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Building Capable Sustainment Formations

Inside

- >>> **Be the Leader You Want to Be Led By:**
An Interview With Gen. Stephen Townsend
- >>> **Capable Sustainment Units Understand the Big Picture**
- >>> **What 1918 Can Teach Us About 2028**
- >>> **Developing the Next Wave of Sustainment Leaders**

ON THE COVER



Sgt. Seamus Redmond and Spc. Joseph Page stand guard as the sun sets at the National Training Center at Fort Irwin, Calif., on May 8, 2018. (Photo by Capt. Katherine Zins)

AMC COMMANDER

2 Capable Sustainment Units Understand the Big Picture

The commander of the Army Materiel Command discusses how capable sustainment units contribute to the essential links between tactical-level operations and the strategic base.

By Gen. Gustave "Gus" Perna

ARMY G-4

3 What 1918 Can Teach Us About 2028

In order to build successful units, we must make fellow Soldiers feel welcome, share experiences, do what is right, and treat teammates with dignity and respect.

By Lt. Gen. Aundre F. Piggee

FOCUS

5 Developing the Next Wave of Sustainment Leaders

Teamwork and collaboration are helping the dedicated instructors at the Army Logistics University to prepare the next generation of sustainers for success.

By Maj. Kyle Smith and Maj. Howard Van Matre

FEATURES

8 Be the Leader You Want to Be Led By: An Interview With Gen. Stephen Townsend

The commander of the Training and Doctrine Command gives his insights on teamwork and the role sustainers play in total Army success.

By Arpi Dilanian and Matthew Howard

14 Shaping a Sustainment Community From Half a World Away

The 8th TSC sustains a broad, multi-domain environment and serves as a model for integrating sustainment teams, ensuring enduring readiness in the Pacific, and executing the national defense strategy.

By Maj. Gen. Charles R. Hamilton and Maj. Aaron J. Shattuck

FEATURES

18 Sustaining America's Hammer: Building the III Corps Sustainment Team

By Brig. Gen. Darren Werner

24 Building Capable Sustainment Organizations Through Trust and Empowerment

By Command Sgt. Maj. Michael J. Perry III

29 Radical Inclusion: An Interview With Retired Gen. Martin Dempsey

By Arpi Dilanian and Matthew Howard

34 The 1st Cavalry Division Sustainment Brigade: Building a Modular Sustainment Team

By Col. Steven N. Carozza, Capt. Darryl Daugherty, and Capt. Jose Rodriguez

38 The 16th Sustainment Brigade and NATO Allies: A Quest for Interoperability

By Lt. Col. Brian J. Ketz and Maj. Micaela A. Gehlen

43 The 1st ID Sustainment Brigade Exercises International Teamwork for Multi-Domain Battle

By Lt. Col. Seth Olmstead, Maj. Shawn Robertson, and Maj. Neal Sivula

"Our power as an Army is in our shared experiences and how we support one another to bring about a ready Army."

Lt. Gen. Piggee, p. 3

OPERATIONS

46 The Good, the Bad, and the Ugly: Lessons Learned From the Army's First Field Feeding Company

By Brig. Gen. Christopher O. Mohan and Capt. S. Ryan Benz

51 Synchronizing the Seaport of Embarkation

By Maj. Joseph D. Komanetz

TOOLS

56 Autonomous Transportation: Combat Power in the 21st Century

By Capt. Matthew P. Henry

TRAINING & EDUCATION

59 Lessons Learned by the 123rd Brigade Support Battalion at the National Training Center

By Lt. Col. Charles L. Montgomery

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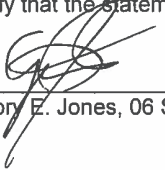
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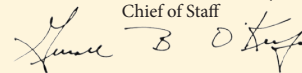
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Capable Sustainment Units Understand the Big Picture

■ By Gen. Gustave “Gus” Perna



Two years ago, I would have said that more than a decade of counterinsurgency war caused the skills of sustainment units to atrophy. Soldiers lost the art of repair, warrant officers lost the ability to diagnose problems, and leaders stopped understanding how our systems and processes work.

Seeing ourselves and our environment allowed us to pivot our efforts to decisive action. We have been focused on reinvigorating that lost muscle memory to rebuild sustainment units that can plan, synchronize, integrate, and echelon transportation and commodities, all while firing back.

We are leading through this, focusing on the basic tenets of our doctrine and the ability to link operations and sustainment. We must draw the line from the tactical tip of the spear back to the materiel enterprise.

The most proficient and capable sustainment units understand the big picture and demonstrate and incorporate sustainment fundamentals to inform their decisions and actions in support of the operational force.

Army doctrine defines how capa-

ble sustainment units operate across the strategic, operational, and tactical levels. Army Doctrine Publication 4-0, Sustainment, definitively states, “Sustainment requires an unbreakable bond between the strategic base that provides a continuous flow of resources and capabilities; the operational force that plans, synchronizes and distributes sustainment to the tactical level; and the maneuver force whose sustainment maintains their combat readiness, strength and endurance.”

Capable sustainment units understand and seamlessly contribute to the essential links between tactical-level operations and the strategic base.

At the tactical level, sustainment brigades, Army field support brigades, and support battalions focus on providing direct support to units. Sustainment brigades must be flexible, multifunctional, and task-organized to support the operational mission. Beyond having knowledge of their own capabilities, sustainment units must also be able to communicate their shortfalls to leverage the broader sustainment enterprise.

It is up to sustainment leaders at the brigade level to understand their roles while attached to theater or expeditionary sustainment commands and while building relationships with operational units. Articulating and delivering capabilities forms a foundation of trust—an important component between sustainers who are supporting and units who are supported. Theater and expeditionary sustainment commands convey the operational-level requirements to the strategic base.

Within the materiel enterprise, the Army Materiel Command, the Office of the Assistant Secretary of the Army for Acquisition, Logistics and

Technology, and the Headquarters, Department of the Army, G-4, are the strategic providers and integrators. Led by senior sustainers, these organizations set priorities, review and publish policy, provide guidance and direction, and advance the art and science of the Army’s sustainment strategy.

While Army doctrine provides a foundation, mission command dictates that it does not direct our specific actions. Leaders and logisticians should find this flexibility both challenging and enabling as they operate within the doctrinal space while using their own knowledge, skill sets, and experience to support the maneuver force.

Capable sustainment units require Soldiers, warrant officers, and leaders who know sustainment doctrine and maintain mastery of the basics of their craft. They must understand their roles in the larger materiel enterprise and always explicitly see themselves in the supporting role to the operational force. Leaders and logisticians must be able to self-assess and determine the right metrics to drive us to the right output.

Recognizing and understanding the inextricable link between tactical and strategic sustainment capabilities forms that unbreakable bond that sustainment doctrine addresses. It also contributes to our success as we carry out the sustainment warfighting function that ensures freedom of action, extends operational reach, and prolongs endurance.

Gen. Gustave “Gus” Perna is the commander of the Army Materiel Command at Redstone Arsenal, Alabama.

What 1918 Can Teach Us About 2028

■ By Lt. Gen. Aundre F. Piggee

On a bare hill in Arlington National Cemetery, Gen. John J. Pershing's grave is marked by a modest headstone with a sparse summary of his life—name, title, home state, and dates of birth and death. There are no stars, no quotes, and no hints of his greatness or his role in growing the Army from a 125,000-Soldier force to a 2 million-Soldier force for World War I.

Instead, his ethos can be seen in the grass near him. His last desire was to be buried next to the doughboys he commanded in Europe, whose names are not legends but whose actions brought victory.

Making Strides

Last year, as we commemorated the 100th anniversary of America's entry into that war, I wrote an *Army Sustainment* column asking, "What would Gen. Pershing think of Army readiness?" Since then, the Army has made tremendous strides in improving not only readiness today but also readiness for 2028, when technology will surely bring fast-moving threats on land, in the air, at sea, in space, and in cyberspace.

We established the Army Futures Command to modernize the Army, including the equipment we supply and how we get it to the warfighter. We are refining how we manage talent, making sure we are involved in career decisions and always in the context of how talent management makes units better.

We are improving materiel readiness and increasing the lethality of combat units. We also upgraded our ability to project the force for rapid deployment by rebuilding our basic skills and institutional muscle memory. All are topics we have discussed in the pages of *Army Sustainment* during the past year.

This month, as we commemorate the 100th anniversary of the end of World War I, Pershing's genius for organizing is still the standard to be studied. How did he do it? He insisted that the Army should have everything in place before committing troops to battle. He understood the importance of logistics. He learned lessons from every experience and put them to good use.

"Military genius is really only the capacity to understand and apply simple principles founded on experience and sound reasoning," Pershing said. I hope this 100th anniversary gets us all thinking about how we can best organize our structure for the future as successfully as Pershing did in 1918.

Building Teams

In a special interview in this edition of *Army Sustainment*, former Chairman of the Joint Chiefs of Staff, retired Gen. Martin Dempsey, leads us in that discussion. He talks about how, in today environment of ubiquitous information and fragile facts, leaders achieve trust by being radically inclusive. People need to contribute and bring meaning and not feel like they are being dragged around.

In another interview, Gen. Stephen Townsend, the commander of the Training and Doctrine Command, says that every Soldier in the Army is a role model for somebody, and so we all need to be the kind of leader we want to be led by.

Indeed, I first learned about building a team as an ROTC cadet at the University of Arkansas at Pine Bluff. My fellow cadets and I were going to Army advanced camp, and they wanted all of us to be RECONDO [reconnaissance and commando] qualified, which meant we had to go through leadership, physical fitness, land navigation, and swimming competitions.



In order to build successful units, we must make fellow Soldiers feel welcome, share experiences, do what is right, and treat teammates with dignity and respect.



EFFECTIVE TEAMS (CHARACTERISTICS)

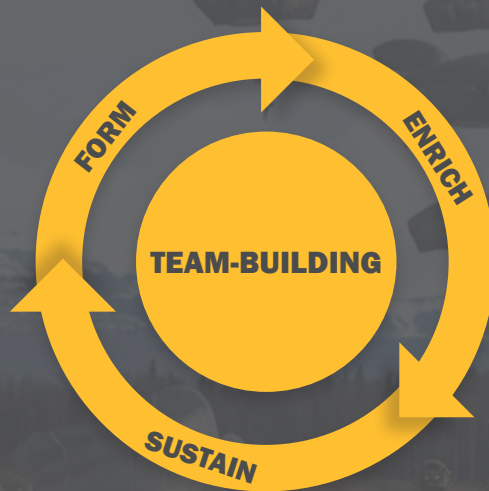
- TRUST EACH OTHER AND PREDICT WHAT EACH WILL DO
- WORK TOGETHER TO ACCOMPLISH THE MISSION
- EXECUTE TASKS THOROUGHLY AND QUICKLY
- MEET AND EXCEED THE STANDARD
- ADAPT TO DEMANDING CHALLENGES
- LEARN FROM EXPERIENCES AND DEVELOP PRIDE IN ACCOMPLISHMENTS

TEAM LEADER ROLES

- ESTABLISHES A POSITIVE CLIMATE
- CREATES A SHARED VISION AND TEAM IDENTITY
- PROVIDES CLEARLY STATED GOALS
- ESTABLISHES ROLES AND RESPONSIBILITIES
- ESTABLISHES AN ENVIRONMENT OF COLLABORATION AND DIALOGUE
- ESTABLISHES AN ENVIRONMENT THAT EMBRACES LEARNING
- KNOWS STRENGTHS AND WEAKNESSES OF TEAM MEMBERS

TEAM MEMBER ROLES

- BUILDS RELATIONSHIPS
- DEMONSTRATES FLEXIBILITY AND ADAPTABILITY
- COOPERATES WITH OTHER TEAM MEMBERS
- ARE WILLING TO HELP OTHERS
- RESPECTS OTHERS



ENRICHMENT STAGE

GOAL:
TO BUILD COMMITMENT AND COHESION

KEY ACTIONS:
DEVELOP TEAM NORMS
ENHANCE TEAMWORK
IMPROVE COHESION

FORMATION STAGE

GOAL:
TO BUILD CONFIDENCE AND TRUST

KEY ACTIONS:
ASSEMBLE THE TEAM
BUILD TRUST
COMMUNICATE EFFECTIVELY

SUSTAINMENT STAGE

GOAL:
TO DEVELOP PRIDE AND OWNERSHIP IN THE TEAM

KEY ACTIONS:
DEVELOP ADAPTABILITY
MANAGE CONFLICT
IMPROVE RESILIENCE

HIP-POCKET GUIDE

LEADER DEVELOPMENT



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WAYS TO ENABLE LEARNING

LEARNING ENABLERS	FORMAL	SEMIFORMAL	INFORMAL
SETTING CONDITIONS	INTEGRATION & RECEPTION COUNSELING INITIAL PERFORMANCE COUNSELING	UNDERSTAND INDIVIDUAL DIFFERENCES IN STRENGTHS, INTERESTS, POTENTIAL, AND DEVELOPMENT METHODS	GETTING TO KNOW AND UNDERSTAND SUBORDINATES BUILD RAPPORT TO ENABLE SUPPORTIVE DEVELOPMENT
GOAL SETTING	INDIVIDUAL DEVELOPMENT PLAN	5-YEAR PLAN	SHORT-TERM AND LONG-TERM PERSONAL AND PROFESSIONAL GOALS STRETCH GOALS
ASSESSMENT	PERFORMANCE EVALUATION CERTIFICATIONS INSPECTION PROGRAM COMMAND CLIMATE COMMANDER 360° ASSESSMENT GENERAL OFFICER 360° ASSESSMENT	ORGANIZATIONAL CERTIFICATIONS UNIT ACCULTURATION PROGRAM CORE UNIT MISSION AND FUNCTIONS REVIEW MULTI-SOURCE ASSESSMENT AND FEEDBACK-LEADER 3600 FOR SELF-ASSESSMENT UNIT 360° ASSESSMENT	DAY-TO-DAY OBSERVATIONS ASKING OTHERS ABOUT A LEADER SENSING SESSIONS
ADVICE AND GUIDANCE	PERFORMANCE COUNSELING PROFESSIONAL GROWTH COUNSELING	MENTORING COACHING TRAINING CENTER COUNTERPART FEEDBACK INSTRUCTOR FEEDBACK	SHORT-TERM AND LONG-TERM PERSONAL AND PROFESSIONAL GOALS STRETCH GOALS

ADDITIONAL DEVELOPMENTAL ACTIVITIES AND OPPORTUNITIES

DEVELOPMENT OPPORTUNITIES	FORMAL	SEMIFORMAL	INFORMAL
CHALLENGING EXPERIENCES	BROADENING ASSIGNMENTS	UNIT SUCCESSION PLANNING/TALENT MANAGEMENT STRETCH ASSIGNMENTS RATIONAL ASSIGNMENTS	OPPORTUNITIES TO OPERATE IN UNFAMILIAR SITUATIONS BROADENING TASKS, CASUALTY ASSISTANCE, STAFF DUTY, FOOD SERVICE DUTY
GROUP LEADER DEVELOPMENT	LEADER TRAINING PROGRAM AFTER ACTION REVIEWS	OFFICER PROFESSIONAL DEVELOPMENT NCO PROFESSIONAL DEVELOPMENT COMBINED EVENTS TEAM BUILDING EVENTS	PROFESSIONAL READING AND WRITING PROGRAM SHARING EXPERIENCES EXCELLENCE COMPETITIONS
EDUCATION	PROFESSIONAL MILITARY EDUCATION COURSES FUNCTIONAL, BRANCH, CAREER PROGRAM, OR SPECIAL TRAINING	SCHEDULING OR SUPPORTING LEADERS TO ATTEND INSTITUTIONAL EDUCATION	ENCOURAGE UTILIZATION OF NEW SKILLS AND KNOWLEDGE OF RECENT GRADUATES
SELF-DEVELOPMENT	STRUCTURED SELF-DEVELOPMENT	GUIDED SELF-DEVELOPMENT	SELF-ASSESSMENT REFLECTIVE JOURNALING PERSONALIZED SELF-DEVELOPMENT STUDY AND PRACTICE
COLLECTIVE TRAINING	INCORPORATE LEADER DEVELOPMENT GOALS AND PROCESSES INTO TRAINING OBJECTIVES	TEAM BUILDING EXERCISES	SHARED STORIES OF DEVELOPMENT

FORMAL

DIRECTED BY POLICY
OR REGULATION

SEMI-FORMAL

COMMONLY PRACTICED,
AND MAY BE REQUIRED

INFORMAL

OPPORTUNITIES WITH A
FOCUS ON LEARNING

Coming from a small school, we really wanted to show that we were just as competitive as cadets attending much larger schools with more resources.

The problem was that five of us could not swim, including me. The faculty taught us how to swim, but they did not teach me well; I almost drowned twice. But they motivated me enough that I wanted to be successful in representing my school.

Even though it was challenging, we earned our RECONDO badges. More importantly, those instructors passed to me a lesson on the importance of motivating teammates in order to be successful in the profession of arms.

Organizing for Success

In the Army, you are never alone. When two or more Soldiers are together, one is in charge. Our power as an Army is in our shared experiences and how we support one another to bring about a ready Army. From my experience, four things stand out

as essential to organizing successful units.

First, quickly make new members feel at home. When new Soldiers show up to an Army unit, there is an instant baseline understanding of who they are based on the ranks they wear. It is automatically assumed they have the skills and abilities commensurate with the experience level represented by their grades. It is the job of leaders to fully integrate them into the new unit with meaningful responsibilities, and the new Soldiers need to take on the tough jobs and do them well.

Second, share experiences and grow the unit. The ties that bind military members together are born of unique experiences and hardships shared by no other profession. Take advantage of the Army's lessons learned systems; after all, we can all learn from others' mistakes so we do not repeat them. Be honest when you mentor and always counsel your subordinates; they deserve nothing less. Tell your Soldiers what they need to know, not what you

think they want to hear.

As a mentor, Gen. Pershing passed great insights to the next generation of generals—Gen. George Marshall, Gen. George Patton, and Gen. Douglas MacArthur—and set conditions for success in what turned out to be World War II. Sharing can be fun, too. Take your Soldiers on staff rides, hold team-building events, use ceremonies to strengthen your units, socialize outside of work, and build family support networks because families are a critical part of the team too.

Third, always do what is right, even when no one is looking. A leader's credibility is the most valuable asset to a unit. Nothing happens without leadership focus. You rub off. You are a guide and a role model. At all times, live the Army values and exemplify the profession of arms. Model what right looks like and others will follow. As Pershing said, "A competent leader can get efficient service from poor troops, while on the contrary an incapable leader can demoralize the best of troops."

Fourth, remember the golden rule. Treat your teammates with dignity and respect, the way you want to be treated. Personified on that hill in Arlington National Cemetery by Gen. Pershing and the Soldiers he led are those characteristics that make for great teammates: courage, sacrifice, devotion to duty, and humble professionalism. On the slopes of that sacred cemetery, they are joined by thousands of other battle buddies from America's wars. That includes Gen. Pershing's two grandsons, 2nd Lt. Richard Pershing, who was killed in Vietnam, and Col. John Warren Pershing III.

We are grateful for every Soldier's sacrifice in every war and for their reminder of our obligations to organize, modernize, train, and equip Soldiers for the next mission.

Lt. Gen. Aundre F. Piggee is the Army Deputy Chief of Staff, G-4. He oversees policies and procedures used by all Army logisticians throughout the world.

Lt. Gen. Aundre F. Piggee, the Deputy Chief of Staff, G-4, discusses current operations, equipment, and staffing with Soldiers from the 21st Theater Sustainment Command during a visit at Kleber Kaserne, Germany, on July 25, 2018. (Photo by Sgt. Benjamin Northcutt)



Developing the Next Wave of Sustainment Leaders

Teamwork and collaboration are helping the dedicated instructors at the Army Logistics University to prepare the next generation of sustainers for success.

