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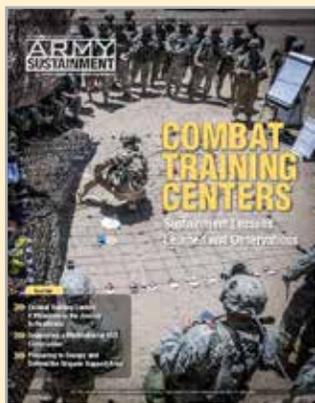
COMBAT TRAINING CENTERS

Sustainment Lessons
Learned and Observations

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A Milestone in the Journey
to Readiness**
- **Supporting a Multinational BCT
Commander**
- **Preparing to Occupy and
Defend the Brigade Support Area**

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Soldiers assigned to 1st Battalion, 145th Armored Regiment, 1st Brigade Combat Team, 34th Infantry Division, conduct a combined arms rehearsal during decisive action rotation 16-07 at the National Training Center at Fort Irwin, California, on June 13, 2016. (Photo by Spc. Daniel Parrott)

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“A CTC rotation should be viewed as a milestone on every Army unit’s journey to readiness. It is not the culminating event. Readiness takes time to build, and it does not last forever.”

*Lt. Gen. Gustave “Gus” Perna,
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Combat Training Centers: A Milestone in the Journey to Readiness

■ By Lt. Gen. Gustavo “Gus” Perna



Last year, the Army rolled out new plans for the three combat training centers (CTCs) as part of the chief of staff of the Army’s priority to build combat readiness. As you will read in this issue of *Army Sustainment*, logisticians have been important beneficiaries of the centers. We now better understand the urgency of changes that need to be made, and I see progress in our ability to set theaters and get to the next fight, as both individuals and units.

This year, 140,000 Soldiers will rotate through one of these CTCs—the National Training Center, at Fort Irwin, California; the Joint Readiness Training Center, at Fort Polk, Louisiana; or the Joint Multinational Readiness Center, at Hohenfels, Germany. The two United States-based CTCs are conducting 18 rotations, and the Joint Multinational Readiness Center is conducting 11 training events involving many multinational partners. We also added two rotations for Army National Guard brigades, underscoring our commitment to readiness of the total force.

Most importantly, the focus of the training has shifted from counterinsurgency operations to preparing for a decisive action fight. This means commanders must shift their thinking and methodology.

Frankly, I see too many very smart and talented commanders who were battle-tested in Iraq and Afghanistan but are still mentally locked on those wars. They have to stop thinking about Army Force Generation, forward operating bases, the Logistics Civil Augmentation Program, and 50 days of supply because that is not today’s Army. It is one thing to say we can now deploy from home station on short notice, land at an austere location, and bring in and distribute all of the equipment and supplies necessary to execute the mission. It is another to validate at a CTC that we actually can do those things.

To be successful at CTCs, commanders need to develop a vision, clearly express it, and allocate time and resources to accomplish it. I offer an approach to your preparation that focuses on five areas—mission, training, maintenance and supply, leader development, and team building. This issue’s hip-pocket guide is a handy tool to assist you.

Mission

Preparation should start with defining the mission. If you understand what the mission is, it will help you focus on the things that you should be doing to synchronize and integrate support. I cannot overemphasize the importance of a clearly defined mission. You will not know how much time and effort to allocate to training, leader development, and all of the other areas if you do not

have the right focus from the start.

Fortunately, the Army has issued standardized mission essential tasks for all units that can guide you. They are the cornerstone of what we expect our logisticians to be proficient at. Understanding these tasks will help you to determine your units’ strengths and weaknesses.

Beyond that, when you plan sustainment support for a brigade’s combined arms live-fire exercise, you need to look at your collective and section tasks and execute them in an expeditionary manner. For example, why not deploy the supply support activity or set up an ammunition transfer and holding point to issue supplies in a tactical environment? Or ensure logistics information systems are used daily in garrison or the field? Or routinely integrate the forward support companies into brigade support operations? Only logisticians who are competent in the field can achieve mission objectives.

Training

The training plan must support the mission. Period. We have all seen units that want to refuel on the move, and once they figure it out, they always want to practice it. But, based on your mission, each commander must ask: What skills does my unit need now? Is my battle staff proficient in the military decisionmaking process? And how often have we exercised it?

Before the training cycle begins and throughout the process, keep assessing yourself, your leaders, and your formations’ abilities to execute your well-defined mission. You have more requirements than you have time. It is critical that you



select training tasks that support the mission and do not just fill up the calendar. Train to execute your mission.

Do not be afraid to create a climate that lets your Soldiers fail, because without the chance to fail, they will never grow. You do not want them to fail on the battlefield, so push them at the CTC. It is important to take people out of their comfort zones and put them into situations where they are professionally uncomfortable. They will either excel or fail, and both will make them better Soldiers and leaders.

As you train, do not lower your standards. If you approve something at levels less than 100 percent, you establish a new standard and accept poor performance. This training gap will surface during your rotation or,

worse, in combat.

After returning from your rotation, as part of your continuous assessment, it is critical that you allocate time to retrain and refine your approach to make your team even better. Leaders need to keep the after-action review process alive.

Maintenance and Supply

Too often brigade combat teams culminate CTC rotations early because they lose critical combat power, and too often the culprits of this loss are vehicles that are not maintained properly. When crossing the line of departure, maneuver commanders need maximum combat power.

A high state of readiness requires having the proper systems and routines in place that will result in having the right parts on hand and the

reach-back capabilities that enable Soldiers to fix equipment. Establish these systems and routines long before the start of the CTC rotation.

Once I asked a brigade commander at the National Training Center how long he had been conducting brigade maintenance meetings. His answer was, "Sir, we planned to do them but got overwhelmed and haven't executed [them] yet." That was not an answer; it was a hope.

Commanders must use command maintenance, logistics synchronization meetings, and materiel readiness reviews to foster a culture of "what right looks like." Supply and maintenance do not operate in separate bubbles. It is imperative that brigade maintenance officers and supply support activity accountable officers synchronize their re-

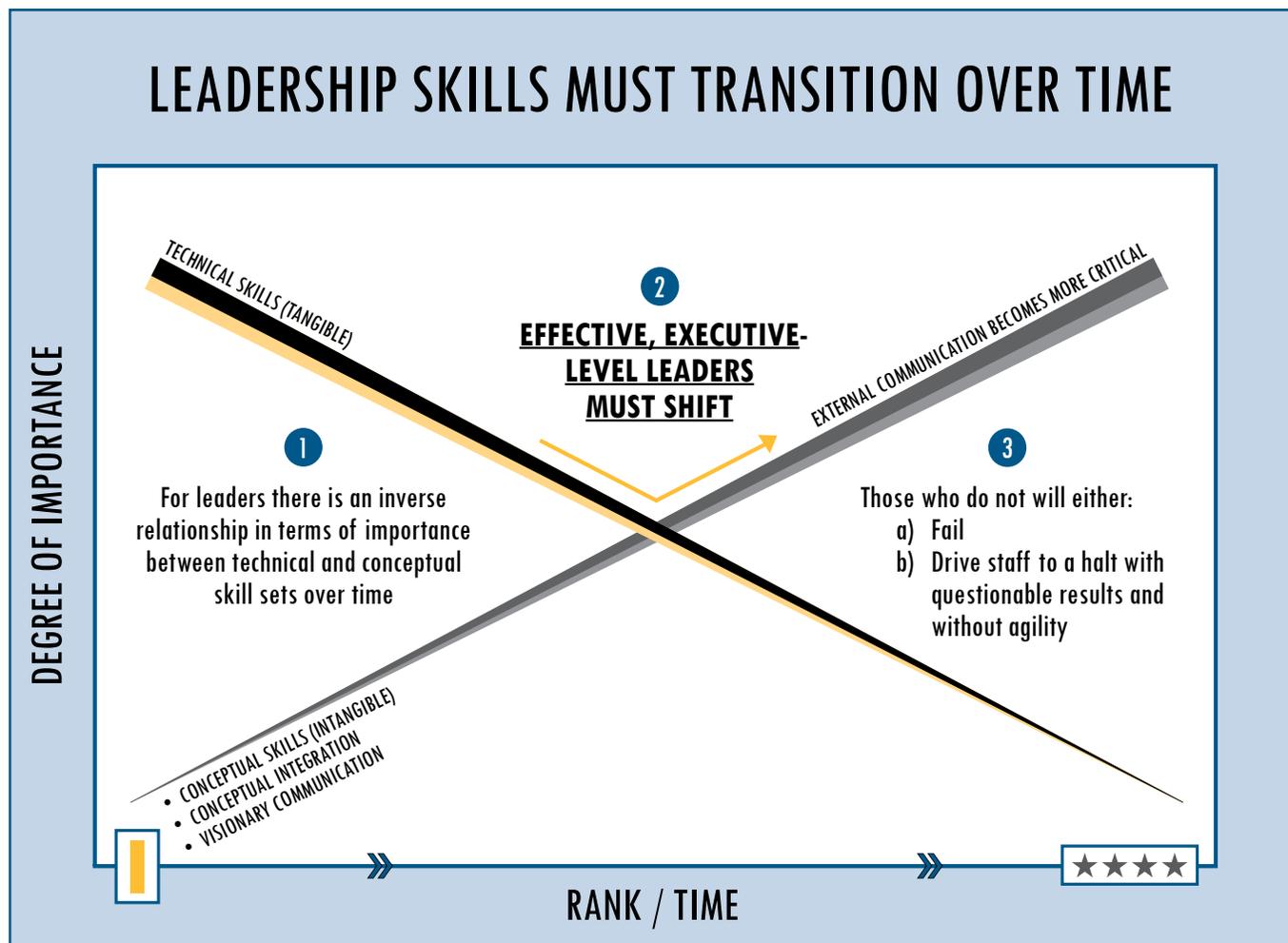


Figure 1. Army leaders must develop new skills as they advance through their careers.



quirements to ensure equipment readiness. Success depends on the interconnectedness of unit-level maintenance and supply.

Building Leaders

As you prepare for CTC rotations, make sure your Soldiers at all

you need to build a team to achieve the capabilities you want. Building a team is tough work. You must emphasize the capabilities needed to achieve the effect you want in the operational environment.

Team building is not made any easier when young commanders

Materiel Command's brigade logistics support teams, and the Defense Logistics Agency. Including everyone provides the logistics linkage between operational assets and strategic enablers.

A key aspect of team building is synchronizing tactical units (forward support companies and brigade support battalions) with operational assets. Building relationships affords leaders the opportunity to disseminate important information and synchronize units and equipment, which ultimately gives commanders the freedom of movement and maneuver needed for the decisive action fight.

Effective relationships are not built over night and cannot be surged in times of crises. If you have not properly invested time in them, you cannot expect the same results. Therefore, integrating operational and strategic assets into your training and CTC rotations is the ultimate goal in relationship building and reinforces the notion that you do not have to own it to control it.

A CTC rotation should be viewed as a milestone on every Army unit's journey to readiness. It is not the culminating event. Readiness takes time to build, and it does not last forever.

When I returned from my CTC rotations as a commander, I always had a simple test—if my Soldiers told me it was easier than our preparatory field training exercises, I knew I had prepared them at the right level. We need to build an Army where every Soldier has executed individual and collective training in the field and then demonstrated and validated at the CTC that they are trained and ready to go to war.

Lt. Gen. Gustave "Gus" Perna is the Army deputy chief of staff, G-4. He oversees policies and procedures used by 270,000 Army logisticians throughout the world.

We need to build an Army where every Soldier has executed individual and collective training in the field and then demonstrated and validated at the CTC that they are trained and ready to go to war.

levels take advantage of the Army's great formal leader development programs. But, to be honest, the real leader building comes from the mentoring, coaching, and training you provide every day.

As a brigade commander, you will do more things than I had to do as a brigade commander, but do not let those get in the way of developing our future. Building leaders is not a "one size fits all" activity. As you can see in figure 1 (on page 3), the skills that our logisticians need shift over time. For junior officers, technical skills are important, but as they rise in rank, conceptual skills are more critical. Great majors may know all of the numbers, but in order to be great higher-ranking officers, they must also understand how to synchronize, integrate, and echelon commodities and materiel in support of maneuver commanders.

Our Army needs dynamic leaders who can adapt and overcome unplanned and unprecedented challenges, manage failure, and enforce the standards and discipline needed for success in high-pressure environments. So, work every day to grow those leaders for our Army.

Team Building

Long before you arrive at a CTC,

are wrapped up about task organization diagrams, who is wearing what patch, and who controls what. What you really need to focus on is leveraging all sustainment capabilities within your footprint and putting them where they are needed so that the Army is ready for the initial stages of a decisive action engagement.

When I was the director of logistics for U.S. Forces-Iraq, the note I used to put on my white board was, "Am I utilizing all the capability available to retrograde people and equipment out of this country?" I was not interested in what I could control. I was interested in what I could influence.

My point is commanders need to be constantly thinking about leveraging all capabilities and building a team that will be a combat multiplier. This starts with increasing your field of vision and widening your aperture.

At the division level, combat sustainment support battalions are critical organizations that must be integrated into the divisional relationship. CTC rotations should not be the first time that they support a brigade combat team. Battle rhythm events must involve sustainment brigades, combat sustainment support battalions, the Army

Mission Command of Sustainment Forces: Opportunities and Challenges

■ By Maj. Gen. Darrell K. Williams

The Army Operating Concept states that we must be prepared to “win in a complex world.” In the complex operational environment of the future, the sustainment community will encounter increasing challenges to the science of supporting warfighting formations and the art of mission command.

Army sustainment formations will continue to be among the most widely dispersed formations on the battlefield, even during peacetime operations. Yet, few will enjoy direct command and control over all of the elements critical to the success of operations. Organizational diagrams will resemble spider webs more than line and block charts with clear lines of authority.

A shared commitment to unity of effort and adherence to the principles of mission command is already more important than the ownership of formations. From the smallest postal platoon to forward support companies inside brigade combat teams to sustainment brigades to Army Materiel Command field support brigades to contracting support brigades to expeditionary sustainment commands (ESCs) and theater sustainment commands (TSCs) to Defense Logistics Agency forward elements to the Military Surface Deployment and Distribution Command, no one organization can “own” every element of sustainment.

Regardless of the designated command or support relationship, commanders must drive operations through understanding, visualizing, describing, directing, leading, and assessing operations. They must develop teams within internal and external organizations, and they

must inform and influence multiple audiences to successfully support missions.

The degree to which we collectively navigate, leverage, and influence partner sustainment organizations will prove decisive to the successful support of future military operations. This key point was made by Lt. Gen. Gustave F. Perna, the Army G-4, in the July–August 2016 issue of *Army Sustainment*. In “Optimized Mission Command: Using Authority and Influence,” he encourages sustainment commanders to embrace the influence aspect of mission command, which reaches beyond the strict bounds of command and control. His column highlights how important it is for commanders to leverage the capabilities of organizations inside and outside of their formations through command influence to meet mission requirements.

Optimized Mission Command

On March 16, 2015, the Army released Execution Order (EXORD) 145-15, Attachment, Redesignation and/or Reflagging of Sustainment Brigades, which presented several opportunities and challenges, particularly for active component sustainment brigades. The EXORD attached active component sustainment brigades to active component divisions while at home station.

The intent was to “maximize unit cohesion and mission command effectiveness” and improve the overall training, readiness, and oversight of sustainment units attached to divisions. Feedback from commanders has been decidedly positive. During the April 2016 Sustainment Brigade Commander Summit hosted by the



Army sustainment formations will continue to be among the most widely dispersed formations on the battlefield, even during peacetime operations.

Combined Arms Support Command (CASCOM), commanders described improved integration into division operations.

CASCOM has received similar feedback from maneuver officers during the sustainment portion of the deputy commanding generals' and brigade commanders' courses at Fort Leavenworth, Kansas. Initial results indicate that the EXORD is achieving the desired intent. Units are eagerly harnessing and taking advantage of the opportunities offered by this new command relationship.

One benefit, highlighted by sustainment brigade commanders, is the ability to positively influence training and materiel readiness of division formations. In truth, this capability already existed. From the onset of modularity, over a decade ago, sustainment brigade commanders were expected to assume the role of senior sustainment commanders and trainers at their respective installations. However, the vibrancy of these relationships varied by location, with some being more optimal than others.

The EXORD standardizes these arrangements, removes ambiguity in command and support relationships, and enhances sustainment brigade responsibilities in the training realm. Sustainment brigade commanders report more effective partnerships with other brigades in the division and better synchronization during division field training and deployment readiness exercises. Without question, the sustainment brigade's influence is broadened under the more formal, attached command relationship at home station.

Enhanced talent management of sustainment professionals is another advantage of the new relationship. Sustainment brigade commanders exercise greater influence on assignments, leader development, and mentorship of sustainment leaders to include those on division staffs and within brigade support battalions (BSBs). In general, sustainment

brigades and BSBs are trending toward greater unity of effort and improved deliberate coordination and synchronization for division and echelons-above-brigade support operations.

Sustainment brigade commanders also exercise increased mission command and influence over BSB operations. While sustainment brigade commanders have historically played a role in making recommendations to the division and brigade combat team commanders on the talent management of sustainers within their footprints, this role appears to have expanded as a result of the new alignment. Their mission command authority and influence inside the division has grown.

Challenges to Mission Command

Solutions for many of the challenges that follow will rest with our ability to exercise proper mission command. The EXORD significantly impacts reserve component sustainment commands and their subordinate units. Army Reserve and Army National Guard units are not postured to take full advantage of the relationships established in the EXORD. These units are more widely dispersed at their home stations, which often span multiple states. Army Reserve units, in particular, are not aligned with divisions but rather ESCs and TSCs. This difference in the alignment of reserve component and active component units could ultimately create a dissimilarity in our approaches to training and support, with reserve component units accustomed to ESCs and TSCs as their home station higher headquarters and active component units reporting to divisions.

With more than 71 percent of our total sustainment force structure in the reserve component, we must carefully monitor the overall effect of these changes. Reserve component units may offer active component partners lessons learned from their experiences exercising mission

command over extended distances.

Perhaps the greater challenge is determining the impact of emerging home-station command and support relationships and dependencies in a deployed theater of operations. The EXORD clearly states the home-station attachment of sustainment brigades does not impact the sustainment brigades' doctrinal missions or wartime requirements. However, as divisions train as they fight and strengthen habitual relationships, sustainment brigades are increasingly being incorporated into division sustainment operations and battle rhythms.

Participating in warfighter exercises, training at the combat training centers, and establishing sustainment operations centers are a few examples of this important and necessary integration. However, integration into these activities will make it very difficult to "unplug" sustainment brigades from these operations upon deployment. As a result, will sustainment brigades remain attached to divisions when deployed?

Since the beginning of modularity, the most common command relationship for sustainment brigades has been their attachment to ESCs or TSCs. As a practical matter, sustainment brigades and other assigned units provide Soldiers for the ESCs and TSCs. Without Soldiers, both elements are simply high-level staff-coordinating agencies. Thus, sustainment brigades normally provide direct or general support to divisions and echelons-above-brigade units on an area basis while assigned or attached to higher-level sustainment commands.

How will these relationships impact the synchronization of sustainment operations across the theater if sustainment brigades are attached to divisions and not sustainment commands? The answer to this question is that current doctrine is flexible enough to accommodate either arrangement, and the pathway to success, in either case, runs through the

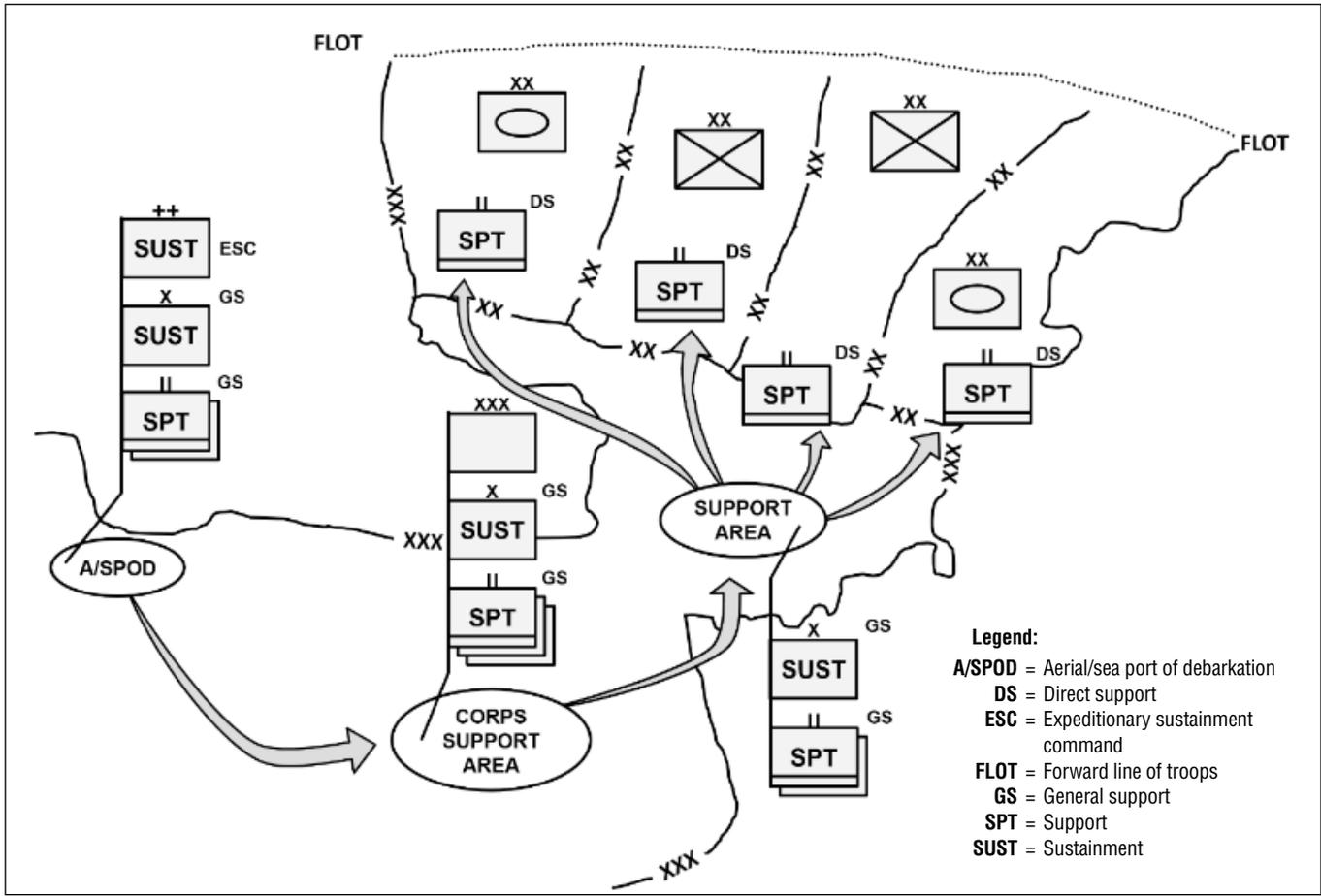


Figure 1. This figure depicts the sustainment brigade in the general support role as discussed in Army Techniques Publication 4-93.

application of mission command.

Range of Doctrinal Relationships

A review of doctrinal relationships and the mission command concept is required to facilitate success. Sustainment forces have the doctrinal latitude and the capability, but do they have the capacity? The following is a review of doctrinal relationships.

Attached support. Under an attached command relationship, the division continues to receive primacy of support and exercises oversight of its sustainment brigade support operations. The division maintains full command authority over the sustainment brigade. The division's authority includes the ability to further task organize and position the sustainment brigade and its subordinates, establish priorities, and impose further command or

support relationships.

The division headquarters also has complete administrative control and responsibility for the unit. When attached, the sustainment brigade would support the division and its subordinate units exclusively without an area support responsibility, unless otherwise directed to do so by the division.

The delicate balance that must be preserved in this construct is the sustainment brigade's technical relationship with the ESC or TSC. Whether at home station or deployed, the true power of the sustainment brigade rests in its ability to tether to and synchronize with higher and adjacent sustainment organizations. Distribution, materiel management, maintenance, asset visibility, personnel services, and financial management systems are all

integrated into a system of systems, making it impossible for sustainment brigades to effectively support their divisional and nondivisional units without being embedded into a broader sustainment architecture. Once again, mission command is the means to achieving the benefits of this dedicated support arrangement to divisions while maintaining vital connections to the ESC or TSC.

If the sustainment brigade is attached to the division while deployed, additional sustainment brigades will be required to execute logistics and personnel services functions for theater opening and theater distribution and, perhaps, for nondivisional forces operating in the division area of operations. Sustainment brigades executing a theater-opening mission will sup-

port joint reception, staging, onward movement, and integration, manage transportation, and establish initial theater sustainment. The operational area sustainment mission includes operating multiclass supply support activities, field-level maintenance support, and field services. Sustainment brigades also operate and manage the operational-to-tactical

requirement more than it is a matter of adhering to doctrine. Attaching a sustainment brigade to each division would require significantly more force structure than would providing general support on an area basis. It may be unsustainable to attach a sustainment brigade to each division and additional sustainment brigades for theater support during

Techniques Publication 4-93, Sustainment Brigade, is the least resource-intensive relationship that can be established between the division and the sustainment brigade. While, on the surface, a general support relationship might appear to provide the division with less support, this is not the case. A deployed sustainment brigade, under the mission command of an ESC, may command up to seven combat sustainment support battalions of varying task organizations.

In a general support role, the sustainment brigade integrates, plans, synchronizes, and employs the sustainment capabilities of brigade support battalions and other units using area support methodology. Their scope of responsibility is vast, but sustainment brigade headquarters are designed for and are capable of executing this range of sustainment support. A sustainment brigade employed in this way has the least force structure implications and fosters the endurance of forces over a prolonged fight. The general support role allows the Army to leverage and optimize limited sustainment structure where it is needed at any time across the battlefield.

Mission command, influence, and unity of effort are the keys to success in any environment. The complexity of operations has progressed beyond the boundaries of strict adherence to command and control principles. At the end of the day, it is mission command that facilitates successful sustainment operations. Regardless of a sustainment brigade's command or support relationship at home station or in a theater of operations, sustainers will continue to meet the requirements of the operational force by applying both the art and the science of mission command.

Maj. Gen. Darrell K. Williams is the commanding general of the Combined Arms Support Command and Sustainment Center of Excellence at Fort Lee, Virginia.

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portion of the theater distribution system—distributing materiel to and from sustainment nodes.

