reporting without objectively validating task completion. An improved system would link specific deployment tasks to a database that automatically updates the status, such as monitoring unit deployment list build status, submission of Class V requests, and routing identifier code realignment.

Additionally, plans and operations sections should possess more options to pull information from databases. Consider building a running estimate or common operational picture in a collaborative space with an information chart linked to Army Vantage that auto-updates on PowerPoint. This capability would serve as a powerful data bridge between programs (Global Combat Support System — Army, Total Ammunition Management Information System, Logistics Functional Area Services, etc.) and the collaborative deployment operations process within the RSOI suite of tools. Attempts to improve deployment operationalization must account for the staff whose planning efforts — as witnessed on countless Word, Excel, and PowerPoint products — inform the commander’s decision and bring their intent to fruition. The Army can optimize staff performance and the resulting commander’s visualization by linking systems of record to a collaborative space for deployment planning and coordination. This could produce the kind of data stream leverage that Hamilton describes as able to “reliably and rapidly inform immediate and future decisions.” A data bridge linked to a collaborative enclave would combine to accelerate the observe and orient process so commanders can more quickly make decisions and units can act within a shorter time frame to conduct operations.

### Conclusion

The 21st TSC has made significant progress in developing sustainable solutions to address the challenges of Europe’s emerging and changing

operational environment. The team has established a knowledge management community of practice to facilitate deployment operations at the speed of war. The 21st TSC RSOI suite of tools demonstrates emerging enterprise resource tools and leveraging new systems to deploy military materiel and personnel. Moving forward, the linkage and integration of record and reporting systems within a collaborative space would maximize scarce planning and execution resources in the transition from competition to crisis. This fusion of systems has the potential to revolutionize the flow and processing of information in support of LSCO. The 21st TSC’s efforts are a significant step toward maintaining the strategic advantage and driving readiness at echelon.

*Lt. Col. Oliver Stolley serves as the Distribution Integration and Host Nation Support branch chief for the Distribution Management Center for 21st Theater Sustainment Command at Panzer Kaserne, Germany. He served as the executive officer for 3rd Brigade Support Battalion (BSB), 1st Armored Brigade Combat Team (ABCT), 3rd Infantry Division (ID), and later as the support operations officer for 703rd BSB, 2nd ABCT, 3rd ID. He has a Bachelor of Arts in communication from the University of Cincinnati, Ohio, and holds a Master of Science in business (supply chain management) from the University of Kansas.*

*Capt. Daniel McCall serves as a force rotations planner for the Distribution Integration Branch of the Distribution Management Center for 21st Theater Sustainment Command at Panzer Kaserne, Germany. He previously served as commander of Forger Forward Support Company, 1-7 Field Artillery, 2/1 Infantry Division (ID), and served as assistant division transportation officer for 1st ID. He commissioned in May 2014 as a transportation officer and graduated from the Logistics Captains Career Course in May 2018. He holds Bachelor of Arts degrees in history and political science from the University of Montevallo, Alabama. He has a Master of Arts in history from Auburn University, Alabama.*



# Developing Partnerships

1st TSC Enhances Logistics Inter-operability with Israel

■ By Maj. Mitchell T. Hunt

In January 2021, Israel transferred from U.S. European Command to U.S. Central Command (USCENTCOM). This strategic shift creates a unique opportunity for the 1st Theater Sustainment Command (1st TSC) that supports the USCENTCOM area of responsibility (AOR). Israel provides a professional sustainment force and critical operational access that offers USCENTCOM sustainment options and another willing partner within the region. Israeli seaports and border crossings contribute to a contiguous AOR from the Mediterranean Sea to the Middle East peninsula, connecting Jordan, Iraq, Kuwait, and Saudi Arabia. USCENTCOM exercises provide Israeli and U.S. forces with opportunities to build relationships within the theater. Juniper Falcon is a joint, biannual U.S.-Israel rapid deployment and contingency response exercise designed to enhance interoperability between the U.S. and Israeli militaries. This year, 2023, is USCENTCOM's inaugural execution of the event, and 1st TSC participated as the operational-level sustainment command. The 1st TSC utilized Juniper Falcon 23 (JF23) to cultivate relationships, partner with Israel's primary sustainment unit, Megiddo Brigade (MB), and establish a mutual logistics and sustainment support concept.

The MB is an Israeli Air Force Reserve unit that primarily focuses on air defense sustainment but is also the premier sustainment element of the Israeli Defense Force (IDF), consisting of force protection, transportation, maintenance, and supply units. In contrast to the U.S. military, MB soldiers remain in the same unit and position for decades. Due to the 1st TSC unit rotation, both organizations had to develop relationships and revalidate plans from previous Juniper Falcon exercises. To develop relationships

and common ground with our partners, 1st TSC entered JF23 with a focused plan on combining training and developing a shared understanding with MB. This training covered three key events: combined academics, security cooperation, and a bilateral training convoy.

### Learning through Shared Understanding

The 1st TSC provides a robust and integrated sustainment capability that supports force projection, while MB partners share their sustainment force's capability to support the defense of Israel. These different approaches allowed both organizations to use academics and bilateral training events to develop a shared understanding, leading to combined courses of action.

Combined academics developed relationships between sustainment units as sustainers from the 1st TSC and MB rehearsed tactics, techniques, and procedures to extend operational reach during a tabletop exercise. The 1st TSC demonstrated how their sustainment enterprise focuses on joint, reception, staging, and onward movement per Army Doctrine Publication (ADP) 4-0, Sustainment, providing

power projection options to geographical commanders. Conversely, MB sustainers provided insight into their sustainment options and how 1st TSC can integrate into sustainment planning. As a result, the sustainment partners achieved better relationships and a shared understanding while setting the theater to meet USCENTCOM's mission requirements.

### Utilizing Security Cooperation to Enhance Sustainment Planning

Building relationships with partners through training and cooperation establishes the ability to project power throughout the AOR. Field Manual 3-0, Operations,

## Building relationships with partners through training and cooperation establishes the ability to project power throughout the AOR.



Members of the 369th Sustainment Brigade, 1st Theater Sustainment Command, and 32nd Army Air and Missile Defense Command brief Megiddo Brigade Command team on operations for Patriot Batteries, Feb. 16, 2023, at Hatzor Air Base, Israel. (Photo by Israeli Defense Force)

establishes security cooperation as a theater requirement to build trust and capabilities. The 3rd Security Force Assistance Brigade (3rd SFAB) is USCENTCOM's security cooperation expert and assisted the 1st TSC with this task. The 3rd SFAB trained alongside the 1st TSC, conducting theater security cooperation with the IDF, concentrating on tactical logistics. The 3rd SFAB provided instruction on movement operations and medical logistics, resulting in rehearsed plans for tactical medical support. The 3rd SFAB's growing relationship with the IDF enabled access to medical facility tours and in-person meetings with IDF providers. These events enabled USCENTCOM to build on existing relationships, developing long-term security cooperation objectives and milestones.

### Building Theater Continuity

With Israel firmly emplaced under the USCENTCOM umbrella, 1st TSC has modified support plans to include ground, air, and sea movement options. JF23 sustainment operations culminated with a bilateral training convoy of U.S. military vehicles and IDF force protection. The seven-vehicle convoy, consisting of IDF MB force protection and 369 Sustainment Brigade palletized loading systems, practiced transferring security responsibility between partners across ground borders. The training convoy resupplied two separate sites within Israel, demonstrating ground support throughout the country. Supporting the

principles of sustainment in ADP 4-0, ground resupply options established the simplicity of sustainment and integration of all regional logistics forces.

### Conclusion

Partnership and shared understanding create responsive support and options for higher commands to sustain forces within the USCENTCOM AOR. JF23 provided opportunities for 1st TSC and IDF sustainers to develop relationships further while learning the capabilities of both nations. Setting the theater includes academic exchanges and bilateral exercises. Solid relationships and understanding between U.S. and Israeli sustainers provide the basis for a successful alliance in the future.

*Maj. Mitchell T. Hunt currently serves as transportation branch chief, 1st Theater Sustainment Command, Fort Knox, Kentucky. He has served as the commander of the 67th Forward Support Company, support operations officer, 1-393 Brigade Support Battalion (BSB), and as battalion executive officer, 2-395 BSB, at Fort Cavazos, Texas. He attended ROTC at Jacksonville State University, Alabama, commissioning as a quartermaster officer. He has a bachelor's degree in political science and a master's degree in general administration from Central Michigan University.*

*Featured Photo*  
Israeli Defense Forces give a mortuary affairs presentation to 1st Theater Sustainment Command — Operational Command Post command team and 673rd Quartermaster Company mortuary affairs team at Hatzor Air Force Base in Israel, May 31, 2023. (Photo by Capt. Natalia Candamo)



# Medical Logistics Sustainment

in Multidomain Operations

By Lt. Col. Mark Sander

In modern military operations, logistics are vital to ensure the right resources are available at the right place and time. Logistics' critical role in warfare is particularly relevant in multidomain operations (MDO). The MDO concept is built upon the premise that the joint force cannot assume uninterrupted superiority in any domain, whether land, sea, air, space, or cyberspace. Recent updates to Field Manual 3-0, Operations, further highlight the military's focus on MDO. The future fight will require highly capable and dispersed units to create and exploit temporary windows of advantage.

MDO requires a high level of coordination and integration among different military units and agencies, all working on synchronizing military capabilities across domains to gain a decisive advantage over the adversary. In turn, Army medical logistics must overcome several challenges to meet the military's future operational demands.

### Rapidly Changing Environment

Military units may need to move quickly from one theater of operation to another or adapt to a new type of threat. This means medical logistics must be flexible enough to adapt to changing requirements, supporting a variety of health care capabilities, and fast enough to move through distribution channels because large stores of medical supplies are difficult to move and maintain.

### Limited Resources

Medical logistics also operates in a commercially based product environment where the healthcare industry supports multiple larger stakeholder efforts, including hundreds of millions living in the U.S., with many of the same materials. Military medical logistics must be efficient and effective in delivering the necessary medical supplies and equipment, even as a minor stakeholder in the market. Competition for the same products and resources used by all echelons of health care means excess built into the supply chain may be harder to achieve, and resources may need to be distributed with late notice to optimize availability for multiple simultaneous downstream requirements. Delayed delivery until the time of need to conserve scarce resources creates risk in ongoing sustaining operations.

### Transportation

MDO requires the integration of different military capabilities across domains. There are no dedicated transportation channels for medical supply in common commercial and military transportation channels. Medical logistics must be integrated into the overall joint logistics system to ensure typical medical supplies and equipment are available when and where they are needed and casualties from joint forces can be cared for by adjacent medical forces and capabilities.

### Supply Chain Security

Medical logistics must be designed to ensure medical supplies and equipment are secure and protected from theft or sabotage, especially now that we understand the potential for scarcity. Healthcare operations can be systematically targeted by cyberattacks, compromising sensitive individual and force data, and interrupting efforts to care for wounded service members. The strategic industrial base also does not use a classified communications user interface, so those essential networks also present known vulnerabilities.

To overcome these challenges, medical logistics must implement five key elements:

**Centralized Controls.** The Army medical logistics system should be centrally controlled to ensure medical supplies and equipment are available when and where they are needed based on priorities to optimize outcomes. This requires a robust logistics management system to track medical supplies and equipment throughout the supply chain and authorize the reallocation of limited resources to support priorities.

**Efficient Distribution System.** The distribution system should be efficient to ensure medical supplies and equipment are delivered to the correct location at the right time and in good condition. This requires a well-coordinated system that can respond quickly to changing requirements, minimizing risks of conditions affecting the quality of healthcare products.

**Robust Communication System.** In MDO, communication is critical to ensure relevant operational data are translated into medical supply requirements and

that centralized distributors make effective allocations to minimize supply deficits and competition for scarce resources. This requires a robust communication system that can operate across different domains and provide a common operating picture.

**Security.** The Army medical logistics system must be designed to ensure medical supplies and equipment are secure and protected from theft or sabotage. This requires a comprehensive security plan that covers the entire supply chain.

**Training.** Medical and logistics personnel must be trained to operate in a multidomain environment. This requires specialized training programs that can prepare personnel for the challenges of MDO.

### Final Thoughts

MDO requires coordination and communication across different domains. As the Army continues evolving its plans to fight and win in a multidomain environment, medical logistics must continue integrating into the sustainment enterprise.

Supply chain management is crucial to ensure timely and efficient medical supplies and equipment delivery to the battlefield. Army medical logistics should use advanced technologies such as radio frequency identification and GPS tracking to monitor and manage medical supplies and equipment movement from the source to the battlefield. This also improves the fidelity of the common operating picture and speeds aggregated decision-making by centralized authorities in reacting to changing environments.

MDO may involve a wide range of medical situations, from minor injuries to complex trauma cases. Army medical logistics should standardize their medical capabilities to include specialized equipment, personnel, and facilities to meet the diverse medical needs of MDO. The Army partially achieves this with special programs pre-positioning common items and equipment globally to enhance responsiveness and resource availability. Enhancing projects with common resupply in configurations that can be applied in multiple domains quickly reduces the risk

of competition and industrial base delay in a developing contingency.

MDO environments are often unpredictable and rapidly changing. Army medical logistics should increase their flexibility and adaptability to respond quickly to changing circumstances and adjust their medical logistics accordingly. Achieving velocity in an unpredictable environment can be attained by configuring common materiel at multiple locations in the supply chain, so they can be rapidly employed by users, loiter in transit vehicles to be applied in another domain, or be reallocated to another storage location in anticipation of a contingency. This deliberate decentralization of materiel storage with an improved common operating picture contributes to a more resilient supply chain, diffusing risk across multiple nodes.