■ By Maj. Kyle Smith and Maj. Howard Van Matre

Many years of sustained combat operations have proven that teamwork and collaboration remain the bedrock of a sustainer's ability to enable operational success on the battlefield. However, as the Army continues to modernize the force, adapt to emerging threats, and prepare for future wars, the Army Logistics University (ALU) must prepare the next wave of sustainment leaders to succeed in unpredictable and challenging environments.

The forward operating base-centric battlespace from which we have operated will soon become obsolete and inadequate for sustaining operations against peer adversaries during large-scale combat operations. Future sustainment leaders must be more agile, adaptive, and flexible in anticipating requirements. Building the ultimate team through collaboration with joint, interagency, and multinational partners will ensure sustainment leaders can provide the greatest capability.

This article discusses current ALU initiatives to prepare the next generation of sustainment leaders for success on the future battlefield. These initiatives focus on critical thought in complex, austere, and ambiguous environments and how teamwork and collaboration enable warfighter support.

Addressing the Future Fight

Emerging Army doctrine envisions a dramatic shift from the counterinsurgency fight against terrorist organizations that we currently face in

combat. We now have the potential to face near-peer and peer competitors who have spent considerable time and money over the last two decades studying the U.S. military while modernizing their weapons and systems.

Successful sustainment within the Multi-Domain Battle environment during large-scale combat operations is a team effort that includes our sister services, strategic enablers, special operations forces, and host-nation partners. In future conflicts, U.S. forces will encounter a degraded operational environment in which the tactical advantage may be significantly reduced.

This chaotic and contested battlefield will require sustainment leaders to anticipate logistics requirements in a disconnected environment, where the battle happens more quickly than technology and communications can transmit information. Accordingly, ALU is at the forefront of incorporating doctrine from Field Manual (FM) 3-0, Operations, into all professional military education curricula.

Within the Logistics Leader College, the Basic Officer Leader Department has launched a pilot program to prepare Quartermaster, Ordnance, and Transportation lieutenants to serve in a broad spectrum of multifunctional logistics assignments, regardless of branch affiliation.

This program, called the Logistics Basic Officer Leader Course, provides foundational knowledge from each of the logistics branches and produces more agile and adaptive junior leaders who are fully capable of supporting high-intensity conflict against

peer adversaries. All individual and team-oriented exercises, which include increased field rigor, fully incorporate new doctrine from FM 3-0.

ALU's Applied Logistics Studies Department, which oversees the Support Operations Course (SOC), the Theater Sustainment Planners Course (TSPC), Global Combat Support System-Army training, and the Sustainment Pre-Command Course, challenges students with realistic tactical, operational, and strategic sustainment concept of support exercises with decisive action scenarios. Course capstone exercises require students to develop tactical- and operational-level sustainment plans in support of maneuver forces conducting high-intensity operations against a peer or near-peer competitor.

At the Technical Logistics College (TLC), warrant officer students prepare and conduct capstone briefings referencing FM 3-0 and are required to demonstrate a clear understanding of decisive action, phases of operations, Multi-Domain Battle, and the systems used for materiel readiness tracking while preparing for the loss of degraded communications.

These fundamental large-scale combat operations concepts complement the technical instruction warrant officers receive in their basic, advanced, and Intermediate Level Education follow-on courses.

Obtaining the Right Talent

Leader development occurs through a blend of institutional, operational, and self-development



Col. Jamal E. Wigglesworth, Army Logistics University (ALU) commandant, left, passes the newly uncased colors of the ALU Support Battalion to Lt. Col. Matthew K. Anastasi during the 71st Transportation Battalion inactivation ceremony on March 28, 2018. Also pictured is Command Sgt. Maj. Leabarron J. Bates, who helped uncase the colors and serves as the battalion's command sergeant major. (Photo by Terrance Bell)

activities. Institutional professional development requires talented leaders to facilitate a world-class learning experience at the Army's learning institution for sustainers.

Such leaders are responsible for designing and facilitating rigorous professional military education course curricula. As new doctrine emerges across the force, ALU's instructors and leaders continually revise and

update curricula in the pursuit of developing more capable sustainers.

ALU instructors are professional men and women with extensive backgrounds in supporting combat operations around the globe. They have a wide variety of experiences, which could include recent deployments, prior assignments as combat training center observer, coach, trainers, and operational assignments.

Additionally, ALU instructors play a significant role in developing and enhancing curricula to meet the demands of sustaining large-scale combat operations at the division and corps levels and in collaboration with joint and host-nation partners.

Depending on specific course outcomes, ALU instructors link tactical, operational, and strategic levels of sustainment through complex sce-

narios and field rigor. This linkage is critical to developing a thorough understanding across the full range of combat operations.

For example, TLC students attending the warrant officer courses conduct concept of support briefings encompassing multiple echelons of sustainment. Conducting these exercises leads to a more thorough understanding of decisive action in a Multi-Domain Battle environment.

Likewise, Logistics Captains Career Course instructors continually revise and update the course's curriculum in pursuit of developing more capable sustainers. Students now complete

driven educational experience for all professionals.

To achieve the university president's vision of offering an exceptional logistics education while building a multifunctional culture necessary to win in Multi-Domain Battle, ALU leverages the combined power of all logistics cohorts. Building teamwork across ALU throughout the many departments creates a synergy among the students that will carry and propel them to their follow-on duty assignments.

Basic Officer Leader Course students conduct a practical exercise in counseling that integrates Logistics

systems in preparation for the Basic Officer Leader Course, which they attend with newly commissioned second lieutenants. This initiative gives both the interns and lieutenants a valuable experience that enhances the relationship between military and civilian sustainment leaders.

Sustainment leaders of varying ranks and backgrounds must work together as a team to achieve success in the Applied Logistics Studies Department SOC, the TSPC, and the Sustainment Pre-Command Course. Successful completion of the SOC and TSPC rely on teamwork between officers, warrant officers, and NCOs. This ex-

A multi-domain, large-scale combat operation will challenge leaders to forge teams capable of analyzing data, conceptualizing the battlefield, and making informed decisions aimed at facilitating warfighter support.

three distinct blocks of instruction: common core material, branch-specific logistics fundamentals, and a staff-focused exercise requiring realistic deliverables based on a decisive action scenario. To graduate, each student must complete an individual concept of support briefing based on FM 3-0 principles.

Fostering Teamwork

Today's sustainment leaders face challenges that require cohesion and teamwork well beyond the scope of small-scale squad and platoon activities. A multi-domain, large-scale combat operation will challenge leaders to forge teams capable of analyzing data, conceptualizing the battlefield, and making informed decisions aimed at facilitating warfighter support. Consequently, building the ultimate team and fostering a culture of cooperation is at the forefront of ALU's mission and vision.

While each college within ALU varies in regard to its mission and general audience, the common theme across all organizations is providing a warfighter-focused and results-

driven educational experience for all professionals. This exercise allows students from both departments to further enhance their written and oral communication skills and promotes the officer and NCO professional relationship at the unit level.

The NCO Academy students also gain invaluable experience leading physical fitness training sessions with their lieutenant counterparts. This gives young officers the valuable experience of understanding physical training fundamentals while affording NCOs the ability to increase their proficiency in training and leading Soldiers.

The Office of the Chief of Transportation hosts officers, warrant officers, and NCOs for "Wheelhouse Wednesday" events, in which professionals from across the regiment network, socialize, and often meet fellow students assigned to the same duty locations.

At the College for Professional and Continuing Education, the Intern Logistics Studies Program educates Department of Army civilian logistics interns on a number of logistics

experience replicates the students' future operational environment.

Senior leaders attending the Sustainment Pre-Command Course serve as brigade and echelons-above-brigade commanders, and they gain experience with receiving concept of sustainment briefings from SOC and TSPC classes while providing valuable feedback for students.

Building the next wave of sustainment leaders requires teamwork, collaboration, and dedicated professionals at institutions like the Army Logistics University. Future success against near-peer and peer competitors conducting large-scale combat operations in increasingly challenging environments depends on our preparation and development of young leaders today. Instructors and students alike must pursue lifelong learning and continuing professional military education.

Maj. Kyle Smith and Maj. Howard Van Matre are instructors in the Applied Logistics Studies Department at ALU.

A photograph of two soldiers in camouflage uniforms standing in a forest. The soldier in the foreground is on the right, wearing a cap with four stars, looking off to the side. The soldier in the background is on the left, also in camouflage, looking down. The text is overlaid on the image.

Be the Leader You Want to Be Led By:

An Interview With Gen. Stephen Townsend

■ By Arpi Dilanian and Matthew Howard



Gen. Stephen J. Townsend, commander of the Training and Doctrine Command, speaks with Officer Candidate School Soldiers from E Company, 3rd Battalion, 11th Infantry Regiment, at Fort Benning, Ga., on Aug. 15, 2018 (Photo by Markeith Horace)

The commander of
the Training and Doc-
trine Command gives
his insights on team-
work and the role sus-
tainers play in total
Army success.

As the commander of the Training and Doctrine Command (TRADOC), Gen. Stephen J. Townsend is leading the charge in building today's Soldiers while changing the Army for the future. Throughout a career spanning more than 36 years, Townsend deployed to combat at every rank from second lieutenant to general officer, and he commanded some of the Army's most historic units.

While responsible for the training of more than 500,000 service members each year in his current assignment, he still makes a point to stay in touch with Soldiers at all levels and build the Army team from the ground up. Here are his insights on teamwork and the role sustainers play in the success of the total Army.

How important has teamwork been throughout your career, and what role have sustainers played in the teams you've led?

Teamwork is the cornerstone of any organization, especially the Army. Whether you're talking about a fellow Soldier or an allied nation, teamwork is always essential to mission success and goes hand in hand with leadership.

From my own experiences, I have a long list of war stories of logisticians contributing to the team's success. Broadly speaking, across my four tours in Afghanistan, I saw countless examples of sustainers on the ground and in the air coming through for our Soldiers in the fight. I couldn't tell you how many times I saw pinnacle landings on mountaintop peaks, shoving out resupply, or convoys driving down IED [improvised explosive device]-ridden roads, getting supplies through to the troops.

One specific instance that comes to mind occurred in Baghdad in January of 2007. I was in a Stryker brigade at the time, and my mobile command group was struck by an IED. I noticed the IED as my truck was driving by it, but it didn't go off on us. I shouted a warning over the radio to

the Stryker behind us, but it was too late; it hit them. Some of our Soldiers were wounded, and the Stryker was taken out of action, so we called for help.

We called for medevac and set up a landing zone and a little while later called for recovery. We were prepared to self-recover the vehicle back, but my brigade support battalion had a recovery quick reaction force they had put together.

Pretty soon a medevac aircraft showed up and took our wounded away, and literally about the time the aircraft was departing, up rolled a small convoy of Humvees and some wreckers at high speed. They collected our damaged Stryker and departed, and we were able to continue on our mission. Our maintainers were then able to repair that Stryker and return it to service a few days later.

That's just one example of the kind of experience I've had with Army sustainers over the course of my career, and there are countless others. They always get the job done on time.

What is the Army doing to develop the leaders we need to be successful on tomorrow's battlefield?

At the institutional level, which TRADOC is responsible for, leader development is integrated everywhere. Every course a Soldier takes, from their initial entry training and basic combat training until the end of their career, whether that be three years or 30 years, it's all about leader development.

The Army has also created a talent management task force to review policies for leader development and assignments Army-wide. It's allowing us to see if we need to change some of our processes and really update the way we're doing things.

At the operational level, our field units and the experience you get in the field Army are absolutely critical to leader development. There's a lot that goes on out there, and we have a system of after action reviews to cap-

ture lessons learned from all across our Army. That information can be spread Army-wide so that leaders, Soldiers, and units can learn from the experiences of others, not just their own.

The other pillar to that is self-development. It's a way to increase your own repetitions because it's not possible for you to fight enough battles in peacetime. So you have to read those after action reviews from other people's battles, and then you have to read history. I think that's really an important part of leader development.

As commander of the XVIII Airborne Corps, "America's Contingency Corps," how did you ensure sustainment units were incorporated into the team to maintain readiness for rapid deployment?

This really wasn't as difficult as you might think. I'm reminded of an old saying sometimes attributed to Gen. Omar Bradley: Amateurs talk about tactics, but professionals study logistics. Every leader I worked with in the XVIII Airborne Corps was intimately familiar with both the requirements of operations and the logistical demands to support them.

Gen. Stephen Townsend, commander of the Training and Doctrine Command, meets with Dr. Mark Esper, the Secretary of the Army, at Joint Base Langley-Eustis, Va., on May 18, 2018.



This pattern held true in other units, too. In addition to the XVIII Airborne Corps, in each of my three final operational units (the 101st Airborne Division [Air Assault], the 10th Mountain Division, and Combined Joint Task Force-Operation Inherent Resolve), sustainment was absolutely critical to the success of all the operations we conducted. Sustainment leaders were completely integrated into everything we did.

About 14 years ago, we started modularizing our brigades into brigade combat teams. In my opinion, that initiative has better integrated sustainment into our operations at the brigade level and below. And I think brigade combat teams are more effective at sustainment than I was as a battalion commander in an infantry-pure brigade as a result.

How critical is effective training for building capable sustainment units?

Absolutely critical. German Field Marshal Erwin Rommel once said, "The best form of warfare for the troops is first-class training." So what does first-class training do? First-class training makes sure you apply combat service support and sustain-

ment to training just as you would combat arms.

First-class training is relevant, it's realistic, and it's tough. It improves and hones not only individual Soldier skills but also collective skills from smaller units all the way up to the BCT [brigade combat team] and beyond. And it strengthens resilience in both individual Soldiers and units, making those Soldiers and units tougher in facing the demands of the battlefield. When it comes to training, sustainers have to be just as involved as combat arms leaders for units to be successful.

I think the proof of training and the integration of sustainment is in the pudding. The last time I failed due to a lack of logistics or sustainment was in 1987; to this day, I can recall it instantly. My unit was on a training exercise, and we had expended our ammunition in an engagement with the opposing force. We were displaced on the battlefield and called for resupply, but it was hours and hours late in coming and arrived only after we had another engagement with the enemy while I was out of ammo.

Beyond that training experience, which is seared into my memory, I haven't had another failure due to a lack of sustainment throughout the course of the rest of my career. So I think we've done a pretty good job of integrating sustainment into our training and our operations.

Can you discuss the importance of team building with our joint and coalition partners, especially as we prepare for complex, multi-domain operations?

I don't think building a team with our joint and multinational partners is really any more difficult than doing so with Army partners. From the very beginning, you first have to explain to them what we have to do; that's the mission. Then you have to tell them what you want to accomplish; that's commander's intent.

Finally, you need to tell them that

we're all going to operate as one team; I don't care what service or branch is above your pocket, what color your uniform is, or what the flag is on your shoulder. In the end, you just have to lead them from the front. And I've found Soldiers and leaders universally respond to this kind of leadership.

Looking toward the future, how are we redeveloping the way the Army builds the greatest team in the world?

The Army is evolving at a number of different levels. At the organizational level, we just stood up the Army Futures Command, the first new major command since 1973, when TRADOC was created. Futures Command will be responsible for all things future, with a particular emphasis on materiel and how we're going about equipping. We've activated six cross-functional teams that

are looking at a range of the Army's highest priority materiel acquisition programs.

In the area of training, we're improving initial entry training for Soldiers. We're making basic combat training tougher, and we're making one station unit training longer, starting with the infantry course and moving on to other courses after that. In our units, we're increasing the demands of home-station training because home station is where we actually train and certify units for war. And at combat training centers, we've introduced a full-spectrum, hybrid, near-peer threat that is really stressing our units in their full-up collective training.

Lastly, we're also introducing the new Army combat fitness test. The new test will improve individual fitness and readiness for deployment, and it's also going to change the culture of the Army.

Do you foresee innovation and emerging technologies impacting mission command?

I think innovation will play out in a lot of areas, but particularly when it comes to mission command. Innovation will improve not only our situational awareness at both the individual and team levels but also our common understanding between commanders and the whole team. It will also increase the speed and quality of our decision-making.

Now, all of that sounds really good; it sounds like we should have perfect information and make great decisions all the time. But the problem goes back to this near-peer, hybrid threat we train for and might have to operate against. That threat has the ability to deny our communications and degrade our understanding and situational awareness.

If our mission command system



fails or is denied to us, we have to operate off of our philosophy of mission command: commanders issuing mission orders with clear commander's intent, and subordinate leaders using their disciplined initiative to accomplish that intent. All of it is enabled by trust.

You have commanded at every echelon. What advice would you give a Soldier entering the Army today to be a successful teammate?

First, keep your honor clean. Every decision you make and every action you take needs to be based on a foundation of our Army values, your service values, or your national values.

Second, live on amber; be ready. Ready for what? Ready for anything. You should be physically ready and mentally ready. Be ready as an individual Soldier and ready as a member of your Army unit. Be comfortable

with uncertainty, and expect the unexpected.

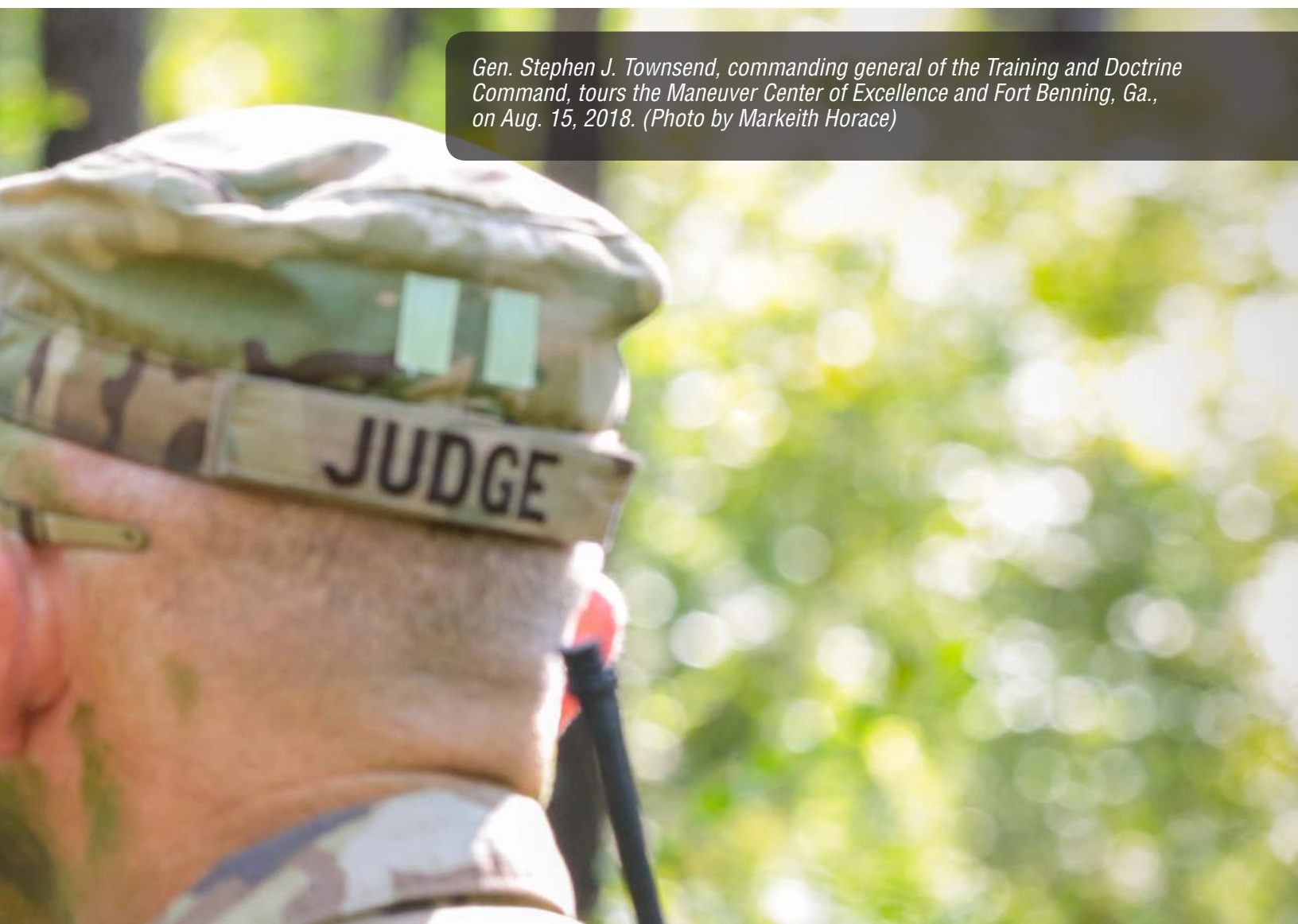
Third, act with disciplined initiative. Our Army has a philosophy of mission command. Leaders give mission orders with a clear commander's intent, which empowers subordinates to act with their disciplined initiative. Subordinates and subordinate leaders have to be smart enough to recognize when their plan is failing; they need to be smart enough to come up with a plan that will work, and then they need to have the guts to do it. And they need to have the trust and backing up and down the chain of command to empower that disciplined initiative.