Recent experimentation indicates that there could be up to a 60 percent increase in the number of sustainment brigades required to support a theater if we maintain the divisional attached relationship while deployed. Yet, in the decisive action environment, the optimal concept of sustainment is likely to attach a sustainment brigade to each division and provide additional sustainment brigades to the ESCs and TSCs for theater-level support. This level of dedicated sustainment would undoubtedly increase the operational footprint, the ratio of support to maneuver forces, and the overall force structure requirement. The proper organization and execution of mission command would enable this structure.

The real question of whether sustainment brigades should remain attached to divisions or attached to ESCs or TSCs (and provide direct or general support) is a matter of the Army's ability to resource this

prolonged operations. Regardless of the relationship, the division will always be the priority for support.

Direct support. A direct-support relationship provides dedicated support to the division that is somewhat different than when a sustainment brigade is attached. It allows the division to position the sustainment brigade within the area of operations and establish its priorities for support.

Similar to a formal command relationship, the sustainment brigade in a direct-support role supports only the division and the division's subordinate units, unless the division directs otherwise. The sustainment brigade may not be available to execute theater-level support and its area-support responsibilities may be restricted. Although this relationship is more flexible in supporting the force than a formal command relationship is, it has force-structure implications that are similar to those of the attached relationship, and it is less sustainable over time.

General support. The general support relationship discussed in Army

Images of the Joint Logistics Enterprise: A Political System

This article, the second in a series of three about how logisticians can view the joint logistics enterprise, discusses the enterprise as a political system.

■ By Christopher R. Paparone, Ph.D., and George L. Topic Jr.

The joint logistics enterprise (JLEnt) is an organizing construct described in joint logistics doctrine as “a web of relationships among global logistics providers, supporting and supported organizations and units, and other entities.” We hope that current and future logistics leaders consider the implications of this definition, because their views of the JLEnt profoundly impact on how people interact within the construct.

In his book *Images of Organization*, Gareth Morgan posits that there are many different ways to view entities like the JLEnt, including as a political system. Extending his idea, we borrow from *Policy Design for Democracy* by Anne Larason Schneider and Helen Ingram and suggest that the JLEnt has three political considerations that help us to better understand the JLEnt and how it works: context, institutions, and complex power plays.

The first consideration is context. Every logistics situation is different to some degree and so are the purposes and actions of the organizations that enter and depart the JLEnt as situations transpire or the environment changes. Commercial firms, non-governmental organizations, coalition partners, wars, and natural disasters are but a few of the entities and events that create unique relationships.

Second, one must consider the more permanent institutions of the JLEnt. They demand predictability and so focus on regulations and doc-

trine, attempting to control and routinize relationships. Requirements determination, contracting, and coordinating authorities are examples of institutionalized activities that attempt to reduce uncertainty in JLEnt relationships.

The last political consideration, political power plays, involves three faces of power within the JLEnt. The first face belongs to those who directly make defense logistics decisions as a function of bureaucratic authority. It includes the defense and service secretaries, the heads of various departments and agencies, and legislative branch participants. These bureaucrats and their organizations rationalize relationships through budget authorizations and appropriations, design of materiel system requirements, and countless other ways in order to meet the needs of stakeholders, including political constituents. Members are incentivized to amass and retain as much control as possible, often at cost of JLEnt effectiveness.

The second face of power belongs to those in the JLEnt that influence relationships more indirectly, largely through agenda setting. They seek to influence procurement, operational and planning decisions, market materiel, or other “solutions” that seek windows of opportunity and to sway the attention of leaders, managers, and other bureaucrats across the JLEnt.

The third face of power belongs to those who determine the language used to describe the JLEnt and its

operations. This is a much subtler form of influence, associated with the saying, “Knowledge is power.” For example, the very adoption of the term “enterprise” in military doctrine is an example of the influence of terms coined in the commercial sector. Today, business terms of reference dominate the military’s conceptualizations of “logistics,” a term with military origins that is now often supplanted by the commercial term, “supply chain management.”

What can make JLEnt relationships even more complex are the ethical or competing value imbalances that arise as context, institutions, and complex power plays interact and unfold into reality. What we are suggesting here is that viewing the JLEnt through the political lens may help military logisticians to better shape how external organizations successfully support military operations despite varying intentions and interests. Logisticians should strive to have as broad a background as possible to enhance their capability to view the JLEnt through many different frames—always considering the political frame in the process.

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Military technician Michael Esser conducts maintenance training on a generator with Spc. John Channer and Sgt. Suman Lama of the 818th Maintenance Support Company, U.S. Army Reserve, at the 88th Regional Support Command's Equipment Concentration Site 67 on Fort McCoy, Wisconsin, on May 18, 2016. (Photo by Sgt. 1st Class Corey Beal)

Partnering Reserve Component Units With Small Businesses for Logistics

To maintain the equipment and industrial capability that the Army needs to have on hand, the author suggests that it partner its reserve component with small businesses.

■ By Maj. Gen. (Ret.) George W. Wells Jr.

There is considerable debate over the future of the Army's reserve component structure and on-going questions about how budgetary constraints and force structure changes will affect our industrial base. Because most of our logistics infrastructure is in the reserve component, any changes to force

structure, dollar resourcing, or the industrial base will immediately create challenges.

Developing and establishing innovative partnerships with small businesses within the nation's industrial base is critical to retaining equipment readiness and maintaining the functional expertise of reserve com-

ponent Soldiers that is necessary to the military's future success during deployments.

Obstacles to Maintaining Expertise

Our principal challenge is figuring out how to maintain the wealth of experience now serving in the reserve component. Our reserve force

is no longer strategically configured; through repeat deployments, it has transformed into an operational force that is trained and ready to respond to the nation's needs.

While withdrawing forces from the battlefield, reserve component formations directly confront a staggering array of resource, time, and personnel challenges. Soldiers want to remain technically relevant in their military occupational specialties. They want to be engaged, challenged, and have the opportunity to routinely participate in relevant training.

Some of the challenges faced by reserve component units in accomplishing relevant training are time, distance, and equipment and facilities shortfalls.

Time. Most reserve component Soldiers have limited days per year to participate in active-duty training. Realistically, only a small number can afford to leave their civilian jobs once a year to train for three to four weeks. It is simply not realistic to assume that a meaningful number can engage in such training numerous times per year.

Here is today's challenge: the active and reserve components must train together extensively to ensure battlefield success. Army leaders mandate that reserve component personnel satisfy the same annual requirements as their active duty counterparts including weapons qualification, nuclear, biological, chemical instruction, personnel update activities, and diversity and sensitivity classes. Numerous administrative actions also fill their monthly training calendars.

As a result, Soldiers may not find much time to exercise their military occupational specialties during battle assemblies. And there is little time for senior staff to coordinate, communicate, and function in ways that prepare them for the highly stressful environment they will face during deployment.

Distance. Also detrimental to training is the reality that most of our unit facilities are far from regional training centers. Even when facili-

ties are close, training time for actual mission skills still is limited. How often can an engineer bridging unit deploy its equipment across a ravine and have it tested by a common vehicle or tank? Units are often unable to practice such skills even during extended training.

Equipment and facilities shortfalls. Redeploying units return to a less than full complement of rolling stock. The remaining equipment is being staged at reserve centers instead of with the units that use them. It is hard for a military police organization to create simulated and realistically rehearsed convoy operation without a full equipment set.

Reserve facilities may not offer adequate space to conduct engineer, maintenance, or warehousing activities either, leaving logistics units looking to ways to practice warehousing operations.

Overcoming Challenges

So what steps can our operational reserve forces take to retain the experience acquired in our most recent conflicts and keep reserve component Soldiers focused and engaged in their duties? The Army needs to seek inventive ways to employ these Soldiers to ensure that they are ready to meet the requirements outlined in our nation's defense strategy.

An approach that begs to be explored is expanded partnerships between the reserve component and functional private-sector organizations. Such partnerships can grow in a variety of locations and ways.

Almost 15 years ago, reserve forces realigned in the Northern Rust Belt. The Army Reserve relocated its railroad battalion closer to the metropolitan Chicago rail yards thereby enhancing access to live rail operations. The move bolstered real-time equipment use and personnel training for yard crews, engineers, and administrative staff. This relocation also was instrumental in identifying qualified engineers and those interested in railroading with the Army Reserve.

In an August 2012 article by Maxford Nelson, "Public-Private Partnerships Offer Smart Alternative to Sweeping Defense Cuts," in *The Daily Signal*, he writes, "One way to improve the defense budget is through partnerships between the military and private industry. Public-private partnerships are part of a larger approach known as performance-based logistics, which seeks to improve efficiency in defense projects by focusing on outcomes."

Nelson provides an example where the Anniston Army Depot and General Dynamics Ground Systems teamed up to repair Stryker vehicles. The Lexington Institute's Loren B. Thompson calls it a "model of efficiency."

How can we enhance more logistics opportunities for the bulk of our infrastructure as we move forward? The Army could create an environment where reserve logistics warehousing units partner with a private-sector logistics organizations. Envision an aviation maintenance unit repairing turbine engines on an assembly line in a private-sector facility alongside civilians. Together they would support the logistics entity and the government need for those engines.

Why Now?

Our industrial base is in a critical state. As forecasted, contractual work reductions continue. Some small businesses owners fear their facilities will face closure. Our logistics footprint at the small business level is vital to our nation's major industries who count on small business for unique major materiel support. If lost, small business technical know-how will be hard, if not impossible, to regenerate.

The tactic to prevent this loss is to award defense supply support-related contracts that create partnerships between military and private businesses. In this environment, our reserve components could reap benefits to include stable employment.

As part of the partnership, the con-

tractual arrangement would establish job rights, eliminating Soldiers' concerns over their civilian employment. Once home they would merely exchange their military uniforms for civilian clothing and return to work. The military-corporate partnership would have a fully staffed, year-round support group for deployed Soldiers and their families.

This partnership would be designed to yield quality workers within the military unit and the private sector. Providing logistics Soldiers the opportunity to work in the same environment during battle assemblies and routinely as a civilian would add to their expertise and broaden their skills and upward mobility potential. This arrangement would enhance those who stay in the force, build the capacity and skills of all partners, and present a stable economic outcome for the military workforce.

The Specifics

Critical processes must be in place first in order to launch this partnership. The military establishment needs to designate logistics functions that fit, identify private-sector partners, and approve a detailed memorandum of agreement (MOA). The concept will need to be tested under various scenarios over an extended period that includes times when reserve members are deployed.

Facilities. The concept is designed to partner reserve logistics units with private-sector small businesses over the full spectrum of logistics services. For example, if the contractual work was repair or refurbishment of a number of turbine engines for aircraft or tanks, the Department of Defense and the corporate entity would establish the required assembly lines in its facility.

These assembly lines would be manned by reserve component Soldiers. During unit training drills, the work may include repairs on the government-contracted turbine engines at the private-sector facility.

Routine activities that occur during drill assemblies would be done on

site as well. Businesses will need to adjust some existing operations and facilities in order to accommodate military needs. In partnership, the two separate organizations would agree to standards based on regulatory guidance, policies, and other agreed-to-authorities specified in the MOA.

Manning. In the early 2000s, the Army restructured its logistics infrastructure at the theater headquarters level by integrating active and reserve component Soldiers. This composite modified table of organization and equipment was valued for its capability to rapidly respond to crises. The trained and ready force reduced active duty requirements and yielded seasoned reserve logisticians and other supply and support efficiencies.

The unit manning infrastructure for military-private sector partnerships would be similar to that of a multicomponent military organization. Under a Department of Defense directive, civilian and military personnel would be cross-leveled throughout the structure. Certain positions would be dual-hatted with flexibility built in to accommodate the contractual agreement.

Duties and responsibilities would be approved in advance through the proper military personnel channels, defense contract offices, and in agreement with the selected small businesses. Most of the activities agreed to in the arrangement would be outlined through routine regulatory guidance, policies, procedures, and processes. An umbrella contract gauged by a comprehensive MOA would serve as the management tool for each partnership.

MOA. Each MOA would be locally managed by a joint team of military and civilian personnel parallel chains of command that manage the critical aspects of each entity. Specified leaders would be permitted to exercise the authorities necessary to accomplish specific work within contractual agreements.

For example, this relationship

would allow individual sections to maintain functional capability even while Soldiers are deployed. Based on the partnership, other reserve component Soldiers could be activated to supplement the private venture if it was working on a full or extended defense-laden contract during the deployment period.

A military and private-sector partnership is a winning proposition that would help decrease the chances of contracted businesses suffering when reserve component Soldiers deploy.

With skilled and dedicated leaders, this concept can work in any of our service components. Certainly the Army and its small business partners must cross barriers, determine roles, draft policies, and design and test models. But as each day passes, quality Soldiers are leaving the force because of a lack of productive growth and potential rewards.

The future operational environment requires that the defense establishment and the private sector work together to produce and service equipment within the industrial base in order to accomplish mission readiness. Partnering with small businesses can revolutionize our industrial base and our ability to retain experienced Soldiers in the reserve component.

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Bridging the Knowledge Gap From the Classroom to the Battlefield

■ By Capt. William K. Smith

After graduating from the Maneuver and Logistics Captain's Career Courses in September 2014, I arrived at Fort Wainwright, Alaska, to take command of a newly created forward support company (FSC) within the 3rd battalion, 21st Infantry Regiment, 1st Stryker Brigade Combat Team (SBCT), 25th Infantry Division.

In January 2015, the SBCT deployed to an 18-day decisive action training rotation at the National Training Center at Fort Irwin, California. After completing this rotation and having some data points for SBCT FSC organizations, I have some recommendations for both new FSC commanders and students of the Maneuver and Logistics Captain's Career Courses.

Career Course Lessons

Career courses focus on doctrine and using your unit's modified table of organization and equipment in the decisive action environment, which is exactly what the SBCT FSC did during its NTC rotation. The courses teach logistics planning with an armored brigade combat team (BCT). This format forces students to plan for massive consumption factors. If you can plan and execute logistics for an armored BCT, you can plan and execute logistics for any brigade.

Apart from the common core classes taught in the first six weeks, the curricula for the Maneuver and Logistics Captain's Career Courses are vastly different and do not necessarily complement each other. For example, while in school, a logistician will never write paragraph four of a company operation order, which would be considered a common assignment for an

infantry officer. Infantry officers focus on tactical issues, while logisticians focus on operational matters.

Decisive Action Lessons

The first challenge typically faced that is not addressed in the classroom is how to operationalize logistics down to the lowest level. This is challenging because each type of battalion fights and supports itself differently.

Like many logisticians, my lieutenant years were spent in non-BCT brigades. Specifically, I was in a military police brigade and a sustainment brigade. My knowledge of BCT operations could have been stronger going into my first company command. However, the headquarters and headquarters company (HHC) commander helped bridge my knowledge deficiency.

Building a strong working relationship with the HHC commander early on is a must. Garrison operations do not require this relationship, but fighting in the decisive action environment will force it. Unlike FSC commanders, almost all infantry HHC commanders are rifle company commanders before commanding HHCs. The HHC commander can visualize exactly what rifle company commanders should expect on the receiving end of the logistics plan. In addition, he is already skilled at operationalizing other battalion enablers such as fire support, medics, battalion scouts, and mortars.

As the only logistics commander in the battalion, the FSC commander knows exactly what is available, how to get it, how to plug into resources from higher echelons through the support operations section and the brigade support battalion, and where to look when things are not flowing right. He also knows how to remain

connected to nonstandard resources.

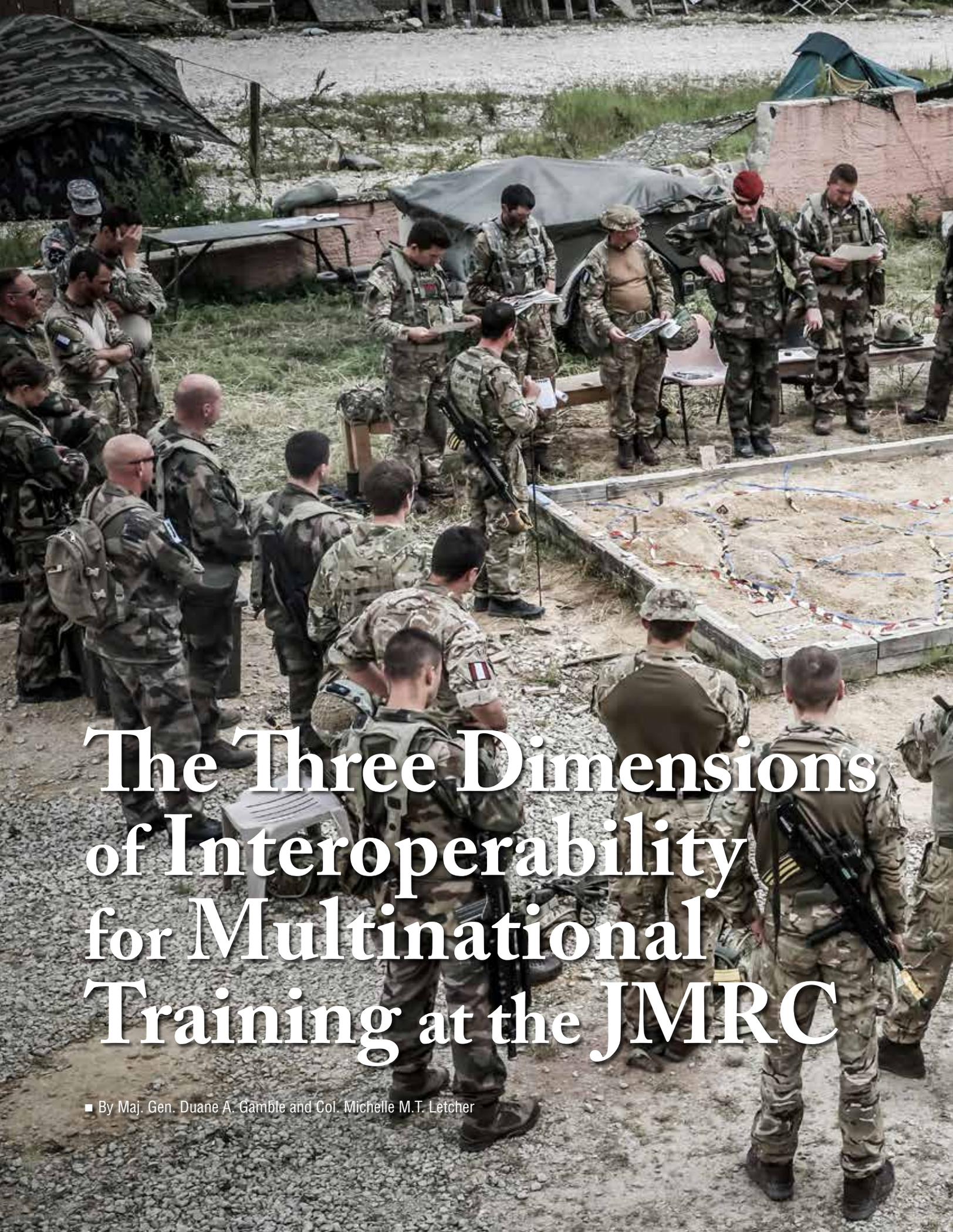
When the S-4 involves the HHC and FSC commanders together in planning, they can help set expectations on both ends of the logistics spectrum and ensure the logistics plan is feasible and attainable for both the FSC and infantry companies.

HHC and FSC commanders who do not attempt to understand each other's role in the battalion decisive action fight are on a collision course.

Establishing the roles and responsibilities of the HHC commander, FSC commander, and the battalion S-4 early on is critical to the success of the battalion. During the after-action review, our infantry battalion realized that home-station training did not test logistics systems the same way a decisive action environment does.

Bridging the knowledge gap from the classroom to the battlefield means applying your knowledge and the knowledge of your team members early and often. Your battalion will sink or swim depending on your relationship with the HHC commander. Define your roles and lanes early; admit that neither of you can do the other's jobs.

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The Three Dimensions of Interoperability for Multinational Training at the JMRC

■ By Maj. Gen. Duane A. Gamble and Col. Michelle M.T. Letcher



Soldiers conduct an operations briefing on June 22, 2016, during Swift Response 16 at the Joint Multinational Readiness Center in Hohenfels, Germany. The exercise included more than 5,000 Soldiers and Airmen from the United States, Belgium, France, Germany, Great Britain, Italy, the Netherlands, Poland, Portugal, and Spain. (Photo by Spc. Gage Hull)

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By focusing on the technical, procedural, and human dimensions during training, units can ensure better interoperability.

Setting the theater requires sustainment formations that are prepared to receive, stage, onward move, and sustain divisions and corps of expeditionary forces and our allies. Sustainment formations must build and maintain reflexive competency to execute mission essential warfighting tasks in a high tempo, full-spectrum environment where interoperability is key.

As sustainment units operate in a dynamic and volatile theater, speed and strength matter. Core responsibilities, such as theater opening, establishing the theater distribution system, and sustaining operations across the European Command area of responsibility, matter as well.

In addition to the more than 50 battalion- and above-level exercises executed across the theater, NATO allies exercise their readiness through formal external evaluation at the Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany. Multinational sustainment integration trends and observations at the JMRC, at the echelons-above-brigade support level, highlight the need for multinational interoperability.

Allied Joint Publication 01(D), Allied Joint Doctrine, describes the three dimensions of joint and allied interoperability. It is through the interoperability of the technical, procedural, and human dimensions that multinational units succeed in achieving allied security objectives. NATO list standardization, training and exercises, technical demonstrations, and tests as a few of the tools that nations can use to achieve and measure interoperability. This article shares the tools that units can use to train across the three dimensions of interoperability—technical, procedural, and human—at JMRC and in any other multinational training environment.

The Technical Dimension

The technical dimension focuses on mission command and logistics management systems used at the tactical level. Interoperability is needed

in units' capabilities and technological output. Units demonstrate this dimension through communication, mission command systems, and the exchange or use of equipment between multinational partners. The technical dimension can be measured by assessing a units' ability to provide mission command and sustainment across allied formations in support of similar objectives or an allied commander's intent.

In order to do this, the senior sustainment commander on the ground must work through numerous command and support systems. Mission command systems are challenging when working with our NATO partners; there are 13 different battle-tracking systems across NATO. The U.S. Army sustainment formations communicate over the Command Post of the Future (CPOF) and Joint Capabilities Release—Logistics, which operate on the secure internet protocol router network. NATO allies use Battlefield Information Collection and Exploitation Systems (BICES) with Logistics Functional Area Services, which provide them with a logistics common operational picture.

Both Joint Capabilities Release—Logistics and Logistics Functional Area Services provide reporting tools and a common operational picture, but through two different networks that do not communicate with each other. This causes friction during JMRC rotations. Compounding the challenge, BICES and other systems used by our allies are not available to the tactical echelons of all nations. Many countries reserve BICES for static operational or strategic headquarters or for a forward-deployed mission command structure.

JMRC observer-controllers mitigate system and information shortfalls by suggesting the use of low-tech solutions such as simple graphic control systems to control movement, FM radio communication, liaison officers (the human dimension), and vehicle marking systems. All of these techniques increase technical interoperability for

mission command in a multinational environment.

A second observation from a technical perspective concerns the interoperability of our sustainment systems. In the absence of a standing NATO logistics brigade, allied units work together to exercise readiness and increase operational reach.

One example of a tool improving technological interoperability is the NATO fuel adapter that was used by the Modular Combined Petroleum Unit, a multinational bulk fuel company, during Trident Juncture 15. The unit executed multinational fuel distribution and storage missions and validated six fuel fittings with seven different nations during the exercise.

The 16th Sustainment Brigade identified the number of adapter kits needed based on each type of brigade's authorized bulk fuel assets. Rotational units must identify similar technical gaps and develop a common solution for mission command and sustainment interoperability with our allies for mission success.

The Procedural Dimension

The procedural dimension of interoperability focuses on doctrine and procedures from the strategic, national level to tactical-level execution. It involves standardizing capabilities and operating in similar types of formations anywhere. Units demonstrate the procedural dimension through standardization agreements, standardized communication, and agreed upon terminology, tactics, techniques, and procedures that minimize doctrinal differences.

The effectiveness of a unit's procedural dimension can be measured by how well it synchronizes its sustainment resources to enable the alliance and increase operational reach and freedom of movement for multinational formations. The differences between nations are magnified in training environments with external evaluation platforms, like JMRC, and during U.S. Army Europe exercises that include border crossings

and multinational execution. Each nation's task organization, equipment, mission command platforms, and planning priorities becomes evident as the observer-controllers and trainers examine processes that are based upon each nation's standard operating procedures.

Standardization increases interoperability. Having standardization

agreements for processes, language or doctrinal difference, and procedures in place before an exercise reduces friction during training and execution. Standardization also increases the operational reach, combat power, and readiness of a formation.

Processes challenge units in all multinational exercises, but requirements for diplomatic clearances,



Pfc. Dontravious Moon with the 240th Quartermaster Company, 18th Combat Sustainment Support Battalion, 16th Sustainment Brigade, out of Grafenwoehr, Germany, resupplies water for Soldiers during training on April 17, 2016. (Photo by Spc. Sarah K. Anwar)



Sgt. Daryl Perez, French Cpl. John Parau, and Spanish air force Pvt. Alejandro Sanudo with Trident Juncture 2015's Modular Combined Petroleum Unit coordinate logistics at Zaragoza Air Force Base, Spain, on Oct. 8, 2015. The unit fueled vehicles from almost all of the 35 countries participating in the exercise. (Photo by Sgt. 1st Class Michael O'Brien)

requests for march credits, and moving equipment by rail can quickly overwhelm units with few rotations in Europe. Each European country has different requirements, and misunderstanding the paperwork and standards for moving in these countries can halt movement and affect the mission. Onward movement has specific requirements by nation and requires division transportation officers, mobility warrant officers, and unit movement specialist to plan according to the requirements of the nations that are being traversed.

A NATO standardization agreement provides a single standard to assist nations in increasing interoperability, but countries may implement this standard differently. The doctrinal terms, resource gaps, and tactics, techniques, and procedures of countries and units vary. It is important for units working within

multinational formations to establish a rotational plan that solidifies reporting formats, reporting time lines, synchronization meetings, and communication in order to standardize procedures.

The Human Dimension

The human dimension of interoperability focuses on human behaviors and abilities at all levels of execution. It ranges from communication at the individual level to the standardized and executable capabilities that maximize national contributions. Human interoperability includes relationships, liaisons, education and training, and language skills. Cultural factors influence the human dimension. Of the three dimensions, the human dimension is most closely connected to interoperability effectiveness and is the most likely to determine system effectiveness.

Friction caused by blocked equipment movement at a single border crossing can become a national-level issue that requires an ambassador's assistance to resolve.

