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NOVEMBER–DECEMBER 2014

ARMY SUSTAINMENT

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Preparing to Be
The Single Sustainment Brigade in Afghanistan

Inside

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ON THE COVER

A Soldier assigned to the 419th Combat Sustainment Support Battalion, 10th Sustainment Brigade, provides security in Afghanistan after his convoy escort team halted for a quick refuel. (Photo by Sgt. 1st Class Luis Saavedra)

FEATURES

TRAINING AND EDUCATION

"Our work ahead will be challenging and we will need collaboration, insights and contributions from across the Army as part of a continuous learning process."

Maj. Gen. Stephen R. Lyons, *Commanding General, Combined Arms Support Command, p. 2.*

DEPARTMENTS

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October 23, 2014

Dear *Army Sustainment* readers:

I am humbled and pleased to join the professionals on the CASCOM team responsible for delivering game-changing professionals and solutions. Our new Army Operating Concept (AOC), "Win in a Complex World," will shape our future force modernization efforts. This underscores the importance of our ability to rapidly deploy/employ Army forces as part of a joint, interagency, and multinational team to meet the full range of emerging requirements, thrive in conditions of uncertainty, and sustain combat power at the end of long and contested lines of communication.

The Army maintains the foundational theater capabilities to synchronize sustainment in support of the joint force commander's objectives by enabling freedom of action, endurance, and operational reach across tactical, operational, and strategic levels to "Win in a Complex World." In addition to BCT capability, the new AOC requires us to maintain sufficient enabler forces to rapidly open/surge a theater by establishing a robust and resilient logistical architecture of multiple routes, modes, and supply bases enabled by a reliable information and communications network.

Our Force 2025 design will be shaped by a series of FY15 sessions focused on the 20 Army Warfighter Challenges, lessons learned from Decisive Action CTC rotations, and continuous feedback from real world operations. Collectively these inputs will drive changes in DOTMLPF-P across the sustainment warfighting function, from tactical to strategic.

One of our most important missions in CASCOM is to deliver the future Army. Our work ahead will be challenging and we will need collaboration, insights and contributions from across the Army as part of a continuous learning process. I encourage everyone to stay engaged in the process by providing feedback in the form of writing articles, emails, or a phone call to the CASCOM staff.

It is an honor and a privilege to be serving as your CASCOM Commander and I take great comfort in knowing that our Army's competitive advantage is and will always remain the American Soldier. Thanks for your continued leadership and selfless service at this critical time in our nation's history.

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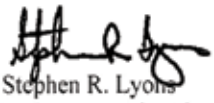

Stephen R. Lyons
Major General, U.S. Army
Commanding

Additional information, as well as back issues of *Army Sustainment* can be found at www.alu.army.mil/alog.

Mission Command and Logistics Interdependencies

■ By Dr. Christopher R. Paparone and George L. Topic Jr.

In this article, the fourth in a series of Blind Spot commentaries, we examine one more aspect of the relationship between mission command and logistics. This time we consider how best to deal with the mélange of organizational and process interdependencies that are vital to the health of our defense logistics enterprise.

For this discussion, we draw on James D. Thompson's 1967 book, *Organizations in Action: Social Science Bases of Administrative Theory*, as a theoretical underpinning for what we hope are useful and practical considerations for the logistics community.

Although unity of command is a longstanding principle of war, it cannot be a principle of logistics—at least not dogmatically at the enterprise level. Too many players and systems are involved to centrally regulate what is essentially a heterarchical, complex, adaptive, and interdependent network.

This network is continuously changing and shaped by many interacting events: war and politics, defense appropriations, science and technology, industry dynamics, international treaties and agreements, viability and reliability of transportation networks, sources of critical raw materials, and so forth.

It is hard to predict how these multifarious interactions unfold and what secondary and tertiary effects result as we inevitably tinker with just one or many of them. In other words, we need logisticians who cautiously exercise initiative as they intervene among these complex interdependencies. To help the logistics professional diagnose the interdependencies, we will lay out what we characterize as "degrees of coupling."

The least coupled degree of interdependence is what open-systems theorists call "pooled interdependence." (We don't make this stuff up—you can Google this term.)

We will illustrate using a sports analogy of a swimmer competing in an individual event. The overall outcome of a swim meet is largely determined by the relatively independent performance of the individual swimmers. A logistics example would be how the armed services, according to Title 10 of the U.S. Code, are responsible for logistically supporting their own formations.

Deconfliction is a management approach that works well in pooled circumstances—as long as one effective organization or process is not interfering with another, the overall outcome should be okay. A joint task force commander, for example, may decide to use service subordinate component commands as operational headquarters, establishing no requirement to share or provide mutual support among the components.

The middle range coupling is described as "sequential interdependence." A sports analogy here would be baseball, where the final score is based on players rounding the bases dependent on the previous batter's performance and so forth.

Likewise, a defense manufacturer's assembly line relies on a supply chain. Process methods, such as Lean and Six Sigma, reflect an approach to managing efficiencies in sequential interdependencies.

The highest degree of coupling is called "reciprocal interdependence," where the output of one organization becomes the input for others and vice versa. A good sports analogy is the fluidity found in a basketball or soccer game, where running, dribbling, passing, and shooting are dynamic, interrelated actions that may also make categorical definitions, such as offense versus defense, seem paradoxical because they are concurrent opposites.

Reciprocal interdependent partners' performance requires complex forms of continuous coordination. It is what the modern military refers to as the "common operational picture," which provides real-time knowledge of each other's actions in time and space to enable near-real time synchronization of requirements, procurements, and distribution at the enterprise level.

Also, as operational logistics capabilities are increasingly reciprocated among the functional components and others—interagency partners, allies, and the like—a key task for logisticians is ensuring well-established trusting relationships and systems for lateral communications across the joint logistics enterprise.

We propose that the more coupled interdependencies are, the more obscure the doctrinal tenets of mission command become because a single commander's statement of intent is inadequate. Understanding interorganizational degrees of coupling may help logistics policymakers and operational commanders appreciate the interdependent complexities of logistics at the enterprise level.

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A contractor teaches Soldiers from B Company, 2nd Battalion, 34th Armor Regiment, how to set up a solar shade system on July 10, 2014, at Camp Buehring, Kuwait. These shades typically reduce the shelter's temperature by 15 degrees and result in a 22-percent fuel savings. (Photo by Sgt. Woodbridge Dean Bullock)

Why Energy Innovation Is Critical to Military Budgets

■ By Dr. Christopher Wedding

Solar power and alternative fuels are not just for tree huggers. And I say that as someone with a doctorate in environmental management. In fact, I would argue that the U.S. military has more reasons than environmentalists have to purchase and deploy clean energy technologies such as solar, fuel cells, and advanced batteries.

Consider the proposed troop reductions and significant cuts planned for Department of Defense (DOD) budgets. Energy efficiency and renewable energy are two ways the military can generate savings in the midst of these changes. Think of them as force multipliers.

Operational Energy

U.S. military energy use is rising. The energy used for training, moving, and sustaining military forces and weapons platforms for military operations has increased tenfold since World War II.

According to a retired brigadier general who served as chief logistician for Gen. David Petraeus in Iraq, the DOD's 2010 bill for air conditioning in Iraq and Afghanistan exceeded $20 billion when manpower, a portion of the required infrastructure, and associated logistics were included in the equation. As a reference point, this exceeds the entire annual budget for NASA.

Operational energy use accounted for 80 percent of all energy used by the DOD in 2012. Imagine the scale of possible cost savings if these funds were reallocated to other critical security needs.

Why We Need to Use Energy Better

Although saving money is a driver of energy innovation and efficiency in the military, other factors are of equal or greater importance.

Soldier safety. Roughly 50 percent of materiel carried by convoy is fuel. The need for millions of gallons of fuel at forward operating bases presents risks. Fuel convoys in 2010 experienced 1,100 attacks. As of 2011, it was estimated that more than 1,000 casualties had occurred while protecting fuel convoys.

Mission effectiveness. If Soldiers are not guarding convoys full of fuel, they can focus on core security functions. For example, the Navy SEALs are experimenting with solar options to create "a leaner, greener tactical force" with quieter on-the-move power generation and water purification technologies. As Dorothy Robyn, former deputy undersecretary of defense put it, "Unleashing warfighters from the tether of [fossil] fuel … will significantly improve our mission effectiveness."

Predictability and resilience. Given the scale of the U.S. military, when the cost per gallon of fuel increases by even 50 cents, the additional costs to the DOD go up by billions of dollars. Especially in a constrained budget environment, this variability creates an undesirable dependence on fuel suppliers.

Secretary of the Navy Raymond E. Mabus Jr. summed it up well when he told the National Clean Energy Summit in 2011, "We buy too much fossil fuel from potentially or actually volatile places on earth. We buy our energy from people who may not be our friends. We would never let the countries that we buy energy from build our ships or our aircraft or our ground vehicles, but we give them a say on whether those ships sail, whether those aircraft fly, whether those ground vehicles operate because we buy their energy."