Finally, the Army must continue to invest in training and education. Army medical logistics personnel should receive training and education on MDO to ensure they understand these operations' unique challenges and requirements. This will enable them to make informed decisions and effectively manage medical logistics supporting MDO. Non-medical logisticians should also be able to support predictable and common configurations of materiel and integrate tactical teams of medical logisticians to enhance optimized supply chains.

By implementing these recommendations, Army medical logistics can effectively support MDO and provide timely and efficient medical care to Soldiers on the battlefield.

*Lt. Col. Mark Sander currently serves as the commander of the U.S. Army Medical Materiel Center-Korea. He entered active service in the Army Medical Service Corps with an ROTC commission as a second lieutenant. He earned a Bachelor of Science in crime, law, and justice from the Pennsylvania State University and holds a Master of Business Administration from the University of Pittsburgh. His military education includes the Command and General Staff Officer Course, Army Medical Department Officer Basic and Advanced Courses, and the Health Service Materiel Officer Course. He has received technical certifications in joint logistics, support operations, intermediate systems acquisition, defense support to civil authorities, strategic studies, joint humanitarian operations, and joint planning.*

*Featured Photo*  
*Medics with the 82nd Airborne Division's 1st Brigade Combat Team retrieve notionally-wounded paratroopers from a Black Hawk medevac helicopter operated by the 101st Airborne Division's 159th Brigade, Jan. 23, 2012, at the Joint Readiness Training Center, Fort Johnson, Louisiana. (Photo by Sgt. Michael J. MacLeod)*

# Sustainment Survivability

## Incorporating Deception at the Tactical Level in the Brigade Support Area

■ By Capt. Brian Strohmaier

Logistics hubs' vital roles in modern warfare have been exhibited in real-time in Ukraine. Russia's initial failed invasion of Ukraine was primarily due to an overextension of the Russian logistics trains, which were poorly equipped and hastily trained. The ensuing calamity that followed allowed thousands of Russian vehicles to fall into the hands of the Ukrainians during their counterattack. The significance logistics hubs play in combat operations has been fully displayed in a real-world conflict.

What is different about the Ukraine conflict is the reliance on long-range fires using ballistic missiles, rockets, and one-way attack drones. Russian doctrine has always favored the use of artillery, explaining Russia's

insatiable consumption of artillery rounds, rockets, and short- or close-range missiles. With the forward line of own troops (FLOT) resorting to World War I trench-style warfare, the expectation is that long-range fires will play an increasingly important role in the conflict.

Whether a brigade support area (BSA), division support area, or other support echelons, the target potential for striking such a location is high. The physical distance of a BSA from the FLOT can range from 10 to 30 kilometers, depending on the element supported and a unit's standard operating procedures. With our adversaries increasing their ballistic missile arsenals, their potential to target a BSA and attempt to cut off the brigade from supply raises the danger for logistics units

everywhere. The use of close-range ballistic missiles, guided multiple-launch rocket systems, and other missile and artillery systems dramatically increases the distance the enemy can close and attack allied forces. With the importance of logistics shown in Ukraine, the logistics community must adapt to counter the increased threat posed by enemy artillery and missiles.

U.S. forces have become so used to operating in an environment where the BSA is unlikely to take constant indirect fire salvos. Yet, as witnessed in Ukraine, logistics nodes are the prime targets of Russian and Ukrainian long-range fires. The effectiveness of a brigade support battalion (BSB) to establish a BSA and be able to displace rapidly varies depending on the unit's level of training, whether it is an armored/mechanized brigade or a light infantry brigade combat team. Army Technical Publication 4-90, *Brigade Support Battalion*, emphasizes the need for BSBs to utilize rapid displacement in large-scale combat operations. Being expeditionary should be the goal of all sustainment units, stressing the ability to pick up and move immediately. The days of a massive battalion/brigade tactical operations center are in the past, and senior commanders need to understand the importance of rapid redeployment.

Modern artillery systems can fire salvos within minutes of each other, realistically giving a BSB 10-15 minutes at most before artillery is ready. In 15 minutes, no BSA can pack up and displace. The sheer size of vehicles and

systems across the BSA makes it challenging to pick up and move immediately. Simply loading a load-handling system takes 5-10 minutes, even with a skilled crew. The flurry of movement and chatter would undoubtedly draw attention from observers, who increasingly turn to unmanned aerial vehicles (UAVs) to find enemies from afar.

The rapid rise in UAVs as spotters has allowed artillery batteries to find targets and engage more accurately and rapidly. UAVs play vital roles in intelligence, surveillance, and reconnaissance (ISR), but they likely will seek more key logistics hubs for artillery to target. In addition, UAVs are modernized with more advanced camera systems, allowing them to see farther and more clearly. Combined with a high reliance on overhead satellite coverage for imagery support, UAVs make long-range fires a nasty threat to any logistics hub.

How do we combat it and increase survivability, allowing uninterrupted sustainment support?

There is always a human element. In everything we do in our daily lives, a decision is made, often many decisions in a single day. The process by which individuals choose to act is based on fact and reason. Disrupt this process, and the individual begins making wrong decisions they perceive to be correct. Society has increased the reliance on computers to do our jobs for us, but even in combat, there is still a human at the monitor or screen deciding whether to press the button.

***With our adversaries increasing their ballistic missile arsenals, their potential to target a BSA and attempt to cut off the brigade from supply raises the danger for logistics units everywhere.***

On today's battlefield, a human operating the UAV identifies the targets themselves. The identifying skills of the individual or system will undoubtedly change, but simple deception could save an entire brigade and allow the continued resupply of friendly forces.

Decoys have long been a valued asset in history. From the Trojan horse to the inflatable tanks positioned at Dover to fool the Germans into thinking the Normandy invasion would occur at Calais in World War II, decoys have targeted human error in the decision-making tree and led to strategic victories for those who successfully employ them. Utilizing decoys can fool a forward observer into targeting the wrong site, allowing time to pack up and relocate to safety. While there are not enough personnel in the Army to dedicate to designing, planning, and executing the use of decoys, it is incumbent on logistics Soldiers and logistics commanders to get creative with solutions with equipment already on hand.

At the planning stage, potential BSA sites need to be large enough to facilitate extra decoy space. Inherently, this means balancing the perimeter size and sustainment functions with the personnel in a BSB, which is a significant struggle for most battalions. The possibility of creating a false maintenance collection point (MCP) or ammunition holding area just outside the barbed wire is not out of the realm of possibility. Proper coordination with other brigade units is necessary to ensure no security gaps, whether using military police or a platoon of infantry to augment BSA security. The staff's planning before setup mitigates the likelihood of units establishing company areas on top of each other. Allowing units to plan for decoys will enable them to build them into their load plans and account for them in layouts.

There are no bounds to the limits of the actual decoys. From a fake ammunition supply point to a decoy fuel point to a motor pool of decoys awaiting repairs at a false MCP, the creativity of the decoys should come from within a company. Camouflage nets are abundant in most units and underutilized. Soldiers should have the utmost leeway in designing decoys that redirect long-range fires away from vital storage sites or personnel quarters. The supply support activity usually has a large inventory of

various wooden box sizes that can build up a decoy site or a false vehicle.

The importance of deception is a long-forgotten art that only recently became more relevant. Decoys aim to make an adversary waste an expensive missile or rocket on an inexpensive target. Modern warfare shows that the costliest missiles or weapon systems do not win wars. Instead, it is the ability to direct enemy munitions at low-cost decoys. Often the munitions are multiple millions of dollars, while an effective decoy may cost a couple hundred dollars and save hundreds of lives. Creating decoys in layers enhances a unit's survivability. Placing a fake decoy next to something that looks more realistic is a brilliant way to fool an adversary. So, creating a low-quality, hasty decoy next to something more fabricated, perhaps with metal, lights, or a heating element, can easily fool an observer, directing enemy fire away from key logistical nodes.

The logistics community needs to incorporate deception principles into field exercises in preparation for a conventional war to increase survivability. The threat of long-range fires puts all logistics hubs at risk. Without moving the BSA further to the rear and severely extending logistics trains, decoys are the most cost-effective way to continue supporting the front lines. Increasing the survivability of our logistics corps allows our allied long-range systems to find, fix, and finish the enemy artillery platforms.

*Capt. Brian Strohmaier is the logistics officer for the National Ground Intelligence Center. He has a Master of Arts in international relations from American University, Washington, D.C., and a Bachelor of Arts in history from Norwich University, Vermont. He served as a maintenance company commander in an infantry brigade combat team.*



# Army 2030

DSB Needs Maintenance Enablers to Support PEN DIV within DSA

■ By Lt. Col. Michael Spears

The field artillery brigade (FAB) within the penetration division (PEN DIV) lacks sufficient surge maintenance support capability. To mitigate this insufficiency, the division support battalion's (DSB's) support maintenance company (SMC) requires a field artillery (FA) section with the ability to provide a surge maintenance capability to the FAB in the division support area (DSA). If the Combined Arms Center (CAC) and Army Futures Command (AFC) can equip the SMC with additional maintenance capability to the PEN DIV in Army 2030, it will allow the DSB commander a more comprehensive range of maintenance capabilities throughout the DSA in a multidomain operations (MDO) environment.

Last year, Joint Modernization Command (JMC) conducted Joint Warfighter Assessment-Exercise (JWA-E) 22 to assess the concepts, capabilities, and formations in support of a PEN DIV and inform modernization decisions that drive the MDO Army 2030 force. Sustainment assessors determined that the Army 2030 PEN DIV DSB solution to mitigate large-scale combat operations (LSCO) sustainment gaps still lacked the sufficient maintenance required to support a PEN DIV within the DSA.

### Insights

The current DSB force structure needs the organizational capacity of distribution compared to the volume and velocity of Class III (B) required during LSCO.

Due to the excessive burn rate of the PEN DIV, especially before and after a gap/wet gap crossing, the DSB's current Class III (B) storage capacity falls short of its requirements. The projected DSB design encompasses a petroleum, oil, and lubricants (POL) truck company in Army 2030. This addition to the organizational structure should allow the DSB to meet the PEN DIV's bulk fuel capacity requirements.

The current DSB force structure lacks the organizational ability to replenish and sustain the division's scheme of maneuver by matching the mobility of distribution to its transportation requirements.

Integrating the movement control team and the movement enhancement brigade into the division transportation section could enable a more effective synchronization between the support area command post and a sustainment brigade. This would then allow the DSB to have a more robust distribution capability and the ability to anticipate the time and tempo of replenishment to the PEN DIV during a maneuver.

The current DSB force structure provides a material management section but needs a doctrinal construct integrating the division material management section with all maintenance enablers across the sustainment enterprise.

For the DSB to provide sufficient maintenance enablers within the DSA, the DSB's SMC maintenance surge team requires an FA section.

The FA section should have the capability to provide a surge maintenance capability to the FAB and remain tailorable to fill gaps in operational area maintenance support to the M109A7 Paladin Integrated Management (PIM), M109A8 Extended Range Cannon Artillery (ERCA), and the next generation wheeled howitzer weapon systems.

### JWA-E 22 Focus

Due to the projected complexities of MDO across the spectrum of conflict in Army 2030, JMC's focus during JWA-E 22 was to assess the 3rd Division Support Brigade (3DSB), enabling freedom of maneuver and operational reach to a PEN DIV in an LSCO environment. In particular, the 3DSB supported the 3rd Infantry Division, an acting PEN DIV, with the continuous ability to receive, store, and distribute critical supplies during a gap crossing. The 1st Cavalry Division and 1st Armored Division are CAC projected PEN DIVs in Army 2030.

### PEN DIV

The Army 2030 PEN DIV will be optimized to attack a narrow front, neutralize enemy defense systems, and seize key terrain. This division concept will provide a unique gap-crossing capability that will destroy the continuity of the enemy's defense, allowing subsequent isolation and defeat in detail by exploiting friendly forces. The PEN DIV's essential tasks will be to conduct movement to contact, conduct an attack, conduct a defense, conduct area security, and conduct gap/wet-gap crossing.

### Current DSB

The DSB's current force structure provides distribution management and materiel management and conducts support operations for all units in the division task organization. The DSB provides command and control for all its assigned and attached units. The DSB is responsible for planning, coordinating, and synchronizing the division's human resources, finance, field services, and field-level maintenance operations.

The DSB is assigned to the division in a subordinate relationship and can coordinate with other sustainment brigades operating near the DSA to provide additional support as needed. The DSB has an organic division sustainment troops battalion (DSTB) and a division sustainment support battalion (DSSB).

The DSTB has an organic headquarters and headquarters company (HHC), an attached field feeding company, human resources company, financial management support company, and a signal company. The DSSB has an organic HHC, a composite supply company, a composite truck company, and an SMC. The DSSB requires a modular ammunition ordnance platoon to operate an ammunition platoon to support division operations. The SMC has an attached maintenance surge team to provide a field-level surge capability to help reinforce maintenance units supporting critical missions at any location within the DSA.

Currently, the maintenance surge team provides echelons above brigade surge maintenance capability. The surge team can provide support maintenance to M1 Abrams, M2/3

Bradley, and Stryker weapons systems. Each maintenance surge team consists of a platoon headquarters and two to four maintenance sections. DSB maintenance planners must review equipment density across the division to determine surge team capabilities required to augment organic maintenance capabilities.