As organizations prepare for training, one of the greatest challenges in Europe is movement. Movements by air, rail, sea, or road require approval authorities across multiple commands, joint services, and host nations. Each command, service, or nation requires a different process, which may cause friction to a unit with new personnel, a regionally aligned or allocated force, or a rotational force.

It is through the human dimension that friction is reduced. Relationships built with carriers, liaison officers nested with other commands, and movement controllers working inside national movement coordination centers are all examples of



1st Lt. Stevie Hasenfus discusses fuel operations with Spanish air force Maj. Sergio Armabilet and Antonio Arraez during Trident Juncture 2015 on Oct. 8, 2015. (Photo by Sgt. 1st Class Michael O'Brien)

human behaviors that reduce potential movement friction and allow for smoother reception, staging, onward movement, and integration.

Education is another important aspect of the human dimension. It provides a foundation for all participants. The Joint Multinational Training Command offers multiple interoperability-enhancing training programs through the Joint Multinational Simulations Center and the 7th Army Mission Command Training Program. These programs provide training to prepare units for multinational missions.

Finally, repetition with our NATO allies in a training environment increases interoperability by building strong relationships. Sustainment training with recovery assets, fueling capabilities, movement control, and distribution capabilities are examples of systems that sus-

tainers may exercise to understand interoperability through the human dimension. Junior leaders learn to understand options and overcome obstacles through different equipment, processes, and language. All of these training opportunities strengthen the alliance.

Before a multinational rotation at the JMRC, units train at their home station to help build a foundation for success. Organizations exercise the human dimension through logistics synchronization and maintenance meetings, the use of mission orders, and combat power and strength management.

Leaders educate their formations on logistics estimation tools, logistics reporting, casualty evacuation procedures, and integrating echelons-above-brigade support to increase operational reach. Allied forces must understand the task organization of

multinational formations, familiarize themselves with national strengths, and use planning conferences and individual contacts to understand national aptitudes and capabilities in order to increase allied strength.

Finally, through the human dimension, leaders gain an understanding the capability gaps of partner nations as well as national caveats that may lead to shortfalls. Knowing this helps units to build a plan for a successful rotation.

Multinational training environments allow allies to exercise their interoperability and readiness and receive formal external evaluations. It is through the interoperability of the technical, procedural, and human dimensions that multinational units succeed in achieving allied security objectives. At the JMRC, or in any multinational training environment, sustainers exercise their ability to provide commanders with options to succeed.

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Soldiers from Delta Troop, 1st Squadron, 91st Cavalry Regiment, 173rd Airborne Brigade, conduct a mission brief on April 17, 2016, before a logistics resupply mission during exercise Saber Junction 16 at the Joint Multinational Readiness Center in Hohenfels, Germany. (Photo by Spc. Nathaniel Nichols)

Supporting a Multinational BCT Commander

■ By Lt. Col. Adrian Gamez



The Army has a long, successful history of working with multinational partners and allies to achieve common military objectives. Since World War I, Army logisticians have continually demonstrated their ability to plan, coordinate, and synchronize multinational logistics to meet the commander's intent and achieve mission requirements.

The concept of U.S. forces supporting a multinational brigade combat team (BCT) is simple, but the reality is hard. Logisticians must consider and understand each country's national caveats, logistics structures, equipment compatibility, and supply management procedures and find ways to mitigate any challenges.

So where does the senior brigade sustainer fit into the process? Observations made at the Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany, have substantiated the need to follow certain steps in order to properly support a multinational BCT.

First, senior sustainers must balance diplomacy and mission accomplishment. Next, they must understand interoperability and its effect on sustainment operations. Finally, they should develop a logistics

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In a multinational brigade combat team, the senior sustainer must balance diplomacy and mission accomplishment, understand interoperability, and provide the commander with information about how sustainers will support the mission.

common operational picture (LCOP) that satisfies mission requirements and provides the multinational BCT commander with the information needed to understand how sustainers will support the mission.

Diplomacy and the Mission

The Army's experience for the past 15 years has been mostly in Afghanistan and Iraq training nascent military forces. But NATO allies and most Partnership for Peace nations have professional armies and logistics structures that are similar to those of the United States. Operating with them is not about building an army from scratch. When working with these multinational partners and allies, we cannot use the same template we used in Iraq and Afghanistan.

The senior sustainer must develop a unity of effort and synchronize logistics activities across the multinational BCT. Keep in mind that all logisticians are committed to supporting their own maneuver commanders.

During the first engagement with all logisticians within the multinational BCT, the senior sustainer must determine how each nation will contribute to the major elements of sustainment. Army Doctrine Publication 4-0, Sustainment, describes those major elements as follows:

- Logistics—maintenance, transportation, supply, field services, distribution, operational contract support, and general engineering support.
- Personnel services—human resources support, financial management operations, legal support, religious support, and band support.
- Health service support—casualty care, medical evacuation, and medical logistics.

In addition to addressing the major sustainment elements, the senior sustainer must ask specifically about bulk fuel capacities, types of fuels required, evacuation platforms, recov-

ery assets, distribution capabilities, and other critical information. Each nation bringing forces to the fight will generate logistics requirements. Instead of the senior sustainer trying to make sustainment plans alone, he or she should ask the other nations' logisticians how they sustain their own formations.

For example, the senior sustainer should ask how the artillery battalion resupplies ammunition. Interestingly, the Czech Republic's army ammunition supply system is similar to the U.S. system in that it uses combat configured loads (CCLs). The first CCL is at the gun line, the second CCL is with the sustainment company (forward support company), and the third CCL is at the brigade support battalion.

Although there are similarities, the senior logistician still needs to know what types of ammunition are needed, how the multinational battalion will move and store it, and what types of primers, fuses, and charges are needed.

The senior sustainer must discuss who is doing what. Who is monitoring supply statuses, forecasting for the multinational BCT, and monitoring the BCT's internal logistics? Who is looking externally to bring in commodities and supplies to the brigade support area from a higher echelon? Who is executing the sustainment missions for each battalion or squadron within the BCT?

Once these responsibilities are delineated, the senior sustainer can establish clear roles and responsibilities to synchronize the multinational BCT field-grade logistics leaders. These roles and responsibilities should be agreed upon before mission execution.

Diplomacy, while valued, does not by itself produce the support plan, nor does it accomplish the sustainment mission. When a logistics issue arises, the time for diplomacy is over. It is time for accountability based on established roles and responsibilities. Having to apply diplomacy after the mission starts is

a course correction caused by not having a synchronized logistics plan.

The senior sustainer must use diplomatic techniques when a unit fails to plan logistics in detail, establish a logistics system capable of supporting the multinational BCT, or provide clear expectations up front for all of the logisticians involved. These mistakes leave logistics officers operating under assumptions.

It is not that the senior sustainer will never need to exercise diplomacy. However, sustainers must be open to professional discussions in order to understand each nation's logistics capabilities, capacities, and shortfalls. This understanding leads to recommendations on how to mitigate the shortfalls and provides the best way ahead to support the multinational BCT.

Interoperability

When operating together, NATO-member militaries are guided by fundamental principles. Standardization agreements establish processes, terms, and conditions for common military or technical procedures and equipment use among all NATO members. They enable a member's military to use the support and supplies of another member's military. A national caveat is a restriction that a NATO member places on the use of its forces.

But NATO doctrine is primarily written at the strategic and operational levels of war. It does not describe how to support the multinational BCT at the tactical level of war.

To attain interoperability, multinational sustainers should not overthink or overcomplicate the mission. Tanks need fuel, artillery needs ammuni-

tion, vehicles need to be repaired, supplies need to be distributed, and Soldiers need medical support, food, and water.

Partners and allies bring knowledge on how best to support their own nation's requirements. U.S. sustainers should consider their techniques and procedures. Sustaining a multinational BCT is a collective problem, so we need a shared solution for it. The U.S. Army does not have the monopoly on great ideas.

For interoperability to occur in a multinational BCT, the senior sustainer must understand the multinational task organization, integrate communications, synchronize allied or partner capacities and capabilities, and develop agreed-upon standards and procedures.

Task organization. The foundation of interoperability is a full understanding of the task organization and



Soldiers from Delta Troop, 1st Squadron, 91st Cavalry Regiment, 173rd Airborne Brigade, unload supplies during a logistics resupply mission on April 17, 2016, as part of exercise Saber Junction 16 at the Joint Multinational Readiness Center in Hohenfels, Germany. (Photo by Spc. Nathaniel Nichols)

what it is intended to achieve. A task organization chart helps the multinational BCT commander to visualize the formation.

Using the chart, the commander can become familiar with the capabilities and procedures of the battalions or squadrons under the brigade and develop a plan that takes advantage of each partner nation's strengths. The commander can also discern if a particular nation cannot perform a specific mission because of personnel, training, or equipment constraints or national caveats.

Using the task organization chart, the commander can see which nations brought sustainment companies or health service support. The chart will identify possible friction points since a multinational task force may have different nations' forces task organized underneath the parent organization.

Communications. In the past 15 years, the Army has enjoyed well-established communications on built-up forward operating bases. A unit inherited the last unit's network and simply changed the domain account for network access.

But, combat training centers are teaching the opposite: units are conducting brigade-level operations in an austere environment with no pre-existing communications network. What the unit brings is what it has.

To be successful, senior sustainers should first understand the capabilities of the communications platforms organic to their battalions. They must then understand the capabilities, limitations, and constraints of the communications platforms in the multinational BCT.

For example, the Army has the Command Post of the Future, but multinational formations do not. Radio systems may be incompatible because of differences in encryption. In these cases, multinational formations may have to transmit over unsecure FM radios.

The S-6 communications officer has to know the senior sustainer's signal expectations. The senior sus-

tainer should be able to answer these questions:

- What do you want to do with the communications network?
- How far do you need your network to reach?
- Who do you need to talk to and why?
- Do you need collaboration tools, or does messaging satisfy the requirement?
- Have you identified dead-space locations where you cannot talk?
- For what you want to do, do you have sufficient bandwidth? If not, what can you do with the bandwidth that is available?

The BCT should consider all of the staff functions (personnel, intelligence, operations, internal logistics, external logistics, supply support activity, medical, and maintenance) when making the communications plan.

Although the senior sustainer may be task organized under the multinational BCT headquarters, the U.S. sustainment units will still require sustainment information specific to U.S. formations. Equally, the partners and allies that provide forces to the multinational BCT will have to report their own logistics information through their national channels, which means bandwidth requirements may increase.

The senior sustainer should also integrate the sustainment automation support management office (SASMO) into logistics communication planning. The SASMO is the primary operations center for organic sustainment information systems support.

The SASMO ensures that the Global Combat Support System—Army, Standard Army Ammunition System—Modernization, Transportation Coordinators' Automated Information for Movements System II, Electronic Military Personnel Office, and Medical Communications for Combat Casualty Care are working properly.

The SASMO is essential for sustainment communications planning. However, even by integrating the S-6 with SASMO, the senior sustainer may not be able to communicate with all multinational elements. Therefore, logistics liaison officers (LNOs) may be necessary.

Multinational partners may not have the same communications equipment; however, they do have command posts. If an ally or partner has a shortfall in communications capability, an LNO can capture pertinent logistics information for the command.

The JMRC observer-coach/trainers recommend using a two-person LNO team that includes an officer and an enlisted Soldier. The team should have a vehicle, Joint Capabilities Release, one long-range radio, and a Simple Key Loader.

Capabilities. The senior sustainer must be aware of all national caveats and support agreements among participating nations. This sets the stage for proper integration of logistics support of the multinational BCT. Commanders or senior sustainers must organize a working group to capture and understand each unit's capability and capacity.

It is a good idea for senior sustainers to conduct a logistics capabilities briefing to better educate themselves and their staffs about the multinational BCT's sustainment capacities. More importantly, the senior sustainer can identify the shortfalls in logistics and develop strategies to mitigate them.

Standards and procedures. The senior sustainer must develop standards and procedures for reporting, logistics status returns (time and frequency), and logistics synchronization meetings (meeting time and agenda).

A logical start point may be to use the U.S. logistics status report as a template, but keep an open mind; each nation has its own way of doing logistics reports, and another military may have a better product that can be used. Remember, this is a shared

problem set that requires a shared solution and understanding.

All multinational representatives should agree on report formats and on who is reporting to whom. For example, in an infantry task force within the multinational BCT, a German battalion headquarters may have one German mechanized infantry company, a Serbian mechanized infantry company, and a Romanian armor company.

It is reasonable to believe that the German battalion headquarters is responsible for reporting logistics information to the senior sustainer's support operations officer and the multinational BCT S-4. However, do not assume anything. Ensure the German battalion headquarters understands the reporting requirements and that it is responsible for the entire task force, not just its own national elements.

The LCOP

When logistics standards and procedures are fully understood and agreed to by all nations, then the multinational BCT can produce the LCOP. The LCOP is a single display of relevant logistics information shared by more than one command.

But how do you display the LCOP to the multinational BCT commander? What logistics data is relevant? What does the multinational BCT commander need to know to make a decision? What feeds the LCOP? Have appropriate standards and procedures for timely reporting been established?

There are several ways to produce an LCOP at the brigade level. The JMRC recommends giving a quick LCOP "snapshot" to the multinational BCT commander. The snapshot should reflect the functionality of the multinational BCT's combat power and be tracked according to task force, battalion, or squadron.

The senior sustainer should track the combat power by key enabling systems and by warfighting function. The sustainer should also assess functional readiness using the framework

of shoot, move, communicate, and sustain.

A multinational task force requires more complex tracking of key enabling systems. Key logistics enabling systems are different than maneuver assets. What primarily concerns logisticians is the equipment used to distribute, refuel, store, lift, evacuate, and recover personnel and equipment.

The senior sustainer must also understand each nation's storage capacity for bulk fuel and water. Some countries may not have bulk fuel and water storage capacity; they may instead use 5-gallon cans. That kind of information is essential to know up front.

What does the data on a LCOP mean to the commander? The LCOP data is analyzed and consolidated to provide the commander with an understanding of the brigade's logistics status.

The staff officer must conduct an analysis and provide recommendations for the commander if the information is determined to be critical. A simple method to present that information is by capturing the "what," "so what," "which means," and "therefore" for all critical logistics shortfalls.

As an example, when a brigade S-4 is notified that the field artillery battalion's 155-millimeter high explosive projectiles are "red," that staff officer must present the data succinctly and efficiently to the commander. The munitions shortfall is the "what" of the unit's problem. The "so what" is how it affects the unit, why it happened, when the next resupply is scheduled, and whether or not external resupply is available.

The brigade S-4 continues by addressing the "which means" aspect of the problem. Questions to ask at this point help build recommendations to overcome the shortfall. For example, how does the staff mitigate the munitions shortage? What missions are affected, and how can the missions be changed if the munitions are not resupplied? Does the brigade have to delay a follow-on mission, attack, or

counterattack because of the lack of effects on the objective?

Finally, the S-4 must present the commander with the "therefore." The analysis of the original shortfall must end with the commander making a decision. How can the commander reallocate resources? What or who needs to be influenced? Do any changes need to be made to the tactical mission?

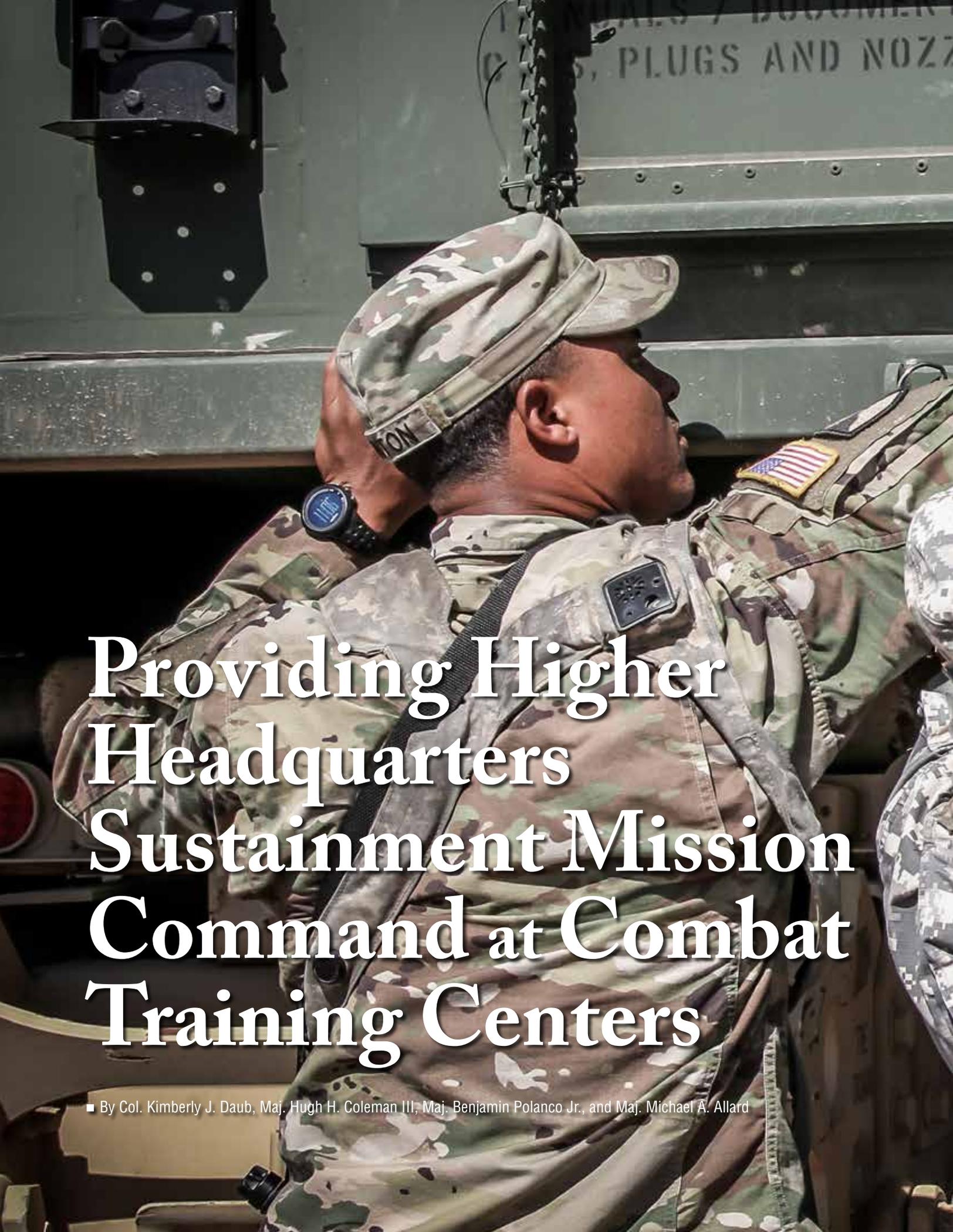
The senior sustainer must fully understand the multinational BCT's task organization and what the formation can and cannot do. Being diplomatic does not, by itself, develop the support plan, nor will it sustain the multinational BCT. Clear roles and responsibilities must be established.

The senior sustainer needs to create opportunities to develop a multinational logistics plan that considers interoperability. A communications plan must be developed to enable mission command of the multinational BCT's sustainment activity.

The senior sustainer should look for the gaps in logistics support and remedy them. Standards and procedures should be agreed upon by all participating nations. Finally, an LCOP will assist the multinational BCT commander in making logistics decisions.

A multinational environment is unique and challenging and offers opportunities to excel and highlight the talents of the Logistics Corps. Successful logistics commanders are the ones who remain open to new ideas and realize that they can learn from other nations' armies as they also learn from ours.

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Providing Higher Headquarters Sustainment Mission Command at Combat Training Centers

■ By Col. Kimberly J. Daub, Maj. Hugh H. Coleman III, Maj. Benjamin Polanco Jr., and Maj. Michael A. Allard



Sgt. Tony Clinton and Spc. Natalie Smith, from the 129th Combat Sustainment Support Battalion, 101st Airborne Division Sustainment Brigade, hook a hose onto a load handling system compatible water tank rack on Sept. 3, 2015, at the intermediate staging base in Alexandria, Louisiana. The water purification team was supporting the 2nd Brigade Combat Team, 101st Airborne Division, during its training at the Joint Readiness Training Center at Fort Polk. (Photo by Master Sgt. Mary Rose Mittlesteadt)

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The 101st Airborne Division Sustainment Brigade headquarters was the first unit of its kind to exercise mission command of sustainment units at the Joint Readiness Training Center. This type of training provides new opportunities for sustainment brigades, but more could be done to improve the concept.

In October 2015, the 101st Airborne Division Sustainment Brigade deployed to the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana, to support the 2nd Brigade Combat Team (BCT), 101st Airborne Division (Air Assault), during JRTC Rotation 16-01. This exercise marked a paradigm shift for sustainment support at combat training centers (CTCs). The rotation integrated training for a sustainment brigade mission command element into the scenario where it provided oversight and integrated echelons-above-brigade (EAB) sustainment.

A sustainment brigade has the opportunity to support its division-aligned units and train with additional resources provided during a CTC rotation. These assets are not always available at home station.

During previous JRTC rotations, the JRTC Operations Group provided mission command, orders, and interaction between the maneuver units for the combat sustainment support battalion (CSSB) providing EAB sustainment. But during JRTC Rotation 16-01, the 101st Sustainment Brigade's tactical command node (TAC) provided mission command to the 129th CSSB, facilitated more realistic training, and oversaw the joint reception, staging, onward movement, and integration (JRSOI) and sustainment support operations to the 2nd BCT. This proved the 101st Sustainment Brigade's ability to improve the readiness of a sustainment brigade TAC through CTC training.

ISB Mission Command

The JRTC provides an excellent training venue for EAB sustainment units to establish longer lines of communication than they would typically train with in garrison. It includes an intermediate staging base (ISB) that is located about 55 miles away in Alexandria that provides real-time constraints. The distance stresses accurate logistics forecasting and planning for both the supported units

and EAB logisticians supporting the rotational unit.

While operating at the ISB, the sustainment brigade support operations served as a critical link between the 2nd BCT and 129th CSSB by developing reporting procedures and requiring the rotational unit to follow doctrinal requests for support in an effort to synchronize operations. Without this layer of mission command, provided by the sustainment brigade TAC working in conjunction with the 2nd BCT support operations, the BCT would have to directly coordinate with the supporting CSSB without higher headquarters' oversight and prioritization.

Reducing Contracted Support

During previous rotations, a BCT could request sustainment support directly from the JRTC Operations Group who would, in turn, task the rotational CSSB to fill the request. If the CSSB could not deliver the commodities, then the operations group would task its acting CSSB, the mission support services contractor on Fort Polk. The contractor provides



combat training systems, mission support services such as fuel transportation, and defense electronics to rotational units.

During this rotation, the 101st Sustainment Brigade TAC provided sustainment support for the rotational unit by taking the contractor's EAB sustainment duties. This allowed the BCT and CSSB to greatly reduce their reliance on the mission support services contractor. It also allowed the sustainment brigade and its CSSB to establish class I (subsistence) and class IIIB (bulk petroleum, oils, and lubricants) accounts and use internal transportation assets and materials handling equipment from the CSSB.

Having a sustainment brigade TAC included in the rotation to allocate and prioritize sustainment also allowed the BCT to experience sustainment operations and support request procedures that better represented combat operations. The sustainment brigade support operations and its commodity managers interacted with strategic partners to open and close accounts, which allowed

the CSSB to focus on supporting the rotational unit.

JRSOI Operations

The ISB was instrumental in providing an opportunity for the sustainment brigade TAC and its CSSB to train on the sustainment brigade's mission essential task to conduct JRSOI. While the primary training audience is the rotational BCT during decisive action operations, JRTC places additional burdens on the BCT by requiring that it use the ISB.

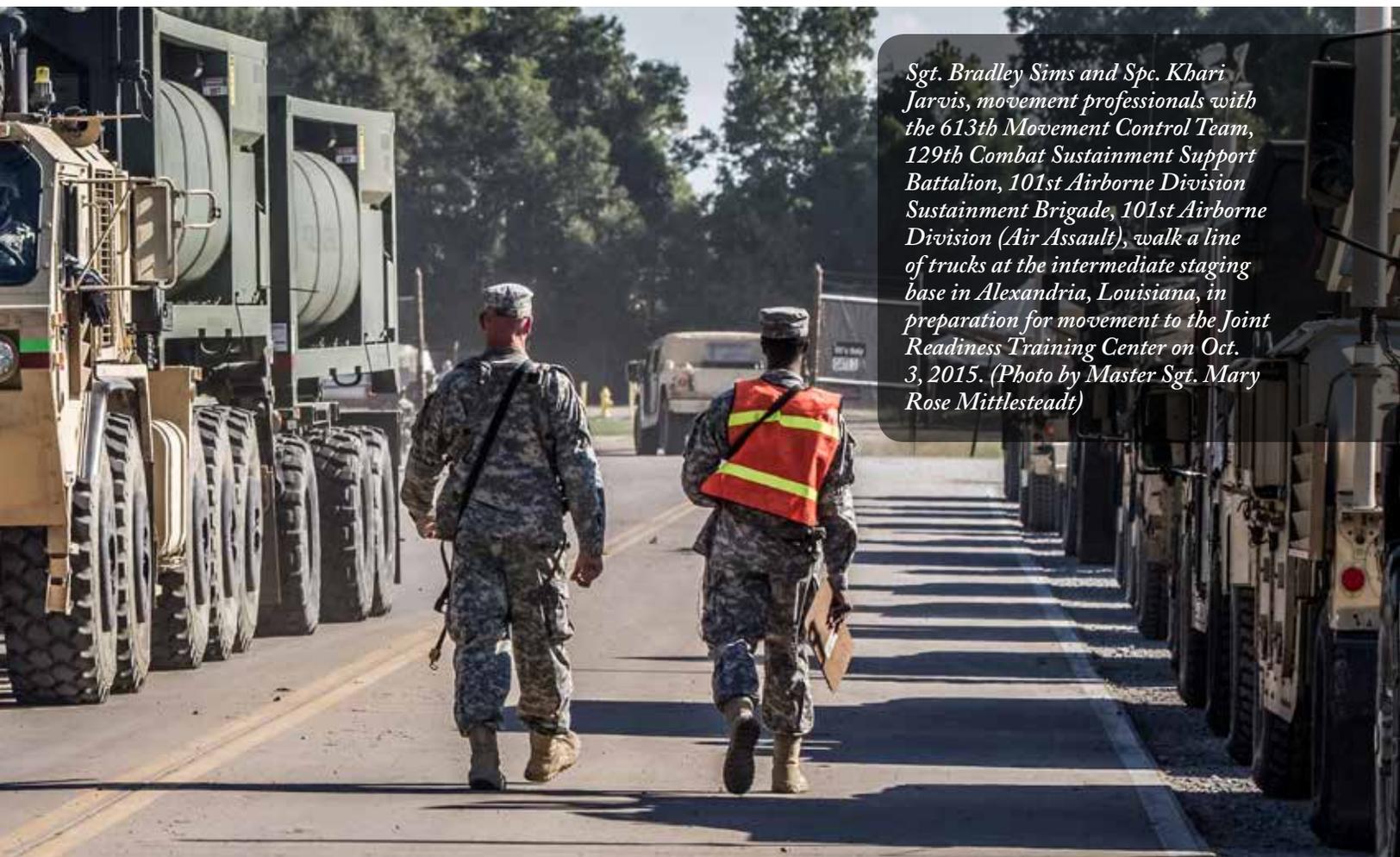
At the beginning of the rotation, the BCT must shift its focus from preparing to execute force-on-force decisive action to the reception of forces and equipment. Requiring the BCT to sign for the ISB, establish life support, sign for and issue unit basic loads, begin contracts, and conduct terrain management greatly detracts from its primary responsibility of preparing for joint forcible entry and follow-on missions.