Last, lead by example. That applies to leaders, but also to Soldiers as well. Sometimes I'll say that, and privates will ask, "Sir, what do you mean by that? I'm not a leader." I believe every Soldier in the United States Army is a role model for somebody. Clearly,

officers and noncommissioned officers are role models for their units, but even privates are a role model for somebody. It may be a teammate in their squad or section, or it may be a family member back home, but they are a role model nonetheless. So to every Soldier: lead by example and model what you think a Soldier ought to be. In the end, be the leader you want to be led by.

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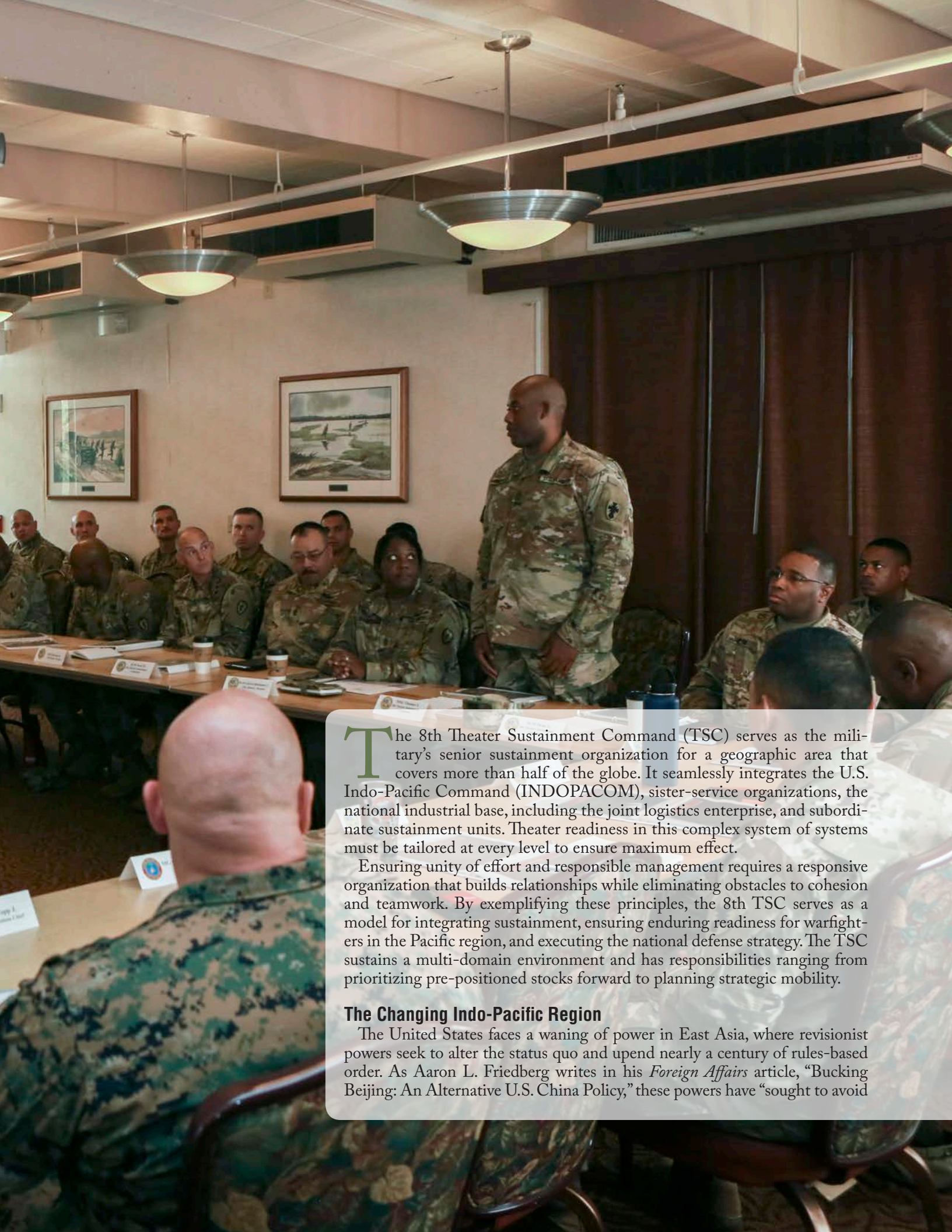


Gen. Stephen J. Townsend, commanding general of the Training and Doctrine Command, tours the Maneuver Center of Excellence and Fort Benning, Ga., on Aug. 15, 2018. (Photo by Markeith Horace)

Shaping a Sustainment Community From Half a World Away

■ By Maj. Gen. Charles R. Hamilton and Maj. Aaron J. Shattuck

Senior enlisted leaders from the Army and Marine Corps gather for the second Joint Senior Enlisted Logistics Forum on June 28, 2018, at Marine Corps Base Hawaii. The forum, developed by the 8th Theater Sustainment Command, allows logistics leaders to improve relationships and better organize joint capabilities. (Photo by Cpl. Patrick Mahoney)



The 8th Theater Sustainment Command (TSC) serves as the military's senior sustainment organization for a geographic area that covers more than half of the globe. It seamlessly integrates the U.S. Indo-Pacific Command (INDOPACOM), sister-service organizations, the national industrial base, including the joint logistics enterprise, and subordinate sustainment units. Theater readiness in this complex system of systems must be tailored at every level to ensure maximum effect.

Ensuring unity of effort and responsible management requires a responsive organization that builds relationships while eliminating obstacles to cohesion and teamwork. By exemplifying these principles, the 8th TSC serves as a model for integrating sustainment, ensuring enduring readiness for warfighters in the Pacific region, and executing the national defense strategy. The TSC sustains a multi-domain environment and has responsibilities ranging from prioritizing pre-positioned stocks forward to planning strategic mobility.

The Changing Indo-Pacific Region

The United States faces a waning of power in East Asia, where revisionist powers seek to alter the status quo and upend nearly a century of rules-based order. As Aaron L. Friedberg writes in his *Foreign Affairs* article, "Bucking Beijing: An Alternative U.S. China Policy," these powers have "sought to avoid

The 8th TSC
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strategy.

confrontation with the United States while pursuing economic growth and building up all the elements of its ‘comprehensive national power.’”

Indeed, the situation in the Pacific is changing. The nation’s decades-long policy for the region has been one of engagement and balance—engaging multilateral institutions and bilateral trade while balancing against growth by preventing aggressive attempts at coercion. The dynamic nature of the geopolitical landscape is heightened when one considers the dynamic character of war itself.

In an *ARMY* magazine article on the changing character of war, Chief of Staff of the Army Gen. Mark A. Milley wrote, “Technology, geopolitics, and demographics are rapidly changing societies, economies, and the tools of warfare. They are also producing changes in why, how, and where wars are fought—and who will fight them. The significantly increased speed and global reach of information (and misinformation) likewise will have unprecedented effect on forces and how they fight.”

These changes are especially true in the Indo-Pacific area of operations (AOR). Subversive actions below the threshold of armed conflict, adversaries with the ability to deftly pursue a decades-long strategic vision, the integrated and interconnected use of national power, and the ability to conduct cross-domain fires all challenge our preconceptions of armed conflict.

The Changing Character of War

To meet these emerging strategic challenges, the U.S. military must rethink the way it integrates operations across an area as wide as the Indo-Pacific AOR—an area that contains over half of the world’s population, the world’s three largest economies, half the world’s declared nuclear powers, 24 of the world’s 36 megacities, and key passages through which over half the world’s liquid fuel travels on a daily basis.

Charged with overseeing military operations in the AOR, INDO-

PACOM and its subordinate units routinely conduct military exercises, exchanges, and cooperative humanitarian relief efforts with six of the world’s 10 largest standing armies. It also maintains close military relations with six treaty allies. Combine these key operations with the fact that INDOPACOM’s AOR covers half the world’s surface and 14 time zones, and it is clear that the command faces significant strategic challenges.

The changing character of war has implications not only for conducting war but also for sustaining war. Across the Indo-Pacific AOR, from Diego Garcia in the Indian Ocean to Joint Base Elmendorf-Richardson, Alaska, sustainers work to ensure the joint force is able to function at optimal levels.

This integrated and distributed network of maintainers, human resources personnel, medical support personnel, and logisticians must transform to meet the evolving demands of future conflict.

Executing the intent and guidance provided by the U.S. Army Pacific (USARPAC) commander, the 8th TSC works to integrate and synchronize not just Army sustainment but joint sustainment as well. The TSC executes mission command for its subordinate military police and engineer brigades and provides strategic and operational direction to sustainment units across the theater.

The expeditionary sustainment commands, sustainment brigades, and Army field support brigades throughout the theater, although assigned to other headquarters, rely on the 8th TSC for synchronization of sustainment operations. Given the geographic spread of the AOR, this is no small feat.

The 8th TSC is also tasked with providing support to other services by coordinating common-user land transportation and logistics. These functions of “Army support to other services” prevent redundancy and help the services achieve a desired level of interdependence. Additionally, enabling partners from the

joint logistics enterprise, such as the Defense Logistics Agency and the Military Surface Deployment and Distribution Command, provide reach-back to the national strategic base to assist with readiness and responsiveness. Navigating this complex, interconnected web in a dynamically changing environment requires not just oversight but also strategic direction.

Building a Cohesive Community

To adequately meet the demands of a geographically distributed joint force in an evolving security environment, the 8th TSC is working both internally and externally to provide the sustainment community with leadership and organizational mentorship.

At the behest of the USARPAC commander, and in concert with its responsibility as INDOPACOM's senior sustainment command, the 8th TSC directs and organizes the sustainment community to meet the requirements of the combatant commander.

First and foremost, the commander provides a strategic vision for the AOR along with a desired end state. With this vision, subordinate sustainment units can exercise mission command and execute sustainment operations within the commander's intent, preventing the need for constant reaffirmation or approval.

Through operation plans and orders, the 8th TSC disseminates tasks, assigns priorities, and ensures unity of effort in sustainment operations. With clear lines of communication and mission command structures, commanders at all levels gain a far greater logistics common operational picture and a more rapid decision cycle.

Through organizational mentorship, the 8th TSC does not assert command authority so much as it influences the culture of the sustainment community across the AOR. Building relationships between organizations enables not only cooperative planning but also a more rapid

flow of information. In a dynamic environment, relationships will prove essential to the conduct of operations; you don't have to own to influence.

The 8th TSC also assists subordinate commands with developing their own contingency plans. The organization has sent planners on multiple visits to Japan and Korea to assist with the refinement of plans. Finally, the 8th TSC enables reach-back to key enabling organizations, such as the Army Materiel Command, the Defense Logistics Agency, and U.S. Transportation Command. Influencing the conduct and culture of the sustainment community remains as important a priority as exercising command.

To provide a more holistic management approach to the Indo-Pacific AOR, the 8th TSC is reaching out to provide more synchronizing touch points. Regular meetings between the command teams of critical stakeholders help set the tone and direction of the sustainment community. Through these summits, commanders realign their visions and proceed with a focused unity of effort. In turn, they also provide direction for subordinate staffs.

The TSC has been hosting a monthly theater-wide sustainment plans synchronization video teleconference. This endeavor, hosted by the 8th TSC G-5, undergirds existing and future planning processes with the commander's vision for the theater. Through this forum, the organization not only imparts direction and guidance but also receives bottom-up refinement of plans and processes. It serves as a medium to revisit planning assumptions and ensure planning efforts remain synchronized. This is arguably the most important job of the TSC.

As with any large planning effort, the action officers are the individuals who carry out the vision. The 8th TSC strives to participate in any relevant tabletop exercise, rehearsal, or other event. It dispatches its best planners to major events not only to represent 8th TSC interests but also

to lend support to subordinate planning efforts.

The command readily offers support across the theater, whether to help with reception, staging, onward movement and integration plans in Korea or the development of deployment orders in the state of Washington. The implementation of a cohesive theater-wide sustainment vision may start with the TSC commander, but it is carried to fruition through the dedicated work of subordinate officers.

The Indo-Pacific AOR remains a strategically challenging environment. The difficulty of conducting operations in the AOR is compounded by the evolving nature of conflict and its implications for sustainment. Through leadership and organizational mentorship, the 8th TSC remains committed to building a cohesive sustainment community that is responsive to the needs of the USARPAC commander.

Maj. Gen. Charles R. Hamilton is the commander of the 8th TSC. He holds a bachelor's degree 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 the Marine Corps University. His military education includes the Senior Service College Fellowship, the Secretary of Defense Corporate Fellows Program, the Marine Corps Command and Staff College, the Joint Forces Staff College, the Quartermaster Officer Basic and Advanced Courses, and the Combined Arms and Services Staff School.

Maj Aaron J. Shattuck is a strategist at the 8th TSC. He holds a bachelor's degree in American politics from the U.S. Military Academy and a master's degree in public policy with honors from the University of Chicago. He is a graduate of the Armor Basic Officer Leader Course, the Aviation Captains Career Course, and the Basic Strategic Art Program.



Sustaining America's Hammer:

Building the III Corps Sustainment Team

■ By Brig. Gen. Darren Werner



Paladins from the 2nd Armored Brigade Combat Team, 1st Infantry Division, from Fort Riley, Kan., line up at the Port of Gdansk, Poland, on Sept. 14, 2017, awaiting movement to Eastern Europe in support of Atlantic Resolve. (Photo by Sgt. 1st Class Jacob A. McDonald)

The commander
of the 13th Expeditionary Sustainment Command outlines
the unit's role in
sustaining III Corps
and improving Army
readiness.

Fort Hood, Texas, is home to III Corps, “America’s Hammer.” In April, Lt. Gen. Paul E. Funk II, the III Corps commander, hosted a sustainment summit with leaders from the Army Materiel Command, the Army G-4, the Forces Command, the Defense Logistics Agency, and divisions and brigades throughout III Corps.

During the summit, Funk emphasized the corps’ role in the readiness of 75 percent of the Army’s armored force. He discussed unit dispersion over eight installations in six states and the global demands for armored forces. Additionally, he championed the corps’ habitual training relationship with reserve component armored formations.

The operating tempo of III Corps remains high with units in various stages of deployments. The corps’ headquarters and a division headquarters were deployed for most of fiscal year 2018. Meanwhile, another division headquarters prepared to deploy, and several brigade combat teams were in various stages of deployment and redeployment.

Additionally, 13 of the corps’ separate brigades had teams or headquarters deployed, and the subordinate sustainment units were on different deployment cycles than their headquarters were. In addition to leading Combined Joint Task Force–Operation Inherent Resolve, the corps dispatched troops to Africa, Asia, Europe, and the Americas.

Because of the scale and scope of its mission, III Corps must be unified and vertically, horizontally, and externally synchronized to fight and win in a complex world. The mission Funk has given the 13th Expeditionary Sustainment Command (ESC) is clear: anticipate and deliver requirements to drive III Corps’ preparedness. The ESC’s role is to optimize teamwork within III Corps and the joint logistics enterprise to deliver readiness.

Building a Team

In May, I assumed command of the

13th ESC at Fort Hood. Since then we have adopted a team approach in order to sustain readiness in III Corps. In the July–August 2016 issue of *Army Sustainment*, then Lt. Gen. Gus Perna, who at the time was the Army Deputy Chief of Staff, G-4, wrote, “Optimized Mission Command: Using Authority and Influence.” The point most relevant to the 13th ESC was the importance of influencing outside the organization and building a team of teams focused on priorities set by the corps.

There must be cohesion throughout III Corps extending beyond its divisions and sustainment brigades, to include strategic partners, to ultimately influence the readiness of the corps. A solid command line to create a monolithic sustainment architecture does not exist. The ESC serves as the keystone within the sustainment architecture to prioritize, expedite, and adapt the enterprise to achieve the vision of the corps’ commander.

The 2018 National Defense Strategy significantly altered the focus of the Army by stating that “Interstate strategic competition, not terrorism, is now the primary concern in U.S. national security.” This paradigm shift is significant for the Army’s largest and only armored corps. The Army was already transitioning its focus from fighting counterinsurgency in mature theaters to fighting near-peer threats in expeditionary environments. These changes increase III Corps’ sustainment challenges.

Building a team capable of sustaining an organization that spans multiple installations across the United States and supports combatant commands globally requires intricate planning and intentional focus on cohesion. As III Corps’ expeditionary sustainment command, the 13th ESC has to develop systems to build and maintain combat power to support multi-domain operations.

Understanding and implementing the six mission command principles strengthens the integration

of teams. (See figure 1.) Supported and supporting commanders generate shared understanding over time and through practice. They also develop trust in the team. Of the six principles, units must focus efforts on building cohesive teams through mutual trust.

As adversaries adapt, upgrade, incorporate hybrid warfare, and learn to operate in a multi-domain battlespace, the Army and its logisticians must prepare to fight unified teams. Team building is at the heart of everything we do, from physical training to rehearsals and exercises to worldwide deployments.

Army organizations operate as part of multiple teams, both internally and externally. Internal teams are more tangible and typically easier to develop. They often have multiple touch points occurring daily. Leaders engage face to face with their troops or subordinate commands and staffs, which results in confident and capable teams. The frequent interaction between the leader and the led creates an environment of trust, and relationships are developed.

The III Corps Commander's Vision

The III Corps commander uses five pillars built on a foundation of teamwork to outline his vision for the corps. (See figure 2 on page 23.) The readiness of III Corps is indicative of the readiness of the Army, and sustainment plays a vital role in ensuring power projection platforms are ready.

III Corps must synchronize priorities as part of a high performing team that encompasses maneuver commanders, sustainment commanders, and sustainment enterprise partners. Each player has to know his individual position and play it well.

Key to the success of a great team is having players who are prepared to back up their teammates when required. Successful teams execute the fundamentals exceptionally well, and each member plays his or her position and trusts the others to do the same.

Relationships Matter

Soldiers often talk about “building the team” but fail to understand how to cultivate teamwork or an effective

team. Being on a team is drilled into Soldiers from the first days of training. We are taught to think bigger than our organization and collectively strive to understand and accomplish the mission. To form the team, we develop relationships through respect, repetition, and reliance.

The same level of team building and cohesiveness is required externally in the contract-enabled, joint, multicomponent and multinational environment. Obtaining interoperability is more challenging. The organizations that comprise teams at higher echelons, such as joint task forces and coalitions, are often separated geographically and have high operating tempos and conflicting calendars. Regardless, these external teams must be capable of coming together without impairing the mission or speed of assembly.

The modularity of formations, not to mention their varied deployment cycles, continues to challenge sustainment organizations with different task organizations and capabilities. Compounding the complexity is the multicomponent nature of sustainment capabilities.

Building relationships from the tactical to the strategic level takes time. Through realistic training, both stateside and abroad, the Army is quickly strengthening relationships that have softened over the past 17 years.

Any sustainment unit deployed to support an operation or exercise has experienced the five stages of team building proposed by Bruce Tuckman: forming, storming, norming, performing, and transforming. Because these units are rapidly aggregated for operations and then return to their parent units, commanders must flatten the learning curve and get beyond the storming stage quickly.