### PEN DIV DSB

CAC's proposed design for a DSB supporting a PEN DIV in Army 2030 focuses on adding organic sustainment companies to provide functional sustainment capabilities to its formation. The proposed DSB's responsibilities remain the same, but its mission capabilities increase with the additions and modifications to its force structure. The DSTB will be modified to add a support operations section. The SMC will be moved from the DSSB to the DSTB to increase its commander's



Soldiers assigned to the 1st Battalion, 5th Field Artillery Regiment, 1st Armored Brigade Combat Team, 1st Infantry Division prepare an M992A3 Field Artillery Ammunition Supply tracked vehicle for repairs at Torun Training Area, Poland, March 28, 2022. (Photo by Staff Sgt. Gabriel Rivera)



Spc. Riley Hawkins, an allied trades specialist assigned to the 1st Battalion, 5th Field Artillery Regiment, 1st Armored Brigade Combat Team, 1st Infantry Division, welds two pieces of steel to form a 90-degree angle at Torun Training Area, Poland, March 28, 2022. (Photo by Staff Sgt. Gabriel Rivera)

span of maintenance support. A mortuary affairs platoon will be added to the DSTB, expanding the commander's reach of casualty collection points throughout the theater. The DSSB will be modified to include the addition of an inland cargo transfer company, a palletized load system truck company, a POL truck company, and a modified ammunition company.

### SMC

CAC's proposed design for an SMC supporting a PEN DIV in Army 2030 firmly addresses the three sustainment gaps to help mitigate capability shortfalls in the DSB. However, this design still lacks a crucial maintenance capability within the SMC. Although the organization of the SMC will be reestablished in the DSTB, its design is not projected

to change. Currently, the SMC consists of three platoons providing allied trades support, wheeled vehicle recovery, maintenance, communication, electronics, special electronic devices, ground support equipment, and test measurement and diagnostic equipment. The SMC, particularly its maintenance surge teams, provides field-level surge maintenance support to units throughout the brigade support area (BSA). However, doctrinally, these surge teams currently only have the maintenance capability to provide field-level surge maintenance support to M1 Abrams, M2/3 Bradley, and Stryker weapons systems.

### Maintenance Surge Teams

Currently, the maintenance surge teams' platoon headquarters and sections have separate standard

requirement codes that allow each team to be tailored and independently attached to a supported unit. This flexibility allows planners within the DSB to tailor critical maintenance capabilities based on specific mission requirements in any required location. The current command relationship of the maintenance surge team is attached to the SMC within the DSSB. The DSSB can designate a different support relationship (direct, general, or reinforcing) based on priorities directed by higher headquarters if required. Based on the PEN DIV commander's priorities, the maintenance surge team may be attached to a field maintenance company within a brigade support battalion (BSB) located in the BSA.

However, since the Army 2030 concept is refocusing its maneuver

and sustainment efforts from brigade combat teams to PEN DIVs, a more robust artillery maintenance surge capability must be available to the division artillery (DIVARTY) within the DSA. Due to DIVARTY LSCO demands, a maintenance surge support focused on a more robust artillery capability is required in the DSA. Based on the pace and tempo of MDO, multiple division/brigade-sized fires elements (DIVARTY, FAB) may operate simultaneously within the DSA. The FAB can deliver deep and shaping lethal and nonlethal fires, conduct counter-fire, conduct suppression of enemy air defense, integrate sensors and shooters, conduct Army targeting and support to joint targeting, provide training readiness oversight to the field artillery battalions, and operate dispersed over wide areas while maintaining the ability to mass fires. Some of the FAB's cannon artillery capabilities include the M109A7 PIM, M109A8 ERCA, and the next-generation wheeled howitzer. However, the operational reach and responsiveness to the FAB, despite the availability of the proposed division combat trains, are insufficient for artillery maintenance surge support within the DSA.

### FA Section

Although the FAB's BSB headquarters and service company are currently organized to coordinate field maintenance for FA battalions in the BSA, it can derive additional support capabilities through various other units selected to support the FAB mission. A field support company may be attached to the BSB or field artillery battalions but are not organic

to the BSB. Therefore, for a BSB to fully support a FAB in the DSA, it must establish a support relationship with the combat sustainment support battalion assigned to the expeditionary sustainment command located in the corps support area. Any additional maintenance support required to support the FAB within the DSA would have to be coordinated by the FAB through contracted maintenance support.

To provide the FAB with sufficient surge maintenance support capability within the DSA, the PEN DIV DSB, DSTB, SMC, and maintenance surge team platoon requires an FA section. Like the Abrams, Bradley, and Stryker sections, the FA section would be attached to the maintenance surge team platoon. This added capability will enhance the PEN DIV commander's ability to rapidly generate combat power by providing maintenance depth and flexibility at critical points of need throughout the DSA.

### Recommendation for JMC:

- Address the current maintenance surge capability deficiency within the DSB to support the PEN DIV FAB in JWA 24 effectively.

### Recommendations for CAC/AFC:

- Expand the maintenance surge capability for the DSB by allowing an FA section to be attached to its maintenance surge team platoon. This would provide additional FA maintenance support to the FAB within the DSA.

- Leverage the CSSB's field maintenance surge capability in the corps support area to the PEN DIVARTY. Maintenance capabilities could flex between the corps support area and DSA for additional FA maintenance support to the PEN DIVARTY/FAB within the DSA.
- Leverage the BSB's field maintenance surge capability in the BSA to the FAB. Maintenance capabilities could flex between the DSA and BSA for additional FA maintenance support to the FAB within the DSA.

If CAC, along with assistance from AFC, adds this added capability to the DSB's SMC projected force structure of Army 2030, it could potentially boost the DSB commander's ability to provide a broader range of maintenance capabilities to multiple artillery units throughout the DSA.

*Lt. Col. Michael Spears is the executive officer to the Requirements Division Director, Sustainment-Capabilities Development and Integration Directorate Futures and Concepts Center, Army Futures Command at Fort Gregg-Adams, Virginia. He holds a bachelor's degree in history from the University of Arizona and a master's degree in education with an emphasis on curriculum and teaching from National University. He is a graduate of the Quartermaster Officer Basic Course, Petroleum Officers Course, Mortuary Affairs Course, Combined Logistics Captains Career Course, Intermediate-Level Education, and Advanced Operations Course.*

*Featured Photo*  
Sgt. Eric Segura, assigned to Alpha Battery, 3rd Battalion, 29th Field Artillery Regiment, 3rd Armored Brigade Combat Team, 4th Infantry Division, disassembles the firing mechanism for the M109 Paladin howitzer as part of his qualification training at Forward Operating Site Adazi, Latvia, July 1, 2022. (Photo by Sgt. Eliezer Meléndez)

# Stryker Rotation

Unit, Enterprise Identification of Sustainment Shortfalls Key to JRTC Exercise Success

By Lt. Col. Sarah Gilbert

Stryker rotations have been infrequent at the Joint Readiness Training Center (JRTC) but are planned once a year for the next five years. As the fourth Stryker brigade combat team (SBCT) to train at JRTC, 2nd SBCT, 4th Infantry Division (2/4ID) completed JRTC 23-03 from Jan. 7 to Feb. 9. The brigade's seven organic battalions were augmented by units from Canada; Fort Carson, Colorado; Fort Riley, Kansas; and Fort Bliss, Texas. While unit and enterprise preparation for Combat Training Centers (CTCs) always includes logistics planning, a Stryker rotation at JRTC poses several unique challenges not faced at the National Training Center (NTC). The installation supply support activity (ISSA) at Fort Johnson, Louisiana, does not stock Stryker or tank repair parts on its authorized stockage list (ASL). The call-forward process during force-on-force is much more restrictive at JRTC than at NTC and requires additional division logistics support element (DLSE) oversight by the Army Field Support Battalion (AFSBn). The standard JRTC regeneration timeline coming out of the box is 10 days compared to 12 for NTC, but rail outload is complicated at JRTC with only six spurs and the lack of locally owned locomotives. Identifying and focusing on the logistics capability shortfalls for an SBCT during the predeployment site survey and months leading up to the rotation proved pivotal in condition-setting the brigade to succeed.

The 2/4ID maintained an operational readiness (OR) rate of no less than 82% during force-on-force and achieved 91% by regeneration day 3. Before the exercise started, however, the unit had to deliberately plan to set conditions for success:

**Healthy common ASL and optimized shop stock list (SSL) upon arrival.** Units within 120 days of a CTC rotation or deployment must prioritize filling optimized SSL. This is especially important when going to JRTC, where there is no Stryker ASL to fall back



on. The 2/4ID began the rotation with a 94% optimized SSL fill rate, allowing them to quickly regenerate combat power at the training center immediately following rail download with minimal reliance on the supply system. With division sustainment brigade and G-4 oversight, 4ID identified zero balance lines for common ASL and optimized SSL. The division first cross-leveled internally and then worked with the installation supply representative at the AFSBn and the Defense Logistics Agency team to expedite the remaining parts. The team recognized the lead time required to receive, process, and pack these items ahead of rail operations and began these efforts four months out

**Pre-positioned repair parts at the Fort Johnson ISSA.** Given the infrequency of Stryker rotations at JRTC and the need for Stryker and tank parts elsewhere in the Army, it does not make sense to maintain a Stryker ASL at the Fort Johnson ISSA. However, pre-positioning parts there before Stryker rotations make sense to reduce response times and maintain fleet OR rates. The enterprise supported 2/4ID and Fort Carson's request to pre-position parts, dramatically reducing the need for expensive, last-minute shipments from other locations. The basis for the pre-position quantities was a pull of the brigade's most recent NTC rotation consumption data. Adjusting to account for differences in JRTC's terrain, the critical parts request was 31 lines valued at \$2.8 million. The AFSBn then communicated that list through the 407th AFSB to the Army Sustainment Command support operations team. Of the 31 items, 18 were available in the system and moved within the Army Working Capital Fund to the Fort Johnson ISSA in the weeks leading up to the rotation. This process worked very well with the support of the Fort Johnson Logistics Readiness Center and should be standard in the future for Stryker rotations. Additionally, the enterprise must ensure the narrative about the cost of pre-positioning parts remains on the realized second destination transportation (SDT) costs of the movement and not the dollar value of the parts in the temporary Army Working Capital Fund movement. As was true for 2/4ID, the rotational brigade should always keep the requested pre-position quantities to reasonable amounts to consume as much as possible and minimize any return SDT costs following regeneration.

**Consolidated sustainment support location.** The AFSBn's DLSE, 4ID Division Support Element, 4th Division Sustainment Brigade, and 13th Expeditionary Sustainment Command worked out of the same building at North Fort Johnson to ensure a common operating picture. This enabled daily crosstalk and prevented confusion about OR rates in daily reports to the division, III Armored Corps, and Army Sustainment Command. It allowed visiting senior leaders to engage all sustainment teams simultaneously. This consolidated footprint also served as the hub for logistics assistance representative (LAR) and field support representative (FSR) coordination, which was particularly important at JRTC. Brigades are not allowed to bring unit-funded FSRs into the box during force-on-force, but they do want to utilize them during expeditionary reception, staging, onward movement, and integration (RSOI) and regeneration. AFSBns should plan to manage the daily transportation and coordination for these unit-funded FSRs in addition to the LARs during Stryker rotations, an increase of 20 to 25 personnel.

**As Stryker rotations at JRTC will likely increase, here are some ways units can prepare for future exercises: Repair parts estimates need continued refinement.** While the list of requested pre-position parts was based on accurate consumption data from NTC, the team learned several lessons. The 2/4ID only used 13 of the 18 pre-positioned lines (72%). Of the 13 lines they used, they needed more than requested. Additional Stryker units training at JRTC utilizing pre-positioned parts will enable better estimates over time. In the future, the pre-position list should include critical tank parts, even if the enabler tank company intends to bring a portion of its optimized SSL from the home station.

**Optimized SSL fills to healthy levels should be standard practice.** It is currently up to the rotational unit and local AFSBn to ask the enterprise to expedite parts to fill common ASL and optimized SSL in the months leading up to a CTC rotation. Standardized enterprise involvement 120 days out would help immensely. Army Sustainment Command is constructing a team to determine how the Army could formalize this process for units with known CTC and deployment dates.

**Rail as the regeneration limitation.** The standard regeneration model at JRTC is 10 days compared to NTC's 12 with a similar flow of events. The unit focuses first on maintenance and return of vehicles drawn from the CTC, clearance of hand receipts for all supply classes, and turn-in of Multiple Integrated Laser Engagement System (MILES) gear. Units typically progress through turn-ins first and transition to rail upload for the second half of regeneration. This sequential model works at NTC because the rail head has 11 spurs to load vehicles and one for containers. Units complete outload in the remaining number of regeneration days. At JRTC, however, there are only five spurs to load vehicles and one for containers. The JRTC transportation team does not have its own locomotive or locomotive engineers, making them entirely reliant upon rail carriers to reorganize empty and loaded cars. This delays rail outload for larger Stryker rotations. The 2/4ID brought eight full trains of 75 cars from the home station plus enabler equipment from other installations to rotation 23-03. By comparison, a typical infantry brigade combat team (IBCT) brings five smaller trains with 45 cars each, plus enablers. Given the increased volume of equipment, 2/4ID required an exception to policy from JRTC to begin upload during regeneration earlier than an IBCT would so they could complete rail by the tenth day. JRTC granted that exception but generally grants them sparingly, for a good reason. Allowing units to ship containers home before clearing MILES hand receipts increases the risk this expensive equipment could accidentally be sent to the unit's home station. While 2/4ID did get approval and began rail upload early, the 10-day model still proved insufficient to complete outload before the arrival of 2nd Brigade Combat Team, 10th Mountain Division. The rail overlap challenge was compounded by rail car delays outside of unit control, a frequent occurrence, but it further supports allocating additional regeneration days to an outbound SBCT or standardizing early rail upload. Since CTC training calendars are created a year out or more, it is essential to start that dialogue early to impact future Stryker rotation calendars. It is worth noting JRTC plans to test a new, condensed expeditionary RSOI and regeneration model in late summer 2023. This new model reduces both expeditionary RSOI and regeneration windows to nine days instead of 10. The idea is to test limiting IBCTs to

four trains worth of equipment instead of the five they usually bring and, if adopted, would see JRTC adopt a 28-day model versus a 30-day one. While this could be very efficient for IBCTs, the reduced timeline should not apply to Stryker rotations.