A sustainment brigade TAC and its CSSB can alleviate the burden on the rotational unit at the ISB

while simultaneously training on one of the unit's core competencies of JRSOI. For future rotations with a sustainment brigade TAC and CSSB, the JRTC Operations Group should shift all planning and execution of the ISB from the BCT to a sustainment brigade and its subordinate EAB sustainment units. Related tasks include land allocation, JRSOI, mayor cell duties, unit basic load issuing, contract oversight, and life support operations. Shifting these tasks to the sustainment brigade would provide unique training that most sustainment brigades do not have the resources to conduct on a large scale at home station.

During planning and scenario design, the sustainment brigade and CSSB with the task of JRSOI should be seen as separate rotational units from the BCT. This would allow the BCT to conduct their own, separate planning processes to enable the accomplishment of its own training objectives independent of JRSOI.

Additionally, EAB sustainment units should arrive at the ISB ahead



Sgt. Bradley Sims and Spc. Khari Jarvis, movement professionals with the 613th Movement Control Team, 129th Combat Sustainment Support Battalion, 101st Airborne Division Sustainment Brigade, 101st Airborne Division (Air Assault), walk a line of trucks at the intermediate staging base in Alexandria, Louisiana, in preparation for movement to the Joint Readiness Training Center on Oct. 3, 2015. (Photo by Master Sgt. Mary Rose Mittlesteadt)



Sgt. 1st Class Christian Thompson, with the 1st Battalion, 320th Field Artillery, 2nd Brigade Combat Team, 101st Airborne Division (Air Assault), reviews transportation documents with Spc. Khari Jarvis, with the 613th Movement Control Team, 129th Combat Sustainment Support Battalion, 101st Airborne Division Sustainment Brigade, at the intermediate staging base in Alexandria, Louisiana, in preparation for movement to the Joint Readiness Training Center at Fort Polk, Louisiana, on Oct. 3, 2015. (Photo by Master Sgt. Mary Rose Mittlesteadt)

of the rotational BCT. This is a more realistic scenario and sequence of events that would facilitate the JR-SOI process. The setup now has EAB sustainment units and the BCT arriving at JRTC at the same time, which stresses the BCT as it tries to receive railcars of equipment and personnel, install Multiple Integrated Laser Engagement System

gear, and prepare for its decisive action rotation. Having units arrive at same time does not allow the sustainment brigade and CSSB to properly execute JR-SOI and build forces in order to receive BCT personnel and equipment. The cost and additional time required to deploy EAB sustainment units to JRTC ahead of the BCT would add to the

realism of a sustainment brigade TAC and CSSB operations.

Challenges

JRTC had not trained a sustainment brigade headquarters element since the inception of modularity. A sustainment brigade headquarters and its TAC are not included in the current CTC rotation scenarios, but JRTC rotational planners helped to integrate the 101st Sustainment Brigade TAC into JRTC Rotation 16-01.

In the future, JRTC planners should significantly revise the base decisive action operations order to include EAB sustainment and sustainment brigade mission command elements. Adding these changes to the scenario and orders, which drive planning and training at home station, will better integrate a sustainment brigade mission command node into future rotations.

A sustainment brigade headquarters is designed to provide mission command for multiple CSSBs, functional logistics battalions, and functional logistics companies, platoons, and detachments. In this role, the sustainment brigade is capable of providing support from the operational to the tactical level. Having only one CSSB as a direct subordinate to a sustainment brigade in a JRTC scenario does not accurately represent a sustainment brigade's headquarters in a decisive action environment.

During JRTC Rotation 16-01, the JRTC planners added notional CSSBs to the scenario in order to facilitate the 101st Sustainment Brigade's training objectives. The sustainment brigade's staff had to fill gaps and make assumptions in order to create an overarching concept of support for the subordinate CSSB and two simulated CSSBs. These gaps in higher orders and planning could be mitigated by creating a mock operations order for an expeditionary sustainment command or theater sustainment command that includes multiple subordinate battalions for the sustainment brigade

so that it can start planning early.

The 101st Sustainment Brigade TAC informed the JRTC Operations Group of all additions and changes to the concept of support so that it could provide oversight of the changes while observing and mentoring the BCT. This helped to synchronize and allowed staff to conduct in-depth analysis of the sustainment planning and efforts of its higher, lower, and supported counterparts.

During the 2nd BCT's leader training program, the 129th CSSB and the 101st Sustainment Brigade could only send limited personnel because of limited workspace and life support. Allowing the sustainment brigade headquarters and the rotational CSSB to send planners during the leader training program would benefit the BCT by allowing the sustainment brigade to plan ISB establishment, open accounts for commodities, and forecast EAB sustainment requirements.

Creating Robust Training

During JRTC Rotation 16-01, the 101st Sustainment Brigade TAC provided mission command of sustainment forces and synchronization for a simulated combined joint task force. While the sustainment brigade was able to exercise critical mission command systems and increase the core competencies of the brigade staff, it did not fully use its mission command element because there was a lack of sustainment commodity requirement data for planning with additional simulated CSSBs and customer units. The data is needed to drive accurate and timely planning, forecasting, and training for the sustainment brigade TAC.

CTCs would benefit from expanding simulation capabilities that blend live and simulated training in order to stress the mission command and planning efforts of a sustainment brigade TAC. Leveraging integrated simulations such as the Joint Deployment Logistics Model or the Warfighter's Simulation

would significantly improve training for larger logistics units.

The simplest way to improve simulations at Fort Polk would be to integrate the Combined Arms Support Command's Command Post Exercise-Functional databases into the mission training complex. This integration would provide constructive wraparound and generate requirements data that would better stimulate the sustainment brigade's support operations section.

Adding this information would increase the number of personnel required to fill response and white cells during a rotation, but the opportunity to provide realistic training for EAB sustainment units is one that should be considered. Blended training environments would enable synchronized operations and stress the mission command capabilities of the sustainment brigade staff and commander at levels above what is currently offered at CTCs.

In order to be successful, a sustainment brigade must train its staff and leaders to execute its mission essential task of mission command. Because of their available resources, CTCs can provide an excellent training venue for this mission essential task. The ISB in Alexandria is a great example; it stresses a sustainment brigade TAC's mission command capability and replicates the fog of war by extending the time and distance supplies must travel, increasing friction between logisticians and maneuver forces, and requiring proper forecasting of supplies and services in order to be successful.

CTCs must consider taking the next step by tailoring scenarios, simulations, and manning to meet the training objectives for EAB sustainment units and their higher headquarters. The Army should include a sustainment brigade headquarters in scenarios and planning. To facilitate this, CTC planners should establish training opportunities that incorporate a role for the sustainment brigade headquarters that allows it to

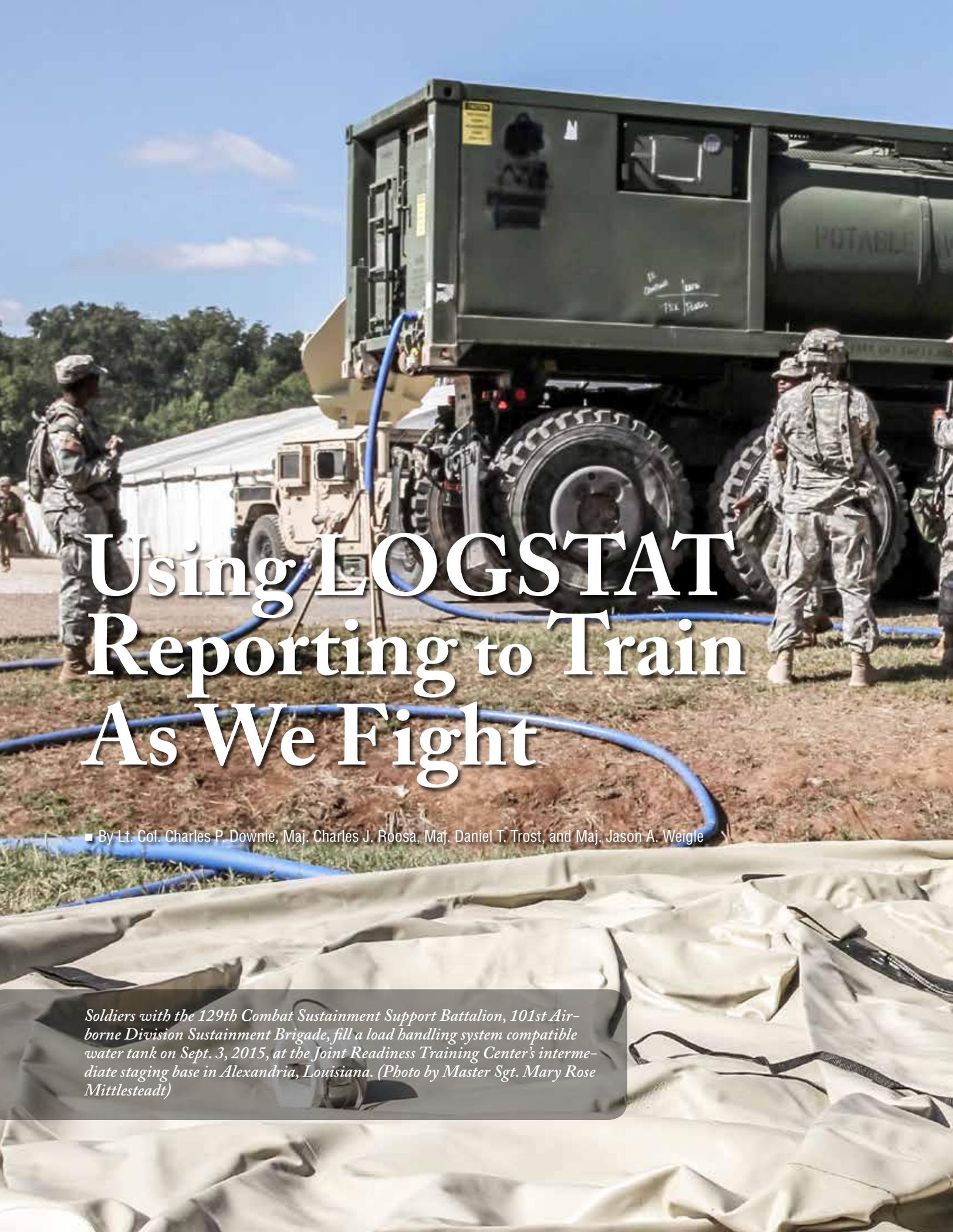
oversee EAB sustainment operations in both live and simulated environments. Doing so will provide warfighters with the realistic constraints and expectations of sustainment operations.

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Using LOGSTAT Reporting to Train As We Fight

■ By Lt. Col. Charles P. Downie, Maj. Charles J. Roosa, Maj. Daniel T. Trost, and Maj. Jason A. Weigle

Soldiers with the 129th Combat Sustainment Support Battalion, 101st Airborne Division Sustainment Brigade, fill a load handling system compatible water tank on Sept. 3, 2015, at the Joint Readiness Training Center's intermediate staging base in Alexandria, Louisiana. (Photo by Master Sgt. Mary Rose Mittlesteadt)



The accurate and timely submission of a logistics status (LOGSTAT) report is the cornerstone to effectively operating within the sustainment warfighting function. A sustainer's proficiency in managing limited resources and mitigating the risks of sustainment operations depends on the capacity to forecast requirements.

During early-entry and decisive action operations, observer-coach trainers (OC/Ts) at the Joint Readiness Training Center (JRTC), at Fort Polk, Louisiana, have noticed that units rarely transition from a reactive to a predictive sustainment environment because they struggle to forecast requirements. A unit's ability to capture and report LOGSTATs at all echelons significantly affects its capability to forecast and transition to predictive sustainment planning.

At the JRTC, LOGSTAT reporting is typically

inconsistent and inaccurate during decisive action rotations, especially during joint forcible-entry operations. After observing six consecutive rotations, Task Force Sustainment OC/Ts witnessed the reporting status of brigade combat team (BCT) LOGSTATs was less than 48 percent. OC/Ts further discerned that most of the supporting sustainment units did not understand their supported units' supply statuses. This lack of understanding resulted in reactive sustainment operations that substantially increased safety, operational, and tactical risks. The JRTC OC/Ts recognized three contributing factors to the inaccurate reporting:

- ❑ A lack of standardized report formats with understood metrics for reporting at each echelon.
- ❑ A lack of a specified LOGSTAT reporting formats across all platforms that are part of the pri-

FEATURES

“Codifying logistics status reporting requirements through standard operating procedures ensures accurate sustainment planning can occur in support of the maneuver commander’s mission. This article provides Joint Readiness Training Center observations and some tactics, techniques, and procedures to assist units in building relationships and identifying training opportunities among tactical sustainment units at home station to improve logistics status reporting.”

Maj. Gen. Flem B. “Donnie” Walker Jr., Forces Command G-4

mary, alternate, contingency, and emergency (PACE) communications plan.

- Gaps between the sustainment reporting and battle rhythms for garrison operations, home-station field training, and combat training centers deployments.

LOGSTAT Reporting

The LOGSTAT reporting process is not solely the sustainer’s responsibility. Supported units including maneuver units also have an obligation to the process. The process should begin with teams, squads, and platoons reporting to the company. The battalion S-4 section assesses each company’s report and forwards a consolidated battalion LOGSTAT to the brigade S-4 and support operations officer (SPO).

The brigade S-4 validates and prioritizes the requirements, and the SPO coordinates and synchronizes their fulfillment. Company, battalion, and brigade executive officers should enforce this process and ensure systems are in place to accomplish it.

The most significant trend contributing to reporting inaccuracy is a lack of standardized commodity metrics. Various metrics used to report on-hand classes of supply could distort the data and complicate the understanding of requirements. For instance, when OC/Ts inquire on the metrics used to describe a day-of-supply for particular commodities, they typically find a vague understanding or a gross assumption of what constitutes a day of supply.

Formats Across Communications

The communication platforms available to transmit LOGSTATs are rarely standardized across the PACE communications plan and may require different formats. This contributes to some confusion.

Decisive action operations, especially forcible-entry operations, require units to operate on various and separate communications platforms as they move into the area of operations. For example, the Microsoft

Excel reporting format that battalions use and submit through the secret internet protocol router network may be different from the format used by a platoon on a joint communications network or a squad using an FM radio.

In some cases, one battalion may solely operate on a joint communications network while another has secret internet protocol router network capability as they transition into an area of operations. Successful battalion and brigade S-4s and SPOs recognize this problem and develop and rehearse a solid PACE plan with the associated reporting formats for each echelon. They also understand the importance of monitoring each mission command system listed on the PACE plan throughout the operation.

LOGSTAT Reporting Gap

Another contributing factor to the fragmented LOGSTAT process identified by OC/Ts involves how forward support companies (FSCs) support their maneuver elements during home-station training. FSCs rarely require support from the brigade support battalion (BSB) during home-station exercises. FSCs can operate independently from the BSB because they can draw fuel, ammunition, food and water directly from their installation assets.

The FSCs’ attachment to their maneuver battalions also limits their need to interact with the BSB. Consequently, the FSCs’ tactical support requests processes are not validated. In addition, companies and battalions struggle to process joint movement requests (ground and air), medical support requests, and transportation movement requests.

The JRTC sustainment OC/Ts recommend creating a habitual FSC to BSB relationship and enforcing LOGSTAT reporting processes within the BCT during home-station training. BCTs would greatly benefit from the development and implementation of LOGSTAT reporting that starts at the team level



Spc. Jonathan Munoz, with the 574th Quartermaster Company, monitors a truck's fuel supply during rotation 16-04 at the Joint Readiness Training Center at Fort Polk, Louisiana. (Photo by Sgt. Bethany L. Huff)

and rising to the BCT S-4 and SPO.

BCTs should use the support operations staff to manage commodities across the brigade instead of allowing direct access to installation support. Furthermore, we recommend enforcing coordination through the SPO for supply and support by restricting FSC installation support access. At a minimum, restricted access should occur during all major battalion-and-above level high-density training exercises such as gunneries, field training exercises, and combined arms live-fire exercises to reinforce the “train as you fight” mentality.

Narrowing the gap between garrison and field training and combat sustainment operations can drastically reduce the tactical, operational, and safety risks that the BCT assumes to sustain its objectives. Establishing formal reporting requirements in standard operating procedures ensures leaders can make sound deci-

sions while planning operations and sustaining their Soldiers.

When used correctly, the LOG-STAT process will reward the reporting unit with requested supplies and services on time while instilling confidence in the sustainment war-fighting function's ability to meet the supported unit's requirements. Specifically, LOGSTAT reporting is critical for providing realistic needs-based sustainment, increased responsiveness, and reduced risk.

Training our formations to perform sustainment in a systematic manner independent of the home-station or combat training center environment is a significant step toward synchronizing tactical sustainment with operations.

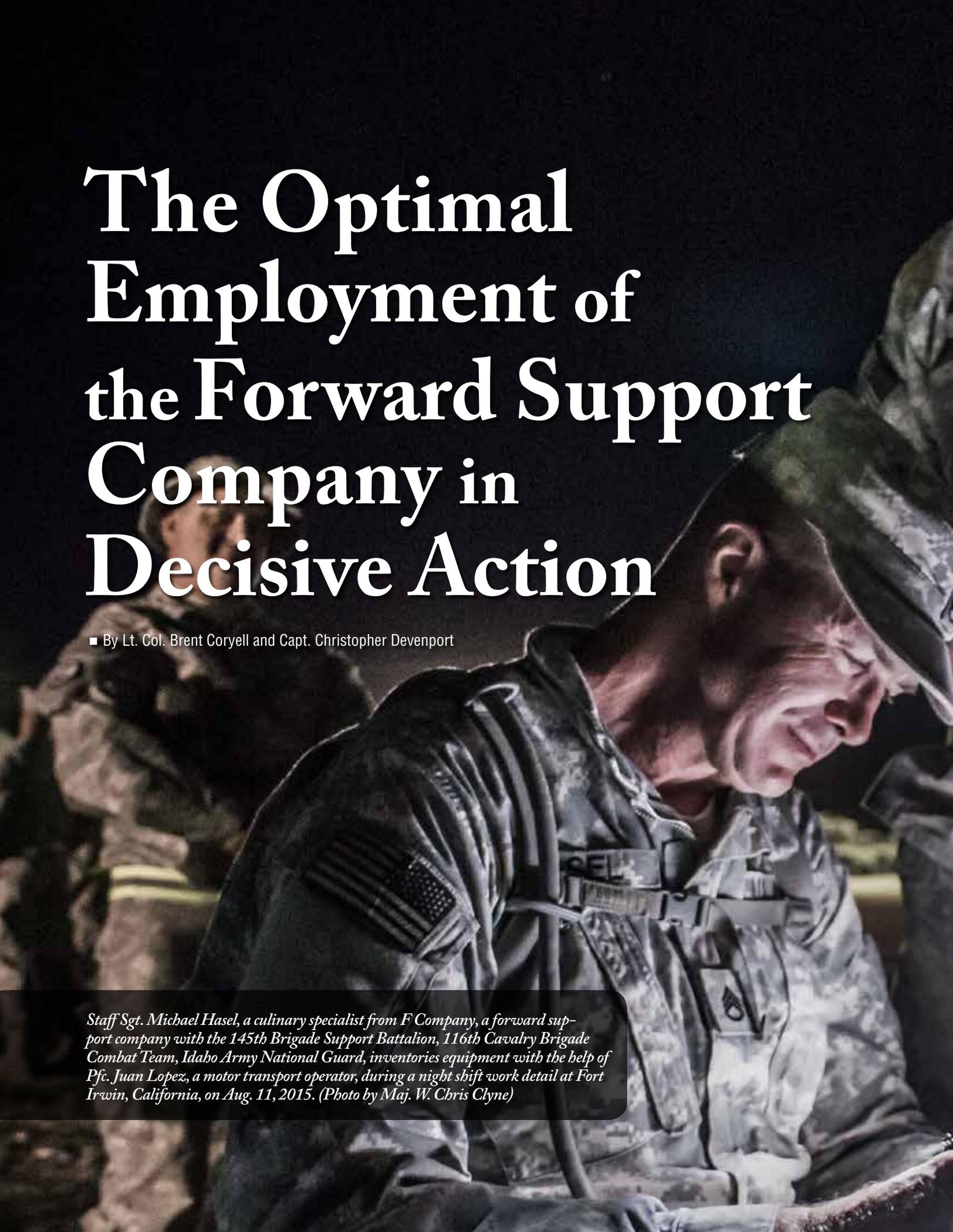
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The Optimal Employment of the Forward Support Company in Decisive Action

■ By Lt. Col. Brent Coryell and Capt. Christopher Devenport

Staff Sgt. Michael Hasel, a culinary specialist from F Company, a forward support company with the 145th Brigade Support Battalion, 116th Cavalry Brigade Combat Team, Idaho Army National Guard, inventories equipment with the help of Pfc. Juan Lopez, a motor transport operator, during a night shift work detail at Fort Irwin, California, on Aug. 11, 2015. (Photo by Maj. W. Chris Clyne)



In brigade combat team (BCT) decisive action operations, many forward support companies (FSCs) do not provide maximum operational reach and optimal logistics support because they are not effectively organized across all sustainment echelons. Task organizing the leaders and capabilities of FSCs at the proper echelons fully extends the operational reach of the BCT and reduces immediate resupply operations.

This proactive BCT sustainment begins with a thorough logistics estimate and a logistics task organization that optimally position the brigade support battalion (BSB) and FSC sustainment assets between the supported company, the combat trains, the field trains, and the brigade support area (BSA).

This article reviews the FSC design, provides recommendations regarding effective FSC employment, and highlights FSC challenges faced with mission command, distribution, and maintenance in a decisive action environment based on recent observations by observer-coach trainers (OC/Ts) at the National Training Center (NTC) at Fort Irwin, California.

The FSC Design

The FSC was designed to be a somewhat flexible and tailorable organization to provide sustainment support where it is needed most—at the front. When maneuver elements move forward and task organize for decisive action, sustainment elements are designed with the mobility and flexibility to continue to provide support. For example, if a cavalry squadron gets a platoon of tanks attached to it, it should get the maintenance, fuel, and distribution assets it needs to support the tanks.

The BSB's six FSCs provide direct support to each of the BCT's maneuver battalions and squadrons, the field artillery battalion, and the

FEATURES

“In brigade combat team decisive action operations, many forward support companies (FSCs) are not providing maximum operational reach and optimal logistics support because they are not effectively organized across all sustainment echelons. This article presents proven methods for optimally employing FSC assets at different support echelons to create maximum operational reach, flexibility, and logistics synchronization.”

Maj. Gen. Flem B. “Donnie” Walker Jr., Forces Command G-4

brigade engineer battalion. Each FSC is organized to support a specific type of battalion or squadron. The FSC provides field feeding, bulk fuel, general supply, ammunition, and field maintenance.

Conceptually, each maneuver battalion can carry a one-day load of basic supplies on its combat systems. The FSC is designed to carry the battalion’s second day of supply, and a third day of supply is maintained by the BSB at the BSA.

The FSCs are the link from the BSB to the maneuver battalions and provide the BCT the most flexible logistics support by using assets at the field trains command post (FTCP) and the combat trains command post (CTCP) to complete missions. Both the FTCP and the CTCP are mobile mission command posts for logistics that execute supply break points to build combat-configured support packages for forward units. The design is sound; the challenge is determining how to best array FSC personnel and assets based on what capabilities are required when and where.

Organizing for Success

As the Army focuses on decisive action training, OC/Ts are observing challenges with optimally employing the FSC. Sustainment often is not synchronized between the support echelons, and battalion distribution plans are inconsistent in terms of logistics capabilities and the skill sets of Soldiers placed at the CTCP and the FTCP.

Sustainment doctrine is intentionally not prescriptive to allow the BCT flexibility in manning and arraying sustainment forces between the FTCP, CTCP, and the company trains. Because there is no specified doctrinal solution, BCT sustainment planners devise numerous concepts of support to employ FSC assets; some work, and some do not. Concepts of support that do not work can cause emergency or immediate and unplanned resupply situations.

Estimating Accurately

By using known requirements, capabilities, and consumption rates for all supply classes, sustainment planners should produce a logistics estimate with a logistics task organization that mitigates shortfalls and backhaul. BCT sustainment planners are generally challenged when conducting this anticipatory logistics analysis because they are not educated on the science of maneuver warfare and armored tactics needed to estimate well. This lack of understanding and poor forecasting drives multiple unplanned resupply operations.

To achieve proactive support, sustainment planners must produce a logistics estimate that considers the distance traveled by the maneuver task force, time needed to travel those distances, and the consumption rates for all supply classes. This logistics estimate will inform the concept of support that will specify the task organization of the FSC assets between the FTCP and the CTCP. Thorough logistics estimates and concepts of support help to optimally emplace FSC assets at these echelons.

The FTCP and the BSA

The FTCP team receives and directs all FSC convoys arriving and departing the BSA and serves as a direct liaison to the BSB support operations officer.

OC/Ts have observed that having the FSC executive officer provide mission command at the FTCP in close proximity to the support operations officer results in successful coordination of emerging requirements. FTCP equipment required in the BSA can be limited to mission command systems, general supply transport, troop transport, and a load handling system or palletize load system to augment the distribution platoon. A gun truck is also needed to assist in the defense the FSC’s assigned sector of the BSA.

OC/Ts have observed that FSC capabilities at the BSA range from

none to the entire FSC. Too little or too much FSC representation presents a challenge. As the size of the BSA becomes unmanageable, support is less responsive.