Recent Examples

Army forces around the world are partnered and building relationships with the forces of other nations.

Figure 1. These six principles of mission command are found in Army Doctrine Publication 6-0, Mission Command.



Most notably, American armored brigade combat teams and aviation brigades on heel-to-toe deployments deter potential adversaries alongside European and NATO allies. These rotations are building an interoperable team that could face a near-peer adversary across a multi-domain battlespace.

The Army's ability to work with allies is vital to defending nation-

al interests. Since World War I, we have fought alongside many of our European allies and partners, fostering relationships to ensure the safety and freedom of their sovereign territories. Atlantic Resolve continues to build on the relationships established through the many years of multinational operations in Iraq and Afghanistan.

III Corps units and sustainers are

More than 1,000 pieces of equipment from the 2nd Armored Brigade Combat Team, 1st Infantry Division, from Fort Riley, Kan., line the port in Gdansk, Poland, on Sept. 14, 2017, as the unit prepares to move its equipment inland. (Photo by Sgt. 1st Class Jacob A. McDonald)



key players in Atlantic Resolve rotations. The 1st Infantry Division has truck and supply companies forward, the ESC has movement control teams rotating through, and the 49th Movement Control Battalion is deployed to manage all movement operations in Eastern Europe.

Training events are similar to deployments except the aggregation of forces, execution of mission, and redeployment of forces occur in less time. One 13th ESC unit recently participated in the Quartermaster Liquid Logistics Exercise. This exercise brought Army (active and reserve), Navy, and Army Materiel Command assets and Defense Logistics Agency Energy representatives together in one task force to provide fuel testing labs, bulk storage capabilities, and water production.

The United Kingdom even sent an observation team to watch operations before conducting a similar exercise in England. The exercise demonstrated over three weeks that the group could receive, store, and distribute bulk water and fuel from Fort Stewart, Georgia, to Naval Air Station Jacksonville, Florida.

The Way Ahead

At the ESC level, teamwork extends beyond the decentralized command structures necessary to meet the needs of ground force commanders. Teamwork must include multicomponent partners and tie back to strategic enablers supported by the industrial base.

As an organization, the ESC is both the intrinsic team that works to provide continuity to sustainment operations and part of a larger external team that meets the needs of combatant commands. The internal ESC team uses standard and creative training opportunities to develop the staff and the headquarters to be expeditionary and maintain capabilities across a broad range of military operations.

In a team-oriented environment, all stakeholders including commanders, the deputy commanding general

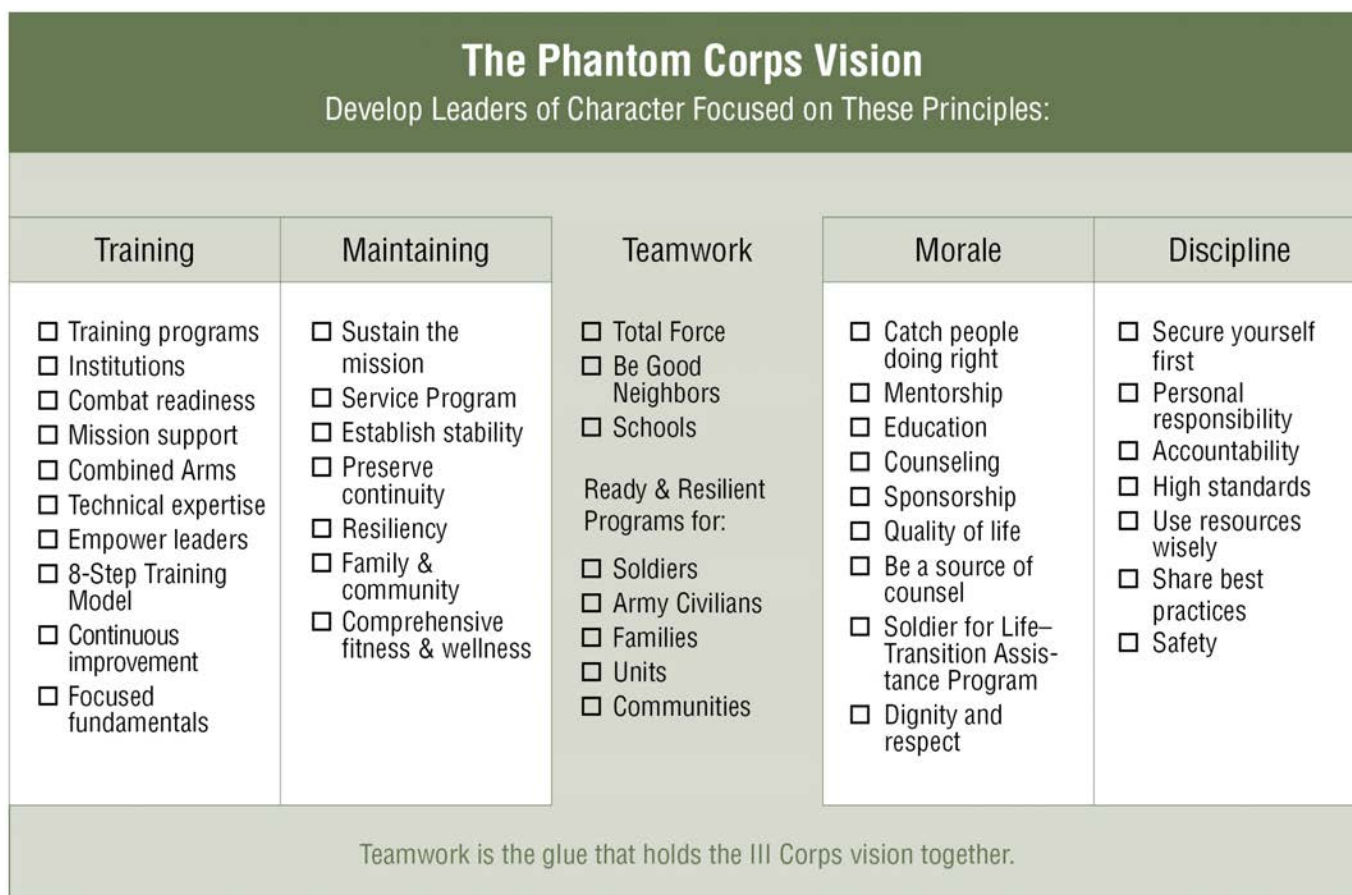


Figure 2. This chart outlines the III Corps vision and its five pillars.

for support, sustainment brigades, ESC staff, corps staff, Army field support brigades, and other members of the joint logistics enterprise contribute to the success of the corps' readiness. Battle rhythm events must contribute to the organization's situational understanding and drive team decisions to improve readiness.

Although not a new concept, the ESC has reorganized the support operations staff to better sustain the fight. The support operations section will refine its processes and systems in the corps materiel readiness center. The corps materiel readiness center, in coordination with the III Corps G-4, is designed to sustain corps readiness, shape future requirements, centralize sustainment efforts, streamline reporting, synchronize staffs, and foster relationships.

Moving forward, the corps consolidation area will doctrinally drive support operations as the Army adapts

to less rigid lines of communication, moving away from operations dependent on large stockage levels held at depots in order to provide faster and more agile distribution directly to end users.

The challenge for logisticians is how to adapt to the current operational environment while simultaneously transitioning away from counterinsurgency and predicting the requirements and capabilities of the future battlefield. The maneuver commanders will not wait, and should not wait, for sustainment. In order for sustainers to be combat multipliers, they must provide maneuver commanders with solutions. Sustainers will accomplish these solutions through collaborative and synchronized teams.

During the Chief of Staff of the Army's recent visit to Fort Hood, he reinforced that the Army's num-

ber one mission is readiness, that the Army must remain prepared to engage the enemy globally, and that III Corps will be called on as America's Hammer.

The ESC's focus is clear. It will lead the sustainment line of effort to build corps readiness. The ESC must develop teamwork within the corps and throughout the joint logistics enterprise to accomplish this critical task.

Brig. Gen. Darren Werner is the commanding general for the 13th ESC. He has a bachelor's degree in biology from Central Michigan University, a master's degree in human resources management from Webster University, and a master's degree in national and strategic studies from the Naval War College. He is a graduate of the Army Command and General Staff College and the Naval War College.

The background of the image features a row of military flags on poles, including blue, light blue, and red flags with yellow fringe. In the foreground on the right, a large black spade symbol with a white spade icon and yellow fringe is visible. The title text is overlaid on the left side of the image.

Building Capable Sustainment Organizations Through Trust and Empowerment

■ By Command Sgt. Maj. Michael J. Perry III



Command Sgt. Maj. Michael J. Perry III, outgoing command sergeant major for the 101st Airborne Division Sustainment Brigade, speaks about his time in the brigade during a change of responsibility ceremony at Fort Campbell, Ky., on Sept. 7, 2017. (Photo by Sgt. Neysa Canfield)

The Combined Arms
Support Command's
senior enlisted Soldier
discusses how pres-
ence and engagement
lead to empowerment.

The best organizations that I have had the honor to serve in understand one fundamental truth: cohesive teams are based upon mutual trust. This is not just a catchphrase from the Army's mission command leadership philosophy; it is a hard-won and enduring lesson that I have learned over the course of my 26-year career, from mess halls to motor pools, to forward operating bases, and to the halls of the Combined Arms Support Command headquarters.

Trust, though, is only half of the equation. Once leaders have done the hard work to build trust among their superiors, subordinates, and peers, they must take the next step to empower their subordinates to take action on their behalf. This empowerment is the ultimate display of trust, and it is never given lightly.

Trust is utterly essential to what mission command is all about, and more importantly, trust is completely necessary for sustainment formations to support, fight, and win in large-scale ground combat operations against foes who are equal to us in tactics and technology.

Gaining Trust

Regardless of your rank or professional reputation, trust will not come to you automatically. It is not issued from the central issue facility, and it is not assigned to you along with your position or duty title. It has to be earned, and re-earned, every time you join a new team.

For noncommissioned officers (NCOs), the mission-essential task of gaining the trust and confidence of both their leaders and Soldiers is one they must absolutely master. All NCOs, myself very much included, will not be in our current duty positions forever. We will move on to new organizations and have to establish ourselves among new populations. How can this be done?

The simple answer is by getting off your fourth point of contact and getting out there among your Soldiers, civilians, and contractors. NCOs are

expected to be "leaders of presence." This is not just presence, as in having personal charisma and the ability to engage with an audience. Leaders must be present, both physically and intellectually, alongside their teammates.

As a leader, you become present by getting out of the office and meeting folks, seeing where they work, and understanding what they do. Getting out and into your organization is critically important for establishing the bonds of trust and cohesion. You need to do this even if you are going back to the same organization or the same type of organization you served in previously. People change, mission and structures change, and one cannot assume that the way things were is still the way things are now.

By being present continually throughout your tenure in a unit, you are able to take an accurate pulse of your organization, identify friction points, and help build cohesion and trust across the command. The larger your span of influence, the more challenging it will be to make time to conduct these engagements across the command. My recommendation is to prioritize this effort by blocking off time on your demanding calendars. Only then can you conduct these critical engagements.

Maintaining Trust

Demonstrating commitment to and understanding of your organization through an active presence and positive engagements will build the bonds of trust between you and those within your organization. But trust gained can easily be lost if you are stagnant and lose touch with what is going on across the command.

You must continuously build the team through engagement. Engagement happens at all echelons, and the most effective NCOs act as a fulcrum between those of us who serve and those whom we serve.

Presence and engagement alone are not enough. NCOs should show up to all the meetings and walks around the motor pool, but they should nev-



Sgt. 1st Class Eric Pena, Spc. Crystal McNab, and 1st Lt. Leeann Sagucio, all of the 962nd Quartermaster Company (Mortuary Affairs), Special Troops Battalion, 3rd Infantry Division Sustainment Brigade, answer questions on Army retention during a leadership development event at Bagram Airfield, Afghanistan, on April 24, 2018. (Photo by Sgt. 1st Class Ben K. Navratil)

er contribute anything that does not add value. Effective NCOs are leaders who have gotten to know their organizations and can leverage their own technical and tactical competence to be part of the solution.

NCOs, especially those serving in staff or headquarters billets, must complement their officers. They do not have the same duties or responsibilities, but with bonds of trust established, they can provide mutual support in the execution of their tasks.

Once commanders and NCOs have relationships built on the foundation

of cohesion based upon mutual trust, commanders can empower NCOs to take decisive action on their behalf. And that is what mission command is all about. Everything I have described is about setting the conditions in the organization so that empowerment happens.

If we understand the people, structure, and mission, then we can accurately assess the environment and advise our commanders on the way ahead. If NCOs demonstrate their commitment to the organization through presence and engagement, then commanders will empower them to take action.

Empowering NCOs does more than just change and improve the culture of a particular place or unit. If commanders are comfortable empowering their NCOs in training and at home station, they will be ready to do so during critical mission-essential tasks and in the heat of battle. That trust and empowerment can literally be the difference between defeat and victory.

Command Sgt. Maj. Michael J. Perry III is the command sergeant major of the Combined Arms Support Command at Fort Lee, Virginia.





Radical Inclusion:

An Interview With Retired Gen. Martin Dempsey

■ By Arpi Dilanian and Matthew Howard

Gen. Martin E. Dempsey, chairman of the Joint Chiefs of Staff, visits with Soldiers from the 173rd Airborne Brigade at the Estonian 1st Brigade Headquarters in Tapa, Estonia, on Sept. 15, 2015. (Photo by D. Myles Cullen)

A 41-year veteran
who served as the
Chairman of the Joint
Chiefs of Staff dis-
cusses his views on
building the Army
team for the future.

When it comes to building teams, few people have more experience than retired Gen. Martin E. Dempsey. Across his 41-year career, which culminated with being the 18th chairman of the Joint Chiefs of Staff, Gen. Dempsey was known as a Soldier's Soldier and was revered by those he led. A graduate of the U.S. Military Academy, he also served as the 37th Chief of Staff of the Army and as commander of both the Training and Doctrine Command and the U.S. Central Command. We sat down with him to discuss his take on building the Army team for the future.

You held many key leadership positions throughout your career. What were some of the lessons you learned about building successful teams?

For leaders at every level, from the lowest tactical level all the way up through the Army's senior leadership, I think the best approach is to first think about how you influence before exerting your authority. To me, the best kind of leadership establishes a sense of belonging, makes clear that everyone's contribution matters, and creates an environment where people get the job done because the leader has been persuasive with them.

The way you create high performing organizations that are cohesive and collaborative is by thinking about leadership as influence rather than authority. As soon as you have to exert authority, your leadership has become directive and the team responds differently.

There are obviously times when you have to exert your authority because there's inadequate time to be influential and persuasive. But in the normal course of events, if you are a leader who believes in getting things done through influence, you'll build the kind of trust that will allow the unit to respond positively when you do have to exert authority.

How would you describe your leadership philosophy?

In the kind of leadership environment we live in, one with ubiquitous information, fragile facts, and intense scrutiny, the way to achieve trust within an organization is by being inclusive. I just coauthored a book, titled *Radical Inclusion*, because I believe this so strongly.

As we transitioned to an all-volunteer force, we made a commitment to ensure it would be reflective of the society it serves. That took us down a path of making sure we had a diverse group of leaders in the formations based on gender, ethnicity, and so forth. I think we really made impressive progress.

But let me make a distinction here. The kind of thing we're talking about is beyond simple diversity. It's not just taking stock of whether you have the proper representation of ethnic groups or genders, but, rather, we should be focusing on how inclusive we are. If you're inclusive, the organization will naturally feel like it is contributing and bringing meaning, not just being dragged around by leadership.

Can you discuss the importance of responsibility as it relates to maximizing team performance and realizing potential?

Responsibility is one of the principles of our profession; leaders accept responsibility for outcomes. This means they don't just simply pass the buck. At every level, leaders need to hold themselves accountable for what they can, and should, accomplish at their particular level, whether it's something as mundane as maintenance rates or something as abstract as building the Iraqi army. When they don't have what they need to do so, they have an obligation to make sure the chain of command is informed.

The military can sometimes be criticized for its "can do" attitude. You've probably never met an officer who would say, "No, I can't do that." But we actually have a responsibility to explain both what we can do and



Gen. Martin E. Dempsey, the 18th chairman of the Joint Chiefs of Staff, delivers remarks at his retirement and change of responsibility ceremony at Joint Base Myer-Henderson Hall on Sept. 25, 2015. (Photo by Petty Officer 2nd Class Dominique A. Pineiro)

what we can't. That responsibility is at every level of the organization.

Of all the jobs I had in my career, the one with the least authority was actually when I was chairman of the Joint Chiefs of Staff. All the budgetary authority flows through the service chiefs; all the operational authority flows through the combatant commanders and up through the Secretary of Defense and the President. So the chairman's role in some ways is to balance the supply and demand aspects of the force to meet the demands of the combatant commanders to the greatest extent possible, while making sure the service chiefs have the ability to develop forces ready to carry out the combatant commanders' intent.

But that's where responsibility comes in. It would be irresponsible to allow that relationship to become out of balance. If we constantly consume the force as it becomes ready,

it makes it almost impossible for the service chiefs to organize, train, and equip the force as well as educate it on the responsibilities of the profession, its role in society, and its relationship with the American people. It is the chairman's primary responsibility to keep all of that in balance.

How important is sustainment to our operations, and how did you ensure our logisticians were integrated into the joint and coalition teams?

Absolutely vital. A famous logistician back in the Desert Storm era made the apropos comment that logisticians draw a line in the sand beyond which the operators dare not tread. His point was, generally speaking, logistics will determine the capability, speed, and tempo of operations. While that quote was very famous back in the 1990s, I had a much different view. I felt it was a bit pejo-

rative and negative, suggestive that the logisticians were a limiting factor of what we could do. Throughout my entire career, I instead preferred to look at sustainment and logistics as enabling factors.

To ensure they're integrated into the team, you have to include them at every point in the planning, preparation, and execution of the mission. As a battalion and regimental commander, I never allowed my staff to concoct an operations plan, get my approval on it, and then toss it over the transom to the logisticians and say, "Figure out how you're going to support this." Sustainers had to be on the team from the start so we had diverse thinking about these complex challenges.

I personally think that's even more important today. The problems we face are so much more complex, especially in deployments, both the kind we've already fought and the ones we prepare for but have not had to perform yet, such as establishing a base of operation in Europe. That was one of the things I worried about most as chairman.

We had become exclusively capable at the kind of missions we were running in Iraq and Afghanistan but had let some of our expertise in other areas erode, things like the value and importance of deterrence, the ability to set a theater, and the ability to maneuver over distance with a heavy force and ensure all the enablers could move at the same pace. I think the expertise is starting to be regenerated, but we can never take those things for granted. Those who sustain and those who are storming the hill better be involved in the planning and preparation from the beginning or in execution it'll fail.

Can you discuss the role our military spouses and families play in the success of our total Army?

In 2003, I was commander of the 1st Armored Division and was given responsibility for Baghdad. Our mission statement for Task Force



Gen. Martin E. Dempsey, chairman of the Joint Chiefs of Staff, and his wife, Deanie Dempsey, lay a wreath at the Tomb of the Unknown Soldier in Arlington National Cemetery on Sept. 25, 2015. (Photo by Spc. Cody W. Torkelson)

Iron was to establish a safe and secure environment in which the duly-appointed government of Iraq could restore basic services and security. We were spread out all over the place with more than 50 combat outposts and forward operating bases, and I had 32,000 Soldiers.

As I told my junior leaders, one of the things we learned very quickly was that contrary to other wars, we really took our families with us when we deployed. They all looked at me like I had lost my mind, but my point was that we now had Soldiers either texting, Skyping or FaceTiming with

their families all the time. It was, “Oh by the way, I have to go now because I’ve got to take a convoy out; I’ll text or come back up on Skype when I get back.” So family members now had a real-time sense of anxiety about the well-being of their Soldiers.