**Next-generation automatic test system (NGATS) or Direct Support Electrical Systems Test Set (DSESTS).** Fort Johnson should maintain an NGATS or DSESTS to support rotations with tank enablers. Some tank companies bring one, but not all, and the logistics readiness center does not have one on-site.

The 2/4ID's JRTC 23-03 was very successful from both enterprise and rotational training unit standpoints. Through deliberate planning by 4ID, AFSBn-Carson, Fort Johnson, and Army Sustainment Command, repair parts support in the absence of a local Stryker ASL went smoothly. Synchronized reporting from 4ID and the AFSBn led to a common operating picture and centralized coordination for LAR support. For required parts beyond what was pre-positioned at Fort Johnson, the 13th Expeditionary Sustainment Command team was instrumental in enabling supply visibility and moving additional critical parts from Fort Cavazos. The JRTC leadership's exceptional support and flexibility during the rotation allowed 2/4ID to quickly identify and safely work through challenges. The team will take these lessons and be better prepared for the next Stryker rotation at JRTC.

*Lt. Col. Sarah Gilbert serves as the commander of the Army Field Support Battalion at Fort Carson, Colorado. She previously served in the 4th Infantry Division, 10th Mountain Division, the Defense Logistics Agency, and the Army Human Resources Command. She was commissioned as a second lieutenant in the Quartermaster Corps and awarded a Bachelor of Science in business and a Bachelor of Arts in international studies from the University of Missouri-Columbia. She holds a Master of Science in supply chain management from the University of Kansas.*

*Featured Photo  
Washington National Guard Soldiers with Charlie Battery, 2nd Battalion, 146th Field Artillery Regiment, 81st Stryker Brigade Combat Team, take part in Table VI certification live fire at Yakima Training Center, Washington, April 21-23, 2023. (Photo by Staff Sgt. Adeline Witherspoon)*

# Tips to Succeed as S-4 WITHOUT Logistics Experience

By Capt. Christopher Drisko

By the time I completed my tenure as a battalion S-4, I had served three full years in the position between two battalions, one an M777 artillery battalion and one an M109A6 battalion. I now serve as Charlie Battery commander for 1-41 Field Artillery Battalion, 1st Armored Brigade Combat Team, 3rd Infantry Division, stationed at Fort Stewart, Georgia. This article is a small how-to for any combat arms officer who has the unique and rewarding opportunity to be a battalion S-4 with zero training as a logistics officer.

## Starting Tips

The first six months as a battalion S-4 are always the most stressful. In addition to being in a new position, you now work directly with the battalion executive officer (XO) and are much closer to your senior rater, the commander. These six months are the perfect example of what drinking from a fire hose is when it comes to information overload. Leaning heavily on your NCO in charge (NCOIC) helps you survive these six months. It enables you to learn enough to make educated decisions and become a real asset to the military decision-making process (MDMP)

when your battalion conducts it. Use the first week of your time as the S-4 to go out and meet people. Introduce yourself as the new S-4 and put a face to the name of all XOs, supply teams, your brigade counterparts, and points of contact for the various outside organizations you will work with. This shows you care about the work and helps everyone remember who you are and be more willing to assist in the future.

## Mindset

The most important mindset you need to be successful as a staff officer is the realization you work for and

in support of the subordinate unit; they do not work for you. You work to facilitate their training and their care. It is not their job to build your reports and slide deck to present to the commander. Showing up to work every day with that mindset instills the motivation you need to better your battalion.

## Account Access

The first thing you need to set yourself up for success is registering for all the accounts needed as an S-4. The main programs are Global Combat Support System-Army (GCSS-Army, also known as GCSS-A and G-Army) and whatever the current flavor is for the financial liability investigation of property loss (FLIPL) management website, which at the time of this writing is electronic FLIPL (eFLIPL). GCSS-Army is where the S-4 sees information such as property serial numbers, what units have what property, dollar values of each property book, property book shortages, and so much more. It is a powerful tool, and I highly recommend any new S-4 take the time to complete the GCSS-Army Training and Certification program. eFLIPL is a very user-friendly system that helps units manage the FLIPL process. Managing FLIPLs becomes easier the more you do it.

Other hot topics the battalion S-4 handles are turn-ins and lateral transfers or proposed sourcing decisions. Communicating the current status for each line item gets you in good graces with your battalion XO and helps your battery/

company/troop (B/C/T) XOs manage their property books.

## B/C/T XOs

Work with the B/C/T XOs to facilitate completing your tasks. As the battalion S-4, you are not the action officer for most tasks. Your job is to facilitate the systems put in place, plan as far in advance as possible, and report progress. The B/C/T XOs are your direct lines of communication with the subordinate units and are always your best source of information. Having a great relationship with these XOs makes your life significantly easier and makes them much more willing to accomplish the tasks you need to have completed. I have seen many times when the collective council of XOs does not like a staff member; they play the rubber ball/glass ball game and immediately turn all the tasks given by that particular staff officer into rubber balls, meaning they drop the ball, knowing the ball will bounce right back up. Building rapport with the XOs makes them treat more of your tasks as glass balls instead.

## Knowledge vs. People Skills

After the six-month mark had passed, I still did not know all the answers being asked of me. “What is the process of turning in this damaged equipment?” “What do I do to initiate a turn-in?” “How do I get this new equipment that’s not on my unit’s modified table of organization and equipment?” I still do not know all the answers after three years as the S-4. The most important advice I can provide in

being a successful S-4 is to realize this job is 20 percent knowledge and 80 percent people skills. Creating great relationships with everyone you work with is invaluable as you become the S-4 and return to being the new second lieutenant with nothing but questions. I was a new captain asking my NCOIC a stupid captain question at least 10 times daily. Accept that you are no longer the subject matter expert and cannot be afraid to ask questions or ask for help. Someone knows the answer; you just have to ask the questions. The same goes for your brigade counterparts and fellow battalion S-4s. We created a group chat titled eFLIPL Support Group and would constantly bounce ideas and ask for help through this chat. It became a handy resource. Developing these relationships makes it much more likely you will receive support when you ask and help you accomplish your battalion’s mission.

Get out of the office and meet with the supply teams in your subordinate units. They do the daily groundwork and have so much knowledge to pass on to you and let you know what is happening in the supply systems you are responsible for facilitating.

## Battalion XO

While these individuals may have been the scariest people in your battalion when you were a lieutenant, they will be your best resource for information and, when in dire need, help. They will help you mature quickly with plenty of tough love but never let you fail. Remember, if you fail, they fail; failure is not an

option. While they are there to help and mentor you, they do not have time to figure out all your problems because they are already too busy solving the rest of the battalion's issues. While buried with a large amount of your work, observing how your XO's operate along with their many duties and responsibilities is valuable. Doing this lets you learn what duties and responsibilities to focus on and direct your time and effort. Additionally, it gives you a peek into the future as to what you should focus on when you become a battalion XO.

### Tips for the field

As with any other officer position in the Army, always have a map. The map is your common operating picture with the operational side of your battalion and helps you stay updated with what is going on with your subordinate units. Keep the map updated with unit locations, adjacent units, and their support nodes' locations. Like in the garrison environment, utilize your sister battalions' resources when it makes sense. Big analog board trackers are the easiest way to track all classes of supply. Either make them yourself or utilize unit resources to make them for you. Tailor them to capture every element of the logistics status report you receive so the data compilation is much easier for you when making your report for the brigade.

### Forecasting Accurately

Another practice that will make you look like a rock star on the battalion staff is keeping a journal of the consumption of your battalion's

fleet. How much food and water does each unit consume? How much fuel does each unit consume during a certain training exercise? Class V is mandated for table progressions, but at a combat training center, it is pertinent to dive into the books and find how much and what type of ammunition is used during a certain type of operation, such as a breach, an assault, a nighttime operation, or a defense. Having a historical log enables you to forecast the real-world consumption of your people and your fleet and never have the awkward situation of Soldiers going hungry or vehicles running out of fuel. A great tool to use until you have that historical log for Class III is the Class III Estimation Tool, updated yearly. It has every type of vehicle and generator in the Army's property book and provides the fuel consumption based on the type of surface you are traveling on, for how long, and how many hours you are idling. The most important rule to being the S-4, which is easy to do but will ruin your reputation if you fail, is never mess up or miss a food request.

### Doctrine

Like everything in the Army, the doctrine is available whenever you cannot come up with the answer on your own. If you haven't yet attended a Captain's Career Course, I recommend purchasing or borrowing the MDMP Lessons and Best Practices Handbook. It goes step-by-step on completing MDMP and your role as the S-4 for each step. Army Doctrine Publication 4-0, Sustainment, is the publication

that has all the answers for how you should perform your warfighting function. When faced with any lost, missing, or damaged equipment, reference Army Regulation 735-5, Property Accountability Policies, to find answers to all your questions. Another great resource of information is Army Sustainment University. They provide resources, tools, publications, etc., to anyone who asks for it.

Being a battalion S-4 is considered the worst job for a combat arms branch officer, but it has been the most rewarding position I have held thus far. Understanding the logistics process of how the Army works has enlightened me and tempered my expectations for receiving supplies. It has shown me the immense amount of work and coordination necessary to make any unit function. Additionally, it has put me in a very opportunistic position to work directly alongside the battalion XO and plan with the battalion S-3. While you must be a leader in the role, you must also seize the opportunity to learn from these individuals.

*Capt. Christopher Drisko is currently the Charlie Battery commander for 1-41 Field Artillery Battalion, 1st Armored Brigade Combat Team, 3rd Infantry Division, at Fort Stewart, Georgia. He was the battalion S-4 when the brigade deployed to Europe in response to Russian aggression in Ukraine. He has also been a battalion S-4 at Fort Carson, Colorado. He has a master's in management and leadership from Webster University, Missouri.*



# Medical Assemblage Relevancy

Use Standard Army Property Structures to Better Manage Medical Capabilities

By Chief Warrant Officer 4 Kevin O'Reilly, Chief Warrant Officer 3 Dae Kim, and Warrant Officer Isaiah Williams

Before the fielding of the Global Combat Support System — Army (GCSS-Army), the medical logistics community fielded medical technology for the Army utilizing the medical assemblage construct without developing line item numbers (LINs). This construct negated the ability to populate authorizations on the modified table of organization and equipment (MTOE) or to cultivate the maintenance master data file (MMDF), rendering maintenance and property management within a multitude of standard Army logistics management systems impossible to use following regulatory guidance and good business sense for many decades. In these situations, medical maintainers and customers often viewed this equipment as buried or hidden in the set.

To overcome this master data gap, the medical equipment maintenance community developed an offline MMDF referred to as the MMDF-plus to enable legacy maintenance management systems such as the Standard Army Maintenance System (SAMS) or the unit-level logistics system — ground. The method was to create a dummy LIN for each piece of medical equipment, manually insert the dummy LIN into the Logistics Support Activity's (LOGSA's) flat-file standard MMDF found on their website, distribute the MMDF-plus to the rest of the medical equipment maintenance community via email, then upload the MMDF-plus

into each SAMS system. This methodology successfully allowed medical equipment maintenance to occur using standard Army maintenance systems. However, numerous MMDF-plus versions meandering about the enterprise for several decades caused data consistency issues within LOGSA's various online management products. Unfortunately, there was no workaround for property management beyond the medical assemblage resulting in medical equipment either not being placed on the property book or being assessed as excess.

Toward the end of the GCSS-Army development and the beginning of its fielding, the medical equipment maintenance community realized in consultation with the Combined Arms Support Command that the MMDF-plus would not be an effective workaround to enable GCSS-Army functionality. The preferred solution was the medical equipment maintenance community engaging in effective business process reengineering initiatives to adjust the medical business to meet GCSS-Army's best business process, in this case, developing and cultivating an effective LIN management program to populate the enterprise's master data construct in coordination with the program manager of medical devices.

Since the medical logistics system developed a disciplined process to develop and cultivate LINs for medical equipment, numerous

maintenance functions have been realized within GCSS-Army without the need for workarounds and are seen as a great success to the medical equipment maintenance community responsibilities, such as the scheduling of services, work order management, and shop operations of medical equipment. Moreover, critical property functions such as medical equipment fielding utilizing GCSS-Army's post-good receipt now possess permanent document numbers for historical preservation tied to MTOE authorization, ultimately increasing accountability, visibility, and accuracy. Additionally, adopting LIN management to account for medical equipment enabled functions within the Army Enterprise Systems Integration Program platform. Most notably, the Decision Support Tool now possesses the ability to manage lateral transfers and un-serviceable turn-in dispositions of medical equipment, and the medical materiel quality control program is now tied to an equipment record within the Modification Management Information System, significantly increasing quality control management for medical technology and materiel, greatly improving patient safety. Moreover, the medical logistics community has embraced the bill of materiel (BOM) process within GCSS-Army to itemize its medical assemblages without the need to cross reference components within other standalone medical logistics-centric systems such as the Medical Materiel Information Portal (MMIP).



Putting readiness to the test, members of the U.S. Army Medical Materiel Agency exercise their ability to rapidly issue Army pre-positioned stock medical materiel in Southwest Asia, July 2018, handing off more than \$6.3 million in medical equipment and assemblages to the 155th Armored Brigade Combat Team. (Photo by Ellen Crown).

Since the medical logistics community has embraced BOM, LIN, and MTOE development to enable Army systems, is the medical assemblage still relevant?

Even today, the medical assemblage is best described as a hodgepodge, often vast sets of durable, non-expendable, and expendable material that, in theory, represent particular medical uses, such as surgical, radiology, pharmacy, or ground evacuation. However, many medical devices still need an

MTOE authorization, resulting in medical equipment being assessed as excess or susceptible to double counting.