The FSC does not have its own long-range communications assets outside of Joint Capabilities Release and a very small aperture terminal. Because of this shortfall, many maneuver battalions feel like they have no communication with the FSC and its FTCP operations. Locating the FTCP near the BSB tactical operations center allows for nonsecure internet protocol router network support from the joint network node and the battalion command post. FTCPs should use this asset to maximize the full capability of the very small aperture terminal and the Combat Service Support Automated Information System Interface.

The FSC also does not have the weapons and personnel to secure itself in a static location and provide adequate convoy security. Because of this, OC/Ts recommended that the FTCP co-locate with the BSA in order to benefit from and augment the security of the BSA. The FSC can then use the communications network established by the BSB.

Regarding capabilities, the FSC should place personnel in the FTCP to facilitate class I (subsistence), class III (petroleum, oils, and lubricants), and class V (ammunition) resupply and the flow of class IV (construction and barrier materials), class VIII (medical materiel), and class IX (repair parts). An FSC food operations sergeant, ammunition supply specialist, petroleum supply specialist, and a unit supply specialist at the FTCP can provide the commodity management expertise that the BSB needs.

Additional vehicle operators and supply specialists can assist the distribution platoon in accurately breaking up supplies and building configured loads for forward movement. FSC commodity teams at the FTCP prepare assets requested on the logistics status report. Each

team gathers requested commodities, breaks bulk materiel, and configures loads. These loads are then picked up by the FSC distribution platoon, if supply point distribution is used, or they are delivered to a logistics release point (LRP) by the transportation platoon for units to pick up.

Positioning the right FSC capabilities at the right echelons will limit immediate resupply operations, fully extend the operational reach of the BCT, and provide proactive versus reactive support.

The CTCP

The CTCP is the closest sustainment node to the forward line of troops commanded by the maneuver battalion. It serves as the focal point for all maneuver battalion logistics. Doctrinally, the CTCP operates four to 12 kilometers behind the maneuver task force. Combat trains usually consist of elements of the battalion S-1, S-4, role 1 aid station, the maintenance collection point (MCP), and the FSC distribution platoon.

The CTCP usually stocks emergency food, fuel, and ammunition. It is a good location for the FSC commander to be located because it is closer to the battalion S-3 and executive officer in the battalion tactical operations center and provides flexibility for the three to plan together.

The battalion S-4 or the headquarters and headquarters company commander often serves as the CTCP officer-in-charge, and the maintenance control officer serves as the officer-in-charge of the MCP. The maintenance control sergeant, control technician, platoon leader, and platoon sergeant also operate from the CTCP.

The bulk of the FSC's distribution platoon, maintenance control, field maintenance, field services, and recovery sections reside at the CTCP

for distribution and maintenance support. Consequently, the distribution platoon leader and shop officer should also be at the CTCP. The FSC's distribution platoon located at the CTCP receives battalion configured loads from the FTCP and the BSA and breaks them into company-configured loads that are

pushed forward as logistics packages (LOGPACs).

The maintenance sections in the CTCP provides general support to the battalion at the MCP and reports to the BSB through the Standard Army Maintenance System-Enhanced.

The Company Trains

Forward of the CTCP, in the company trains, field maintenance teams are frequently co-located with supported maneuver companies to quickly regenerate combat power. Each team has a forward repair system, specialized tools, military occupational specialties (MOSs), and recovery assets that are tailored to the type of company it supports.

Mission command usually lies with the senior mechanic who uses Joint Capabilities Release or Joint Capabilities Release-Logistics to communicate with the CTCP about vehicle faults and additional support requirements. Field maintenance teams execute the "fix forward" concept to enable the BCT's success in tactical operations.

Moving toward the forward line of troops with sustainment assets must be rehearsed and well understood by both the FSC elements and the maneuver company commanders. Maneuver first sergeants and com-



Pfc. Edward Gomez, a forward support company distribution platoon driver for the 14th Engineer Battalion, 555th Engineer Brigade, provides vehicle security during night time driver's training at Joint Base Lewis-McChord, Washington, on Nov. 27, 2015. The training was part of the platoon's preparation to support the 2nd Stryker Brigade Combat Team at the National Training Center, at Fort Irwin, California. (Photo by Staff Sgt. Dayan Neely)

pany supply sergeants are critical in synchronizing the movement of sustainment assets and commodities to the warfighter.

Mission Command Challenges

There is often confusion in the delineation of duties between the maneuver battalion S-4 and FSC commander. The maneuver battalion S-4 is the logistics planner for the battalion and responsible for developing the battalion concept of support, which should be nested with the BCT concept of support. The FSC commander executes the missions derived from the concept of support.

Typically, battalions assign a pre-career course first lieutenant as the S-4. By modified table of organization and equipment, it is a combined arms captain position for an

individual who has completed the logistics captain's career course. Often, this is the lieutenant's first staff position, he is inexperienced in military decision-making, and he does not understand the fundamentals of sustainment.

This inexperience drives the maneuver battalion commander directly to the FSC commander who is the senior officer and most experienced logistician in the task force. This marginalizes the effectiveness of the battalion S-4 and creates risk in sustainment execution by shifting staff duties to a company commander. The FSC commander should focus on commanding the FSC and executing the support mission.

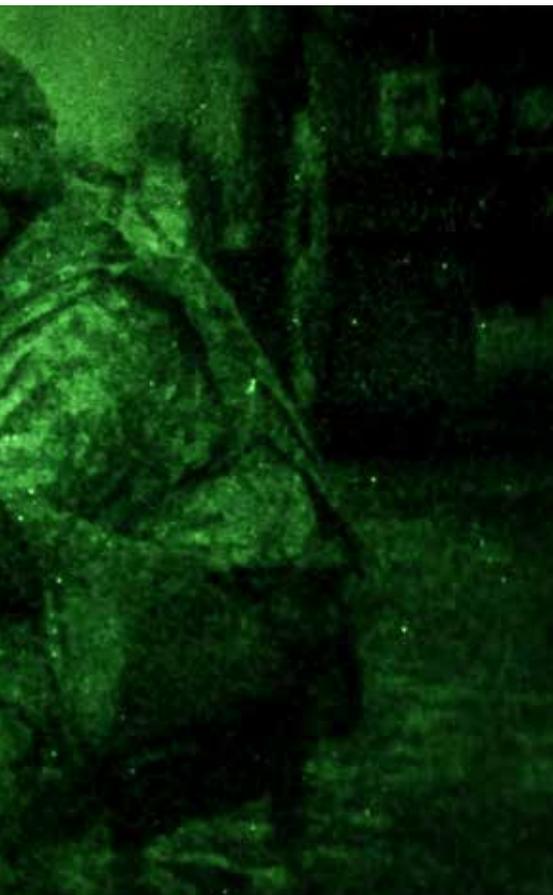
The BSB and maneuver battalion commanders need to ensure the duties of the FSC commander and the

maneuver battalion S-4 are spelled out and functional. Any confusion about who is responsible for what needs to be delineated by the BSB and maneuver battalion commanders.

Distribution Challenges

FSC distribution platoons are often overused, while the transportation platoon from the BSB's distribution company is underused. The FSC distribution platoon regularly covers long distances and delivers multiple LOGPACs daily to support their battalions. They frequently operate between the field trains and combat trains, breaking loads and then pushing supplies forward to the company trains.

Using the BSB transportation platoon to regularly move commodities between the FTCP and CTCP



Setting up the BSB and the FSC for Success

■ By Lt. Col. Brent Coryell and Capt. Christopher Devenport

A good relationship between the brigade support battalion (BSB) and the forward support company (FSC) starts in garrison, and it is difficult. The BSB is assigned subordinate FSCs by its modified table of organization and equipment, but most FSCs in the Army are under the operation control of and are almost entirely integrated into their supported battalions.

There is a tendency for the FSCs to become “distanced” from the BSB, which limits the BSB commander’s influence and undermines his authority as the senior logistician in the brigade combat team (BCT). This is mainly because those within the BCT do not understand the difference between command and support relationships. The BSB commander is the BCT’s senior logistician and is responsible for sustainment planning, coordination, integration, and synchronization for the brigade, regardless of FSC command relationships.

Establishing Terms of Reference

In garrison, the task organization and command relationship of the FSCs require analysis of BCT operations and the consensus of all commanders. With this in mind, the BSB commander should establish a memorandum of agreement that delineates roles and responsibilities and ensure that the agreement is supported by the BCT and the maneuver commanders.

This “terms of reference” document must clearly delineate who is responsible for what while in garrison and in the field. With only a few exceptions, FSCs receive the same support from their supported battalion as the supported battalion’s organic companies.

Talent Management

The BSB commander should have the authority (delegated from the BCT commander) for logistics officer management, while the BSB command sergeant major (CSM) should have the delegated authority for logistics noncommissioned officer (NCO) management.

Talent management and honest, accurate assessments of all subordinate leaders are critical to mission success and support flexibility. Many BSB commanders put their best Logistics Captain’s Career Course graduates in the FSCs. The BSB CSMs do the same with senior NCOs; they accept risk with the internal BSB leader talent because they have more control to mentor less talented leaders.

Talent should be dispersed proportionately between the BSB and the FSCs. The BSB commander should make an effort to professionally develop logistics lieutenants and grow the next generation of logisticians. BSB commanders should rotate logistics lieutenants between supply, maintenance, and transportation jobs with the lieutenant’s final year ending as a company executive officer or in a staff position. A second lieutenant should do a branch-specific job first, if possible, but position openings do not always align with new arrivals.

can help offset this imbalance. The transportation platoon of the BSB’s distribution company can support multiple FSCs and CTCPs through synchronized and rehearsed LRP operations to help balance the use of distribution assets. LRPs are an excellent way to extend operational reach, but they are not often used during NTC rotations.

Swapping modular systems, such as a palletized load system flatracks, load handling system compatible water tank racks, and modular fuel system tanks is also useful. These systems are designed to decrease the time of sustainment assets on station, thus increasing efficiency and extending operational reach. At the NTC, many units do not exchange these systems because they are afraid of losing property accountability or damaging equipment.

The FSCs that position all of their distribution capabilities with the FTCP in the BSA do not have the assets forward in the CTCP to con-

Continued on page 43.



Forward support company paratroopers, from the 1st Battalion, 325th Airborne Infantry Regiment, 2nd Brigade Combat Team, 82nd Airborne Division, conduct recovery operations for a vehicle disabled by a simulated improvised explosive device during a logistics convoy at the National Training Center at Fort Irwin, California, on Aug. 11, 2015. (Photo by Staff Sgt. Jason Hull)

duct LRP operations with the BSB’s transportation platoon. Conversely, if all FSC distribution assets are at the CTCP, it forces the FSC distribution platoon to return to the BSA to get supplies in order to push from the CTCP. An effective solution is meeting in the middle at an LRP. At the LRP, the maneuver company first sergeants and supply sergeants link up with the FSC distribution platoon or the BSB transportation platoon to conduct LOGPAC operations.

Maintenance Challenges

NTC OC/Ts have observed that commanders have low confidence in the technical abilities of FSCs’ forward mechanics. In many cases, FSC mechanics are not fixing forward because they lack the troubleshooting skills to identify faults. The underlying issue is that specialty technicians who reside in the BSB shops do not provide forward support team me-

chanics with the low-density MOS training needed to repair radios, small arms, night-vision devices, and ground support equipment.

The BSB often pulls the forward mechanics in low-density MOSs back to its field maintenance company (FMC) so that they can work under the supervision of the commodity warrant officer technician. In other cases, items are not repaired because the untrained forward FSC mechanics have been given other jobs such as unit armorers or orderly room clerks.

The BSB support operations officer and the maintenance officer, along with the maneuver battalion S-3s and executive officers, could resolve the issue of untrained Soldiers in low-density repair MOSs by publishing a training plan that develops the necessary technical skills to troubleshoot and fix equipment forward. Specialty maintenance technicians

assigned to the FMC should take an active role in training and mentoring Soldiers in low-density maintenance MOSs in order to develop their skills in the FSCs.

Recommendations

BCT sustainment planners must clearly understand requirements derived from effective forecasts and the functions and capabilities of the FSCs in order to develop the battlefield geometry required to maximize the operational reach of the BCT. Optimal FSC asset emplacement in decisive action requires thorough staff analysis, a complete understanding of FSC capabilities, and clearly defined personnel functions to support the tactical operation.

Accurate and continuous logistics running estimates will determine what is needed where and when on the battlefield. With input from

the BSB commander, sustainment planners need to have the flexibility to move and adjust sustainment forces across the CTCP and FTCP, use LRPs as required, and enforce the use of modular system exchanges to best support the BCT.

The BCT S-4 should plan the sustainment missions and the FSC commander should execute them. The BCT sustainment planners need to establish the right balance of distribution assets and methods between the FSC distribution platoon and the BSB distribution company's transportation platoon so that one or the other is not being overused or underused.

Specialty maintenance technicians assigned to the FMC should training and mentor low-density maintenance MOSs in order to develop the skills of Soldiers in the FSCs. This will prevent the pooling of mechanics and the evacuation of not-mission-capable equipment to the FMC.

Positioning the right FSC capabilities at the right echelons will limit immediate resupply operations, fully extend the operational reach of the BCT, and provide proactive versus reactive support.

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Capt. Christopher Devenport is a Logistics Captain's Career Course small group leader at the Army Logistics University at Fort Lee, Virginia. He served at the NTC as an observer-coach trainer for 17 decisive action rotations as both the assistant support operations trainer and the brigade support battalion S-3 trainer. He holds a bachelor's degree in education from the State University of New York at Oswego.

Continued from page 41.

The goal should be for all logistics lieutenants to have three job assignments during their tenure with the BCT that include both time in the BSB and the FSC. This will make them well-rounded and ultimately better prepared to be multifunctional logistics captains.

Training Together

The BSB should incorporate the FSCs into all battalion-level field training exercises so that the support relationships remain intact. BSBs should establish the brigade support area with its FSCs at least twice a year and practice the complexity of tactical distribution, sustainment synchronization at each echelon, and the science of control by establishing the field trains command post and combat trains command post and defining the skill sets and equipment (to include communications systems) that should reside at each location.

The BSB commander and CSM should establish and validate the sustainment tactical standard operating procedures to cover all sustainment echelons in the BCT. The BSB should provide resourced training packages for all sustainment Soldiers and oversee their professional development by mentoring and training all junior sustainment leaders. The BSB commander and CSM can host a "Sustainment University" that meets monthly and covers sustainment functions like reporting logistics statuses and preparing logistics estimates.

Another training event that works for logistics lieutenants is a logistics lieutenant "stakes" competition. Have logistics sergeants first class grade the lieutenants so that it is a training event for the NCOs as well. Have the lieutenants participate in 10 to 15 graded events such as setting up an OE254 radio antennae, conducting preventive maintenance checks and services on a humvee, and turning on and distributing fuel from a heavy expanded-mobility tactical truck fuel tanker. This competition will test mental toughness, physical fitness, technical and tactical proficiency but most importantly will build camaraderie among the logistics lieutenants and improve their skills in many areas.

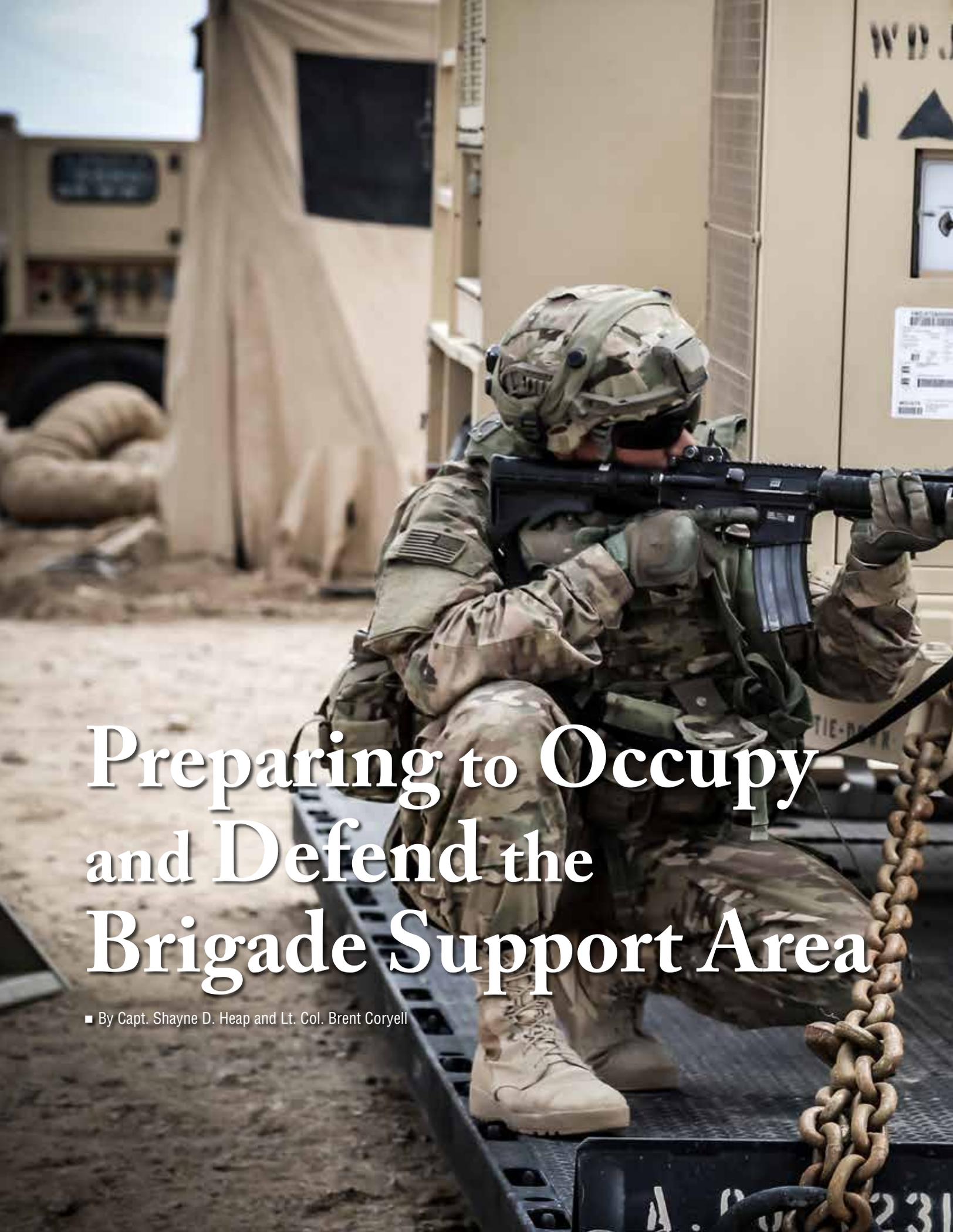
Train As You Fight

While in garrison, do not allow FSCs to pick up fuel from main post. Make the distribution company issue it from the motor pool. This is how petroleum supply specialists in the FSCs develop working relationships with their fellow fuel handlers in the BSB.

The BCT should set up all of the very small aperture terminals and conduct tactical file transfer protocol between logistics information systems daily. It is easy to get tied to the Network Enterprise Center, which is not training as we fight.

Have all of the commodity maintenance technicians in the field maintenance company incorporate all of the low-density MOSs into monthly "fenced" MOS training. Training between the BSB and the FSCs is essential and requires coordinated efforts and agreements among commanders.

Build the BSB and FSC relationship in garrison with a memorandum of agreement between commanders that clearly outlines the terms of reference that define who is responsible for what. Then, most importantly, BSB and FSCs must train together.



Preparing to Occupy and Defend the Brigade Support Area

■ By Capt. Shayne D. Heap and Lt. Col. Brent Coryell

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A Soldier from 123rd Brigade Support Battalion, 3rd Brigade Combat Team, 1st Armored Division, provides security during Decisive Action Rotation 16-05 at the National Training Center at Fort Irwin, California, on April 11, 2016. (Photo by Pfc. Esmeralda Cervantes)

BSB

FEATURES

“After two years of decisive action rotations, one of the biggest trends we see at the National Training Center is a direct reflection of 12 years of forward-operating-base logistics. This article addresses the main issues associated with brigade support area (BSA) operations. After occupation, the brigade support battalion must develop a defense plan that will secure and protect the BSA during decisive action operations.”

Maj. Gen. Flem B. “Donnie” Walker Jr., Forces Command G-4

Brigade support battalions (BSBs) and regimental support squadrons at the National Training Center (NTC) at Fort Irwin, California, face the challenge of establishing a brigade support area (BSA) that is able to sustain a brigade combat team’s (BCT’s) tactical operations. Successful BSA operations develop during the planning process where rehearsed operations set conditions that lead to structured occupation of a BSA site. After occupation, the BSB must develop a defense plan that secures and protects the BSA support activities during decisive action operations.

Without defense, support cannot happen. Thus, both BSA operations and defense must be taken into consideration from site selection through occupation, and then the defense plan must be refined as conditions change.

Selecting a Site

During occupation planning, the staff must anticipate the mission, enemy, terrain and weather, troops and support available, time available, and civil considerations for the proposed BSA sites. These considerations are needed in order to determine and recommend a defensible location to the battalion commander and to ensure the BSA footprint enables support operations.

While the size of a BSA may prevent it from being completely hidden, the intelligence preparation of the battlefield can find areas that may conceal it from possible enemy avenues of approach and population centers. This preparation can help to identify fields of view and possible observation posts.

The BSB staff must not only consider BSA defense in site selection. It must also consider support for sustainment operations located at the BSA including:

- Ammunition transfer and holding point operations.
- Fueling missions.
- Supply support activity operations.

- Staging areas for convoys.
- Medevac to the nearest role 2 medical facility.

These areas should be large enough to support all operations that are conducted on the BSA by BSB units, forward support companies, and a combat sustainment support battalion. In addition to calculating space for vehicle operations, the staff must consider the space required to incorporate aviation assets and the required helicopter landing zones for aerial resupply and air medevac operations.

Identifying road networks will promote ease of maneuver inside the BSA. Proper planning can minimize congestion as occupation takes place and thus mitigate vehicles’ times on station, negative effects on defense, and safety risks. Once a site is determined, occupying the BSA can take place.

Occupying the BSA

Occupation of the BSA is an organized and thoroughly planned action that begins with the quartering party. The quartering party is key to the initial execution. Its presence is the first opportunity that the unit has to see the terrain and make adjustments to the BSA and defense.

The quartering party verifies site selection and makes limited preparations in order to receive the rest of the organization. These preparations include initial security and chemical, biological, radiological, nuclear, and high-yield explosive sweeps. The quartering party can also establish initial communications to begin the transfer of mission command from the tactical assembly area or intermediate staging base to the BSA. Finally, the quartering party establishes tenant areas of responsibility and changes the defense concept as needed.

After the quartering party completes its tasks, the other elements convoy to the BSA. These convoys are normally divided into three types: the advance party, the main body (the

number of main body serials will differ by organization and planning), and a trail party.

Determining when the BSA will achieve initial and full operating capability is essential for planning the concept of support and must be communicated across the BCT. Through the military decisionmaking process, planners must determine when elements of the organization will move to occupy the BSA.

The support operations officer and the S-3 must plan and coordinate when essential logistical platforms must move into the BSA and begin support operations. These movements must support the maneuver plan and the BCT's mission.

Using the clock method to occupy the BSA has been successful at the NTC. (See figure 1.) The entry control point (ECP), where all elements enter the BSA, becomes the first point of reference. Drawing a straight line from the ECP through the battalion tactical operations center and the perimeter places the ECP at 12 o'clock. The tactical operations center is in the middle of the clock, and the opposite side of the perimeter is at 6 o'clock. Next, the perimeter can be divided according to the relative combat strength of the each tenant unit.

The BSA occupation must be well rehearsed. All Soldiers arriving at the BSA should have an understood task and purpose. Unit standard operating procedures should establish the priorities of work for all Soldiers during the occupation and establishment of the BSA.

Establishing BSA Defense

The BSA defense plan changes during all phases of occupation. One of the most important pieces of the initial plan is the emplacement of the ECP. The ECP maintains positive communications with the mission command element and provides early warning of possible enemy threats traveling along high speed avenues of approach.

Many times the ECP has first con-

tact with the enemy and is the first line of defense. The ECP should be well fortified against possible attack and occupied by Soldiers who are trained in ECP operations such as searching vehicles, detaining individuals, and gathering intelligence.

The first priority of work at any assembly area is security. Some of the tasks associated with security are emplacing weapon systems, establishing communications, designating final protective fires and final protective lines, emplacing obstacles and mines, and building fighting positions. For sustainers on the BSA, additional tasks must be incorporated such as placing berms around fuel assets and the ammo in the ammunition transfer and holding point, identifying supply evacuation routes, and establishing decontamination sites. (See figure 2 on page 49.)

Once the perimeter defense is established and supplies are received and ready for distribution, rest and meal plans can be prepared. Without published, enforced, and rehearsed priorities of work, occupation will be frustrated and take longer to complete.

Developing Engagement Areas

As an initial security posture is established and fighting positions are developed, companies are given areas of responsibility that can be divided into three categories: platoon areas, squad or section areas, and fighting positions. Construct fighting positions based on the requirements established in the unit's standard operating procedures. Ensure fighting positions are mutually supportive with interlocking fields of fire. Emplace obstacles to create engagement areas where the unit desires to engage the enemy with its most casualty producing weapon systems.

The seven steps of engagement area development found in Field Manual 3-21.10, Chapter 5, are identify all likely enemy avenues of approach, determine likely enemy schemes of maneuver, determine where to kill the enemy, emplace weapons systems, plan and integrate obstacles, plan and integrate indirect fires, and rehearse the execution of operations in the engagement area.

Leaders must ensure fighting positions, for crew-served and individual weapons, and security are inspected and ready to go. This includes creat-

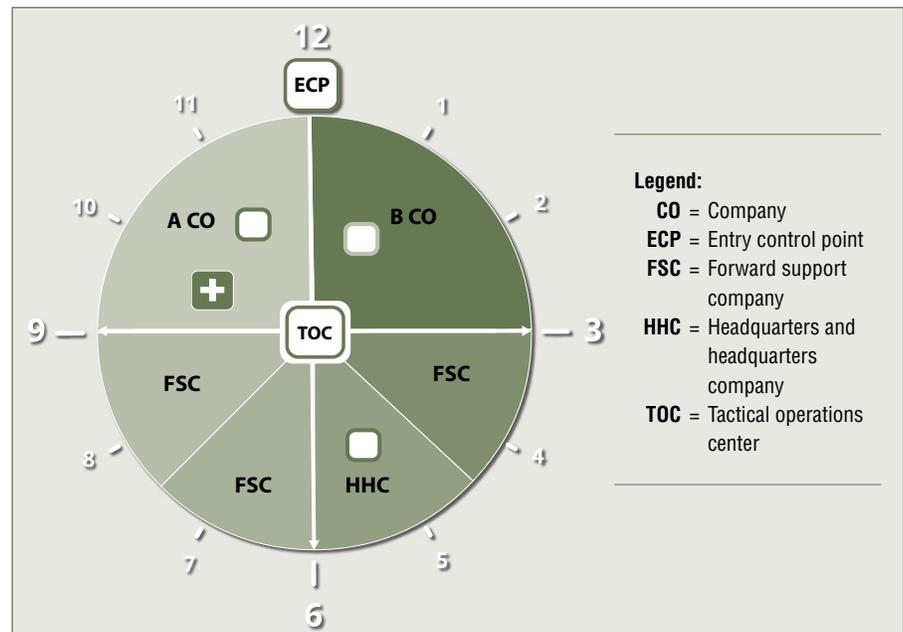


Figure 1. This diagram depicts the clock method for occupying a brigade support area.

ing range cards that help to develop situational understanding of the terrain the BSA occupies.