Increasing Investment Returns

In 2010 the DOD created the Office of the Assistant Secretary of Defense for Operational Energy in part to drive down the ever increasing energy demands of our forces. Its mission is to strengthen the energy security of the U.S. military by improving military capabilities, cutting costs, and lowering operational and strategic risk through better energy accounting, planning, management, and innovation.

Military leaders, such as former U.S. Army G–4 Lt. Gen. Raymond V. Mason and Katherine Hammack, Assistant Secretary of the Army for Installations and the Environment, have pushed for a much needed energy-informed culture. In this new paradigm, every Soldier is challenged to be a better energy manager for reasons that have very little to do with environmental policy.

There are plenty of reasons for the DOD to aggressively pursue clean energy now, and it has been doing just that in recent years. Based on my conversations with military professionals on the topic, here are several ways that the DOD could do more to benefit from energy innovation.

Dedicate more resources. The DOD should use more print materials, web-based education, local champions, and success-based incentives to create an energy-informed culture throughout its military ranks. This strategic decentralization and individual empowerment can exponentially increase the number of innovative ideas to lower energy budgets and increase resilience. This kind of education and training will increase the odds that new energy-related products and behaviors will lead to the DOD's desired goals.

Improve alternative energy financing. The DOD should make it easier to leverage third-party financing for its new alternative energy infrastructure. Although the military is engaging in contracts with the private sector to finance the capital expenses of alternative energy projects, most businesses find it confusing, time-consuming, and risky to pursue large projects with the DOD. Simultaneously, most clean energy investors and developers see the military as an ideal customer and partner given its scale (in scope and geography) and long-term stability.

Change the metrics for energy-related decisions. Leaders should consider the following types of factors when deciding what energy sources to use and when and where to use them:

- ☐ What is the difference in the cost of a gallon of diesel fuel at a forward operating base in Iraq and at a fixed installation in Virginia, including the cost and risks of transporting this fuel?
- ☐ What are the financial and strategic impacts of the electrical grid going down or power to a DOD base being cut off from time to time?
- ☐ How does the energy used during the operating life of a piece of equipment relate to its initial capital costs?
- ☐ Most importantly, how does a given energy option relate to Soldier safety?

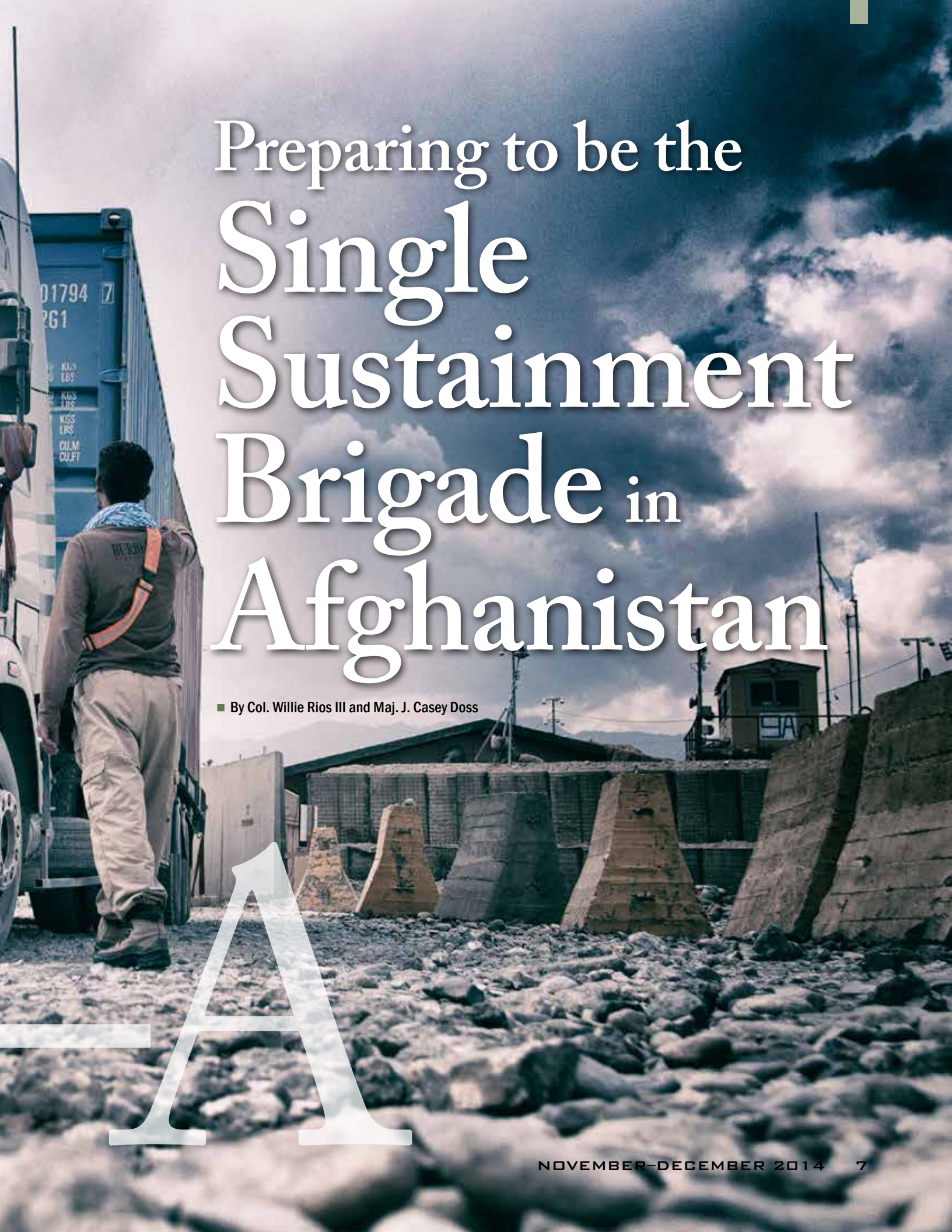
If these types of factors are considered when deciding what type of fuel is used, how much is used, and what kind of equipment is purchased, then energy costs and their related risks will likely go down.

By implementing the recommendations suggested in this article, the Army can create and nurture an energy-informed culture in which every Soldier is challenged to be a better energy manager, to innovate, to lower energy expenses, and to make well-informed decisions about energy use. This will go a long way toward stretching dollars in a budget-constrained environment.

Dr. Christopher Wedding is an adviser and professor focused on innovation, investment, and strategy in green building, solar power, and corporate sustainability. He is an adjunct faculty member at Duke University, the University of North Carolina at Chapel Hill, and the Institute for Defense and Business; the founder of IronOak Innovations, a strategy consultancy; and the co-founder of g-bit.com, a market intelligence software company.

A transportation management coordinator assigned to the 495th Movement Control Team records the numbers on trucks entering the inbound yard at Bagram Airfield, Afghanistan. (Photo by Staff Sgt. Michael K. Selvage)

CJOA



Preparing to be the Single Sustainment Brigade in Afghanistan

By Col. Willie Rios III and Maj. J. Casey Doss

As

10th Sustainment Brigade

Because sustainment brigades do not have a single, integrated training model for certification, a sustainment brigade commander has various options for developing a training plan to match the brigade's assigned mission, task organization, and available training resources.

As it prepared for its recent deployment to Afghanistan, the 10th Sustainment Brigade developed a set of training objectives relevant to its future mission and a training methodology in accordance with its available time, resources, and opportunities. By visualizing the brigade's future mission, the brigade staff developed pertinent training objectives and tasks and then, to achieve them, applied resources resident at Fort Drum, New York, and from across the sustainment community.

This article explains the training process, assesses how effectively the unit prepared for its deployment, and provides recommendations for other sustainment brigades' training plans.

Training Objectives and Methods

During the training phase of the Army Force Generation cycle, sustainment brigades commonly focus on certifying the brigade staff to conduct mission command and oversight of sustainment support operations, including the management of commodities, distribution, and services.

As it prepared for its fifth deployment to Afghanistan and its sixth deployment in the past 13 years, the 10th Sustainment Brigade had significant experience with its core sustainment and distribution functions.

However, the unit had only 14 months to reset, train, and prepare for its return to Afghanistan, and sequestration and resource constraints limited the brigade's training opportunities. The brigade quickly had to identify and resource training opportunities that it could organize into an integrated training model in order to achieve its objectives during an accelerated training phase.

Additionally, since the previous deployment, the theater had gone from having two sustainment brigades to only one as part of the drawdown, doubling the brigade's geographic span of support. The brigade's mission as the single sustainment brigade in support of six regional commands during the final phase of Operation Enduring Freedom required the unit to refine its training objectives.

The staff still needed to prepare to sustain and distribute supplies and services, but it would also have to train to facilitate a responsible drawdown of commodities, materiel, and contracts for the entire Combined Joint Operations Area–Afghanistan (CJOA–A).

The brigade needed to understand how the operational environment varied across the six different regional commands, each with its own unique support requirements and procedures, and how best to conduct mission command across a widely dispersed formation.

The brigade staff applied to its training strategy the observations, insights, and lessons learned that had been collected during the brigade's previous deployment and presented at its reverse collection and analysis team briefing. It also applied the ongoing analysis of the evolution of sustainment mission command and operations within the CJOA–A.