It was interesting back in those

days to try to exert some control over that. Finally, I came to the conclusion—and this gets back to the idea of radical inclusion—that the answer wasn't to try to control it because it became nearly impossible. Even if you thought you could, you couldn't. Instead, we actually tried to empower it and to literally make the family members feel like part of the team by sharing information with them about what we were doing and why. It became a very powerful leadership tool.

Initially, we thought the division was going home by Christmas of 2003. That was extended to April, which brought us to one full year, and then we were extended again to July following the Shiite rise. The way we got through that was making sure Soldiers and their families concurrently understood what was happening and why.

I sent Mark Hertling, a brigadier general at the time, back to Europe, where we were mostly based, to partner with my wife, the U.S. Army Europe commander, and the European installation management director. Together they went from kaserne to kaserne doing hour-and-a-half briefings and taking another hour's worth of questions so families understood why our mission was important. Those families then became part of the solution, not part of the problem.

As a commander at any level, if you think you can just worry about those who wear the uniform, it's a big mistake.

What was the most challenging team-building experience you had?

The most challenging experiences are generally those where units come together on relatively short notice, as we experienced in particular during the first decade of this century with things like the surge in Iraq. Everyone in the Army at the time was trying to figure out how we could more quickly adapt and innovate and how we could become more agile. One of the answers that emerged was modularity.

As we began to go down that path, phrases like “plug and play” came into play. We would take brigade combat teams from various divisions, run them through a mission readiness exercise, and then deploy them. But the cost of this model in terms of team building was pretty high.

Throughout the first 20 or 30 years of my career, I belonged to units that trained together habitually. We were task-organized habitually; we always knew which tank company would go over to the infantry brigade or which infantry battalion would come over to the armor brigade, and we trained that way year-round. We got to know each other; our families got to know each other. When you have that kind of constant interaction, it builds a bond of trust that runs pretty deep.

Modularity, of course, is kind of the antithesis of that. People come and go based on the needs of a particular mission. It's the ultimate exercise in task organization. That's difficult because systems or units only become high-performing when they begin to trust each other, not before. As an Army, I think we have to constantly be conscious of this balance between agility that comes through modularity and the bonding that comes through continuity.

Since retiring from service, has your outlook on leadership evolved?

If anything, my beliefs about leadership based on my experiences coming through the ranks have actually been reinforced, especially this idea of trust being the cornerstone of building teams. In today's environment, political corrosiveness has caused having a pleasant conversation about issues, which was always challenging, to become seemingly impossible. We often talk less about the substantive issues than we do about the narrative that accompanies them. It's a battle of competing narratives more than a battle of merit on a particular issue. In that environment, it makes leading more difficult. Fortunately, however, it doesn't make it impossible.

What makes it possible is a commitment to creating a sense of belonging, to make sure people know their contributions matter, and to develop trust. That was how I tried to lead throughout my career, particularly as a general officer where all of the sudden I had influence on the future of the Army and joint force. I'm sure there were individual actions along the way that I would've liked to have come out differently, but in terms of how I tried to build teams, I don't think I would've done anything differently.

What is the most important thing a young Soldier should know as part of the larger Army team?

The best young leaders, be they enlisted, warrant officers, or commissioned officers, have always had a sense that they were part of something bigger than themselves. I personally believe one of the things that makes the Army special is this ability to recognize the greater good we serve, and that's probably even more true today in the current environment.

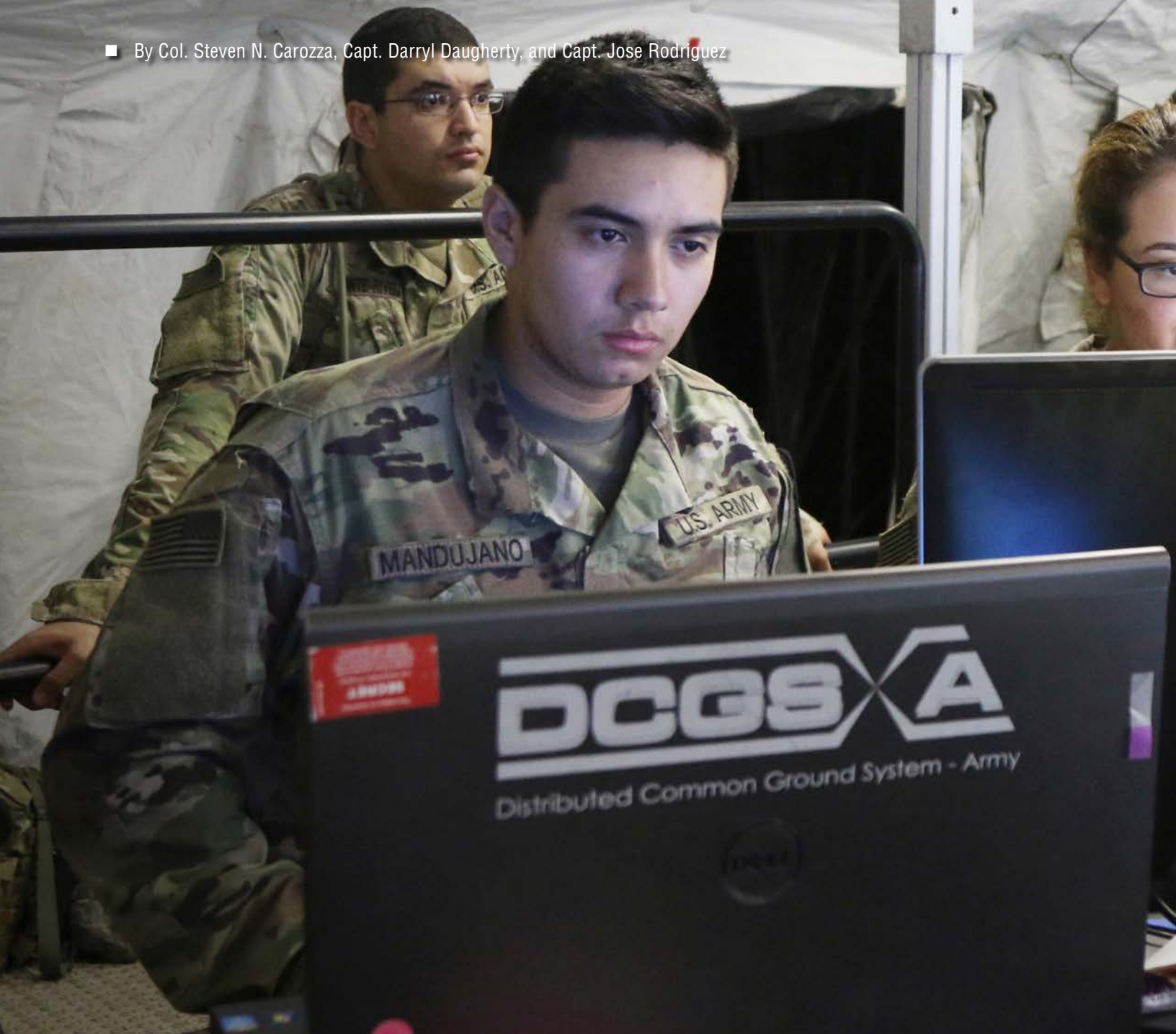
It doesn't come to life immediately when a young man or woman raises their hand and takes the oath. But if leaders feel that responsibility to continue to educate the force that this is a team of teams, I think we're going to be okay. We can't forget we are one joint force, and it's the American people who are counting on us. If we stay true to our professional ethos, we will succeed.

Arpi Dilanian is a strategic analyst in the Army G-4's Logistics Initiatives Group. She holds a bachelor's degree from American University and a master's degree from Rensselaer Polytechnic Institute.

Matthew Howard is a strategic analyst in the Army G-4's Logistics Initiatives Group. He holds bachelor's and master's degrees from Georgetown University.

The 1st Cavalry Division Sustainment Brigade: *Building a Modular Sustainment Team*

■ By Col. Steven N. Carozza, Capt. Darryl Daugherty, and Capt. Jose Rodriguez





Soldiers from the 1st Cavalry Division Sustainment Brigade's combined operations and intelligence center process updates for current operations during Warfighter Exercise 18-05 at Fort Hood, Texas.

The 1st Cavalry
Division Sustainment
Brigade ensured sup-
port to maneuver
units by co-locating
critical sustainment
staff elements and
maneuver leaders,
synchronizing lo-
gistics, and build-
ing comprehensive
orders.

Sustainment units face unique dynamics in executing mission command. The modular nature of sustainment formations means that combat sustainment support battalions (CSSBs), sustainment brigades, and expeditionary sustainment commands (ESCs) will be task-organized to include units they have never worked with in order to support unfamiliar organizations while deployed. The ability to rapidly build a capable sustainment team at echelon is imperative to mission success.

During a recent warfighter exercise, the 1st Cavalry Division (CD) Sustainment Brigade staff experienced this dynamic and exercised a number of tasks and systems to provide the support and services necessary to ensure freedom of action, operational reach, and prolonged endurance.

The exercise helped the sustainment brigade identify critical sustainment components, such as the co-location of critical sustainment staff elements and maneuver leaders, logistics synchronization (both vertical and horizontal), and a comprehensive orders development process.

Co-Location of Staff Elements

One crucial, yet often underappreciated, aspect of sustainment planning is building the multi-echelon sustainment team. Field Manual 6-0, Commander and Staff Organization and Operations, directs command post staffs at echelon to establish a cell dedicated to the sustainment warfighting function.

It's easy for a small group of personnel to plan in a vacuum, to the detriment of other units, in an environment with many modular sustainment cells. A potential solution, which the 1st CD Sustainment Brigade exercised, is physically connecting the division sustainment area command post and the sustainment brigade tactical operations center.

By physically connecting the two operations centers, significant por-

tions of the division sustainment staff, including elements of the G-1, the G-4 with a robust division transportation office, the G-8, the sustainment brigade support operations (SPO) section, and elements of the maneuver enhancement brigade, were able to seamlessly coordinate with the protection cell. Co-location expedited sustainment planning and mitigated the confusion often associated with a complex and dynamic operation.

The close quarters facilitated constant communication and the development of ad hoc working groups and relationships. This environment allowed planners to adjust to the sudden changes of the decisive action environment. The dynamic was superior to the timed and strictly scheduled interactions of voice-only communication used in previous operations.

Logistics Synchronization

Supporting an armored division in theater requires investments from numerous stakeholders across the sustainment enterprise. These stakeholders include higher echelon units, such as the ESC and Army field support battalions, and subordinate sustainment elements such as the sustainment brigade's CSSB, divisionally aligned brigade support battalions, and forward support companies.

All of these elements come together to support both divisional and nondivisional units within the division's area of responsibility. It is absolutely imperative that stakeholders synchronize the requirements, capabilities, and movement tables at echelon with the maneuver plan in order to create the overall distribution plan.

Only by conducting rigorous logistics synchronization meetings, placing liaison officers with units that are separated by significant distance, and ensuring communication and requests flow smoothly are we able to integrate all of the sustainment assets necessary to

win in today's complex operational environment.

The sustainment brigade has the most logisticians in the division consolidation area, so it must act as the nexus for coordinating these various stakeholders into a cohesive team that carries the support from the strategic to the tactical level.

A frequent friction point in this process is the priority of support from the ESC. Each echelon operates within a different planning horizon. The sustainment brigade is driven into a dynamic planning cycle and often adapts the plan inside of a 48-hour window. An ESC has a much longer planning cycle because of its responsibilities that support corps-level operations.

Constant communication between the sustainment brigade and the ESC is essential in order to mitigate that friction point. Designating individuals to have the sole responsibility of communicating between the two units is a potential solution. Having personnel dedicated to this task maintains communication and improves teamwork.

Communication needs to focus on or beyond the 72-to-96 hour planning horizon so that the sustainment brigade and ESC can anticipate potential changes to the maneuver plan so that the sustainment brigade can influence the deep sustainment fight and shape sustainment operations in depth. Sustainment brigades and ESCs are extremely well-served when they take the time, in advance of exercises and operations, to develop relationships between their staffs that facilitate communication.

The next step is to put the staffs to work. They must anticipate the requirements of the supported unit and balance them against available capabilities. The most successful teams not only plan their movements but also project where each member of the sustainment enterprise will be on the battlefield and what actions they will take. In order to develop a sustainment team in

a decisive action environment, the sustainment brigade and ESC staffs must project not only what they will do but also what other sustainment elements around them will do.

For example, if the sustainment brigade monitors inbound vessels and knows that the ESC will receive 10 tanks, it can anticipate how long it will take to move those assets forward and coordinate with the ESC to reconstitute combat power accordingly. Prioritizing cargo movement within the intratheater strategic pipeline will determine whether or not the warfighter receives major end items.

This process of anticipation begins before crossing the line of departure and continues throughout all phases of the operation. To be most effective, sustainment organizations must maintain situational awareness of ongoing operations throughout the battlefield. The relationships built with fellow sustainers can further facilitate a common understanding of the dynamic sustainment situation.

Comprehensive Orders

Standardized processes and procedures are required to delineate and synchronize efforts. Tactical standard operating procedures provide a baseline for how to conduct operations, but conditions change rapidly in a decisive action environment.

The 1st CD Sustainment Brigade used orders to convey changes in procedures and provide guidance to subordinate units. These orders covered everything from requesting movements for supplies to establishing attachments for supply distribution to providing support for an external brigade.

During the 1st CD Sustainment Brigade's warfighter exercise, the corps headquarters and ESC published orders for the release and delivery of supplies to the sustainment brigade. From there, the sustainment brigade coordinated orders for the delivery of supplies and support to the maneuver units. The orders

from both the division and sustainment brigade were equally important because they worked together to outline the delivery and receipt of support.

Building relationships and facilitating communication across all echelons are the main elements that enabled the practices described above. Many planning factors for developing a staff or a tactical standard operating procedure focus on a schedule for reporting, working groups, briefings, and back briefings. These factors ensure that information flows in both directions. But the most important element of all is the relationships developed with the supported units, the supporting units at higher echelons, and other assets in theater.

Those relationships ensure that the sustainment warfighting function can achieve its most important goal: gaining the maneuver units' trust and confidence. As sustainers of the force, it is imperative that we devote the time and energy necessary to build relationships between organizations that enable responsiveness to the ever changing needs of the maneuver force commanders who rely on us to help build and maintain combat power.

Col. Steven N. Carozza is the commander of the 1st CD Sustainment Brigade at Fort Hood, Texas. He holds a bachelor's degree from the University of Notre Dame and a master's degree from the University of Oklahoma. He is a graduate of the U.S. Army War College.

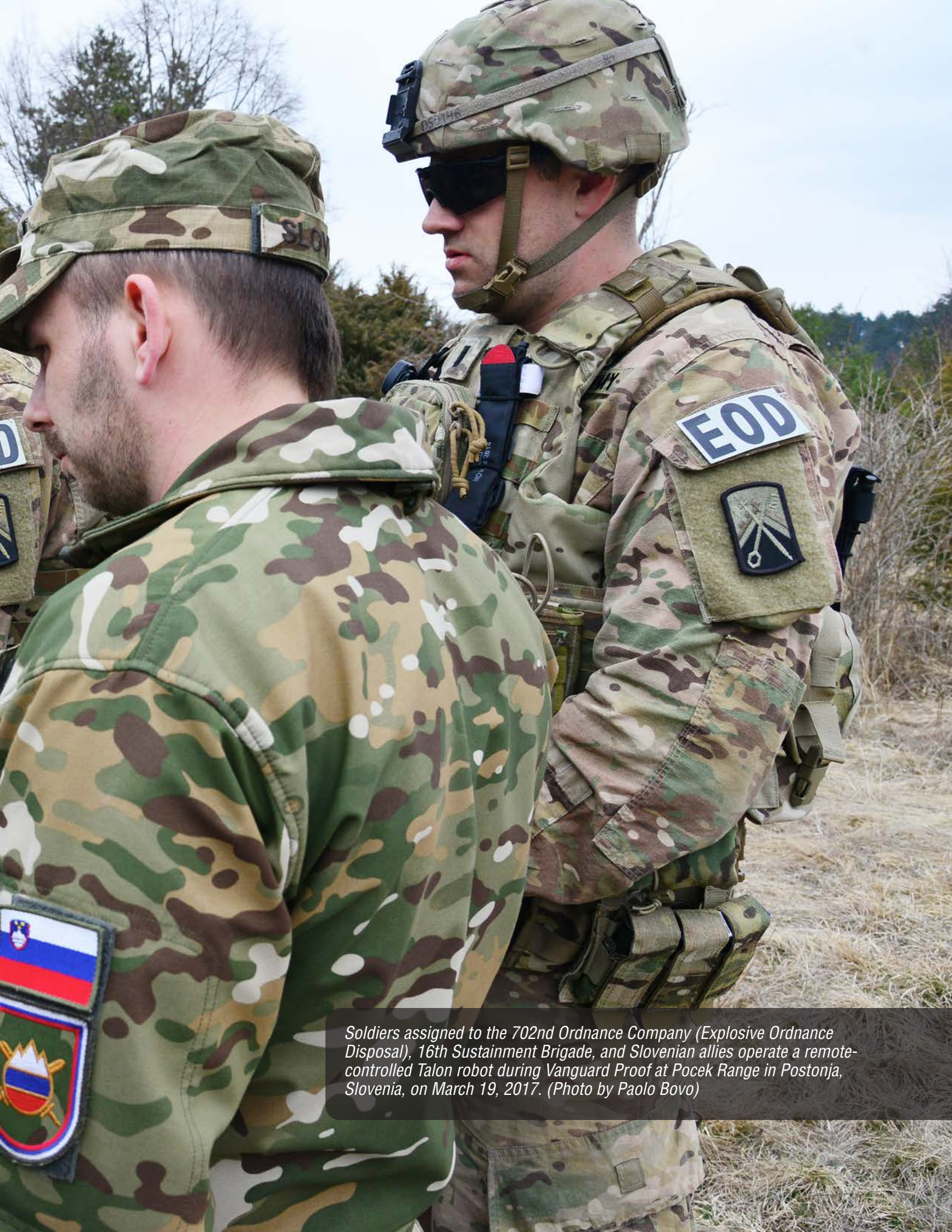
Capt. Darryl Daugherty is the materiel management operations officer for the 1st CD Sustainment Brigade SPO. He holds bachelor's and master's degrees in mathematics.

Capt. Jose Rodriguez is the Distribution Integration Branch operations officer for the 1st CD Sustainment Brigade SPO. He holds a bachelor's degree in industrial and systems engineering.

A photograph of two soldiers in camouflage uniforms operating a piece of electronic equipment in a field. The soldier in the foreground is wearing a helmet and sunglasses, and is adjusting a red knob on a device housed in a blue plastic case. The soldier in the background is wearing a green beanie and is looking on. The equipment is placed on a table, and a roll of green tape is visible in the foreground. The background shows a wooded area with trees and a hill.

The 16th Sustainment Brigade and NATO Allies: *A Quest for Interoperability*

■ By Lt. Col. Brian J. Ketz and Maj. Micaela A. Gehlen



Soldiers assigned to the 702nd Ordnance Company (Explosive Ordnance Disposal), 16th Sustainment Brigade, and Slovenian allies operate a remote-controlled Talon robot during Vanguard Proof at Pocek Range in Postonja, Slovenia, on March 19, 2017. (Photo by Paolo Bovo)

Building a sustainment common operational picture with NATO allies is essential to teamwork and a strong alliance.

A joint common operational picture (COP) is vital for the U.S. sustainment mission and for forces operating in Europe. Likewise, sharing information with NATO partners is critical when operating in a multinational environment. Planning and executing sustainment operations requires interoperable accessibility to digital systems that enable the commander to make decisions.

The Soldiers of the 16th Sustainment Brigade are faced with a dynamic mission that is critical to adversarial deterrence in the European theater. As the only U.S. Army sustainment unit supporting European theater security cooperation events and multinational exercises at the tactical level, the brigade must have multinational logistics interoperability during daily operations to ensure the support of equipment, supplies, personnel, vehicles, and other resources needed for mission assurance.