Range cards from fighting positions are compiled to build sector sketches up to a complete company sector sketch. All companies provide their sector sketches to the BSB S-3. These sector sketches are compiled to give an overall picture of the BSA perimeter defense and are used to develop a BSA sector sketch that can help to direct battle drill efforts.

Integrating Defense Enablers

With a complete picture of the initial defense perimeter, the battalion S-3 can further develop the BSA

defense plan by coordinating with the battalion staff and supporting units. A quick reaction force (QRF) should be established and fall under the command and control of the S-3 battle captain. During battle drills, the QRF provides reinforcing fire support and capabilities to BSA defenses at any location the battle captain specifies. It is imperative that the mission authority of the QRF is established and clear and that all battle drill rehearsals include the QRF.

Target reference points are easily recognizable points on the ground, either natural or man-made, used to control fires. Target reference points should be placed where enemy con-

tact is anticipated to make it easier to call for fire. Once identified, the target reference points are confirmed and coordinated with the BCT fires cell and the field artillery battalion for support.

Observation post locations can be identified and manned with intelligence reporting requirements that have been developed through synchronization with the battalion S-2. These priority intelligence requirements are distributed to all defensive positions. Debriefs should be conducted at the end of each guard shift in order to provide intelligence feedback to the S-2. Units can also leverage aerial intelligence, surveillance, and reconnaissance assets, such as Raven unmanned aerial vehicles and aviation assets, to gather intelligence and build defense capabilities. All of these assets provide the battalion commander with a better picture of BSA defense.

Maintaining Fluidity

Support activities conducted in the BSA can either be the force behind the brigade that extends operational reach, or the anchor that holds the brigade back from creating forward momentum in its operations. BSAs must maintain the agility to respond to the needs of the formation and must be mobile and flexible in order to move as required by the brigade's operational tempo.

As conditions change in the area of operations and on the BSA, the shape and perimeter of the BSA as well as its defense plan must be flexible and adjust. When the number and composition of tenet units change, the BSA defense plan also changes.

Leaders must communicate adjustments to ensure all units know and can execute in their respective areas of responsibility.

With limited BSA field training at home station and years of conducting operations from forward operating bases and combat outposts, the skill set and institutional knowledge required to establish a



Soldiers from 1st Battalion, 82nd Field Artillery Regiment, 1st Armored Brigade Combat Team, 1st Cavalry Division, take cover and return fire as opposing forces assault the battalion's tactical assembly area at the National Training Center at Fort Irwin, California, on Oct. 14, 2015. (Photo by Staff Sgt. Keith Anderson)



Medics treat simulated casualties at the 115th Brigade Support Battalion's aid station during a mass casualty exercise at the National Training Center, on Oct. 14, 2015. (Photo by Staff Sgt. Keith Anderson)

BSA have atrophied.

Defense of the BSA must be rehearsed just as any battle drill. It is the responsibility of leaders to ensure that Soldiers know and understand

how individual efforts support the entire defense plan. All applications of a unit's defense plan must be captured and continuously refined in a standard operating procedure.

As units become more proficient in defense of the BSA and its internal operations, BSBs and their subordinate units will be better prepared to extend operational reach of the BCT by providing coordinated and synchronized sustainment.

Priorities of Work	Time (NLT)
Establish security (minimum of 25%)	Immediate
Position listening and observation posts	+2 hours
Establish communications (to higher and lower echelons)	+2 hours
Emplace crew-served weapons	+2 hours
Complete range cards and sector sketches	+6 hours
Prepare defensive positions	+8 hours
Camouflage positions and equipment	+10 hours
Construct tactical operations center perimeter	+10 hours
Select and prepare alternate and supplementary fighting positions	+14 hours
Establish unit operations	+15 hours
Establish sleep areas	+15 hours
Conduct maintenance operations	+16 hours
Conduct personal hygiene	+18 hours
Serve meals	+19 hours
Rest	+20 hours

Figure 2. Example of priorities of work for a brigade support area.

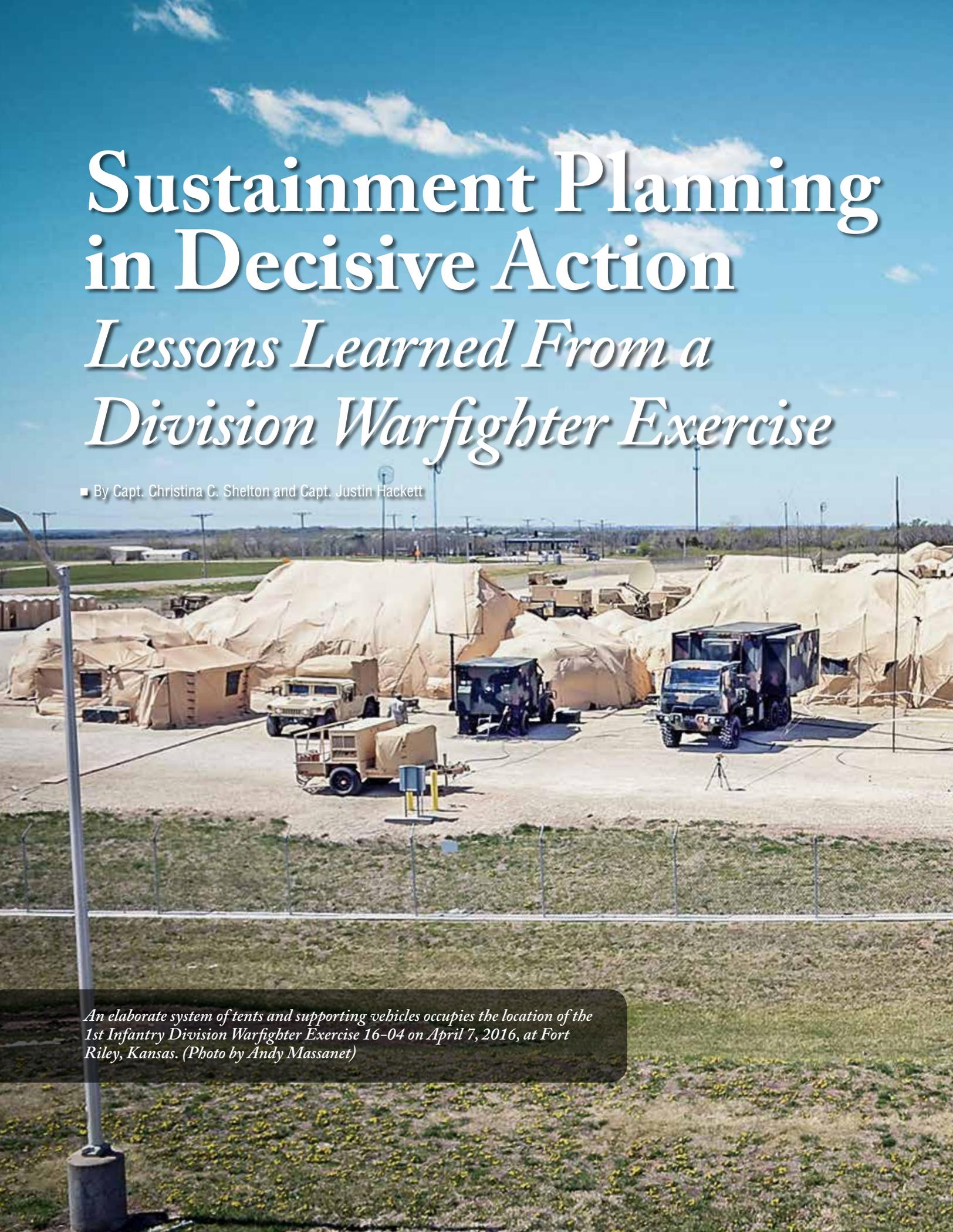
Capt. Shayne Heap is the brigade support battalion (BSB) S-3 trainer at the National Training Center at Fort Irwin, California. As an observer-coach trainer, he has worked with combat sustainment support battalions and BSBs during more than 19 decisive action rotations. He holds a bachelor's degree in business management from Montana State University, and he is a graduate of the Ordnance Officer Basic Course and the Logistics Captain's Career Course.

Lt. Col. Brent Coryell is the senior logistics trainer at the National Training Center. He holds a master's degree in logistics management from Florida Tech and a master of military art and science degree from the Command and General Staff College.

Sustainment Planning in Decisive Action

Lessons Learned From a Division Warfighter Exercise

■ By Capt. Christina C. Shelton and Capt. Justin Hackett



An elaborate system of tents and supporting vehicles occupies the location of the 1st Infantry Division Warfighter Exercise 16-04 on April 7, 2016, at Fort Riley, Kansas. (Photo by Andy Massanet)



Sustainment integration is most effective when it is continuous and concurrent, providing detailed logistical analysis throughout all steps of the military decisionmaking process. This article details lessons learned during the 1st Infantry Division's (1st ID's) decisive action Warfighter Exercise (WFX) 16-04 facilitated by the Mission Command Training Program at Fort Leavenworth, Kansas, and executed at Fort Riley, Kansas.

Planning

Three concepts were critical to successful sustainment planning for decisive action: anticipation and running estimates, sustainment preparation of the operational environment, and task organization to solve the problem.

Anticipation and running estimates. Anticipating bulk fuel requirements, ammunition, and casualty rates were a point of debate throughout the planning process. Running estimates are the bedrock of sustainment planning and continually change throughout the planning process. The division staff used planning factors from the Logistics Estimation Workbook, medical and casualty estimation simulation, and the Theater Sustainment Battle Book (ST 4-1) to populate the sustainment running estimates.

The staff's experience varied; low estimates were based on counterinsurgency operations, while high estimates were based on recent experiences in decisive action rotations at the National Training Center, at Fort Irwin, California, and the Mission Command Training Program. For example, casualty estimates for the division wet gap crossing from the G-1 section and the

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“Understanding and echeloning sustainment forward allows for a division combat team to gain, maintain, and exploit the initiative to gain a position of relative advantage during combat operations. Understanding logistics is imperative to that success.”

*Maj. Gen. Wayne W. Grigsby Jr.,
Commander, 1st Infantry Division*

division surgeon's office ranged from 250 to 1,200. This wide range of estimates drove critical discussions regarding the allocation of medical assets and the positioning of forward surgical teams and the combat support hospital.

Fuel consumption and artillery expenditure estimates showed similar disparities. In the end, the division staff reached a consensus that the higher estimates were more relevant for decisive action operations. Regardless of the final decision, the estimate discussions and resulting creative friction increased the division staff's appreciation for the problem and allowed it to be more responsive in supporting the maneuver plan.

Sustainment preparation. Sustainment preparation of the operational environment provided continuity throughout the concept of support. The physical network analysis, as outlined in Army Doctrine Reference Publication 4-0, Sustainment, focused on host-nation support, airfields, road networks, possible logistics nodes, main and alternate supply routes, and logistics support area requirements.

For example, analysis showed that logistics nodes needed to be closer to the forward line of troops. To meet this need, the staff created options for primary and alternate logistics support areas that supported various courses of action. This resulted in a deliberate decision point where the commander could choose to slow the speed of maneuver operations to ensure continuity of support.

Ultimately, integrating sustainment planning into the operations process prevented unnecessary operational pauses and provided required materiel to the organization at the right place and time.

Task organization. One of the most important lessons from sustainment planning was that clear command and support relationships contribute to the simplicity of sustainment operations. The division staff debated the construct of the exercise's

sustainment support model. Ideas ranged from a modular construct, assuming a distribution-focused logistics system with a single sustainment commander in theater, to the legacy division support command concept. The solution rested in a compromise. The WFX was supported by an expeditionary sustainment command and three sustainment brigades.

The combined joint forces land component command allocated one sustainment brigade in direct support to each division, with the understanding that the direct support sustainment brigade was still responsible for providing support to the corps enablers within the division's area of operations. The 1st ID positioned sustainment forces on the battlefield so that it could weigh the needs of the main effort and, in turn, provide more tailored support. Specifically, the division positioned units with palletized load systems and bulk fuel storage and distribution capabilities forward to mitigate the forecasted sustainment risks.

For example, the 1st ID was augmented with two multiple launch rocket system battalions and one high-mobility artillery rocket system battalion. Although forward support companies were allocated with them, the sheer volume of fire support tasks and required rocket pods vastly exceeded the 1st ID's transportation capability. This shortfall could not be backfilled by the brigade support battalions because they were already transporting vast quantities of munitions and other commodities on their palletized load systems. Having a direct support relationship enabled the division to develop solutions with the sustainment brigade to properly position logistics assets on the battlefield. It also allowed the staff to adapt the plan to the changing environment and met the needs of the supported commander.

Preparation

Properly preparing to support the WFX was crucial to creating a thorough understanding of the situation

among the commander, staff, and participating units. The most effective methods were conducting sustainment rehearsals and building the division's WFX team.

Rehearsals. Rehearsals are critical to sharing the understanding developed during the planning process. Units often forgo the sustainment rehearsal and miss the transition from planning to preparation. The 1st ID staff found that the plan continued to adapt as understanding increased throughout rehearsals. The staff maximized coordination and synchronization with subordinate, adjacent, and higher echelon units through three command post exercises (CPXs) and the WFX. All exercises included division confirmation briefs from the brigades, teleconferences with adjacent units, and combined arms, fires, intelligence, and sustainment rehearsals. They also included one briefing and rehearsal with the corps commander and staff. One of the most valuable inputs from a sustainment standpoint was the unique perspectives of the maneuver units, enablers, and maneuver support elements. Their participation ensured that they understood how their operations were going to be sustained and allowed for the development of contingency plans.

Building the team. The coordination and synchronization of sustainment in conjunction with maneuver support planning involves the unity of command, a common operational picture (COP), and timely decision-making. Unity of command and a shared understanding are extremely difficult to achieve when the supporting unit is not organic to the supported organization. The sustainment brigade assigned to the 1st ID's WFX was an Army Reserve unit. The 1st ID did not have a habitual relationship with the unit and had not operated with it prior to the WFX. Therefore, integrating the unit through shared training and exercises was imperative.

The partnership began nearly six

months before the WFX and was sustained throughout the three subsequent CPXs. The 1st ID's staff and sustainment brigade assisted in training and preparing the Army Reserve unit for the exercise. The 1st ID shared planning products, running estimates, sync matrices, graphics, and orders. It also provided a robust liaison team and assisted the unit's leaders with their military decision-making process to ensure that it was integrated with 1st ID's planning process.

The Army Reserve sustainment brigade was included in all of 1st ID's CPX and WFX battle rhythm events, including briefings, rehearsals, and reporting requirements, in order to build the relationship through repetition and familiarity. It also provided several officers to fill the requisite liaison officer roles within the division's main command post. This paid huge dividends by establishing a range of skills that were tested during the WFX.

Execution

Situational awareness requires the use of a sustainment COP, maintaining asset visibility and commodity tracking, and employing effective distribution services. During the WFX, well-laid plans were understood across the division and the sustainment brigade regarding the optimal locations for logistics support. As the 1st ID moved past the division's wet gap crossing site, the staff realized that the plans were based on the assumption that the adjacent division would match the 1st ID's operational tempo and protect its southern flank. However, delays and significant attrition of the sister division allowed the enemy within indirect-fire range of one of the 1st ID's proposed logistics support areas.

The sustainment COP created superior situational awareness and enabled adaptability within the sustainment plan. The COP was updated continually and shared with the sustainment brigade through the division's daily sustainment synchro-

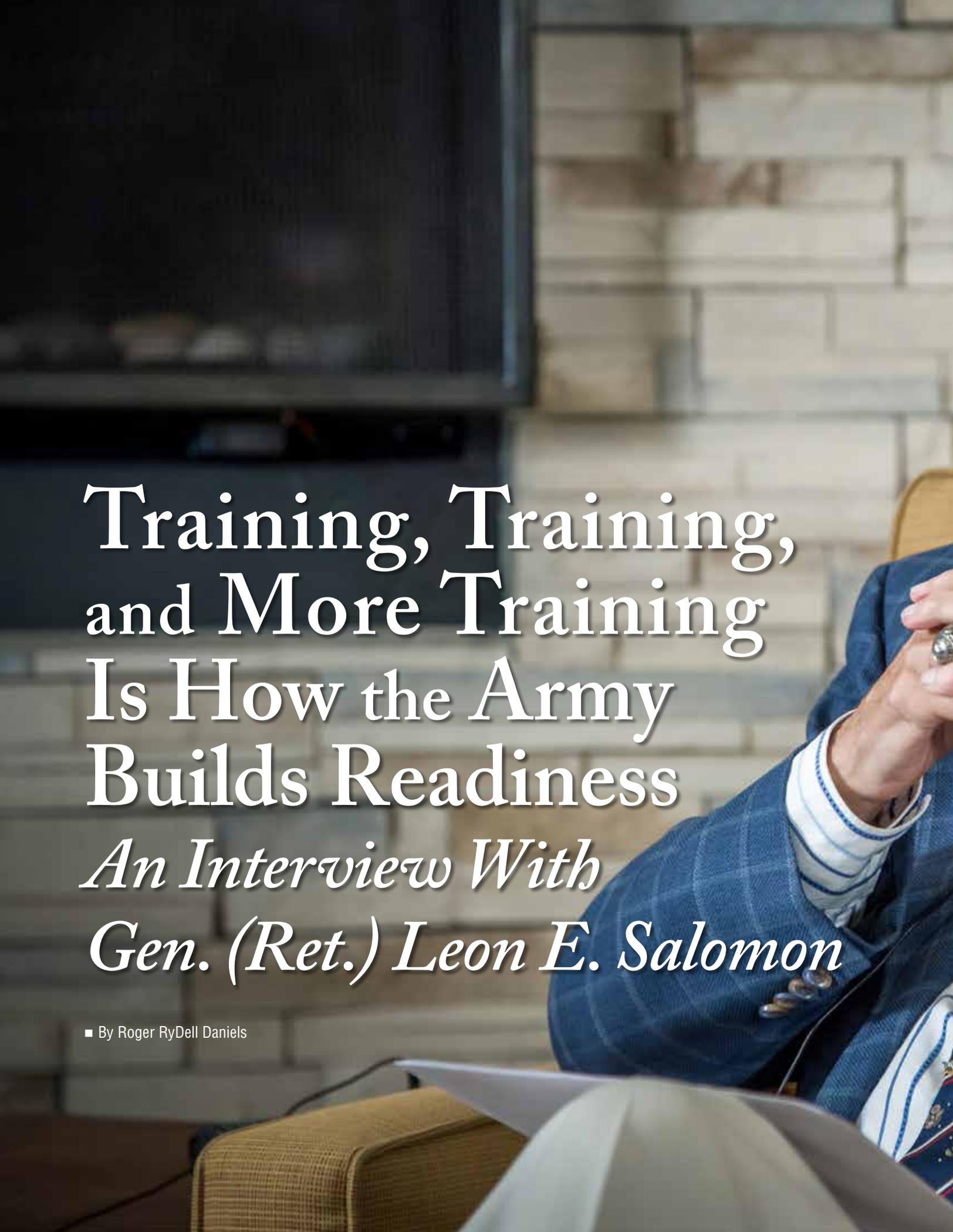
nization meeting, battle update brief, movement board, and commanders' updates and assessments.

Because the COP allowed for effective situational awareness, the sustainment brigade, in coordination with the 1st ID staff, redirected a forward logistics element to a division objective just east of the wet gap crossing site, far enough north to avoid enemy artillery fire.

The decisive action fight is a high-intensity conflict and an unyielding war of uncertainty with high attrition rates. Supporting decisive action operations requires adaptive sustainment leaders who can think critically and solve problems while supporting multiple missions and adjusting to changing conditions. The initial investment of time, resources, and personnel for planning for the WFX created the understanding needed to provide logistics at the right place and time. Intensive planning allowed the staff to anticipate issues, develop appropriate responses, and minimize response times to achieve precise effects. The 1st ID's staff gained an understanding of the importance of sustainment planning as a basis for developing and communicating a common view of support for decisive action operations.

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Training, Training,
and More Training
Is How the Army
Builds Readiness

*An Interview With
Gen. (Ret.) Leon E. Salomon*

■ By Roger RyDell Daniels



Gen. (Ret.) Leon E. Salomon discusses a range of topics including leader development, talent management, and the future of the Logistics Corps and reflects on his 37-year Army career. (Photo by Brandy D. Sims)

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Distinguished logistician Gen. (Ret.) Leon E. Salomon discusses lessons he learned during his 37-year Army career.

This year marks the 20th anniversary of Gen. Leon E. Salomon's retirement from the Army. *Army Sustainment* recently sat down with this distinguished logistician to discuss lessons he learned during his 37-year career, which included time as the commander of the 1st Cavalry Division Support Command (DISCOM) and culminated with his last assignment as the commanding general of the Army Materiel Command in 1996. He discussed the importance of training to build readiness and gave his observations on leadership.

What traits do you look for in leaders?

Good leaders are good listeners. Good leaders have vision. Good leaders also take bad news well. I used to say, "You have to be a good bad-news taker." But you don't hang on to that bad news very long because you want your staff to make recommendations to make things better. But if you're not a good bad-news taker, you won't get the bad news, and you'll be constantly surprised.

What are your thoughts on leader development and talent management?

When I was on active duty, we had this thing called doctrine, organization, material, training, and leader development. I've always been of the opinion that the most important of those was leader development.

Whenever I made a decision, regardless of whether it was logistics or operational, the last implication or the last lens that I looked at was from the leader development aspect. What does this do to leader development? Is it going to improve leader development or not? Because you can do some technical things, you can consolidate, and what does that do to build leaders?

Leaders need to set and enforce standards, and those standards

must be achievable. Leaders need to stretch their subordinates and stretch themselves, and when they set standards, they've got to enforce them.

What can leaders do to ensure their formations are ready?

Train, train, train, and train some more. When the Army created the combat training centers, that was a great thing to do. We did a lot of technical training, but we didn't do enough training in operational logistics, supporting in the field. That's been one of the big advantages of the brigade combat teams because the logisticians are involved all the time. It is also good to see the emphasis again being placed on the combat training center rotations.

As a company grade officer operating in the Army's Communication Zone in Europe during the Cold War, what lessons did you learn?

It was probably the first job that I had where I was involved in operational logistics. I was a chemical officer at the time, and I was in charge of the chemical inventory control point for Europe, so I learned all about stockage levels, reorder points, inventory management, and all those kinds of things. It was a very profitable assignment for me to have those types of responsibilities.

That's what later led to my decision to transfer from the Chemical Corps to the Ordnance Corps, which had more logistics responsibilities. When I was there [stationed in Europe], we were evicted from France by Gen. Charles de Gaulle; we had built up this infrastructure, and we had to take that infrastructure down and move it to Germany. I learned a lot.

You commanded the 1st Cavalry DISCOM when AirLand Battle was the Army's capstone doctrine. In 2014, the Army issued the Army Operating

Concept as its new capstone doctrine, focused on globally distributed operations. Based on your experience, what should leaders be thinking about?

The challenges get greater every year. Today's Army is much more dispersed. The Army has small units operating independently. I think we need to relook at our force design to determine if our "tip of the spear" units—platoons and companies—need to have more embedded or organic logistics in their formations.

In Afghanistan, platoons go out for two to three weeks at a time and pretty much take everything with them. So, you're really looking at the concept of the basic load, the combat load, and the Soldier's load. Should the Army push more stuff or have more organic logistics capability? For example, increasing combat and basic loads. I'm not saying that is the way to go, but we need to look at some alternatives. The battlefield is becoming more dispersed and complex.

I have done a lot of work with the Army Science Board and the Board of Army Science and Technology, and I have found that the Army staff, CASCOM [Combined Arms Support Command], and G-4 have always been very receptive to getting different views. Naturally, it's their responsibility to determine if a relook is necessary.

What is the difference between distribution in the Army and in the private sector?

One of the big differences is that in the private sector you have a zip code; you know where this person is because now you can look at a Google map. In the Army, when you're in this new area of operations and you're maneuvering a lot, you've got to pick a place to send stuff.

The distribution system becomes more challenging even with GPS. When we would have to decide do we do "just in time" [logistics] versus

"just in case," I always came out on the side of just in case.

What are your thoughts about the future of the Logistics Corps?

I think its future is bright. We first had the idea of a LOG [Logistics]

Leaders need to set and enforce standards, and those standards must be achievable. Leaders need to stretch their subordinates and stretch themselves, and when they set standards, they've got to enforce them.

Corps when Gen. William G.T. Tuttle was the LOG Center commander. We were thinking, with the multifunctional battalions, how do we staff them and who should command the battalions. If you were a heavy division, you put an ordnance officer in charge; if you were a light division, you put a quartermaster officer in charge; and, if it was a mobile or airborne division, you'd put a transportation officer in charge. But all the battalions were multifunctional. We needed logisticians so we created a functional area 90, logistician, skill set. Lt. Gen. [Mitchell H.] Stevenson formalized things by creating a Logistics Corps, which is much stronger than having just a functional area. I think we're on the right track, because we are expecting more from our logisticians.

We always felt that we needed to keep some experts in things like petroleum, explosive ordnance disposal, and special weapons and ammunition. However, there are very few command positions for those skill sets.

What is your most memorable logistics assignment or command?

It's hard to pick one out. I loved my time in the 1st Cavalry Division as the DISCOM commander.

I liked the TRADOC [Training and Doctrine Command] assignments as well. I had a position as a two-star as the deputy chief of staff for readiness in AMC [Army Materiel Command] where I got to work with all the divisions on their readiness issues. I learned so

much. From there I went to CASCOM and had firsthand knowledge of the current DOTLM [doctrine, organization, training, leader development, and materiel] issues facing our divisions.