The Deployment Mission

As the single sustainment brigade in theater, the 10th Sustainment Brigade, Task Force Muleskinner, would conduct its core mission of tactical sustainment and distribution by providing mission command for three task-organized combat sustainment support battalions (CSSBs) and one special troops battalion. The command would also provide operational coordination for logistics across the theater, balancing the drawdown of commodities and services with the requirement to continue supporting ongoing operations.

The brigade headquarters would assist in synchronizing sustainment and retrograde operations in coordination with its sister organizations, an Army field support brigade, a U.S. Central Command materiel recovery element (CMRE), and a joint movement control battalion.

Task Force Muleskinner would support operations by coordinating with the six regional command headquarters to understand and anticipate their sustainment and retrograde requirements, by reinforcing the regional commands' brigade and aviation support battalions, and by providing sustainment expertise.

Finally, the brigade would influence upward as well by interacting with its higher headquarters and with strategic enablers to affect distribution pipelines that bring sustainment into theater and return equipment and commodities to the Army materiel enterprise.

The Training Plan

Although it would be difficult to replicate the complex operational environment within a single training event, the command prepared the staff through a progressive training model. Using a mixture of live, virtual, and constructive training events, the staff trained in various headquarters configurations, including a brigade tactical operations center, an expeditionary command post, and fixed facilities.

The brigade incorporated home-station resources in a series of command post, staff, field training, and live fire exercises, all conducted at Fort Drum. This training strategy maximized the use of home station

To prepare for its deployment, the 10th Sustainment Brigade conducts a rehearsal of concept drill with participation from the 3rd Expeditionary Sustainment Command, the 1st Theater Sustainment Command, Operations Group Sierra, and other sustainment brigades.

capabilities and economized resources by training with the brigade's division headquarters and sister brigade combat teams and combat aviation brigade. Extensive support from the 10th Mountain Division was instrumental to the success of this training plan.

The brigade also incorporated the greater sustainment community into its training strategy by participating in Leveraging Sustainment Organizations in the Continental United States–East (LSOC–East) and other programs. This provided the opportunity to train with the 1st Theater Sustainment Command (TSC) and expeditionary sustainment commands (ESCs) from both the active and reserve components.

LSOC–East provided the brigade with a venue to interact and train with the 3rd ESC, its future deployed higher command. This approach to training led the brigade to meet its requirements through robust and realistic, yet economically feasible, training.

Complementing and reinforcing these major training events, the brigade conducted two predeployment site surveys (PDSSs), a virtual right-seat ride prior to deployment, and a predeployment rehearsal of concept (ROC) drill supported by subject matter experts from higher, sister, and supported headquarters. Finally, oversight of the Fort Drum sustainment operations center helped to develop commodity management skills within the staff.

The brigade conducted a ROC drill before its deployment, which included participation from the 3rd ESC, the 1st TSC, the 101st Sustainment Brigade, the 15th Sustainment Brigade, the 43rd Sustainment Brigade, the 45th Sustainment Brigade, and Operations Group Sierra from the Mission Command Training Program at Fort Leavenworth, Kansas.

These training exercises collectively developed mission command capabilities, focused the brigade staff on the problems inherent to sustaining and retrograding the CJOA–A, and prepared the staff to anticipate challenges it would face upon transfer of authority.

Mission Command

Because the oversight of six noncontiguous regional commands would be a paramount challenge, the brigade's leaders prioritized mission command as part of its training strategy and ensured it was practiced across the staff.

Army doctrine defines the art of command as the creative and skillful exercise of authority through timely decision-making and leadership.

The science of control within mission command is the application of staff processes and systems to facilitate the commander's understanding and to enable mission accomplishment. Control requires an acknowledgment and understanding of the time required to execute operational concepts.

Each training event therefore included scenarios designed to challenge the staff to develop science of control measures using mission command systems to provide the commander with relevant information. This enabled the brigade commander to make decisions based on sound understanding and visualization of the operational environment.

While retaining a traditional staff structure, the brigade incorporated warfighting function working groups to assist the staff in developing measures necessary for effective mission command of sustainment and retrograde activities.

Muleskinner Climb

Although it was unable to participate in either of the Combined Arms Support Command's command post exercises (CPXs), the brigade conducted two major CPX events to train for its sustainment and retrograde missions.

The brigade staff developed and resourced the first CPX, called Muleskinner Climb, with support from several external agencies. The second CPX was part of the XVIII Airborne Corps' Unified Endeavor certifying training event.

The Muleskinner Climb CPX familiarized the staff with its future task organization and the challenges of sustaining and supporting retrograde across the entire CJOA–A. It introduced the new staff members to the brigade's battle rhythm and the processes through which the staff synchronized distribution, from requirements generation to execution.

With assistance from the Combined Arms Support Command, the National Simulation Center's Logistics Exercise and Simulation Directorate, and the Training Brain Operations Center, the brigade developed a realistic exercise scenario modeling a single sustainment brigade in Afghanistan. The exercise was conducted in an expeditionary tactical operations center within the Fort Drum training area, with the Fort Drum mission training center remotely stimulating the brigade's mission command systems.

The exercise included response cells from the 10th Mountain Division G–4, the 103rd ESC from Iowa, and the brigade's subordinate battalions, effectively replicating higher, lower, and supported echelons from multiple components.

Conducted in place of a CPX–functional (CPX–F), the exercise demonstrated the potential value in a Combined Arms Support Command CPX scenario and simulation that home-station mission training centers can facilitate.

Developing a robust, realistic scenario required significant effort from the brigade staff, the Logistics Exercise and Simulation Directorate, the Training Brain Operations Center, and the Fort Drum mission training center.

The CPX–F program should provide the same training value with much less effort and cost. However, the scenarios should remain flexible for the unit's specific training objectives and replicate the operational environment of the assigned mission or regional alignment.

The CPX–F ideally includes participation from ESCs, TSCs, division headquarters, and other strategic enablers, and it should be used to train in conjunction with Army Reserve and National Guard units. The LSOC initiative facilitates these complementary training efforts.

The Muleskinner Climb CPX included one-way mission command system feeds from the 548th CSSB's support to the 3rd Brigade Combat Team, 10th Mountain Division, during a Joint Readiness Training Center rotation. This provided the brigade staff with visibility of its subordinate battalion's operations.

However, the 10th Sustainment Brigade was unable to communicate with or provide mission command for the 548th CSSB during the exercise and could only monitor its operations. Although this reduced the training value for the brigade staff, the exercise serves as a technical proof of principle for future training possibilities.

The 10th Sustainment Brigade used a variety of home-station exercises to prepare for its deployment to Afghanistan.

During a key leader engagement in Afghanistan, the 10th Sustainment Brigade commander, Col. Willie Rios III, provides the chief of the Salang maintenance department with paperwork to complete a foreign excess personal property transfer. (Photo by Staff Sgt. Michael K. Selvage)

Connecting sustainment brigades at home station to combat training centers to provide mission command for echelons-above-brigade sustainment units would realistically and economically replicate sustaining a noncontiguous battlefield.

Mission Rehearsal Exercise

The 10th Sustainment Brigade also conducted a Unified Endeavor mission rehearsal exercise as its certifying training event and again employed resources from home station and the logistics community. Training audiences for the exercise included the XVIII Airborne Corps, the 10th Mountain Division, and other separate brigades.

Additional training enablers included the 1st TSC and 3rd ESC, who would serve as the brigade's higher headquarters during the deployment, deployed sustainment brigades and CMREs, and other strategic enablers. These units provided response cell and over-the-shoulder support during the exercise.

Operations Group Sierra conducted mission command academics with the brigade before the exercise and provided senior mentor and observer-coach/trainer support. During the mission command academics, Operations Group Sierra stressed the importance of organizing efforts along the warfighting functions, which would facilitate the staff's ability to provide the science of control within mission command.

Training with currently deployed sustainment brigades, future higher

A 10th Sustainment Brigade Soldier in Afghanistan places a tracking label on a 20-foot container before it is shipped back to an Army depot in the United States. (Photo by Sgt. 1st Class Luis Saavedra)

headquarters, and a supported regional command headquarters allowed the 10th Sustainment Brigade to better understand other headquarters' priorities and expectations, battle rhythms, and staff processes.

Training with a supported regional command set the conditions for a more effective integration upon deployment, both as a supporting sustainment organization and as a supported organization requiring movement and maneuver, fires, protection, and intelligence capabilities.

Including strategic enablers, such as the Defense Logistics Agency and Military Surface Deployment and Distribution Command, provided realism and helped the staff to understand and appreciate the complexity of the sustainment footprint within theater.

As the force moves toward a regional alignment, sustainment brigades should continue to participate in these warfighter exercises. This will ensure that staffs better understand the roles and responsibilities of the numerous sustainment organizations resident in a theater of operations and how they work together from the strategic to the tactical levels of war to distribute commodities and sustain the force.

Convoy Training

Because mission command of convoy escort team operations was a priority during the training cycle, each training event included convoy operations as a primary objective. During the CPXs, the brigade staff refined the science of control measures (the convoy battle rhythm, working groups, and tactics, techniques, and procedures) required to effectively employ intelligence and force protection enablers to mitigate risk.