Limited Interoperability

Information sharing is the key to any modern multinational operation, and the information's true power is fully realized only if it is accurate, timely, understandable, and meets all mission requirements. Currently, U.S. and NATO mission command networks converge only through email messages and teleconferencing.

A joint logistics COP does not exist among NATO allies within the European theater for critical functions such as battlespace management, movement control, sustainment operations, and force accountability.

Timely decision-making demands a mutual COP that is enabled through shared communication systems and programs supporting joint efforts. Critical warfighting functions depend on the network, which means the applications that support those functions and the data populating those applications must be on a network accessible by both U.S. and partner forces.

Logistics Functional Area Services (LOGFAS) is the ideal platform for

shared analysis, planning, executing, and monitoring of the sustainment mission set within the European theater. However, there are challenges with the U.S. network and LOGFAS data interoperability among NATO partners. The impact of these challenges hinders mission command with foreign partners and adds another layer of complexity to tactical operations.

Existing network platforms have provided limited interoperability with NATO partners. Up until this point, the Battlefield Information Collection and Exploitation Systems (BICES), for instance, has provided only email communication to NATO network platforms and a few collaborative websites. Furthermore, BICES does not offer the level of accessibility required to communicate with all NATO partners and efficiently carry out sustainment operations.

Mission Partner Environment

Implementing a federation of some sorts between U.S. networks and NATO partner networks is essential. That is where the Mission Partner Environment (MPE) comes into play. MPE offers more accessibility for NATO allies and makes it easier to create a gateway for new and effective ways to execute mission command.

The interoperability of mission command systems and core services (data and voice) with NATO allied forces would greatly enhance annual multinational exercises and create an endless number of training opportunities. However, the current U.S. signal posture does not have a permanent MPE network infrastructure in place for all units to utilize.

For Sabre Strike 18, a multinational exercise, MPE was the primary coalition platform for U.S. forces to collaborate with foreign partners. Although most of the 16th Sustainment Brigade was fully functional on the MPE network, the brigade was still unable to provide all of its battalions with MPE network kits to collaborate.

Even though the brigade was fielded three MPE baseband kits, additional MPE infrastructure would have greatly benefited the unit and provided needed flexibility with critical brigade training objectives, such as jumping the tactical operations center, with all three network enclaves, which are the Non-classified Internet Protocol Router Network, Secret Internet Protocol Router Network, and MPE.

LOGFAS on MPE

LOGFAS has been accredited on the MPE platform, which is a great step forward for enabling the exchange of information with NATO.

In concert with injecting joint LOGFAS data into a NATO COP, a formal training process needs to be immediately implemented to train all current COP technicians on how to use and implement the joint LOGFAS data within the NATO COP.

Furthermore, all Army regionally aligned forces at all tactical levels, particularly at brigade and division levels, need to be functionally proficient and manned and equipped to employ LOGFAS software.

The Brigade's Plan

While the network interoperability and LOGFAS data exchange proofs

the data interoperability framework is headed in the right direction. The first practical application of this new capability is currently planned for exercise Trident Juncture 18 in late 2018. Trident Juncture 18 will have 40,000 participants from more than 30 countries. Its goals will be to deploy and exercise in a complex, joint, and distributed environment.

By gathering data injects from the boots on the ground and passing it up through the battalion, brigade, division, USAREUR, and finally the U.S. European Command, Army units in Europe can give the Supreme Allied Commander Europe situational awareness and actionable data to make

A multi-domain, large-scale combat operation will challenge leaders to forge teams capable of analyzing data, conceptualizing the battlefield, and making informed decisions aimed at facilitating warfighter support.

LOGFAS should be the universal platform for coalition forces to use because it encompasses a number of useful tools, such as the Sustainment Planning Module, Allied Deployment and Movement System, Effective Visible Execution, and Logistics Reporting.

The end state is to satisfy the requirement for an enduring capability for the U.S. European Command and components to collaborate with NATO for adaptive planning and the execution of coalition operations.

Steadfast Cobalt 18 introduced the 16th Sustainment Brigade to the Joint Enterprise Data Interoperability, a tool that has the potential to provide data and system-level interoperability for joint and coalition functional services on the MPE network. Joint Enterprise Data Interoperability also potentially enables data exchanges between the Joint Operation Planning and Execution System and LOGFAS over MPE information systems, replacing the current "swivel chair method," which uses manual LOGFAS data input.

of concept will hopefully bridge the gap on data exchange among U.S. forces and NATO allies, the Army must prioritize focused LOGFAS training for units and personnel.

To that end, the 16th Sustainment Brigade's S-6 staff has worked closely with the U.S. Army Europe (USAREUR) G-6 section to successfully make the LOGFAS connection work. Currently, the MPE network connection uses the garrison network backbone, and multiple tactical connections are at the ready.

Additionally, the 16th Sustainment Brigade's S-6 staff is receiving LOGFAS application training and has access to the latest software. Once final network architecture and federation modifications at the USAREUR level are complete, the brigade stands by to be possibly the first to test the LOGFAS application on the MPE network while exchanging logistics data with NATO allies.

There will undoubtedly be more challenges ahead with multinational data exchange, but it seems as if

real-time decisions in the European theater using the fully functional joint LOGFAS COP. Information sharing is a combat multiplier that helps to strengthen the alliance by putting allies and partners on equal footing in terms of digital capabilities.

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**CONVOY FOLLOWS
KOLONNE FOLGT**

A photograph of a military convoy on a paved road. In the foreground, the rear of a Humvee is visible on the left. A long line of white military trucks follows down the road, leading towards a larger armored vehicle in the distance. The sky is overcast.

The 1st ID Sustainment Brigade Exercises International Teamwork for Multi- Domain Battle

■ By Lt. Col. Seth Olmstead, Maj. Shawn Robertson, and Maj. Neal Sivula

A Humvee from the 63rd Armor Regiment, 2nd Armored Brigade Combat Team, 1st Infantry Division, leads a multinational convoy during a joint war-fighting assessment exercise in Grafenwoehr, Germany, on April 23, 2018. (Photo by Pfc. Maximilian Huth)

The 1st Infantry Division Sustainment Brigade provides lessons learned from working with NATO partners during a joint warfighting assessment.

The Joint Warfighting Assessment (JWA) 18.1 was a multinational training event that focused on joint and multinational interoperability. Assessed by the Army Joint Modernization Command, the exercise was intended to generate Soldier feedback on the concepts and capabilities required for the joint force to win tomorrow's fight.

The exercise included six three-star headquarters and 10 partner nations. It exercised multinational sustainment friction points and the sustainment warfighting function in division-level, U.S. forces-led, multinational operations.

The most prominent friction points of the JWA were the role of sustainment in Multi-Domain Battle (MDB), creating shared understanding across the coalition, and interoperability of systems.

The MDB Framework

According to MDB doctrine, convergence is the integration of capabilities across domains, environments, and functions in time and physical space to achieve a purpose. The battlefield framework used during JWA introduced the concept of the "convergence window." The 1st Infantry Division (ID) Sustainment Brigade used the window to advance U.S. mission command goals and objectives while the division pursued corps-level objectives using a multinational force structure.

The 1st ID's mission command of a multinational force structure presented multiple opportunities for the 1st ID Sustainment Brigade to exercise sustainment from the support area command post (SACP). Because multinational partners' national supply chains are activated by their respective countries, integrating national mission elements into sustainment operations challenged the integration of sustainment operations from the SACP.

National caveats and acquisition and cross-servicing agreements created friction points that affected

sustainment mission command and interoperability. Simply understanding these national differences went a long way toward mission accomplishment. Each partner nation's national support element executed sustainment differently, largely because of their view of what was effective and efficient.

While the 1st ID Sustainment Brigade attempted to orchestrate sustainment operations from the division SACP, partner nation practices affected all classes of supply. For instance, the Canadian Army's desire to throughput class VII (major end items) created challenges for route deconfliction and combat power tracking.

Skipping echelons of sustainment support expedited delivery to Canadian units, but it reduced equipment visibility and situational awareness for commanders at the division and higher levels. The French military desired to maintain its battalion support area in the division support area rather than distributing its sustainment force structure along the axis of advance. That challenged terrain management of the consolidation area.

Each task force within the 1st ID during the JWA was purely based on nationality. This structure affected combat power tracking because the division could not aggregate reporting at the division level. Each task force had greater fidelity, but the structure increased the amount of data and discussion that had to take place at any one time.

One learning point is that integrating partner countries' national mission elements is key to moving repair parts through the supply chain at the right time. Without the national mission elements reaching back to wholesale, a task U.S. sustainers are unable to accomplish, reconstitution of class VII is unrealistic.

International Teamwork

The JWA environment created a sustainment team of teams. Each nation had its own staffing solutions for

sustainment. Some incorporated maneuver personnel into sustainment operations, while others employed only personnel with sustainment backgrounds.

With each nation organizing sustainment manning differently, the separate staffs had to find ways to create shared understanding. Face-to-face became the preferred method for understanding requirements at echelon. Liaison officers (in ranks equivalent to U.S. majors and lieutenant colonels) had permanent seats in the SACP and were empowered to make decisions and provide feedback to fill gaps.

Perhaps a NATO logistics status report works well above the division level, but below the division level significant friction points get in the way of producing a logistics common operational picture.

Interoperability of equipment was a challenge. The 1st ID Sustainment Brigade discovered nuanced differences in ammunition types, weapon systems, and storage techniques. Combat power was fairly easy to track, but class V (ammunition) consumption reporting was extremely difficult.

Ammunition operations in an MDB environment will be a challenge for the foreseeable future in terms of not only throughput but also safe storage of the tons of multinational ammunition that will invariably be staged at multiple locations in the consolidation area.

Multinational distribution systems and operations are crucial for maintaining forward momentum. The 1st ID Sustainment Brigade conducted a coalition movement review board that organized routes, movement times, and multiclass convoys throughout the battlespace.

Managing multinational distribution in MDB presents significant mission command challenges for any headquarters, and the European theater presents significant challenges that must be overcome. Managing both routes and command relationships is critical to leveraging the

convergence windows utilizing the distribution cycle.

Distribution occurs in the window of opportunity when mass (as a characteristic of the offense) decelerates, thereby creating a window of opportunity offset from the convergence window that allows for sustainment actions to occur.

During the JWA, NATO forces were under the NATO operational command of the 1st ID. According to AAP-06, NATO Glossary of Terms and Definitions, NATO operational command is “the authority granted to a commander to assign missions or tasks to subordinate commanders, to deploy units, to reassign forces, and to retain or delegate operational and/or tactical control as the commander deems necessary. Note: It does not include responsibility for administration.”

The division transportation officer must be keenly aware of battlefield transitions and work with the division G-3 to take advantage of the key moment in time between the offense and defense. This key moment, the tangential diffusion space, is when the division uses ground and air lines of communication to offset the consumption of tons of supplies.

Systems Interoperability

Any discussion regarding sustainment interoperability comes down to the passing of basic logistics status (LOGSTAT) reports. How much fuel, ammunition, and food does a unit require? Although LOGSTATs are a cornerstone of sustainment operations at the tactical level, the Army currently has no single system that supports the passing of this information, let alone a multinational system.

The solution to the multinational LOGSTAT gap during this exercise was Microsoft Excel, the Army’s unofficial LOGSTAT reporting system. Using Excel for LOGSTATs had the unexpected benefit of providing a like platform that each nation was familiar with and could use to manage reporting differently.

Passing the LOGSTATs was a challenge. During the JWA, the 1st ID Sustainment Brigade used an internal network that relied on the network infrastructure of Grafenwoehr Training Area. In a tactical environment, the U.S. Army relies on the Combat Service Support Very Small Aperture Terminal and satellite-based communications to pass LOGSTATs and other unclassified sustainment information.

The future of the sustainment warfighting function requires multi-domain, multinational, coalition teamwork in a decisive action environment. Sustainment must be integrated across supply classes and distribution pipelines, and efforts associated with sustainment must be multinational in focus.

For sustainers to remain effective, they must understand how to adapt to national caveats and communicate across multiple capabilities and methods.

International teamwork is important in MDB for creating shared understanding, especially with regard to the consolidation area. The consolidation area is where most multinational interoperability will take place and where the sustainment warfighting function will predominantly demonstrate its value.

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The Good, the Bad, and the Ugly: Lessons Learned From the Army's First Field Feeding Company

■ By Brig. Gen. Christopher O. Mohan and Capt. S. Ryan Benz

A few years ago, the Total Army Analysis determined that years of ordered force reductions caused an Army-wide shortage of 4,000 culinarians (1,300 in the active component). In response, the Combined Arms Support Command began working to add field feeding companies (FFCs) to the force. Now, two FFCs have already been activated in the active component, and the Army has scheduled for activation 15 more active component FFCs, eight National Guard FFCs, and three Army Reserve FFCs.

FFCs are intended to create an expeditionary force posture for the military occupational specialty (MOS) 92G (culinary specialist) community. With a traditional company force structure but modular capabilities, the FFC modernizes an often overlooked Army capability. The FFC allows higher headquarters commands to order customizable subsistence packages, majorly improving sustainment force structure.

The 25th Quartermaster Company

The Army's first FFC, the 25th Quartermaster Company, was activated on January 17th, 2018. The company is assigned to the 264th Combat Sustainment Support Battalion (CSSB), 3rd Expeditionary Sustainment Command (ESC), and is one of two XVIII Airborne Corps FFCs located at Fort Bragg, North Carolina.

The FFC consists of 143 personnel and three platoons and is led by a company commander and first sergeant. The headquarters platoon

consists of 19 personnel that conduct mission command, maintenance, supply, and orderly room functions. The two field feeding platoons consist of 124 personnel within eight teams.

The company was built to have cohesive and deployable field feeding teams (FFTs) capable of synchronizing and integrating their efforts with the supported warfighters. This unit has been an overwhelming success, as evidenced by increased readiness statistics and positive feedback from its supported units.

Starting From Scratch

When the company commander arrived at Fort Bragg in July 2016, the provisional 25th Quartermaster Company consisted of a first sergeant, a warrant officer, and fewer than a dozen MOS 92Gs. The 264th CSSB found the FFC a temporary office space and a few computers to begin building a headquarters. The next nine months were filled with discovery learning as the company built a \$19 million property book and grew to 178 assigned personnel.

The lessons learned from activating this FFC are best categorized as the good, the bad, and the ugly.

The Good

Most of the 25th Quartermaster Company's lessons learned have been positive, particularly in the areas of leadership, equipment readiness, and training.

Leadership. The Army culinary community has historically operated without much leadership in-

volvement. While other Soldiers are saluting the flag during the morning reveille, the 92Gs are preparing breakfast in the dining facilities. While other Soldiers run and call cadence with their commanders and first sergeants, the 92Gs are answering solely to their sergeants first class, who in some cases have very little oversight from their assigned units.

The result is that 92Gs are denied developmental experiences that instill pride, discipline, and Army standards. The Army has had several senior culinary noncommissioned officers (NCOs) move through the ranks with absolutely no field experience. That's all changing with the implementation of FFCs. The companies present many benefits, including improved Soldier standards and discipline (or "total Soldier concept"), increased equipment operational readiness, and better support for the warfighter.

The new FFC force structure includes 92G leadership positions, such as first sergeant, platoon sergeant, and team leader. These NCOs closely manage their Soldiers to balance mission requirements with the Soldiers' developmental needs. Physical training is conducted daily. Those who work the breakfast shift conduct physical training in the afternoon. The result is that many Soldiers have increased their Army physical fitness test scores by an average of 20 points in just six months.

In addition to the new authorizations on the modified table of organization and equipment, the FFC has other leadership opportunities. Many

culinary NCOs enjoy the opportunity to learn new skills through additional duty positions. FFC Soldiers train to become orderly room NCOs-in-charge, armorers, communications representatives, unit movement officers, equal opportunity advisers, and for many other positions that are not typically held by culinarians. These leadership opportunities energize the Soldiers, and they seem to take pride in their new responsibilities.

Company-level promotions and Chef of the Quarter boards foster both the improved total Soldier concept and the success of junior leaders in higher headquarters boards. Since August 2017, a 25th Quartermaster Company Soldier has won every Fort Bragg Chef of the Quarter board.

Soldiers are also better prepared for battalion-level promotion boards

and experience a high promotion rate. Company-level boards are the direct result of engaged senior NCOs and enable junior leaders to build the confidence required to advance in rank.

Equipment readiness. The most striking benefit of the FFC is improved equipment readiness. While conducting lateral transfers, the company discovered that very little oversight is placed on field feeding equipment. Most equipment sets were reported as fully mission capable with no faults found.

However, after conducting its own preventive maintenance checks and services, the FFC realized that major faults and shortages rendered the equipment unserviceable. Some larger units had multiple mobile kitchen trailers, but only one would be ser-

viceable to deploy for field exercises.

So, the XVIII Airborne Corps created disposition orders for donor units to transfer equipment to the 25th Quartermaster Company at the Army maintenance standard. This standard was reemphasized by the ESC and CSSB commanders, which has made it possible for the FFC to build its capabilities.

When equipment was unserviceable, it was sent back to the donor units. Once the deficiencies were corrected, the FFC rescheduled the transfer and accepted the equipment. This allowed the FFC to build capabilities that it could immediately employ in support of the warfighter.

Training. Diversified training is another area in which the FFC improves the antiquated 92G force structure. To ensure that equipment

The 25th Quartermaster Company represented the XVIII Airborne Corps in a containerized kitchen during the 51st Philip A. Connelly Awards Program evaluation on June 21, 2018. (Photo by Jody Benz)



standards were maintained across its teams, the FFC created a quarterly equipment validation exercise and pitched it to the Soldiers as a cook-off. This event included an alert, marshal, and deploy exercise for all eight teams, followed by a cooking competition with training rations and a judges' table. It provided a platform for platoons and teams to exercise their mission-essential tasks while building morale and fostering competition.

Every quarter, the FFC has adjusted the rations and the conditions. It hosted a team from the 82nd Airborne Division that competed alongside it. This type of training event allows the FFC to stay technically proficient and keep its equipment serviceable.

In addition to operating two dining facilities, the FFC pursued a variety of training opportunities, including local and regional field feeding missions, missions outside the continental United States, culinary arts competitions, and partnerships within the sustainment enterprise.

The goal is to create a dynamic culinary and tactical skill set among the Soldiers, which translates to a better field and garrison dining experience for the warfighter. In achieving this, the FFC has established relevance as an organization.

The best way to improve support is through practice, so the FFC conducted multiple field feeding operations. During the XVIII Airborne Corps' Warfighter Exercise 18-4, the company supported 2,600 per-

sonnel from six feeding sites across Fort Bragg. This was the largest centrally-managed field feeding operation conducted to date and was not without challenges.

In addition to training missions, the FFC competes in several culinary competitions, to include the Philip A. Connelly Program and the Joint Culinary Training Exercise at Fort Lee, Virginia. These competitions give Soldiers the opportunity to develop expert culinary skills and improve team cohesion. Soldiers return from competitions with advanced skills in cooking, pastry baking, carving, and nutritional menu planning.

The Bad

No change is without friction, and

The 25th Quartermaster Company prepared a variety of fresh food for the Forces Command-level Philip A. Connelly Field Kitchen Evaluation on June 21, 2018. (Photos by Jody Benz)



there were plenty of struggles associated with breaking ground for this new company. The major challenges experienced while activating the Army's first FFC involved personnel assignments, training, reliance on supported units, and readiness systems.

Personnel. Over the first few months, the FFC received most of its 92G personnel as donor units were projecting to lose their fiscal year 2018 field feeding authorizations. However, the company did not immediately receive other critical MOSs in areas such as supply, maintenance, administration, or chemical, biological, radiological, nuclear, and explosives. These were personnel shortages across the battalion, which would take months to fill.