What propelled you to become a four-star general?

On the second day of basic training my platoon sergeant said, "You scored well on the test. Do you want to go to OCS [Officer Candidate School]?" I said, "What's OCS?" When he answered my question, I said, "Why not?" I graduated, liked what I was doing, and decided that I'd stay in if I got selected for a regular Army commission, which I did.

I was very fortunate in my career in that I had many very good mentors, which is another important part—to me the most important part—of leader development.

Roger RyDell Daniels is an assistant editor with *Army Sustainment* at Fort Lee, Virginia. He retired as an Army Public Affairs noncommissioned officer after 20 years of active and reserve service. He holds a bachelor's degree in journalism from Ohio State University.

A large, multi-decked battleship, the USS Missouri (BB-63), is the central focus of the image. The ship's complex superstructure, including gun turrets, radar masts, and various antennas, is visible against a bright blue sky with scattered white clouds. In the foreground, several military personnel in camouflage uniforms are walking across the deck. Some are carrying flags, including the United States flag and other national flags. The overall scene is one of a formal military event.

Pacific Talent Management

A Regional Approach to Recruiting and Retaining Talent

■ By Maj. Gen. Edward F. Dorman III, Col. Phillip A. Mead, and Maj. Marc C. Vielledent

Top-performing military leaders, from 18 organizations across the Pacific theater, gather aboard the USS Missouri at Ford Island, Pearl Harbor, Hawaii, for graduation from the Young Alaka'i leader development program, on Jan. 16, 2016. The program provides broadening opportunities to prepare tomorrow's strategic leaders. (Photo by Master Sgt. Mary E. Ferguson)



The 8th Theater Sustainment Command (TSC) is executing talent management initiatives focused on assessing, developing, and retaining talent and enabling commanders to develop and place high performers in positions that match their potential. The approach affords commanders the flexibility to anticipate future requirements and leverage manning cycles, schools, assessments, and other developmental opportunities to ensure the right Soldier is placed in the right job at the right time.

This article outlines a holistic Army service component command talent management approach for sustainers within the Asia-Pacific

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The 8th Theater Sustainment Command's comprehensive talent management strategy identifies and provides focused career opportunities for Soldiers within the command while ensuring the Army benefits from their education and experience.

region. While focused on U.S. Army Pacific (USARPAC), this talent management model could be adopted by any command within the Army.

Strategic Approach

For the purposes of this article, talent management is defined as a strategy focused on creating a balanced workforce by retaining the best Soldiers, developing and broadening their skills and experiences, and employing their skills in the best interests of the Army. The goal is to establish progressive assignments that improve the Soldier's regional understanding and create a continuity of knowledge relative to—or matched with—operational plans, regional partners, and individual capabilities.

This strategy increases the individual's knowledge, skills, and attributes (behaviors) and can result in both career progression and enriched regional relationships and interoperability. However, the strategy must be executed according to sound business rules and complemented with the buy-in of individuals and their families, regional commanders, the Army Human Resources Command (HRC), and the sustainment triad (the Army Materiel Command, Army G-4, and the Combined Arms Support Command).

A Three-Tiered Regional Approach

Retaining talent, recruiting talent, and identifying future commanders, encapsulates the 8th TSC talent management program.

Retaining talent. Talent retention is the main effort, but the process starts by focusing on our strongest field-grade officers who exhibit tremendous potential but are not competitive for the command selection list. These officers continue to serve the Army for many reasons. Providing them with additional assignment opportunities in the Asia-Pacific region, on a voluntary basis, is a win-win for the Soldiers, families, and commands. We have a number of colonel authorizations, with only five coded as requir-

ing former brigade commanders. Though we have less flexibility with our senior sustainment leader, retaining just a few within the command pays significant dividends.

The crux of our retention effort is the identification of key billets. Not all major and lieutenant colonel jobs can be categorized as critical and we recognize that only a few positions require regional continuity to coordinate and synchronize operations across the command and with partner nations. But, ensuring we develop and place the right officers in these positions is key to the overall readiness of the Asia-Pacific region.

Recruiting talent. This effort's sole focus is to ensure local recruiting efforts are coordinated and synchronized. The 8th TSC leaders fully acknowledge that recruiters from each major subordinate command will visit intermediate level education courses to recruit the best and brightest candidates, but friction occurs when different commands recruits the same personnel. The 8th TSC's talent management program ensures that recruiting results are shared among the command's senior leaders and general officers and that any duplicate requests are deconflicted before units engage HRC. In the event that multiple commands recruit the same officer, HRC develops a solution with the USARPAC deputy commanding general for sustainment. This enhances fairness and ensures commanders get the right officer in the right position.

Identifying future commanders. To retain top talent, the 8th TSC works to identify follow-on assignments for officers with clear command selection list potential. Once these top-tier officers are identified, commanders work with HRC and the sustainment triad to identify each officer's next assignment as well as a successive tour.

Today, the Army manning approach is "one job at a time" with a performance assessment at each gate. But, for the exceptional few, it

is in the best interest of Army readiness to develop the future “bench.”

The 8th TSC also works with HRC to influence and position Army service component command operational moves, curtailments, and extensions. There are some assignments in the region that do not provide top-tier officers with optimal career progression. For these officers, the 8th TSC aims to leverage operational moves for career development. In other instances, a top-tier officer may be offered an additional broadening assignment at a two- to four-star headquarters after finishing a developmental assignment, if there is sufficient time left in the tour. In these instances the 8th TSC seeks HRC support for extensions or curtailments to support the broadening assignment.

Progress

The 8th TSC is just under two years into implementing the theater talent management strategy, and it has already shared its collective requirements and talent assessments that include buy-in from the 25th Infantry Division, the Army Materiel Command, and the Military Surface Deployment and Distribution Command. The 8th TSC achieved consensus and its council of colonels kicked off the talent management strategy in July 2015.

In the fall of 2015, the 8th TSC held its first Pacific council of colonels followed by a general officer steering committee. Local talent management efforts focused on key and developmental assignments, while the regional talent management program focused on key field-grade officers and senior leader billets.

Additionally, USARPAC established a warrant officer board of directors in early 2016 to empower warrant officers to manage talent and develop partnerships among the senior leaders of major commands. This board of directors comprises senior warrant officers from the major commands within USARPAC and reports to the commanding general.

There has also been progress made in modifying the assignment processes to provide better predictability for families, commanders, and HRC. Within the past year, HRC proposed a shift from brigade distribution management sub-level assignments to senior mission commander (SMC)—two-star and above level—distribution management level assignments. Although some human resources professionals disagree with this change, the 8th TSC talent management program represents a compromise. Assignment managers provide their proposed distribution management sub-level assignments to the USARPAC SMC, along with the officers’ file assessments, and allow time for senior leaders to recommend any unit changes. This proposal does not shift the entire workload onto the SMC assignment personnel, but it does afford SMC input, which provides efficiency and predictability by eliminating last-minute changes to assignments for officers who are en route or have just arrived.

Last year, the 8th TSC provided the 25th Infantry Division with a top-tier lieutenant colonel to assume a rear-detachment battalion command position. Had this position been assigned the previous year, it would have likely resulted in a lesser qualified officer assuming this critical position. However, the 8th TSC was able to affect the overarching primary objective of the sustainment command—to build and maintain readiness.

The 8th TSC talent management approach optimizes Soldier and unit readiness by placing the right Soldier in the right job at the right time—all while working within the Army human resources enterprise. The talent management program also enables key leaders in the Asia-Pacific region to gain regional acumen and cross-cultural competencies that are much needed in the theater’s complex environment. Although early in its development, the 8th TSC’s holistic and compre-

hensive talent management strategy ensures that the regionally engaged Army is sustained with leaders who possess the right cultural, regional, and organizational skills. The Army must retain its best talent, and those officers must have maximum opportunity to serve in critical, career-enhancing, professionally developing positions that best posture them for increased responsibilities and upward mobility.

Maj. Gen. Edward F. Dorman III is the commanding general of the 8th Theater Sustainment Command (TSC) and the deputy commanding general for sustainment for U.S. Army Pacific at Fort Shafter, Hawaii. He holds a master’s degree in German language and literature from Middlebury College and the Johannes-Gutenberg University, Germany, and a master’s degree in national resource strategy from the National Defense University. He is a graduate of the Infantry Officer Basic and Advanced Courses, the Army Command and General Staff College, and the Industrial College of the Armed Forces.

Col. Phillip A. Mead is the deputy commander of the 8th TSC. He holds a bachelor’s degree in economics and a master’s degree in business administration from the University of Mary Hardin Baylor and a master of military art and science degree from the Command and General Staff College. He is a graduate of the Ordnance Officer Basic and Advanced Courses, the Army Command and General Staff College, and the Advanced Operational Arts Studies Fellowship.

Maj. Marc C. Vielledent is the strategist for the 8th TSC. He holds a bachelor’s degree in American legal studies and a master’s degree in strategic public relations from the University of Southern California. He is a graduate of the Field Artillery Officer Basic and Advanced Courses, the Army Command and General Staff College, and the Basic Strategic Arts Program.



Sgt. Mary Irving, 731st Combat Sustainment Support Battalion, Alabama National Guard, and Air Force Tech. Sgt. George Peoples, 117th Air Refueling Wing, move bottled water at the distribution center in Birmingham, Alabama, in May 2011. (Photo by Staff Sgt. Katherine Dowd)

The National Guard's Contributions to Expeditionary Logistics

■ By Brig. Gen. Sylvester Cannon and Col. Steven G. Shepherd

The overall effectiveness of the Total Force has never been more visible than in the recent military campaigns in Iraq and Afghanistan. Since the terrorist attacks on Sept. 11, 2001, and the subsequent military campaigns in Iraq and Afghanistan, operations and relationships among the components and especially our sustainment forces have reached new heights. In the Army, the nation's largest branch of the military, executing operations among the Active and Reserve components is relatively seamless.

Reserve Component Sustainers

The Army National Guard and Army Reserve currently make up ap-

proximately 80 percent of the Army's sustainment forces. Specifically, the National Guard has 24 percent of the Army sustainment force in its formations. Current projections indicate that reliance upon sustainment units in the National Guard will continue to increase during the current draw-down of active Army forces.

The National Guard currently has three sustainment commands in its military force structure: the 135th Sustainment Command (Expeditionary) (ESC) located in Birmingham, Alabama; the 184th ESC located in Laurel, Mississippi; and the 167th Theater Sustainment Command located at Fort McClellan, Alabama.

Army Techniques Publication 4-94, Theater Sustainment Command, specifies that the role of the ESC is to deploy to an area of operations or joint area of operations to provide mission command capabilities when multiple sustainment brigades are employed or when the theater sustainment command determines that a forward command is required.

Since 2003, the 135th ESC and its subordinate units have deployed 22 times in support of Operations Iraqi Freedom, Enduring Freedom, New Dawn, and Multi-National Force Observer Sinai. The command's subordinate units include combat sustainment support battalions, transportation

companies, component repair companies, quartermaster companies, and surface maintenance companies.

Afghanistan

Historically, expeditionary logistics has always been important in sustainment operations, but it is even more important now as the Army tries to find ways to support and sustain its smaller, lighter maneuver forces in remote locations across the globe. Since 9/11, National Guard units ranging from companies to general officer-led sustainment commands have made significant contributions to the success of our joint forces domestically and overseas.

The 135th ESC was the first ESC in the National Guard to deploy to Afghanistan in support of Operation Enduring Freedom. Designated as Joint Sustainment Command–Afghanistan, and supplemented with Air Force, Navy, and Marine personnel, the 135th ESC coordinated logistics support for all supplies, personnel, and equipment for the Afghanistan theater.

The unit commanded two active Army sustainment brigades, the 82nd and the 43rd, and a number of subordinate battalions and companies from all components of the total force. During its tour of duty, the 135th ESC oversaw the surge of an additional 30,000 troops to Afghanistan.

The 135th ESC also provided logistics coordination for more than 200 forward operating bases and camps. Many of these bases and camps were established in remote locations and in very austere environments. They supported service members from all branches of the armed forces, contractors, and coalition partners. Executing sustainment operations was a massive effort; everyone needed to be well supplied with water, food, ammunition, and mail on a regular basis.

Kuwait

Within three years of performing its sustainment mission in Afghanistan, the 135th ESC was called upon to perform expeditionary logistics again, this time in Kuwait. Consid-

ering the operational reach of their sustainment efforts, a number of key leader engagements were required to help shape and sustain logistics operations in the region.

During the unit's tour in Kuwait, the 135th ESC coordinated logistics operations in the surrounding joint sustainment area, which included Kuwait, Iraq, Qatar, Bahrain, Jordan, and Afghanistan. Several key areas were identified as critical to overall mission success: contract management, watercraft operations, finance and postal operations, aerial delivery, and mortuary affairs.

Using new innovative processes, the 135th avoided unnecessary costs to the government. For container management, more than \$80 million was saved through contract cost reduction techniques and improved contract oversight. An additional \$145 million was saved by retrograding and refurbishing armor and ammunition.

Finance and postal operations were conducted in four countries in nine different locations. More than \$70 million in financial transactions were processed and nearly three million pounds of mail were delivered.

The 135th ESC also provided mission command for aerial delivery and mortuary affairs operations, providing coordination for over a million pounds of supplies and 130 mortuary affairs evacuation missions.

Defense Support of Civil Authorities

National Guard units are unique in that they have both a federal and a state mission. Stateside, in cases of natural disasters, domestic events, and civil disturbances, the National Guard conducts Defense Support of Civil Authorities. All Defense Support of Civil Authorities operations require expeditionary logistics to support personnel or equipment supporting the local citizens.

In April 2011, just months after the 135th ESC returned from Afghanistan, 62 tornadoes swept through Alabama, killing hundreds and leaving thousands suddenly homeless. The 135th ESC, designated Joint

Task Force Vulcan, set up a logistics support area and multiple points of distribution throughout the state to distribute food, water, and tarps to storm victims.

The National Guard's contributions to the total force and expeditionary logistics have been a key enabler to the national military strategy. National Guard sustainment forces have proven to be critical in providing the capability and capacity needed to solidify enduring military operations in a number of volatile and unstable environments, both domestically and internationally. The integration of National Guard forces in individual and multicomponent collective training events and in combat operations as they conduct multi-echelon support has been the key to success for the Army in the 21st century and will continue to be in years to come.

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Col. Steven G. Shepherd is the chief of staff for the 135th Sustainment Command (Expeditionary), Alabama National Guard. He holds a master's degree in strategic studies from the Army War College, a juris doctorate degree from Birmingham School of Law, and a bachelor's degree in history from the University of Alabama-Birmingham. He is a graduate of the Armor Officer Basic Course, the Quartermaster Officer Advanced Course, and the Combined Arms and Services Staff School.



Forward support troop Soldiers from the 4th Squadron, 2nd Cavalry Regiment, repair a vehicle during a rest stop in Kuchyna Air Base, Slovakia. The Soldiers of the maintenance platoon kept 153 vehicles operational during a four-day road march across Europe in September 2015. (Photo by Capt. Ryan R. Stone)

Sustaining Strykers Over Four Days Through Four Countries

A forward support troop that maintained vehicles convoying 798 kilometers through Europe provides lessons learned on vehicle maintenance, recovery, and fuel consumption.

■ By Capt. Ryan R. Stone

When the forward support troop (FST) for the 4th Squadron, 2nd Cavalry Regiment deployed on September 13, 2015, to support the unit's 798-kilometer road march through NATO allies Germany, Czechoslovakia, Slovakia, and Hungary, some 480 personnel and 153 vehicles, including multiple Stryker variants and sustainment ve-

hicles, made the four-day movement.

The FST demonstrated logistics interoperability during the road march by using host-nation resources including recovery vehicles, facilities for class I (subsistence), and class IIIB (bulk petroleum, oils, and lubricants).

The mission included strategic-level military-to-military and civilian-to-military engagements and refuel on

the move sites hosted by allied forces. The culminating event was a multinational bridge crossing, known as Dragoon Crossing, in route to the Central Exercise and Shooting Range near Veszprem, Hungary.

Organizing for Success

The six-serial convoy included a maintenance team in every serial.

Having dedicated assets in each convoy allowed the maintainers freedom of movement and ensured that faults were diagnosed quickly and accurately.

Serials one, three, and five each had a contact truck so that maintainers could quickly diagnose faults and call for a wrecker if self-recovery or like-vehicle recovery was not an option. Serials two, four, and six each had a M984A4 heavy expanded-mobility tactical truck wrecker and an M915 tractor-trailer truck pulling a low-boy trailer.

The serials were staggered in 30 minute increments, allowing maintainers time to diagnosis or fix faults. During the 36 hours on the road, the maintainers dealt with 15 faults that deadlined vehicles. The maintainers also conducted maintenance on 20 faults in order to keep the convoy moving. Of all the vehicles that made the international four-day movement, only one had to be towed to the Hungarian training site.

The FST maintainers worked on 10 roadside breakdowns during the road march. Because all of the convoys had host-nation police escorts, maintainers were able to safely repair faults ranging from loose coolant hoses to failed brake chambers. In one case, maintainers called for emergency aerial resupply during an overnight stay at Kuchyna Air Base, Slovakia. Within 12 hours, the FST Soldiers diagnosed the fault of a Mobile Gun System Stryker variant, found the national stock number, called the supply support activity to order the part, received the part delivered via a UH-60M Black Hawk helicopter, and installed the part.

Vehicle Recovery Challenges

Using like-vehicle recovery proved challenging. Serials were under a constricted time line and vehicle operators were not familiar with like-vehicle recovery operations. A lack of complete tow-bar kits also compounded recovery challenges. Tow bars for 5- and 2.5-ton trucks were not properly resourced before the movement, so a wrecker had to move these disabled vehicles.

Having a wrecker and an M915

with an M870A1 trailer staggered in even-numbered serials as line-haul assets was the key to a successful movement. The wrecker's main winch was used on two occasions to pull a Stryker onto an M870A1 trailer.

Reliance on civilian tractor-trailers for Stryker recovery highlights the need for a dedicated recovery asset for

Having a wrecker and an M915 with an M870A1 trailer staggered in even-numbered serials as line-haul assets was the key to a successful movement.

the Stryker systems. The reconnaissance squadron had eight Mobile Gun System Strykers in the road march. These systems can only be towed by a flatbed wrecker because of the length of the gun tube. Additionally, the two mortar carrier vehicles with the double V-hull upgrade each weighed 49,169 pounds—nearly twice the capacity of the M984A4's recovery lift system.

The 2nd Cavalry Regiment's modified table of equipment only authorizes the M1088 tractor and the M172A1 25-ton trailer. The Stryker wheelbase is 191 inches and the deck length of M172A1 trailer is 192 inches, making the M172A1 trailer too short to haul a Stryker vehicle. A Stryker can be safely moved on an M870A1 trailer, which has a 216-inch-long platform.

Estimating for Success

Nearly all of the squadron's support vehicles were near their respective carrying capacities during this movement. The squadron planned fuel consumption based upon the standard 300-mile range for all military vehicles. But because many of the squadron's vehicles were equipped with air conditioning, additional armor, or additional equipment, the projected fuel range was inaccurate. Vehicles had to use fuel cans to make it to the next refuel point, especially with various stops to complete maintenance and to wait for police escorts at border crossings.

The added weight of personnel and equipment stressed older vehicles and caused multiple braking, cooling, and suspension breakdowns along the route. Wheeled sustainment and cargo-carrying vehicles had the most breakdowns. These repairs were resolved with hand tools, but they caused significant delays

within the movement window.

To mitigate fuel consumption and maintenance issues, units should conduct a movement of at least 25 miles with the designated load for each vehicle before attempting a road march over 60 miles. The shorter movement will allow the vehicles to get up to operating temperature and test the efficiency of the cooling, suspension, and braking systems.

In order to project accurate estimates, operators must record fuel consumption. Quarterly movements of all vehicles must be completed in order to alleviate the need for adjustments before a major move.

Overall the mission showed logistics interoperability with NATO allies. The lessons learned from this road march will enable the FST to provide support and services to ensure freedom of action across the European theater while showing interoperability within the NATO alliance.

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Soldiers fuel their vehicle at the intermediate staging base in support of Joint Readiness Training Center rotation 16-01 at Fort Polk, Louisiana, on Sept. 24, 2015. (Photo by Staff Sgt. Terrance D. Rhodes)

Providing Intermediate Staging Base Support for JRTC Training

■ By Capt. Carlos “Mike” Sanford, Capt. Brian E. Jones, and Capt. Zachary McDonald

Sustainment units are often described as being “in the rear with the gear,” but this description contradicts the vital logistics support that the 129th Combat Sustainment Support Battalion (CSSB) provided to the 2nd Brigade Combat Team, 101st Airborne Division (Air Assault), while deployed to the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana, in the fall of 2015. To provide this support, the 129th CSSB established a logistics node approximately 55 miles away from the JRTC at the intermediate staging base (ISB) in Alexandria.

Preparation and Planning

With the entire battalion together

at its home station of Fort Campbell, Kentucky, for the first time in several years—after completing a variety of complex missions in Afghanistan, Kuwait, and West Africa—leaders began to focus on training and building a unified sense of purpose. The battalion went through a series of tough field training exercises at Fort Campbell; Camp Atterbury, Indiana; and Fort Knox, Kentucky, to validate nearly 20 platoons.

The planning phase for JRTC 16-01 challenged the 129th CSSB. Planning to the smallest detail was the key to mission success. The high operational tempo of the 101st Airborne Division kept subordinate units in constant motion while they tran-

sitioned between progress phases. To balance the need for information with the mission, the 129th CSSB ran regular synchronization meetings to pass requests for information upward.

The support operations section had the lion’s share of planning to develop the CSSB’s concept of support and synchronize it with the 526th Brigade Support Battalion, the CSSB’s primary customer throughout the exercise.

Deployment

The 101st Airborne Division required all units to maximize the pre-positioned equipment already at Fort Polk to reduce transportation costs. However, the 129th CSSB still line-hauled more than 100 pieces of

equipment to meet the large class I (subsistence) and class III (petroleum, oils, and lubricants) requirements. More than 300 railcars were used to move all of the equipment from 101st Airborne Division Sustainment Brigade and 2nd Brigade Combat Team from Fort Campbell to Louisiana.

The most expedient and cost-effective transportation method was three convoys of 52 M915 tractors with M872 trailers. The 594th Transportation Company conducted the 600-plus mile, one-way trips. Using the 594th Transportation Company's assets saved the division more than \$150,000 and provided valuable convoy experience and training to the Soldiers from the 594th Transportation Company, the 227th Composite Supply Company (CSC), and the 584th Support Maintenance Company (SMC).

Both the 227th CSC and the 74th Composite Truck Company (CTC) were heavily used. The 74th CTC executed personnel movements, most of the class I movements, and convoy security while the 227th CSC was tasked with providing water purification and storage assets, fuel transport, and all materials handling equipment support on the ISB.

Running the ISB

Two days after arriving at the JRTC, the 129th CSSB took control of the ISB where nearly 4,000 Soldiers would begin the reception, staging, onward movement, and integration process. They would arrive, stage their equipment, and then convoy to the Fort Polk training area, also known as "the box." As the ISB owner, the 129th CSSB's mayor cell faced a unique challenge. Because it was not the primary rotational training unit, it did not have the same level of authority needed to influence units occupying the ISB.

As one of the commander's key tasks of ensuring the main body had potable water upon arriving at the ISB, the 227th CSC used two tactical water purification systems and four water treatment specialists to setup and pu-

rify more than 15,000 gallons of water. The 227th CSC also provided fuel support to more than 1,000 pieces of equipment.

Once the brigade combat team left the ISB, the 129th CSSB's primary mission was to provide all classes of supply to the Geronimo Drop Zone at Fort Polk. In addition to commodity support, the 74th CTC provided troop transport, including moves from the box to Peason Ridge, north of Fort Polk, for live-fire training.

Leveraging Enablers

While at the JRTC, the 129th CSSB was augmented with additional sustainment assets from the Kentucky Army National Guard, including the 307th SMC who supplemented the 584th SMC with additional mechanics and supported the ISB with a quick reaction force.

The 138th Signal Company provided both classified and unclassified internet, telephone, and FM radio communications. It also established two retransmitting sites along the main supply route from the ISB to the box. This allowed communications during convoys and greatly increased the battalion's command and control over all of the elements on the road.

Here are some lessons learned from the 129th CSSB's operations in support of this JRTC rotation. Allowing the CSSB to control all of the commodities in the ISB lets the brigade combat team to focus on reception, staging, onward movement, and integration. Integrated home-station training should take place among the CSSB, the sustainment brigade, and the brigade support battalion.

Assigning a lead action officer who will be available throughout the entire planning process is vital. While working through the military decisionmaking process, it is not uncommon for the entire concept of the operation to change two or three times before the exercise hits its execution phase. Having a single person and their team to col-

lect, analyze, and disseminate key information saves the unit time and avoids the frustration of operating under guidance created using outdated information.

Another lesson learned is to ensure that M172 lowboy trailers are available to transport materials handling equipment between Fort Polk and the ISB. These trailers need to be brought from home station because none are available in the pre-positioned equipment yard at Fort Polk.

Finally, the ISB mayor cell should have access to a government purchase card for buying essential supplies requiring immediate acquisition. Separate funding for the ISB should be established by the sustainment brigade.

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Soldiers from Echo Company, 2nd Battalion, 25th Aviation Regiment, conduct a cold refuel of a CH-47 Chinook helicopter during Lightning Forge in February 2016 on the Hawaiian Islands. (Photo by Cpl. James Halstead)

Supporting an Aviation Task Force Attached to a Brigade Combat Team

■ By Capt. William S. Cunningham and 1st Lt. Jacob H. Lillehaug

In February 2016, the 2nd Battalion (Assault), 25th Aviation Regiment (2-25 AVN), 25th Combat Aviation Brigade (CAB), 25th Infantry Division, participated in Lightning Forge, a home-station decisive action training exercise that took place throughout the Hawaiian Islands. The exercise was designed to provide a brigade combat team (BCT) with combat training center-like training with a focus on jungle operations.

During the training, 2-25 AVN was attached to the 2nd Stryker Brigade Combat Team (SBCT), 25th Infantry Division. The unit learned that the modified table of organization and equipment of an aviation forward support company (FSC), combined with a different approach to sustainment oper-

ations, presented unforeseen challenges that required non-doctrinal solutions.

This article highlights some of the lessons learned from integrating into a BCT and supporting an aviation task force attached to a maneuver BCT. It also provides best practices to overcome these challenges.