The intelligence warfighting function practiced analyzing and assessing the threats along convoy routes across a geographic area roughly equivalent to the state of Texas and coordinating intelligence, surveillance, and reconnaissance assets.

Simultaneously, the movement and maneuver, fires, and protection warfighting functions within the operations section trained on coordinating with six separate regional commands in order to operate within their battlespaces and receive force protection enablers. These enablers included route clearance packages, electronic warfare, and air weapons teams.

This training culminated in a brigade convoy live fire exercise, which

included the brigade special troops battalion, the 548th CSSB, and assigned engineer and military police battalions.

The 10th Mountain Division developed and supervised this live fire exercise, called Muleskinner Peak. Supported and resourced by the division, the brigade staff trained on mission command procedures and the integration of convoy movements with aerial and ground enabling assets.

Observer-coach/trainers provided feedback during after action reviews, and the staff refined the internal processes that would later enable it to quickly assume its deployed mission to oversee and coordinate enablers for convoy operations across the CJOA–A. Further, subordinate units gained experience conducting live fire air-ground integration and medical evacuation operations.

Muleskinner Peak replaced a combat training center rotation for the brigade. It had extensive division-level resourcing and direct involvement from division general officer leaders, and it provided realism that is difficult to achieve in a CPX.

As the Army moves into an increasingly resource-constrained environment, it is critical that sustainment brigades continue to receive support from their associated divisions to conduct similar training.

Muleskinner Peak was an example of such support, and similar exercises in the future will assist the sustainment force in maintaining the hard-earned tactical procedures developed over the past 13 years of conflict.

Additional Training Events

The brigade's two PDSSs, virtual right-seat ride, and the predeployment ROC drill also enabled the staff to adapt quickly to its deployed mission within a dynamic operating environment. The PDSSs directly familiarized the staff with sustainment and retrograde operations within CJOA–A.

Continuing to observe operations virtually after returning to Fort Drum, the command team and staff maintained an understanding of the theater as it evolved, enabling parallel planning efforts.

This situational understanding further enabled the brigade to anticipate the dynamics of the theater within the first days of assuming the mission and to quickly and effectively respond to change.

Supporting sustainment mission command through the sustainment operations center at Fort Drum also paid dividends immediately upon transfer of authority in Afghanistan. Overseeing sustainment at Fort Drum developed and enforced the staff's skills as professional sustainers, in particular through manager review file oversight.

Developing professional skills at home station significantly reduced the turbulence to the CJOA–A as the brigade assumed the mission and allowed the staff to address the challenges of simultaneously sustaining forces and conducting materiel retrograde.

The success of the 10th Sustainment Brigade's training strategy depended on support from the brigade's higher division and the greater sustainment community. The resources and expertise they applied enabled the 10th Sustainment Brigade to effectively prepare for its deployment.

Without external support from both maneuver and fellow sustainment forces, sustainment brigades cannot effectively train for deployment. The brigade's progressive series of live, virtual, and constructive training events enabled staff members to become proficient in their assigned duties, understand the brigade battle rhythm, visualize the theater of operations, and understand the brigade's role within sustainment, distribution, and retrograde operations.

Perhaps most importantly, these exercises cultivated the staff synergy required to solve complex problems that require critical thinking and nonstandard solutions.

> These training exercises collectively developed mission command capabilities, focused the brigade staff on the problems inherent to sustaining and retrograding the CJOA–A, and prepared the staff to anticipate challenges it would face upon transfer of authority.

By conducting all of its collective training at home station, the brigade could effectively train for its assigned mission while economizing its efforts. This training strategy can be an example for other sustainment brigades wanting to achieve training readiness in a resource constrained environment.

Col. Willie Rios III is the commander of the 10th Sustainment Brigade. He has a bachelor's degree in business administration from Texas Southern University and a master's degree in military arts and science from the Command and General Staff College. His military education includes the Senior Service College as a 2011 Scowcroft Institute of International Affairs Fellow at Texas A&M University and the Army Command and General Staff College.

Maj. J. Casey Doss is the executive officer for Task Force Muleskinner and the 10th Sustainment Brigade. He has a bachelor's degree in literature from the United States Military Academy and a master's degree in history from George Washington University, where he is currently a doctorate student. He is a graduate of the Combined Logistics Captains Career Course and Intermediate Level Education.

A crane lifts a military tactical vehicle onto a flatbed truck at the redistribution property assistance team yard, Camp Liberty, Iraq, in October 2011. (Photo by Capt. Kurt Rauschenberg)

Ensuring Army Eq

DMC

uipment Readiness

By Col. William Krahling and Matthew Meenan

The Army Sustainment Command's (ASC's) Distribution Management Center (DMC) is a brigade-level command that serves as the materiel management and distribution integrator for Army commands, Army service component commands, and corps.

The DMC is essential to building and sustaining Army equipment readiness. It has become the Army's materiel management center, synchronizing equipment from multiple sources and multiple managers and including all parties in the Army's equipping strategy. This effort is key to enhancing readiness for the Army of 2025.

The DMC provides materiel readiness and management by equipping the force, providing supply management and oversight for logistics readiness center (LRC) supply support activities, and assessing workload and maintenance

capabilities at the ASCs supporting LRCs. The DMC also synchronizes strategic-level mobility support by coordinating efforts between the LRC installation transportation offices and the Military Surface Deployment and Distribution Command.

As the operational arm of the Army Materiel Command (AMC), ASC provides AMC capabilities to the force, both at home and abroad. Working with the Army field support brigades and LRCs, the DMC provides an end-to-end capability to deliver equipment from the national industrial base to tactical units located across the globe.

By bringing materiel management back to the Army, the DMC is responsible for enabling Army readiness. This is done by leveraging and synchronizing materiel managers across the Army, allowing the DMC to take the lead in reshaping and modernizing the force.

Lead Materiel Integrator

The Secretary of the Army designated AMC as the lead materiel integrator (LMI) in March 2011, and ASC assumed the role of synchronizing and integrating Army equipment according to Army priorities and directives. ASC serves as the executing agent for the LMI and is the Army's primary synchronization point. As such, ASC ensures the right materiel is provided in the right quantity and condition and delivered to the right place at the right time.

Redistribution across commands allows excess equipment to be matched with identified shortages, which promotes enterprise-level readiness and reduces the need to procure items already in the inventory. LMI analysis can determine when the Army has neither current shortages nor projected future shortages of a given piece of equipment.

In such situations, DMC directs responsible divestiture of excess equipment, removing it from inventory and reducing the storage and maintenance requirements for equipment that is no longer needed. A common thread in all LMI practices is the opening of communication channels among stakeholders.

Balancing the Force

The focus on synergy among Army commands, program managers, and the Army G–3 and G–8 promotes optimal decision-making and the agility to adjust to emerging requirements. The LMI balances the force based on present requirements and authorizations and can analyze future production schedules and authorizations.

The capability to gain insight on future readiness for a given unit or piece of equipment allows managers to influence a long-term strategy. The DMC can accurately identify excess and fill requirements in a fiscally constrained environment. This allows the Army to adjust its procurements, reset, and redistribution, which reduces duplication and underutilization of assets in the inventory.

In the past, legacy processes relied on commands to balance themselves by requisitioning for shortages and disposing of excess equipment on their own. The LMI uses data from the Logistics Support Activity's Logistics Information Warehouse to gain enterprise-level visibility of materiel.

The Logistics Information Warehouse uses the LMI Decision Support Tool to pull data, including unit equipment authorizations (current and future) and quantities on hand. This enables ASC's materiel and unit integrators to work with program managers, life cycle management commands, and higher headquarters to perform readiness analysis and propose sourcing decisions. The DMC proposes sourcing for distribution of new procurement and depot stocks and for redistribution of command-identified excess.

Organizational-Level Readiness

One way the DMC enhances readiness through the LMI is at the organizational level. The modernization effort for the Eighth Army in Korea is an excellent example of the power that the LMI can bring to bear.

The DMC enhanced readiness on the Korean Peninsula, improving equipment on hand by more than 10 percent in fiscal year 2012. This mission also supported efforts to modernize the entire 2nd Infantry Division and source the attack reconnaissance squadron in Korea.

Enhancing Installation Readiness

The DMC can also enhance readiness at the installation level. One example of this occurred at Fort Hood, Texas, where the DMC identified potential readiness increases across the installation. The DMC's recommendations for materiel redistribution across commands on the installation resulted in a readiness increase of 2.9 percent and a greater than 5 percent increase in equipment fill within one division—all without incurring second-destination transportation costs.

Ensuring Visibility and Readiness

The DMC's holistic view of the Army's materiel inventory allows for effective redistribution of equipment. Whether it is moving equipment from the theater of operations back to depots or across commands to reduce excess and fill shortages, the DMC analyzes alternatives and directs redistribution to ensure strategic readiness and minimize shipping and storage costs.

The DMC also directs and redistributes equipment in response to the reorganization and modernization of the Army Pre-positioned Stocks Program. This modernization will allow our forces to operate with strategic flexibility and depth.