With this said, it is difficult to visualize the make-up of a medical assemblage, even for the medical professional. Thus, a notional Mobile Protected Firepower assemblage can articulate this obscure method. This assemblage could contain a variety and quantity of vehicles, such as the Abrams tank and Bradley fighting vehicle, along with

an assortment of weapon systems and communications equipment. In order to use all the vehicles, weapons, and radios in the set, a variety of durable items like tools, antennas, and cables are needed. Additionally, there are items with expiration dates, which are tracked through lot numbers. These include various types of ammunition, batteries, fuel, and food necessary to support combat operations. A cursory review of what a notional Mobile Protected Firepower assemblage would require could easily exceed

hundreds of lines of materiel with various special handling instructions making it challenging to assess shortages, readiness, and hand receipt management beyond the assemblage.

Knowledge is vital, and ambiguity is heresy. It is inconceivable that a broad group of military professionals would understand the technology that resides within the Army function or is assembled, such as aviation, armor, missile, or communications, outside of a formal, commonly understood system of accountability. Thus, the goal is to structure the Army's systems so that knowledge management occurs effectively. Defining, issuing, reporting, and accounting for property using numerous accounting concepts, such as but not limited to associated support items of equipment (ASIOE), components of end item (COEI), basic issue items (BII), and additional authorization list (AAL), or developing a contingency LIN or unit basic load (UBL), are how the tasks of property accountability and knowledge management are achieved within complicated structures and information management systems.

Numerous tanks are not placed within a tank assemblage to revert to the notional Mobile Protected Firepower assemblage analogy. Still, they are major end items with the machine gun and radio designated as ASIOE to the tank and authorized separately on the MTOE where if any of the components to the major end item

is rendered non-mission capable or missing, the functional relationship is compromised until the component is repaired or replaced. Moreover, the tank, machine gun, and radio each possess its own BII or AAL, whereas each tank and machine gun possesses its own tools, cables, and antennas. Lastly, it would be inconceivable and vastly inefficient for each notional Mobile Protected Firepower assemblage to possess a stock of fuel, batteries, food, and ammunition. To account for this materiel, the Army developed contingency LINs for difficult-to-store or cost-prohibitive materials, such as ammunition; chemical, biological, radiological, and nuclear materials; and sustenance. These pre-developed contingency LINs can be authorized during a time of need to sustain a combat operation adequately. UBLs can ensure material availability to sustain specific units or situations during peacetime or forward stationed units such as in South Korea.

By capitalizing on the recent successes of LIN development and the adoption of GCSS-Army's BOM construct, the medical logistics community is positioned to structure medical technology into more manageable schemes. For example, the radiographic fluoroscopic medical assemblage consists of a radiographic fluoroscopic unit, anesthesia unit, oxygen generator, sevoflurane vaporizer, and many other major end items. Each piece of medical equipment should be removed from the medical assemblage in totality

and designated as a major end item, and then other devices would be made ASIOE or COEI to that item. In this instance, the oxygen generator could be assessed as ASIOE, and the sevoflurane vaporizer assessed as COEI to the anesthesia unit. Like the tank analogy, each end item requires durables and expendables such as tools, pads, and leads, along with an assortment of hoses and cables, which are all placed within the broader medical assemblage, no matter its status, often requiring a clinical expert to assess the medical assemblage's readiness. To complicate readiness assessments, Army Regulation (AR) 220-1, Army Unit Status Reporting and Force Registration — Consolidated Policies, paragraph 5-4, assesses assemblage readiness by fill rate, where if an assemblage is filled more than 90 percent, the assemblage is assessed as ready for combat. Using this logic, if a radiographic fluoroscopic medical assemblage is missing a critical component, such as the breathing circuit to the anesthesia unit, or even a major end item, such as the radiographic fluoroscopic unit itself, the medical assemblage is assessed to be more than 90 percent complete and rendered ready for combat.

The solution is to identify what components within the medical assemblage is BII or AAL to each end item, remove them from the assemblage in totality, and make them available under the end item's LIN utilizing the BOM process within GCSS-Army. Moreover, the medical logistics community

has developed a host of start-up documents for many medical devices. These documents' data should also be incorporated into the devices' BII or AAL construct for each end item utilizing GCSS-Army's BOM process to ensure a complete understanding of the medical system's capabilities.

Once major end items and their associated BII and AAL are removed from the medical assemblage, the remaining items consist largely of medical materiel possessing expiration dates, more commonly known as potency and dated items, tracked via a lot number. To account for this materiel, AR 220-1, paragraph 5-4, directs commands to manually omit these items from command reporting due to limited shelf life, cost, or difficulty in storing. A more effective way to manage such materiel is to develop medical contingency LINs or a UBL to account for it, similar to ammunition and food, where its management is more aligned to stock and not assessed as property. At this point, medical materiel would be broken down into manageable concepts and portioned into understandable schemes eliminating the need and the mystique of the medical assemblage, thus enabling knowledge management throughout the Army's command and information technology reporting structures.

Beyond the current medical assemblage's hodgepodge nature, the records that populate the medical assemblage construct within GCSS-Army's BOM

structure, the MMIP portal, or the various start-up documents do not match the procurement records offered by the numerous medical supply agencies that make up the broader medical logistics system. This gap exists because the Army's medical supply system is modeled after the military treatment facility's local business model. Each agency possesses its own catalog that is inherently different from the records used to develop the assemblage, as detailed in the article "Opinion: Conversation about the Medical Supply System," published online in conjunction with the Summer 2022 issue of *Army Sustainment*. Moreover, national-level logistics tasks such as integrated product support and item management are performed by the medical customer at the tactical level to develop and cultivate local catalog records, resulting in considerable data variance between each medical catalog, as described in the article "Improving Medical Materiel Effectiveness: Tips and Strategies to Build Better Item Requests," published in the Fall 2022 issue of *Army Sustainment*. To overcome this gap, it is the responsibility of the medical customer, such as the nurse, medic, or medical maintainer operating at the tactical level, to engage in qualitative analyses to reconcile records between the assemblage and the various medical supply agencies to assess and fill medical assemblage shortages.

The Army requires effective knowledge management of its medical technology and

capabilities to enable standard Army property accountability and reporting principles. The inventory and replenishment of medical capabilities should align with standard supply management principles to achieve a comparable level of capability enjoyed by the rest of the Army.

*Chief Warrant Officer 4 Kevin O'Reilly is the brigade maintenance officer for the 65th Medical Brigade. He deployed to Iraq in 2003 with the 82nd Airborne Division, to Iraq in 2005 with the 44th Medical Brigade, and to Afghanistan in 2010 with the 1st Medical Brigade. He was chief of the Equipment Management Branch at Kimbrough Ambulatory Care Center in Landstuhl, Germany. He has a master's in data analytics and a doctorate in business from The University of the Incarnate Word, Texas.*

*Chief Warrant Officer 3 Dae Kim is the 8th Army asset visibility officer. He deployed to the United Arab Emirates in 2010 with the 108th Air Defense Artillery Brigade, to Iraq in 2012 with the U.S. Army Security Assistance Command, and to Iraq in 2017 with the 10th Mountain Division. He has a Master of Business Administration from Fayetteville State University, North Carolina.*

*Warrant Officer Isaiah Williams is the property book officer for the 65th Medical Brigade. He deployed to Afghanistan and Kuwait with the 101st Division, 101st Sustainment Brigade, and 3rd Infantry Division, 3rd Division Sustainment Brigade. He has a bachelor's degree in business administration with a concentration in business analysis from American Military University, West Virginia. He has earned his Certified Logistics Associate, Certified Logistics Technician, and Demonstrated Logistician certificates.*

*Featured Photo*  
*The 549th Hospital Center conducts a change of command inventory of one of its surgical medical assemblages at Camp Humphreys, South Korea, July 1, 2022. (Photo by Chief Warrant Officer 4 Kevin O'Reilly)*

# Future of Army Logistics

Exploiting AI, Overcoming Challenges, and Charting the Course Ahead

■ By Col. Everett "Bud" Lacroix

**I**ntegrating artificial intelligence (AI) into Army logistics can revolutionize supply chain management, optimize resource allocation, and enhance decision-making. However, it necessitates a well-rounded approach that addresses the challenges and concerns accompanying its implementation.

The swift progress in AI technology has uncovered new opportunities for its incorporation in various sectors, including Army logistics. Acknowledging AI's potential, the Army should endeavor to exploit its capabilities at scale and down to the tactical level to improve supply chain management, resource allocation, and decision-making processes. By aligning with the guiding principles

outlined in Joint Publication 4-0, Joint Logistics; Field Manual 4-0, Sustainment Operations; and Army Doctrine Publication 4-0, Sustainment, the Army can develop adaptive, responsive, and effective logistics operations in an increasingly complex and rapidly evolving world. Nonetheless, the integration of AI in Army logistics poses several challenges and concerns, such as finding the optimal balance between automation and human expertise, ensuring robust cybersecurity, addressing ethical issues, and adapting the workforce to the changing technological landscape. This essay examines the potential advantages and disadvantages of AI integration in Army logistics and discusses the well-rounded approach required to maximize benefits while

minimizing risks and addressing the concerns associated with its implementation.

### Maximizing Supply Chain Management: Real-Life Examples

AI's transformative power in significantly enhancing supply chain management within the Army is indisputable. As the former commander of Army Materiel Command, Gen. Ed Daly, underscored, AI is crucial in attaining the speed of relevance necessary for practical logistics. His vision encompasses AI and machine learning integrating seamlessly into every aspect of the Army's logistics processes, resulting in unparalleled efficiency and timely support for Soldiers on the battlefield. In support of this notion, a study published in the

International Journal of Production Economics revealed that integrating AI into supply chain management could bolster efficiency by 20 percent or more.

AI's ability to analyze enormous quantities of data and predict future trends and resource allocation requirements is another significant advantage for Army logistics. By harnessing AI-driven analytics, the Army can anticipate Soldiers' needs with greater precision, ensuring vital supplies reach their destination at the right time and place. Furthermore, predictive analytics can optimize Army operations by streamlining personnel and equipment distribution. Predictive analytics in Army logistics can determine when vehicle parts require replacement, enabling proactive maintenance before a breakdown occurs. This approach results in considerable cost savings and increased operational safety, reducing the likelihood of unscheduled downtime for maintenance and accidents. Moreover, predictive analytics can refine supply chain management by forecasting supply demands and verifying the right resources are available at the right place and time. This strategy enhances operational efficiency, trims lead times, and improves supply chain visibility.

### Adaptive Logistics and Decision-Making: Reacting to Real-Time Information

The capacity to adapt to rapidly changing conditions on the ground is an essential component of modern military operations. Adaptive

logistics and decision-making are crucial in sustaining the Army's effectiveness and responsiveness in complex environments. AI can potentially revolutionize this aspect of military logistics by providing real-time information, sophisticated analytics, and advanced decision-support tools.

A significant benefit of AI in adaptive logistics is its capacity to gather and analyze extensive data from various sources, including sensors, satellites, and other intelligence platforms. In addition, AI can access systems of record data from different Army source systems, like the Global Command and Control System-Army, Logistics Modernization Program, port automation tool, and Transportation Coordinators' Automated Information for Movements System II. AI can also leverage non-Army systems such as the Global Decision Support System and Logistics Functional Area Services. This comprehensive data analysis enables more informed decision-making and efficient logistics operations.

This information can create a comprehensive and up-to-date picture of the operational environment, allowing commanders to make informed decisions based on real-time intelligence. By having access to accurate and timely data, the Army can respond more effectively to emerging threats, minimize risks, and capitalize on opportunities.

In addition to providing real-time information, AI can enhance decision-

**A significant benefit of AI in adaptive logistics is its capacity to gather and analyze extensive data from various sources, including sensors, satellites, and other intelligence platforms.**



Future Soldiers will partner with autonomous systems to accomplish missions, as shown in this graphic depiction. (U.S. Army illustration)



Army researchers created this graphical depiction showing how future Soldiers will communicate in complex and autonomous environments. (U.S. Army illustration)

making by identifying patterns and trends that may not be readily apparent to human analysts. Through machine learning algorithms and advanced data analytics, AI systems can uncover hidden correlations and generate actionable insights to inform strategic and tactical decisions. For example, AI could help predict enemy movements, anticipate logistical bottlenecks, or identify potential supply chain disruptions before they occur. Equipped with these insights, commanders can make more informed decisions, allocate resources more efficiently, and maintain a competitive edge on the battlefield.

AI can also improve the Army's ability to respond to unexpected events and contingencies by automating certain logistics planning

and decision-making aspects. For instance, AI-driven systems could automatically reroute supplies and personnel in response to changing environmental conditions or sudden disruptions in the supply chain. By automating these processes, the Army can minimize delays and ensure critical resources are delivered where needed most, even amid uncertainty and adversity.

Another application of AI in adaptive logistics involves using simulation and optimization techniques to support decision-making under complex and dynamic conditions. AI-powered simulation models can help commanders explore various scenarios, evaluate potential courses of action, and identify the most effective strategies for achieving

their objectives. This can lead to more robust and resilient logistical plans as well as improved overall mission success.

### Counterargument

While the integration of AI in Army logistics presents numerous benefits, there are also valid concerns and potential drawbacks to consider. Some critics argue that reliance on AI could lead to overemphasizing technology at the expense of human experience and intuition, which are crucial in complex and unpredictable situations. There is a risk AI could create a false sense of security, leading to overconfidence and strategic errors.

Moreover, the significant costs associated with implementing AI

technology, such as infrastructure upgrades, software development, and ongoing maintenance, may outweigh the potential benefits. Budget constraints and competing priorities could make allocating sufficient resources to AI integration challenging, potentially limiting its effectiveness.

Another concern is the vulnerability of AI systems to cyberattacks and adversarial manipulation. As AI-driven logistics systems become more critical to Army operations, they also become a high-value target for adversaries seeking to disrupt or compromise military capabilities. Developing robust cybersecurity measures is crucial, but there is no guarantee these defenses will always be effective against rapidly evolving threats.