As an assault battalion, 2-25 AVN is designed to have 30 UH-60M Blackhawk helicopters and execute air assault and air movement operations. During Lightning Forge, the aviation task force was comprised of 10 UH-60 Blackhawks, plus three HH-60s for aeromedical evacuation, and two UH-60Ls for aerial mission command. The task force also included four CH-47 Chinooks and four AH-64D Apaches.

Additionally, the 2-25 AVN usual-

ly receives sustainment support from its aviation support battalion (ASB). However, during Lightning Forge, it received sustainment support from the BCT's brigade support battalion (BSB) that they were attached to.

Challenges of Aviation FSCs

Much like FSCs for BCTs, aviation FSCs are tailored to support their maneuver battalions. But, unlike BCT FSCs, the aviation FSC belongs to its maneuver battalion. It has no command relationship with the ASB. This not only offers a more tailorable package but also presents challenges for the aviation FSC supporting an aviation task force in a decisive action scenario.

Neither the aviation task force nor the aviation FSC is designed to maneuver

extensively on the battlefield. The aviation FSC is not designed to support an aviation task force. It is only designed to support its assigned aviation battalion. Logistics operations in an aviation unit are significantly different from logistics in a BCT and can be a challenge to fully integrating into a BCT task force.

Mobility. The first challenge, mobility, is rooted in the modified table of organization and design of the CAB. CABs are designed to fight together from a fixed position as was common in Iraq and Afghanistan. While fighting from built-up airfields in a counterinsurgency environment, mobility was not necessary. However, as training priorities shifted to decisive action and we experienced BCT task force decisive action operations, the CAB design has limitations.

During the planning for Lightning Forge, Echo Company, 2-25 AVN, an FSC supporting the aviation task force, identified the mobility it required to support the aviation task force and that it had a severe mobility asset shortfall. As a result, the unit requested load handling systems with trailers and flat racks and the Soldiers to operate them. This provided the mobility assets required to move a three-day supply of food and drinking water, ammunition, repair parts, and the complex mission command systems of the aviation task force.

Personnel. The second challenge was the lack of ammunition specialists required to handle the rockets and missiles for the AH-64D Apaches. While the FSC normally operates ammunition holding areas for small arms, the handling and rearming of the Apaches' weapons required the addition of two ammunition specialists from the ASB.

Integration. The final logistics challenge was the integration of the aviation task force into the sustainment structure of a BCT. Field Manual (FM) 3-96, Brigade Combat Team, says that the BCT should echelon sustainment support by creating a brigade support area with a field trains command post while pushing the combat trains command post forward with the maneuver battalion. This allows the maneuver

battalion the maximum support while still maintaining a high degree of mobility on the battlefield. However, aviation FSCs provide a distinctly different set of capabilities to aviation battalions that invalidate field and combat trains command posts.

CAB versus BCT Logistics

Aviation logistics doctrine is very different from BCT logistics doctrine. FM 3-96 describes the use of echeloned support as the method of supporting an organization arrayed within an area of operations. To support the maneuver battalions, supplies are pushed from a sustainment brigade to the brigade support battalion, reconfigured, and then sent to the FSCs for distribution to the maneuver company. FM 3-04.111, Aviation Brigades, describes the throughput of supplies to the ASB and FSC and the need for pulsed logistics. Pulsed logistics is defined as support that does not come in a continuous stream but arrives in distinct packages. Pulsed logistics allows supplies to flow during tactical pauses and provides minimum disruption to the aviation FSC and the aviation battalion.

FARPs. The aviation FSC's greatest asset to the aviation battalion is its ability to operate forward arming and refueling points. These field-expedient points gives the FSC the ability to quickly refuel helicopters, rearm Apaches, and provide 24-hour support to the aviation battalion.

Aviation support naturally pulses with the operational tempo and crew rest requirements. Pulsed logistics allows the aviation FSC to receive supplies after major flight periods and during operations when supplies are low and the capacity exists to receive resupply. Normal expenditures during Lightning Forge ranged from 6,000 to 12,000 gallons of fuel per day in the aviation task force. This requirement quickly overwhelmed the infantry BCT's BSB, so the next supporting element, the 25th Sustainment Brigade, delivered fuel directly to the aviation FSC.

Proper support. Problematic to the integration of aviation logistics into BCT logistics is the lack of ech-

eloned support. Unlike ground maneuver battalions, aviation battalions maintain battalion integrity in the battlespace. All of the aviation FSC's supported maneuver companies are co-located with the task force headquarters and the FSC. The FSC can then leverage unit supply. Maintaining a liaison with the BSB was extremely important during the exercise. Originally, the FSC executive officer and the S-4 noncommissioned officer-in-charge acted as liaisons with the BSB. This worked well but could be improved upon.

Having a representative from the S-1 would be helpful, especially given the requirement to coordinate replacements and report battle losses. Also, having a representative from the S-3 section would provide better visibility of aviation operations in the BSB. Much of the logistics support in the exercise was done by air. Because the operation took place on an archipelago, aviation was heavily relied on to move troops and supplies. The aviation liaisons to the BSB received a lot of requests for information about aviation operations.

Lightning Forge presented many learning opportunities for sustainers at the tactical and operational level. The BCT and CAB developed a mutual understanding of sustainment operations and became generally familiar with each other's sustainment doctrine. The key to success was direct communication and a shared understanding of their different mission sets and support requirements.

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Maj. Gen. Bryan Owens (center right), commander of U.S. Army Alaska, receives an operations order back-brief in the brigade tactical operations center near Fort Greely, Alaska, July 20, 2016. (Photo by Marion Basilioli)

Simplifying Complex Briefings

A two-minute drill informs the command team of pertinent information to improve the common operational picture.

■ By Maj. Allen D. Tapley and Master Sgt. Edwin Clouse

At some point in their careers, logisticians step into a position just before a major training exercise or a training center rotation where they have to support the commander and subordinate commanders in understanding situations, making decisions, and implementing courses of action.

Army Doctrine Publication 6-0, Mission Command, defines the

science of control as the systems and procedures used to improve the commander's understanding and support accomplishing missions. As leaders, we sometimes struggle to come up with the systems needed to synchronize staff efforts and build a shared understanding that will act as a forcing function to update running estimates on a regular basis. The subordinate companies are the ones

that suffer when staff officers get this wrong.

Company commanders and first sergeants know how frustrating it can be to have five different staff sections requesting the same information during the same day. So what systems can be put into place to ensure that the staff sections talk to each other and update running estimates? Besides conducting com-

mander's update briefs, battle update briefs, and shift change briefs, the two-minute drill is another technique coached and observed at the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana.

How to Conduct the Drill

The two-minute drill is basically a mini commander's update brief that allows the staff sections to quickly inform the commander, executive officer, command sergeant major, or a distinguished visitor of any pertinent information as of a specific date and time. Each staff group provides their own piece of information that paints a common operational picture (COP) in a relatively short amount of time.

The contents of the two-minute drill vary depending on what the battalion commander wants to know, but typically, it will consist of the following.

Intelligence. The S-2 provides enemy significant activities and their effects on the battalion and on logistics. He also provides the current weather and weather activities that could affect operations.

Operations. The S-3 outlines the current activities of friendly forces, route statuses, and the current mission status for current and upcoming convoys.

Personnel. The S-1 reports the number of personnel on ground at every location of responsibility. He also provides the status of any wounded-in-action or killed-in-action packets.

Supply. The S-4 provides a status update of combat power, estimated shipping dates or completion dates for supplies and the current logistics status for the battalion.

Communications. The S-6 provides the status of communications and the battalion's primary, alternate, contingency, and emergency communication plan to higher commands, subordinate units, convoys, and any deployed forward logistics elements.

Support operations. The support operations officer briefs the logistics

COP and any changes to brigade combat power.

The order of the briefing is important because operations are based on intelligence. After current operations are briefed, personnel and equipment should be next. Communications will tie everything

confidence that the staff is competent and understands their roles and responsibilities.

As Field Manual 6-0, Mission Command, states, "Staffs support the commander in understanding situations, making and implement-

The two-minute drill is basically a mini commander's update brief that allows the staff sections to quickly inform the commander, executive officer, command sergeant major, or a distinguished visitor of any pertinent information as of a specific date and time.

together. The support operations officer will brief the current logistics posture for the brigade and any resupply updates. At the JRTC, we have found that this order works best; however, it can be modified to best suit the organization.

The Benefits

Why is a two-minute drill so important to developing a good COP? First, it is a forcing function that makes staff sections update their running estimates because most of the information used in the drill comes from these estimates. This does not mean that you have to update your running estimates every hour. You will update them as conditions change.

Second, staff sections will tend to put their information near the analog map board with as of dates so that it will be easier to brief if a commander calls for a two-minute drill. Third, the drill is a forcing function to update the analog map board, creating the analog COP that will match the digital COP. Fourth, it promotes communication among the staff sections that results in information sharing.

Lastly, the two-minute drill breeds confidence in staff sections by creating a COP for everyone in the unit. This improves the commander's

ing decisions, controlling operations, and assessing progress by providing timely and relevant information and analysis."

A well-run staff will update their running estimates. The challenge has always been ensuring that the staff sections update their running estimates. Staff officers must understand that their main purpose is to give the commander the right information at the right time to make sound decisions.

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An example of equipment in a densely packed block storage pattern that was designed using the Graphic Asset Representation module. (Courtesy photo)

Maintaining Equipment Readiness With Graphic Asset Representation

This article provides an overview of a planning tool that improves the readiness of Army pre-positioned stocks by maximizing use of indoor storage space.

■ By Lt. Col. Carl L. Hennemann

The Army pre-positioned stocks (APS) are placed around the world to reduce the time it takes to deploy equipment to a combatant command's area of operations. The APS sites are managed by the Army field support battalions (AFSBn) and Army field support brigades (AFSB) of the Army Sustainment Command,

a two-star command that is subordinate to the Army Materiel Command.

These organizations manage APS stocks by using the Army War Reserve Deployment System (AWRDS) for the receipt, storage, maintenance, and issue of APS stocks. Within AWRDS, the Graphic Asset Representation

(GAR) module provides a floor plan of how equipment is arranged in a warehouse.

This floor plan benefits the Army because it improves readiness by enabling APS managers to place more APS equipment in controlled-humidity (CH) warehouses in order to reduce deterioration and ensure materiel is in ready to use. It saves

money by optimizing space, which reduces labor cost for moving and maintaining equipment. It also provides a planning tool to determine future storage space requirements. This information can help Army leaders make informed decisions concerning military construction projects, warehouse leasing, and open storage space use.

Maintaining APS Readiness

To preserve readiness, the GAR module allows planners to maximize all of the usable square feet of CH warehouses to store as much APS equipment as possible.

Although the central aim at APS sites is to maximize space, managers must also plan for adequate room between vehicles so that personnel can conduct care of supplies in storage checks without increasing costs by having to reposition equipment.

APS storage and maintenance subject matter experts can use products from the GAR to war-game the cost-benefit of different storage configurations in order to save money. Using the GAR to reduce the amount of equipment that is stored outdoors lowers the number of man-hours required to maintain equipment by minimizing component failure and reducing the frequency of scheduled maintenance on APS equipment.

According to Technical Manual 38-470, Storage and Maintenance of Army Prepositioned Stock Materiel, most APS equipment requires a scheduled maintenance service every 48 months when stored in CH facilities. This potentially reduces maintenance hours by 50 percent because equipment stored in non-CH warehouses requires a scheduled service every 12 to 24 months.

For example, at APS-5 Qatar, the 48-month maintenance schedule (for equipment stored in CH facilities) results in less than 2,100 maintenance work orders for calendar year 2016, whereas a

24-month service schedule for the same equipment stored in non-CH warehouses would double the number of maintenance work orders to 4,200.

In addition to the increase in scheduled maintenance, data shows that equipment stored in non-CH conditions requires more unsched-

At some APS sites, this could be translated into military construction requirements that may result in a host nation sharing the cost of construction projects to support mutual defense agreements.

Having a tool that can help forecast military construction requirements aids long-term planning for

Using GAR informs the planning process and allows commanders to make decisions that improve readiness, reduce costs, and provide visibility of future storage space requirements.

uled maintenance because of corrosion and other environmental effects.

Warehouse Organization

Using the GAR module provides AFSBns and directorate of public works master planners with the ability to determine future warehouse requirements on installations. The Department of the Army determines overall APS strategy and what unit sets will be placed at what APS sites around the world.

To ensure facility planners have the most accurate data, APS managers validate AWRDS data to ensure it includes all changes to unit sets directed by the Department of the Army. This ensures that AWRDS includes all force design updates to the modified table of organization and equipment.

The GAR module takes equipment dimensions from the Army Master Data File and places a template of the equipment within the scale drawing of a warehouse. This assists the APS manager to visualize the amount of warehouse space available and the equipment that requires it. The APS manager will then use the GAR to determine warehouse requirements based on the ideal storage configuration for that site.

future budget requirements. The GAR can help facility planners see current space capacity and compare it to future space requirements in order to ensure today's military construction plans support future storage needs.

Preserving Equipment

According to the Department of Defense Preservation and Packaging course, corrosion-causing moisture is the number one hazard to military stocks and materiel. CH storage, when properly planned and designed, requires minimum surveillance and maintenance. However, CH systems are not maintenance free. They do require a moderate amount of inspection and preventive maintenance.

The optimal level of relative humidity for APS equipment is 40 percent, and care shall be taken to prevent the humidity from dropping below 30 percent or rising above 50 percent for extended periods of time. The best environment is one where the temperature is maintained between 60 and 80 degrees. Equipment stored in these conditions does not require extensive preservation. Controlling relative humidity prevents corrosion on metal components, prevents rubber

components from drying out, and prevents mold and mildew growth on materiel such as tents, parachutes, and military clothing.

Storage Methodology

The GAR module in AWRDS provides a tool that enables APS custodians to maximize the use of available CH warehouse space and place more equipment indoors to provide better protection from environmental hazards such as moisture, dust and dirt, sunlight, high heat, and extreme cold. These custodians consider the optimal storage configuration and clearance space required to move equipment in to and out of warehouses. Optimal configuration depends on the size, set up, and storage priorities of the APS location.

One method is to store equipment in company sets in order to facilitate

rapid issue to a deploying unit during contingency operations. Another method is to store equipment by like model in a densely packed block pattern to maximize space. A third method is to store in a back-to-back pattern in accordance with maintenance service schedules to facilitate more efficient movement from warehouse to maintenance facilities.

There are variations of storage patterns that combine the densely packed block pattern and the back-to-back pattern to merge their benefits into site-specific patterns that are based on the location of warehouse doors, floor space, and storage priorities.

Using GAR informs the planning process and allows commanders to make decisions that improve readiness, reduce costs, and provide visibility of future storage space re-

quirements. Although AWRDS and its GAR module are not well-known, its utility in maintaining APS readiness at the best cost to our Army is worth highlighting.

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The author would like to acknowledge Robert Guess and Andy Hill who contributed to this article.



Soldiers download a track vehicle from the Army pre-positioned stock at the 1st Brigade Combat Team, 1st Cavalry Division motor pool at Camp Beubring, Kuwait, Jan. 20, 2012. (Photo by Staff Sgt. Raul Tirado)



Humvees stand ready for issue at the National Training Center's pre-positioned fleet draw yard at Fort Irwin, California. (Photo by Capt. Andrew J. Cochran)

Maximizing the NTC Pre-Positioned Fleet for a Successful Rotation

An armored brigade combat team used the grid draw process to balance its deployment of home-station equipment with its use of the NTC's pre-positioned fleet.

■ By Capt. Heath A. Bergmann

The challenge presented to brigade leaders deploying to the National Training Center (NTC) at Fort Irwin, California, is how to maximize the use of the pre-positioned fleet while ensuring that each subordinate unit has all of the equipment it needs to conduct its

mission. There are many viewpoints on how to deploy a brigade to NTC, and every brigade's experience differs.

Forces Command (FORSCOM) requires units to use as much of the pre-positioned fleet as possible. The reason for this is simple—money. Maintaining a fleet of commonly

used items at Fort Irwin is much cheaper than paying to ship the same types of equipment for each rotation.

This article shares how the 2nd Armored Brigade Combat Team (ABCT), 1st Infantry Division, was able to successfully balance the de-

ployment of home-station property and remain compliant with FORSCOM's requirement to use the NTC pre-positioned fleet.

Using the Grid Draw

There are no magic tricks for successfully drawing equipment from the pre-positioned fleet. Successful use of the pre-positioned fleet is a result of communication, coordination, and the use of a predeployment checklist to ensure compliance within a defined time line. The 2nd ABCT's success can be directly attributed to its establishment of an internal tracking system that managed changes to the pre-positioned fleet allocation process, known as the grid draw.

Coordinating transportation assets early in the planning process saved the brigade time and money. Developing a system to mitigate and manage hundreds of changes to the grid draw was also critical to controlling chaos and keeping a common understanding of the plan.

The Pre-Positioned Fleet

It is important to understand what the pre-positioned fleet is, how and why it's used, and the consequences for not complying with FORSCOM requirements for its use. The pre-positioned fleet is a store of rolling stock items, trailers, generators, forklifts, mine plows, and other ancillary equipment. The purpose of this equipment is to reduce the transportation costs associated with deploying a brigade to NTC. The pre-positioned fleet does not include items such as Abrams tanks, Bradley fighting vehicles, Strykers, or Paladins. It does include a great deal of support equipment that is used by both light and heavy formations.

If a piece of equipment exists in the pre-positioned fleet and a unit needs that equipment at the NTC, it must draw the equipment in lieu of bringing it from home station. There are exceptions to this rule, but only FORSCOM can approve them. During reception, staging, onward

movement, and integration, units are audited for equipment compliance. Units found not compliant can be fined and lose training dollars.

Overcoming Challenges

Understanding what the brigade's task organization would look like for its NTC rotation was the first step to remaining compliant with FORSCOM regulations for use of the pre-positioned fleet. The amount of external units attached to the 2nd ABCT during the rotation and its complicated task organization made this difficult to visualize. The 2nd ABCT was responsible for the equivalent of 11 battalions. This large and complex task organization made it difficult to determine each unit's mission essential equipment requirements.

The key to overcoming this complexity was clear and productive lines of communication between the brigade S-4 and the battalions' executive officers and S-4s and between



3rd Cavalry Regiment Stryker vehicles halt during a convoy movement at the National Training Center, Fort Irwin, California, on Feb. 12, 2016. The National Training Center has a pre-positioned fleet of equipment that is issued as part of the combat training center rotation. (Photo by Staff Sgt. Alex Manne)

the battalion executive officers and S-4s and their organic and enabling companies. The greatest communication challenges were experienced while working with supporting units from the Army National Guard and Army Reserve. These units fell under unfamiliar headquarters and were unaware of their reporting process. As the brigade S-4, I often called reserve component units during the planning process to gain clarity on their equipment needs.

Over time, supporting units came to understand their role within their respective organizations and communication improved drastically. The battalion S-4s began to take ownership of their attached units and effectively communicate their equipment needs to the brigade S-4.

Constant changes to the NTC's pre-positioned fleet presented yet another challenge. One change to the grid draw invariably affected multiple formations across the brigade. For example, once the grid draw was complete, adding a unit to the rotation caused ripples that affected at least one other formation because newly added units rarely had all of the equipment that they needed for the rotation. As a solution, the brigade had to source the equipment from another unit. This caused a ripple throughout the brigade as assets were redistributed and transportation was coordinated to accommodate the changes.

Completing the grid draw as soon as possible allowed for the sourcing of transportation assets to move the rolling stock and containers shipped from Army posts and Army National Guard and Reserve Training Centers. Coordination of rail movements from Fort Riley, Kansas; Fort Sill, Oklahoma; and Fort Lewis, Washington had to be completed 60 days before movement. The key to being able to project and lock in these assets was completing a solid grid draw as early as possible.

Planning Through the PDSS

The 2nd ABCT executive offi-

cer decided that the brigade would use the predeployment site survey (PDSS) to begin the grid draw. The PDSS was conducted during a four-day period in November 2014, nearly four months prior to the start of the NTC rotation.

The planning team, which included the brigade and battalion executive officers, the battalion S-4s and me (the brigade S-4), made the ini-

It is important to understand what the pre-positioned fleet is, how and why it's used, and the consequences for not complying with FORSCOM requirements for its use.

tial list containing the equipment that each unit would draw from the pre-positioned fleet and the equipment it would ship from home station. The list was made in accordance with the pre-positioned fleet utilization report, which is used by FORSCOM to audit units in the reception phase.

By taking advantage of the PDSS, the ABCT was prepared for the NTC grid set conference, a teleconference between the NTC rotation coordinator, the brigade S-4, and representatives from each battalion and company, including the Army National Guard and Reserve units. The grid set conference took place about two weeks after the PDSS and was the first time that each unit was required to submit their unit grid worksheets.

Over the next two months, hundreds of changes were made to the grid draw due to the addition of enabling units, equipment serviceability, personnel changes, and input from commanders. A small change from one unit inevitably affected multiple units in order to keep the brigade compliant with FORSCOM regulations. Communication among units mitigated the impact of these changes.

Maintaining Document Control

Tracking all of the changes between the grid set conference and the final grid draw submission was the most difficult part of the process. Version control and consistent internal auditing were the keys to successfully managing this process. The 2nd ABCT only allowed the brigade S-4 and assistant S-4 to make changes to the official version

of the grid draw submission.

It was highly stressed that change authority was limited to no more than two people, with these individuals communicating each change with each other as soon as possible. The document was also consistently audited to ensure accuracy and compliance with FORSCOM requirements.

In recommending a course of action for any brigade to successfully maximize the pre-positioned fleet at NTC, I suggest tackling the issue as early as possible. Maximizing communication with supporting units early can mitigate last-minute changes to drawing pre-positioned equipment.

Capt. Heath A. Bergmann is commander of Dakota Troop, 299th Brigade Support Battalion, a forward support troop for the 5th Squadron, 4th Cavalry Regiment, 2nd Armored Brigade Combat Team, 1st Infantry Division, at Fort Riley, Kansas. He holds a bachelor's degree in general studies and a master's degree in safety, security, and emergency management from Eastern Kentucky University.

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Let's Talk!

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Sustainment mission command in a globally distributed environment

By Maj. Gen. Edward F. Dennis III July 8, 2016



In the vast, noncontiguous Pacific theater, the 8th Theater Sustainment Command (TSC) is responsible for building and sustaining land component and joint force readiness despite the "tyranny of distance." This globally distributed environment includes multiple theaters of operations full of geopolitical intricacies. Almost 25 percent of the U.S. active-duty military force is in the Pacific theater, spread across to time zones.

What the 8th TSC does not have is direct mission command relationships with subordinate enabling formations. Through a combination of directed authority, sustainment integration, designated roles and responsibilities, and relationships and influence, the 8th TSC controls a supply pipeline that it does not own.

TOP 5

AUGUST 1, 2
Senegalese
Readiness
exercise

AUGUST 1, 2
Neuroscic
battalions

JULY 31, 2016
In Roman
enemy for

JULY 28, 2016
Army jump
paratrooper

JULY 29, 2016
Army rec
America.

JULY 28, 2016
NCOs sought
assignments

JULY 28, 2016
Archives for
Lake Champlain

July-August 2016 issue of Army Sustainment magazine

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ARMY G-4

Optimized Mission Command: Using Authority and Influence

The Army G-4 document for importance of using command influence to manage command and support relationships in order to optimize readiness.

By Lt. Gen. @Glenne Press

FOCUS

Building the Green Power

What happened to the Theater Logistics Studies Program?

By Lt. Col. Gen. David K. Williams and @Randy Smith

FEATURES

Sustainment Mission Command in a Global, Distributed Environment

In the Pacific theater, the 8th Theater Sustainment Command applies the principles of mission command through operational influence rather than through direct control.

By Maj. Gen. Edward F. Dennis III

Optimized Design for Expeditionary Corps Support

The remainder of the 19th Expeditionary Sustainment Command describes the operational design that enables it to provide expeditionary support for 1 Corps' widely dispersed units.

By Major Gen. John "Jack" Haley

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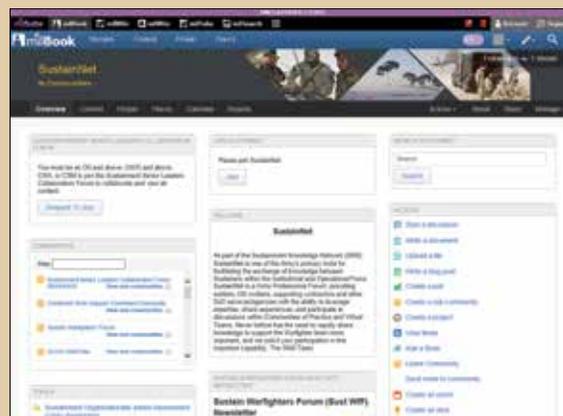


Sustainment Knowledge Centers

The Sustainment Knowledge Network (SKN) is a platform for rapidly disseminating and integrating sustainment information and knowledge among Sustainers within the Generating and Operating Forces. It is an enterprise-level “One-Stop-Shop” that gives you access to live video conferencing via SKN-Live, as well as archived conferences for information/training purposes. Utilize Knowledge Centers (KCs) developed to address the needs of Sustainers (OD,TC,QM, SSI and ALU), access logistics and sustainment lessons learned and tools designed specifically to improve the processes of sustainment organizations across the full spectrum of the Army’s operational construct. SKN links all aspects of Sustainment and Logistics which provides the means to rapidly produce, share and respond to the critical knowledge needs of our Soldiers and DoD Civilians whenever and wherever needed.

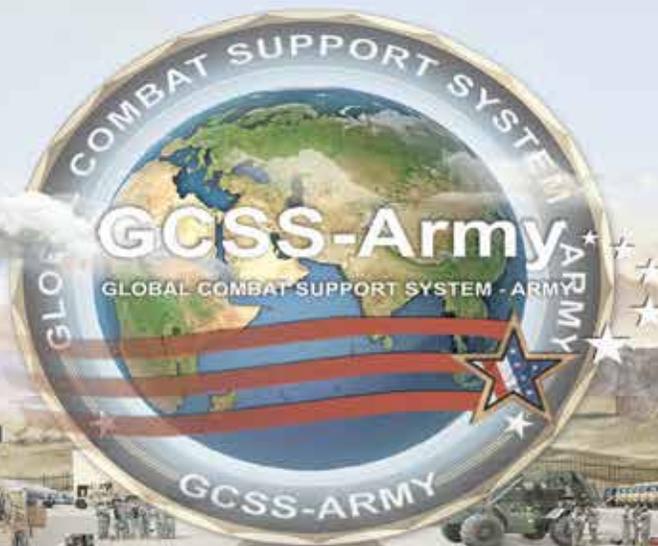
SustainNet

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