End of Life Cycle Management

The Army is executing several concurrent operations to divest itself of equipment that is in excess of future force requirements, reorganize brigade combat teams, and modernize our forces to regain balance and drive readiness to support the

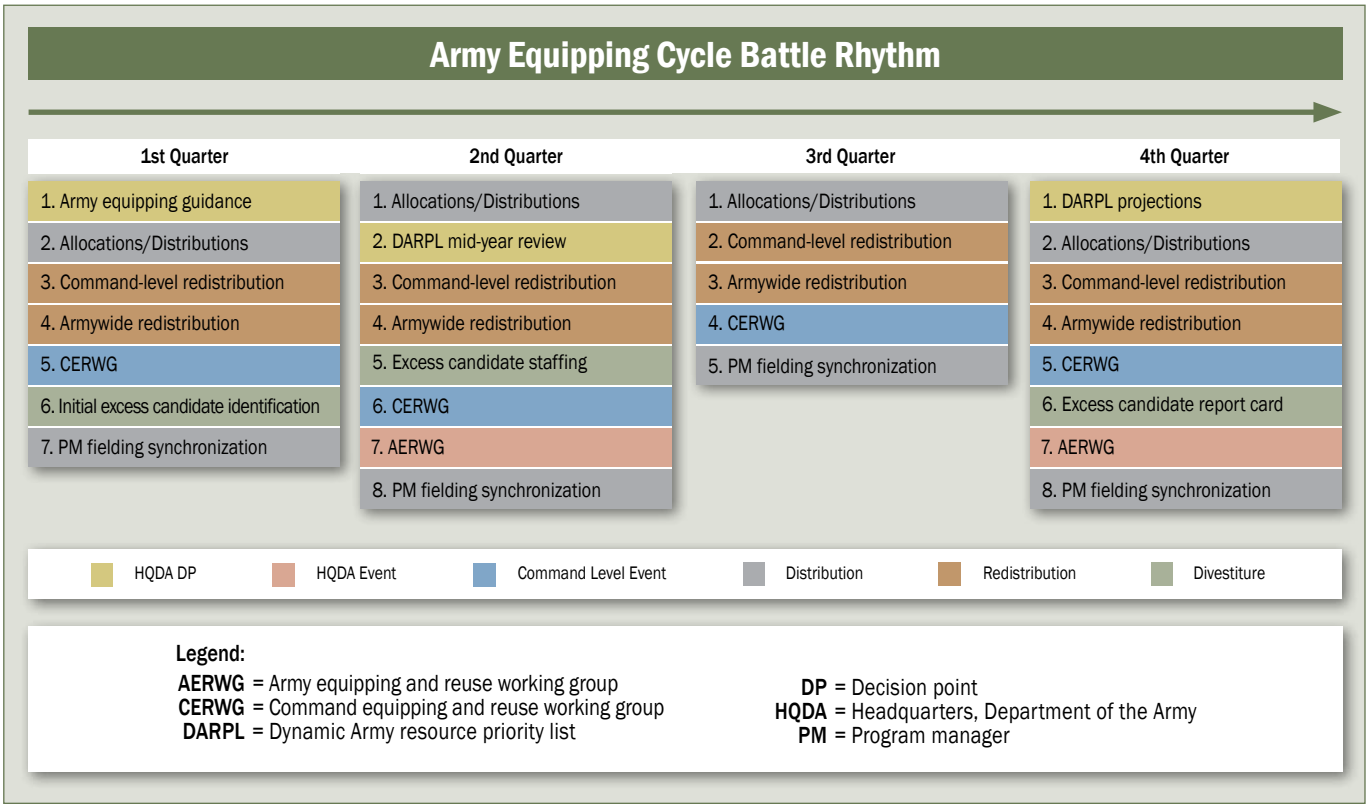


Figure 1. The Army equipping cycle battle rhythm represents a sequenced approach to materiel management. This approach allows for cyclical redistribution of equipment and optimization from the ground up. This enhances command visibility and enables readiness and modernization efforts.

Army's missions. Supporting this effort, the DMC identifies Army surplus for reutilization, divestiture, potential use as excess defense articles in support of foreign military sales, and disposal.

Army Equipping Strategy

Today, the significant events in the materiel management process are nested in the G–8's Army equipping strategy. This approach incorporates a sequential method to enable the Army to meet the equipping goal of achieving balance. (See figure 1.)

As the DMC's mission evolves, the sequencing of distribution, redistribution, and divestiture of equipment will lead to a number of efficiencies. These include increased predictability in tracking on-hand equipment, greater ease of adjusting to emerging requirements, and increased accountability.

The DMC's sequenced approach to materiel management will lead to increased efficiency as key decisions and actions are executed concurrently. First, as the Army provides its quarterly materiel allocations, DMC representatives will engage life cycle management commands and Army commands, directing distributions to units based on priority. Next, commands will balance themselves internally, identifying excesses and shortages and directing the transfer of materiel among units.

Once command shortages and excesses are identified, ASC will coordinate an intercommand redistribution effort. Then the DMC will direct the transfer of materiel across commands and the divestiture of enterprise-level excess. To ensure that Army meets readiness goals, materiel management forums are in place throughout the equipping strategy.

The DMC's approach to materiel management by line item number, unit, command, and across commands provides the Army the visibility to see itself. This visibility establishes the environment to create balance in the force and continues to build and sustain Army readiness.

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Developin in Complex C

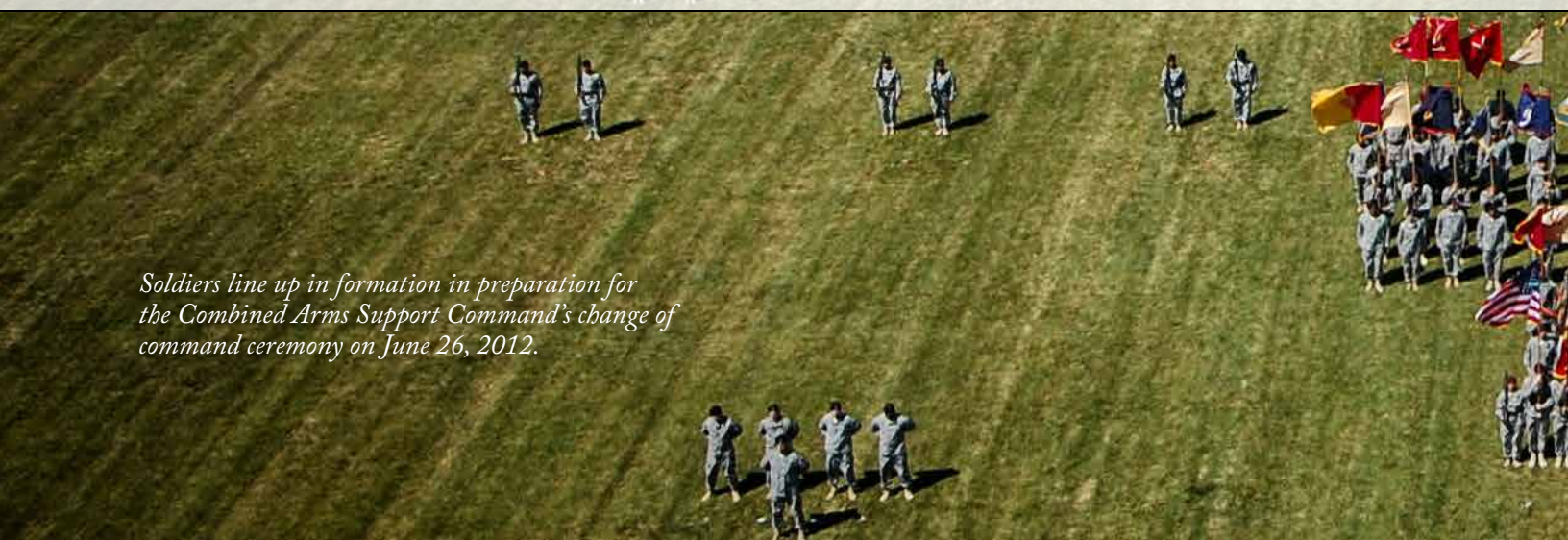
The military's resource pools were significantly upsized to support the overseas contingency operations of the last decade. However, the military is now facing a smaller budget and must adjust accordingly.

The transition to a new normal for resourcing and requirements will present significant challenges for commanders and planners. Organizations looking to get ahead of the changes will need a well-developed and synchronized strategy communicated as a strategic plan, especially in organizations with multiple subordinate schools, sections, and directorates.

Developing the Strategy

The Combined Arms Support Command (CASCOM) approved the CASCOM Strategic Plan for 2014 in October 2013. The plan was the culmination of a yearlong strategy development and writing process. It was also the continuation of the execution phase of the plan, rather than the beginning of it.