Furthermore, consider ethical issues related to AI in military logistics. Using AI could lead to biased decision-making, lack of transparency, or unintended consequences. The responsibility for the actions of AI systems must be clearly defined to ensure accountability in the event of errors or failures.

Lastly, integrating AI in Army logistics may have unintended consequences for the logistics military occupational specialty. While automating specific tasks can lead to increased efficiency, it may also result in job displacement and the need for significant workforce retraining. Ensuring the Army can adapt to these changes and retain

a skilled workforce is essential, but it will require ongoing effort and investment.

While the concerns raised in the counterargument are valid, it is essential to note the potential benefits of integrating AI should not be dismissed outright. Instead, a balanced approach is necessary, carefully considering the risks and challenges associated with AI implementation while seeking to harness its transformative potential in Army logistics. By developing a well-rounded strategy, the Army can address these concerns and maximize the benefits of AI integration.

### Conclusion

Integrating AI into Army logistics offers numerous opportunities to revolutionize supply chain management, optimize resource allocation, and enhance decision-making processes. However, it is crucial to recognize and address the challenges and concerns associated with AI implementation, such as striking the right balance between automation and human expertise, ensuring robust cybersecurity, addressing ethical issues, and adapting the workforce to the changing technological landscape.

To fully capitalize on AI's potential, the Army should adopt a comprehensive approach that includes investing in AI infrastructure, fostering collaboration between the public and private sectors, providing ongoing education and training for personnel, and developing robust cybersecurity

measures. Additionally, it is essential to maintain an open dialogue about the ethical implications of AI in military logistics and establish clear guidelines and accountability structures to ensure responsible AI deployment.

By adopting a well-rounded approach, the Army can overcome the challenges associated with AI integration, unlock its transformative potential, and maintain a competitive edge in the increasingly complex and rapidly evolving global security environment.

*Col. Everett "Bud" Lacroix currently serves as the support operations officer for the 21st Theater Sustainment Command. Previously, he served as the battalion commander for the 49th Transportation Battalion and 6th Brigade Support Battalion, 4th Security Force Assistance Brigade. He is a graduate of the U.S. Army Intermediate Level Education program at the Army's Command and General Staff College, the Joint and Combined Warfighting School at the Joint Forces Staff College, and the College of Naval Warfare at the United States Naval War College. He also holds a Master of Science in administration with a concentration in leadership from Central Michigan University and a Master of Arts in national security and strategic studies from the Naval War College.*

*Featured Photo  
Pfc. Daniel Candales, assigned to the 82nd Airborne Division, uses the tactical robotic controller to control the expeditionary modular autonomous vehicle as a practice exercise in preparation for Project Convergence at Yuma Proving Ground, Arizona, Oct. 19, 2021. (Photo by Sgt. Marita Schwab)*

# Army COMMITMENT to Improving Overall Nutrition

■ By Sgt. Maj. Kelvin E. Windbam



The Army Commitment to Improving Overall Nutrition (ACTION) is a Sgt. Maj. of the Army initiative to improve Soldiers' nutrition, readiness, and lethality for the Army. The Army established ACTION in 2019 as an enterprise-wide campaign to support the Holistic Health and Fitness system. ACTION aims to achieve and sustain improved nutritional fitness of Soldiers. ACTION supports individual physical and mental performance and wellness, impacting unit lethality, combat effectiveness, and readiness. The ACTION campaign focuses on four areas of

food service that require consistent review and improvement to support increased customer utilization, customer satisfaction, improved nutritional fitness of Soldiers, culinary training, facilities, menu development, and modernization.

ACTION is the sustainable path to having a healthier Army focused on holistic health and fitness through nutrition. By implementing Army Go for Green® (G4G) menus, warrior restaurant modernization, nutrition education, and Army Wellness Centers (AWCs), the Army will have a healthier and more lethal force ready to win America's wars, exponentially increasing Soldier retention and recruitment rates.

## Army Go for Green Menus

The United States Army Food Program Implementation Guide was created by the Joint Culinary Center of Excellence (JCCoE) to guide the operating procedures of the Army Food Program. The Sgt. Maj. of the Army initiated this Army program to establish a feeding (fueling) standard for warrior restaurants. It infuses the DOD, Department of the Army, and Special Operations forces nutrition standards, nutritional education, menu development, product selection, preparation, and serving standards. The Army G4G menus support the requirements of the JCCoE to improve holistic health, fitness, and the Army's second priority, readiness. This focus supports increasing the Soldiers' performance through nutrition awareness. Several tenets shape the framework of the Army's G4G menus. The modified

application of nutritional standards promotes healthier eating. The prescribed modifications standardize menus, recipes, preparation methods, and portion sizes for all warrior restaurants. Nutritional education emphasizes the links between diet, performance, and long-term health. The precise identification of healthier and less healthy options to aid in determining appropriate choices increases Soldiers' readiness. Marketing of the program maintains awareness of nutrition, proper food and beverage choices, and both short-term and long-term performance health.

Vegan and pescatarian options also support additional nutrition requirements served in warrior restaurants as part of the Army G4G menus. Vegan diners do not eat animal products as they typically have plant-based diets, and pescatarian diners incorporate seafood as the only source of meat in their diets. This effort to include dedicated menus that include vegan and pescatarian meals supports efforts for Soldiers to have the same menu options as local quick-service restaurants. This initiative supports design requirements to make installations' warrior restaurants the number one choice for Soldiers to eat for breakfast, lunch, and dinner.

## Warrior Restaurant Modernization

The warrior restaurants' dated decoration packages and equipment have not been updated to keep pace with industry-leading restaurants. Over the past five years, the lack

of modernized warrior restaurants has significantly caused utilization rates to drop. Sgt. Maj. of the Army Michael Grinston proposed that all warrior restaurants remove deep-fat fryers and replace them with air fryers. Air fryers serve as a healthier alternative for deep-fried foods; air fryers prepare quality fried foods without using oil. Menu fatigue also remains a driving force for Army warrior restaurants to modernize. To keep Soldiers utilizing the warrior restaurants, the facilities must offer some of the same amenities as its industry competition.

Modernizing warrior restaurants and providing the best feeding options makes the warrior restaurant the number one choice for Soldiers to eat with their squads. This allows teams to build camaraderie and trust after rigorous physical readiness training or a long training day. Squads can go to their warrior restaurant and talk to each other about issues they may struggle with over an excellent and nutritious meal. This can lead to getting the warfighter the behavioral health help they may need to increase their readiness and meet the Chief of Staff of the Army's top priority in taking care of people. The warrior restaurant must remain a welcoming place Soldiers want to come to, as it serves as a vehicle for team building. The best dialogue typically occurs over a shared meal, and the warrior restaurant remains the venue Soldiers feel comfortable in to communicate problems with leaders.

Installing internet capabilities within the warrior restaurants also



Nicole Leth, director of the Fort Belvoir Armed Forces Wellness Center, prepares Sgt. Maj. of the Army Michael A. Grinston for a biofeedback stress relief session, May 18, 2021, at Fort Belvoir, Virginia. (Photo by Spc. Hayden Allega)

serves as an initiative outlined in the modernization plan. This simple convenience provides Soldiers a place with free internet access, allowing Soldiers to complete continued education courses while enjoying a nutritious meal. Studies display that internet use between 18- to 24-year-olds remains significantly higher from years past. These analyses suggest that installing Wi-Fi in warrior restaurants will enable them to meet the 65 percent utilization rate. On average, by eating in warrior restaurants instead of local restaurants, Soldiers will save \$200 a month.

The warrior restaurant modernization includes cooking action

stations that prepare healthy made-to-order menu items such as vegetable stir fry, fruit smoothie bars, and ready-to-eat meal prep options for Soldiers who do not have time to dine in. These modernization efforts made warrior restaurants comparable to some of the most popular restaurants Soldiers frequently patronize. Adding these capabilities gives Soldiers diverse eating options at lower prices than quick service restaurants. Embedding AWC nutritionists inside warrior restaurants to educate Soldiers on healthy meal combinations and schedule appointments for Soldiers is also a part of modernizing warrior restaurants. Adding the capability of AWC staff, which includes certified dieticians, will give Soldiers access

to professionals at the point of need within the warrior restaurant.

### Army Wellness Center

The services at an AWC support a medically ready force by targeting the risk factors most likely to result in chronic disease, injury, and performance issues. The standardized and streamlined AWC model optimizes service delivery to maximize client health outcomes. Leaders must use the upstream thinking model to prevent injuries before they happen. For example, 71 percent of military injuries occur from overuse of muscle ketal injuries. Incorporating the AWC into the warrior restaurant modernization plan will assist the Army with

getting upstream on musculoskeletal (MSK) injuries. Embedding AWCs into warrior restaurants allows Soldiers to receive support during three daily touchpoints (breakfast, lunch, and dinner). This will enable the AWC-certified trainers and dieticians to educate Soldiers at the warrior restaurant and schedule their appointments at their local AWC.

AWCs provide evidence-based services across six standardized cores. The programs support personalized health assessments through the health assessment review, state-of-the-art fitness assessments, healthy nutrition education, stress management, general wellness education, and tobacco-free living estimates, and include metabolic, cardiorespiratory fitness, body composition testing, and personal health coaching. These assessments can help reduce MSK risk by educating Soldiers on healthy weight loss strategies and fitness improvements. Information provided includes personalized caloric targets to promote the achievement of healthy target body weights and exercise prescriptions based on individualized goals.

Having AWCs embedded in the warrior restaurant enables Soldiers to have access to professionals that can assist in building meal plans in real-time as Soldiers enter the warrior restaurant. The AWC educational capability will allow Soldiers to get individualized meal plans and health screenings to optimize performance. The health screenings an AWC provides can help Soldiers improve on fitness assessments, body composition

assessments, and overall holistic health and fitness. Health education remains a critical component of the AWCs portfolio, a force enabler to increase Soldier readiness and lethality across the Army.

### Education

The Army Credentialing Assistance (CA) program increases the Soldiers' knowledge, skills, and attributes, making them more competitive for future assignments and promotions and helping Soldiers attain industry-recognized credentials. The CA trains Soldiers on industry-seeking certifications and improves Army readiness through the retention of quality Soldiers, enhances Soldier career progression, and provides Soldiers with skills and capabilities reflective of civilian qualifications. Culinary specialists can become members of the American Culinary Federation of more than 17,500 members — the nation's foremost organization of chefs providing hands-on skill validation through certification and recognized professional achievement through awards and competitions. The credentialing mission supports providing Soldiers with the knowledge and credentials to excel in their military careers while helping them to maintain their competitive edge in today's evolving culinary industry.

The Advanced Culinary Skills Training Course involves a very intense hands-on course designed to improve the overall skills of an experienced cook. This remains an excellent resource to learn or

review your basic cooking skills. The course focuses on knife skills, menu development, advanced baking techniques, buffet platter production and presentation, course meals (three, five, and seven studies), effective purchasing techniques, advanced dessert preparation, table service, nutrition, and more. The culminating event entails a multi-course meal for select dignitaries and their guests. The class remains responsible for designing, training, and serving the dinner. During this course, we now offer American Culinary Federation certification.

Credentialing provides senior food service leaders with the technical knowledge, management skills, critical thinking, and decision-making to effectively understand and meet the Army's food service objectives. Facilitation of all subjects uses the blended learner-centric approach that includes hands-on research, group discussion, and individual practical exercises. Areas of emphasis include garrison food service management operations, accounting, Army field feeding system/theater of operations, Army Food Management Information System, ServSafe, and food service contract management. In addition, credentialing creates an academic baseline in business topics such as management, communications, and economics that builds upon the culinary management specialist baseline by developing technical knowledge and application skills in market research, consumer behavior, advertising, and marketing strategy. Courses combine elements of

advertising, communication, research, and finance. After completing the marketing course, 92G Food Service Specialists will have the skills needed for various positions and roles such as advertising, data analysis, market research, retail management, sales, and more.

### 30-Day Fitness and Nutrition Challenge

ACTION also fosters the spirit of winning. Through the ACTION initiative, the 30-day fitness and nutrition challenge was born. The 30-day challenge includes an enterprise partner, the Defense Commissary Agency. The challenge solicits Soldiers from all posts, camps, and

stations within and outside the continental United States. Soldiers receive dietician-approved recipes from both the commissary and the warrior restaurant. The Soldiers only eat dietician-approved G4G meals for thirty days. During the 30 days, the Soldiers' body compositions require measurements to analyze the increase or decrease in body composition. In addition, the Soldiers also conduct physical assessments that include the Army Combat Fitness Test, metabolic testing, and oxygen assessments. At the end of the 30-day assessment, the Soldier with the best baseline scores wins the 30-day fitness and nutrition challenge.

During the 30-day performance challenge, Soldiers are given cooking classes. The classes begin with Soldiers getting a tour of the commissary to learn how to shop for G4G menu items. After the commissary tour, the Soldiers receive a cooking class demonstrating how to prepare green meals. Army culinary specialists and AWC dieticians provide cooking demonstrations. The classes use cooking apparatuses that Soldiers have in their barracks rooms.

This challenge displays high success rates in influencing Soldiers to remain motivated to eat healthily. The support of the chain of command

remains vital to the success and participation of Soldiers participating in the 30 days of challenges. It is a fun, sustainable approach to get our Soldiers healthy eating dietician-approved G4G menu items in the warrior restaurant and the local commissary. The ACTION initiative places Soldiers first to improve their holistic health and fitness, but it also comes with a high cost in a financial constraint era. Some congressional leaders counterclaim that ACTION is not a top DOD priority.