As a provisional company, the FFC did not receive any new Sol-

dier assignments from the Human Resources Command. It delayed lateral transfers for the first three months until it received critical support personnel to facilitate lateral transfers and take responsibility for MOS-specific equipment.

Training. There have also been some unique training challenges along the way. Most FFCs have a garrison dining facility mission, so it is not practical to do many company-level training exercises. The FFC realized this early and decided to divide training by platoons, teams, and shifts.

The unit mission-essential task list is primarily trained by platoon leaders, and two to four teams participate at one time. Training requirements outlined in Army Regulation 350-1, Army Training and Leader Development, are conducted between shifts in the dining

facility. There are always makeup days for those who have missions elsewhere.

Reliance on supported units. Another challenge is the reliance on supported units for cleaning supplies, gray water containers, handwashing stations, garbage dumpsters, lodging, and refrigeration support. These external requirements are essential for FFTs to accomplish their mission, but they are coordinated and funded by the supported units.

Although the supported units have divested their 92Gs, their MOS 922A, food service technician, warrant officers remain behind as the brigade food advisers. Their remaining responsibilities are to facilitate field feeding requests and coordinate for field feeding requirements. The problem is that if these requirements are not met, then the FFC cannot support the warfighter.



There are two possible solutions: the Army could create a funding code for FFCs to coordinate for their own support, which would reduce the reliance on the brigade food adviser, or the requesting units could be tasked through an XVIII Airborne Corps order for brigade food advisers to complete their required tasks.

The FFC was established with a unique force structure, consisting of an “AA” unit identification code (UIC) and 12 derivative UICs, similar to a battalion task force.

K. Carla Wade, a Forces Command readiness systems analyst, explained that this was done to “facilitate rapid deployment of FFTs and prepare the unit for the future Army-wide implementation of Global Force Management–Data Initiative, a system that will give the Army down trace visibility of individual billets and equipment serial numbers, so all Army capabilities are easily and accurately identified.”

However, it created a very challenging situation within the FFC command supply discipline program. Every FFT leader maintains his or her own property book and conducts monthly and quarterly inventories.

Every piece of equipment that is moved from one FFT to another requires an internal lateral transfer. This structure increases overall deployment readiness but requires a very experienced supply sergeant and lots of monthly reports.

Readiness systems. Army readiness systems took almost a year to become operational for the FFC. The Medical Protection System and the Commander Portal were not pulling information for FFC personnel from the Electronic Military Personnel Office, so the FFC relied on the ESC’s surgeon cell to pull profiles from the donor UICs and provide updates.

The Digital Training Management System had a similar issue in which no Soldiers were slotted under the FFC’s UICs. These systems

are vital for managing unit readiness, and their absence likely initially reduced the FFC’s effectiveness as a command.

The Ugly

The FFC is an incredible concept, and it may revolutionize the way the Army looks at culinarians, but it is clearly not for everyone. The FFC requires disciplined Army culinarians, as opposed to just cooks. Not everyone embraces this change.

The 25th Quartermaster Company experiences an unusually high volume of Uniform Code of Military Justice (UCMJ) violations, which directly affects its combat power. As a provisional unit, the FFC encountered two large legal hurdles: the lack of counseling packets and UCMJ authority.

The lack of counseling packets was a clear sign that leaders were not documenting misconduct. This was evident when team leaders would complain about continually disrespectful subordinates but would never actually address these behaviors through written counseling. It took a few weeks to establish a healthy counseling system, which was the first step.

Initially, the FFC relied on donor organizations to adjudicate the Article 15 packets that it created. The process required time and constant communication between both commands in order to execute actions properly.

The lack of counseling packets and UCMJ authority hindered the company’s ability to establish good order and discipline within its ranks. This has been corrected.

The FFC has struggled with Soldier misconduct from the beginning, and the fact that it has become proficient in processing legal actions has not completely changed unwelcome behavior. Nearly 20 percent of its personnel are being processed for adverse action or legal separation, which accounts for nearly 50 percent of the CSSB’s total legal actions. This has diverted leaders’ time from the FFC mission.

While Soldier misconduct is trending down for this FFC, it will present a challenge for future FFCs.

The FFC offers many benefits to the antiquated 92G force structure, including an improved total Soldier concept, increased equipment operational readiness, and excellent support to the warfighter. While there are challenges in activating these new units, the pros largely outweigh the cons.

These companies allow for diverse training opportunities that create a dynamic culinary and tactical skill set among the 92G community. Physical fitness scores are improving across the board. New leadership positions are available. Company-level boards are promoting junior leader development. FFC equipment is maintained at the Army maintenance standard and is ready to deploy at a moment’s notice.

When properly executed, the FFC translates to a better field and garrison dining experience for the warfighters. As more field feeding companies are activated and deployed, the concept will continue to evolve.

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Synchronizing the Seaport of Embarkation

■ By Maj. Joseph D. Komanetz

Deploying a unit overseas is a monumental task that requires a level of experience not typically resident in most staffs. Planning the railhead operation comes fairly easily: put a unit in charge, sequence units with trains, and emphasize safety. The deploying unit has many things working in its favor while conducting rail operations at home station. Leaders understand the railhead location in relation to their unit areas. Soldiers handle their own life support as they go home at night. Everyone generally knows what to do.

But the port is different. What is the deploying unit responsible for? How do you plan base life support in a place you have never been? What does the deploying unit actually do? Who is in charge?

The Port Support Activity

The Soldiers tasked to the port become the port support activity (PSA) and represent the unit's interests, provide understanding of equipment status and progress, and preserve combat power through the transition. It behooves deploying units to resource a PSA at the seaport of embarkation (SPOE) in order to move equipment from home station onto vessels and provide transparency.

Moving the heavy equipment of an armored brigade combat team (ABCT) from several busy motor pools to a few waiting ships creates a huge amount of friction that can be mitigated through the PSA's expertise, capabilities, and leadership. The PSA, a unit-sourced team of teams, travels to the port to ensure all equipment is successfully loaded onto the ships.

Gather the Experts

Identifying and emplacing expertise is critical. This differs from gathering commanders and staffs during the planning phase. How many of the unit's leaders and planners have port experience? The answer is likely none or just a couple staff members, which puts staffs in the difficult position of planning a complicated and unfamiliar mission.

Most of the expertise within the unit will reside at the Soldier and noncommissioned officer (NCO) levels, but it will not be enough for planning. Organizations like the installation transportation office, the Military Surface Deployment and Distribution Command (SDDC), and the subordinate transportation battalion responsible for that specific port have the requisite knowledge and experience.

The primary mission of an ABCT is not to conduct port operations, so it is important to build a team of subject matter experts early in the planning process. Conduct a data call within the organization that includes everyone with port operations experience.

Concurrently, reach out to external organizations to identify key players who can provide invaluable information and lessons learned. Read articles from the Center for Army Lesson Learned for historical data, and share that data to create an understanding of transportation terminology. Making a concerted effort up front will ultimately save time because the faster a unit understands the mission, the more time it will have to plan.

After you identify the experts, determine where and when they provide the most value. Do they need to reside physically at the port during

the entire operation or can they be consulted by phone?

Define the Requirements

Once you have the experts, they can help define requirements. Defining requirements drives the PSA's composition and processes. Equipment must be moved from trains to ships. The onus for this process is on SDDC, which is responsible for surface transportation and is the interface between Department of Defense shippers and commercial transportation companies.

SDDC has transportation brigades and subordinate battalions spread around the world. The 842nd Transportation Battalion deployed all 2nd ABCT, 1st Infantry Division, equipment from Beaumont, Texas, to Central Europe in the summer of 2017. SDDC provided invaluable insight during the planning phase and outstanding support during execution. The unit should also contact the transportation battalion at the SPOE and include it early in the planning.

In defining requirements, it is helpful to separate major muscle movements to understand how the port works. Equipment is downloaded, staged, and reloaded. Equipment is driven and possibly broken. Equipment is accounted for and manifested for loading. The transportation battalion coordinates with the commercial port to contract a civilian labor force to download and stage all equipment off the rail.

Equipment arriving by line-haul comes in the gate and is met by transportation battalion Soldiers who receive it and ensure proper staging. The transportation battalion develops a staging plan that best facili-

tates ship-loading and the use of the commercial port staging areas. For example, the transportation battalion staged the 2nd ABCT's equipment into three separate areas by type: tracked vehicles, wheeled vehicles, and containers. The major requirements at this point are preserving, operating, fixing, certifying, battle tracking, manifesting, and reporting.

As ships come in, a civilian workforce is hired to drive (and tow) equipment from staging areas onto the ship. What happens when military shipping labels (MSLs) don't match? What happens when a tank slides off a rail car or a rail car slides off the track? What happens when

the unit's destination port changes or equipment breaks down or unit locations in theater change? Leaders at the port will deal with these and many other nonstandard problems.

Build the Team

Identifying leaders is a great place to start when building the team to meet requirements.

An officer. The fluid operational environment at the destination could change the port operations plan and things could go wrong. Such situations require on-site leadership. The unit should place someone at the port with a vested interest in the unit's personnel and equipment and

who can make quick decisions, get quick answers, and work well with civilians. This is field-grade business.

A transportation field-grade officer is the best choice, but factors such as personality, experience, training, and education also matter. A field-grade officer carries the experience required for quick planning, dynamic action, reporting, and dealing with nonstandard problems. A logistician works well in this position because of the transportation and maintenance mission sets of the port.

A senior NCO. The deploying unit might be tempted to avoid using a senior NCO as an NCO-in-charge because of competing requirements.

Soldiers from the 149th Seaport Operations Company, 10th Transportation Battalion, 7th Transportation Brigade (Expeditionary), move vehicles onto a vessel during Exercise Dragon Lifeline on July 31, 2018, at the Federal Law Enforcement Training Center in Charleston, S.C. The exercise trained participants in the planning and processes of rail, convoy, port, and vessel operations. (Photo by Staff Sgt. Christopher Hubenthal)



Investing in NCO leadership builds the health and welfare of the team in an unfamiliar and risky environment. A senior NCO can handle Soldier issues, track personnel accountability, and keep constant tabs on the welfare of the team.

Civilians. Within the civilian workforce, stevedores are the operators of marine terminals who employ longshoremen to move cargo. Longshoremen load and unload cargo on the docks of every port in the United States.

Longshoremen have varying levels of expertise with military equipment. Some will perform startup and shutdown procedures of tracked vehicles incorrectly. They will activate fire suppression systems. They will have accidents in the staging area. These problems drive the need to deliberately place equipment operators in the PSA. Position them at the rail download site and also in the staging area.

The transportation battalion holds regular meetings with the union representative to synchronize future operations. The unit should use the meeting as a venue to coordinate for Soldiers to start tracked vehicles on the rail cars and shut them off in the staging area. The task does not take away work from the longshoremen and will preserve combat power.

Equipment operators. Equipment operators add flexibility. When a longshoreman blocks in a critical asset, an equipment operator can move it and keep operations going. They can also move equipment back and forth from the staging area to a maintenance area without disrupting operations. This requires understanding between the union representatives and the transportation battalion up front.

Maintenance personnel. Equipment will break down. At a minimum, mechanics must stop fuel and oil leaks. Put two tracked and wheeled vehicle mechanics at the rail download site and one of each in the staging area. The additional number at the download site accounts for

multiple rail spurs and also provides flexibility; while one crew troubleshoots, the other can battle track.

In addition to diagnosing problems, the mechanics also keep track of faults by administrative number. This is important for three main reasons: to track combat power throughout port operations, to start requisitioning parts, and to identify safety issues to communicate to the destination PSA.

A maintenance warrant officer is absolutely essential. This person researches parts, tracks not mission capable (NMC) statuses, offers troubleshooting expertise, and coordinates to fill resource shortfalls.

The level of maintenance performed at the port depends on many variables. A warehouse became vacant prior to the 2nd ABCT's deployment, and the transportation battalion coordinated space dedicated to the maintenance operation. The unit line-hauled a Tricon container with petroleum products, batteries, and high-demand parts. Batteries, petroleum products, and absorbent sweeping compound proved to be most critical.

The 2nd ABCT used an M88 Hercules recovery vehicle, M7 forward repair system, and M984 heavy expanded-mobility tactical truck wrecker to pull packs, pull engines, and access tools. It also placed a maintenance control sergeant at Fort Hood, Texas, to bring parts from a supply support activity.

Two rented trucks were used for hauling parts and major assemblies: a pickup truck for standard parts and a moving van style truck for major assemblies. The PSA officer-in-charge identified the requirement, the brigade executive officer validated the requirement, and the unit S-8 added the rental vehicle to a senior NCO's travel authorization.

Unit movement officers. Accounting for and manifesting equipment requires unit movement officers (UMOs). Each piece of equipment is programmed for movement in the Transportation Coordinators' Auto-

mated Information for Movements System and marked with MSLs.

The UMOs validate that everything arrived at the port and is marked correctly. They take direction from the brigade mobility warrant officer or mobility NCO. The mobility warrant officer and NCO provide invaluable expertise to assist UMOs and arbitrate between the unit and transportation battalion. The transportation battalion also accounts for equipment and fixes MSLs, but the process goes more smoothly when the unit has the manpower to fix its own mistakes.

How will the unit determine piece count? Are five flat racks counted as one nested load on a trailer or as six pieces? The UMO cares about tracking every piece of equipment. The transportation battalion counts equipment as annotated on its spreadsheets printed from the Global Air Transportation Execution System, which will have nested loads. If the PSA reports piece count to its parent headquarters, it should use the same counting method as the transportation battalion to eliminate confusion.

A hazmat certifier. A hazmat certifier may be required to fix documentation and even repack a container. If the agency shipping the container identifies discrepancies, it can reject the container and even have the unit open it to verify its contents.

After the hazmat container arrives, the hazmat certifier can drive down in a government vehicle instead of flying. This way, frustrated hazmat cargo has a way back to home station. Also, if any repair parts for the mechanics become available while the hazmat certifier is at home station, the certifier can bring them down at the same time.

A sustainment brigade element. The home-station sustainment brigade may decide to send an element to facilitate port operations. For the 2nd ABCT's deployment, the 1st Infantry Division Sustainment Brigade provided a movement control team (MCT), augmented with a 5,000-gallon fueler, and a mainte-

nance contact team. The transportation battalion administers MCT duties, but working with the MCT is a great opportunity to develop experience and ease the burden on the transportation battalion.

Petroleum supply specialists. Fuel requirements depend on the level of focus prior to rail load. The 2nd ABCT support operations shop conducted a deliberate refuel the week prior to rail load, which required more than 10,000 gallons of fuel. Leaders checked tanks in the motor pools and also at the railhead staging area. Additionally, the sustainment brigade provided fuel at the railhead staging area.

With this level of effort, a few hundred gallons is adequate at the port and provides fuel internal to the sustainment brigade. The maintenance contact team takes care of the internal support package but also provides assistance to the PSA. If equipment runs dry, longshoremen will tow vehicles on board. The difference between equipment rolling off the ship at discharge versus being towed off is monumental in terms of both speed of assembly (during reception, staging, onward movement, and integration) and also strategic messaging.

Building a PSA as suggested above will satisfy requirements to preserve combat power, operate equipment when needed, fix equipment, certify hazmat, battle-track progress, manifest for loading, and report to higher headquarters.

Load the Vessel

Once all equipment is downloaded and properly marked, it is time to prepare for vessel loading. During loading, the unit must focus on being safe, counting pieces, and capturing anything that did not fit.

Many people want to get on the ship for the experience, but doing so with no plan increases risk. Mechanics will have last-minute parts to install. Leaders want tours, and everyone wants to see how it works.

Loading can be dangerous. The unit should minimize trips onto the ship

by getting everyone on board prior to loading and have an internal system to track Soldiers moving on and off the vessel. Ensure all personnel boarding the ship have a leader with them.

Capturing piece count is the next concern. PSA leaders must capture equipment disposition throughout the operation in a relevant way. Most pieces will load as planned, but those that do not will have administrative, operational, and logistics impacts. The transportation battalion will place a team at the loading deck to conduct piece count.

The loadmaster may run out of room, so it is important to communicate priorities prior to load day and be clear about what can load on a subsequent ship if needed. When this happens, the PSA leaders need to influence the process as much as possible prior to ship loading and accurately report changes.

Equipment that arrives at a different destination port than planned becomes an administrative problem for the company commander, who is trying to account for property. It also creates a rail or line-haul challenge for brigade mobility, thus impacting logistics resources. A timing and capability problem creates an operational impact on the brigade.

Additionally, some pieces may become frustrated because of severe mechanical problems or unresolved documentation discrepancies. It is not realistic for PSA leaders to track every piece of equipment with bumper-number fidelity, but it is realistic to track the outliers that way.

Where does the broken equipment go? Logically, NMC equipment, which cannot move under its own power, should load first so it is buried in the back and will not embarrass the deploying unit at the destination. However, it is also logical for it to go on last because towing NMC equipment through an entire ship is difficult and dangerous. Or it could go to the bulkheads as a compromise between the two.

The unit absolutely has a say on which way to do it, but it has little

to no control over execution. Also, each ship has different limitations. The ship is a series of decks, rather than a big square box, on the inside. Each deck has different height and weight restrictions, and the ship must be balanced. The ship's captain ultimately decides what goes where depending on the loadmaster's storage plan. A way to influence where NMC equipment goes is to communicate unit intent in all forums.

Once NMC equipment is loaded, mechanics can still perform some maintenance actions after equipment is chained down, but it is extremely difficult and dangerous. Unless it is a pacing item that cannot afford to take down days as it transits the ocean or it is an easy fix, the best option is to put the part in the vehicle for mechanics to install at the destination.

Deliberate supervision and shared understanding is required and needs to be communicated to the loadmaster. As the ship is loaded, an increasing number of Soldiers will find themselves with nothing to do.

The PSA remains at the port until all cargo is loaded, but once rail operations are complete, the unit should take the opportunity to progressively redeploy PSA members. This is also around the time the supercargo Soldiers will arrive to escort the equipment to the destination.

The PSA should be prepared to also act as supercargo Soldiers. Problems will arise at home station, and Soldiers already at the port become the quickest solution. This can easily add a month to a Soldier's timeline as commercial ships stop at other ports along the way. It is not just your brigade equipment on the boat unless the U.S. Transportation Command sources military vessels.

The unit should make sure battalions communicate flight information for supercargo personnel to PSA leaders because the PSA detail will pick them up and get them either into a hotel or directly onto the ship. The ship provides all base life support, but it is a good idea to bring 15 days of supply of basic use items and



A longshoreman carefully drives an M88 armored recovery vehicle off a rail car for staging at the Port of Beaumont, Texas, on Aug. 13, 2017. (Photo by Maj. Joseph D. Komanetz)

30 days of supply of special items like medications.

Supercargo personnel should be sent three days prior to the available to load date. A number of factors can affect a commercial ship's departure date. Throughout this entire complicated process, PSA members' phones will ring constantly.

Establish Reporting

Establishing reporting requirements is key to situational understanding throughout the process. First, determine who is in charge. Many people are in charge of many things, and confusion will prevail if command and support relationships are not defined. It is more than merely getting along.

The unit identified to run the port, the field-grade officer assigned mission command, the division tactical command post, the sustainment brigade tactical command post, the transportation battalion, the union representative, and the ship captain all have their roles. At some point, a situation will require a decision, and everyone needs to understand who holds 51 percent of the vote.

It is appropriate for the deploying unit to authorize the PSA to be a direct liaison to the transportation battalion. This way, the PSA can consult and coordinate action with an agency outside its chain of command and keep the parent commander informed during the process.

The division establishes command and support relationships between divisional units and creates reporting requirements. The PSA leaders are supported by the parent sustainment brigade (if applicable) and coordinate with the transportation battalion. These elements should not be sent to the port and be expected to "work it out."

In terms of reporting, the situation is fluid and changes rapidly at the port. Not all reports have time to travel through a hierarchy of command levels. Everyone invested needs the same information at the same time rather than just the most up-to-date information. To remedy this, a conference call works well.