The strategy development process starts with the commander's guidance, which drives a series of questions to create a problem statement. Developing the CASCOM strategy started with the following problem statement: How does CASCOM, as



Soldiers line up in formation in preparation for the Combined Arms Support Command's change of command ceremony on June 26, 2012.

g Strategy Organizations

■ By Lt. Col. Stacey Lee

the Army's sustainment think tank and premier learning institution, develop a common operational picture across the organization that integrates and synchronizes the command's efforts to support the current force and build the future force that fully supports Training and Doctrine Command (TRADOC) and Army goals?

The CASCOM commanding general added the following initial guidance, or minimum conditions:

- ☐ The plan must account for the operational environment to allow the organization to anticipate the requirements of the warfighter.
- ☐ The plan must be tied to the budget and prioritization processes in order to achieve maximum resource efficiency.
- ☐ The plan must have a governance process that is synchronized with the TRADOC, Army, and Joint timelines to give the commander maximum decision-making time.

The commanding general also directed that the strategic plan capture relevant day-to-day functions that support and enable the long-term strategy. The guiding document for CASCOM that details the command's daily activities is TRADOC Regulation 10–5–5, Organization

and Functions: U.S. Army Combined Arms Support Command and Sustainment Center of Excellence.

The Purpose

Why do you need a strategic plan? The easy response in any military organization is to say "because the commander directed us to write a plan." But that diminishes the power that the staff and subordinates bring to developing the commander's understanding.

A strategic plan is a communication tool that captures the commander's vision for the organization in a clear and consolidated form that is available to every member of the organization.

The decision to write a strategic plan generally comes from a desire to understand and respond to uncertainty in a manner that aligns resources with accomplishing critical goals, such as communicating direction, providing a framework for decision-making, detailing measures for accountability, and stimulating and driving change.

Communicate direction. Strategic plans are, first and foremost, strategic communications tools. A strategic plan that is tailored to the audience—internal or external— allows leaders to set the long-term direction of the organization.

Provide a framework for decision-making. Once the long-term vision is established and communicated, it is critical to establish a governance structure that allows the organization to monitor, assess, and adjust plans, disseminate shaping guidance, and consolidate data into information that can be used to make timely decisions.

Detail measures for accountability. Executing the strategy is directly tied to assigning responsibility for specific goals and objectives (or key tasks). If the focus is on the factors that are critical to success as detailed in the commander's priorities, then each objective needs to be assigned to a critical asset.

Stimulate and drive change. Once the governance structure is in place and key assets are focused on the goal, the last critical step is stimulating or driving change, which is about providing key resources to the right effort at the right time and working to keep the team focused on the vision.

Accounting for the Environment

Environmental understanding is about evaluating the possible effects—internal and external—of forces and stressors on the organization. Effects can be positive or negative; understanding and acting accordingly are critical to the strategy. Understanding the environment is about answering these types of questions:

- ☐ What is the current state of the organization?
- ☐ What assets do I have at my disposal, and how will the assets change during the period covered by the strategic plan?
- ☐ Who or what are the key drivers in the environment that can influence the organization?
- ☐ Who or what is the primary focus (customers or priorities), and how does the organization monitor progress in meeting their demands?
- ☐ What mechanisms are needed to monitor and assess changes in the environment over time?
- ☐ How do I communicate changes to the plan as it evolves?

The answers drive organizational dialogue and set conditions for further assessment of the current and desired states. The answers also highlight what challenges lie on the path between the two.

Determining Progress

Assessing progress during plan implementation is about establishing key performance measures, performance targets, and timelines that correspond to goals and objectives. Incorporating feedback is also critical to assessing performance, and progress is determined by developing and monitoring quantifiable indicators. Three key components are detailed milestones and metrics, a supporting and active governance structure, and a method to capture and present information clearly and concisely.

Determining what you need to measure is the driver that translates actions into results through your governance process. It is also one of the most daunting and confusing tasks. It is helpful to use these practical steps in the effort:

- ☐ Start building metrics with the strategic objectives as the defined objective; tie the goals and objectives to quantitative measures.
- ☐ Identify key drivers, and stay ruthlessly focused on enabling their success.
- ☐ Integrate the perspective of your key drivers and influencers.
- ☐ Develop a clear, concise set of metrics. Keep score using the strategic objective definitions.
- ☐ Continually refine and reassess. Let feedback and environment drive your actions.

Successfully determining progress is an iterative process that involves the entire organization and does not end with the publication of the strategy. Once the strategy is developed and the frame of the strategic plan is completed, the next step is to capture the strategy in the guiding document.

Writing the Strategic Plan

The strategy development process refines the organization's understanding of the mission, vision, and end state. That process is then communicated both internally and externally in a written plan.

In the same way that the operations process results in an operation order or fragmentary order, the strategy development process results in a strategic plan. The strategic plan is the story of how the command plans to get from the current organization to the future desired organization.

Strategic plans can range from a few pages of highly compressed information to exhaustive tomes with

countless appendices for further information. At minimum, effective strategies cover the following:

- ☐ The current state, which answers what the organization is, what it does, what it does well, its challenges, and its primary customers.
- ☐ The desired future state, including where the organization is going, what it wants to achieve, and its time frame for measuring success.
- ☐ A path or plan to get from the current state to the desired state, which describes how the organization will leverage assets to drive it toward the desired future.
- ☐ A set of goals or metrics to monitor and assess the plan's progress.

The current state is the current mission with any contributing history, trends, or cycles that are relevant. It clearly defines the most urgent and important issues as they relate to the current situation and the purpose of the plan. Key issues are usually those strengths, weaknesses, opportunities, threats, capability gaps, and barriers that affect the organization's performance.

The desired state is the organization's vision in narrative form. It is a clear and concise description of how the organization will look at some future point that is listed as set of goals and objectives delineated in a timeline.

The following components, at a minimum, are normally included in the desired state:

- ☐ A narrative description of the aspirations of the organization.
- ☐ Goals or objectives defined in relation to time—the mid-term or long-term future.
- ☐ Scenarios or courses of action that serve to guide milestones and decisions to be made.
- ☐ Key points for leaders to share the vision and make decisions in line with common objectives.

The path between the current and desired states is the core of the strategic plan and generally consists of a sequence of steps or activities that must be achieved for a strategy to succeed. The path can contain some of the elements of day-to-day activities but is framed at the organizational level, not the individual level. It is frequently revisited to ensure it fits.

The plan's progress must be continually assessed. Ultimately, any plan is graded against whether or not the stated outcomes are achieved within the time stated and within established constraints.

The results of the assessment are revisited constantly so that the path between current and desired remains relevant and up-to-date. The feedback loop also allows decision-makers to provide course correction guidance as needed.

Ensuring Realism

For the Army and the sustainment community in general, the transition to a resource-lean era makes a coordinated strategy critical to getting ahead and staying ahead of changes in the environment.

The plan has to be realistic. It must focus on determining how to hurdle barriers, measuring the adequacy of available and projected resources, having and keeping the right people, maintaining a fiscally sound organization, and establishing realistic timelines.

Assessing realism is about answering the following questions:

- ☐ Is the language clear, concise, and tailored to the target audience?
- ☐ Is assessment a written and iterative part of the governance process?
- ☐ Are priorities concise, balanced, logical, and quantitative rather than qualitative?
- ☐ Is redundancy built into the information gathering and validating processes?
- ☐ Are assumptions and the underlying logic revisited on a frequent and public basis?
- ☐ Has the entire organization bought in to the strategy?
- ☐ Is the language in the plan being used daily and in performance evaluations?

Developing a strategy for complex organizations can be daunting. Picking the right development approach is simply the opening move. Effective strategy answers four questions: where are we now, where are we going, how will we get there, and how will we measure our progress?

An organization that is flush with resources may be stymied by an "if it isn't broken, don't fix it" mentality, but even in good times, organizations should have a conversation about the importance of a strategy to achieve efficiency.

A strategic plan is the strategic communication tool for sharing the organization's vision both externally and internally. From a culture standpoint, everyone will know that the leaders are serious about executing the plan when the organization as a whole starts to use the language in the plan and periodic evaluations are tied to that language.

When asked in an interview about his strategy and planning for the boxing ring, Mike Tyson said, "Everyone has a plan until they get punched in the face." His point was that every plan has to be flexible, and flexibility has to be forethought and not afterthought.