### Counter Claim

Food service modernization brings a price tag upwards of \$55 million. The Army only requires warrior restaurants to maintain a utilization rate of 65 percent to remain open. If the warrior restaurant falls under a 65 percent utilization rate, the warrior restaurant, by regulatory guidance, experiences closure and reconsolidation with another warrior restaurant. This results in no misuse of taxpayer dollars. In addition, warrior restaurants need help competing with the mega food courts on every post, camp, and station. This is attributed to industry restaurants operation hours being longer than warrior restaurants and the revenue restaurants generate from marketing their products. Warrior restaurants need continuity when units participate in training events, which causes warrior restaurants to close during training. The bottom line, warrior restaurants cannot compete for our Soldiers' business against industry restaurants such as McDonald's, Popeyes, Panera Bread, or Freshens, to name a few.

Warrior restaurants cannot compete with industry-based quick-service restaurants because the Army is not a business and does not generate revenue. Top-selling quick-service restaurants generate millions of dollars in profits annually. These profits remain used for marketing to the target audience aged 18 to 24. The marketing efforts from quick-service restaurant target ease of access for the customer and better menu options that reach a more diverse customer base than warrior restaurants. Quick-service restaurants provide flexible feeding options such as delivery, making it convenient for Soldiers to access. Lastly, industry-based restaurants meet customer needs 24 hours a day, whereas Army warrior restaurants do not.

### Conclusion

ACTION is a Sgt. Maj. of the Army initiative that began in 2019. The initiative focuses on improving the health and fitness of Soldiers. By implementing Army G4G menus, warrior restaurant modernization, nutrition education, and AWCs, the Army will have a more healthy and lethal force ready to win America's wars. ACTION remains a critically important initiative supporting increasing lethality across the Army. The plan to accomplish ACTION intends to implement Army G4G menus, warrior restaurant modernization, education, and embedding AWCs professionals inside warrior restaurants. Including the AWCs in the modernization plan gives Soldiers direct access to AWC professionals daily. This will lead to

having a healthier and more lethal force ready to win America's wars. In addition, embedded AWCs in the warrior restaurants will focus on Soldiers' nutrition to stay upstream in preventing MSK injuries.

To build highly fit, cohesive, and disciplined teams, first-line leaders must ensure their Soldiers remain educated on the proper Army G4G menus. For the Army to compete and win the nation's wars on any battlefield, Soldiers must fuel their bodies with the best foods available. ACTION provides the framework and funding to modernize the Army's food service program to provide Soldiers with a warrior restaurant comparable to industry quick service restaurants. ACTION creates an environment for teams to eat meals together in state-of-the-art facilities with free Wi-Fi access, making the warrior restaurants the number one choice for Soldiers to eat.

*Sgt. Maj. Kelvin E. Windham has recently been a student at the Noncommissioned Officer Leadership Center of Excellence Sergeants Major Academy Class 73. He previously served as a senior logistics NCO for the Deputy Chief of Staff of the Army, Headquarters, Department of the Army, G-4, Pentagon, and as the first sergeant for the 2nd Infantry Division Sustainment Brigade, 581st Quartermaster Company, Camp Humphreys, South Korea. He is an alum of the Institute for Defense and Business, Industry Based Broadening Logistics course, and the University of North Carolina at Chapel Hill. He has a Bachelor of Arts in leadership and workforce development from the Command and General Staff College.*

*Featured Photo  
A culinary specialist prepares a plate of food during the "Back 2 Basics" culminating luncheon, Fort Stewart, Georgia, March 19, 2021. (Photo by Pfc. Summer Keiser)*



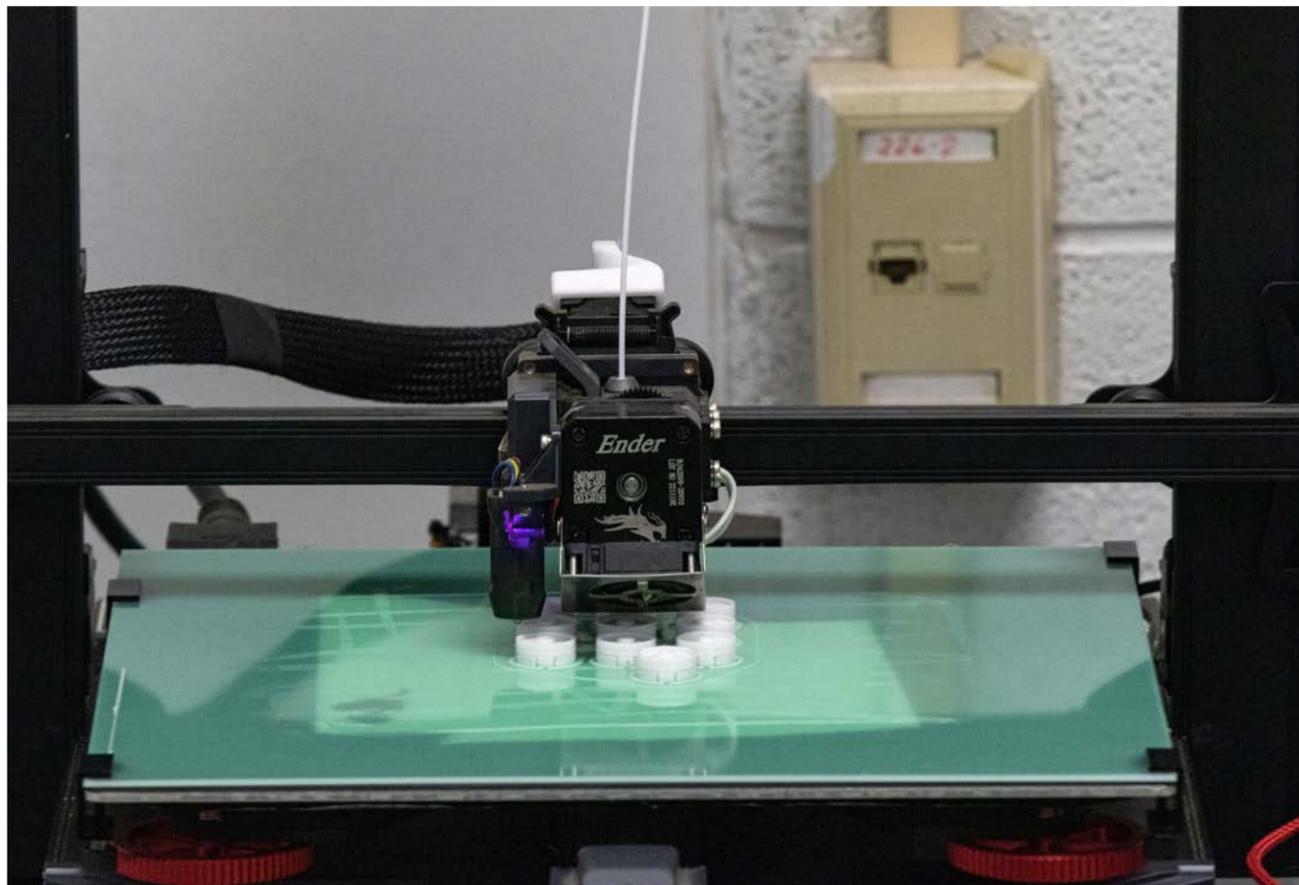
*Soldiers enjoy tasting different dining facility menu options and fill out comment cards to express their thoughts about each one at Fort Knox, Kentucky, Oct. 5, 2021. (Photo by Jenn DeHaan)*



# Modernize Army Equipment, Training with Rapid Prototyping Technologies

By Staff Sgt. Marcel A. Blood

Additive manufacturing, also known as 3D printing, allows users to create physical objects using digital files. The user generates a digital model using computer-aided design software or with an existing item using a 3D scanner. Originally, companies used 3D printing to create prototypes more rapidly. These prototypes can serve as a tooling master, which allows more durable materials to be used. For example, if an engineer designs a new part that must be manufactured out of carbon fiber and resin, they model the object and produce a negative of the model using a 3D printer. This negative is then used as a mold to apply carbon fiber and resin. It is important to remember that although this process sounds complicated, a Soldier



*Soldiers with Bravo Company, 10th Brigade Support Battalion, 10th Mountain Division, learned how to use 3D printing to streamline the replacement of small parts of military equipment that are otherwise expensive or tedious to obtain, improving the readiness of 10th Mountain Division as a whole. (Photo by Pvt. Elijah Campbell)*

can learn how to do this in a single day of instruction for small items, given they have access to the correct equipment.

### Unit-level 3D printing

The 3D printing program at the 28th Ordnance Company (EOD) is purpose-built for their needs, and it is an effective example of the widespread utilization of 3D printing at the small unit level. The program balances start-up costs, long-term viability, and overall production.

### Brief History and Overview

The 28th EOD started its 3D printing program in 2022 after an Aberdeen Proving Grounds 3D printing conference demonstrated how to use the capability within units. Representatives from the Army, Navy, Air Force, and Marines were in attendance, as well as

law enforcement personnel from across the U.S. The sponsors demonstrated various 3D printing solutions, including metal, compact, and large-volume printers. The participants decided a useful program needed to be economical, require little technical expertise, and be efficient with one's time. These requirements were derived from the things that historically caused programs in the industry to fail: lack of money, training, and time. Money, training, and time are required to 3D print, and the 28th EOD demonstrated a usable model to balance them.

The unit initially purchased three 3D printers and two 3D scanners. Each 3D printer was purposefully chosen to complete a certain task, and the 3D scanners encompassed the two capabilities previously mentioned. Remembering the expendable portions of the 3D printing process is also important. Filament materials and expendables such as nozzles and other components must be forecasted.

### PTKM-1R/POM3 Landmines

The 28th EOD saw the need for the program after the discovery of PTKM-1R and POM3 landmines in Ukraine. As a snapshot into potential future conflicts, Ukraine has been illuminating the capabilities of competing foreign countries. These next-level landmines, discovered in April 2022, use advanced technology to target vehicles and personnel. They change the battlespace in a way that necessitates an understanding of them to train and equip U.S. forces properly. The initial estimate, even for priority units capable of paying premium prices, of receiving training aids for these ordnance items was 18 months. Commercial entities move as slowly as the economic process allows them to, and, unfortunately, they are not fast enough to keep up with the initiative of the U.S. military. Using 3D printing, the 28th EOD had a full-scale training aid replica of the PTKM-1R 3D modeled, printed, and in front of Charlie Company, 2nd Battalion, 75th Ranger Regiment in five days. This level of prototyping and flexibility was unprecedented and allowed the unit to adjust to changing conflicts and train on new technologies as they are found, not months after.

The unit has successfully printed 29 different models in various quantities. It has also printed pieces of equipment developed in-house by unit members. These pieces of equipment are not safety-related but instead increase functional implementation of existing equipment, such as night vision covers, cable organizers, shipping aids, battery compartments, etc. These items are used across the organization, and any surplus is given to peer units to bolster their capabilities.

All additive manufacturing projects across the unit have reduced the cost of applicable training aids and equipment by 97% and the acquisition time by 99%. This savings is achievable by all Army units, whether stateside or deployed.

### Army Academic Institution Integration

Although 3D printing is not new, many Soldiers must be taught its benefits by introducing them to this technology and its capabilities at Army's learning

institutions, especially leader courses. The curriculum should focus on small unit implementation and the actions of the individual to affect the process at the associated level of instruction. For example, an enlisted Soldier in the Basic Leader Course should learn about resources to provide functional expertise and physically navigate the 3D printing process. In contrast, an enlisted Soldier in the Senior Leader Course should learn to advise on and manage such a program.

In addition to increasing awareness, updating curriculum should include the most recent information across the Army about existing additive manufacturing initiatives, resources available to units, current policies, and examples of successful implementation, like the 28th EOD.

The end goal for modernization instruction at Army learning institutions should be that the most pertinent and current information about improving the Army is shared in an open-forum capacity. This is the structure featured in Army courses, and the curriculum should be shared at the level at which the instruction can reach the most Soldiers to achieve maximum dissemination of information.

**Staff Sgt. Marcel A. Blood** currently serves as an explosive ordnance disposal (EOD) team leader at the 28th Ordnance Company (EOD) (Airborne), 192nd Ordnance Battalion (EOD), on Fort Liberty, North Carolina. He enlisted in the Army in 2011 as an EOD technician. He deployed to Afghanistan in support of Operation Enduring Freedom, to Syria and Iraq in support of Operation Inherent Resolve, and to Afghanistan in support of Operation Freedom's Sentinel. He is a Distinguished Honor Graduate of the Senior Leader Course, Advanced Leader Course, and Basic Leader Course. He has an undergraduate degree in forensic psychology from Southern New Hampshire University (SNHU) and a graduate degree in industrial/organizational psychology. He is currently enrolled in his second graduate program in mental health counseling at SNHU and his second and third bachelor programs in nutrition science and organizational leadership at the University of Arizona.

**Featured Photo**  
Spc. Spencer Gasaway builds a custom hub cap specialty tool at Marne Innovation Center on Fort Stewart, Georgia, April 20, 2023. (Photo by Sgt. Jameson Harris)

**Editor Note:** This article was a selection from the Army Sustainment University President's Writing Competition.

# Modernizing? Don't Forget People!

By William T. Smith, Ph.D.

Recent history has provided mixed messages on military modernization and whether nations should invest in next-generation technology. For instance, the United States and its NATO partners provided the Afghanistan National Army (ANA) with material support years beyond what the insurgents had. Yet, the ANA quickly

collapsed without coalition support. Conversely, Russia suffered greatly after failing to modernize its military to counter the threat of newer anti-tank weapons and unmanned aerial vehicles. Given the differences between the conflicts, it may seem unfair to compare the two, except that in each conflict, success or failure depended upon how people made the most of the equipment available. Many

leaders immediately turn to material solutions to outpace an adversary's modernization, thinking each situation is like Russia's failure to modernize. However, when it comes to effectively using data to make better decisions, the Army is more akin to the ANA, and fielding more technology may not be the right application of resources.