The transportation battalion provides progress reports to its parent brigade. The PSA provides reports to

its parent brigade. If a sustainment brigade package is used, it reports to its brigade. A conference call brings leaders from all organizations together to identify and resolve friction points.

Very little of what we do in the Army is new; it's just new to us. Although deployment is complicated, Army units can successfully deploy their equipment through the SPOE by identifying experts, defining requirements, building and resourcing teams, and establishing reporting requirements. If done properly, the team will preserve combat power, have transparency, and ultimately increase the speed of assembly at the destination.

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Autonomous Transportation: Combat Power in the 21st Century

■ By Capt. Matthew P. Henry

A few years ago, the mere mention of autonomous vehicles (AVs) in U.S. society brought on feelings of grave concern. Many people wanted trained operators, rather than computers, to be the responsible entities in our transportation system. However, discussions about AVs typically focused on privately owned vehicles rather than logistics assets. Today, the Army is in the forefront of bringing AVs into the logistics profession.

The Department of Defense (DOD) has been researching the possibility of using AVs for battlefield logistics since at least 2004, when the Defense Advanced Research Projects Agency funded specific research and technology and held its first AV competition. While the most recent technical emphasis has undoubtedly been on front-line functions such as unmanned tanks or light maneuver capabilities such as bomb disarmament, those assets are not technically AVs.

AVs, as defined by the National Highway Traffic Safety Administration, are “vehicles in which operation occurs without direct driver input to control the steering, acceleration, and braking.” AVs undoubtedly have great potential to bring valuable sustainment to the warfighter.

The Technology

AV technology uses several functions to operate in an efficient and effective manner. The U.S. military, a leader in developing technologies for AVs, used the autonomous technology employed in minesweeping to enable the current AV technology used in privately owned vehicles.

According to Markus Kuckelhaus, the vice president of innovation and

trend research at DHL Express, minesweeping technology grew into four primary functions that are used in AV technology today: navigation, situational analysis, motion planning, and trajectory control.

Navigation. Navigation is essentially route planning using GPS technology in most cases. Linux-based communication systems could possibly enable this function in the future to integrate with the Army’s Force XXI Battle Command Brigade and Below system or the Blue Force Tracking network. However, AVs exchange data between wireless area networks to recognize dangerous routes at early stages.

Situational analysis. Situational analysis uses ultrasound, video cameras, and surround views in order to make the operator aware of surrounding threats and changes to preferred maneuvering.

Motion planning. Motion planning monitors vehicle movements and identifies oncoming objects. It also forecasts what the object’s likely move will be and corrects movements based on this data.

The military used these four functions when developing the Autonomous Mobility Applique System (AMAS) prototype in 2012. Most privately owned AVs have the autonomous technology built into the vehicle, but the AMAS was designed to keep the AV technology separate from the vehicle, allowing it to be used with almost any vehicle in the inventory.

A statement from Lockheed Martin following a successful test drive of the AMAS said, “The AMAS hardware and software are designed to automate the driving task on cur-

rent tactical vehicles. The Unmanned Mission Module part of AMAS, which includes a high-performance lidar sensor, a second GPS receiver, and additional algorithms, is installed as a kit and can be used on virtually any military vehicle.”

Benefits of AV Technology

AV technology can benefit the Army in the areas of safety, efficiency, cost, sustainability, warfighting effectiveness, convoy security, warehousing operations, and maintenance.

Safety. According to the Under Secretary of Defense for Research and Engineering, Dr. Michael D. Griffin, 52 percent of battlefield casualties occur when sustainers are delivering needed supplies to and from the battlefield. Some of these casualties are the result of enemy attacks, but vehicle collisions and human error are significant risks to those in the logistics profession. As much as 90 percent of vehicle accidents are caused by driver error.

Efficiency, cost, and sustainability. AVs offer the DOD possible cost savings and more efficient transportation networks. AVs could allow line hauls to take place 24 hours a day, 7 days a week, and afford Soldiers the opportunity to rest while the convoy is en route. The use of vehicle-to-vehicle communication and autonomous system algorithms could allow logistics vehicles to avoid congested or high-risk areas and to drive for optimal fuel efficiency. AVs could possibly reduce fuel costs by as much as 40 percent and help the Army comply with federal sustainability and energy reduction requirements.

Warfighting effectiveness. Another possible benefit of AVs could be

the direct impact they have on the sustainers' customers. Smarter, more efficient logistics could allow more frequent logistics packages in a high operating tempo environment. If warfighters are resupplied more often, more reliably, and more predictably, they would be responsible for carrying a smaller quantity supplies.

Improved convoy security. Convoy security is also an opportunity for AVs to provide increased functionality. In theater, a convoy is assigned a convoy escort team (CET) consisting of four convoy protection platforms (CPPs). CPPs include a driver, a vehicle commander, and a gunner. AVs could reduce the possible number of casualties if the Army could use them to decrease the required number of CETs on the road. They also open the possibility of linking unmanned

CPPs to manned CPPs through a wireless area network to vastly reduce the needed manpower.

In the past two decades, an increased number of contracts have been awarded to transnational companies to augment or supplement CETs in escorting Army convoys. AVs present an opportunity to save contracting costs and may ease concerns about using contractors for traditional military functions.

Warehousing operations. Leading logistics companies currently use artificial intelligence in warehousing operations. However, this technology simply stops when it encounters an obstacle, so paid staff is required to remove the obstacle or switch to manual methods. AV technology that uses functions such as situational analysis would allow more complex

autonomous maneuvering for stocking and shipping military supplies.

Maintenance. Prominent companies such as Amazon are researching the possibility of drone delivery services for small, easily transportable supplies. Repair parts could be delivered using the most efficient aerial routes and greatly reduce the time that deadlined vehicles spend awaiting parts.

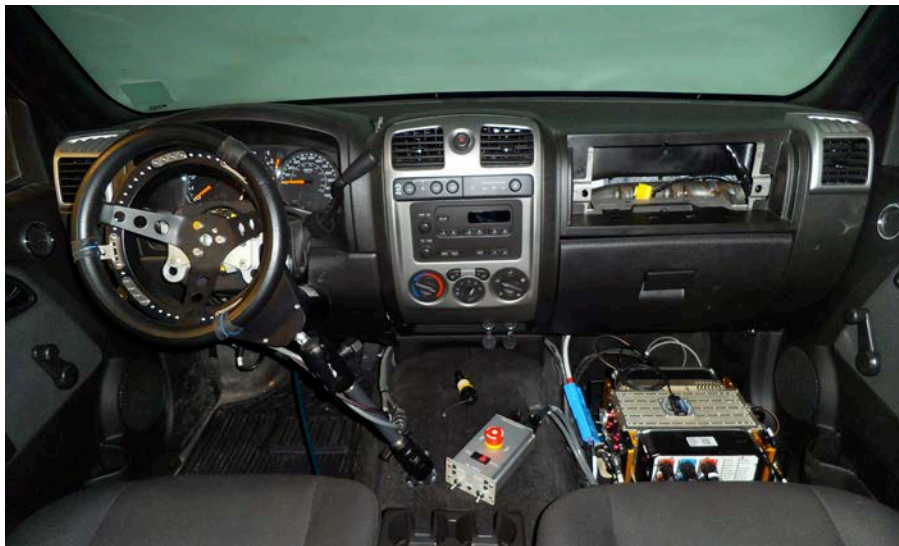
Risks to AV Technology

Several apparent risks should be considered before the Army shifts to using AVs.

Mistakes and liability. One thing is for certain: mistakes will occur, even if the Army is using AVs. The question then is who will be held accountable for these mistakes. Would the operator or convoy commander

Autonomous vehicles, such as this truck with a roof-mounted Pronto4 unmanned ground vehicle kit, could possibly be used for convoy escort missions in order to reduce costs and risk of casualties. (Photo courtesy of Kairos Autonomi)





This Pronto4 robotic applique kit, installed on a Chevy Colorado, was successfully tested and is currently in use for target training. (Photo courtesy of Kairos Autonomi)

share liability for an accident that occurred because of a decision made based upon data received from a sensor? Will the accountability be shifted from the operator or leader to the manufacturer of the AV?

One possible solution is to take a hybrid approach and share safety responsibility with both the manufacturer and operator by choosing a lesser level of automation so that the operator is not entirely omitted from all responsibility.

These questions still need to be addressed, but recent developments seem to suggest, at least in the civilian world, that manufacturers will share some of the liability when insurance companies deem accidents are caused by manufacturing defects or faulty instructions.

Safety. While AVs could make transportation safer and more efficient, there is the possibility that AVs could give Soldiers a false sense of safety and could breed complacency in staying vigilant and following safety procedures. However, as with anything else, this could be mitigated with proper training and discipline at the unit level.

Maintenance. With the addition of innovative technology to the Army wheeled vehicle inventory, maintenance

will inevitably become a critical consideration. Highly skilled mechanics within the ordnance community will need to be trained to properly maintain this equipment. Additionally, operator-level maintenance training will have to take place Army-wide to ensure this smarter, and possibly more finicky, equipment is kept fully mission capable.

Future and Implementation

AVs present a unique opportunity specifically for the Army National Guard. During emergencies and natural disasters, AVs could be used to improve response times, deliver necessary supplies, or provide emergency evacuation capabilities.

State and local governments have recently been discussing the need to include AV needs and capabilities in their new mobility resilience action plans and local hazard mitigation plans. As the Army is looking at moving forward with AVs in the future, the National Guard is seemingly a fitting place to begin implementation.

In the past decade, the DOD has made significant strides in developing AV technology. Several defense manufacturers have been marketing prototypes for autonomous tech-

nology. In 2013, Kairos Autonomi successfully installed its Pronto4 applique kits at several National Guard Bureau test sites to allow for optionally manned target vehicles. Most notably, in 2014 the Tank Automotive Research, Development and Engineering Center, through a partnership with Lockheed Martin, successfully tested a convoy of autonomous vehicles at Fort Hood, Texas.

The automobile industry has already released several AV prototypes, and communities throughout the country (and the world) are revising their regulatory frameworks in an attempt to get ahead of the implementation of AVs in the private sector. Large logistics companies have also recognized their potential to use AVs to gain an advantage over their competitors.

The Army logistics community, particularly within the National Guard, should further explore the potential of AVs to obtain a combat advantage for logistics superiority over our adversaries and to improve domestic response capabilities nationwide. This presents an exciting opportunity to reduce costs, energy consumption, and most importantly the risks Soldiers face when executing their sustainment missions in combat zones or here in the homeland.

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Lessons Learned by the 123rd Brigade Support Battalion at the National Training Center

■ By Lt. Col. Charles L. Montgomery

The Department of Defense's investment into the National Training Center (NTC) continues to provide armored brigade combat teams a premier training environment aimed to increase lethality. The 3rd Armored Brigade Combat Team (ABCT), 1st Armored Division, from Fort Bliss, Texas, completed rotation 18-08 at Fort Irwin, California, in June 2018. During the rotation, I served as the 123rd Brigade Support Battalion (BSB) commander.

One of the more complicated questions the BSB faced was how to approach garrison and tactical battle rhythms—specifically, the transition between the two. Fundamentally, why are these two battle rhythms vastly different?

I propose leaders develop a battle rhythm that transcends both garrison and tactical environments to ease friction as the organization transitions into tactical operations.

The Army's number one priority is readiness, specifically readiness to conduct war (offense, defense, and stability operations) in support of our nation. Currently, tactical battle rhythms are secondary to garrison battle rhythms in time and space. This approach abstractly establishes an improper mindset when units transition to tactical operations.

Conceptually, inculcating the tactical-operational mindset must start early to develop the proper approach required to dominate the enemy. Gaining initial momentum places the enemy at a disadvantage; however, the way in which units execute battle rhythm transitions does not place sustainment

units in an advantageous position.

The 123rd BSB learned valuable lessons in the following five areas during our NTC rotation: Raven operations, base defense operations center (BDOC) placement and execution, operational synchronization, forward support company (FSC) commanders' roles and responsibilities, and the execution of role II medical facility operations. This article provides insight and lessons learned from a decisive action rotation that can be applied to future BSB operations.

Raven Operations

Raven unmanned aerial vehicles provide commanders with an additional sensor to better understand the enemy situation. In a sustainment formation, using Ravens provides the BSB commander, BSB S-2, BSB S-3, and the brigade staff an opportunity to conduct in-depth analysis on potential enemy courses of action designed to disrupt sustainment lines of communication.

Most importantly, the data from Raven operations affords the BSB staff an opportunity to develop a plan with the brigade S-3 that enables logistics survivability and sustained logistics support. Ravens are especially vital to sustainment formations, which have fewer protection and sensor collection platforms than maneuver units have.

Sustainment formations must take advantage of every available brigade and battalion asset to gain and maintain a position of advantage. When combined with the One System Remote Video Terminal, the Raven

provides the distinct capability to display real-time aerial reconnaissance, which enables the development of a viable common operational picture. This capability encourages collaborative approaches that produce actionable intelligence to alert logistics convoy commanders of potential dangers along main and alternate supply routes.

First, the BSB commander must establish who owns the responsibility for Raven operations. In the 123rd BSB, the responsibility is assigned to the S-2. The foundational logic is to combine intelligence collection with intelligence analysis in an effort to produce quality data designed to enable the decision-making process.

Second, the staff must fully understand the Raven operational zone submission process. The brigade aviation officer serves as the conduit for Raven operations approval within the 3rd ABCT. The BSB must truly understand submission requirements to ensure airspace deconfliction occurs at the brigade level.

Lastly, the BSB must anticipate requirements and submit pre-Raven operational zone requests (based on known operations and emergency requests) to increase Raven availability. Raven operations bring a unique and vital capability to sustainment formations. When implemented correctly, the asset will ultimately improve survivability, which supports prolonged tactical endurance for the ABCT.

The BDOC

BDOC placement and responsibilities add another layer of complex-

ity to tactical sustainment operations. The BDOC provides perimeter defense and actions upon enemy contact external to the battalion S-3 section. However, everything that is external to the BSB's modified table of organization and equipment detracts from its ability to provide sustainment support to the brigade combat team in some capacity.

During the 123rd BSB's NTC rotation, the battalion S-3 section proved more effective than an external BDOC in the following areas: maintaining communications with company tactical operations centers, reallocating assets to defeat threats, and developing a real-time common operational picture to enable key decisions at the battalion level.

In order to make the BDOC successful, the right officer must lead the formation. The headquarters and headquarters company commander may not be the right officer based on personality, experience, or ability to make judicious decisions under stress. Once the organization selects the BDOC officer-in-charge and noncommissioned officer-in-charge, there must be a deliberate effort to integrate the battalion S-3 staff and BDOC teams early to establish reporting procedures, tasking authorities, and decision-making processes.

BDOC and S-3 integration will ensure the battalion is operating in unison to defeat the enemy. The key is to clearly identify roles and responsibilities the BSB desires the BDOC to perform. The alternative to establishing a BDOC is using the battalion S-3 section to facilitate perimeter defense actions upon enemy contact. This method eliminates a layer in the communication process. The enemy will attack, but the most important aspect is how the organization responds, not necessarily who owns the response process within the organization.

Operational Synchronization

Effective synchronization at the battalion level is paramount to suc-

cessful operations. Downgrading the BSB S-3 position to a captain increases complexity because, in many cases, the officer will lack the experience to view brigade operations holistically.

The two key players during operational synchronization are the support operations officer (SPO) and the battalion S-3. Doctrinally, the battalion S-3 has tasking authority and the SPO must understand the proper steps to ensure operational effectiveness.

During our rotation, operations synchronization gradually shifted to the SPO section and the BSB's ability to understand and track operations degraded quickly. This lack of understanding drastically affected logistics convoy resourcing and execution.

To rectify the issue, a daily operational synchronization meeting was instituted to create a shared understanding within the battalion in regard to brigade logistics requirements. The meeting's driving force was the synchronization matrix, which is a byproduct of the SPO logistics synchronization meeting.

The operational synchronization meeting allowed the BSB S-3 to manage operations more effectively in regard to logistics convoys. This meeting also included the BDOC and key tenants of the brigade support area to ensure information-sharing designed to synchronize operations.

This meeting continues to occur at home station to enable the development of the proper culture prior to tactical operations.

Roles and Responsibilities

FSC commanders are the BSB commander's link to sustaining tactical operations forward of the brigade support area. FSC commanders must track all logistics within their formations and anticipate requirements in conjunction with the maneuver battalion S-4s.

During the 123rd BSB's NTC rotation, FSC commanders divorced themselves from the planning process and remained absent during execution. Often, FSC commanders did not review or provide input for

logistics status reports submitted to the SPO.

FSC commanders are an extension of the BSB commander in their respective organizations. They are the senior logisticians in their supported battalions, which demand their complete attention and proactivity to ensure operational endurance.

To improve this process, FSC commanders were encouraged to attend logistics synchronization meetings. Logistics status report submission shifted to FSC commanders, which served as a forcing function to increase their involvement in the logistics process. Holistically, this change increased communication among the maneuver battalion S-4s, FSC commanders, the BSB commander, and the SPO significantly. FSC commanders also attended brigade maintenance meetings to ensure their understanding and priorities remained focused on the 3rd ABCT's readiness.

FSC commanders must understand their roles and responsibilities before, during, and after operations to ensure sustained success. This will allow their maneuver commanders to focus on tactical operations and defeating the enemy without any logistics distractions.

Role II Medical Operations

The brigade support medical company's role II medical operations, which include dental, laboratory, and X-ray capabilities, are vital to saving Soldiers' lives during tactical operations. These operations rely on the company's ability to respond rapidly to role I requirements.

The pace and tempo of an ABCT can be overwhelming, especially during tactical transitions. The brigade surgeon, in conjunction with the SPO medical section, must deliberately design approaches to medical operations that decrease time and distance from role I locations to role II care.

During our NTC rotation, the died-of-wounds rate was highest between points of injury and role I locations. Based on the 3rd ABCT's



Soldiers assigned to Company J, 123rd Brigade Support Battalion, 3rd Armored Brigade Combat Team, 1st Armored Division, participate in convoy training at Camp McGregor, N.M., on March 15, 2018. The training prepared the unit for a rotation at the National Training Center at Fort Irwin, Calif. Convoy training stresses the importance of communication and develops effective strategies for future combat missions. (Photo by Pvt. Matthew J. Marcellus)

operating tempo, role II care moved seven times in 14 days to maintain an acceptable distance from role I care in order to preserve life.

Two valuable lessons were learned from this training experience. First, there must be a consensus on who has the ability to task role II to relocate. Role II should not move without explicit approval from the BSB commander, who bears the ultimate responsibility to provide synchronized medical care to maneuver battalion's role I facilities.

However, we struggled with role II mission command, and the brigade support medical company found itself taking directions from the brigade and BSB staff sections, which desynchronized medical operations. Medical sustainment communication must include the brigade S-4, the brigade surgeon, the brigade command sergeant major, and the BSB commander in order to ensure a shared understanding during execution to avoid desynchronization.

Second, the average time to relocate role II was 3.5 hours from notification to tactical movement. To mitigate this deficit, the brigade support medical company received three palletized load systems, which afforded easier loading and downloading. This change shaved approximately two hours off the original relocation time, which decreased the brigade's died-of-wounds rate by 36 percent and preserved combat power for future operations.

NTC continues to provide a premier training environment for mechanized formations that simply cannot be replicated at home station in breadth and scope. In order to maximize the benefits of participating in an NTC rotation, units must assimilate and incorporate lessons learned into their formations to ensure lethality increases.

The 123rd BSB provides 3rd ABCT tactical commanders with operational reach, freedom of movement, and

prolonged endurance during tactical operations. The number one principle of sustainment, in my mind, is survivability. If we cannot survive initial and prolonged enemy contact, how can we provide continual sustainment support to the warfighter?

Sustainment formations must harden themselves to ensure sustained operations. Being a soft target is a decision at some level within our formations. However, focusing on increasing lethality through all available means will increase our chances to defeat and deter level one threats aimed at disrupting sustainment operations.

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