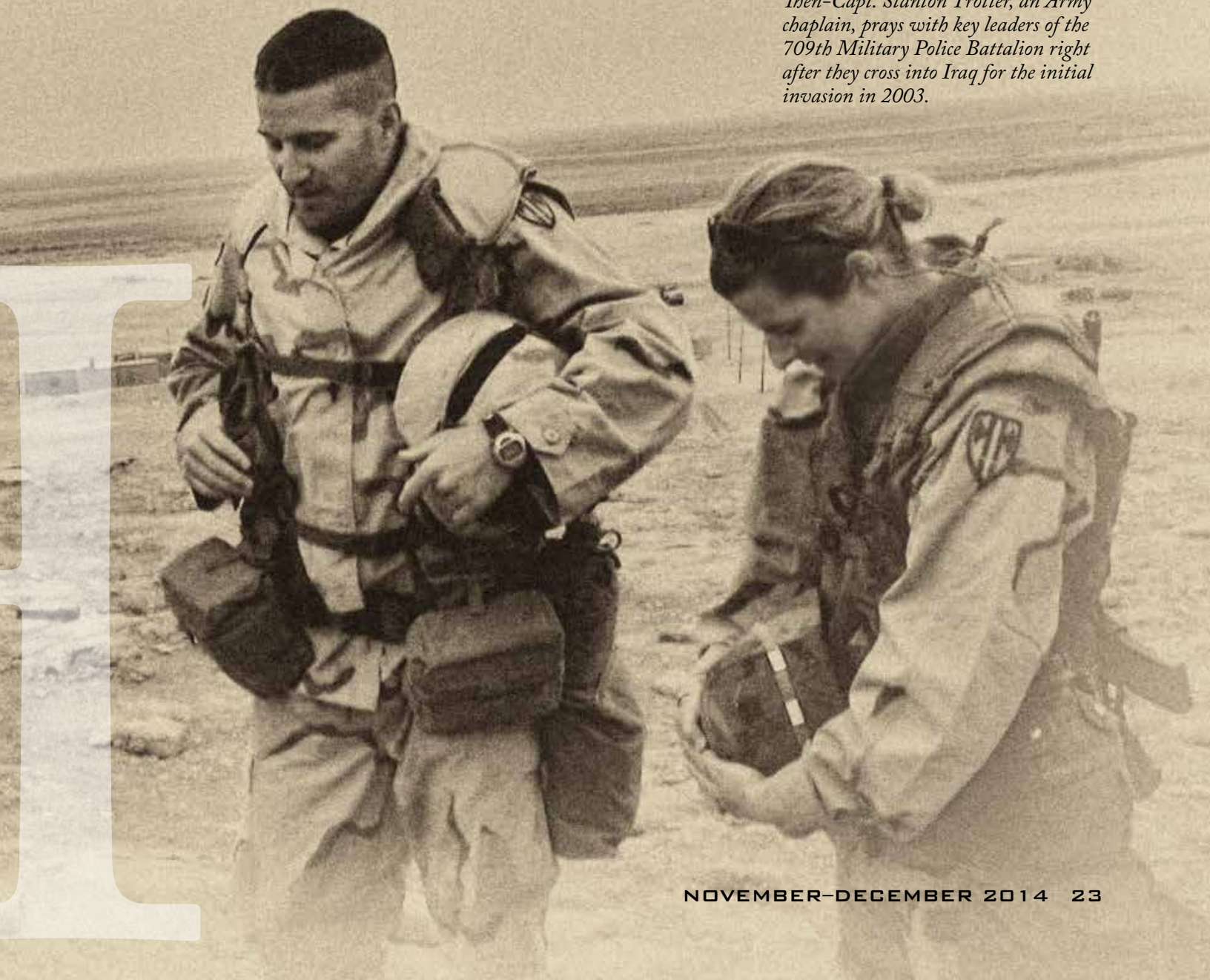
An internalized strategy has flexibility built in that accounts for changes in the environment. The first test or major challenge to the strategy will determine whether the organization has bought in or if the desired resiliency is simply an illusion.

Lt. Col. Stacey Lee is assigned to the Combined Arms Support Command as the Deputy Director of the G-3/5 Operations, Plans, and Strategy Directorate. He holds a bachelor's degree in biochemistry from Clemson University, an MBA from Norwich University, and a master's degree from the School of Advanced Military Studies.

The Combined Arms Support
Chaplain Capabili

t Command
ities Developer

■ By Maj. Stanton Trotter



Then-Capt. Stanton Trotter, an Army chaplain, prays with key leaders of the 709th Military Police Battalion right after they cross into Iraq for the initial invasion in 2003.

The Army Chaplain Corps touches every level of Army operations, from tactical to strategic, in order to nurture the living, care for the wounded, and honor the fallen. Since Gen. George Washington established the Chaplain Corps on July 29, 1775, approximately 25,000 chaplains have served in over 270 major wars and combat engagements. History is replete with examples of the remarkable contributions chaplains have made to Soldiers in combat. Nearly 300 chaplains have laid down their lives, and eight have been awarded the Medal of Honor.

As the Army prepares for the operations of 2020 and beyond, the Chaplain Corps, a key component of the sustainment warfighting function, is actively engaged in assessing its capabilities for the future. One way they are doing this is through the integrated efforts of one chaplain assigned to the Combined Arms Support Command (CASCOM). This article addresses the benefit and overall impact on the Army of assigning a chaplain to CASCOM.

The Chaplain Capabilities Developer

CASCOM is the Army's sustainment "think tank," where sustainment capabilities are developed and assessed. The Army Chaplain Center and School has a Capabilities Development Integration Directorate responsible for actively engaging in the capabilities development process of the Chaplain Corps.

In order to link the capabilities development and integration efforts of CASCOM and the Chaplain Center and School, the Chaplain Corps assigns a chaplain to CASCOM as a chaplain capabilities developer within the Sustainment Battle Lab. Placing a chaplain in the Sustainment Battle Lab ensures that Chaplain Corps capabilities and requirements are considered and integrated into overall sustainment capabilities and requirements for the future Army.

The current chaplain capabilities developer is a major and a graduate of Intermediate Level Education (ILE) at the Command and General Staff College at Fort Leavenworth, Kansas. The resident ILE studies, along with the Capabilities Development Course, exposed him to the strategic-level Army planning needed for effectively assessing Chaplain Corps capabilities and requirements in the Joint Capabilities Integration and Development System (JCIDS).

JCIDS

JCIDS is the formal Department of Defense process for determining future acquisition requirements. It assesses current capabilities and future defense programs in order to recommend resourcing priorities to mitigate capability shortfalls. JCIDS

Capt. Seung-Il Suh, an Army chaplain with the 10th Combat Aviation Brigade, 10th Mountain Division, Task Force Tigershark, prays during a Sunday service at Forward Operating Base Salerno, Afghanistan, July 17, 2011. (Photo by Staff Sgt. Ben K. Navratil)

provides an analytical assessment that provides the services with the means to balance and prioritize resourcing equities.

Within this process, capability developers study the likely future operational environment and then assess what is needed to ensure success in future missions.

IRDS CONOPS Assessment

A good example of JCIDS analysis is the chaplain capabilities developer's assessment of the Interim Remains Decontamination System (IRDS) concept of operations (CONOPS).

The ability to safely recover, identify, and return contaminated human remains to the Unities States is a well-documented requirement that can be achieved by implementing the IRDS. Once the CONOPS was written, outlining how the IRDS would be fielded and used, the chaplain capabilities developer helped to conduct a comprehensive analysis across each of the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF–P) domains. This resulted in an official DOTMLPF–P assessment that accompanied the IRDS CONOPS.

The chaplain capabilities developer was an integral member of the IRDS concept development and DOTMLPF–P assessment team. He used his firsthand expertise with casualties on the battlefield and his interaction with mortuary affairs personnel to produce a comprehensive DOTMLPF–P assessment that validated the overall IRDS concept in preparation for the system's use throughout the Department of Defense. In this instance, having the chaplain as part of the IRDS team gave the Chaplain Corps a proactive preview of the future battlefield and how chaplains can prepare now.

Downsizing Capabilities

Another example of the CASCOM chaplain's capabilities assessment duties is the restructuring of the force during the Army's present downsizing. The CASCOM chaplain proactively engages senior planners and decision-makers to ensure the Chaplain Corps is kept aware of force restructuring and its associated implications for religious support.

This awareness ensures the Chaplain Corps appropriately assigns the correct number of chaplains throughout the Army. Assessing capabilities allows the Chaplain Corps to seamlessly continue providing the best religious support possible while the Army is changing and evolving.

Globally Responsive Sustainment

The CASCOM chaplain capabilities developer is also involved in the Globally Responsive Sustainment (GRS) initiative. GRS is the strategy to evolve the Army's current sustainment footprint into a leaner and smarter sustainment force capable of meeting the needs of tomorrow's Army.

As the Army transitions to an Army of preparation, the sustainment think tank is proactively analyzing how the Army can better sustain itself globally. The focus of GRS is to weigh current capabilities against future requirements, identify unnecessary redundancies, and provide solutions to support and train Soldiers and leaders for the next fight.

The CASCOM chaplain capabilities developer plays a critical role in determining and integrating religious support within the GRS framework. Key implications for the Chaplain Corps are how and where on the battlefield unit ministry teams will be located and where low density chaplains (for example, Catholic chaplains) can tie into already established logistic nodes and infrastructure.

Chaplain Corps involvement in the sustainment capabilities determination process is critically important because the Army cannot wait until the next battle to figure out what sustainment looks like. Providing religious support, along with the other sustainment functions, must be considered early on in order to provide effective GRS support.

Chaplain Corps involvement in the sustainment capabilities determination process is critically important because the Army cannot wait until the next battle to figure out what sustainment looks like. Providing religious support, along with the other sustainment functions, must be considered early on in order to provide effective GRS support.

The CASCOM chaplain capabilities developer is exactly where the Army needs him—right in the middle of the Army sustainment think tank, helping prepare the Army for the future. He does this through critical planning and interaction with CASCOM and Chaplain Corps key leaders. The religious support provided to Soldiers on the future battlefield will be directly connected to the work that the CASCOM chaplain capabilities developer does today.