Soldiers in the U.S. Army bring an intuitive understanding of technology that transfers to the employment and sustainment of modern weapon systems. This familiarity stems from dealing with advanced machinery and technology on a daily basis, something many ANA soldiers lacked. Because of this unfamiliarity, many ANA vehicles and weapons went without preventive maintenance. Training and additional systems to track maintenance helped, but the ANA soldiers often reverted to their initial behavior and understanding. It became evident a culture of preventive maintenance required changes in their education and development.

The Army is attempting to modernize all things data after seeing how civilian organizations have benefited from incorporating data analytics into their processes. However, the average Soldier may not intuitively understand data analysis and the mathematics that support predictive logistics. This has led many within the military to grasp onto hype surrounding automated data analytics, especially artificial intelligence (AI) and machine learning, without fully understanding the technology, as if the object provides an advantage over an adversary. This may be hard for many to accept, but the similarities between handing the ANA a helicopter and providing Soldiers with automated data analysis are eerily similar. Developing a culture that embraces data-driven decision-making and quantitative reasoning takes years of education.

Many civilian organizations have centralized departments dedicated to data analytics, meaning most managers do not require indoctrination into a data culture. Why does the Army require decentralized data analysis and more emphasis on leaders at all levels to be educated? The short answer is the Army's mission sets are more variable, multifaceted, and broadly defined, while most civilian companies have a single objective

— maximize profit. Civilian companies have well-established, unchanging systems that benefit from data gathered from sensors. At the same time, the military often changes established relationships and processes based on mission requirements, with most data being provided through human input. The ability to conduct tailored, decentralized operations has been a hallmark of the Army's success on the battlefield, but it makes centralized data analysis difficult. A deliberate effort must be made to educate all Soldiers on data literacy, with leaders obtaining a greater understanding of how to use data to inform decisions. A culture of quantitative reasoning will not be created quickly, but it starts with delivering the education many Soldiers are not getting in high schools and colleges.

Modernizing information technology and data analysis capabilities are vital to maintaining the lead over near-peer adversaries. However, the Army must be cautious not to allow the technology to outpace its understanding of how to employ and maintain it effectively. While advances in automated decision tools have been impressive, there is a serious risk of them being biased toward the conditions that were used to develop the algorithms that made them successful. An AI tool trained on logistic data from the National Training Center will perform poorly if blindly applied to a unit training at the Joint Readiness Training Center. Even with more mundane analysis tools, correlation can be mistaken for causation, leading to poor decision-making. Without a concerted effort to overhaul ingrained behaviors while educating servicemembers on the foundations of data analysis, leaders will resort to leaning heavily on experience and the art of decision-making while giving less consideration to the science of decision-making. Before the Army invests heavily in modernizing its data systems, it must invest in modernizing its education systems to ensure its people know how to fight and win with data.

*William T. Smith, Ph.D., is an instructor of operations research for the Army Sustainment University at Fort Gregg-Adams, Virginia. He has more than 29 years of military experience as a logistics officer and operations research analyst. He earned a Master of Science in applied mathematics from the Naval Postgraduate School and a Doctor of Philosophy in industrial engineering from Pennsylvania State University.*

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# SFAB Sustainment

Operating in the Interoperability Frontier

■ *By Lt. Col. Jeremiah Hull and Lt. Col. Eric Shockley*

When discussions about security force assistance brigades (SFABs) arise, the topic often focuses on issues at the user or tactical levels, such as incompatible tool sets or equipment differences. Issues like sustainment interoperability challenges through the U.S. European Command (USEUCOM) area of responsibility (AOR) are less discussed. Using experience from advising SFABs

in multiple nations within the USEUCOM theater, this article aims to highlight considerations for senior sustainment leaders, such as at the sustainment brigade or division G-4 level. With proper consideration, leaders can adjust their standard operating procedures to reflect solutions to interoperability challenges when incorporating a non-U.S. unit into a U.S. operation or formation. More information on the human, procedural, and technical interoperability domains

can be found in Army Regulation 34-1, Interoperability.

Although SFABs have been around since 2017, how the Army currently employs them is relatively new. Each of the five active component brigades is aligned or assigned to a combatant command. The way the units are integrated into organizations is mission dependent. The sustainment advising battalion focuses on advising, supporting, liaising, and assessing (ASLA) tasks



across the sustainment and mission command warfighting functions. Through ASLA, the Army works on building or improving the capability of allies and partners, building capacity, and building and developing interoperability. Everything done is grounded in U.S. doctrine focusing on large-scale combat operations (LSCO). Each SFAB team, from the captain-led advisor team to the brigade headquarters team, covers the operating to generating levels.

Depending on the mission, each team operates independently within one organization, like a partner force battalion, or consolidates and spreads across the breadth and depth of one or multiple organizations across multiple countries, like a multinational division.

ASLA is executed along the continuum of competition, crisis, and conflict. The unit focuses on advising and assessing competition with an eye on preparing for conflict. In support roles, SFABs become relationship managers between the allied and partner forces and the U.S. forces. The other critical pieces SFABs provide the Army, reinforced in 2022 by the Chief of Staff of the Army, are access, presence, and influence. While the U.S. already has a historical presence in Europe, SFABs focus on countries that do not have a large U.S. presence, such as Romania, North Macedonia, and Georgia. The unit provides persistent presence. One of the concerns from the Army service component command perspective is rotational forces

relearning the same interoperability issues. SFABs can pass on lessons learned and maintain continuity due to rotational deployments. If the operational environment deteriorates from competition to crisis or conflict, the roles shift to liaise and support. Technical interoperability is provided with the unit's organic mission command systems or presence. Being embedded with allies and partners enables unit members to understand the gaps and shortfalls in the partner force's capability and to rapidly identify options to close those gaps, fulfilling our support role. SFAB sustainment elements support Army shaping operations by establishing logistics partnerships, enhancing interoperability, establishing or refining host nation (HN) support agreements, and gaining access to potential critical infrastructure, which are key tasks of the SFAB. Ultimately, an SFAB is the connective tissue that understands how an ally, partner force, and the U.S. operates.

Now that the SFAB mission and operational concept are summarized, here are some interoperability challenges. The first challenge sustainment leaders should consider is the integration of non-U.S. units into a division's task organization or addition to a sustainment brigade's general support requirements conducted on an area basis. Under similar circumstances, this consideration applies to non-Army units, like the Navy and Marine Corps. It begins with a series of questions that allow

sustainment leaders to understand the interoperability gaps between supporting and supported units.

**Does the unit have a support operations section?** The idea of an additional staff section that works in concert with the S-4/G-4 is generally only seen in U.S. Army operations. From the outset, leaders must identify the counterpart relationships to prevent overwhelming the supported unit with sustainment reporting requirements from multiple U.S. entities directly related to procedural and human interoperability domains.

**Does the unit conduct parallel planning? At what echelon does sustainment planning occur?** In U.S. Army units, it is standard procedure for subordinate and enabling units to plan in parallel with a higher-level unit rather than wait until the complete order is published (e.g., a brigade support battalion develops a concept of support even though the brigade combat team order is only in the warning order phase). This is not necessarily the case in non-U.S. units and can become a point of friction between counterparts.

**Does the unit forecast requirements?** What was experienced from a procedural domain standpoint was that the unit did not make general projections about an operation, a form of parallel planning. Instead, they opted to wait until the order was published and the supported units generated

requirements. The unit forecasted requirements at a more micro level and used existing forecasting tools to predict consumption only once the final order was issued.

**Can the unit integrate non-U.S. units (subordinate or adjacent) into sustainment reporting channels?** This relates to the technical and human aspects of interoperability and is the actual format and method of reporting, whether it is a standalone spreadsheet with translated terms or a common software for virtual meetings, and the expectations for reporting. Expectations from U.S. units for what a subordinate unit briefs in a maintenance meeting may not match non-U.S. expectations. This can lead to interoperability friction in the human domain, exacerbated by problems in the technical domain due to using different software solutions to report data.

**Can sustainment leaders transition terms and concepts from a U.S. format to a NATO format?** Many NATO nations have brigade-sized logistics units, but U.S. leaders must understand the differences in structure, employment, and capability of these units, as it is a mistake across all three interoperability domains to see a logistics brigade icon on an organization chart and assume it is comparable to a U.S. Army sustainment brigade.

The second challenge that sustainment leaders should consider is how familiar non-

U.S. units are with LSCO. More importantly, leaders must recognize if a counterpart truly understands the impact a transition to LSCO has on sustainment operations. As part of the advising mission, a live fire exercise preparation was observed, during which the medical concept of support was asked about. Surprisingly, the response was that the unit would call the local emergency services. When pressed, the unit responded that this procedure was the expectation even for LSCO. A second example involved resupply operations, with the default being to purchase fuel, supplies, etc., on the local economy. Both examples point to a lack of understanding of the LSCO operating environment, which the Army faces as well. While a nation at war can have areas completely untouched by combat, at the tactical level where fighting occurs, the normal commercial support system disappears as the power grid fails, bridges and roads are destroyed, and civilians flee. This impacts all three domains of interoperability. Regarding the human domain, leaders likely face challenges in generating the culture change for counterparts with decades-long careers without significant consideration of sustainment in LSCO.

In some cases, the culture change is hampered by the organizational culture of the non-U.S. unit, as few European countries allow for high levels of mission command among subordinate leaders. This limits junior leader authority to make

decisions for designing sustainment plans, something U.S. leaders may be unfamiliar with. This connects directly to the procedural domain in that leaders may need to invest time working with counterparts to develop procedures for operations in a LSCO environment. For example, leaders may work with a counterpart's legal office to create authorities and procedures for seizing fuel or occupying private property due to military necessity.

Lastly, leaders can assist counterparts in the technical domain by sharing insights and practices that U.S. forces use on the battlefield, such as using monetary wire transfers to allow for field ordering officers or commanders' emergency response program payments. Additionally, leaders must clarify the support relationship expectations with non-U.S. units. Unfortunately, the U.S. definitions of command and support relationships do not match NATO definitions. This creates a support shortfall due to a misunderstanding of expectations since many of the terms are the same even though their meaning differs.

The third challenge is that U.S. forces are likely less familiar with USEUCOM operations than NATO counterparts, which means U.S. leaders immediately begin an uphill battle trying to understand the sustainment situation and available support options. This limits a leader's ability to get past ground level interoperability issues and instead see the bigger picture.

This was experienced during the unit's initial USEUCOM advising mission, and arguably we learned as much or more from our counterparts as they learned from us. Specifically, we discovered several topics that can be useful for senior sustainment leaders to know about. Some examples are:

- Acquisition and cross-servicing agreement: An agreement between nations that allows one to provide to the other, including supplies and services, in lieu of monetary payments. For example, an HN could provide life support to U.S. forces on an HN base during an exercise in exchange for the U.S. providing fuel to the HN during a previous training exercise.
- Mission partner environment: A common computing solution that European and NATO nations connect to and share information from their own internal networks and systems.
- Logistics functional area services: A suite of logistics software tools that allows allies and partners to coordinate logistics requirements. Currently focused on managing transportation, it also has functionality for sustainment planning, deployment operations, and other aspects of logistics.
- Standardization agreement: Used within NATO for a common understanding between nations on technical or equipment-related spec-

ifications, such as the additives required to make diesel fuel into JP-8 jet fuel.

- National support element (NSE)/joint logistic support group (JLSG): These two entities go hand in hand, with the NSE being the primary support provider to a nation's forces. For example, a U.S. Army sustainment brigade providing support to U.S. forces during a training exercise is, from the ally or partner's view, the U.S. NSE providing support to U.S. forces. The JLSG is primarily a wartime entity and, in theory, is the handoff point between the NSEs (who get supplies and equipment forward from their own nation to the joint operations area or the transition from the communications zone to the combat zone) and the multinational effort managed by the JLSG to get those supplies and equipment forward to the end user.

In closing, many interoperability challenges across the three domains remain at the lower tactical level, such as fuel nozzle compatibility or the lack of expertise and repair parts for U.S. mechanics to work on another nation's fleet of vehicles. However, there are additional interoperability challenges at battalion and above regarding planning, providing support, and understanding doctrinal capabilities that leaders can address by updating their planning tools and standard operating procedures. Senior sustainment leaders operating

in the USEUCOM AOR can begin addressing these challenges by understanding our allies' and partners' differences in doctrine and practice.

Key resources for this are the available SFAB teams already operating in theater, learning the sustainment intricacies as they execute their ASLA missions. These advisors can provide both context and connection, helping fill in the whole picture of the sustainment situation in the theater.

*Lt. Col. Jeremiah Hull currently serves as the commander of the 6th Sustainment Advising Battalion, 4th Security Force Assistance Brigade, at Fort Carson, Colorado. He commanded the 17th Combat Sustainment Support Battalion in Joint Base Elmendorf-Richardson, Alaska, and has held various tactical and strategic assignments, including multiple combat deployments and an operational deployment as an advisor in Romania.*

*Lt. Col. Eric Shockley currently serves as the support operations officer in the 4th Infantry Division Sustainment Brigade at Fort Carson, Colorado. He previously served in the 6th Sustainment Advising Battalion, 4th Security Force Assistance Brigade in various roles and in tactical assignments from platoon to brigade level that include deployments to Iraq, Romania, and Poland.*

*Featured Photo*  
*Soldiers assigned to Bravo Company, 2nd Battalion, 70th Armor Regiment, 2nd Armored Brigade Combat Team, 1st Infantry Division, supporting the 4th Infantry Division pose for a picture with soldiers from Poland, Slovenia, and Romania after Anakonda 23 live fire training exercise at Nowa Deba Training Area, Poland, May 15, 2023. (Photo by Pfc. Jason Klaer)*

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