Maj. Stanton Trotter is an Army chaplain and the chaplain capabilities developer for the Combined Arms Support Command. He holds a bachelor's degree in religion from Methodist College and a master of divinity degree from Claremont School of Theology. He is a graduate of the Chaplain Basic Officer Leader Course, Chaplain Captain Career Course, Brigade Chaplain's Course, Airborne School, Advanced Airborne School, Air Assault School, Joint Planners Course, Capabilities Developer Course, How the Army Runs (Force Management) Course, and Intermediate Level Education.

Korean Service Corps cargo carriers use A-frames to carry food and ammunition to a regiment of the 1st Marine Division on ridges of the central mountains in Korea on June 8, 1951. (Courtesy photo)

The Korean Service Corps Battalion

■ By Maj. Michael J. Lee

The special relationship forged in war between U.S. Soldiers and the Korean Service Corps (KSC) remains as strong today as it was more than 60 years ago. Just as it was before the forklift replaced the A-frame carrier, the KSC Battalion is an integral part of meeting critical needs on the Korean Peninsula.

The KSC Battalion consists of 2,185 paramilitary personnel who work to make it South Korea's premier organization for providing support to U.S. Forces Korea (USFK) and Eighth Army. Some of the hallmarks of the KSC Battalion are its flexibility, adaptability, and continual ability to meet new and emerging requirements.

The Birth of the A-Frame Army

Facing a severe fighting strength shortage along the Busan perimeter during the Korean War, Lt. Gen. Walton H. Walker, the Eighth Army commander, knew an infusion of Korean manpower could relieve his Soldiers of supply distribution duties and get them back into the fight.

Korean President Syngman Rhee responded to Walker's call for manpower by signing an emergency decree on July 25, 1950, that directed the Republic of Korea (ROK) Army to provide civilian carriers to haul supplies to the front line. The result was the creation of the Civilian Transportation Corps, which later was renamed the Korean Service Corps. Thus began a unique relationship between the Korean people and the Eighth Army.

For the duration of the Korean War, the KSC carried ammunition, fortification materials, food, and supplies to

U.S. Soldiers and Marines fighting on the front line. Despite harsh weather and the threat of hostile action, KSC members (usually referred to as KSCs) traveled by foot through steep, rugged terrain that was inaccessible by vehicle.

KSCs served at Pork Chop Hill, Old Baldy, Carson, Vegas, and numerous other locations that are famous for the most intense fighting of the Korean War. They brought supplies and helped build bunkers during the day and evacuated the dead and wounded before nightfall.

U.S. Soldiers nicknamed the KSC the "A-frame Army" for its wooden backpacks. The KSC grew to more than 133,000 personnel at the height of the war.

The KSC Battalion Organization

Today the KSC Battalion, a flagged battalion commanded by a U.S. Army lieutenant colonel, is task organized into 17 organic companies geographically dispersed across the peninsula from Panmunjom in the north to Busan in the south.

The KSC Battalion is the largest battalion in the U.S. Army and executes mission command for 2,188 Soldiers and paramilitary KSCs who provide heavy equipment transporter (HET) support, fire support, air traffic control, water survival training, maintenance, medical evacuation, and linguistic support to USFK and Eighth Army. The battalion also provides multifunctional support to the garrisons throughout Korea.

On order, it expands to wartime strength to provide continuous support to U.S. forces on the peninsula. The KSC Battalion is a part of the Materiel Support Command–Korea of the 19th Sustainment Command (Expeditionary).

The KSC Battalion Mission

The KSC Battalion provides mission command for the Korean Peninsula's only HET company, the 7th KSC Company (HET), which transports combat platforms in support of the 2nd Infantry Division to various training areas in the northern corridor just south of the Korean Demilitarized Zone.

The 7th KSC Company's HETs conducted 1,651 missions and drove more than 72,460 miles moving combat platforms in 2013. All of these miles were driven with zero at-fault accidents. This is a prodigious achievement considering the inherent risk associated with routinely moving combat platforms at night.

Equally impressive is the Incheon Reception Center, where a section of the 28th KSC Company supports all branches of military personnel, their dependents, and Department of Defense civilians traveling to and from the ROK. The Incheon Reception Center processed over 27,000 travelers over the course of a year.

The KSCs at the Incheon Reception Center provide the first impression of Korea to arriving travelers. The KSC reception team meets inbound personnel at customs, escorts them to the reception center desk, and arranges their onward transportation.

The KSC Battalion has a large linguistic support mission, providing linguists in support of USFK and Eighth Army. The linguists go through a rigorous selection process and must be able to perform written, sequential oral, and simultaneous oral translation from English to Korean and from Korean to English.

These linguists support USFK, the command groups of the Eighth Army and 2nd Infantry Division, and many other organizations and events throughout the peninsula. A pool of 10 translators is always poised to support ROK ministry-level meetings, engagements with ROK Army counterparts, and combined exercises.

"Fight Tonight" Readiness

As a member of a paramilitary unit with a go-to-war mission, each KSC receives Army combat uniforms, individual protective equipment, and a full set of organizational clothing and individual equipment. Each KSC is also issued a complete set of chemical, biological, radiological, and nuclear gear that includes an M50 protective mask.

One of the hallmarks of the KSC Battalion's paramilitary force is its preparedness for war. Just as they did during the Korean War, KSCs will perform active service alongside Eighth Army on a future Korean battlefield.

The KSC Battalion leverages planned individual and collective training events to maintain its go-to-war readiness to the same standard as Soldiers. KSCs also participate in 40 hours of mandatory Army warrior training (AWT) each year. Through AWT, KSCs maintain proficiency in the 21 AWT tasks that include first aid, weapons familiarization, map reading, and chemical, biological, radiological, and nuclear defense.

Twenty percent of each organic KSC company is combat lifesaver certified. The AWT and combat lifesaver certifications paid off in huge dividends when a Soldier collapsed at Camp Stanley in June 2013. Two KSCs who heard the commotion ran to the scene and saved her life by performing CPR.

One of the hallmarks of the KSC Battalion's paramilitary force is its preparedness for war. Just as they did during the Korean War, KSCs will perform active service alongside Eighth Army on a future Korean battlefield. The mobilized KSC wartime companies will become an integral part of the team and help meet pressing and critical needs and gaps.

The KSC Battalion conducts mobilization exercises to test its ability to expand to wartime strength. The battalion tests its mobilization stations'

ability to conduct full-scale operations one or more times a year.

For instance, the battalion conducted an Eighth Army-wide KSC mobilization rehearsal of concept (ROC) drill in November 2013 with staff from USFK, Eighth Army, and Eighth Army major subordinate commands participating. Host nation guests who participated in the ROC drill came from the ROK Ministry of National Defense, ROK Army, and ROK Ministry of Security and Public Administration.

The KSC Battalion expands to division-level-plus strength and has well over 100 companies when mobilization is complete. The battalion conducts category I (unskilled labor) and category II (skilled labor) muster exercises to hone its coordination skills with the ROK government and to validate the ROK government's ability to send wartime mobilized KSCs to the KSC mobilization stations during a contingency operation.

The KSC Good Neighbor Program

Mindful of the importance of reaching out to the host-nation community, the KSC Battalion runs a dynamic good neighbor program (GNP). The battalion annually sponsors approximately 60 GNP events that affect a wide range of communities across the ROK.

The KSC GNP makes a difference in people's lives by providing school scholarships, textbook coupons to students, and food donations to needy families; spending time entertaining the elderly; and providing many other types of help and support to the community.

Repositioning of Forces

The Land Partnership Plan and the Yongsan Relocation Plan will be implemented in stages over the next six years. They will result in much consolidation at Camp Humphreys.

The KSC Battalion will remain an organization that is optimally balanced to support the repositioning of forces on the peninsula. The battalion will use the repositioning of forces to drive change, taking on new mission sets and geographically posturing the KSC workforce to best support Eighth Army and USFK.

Since its establishment more than 64 years ago, the Korean Service Corps has served alongside USFK and Eighth Army continuously. The Korean Service Corps is the ultimate representation and best possible example of the strong relationship between the United States and the Republic of Korea.

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The 22nd Korean Service Corps Company, located at Camp Humphreys, Korea, provides shallow water egress training for 2nd Combat Aviation Brigade Soldiers, pilots, and crew members. (Photo by Kwak Tong Hyon)

Afghan National Army soldiers learn how to use a piece of heavy engineer equipment. (Photo by Capt. Laura Beth Beebe)

Engineer Sustainment in Afghanistan

■ By Maj. Pierre A. Spratt and Capt. James M. Beebe

From September 2013 to June 2014, the 130th Engineer Brigade, Joint Task Force (JTF) Sapper, used a sustainment cell of 15 personnel to overcome theater-wide logistics friction, sustain the brigade, and achieve continuous logistics preparation of the battlefield in Afghanistan.

The sustainment cell used specific tactics, techniques, and procedures to overcome the complexities associated with achieving sustainment goals. The cell applied external coordination and relationship support to achieve success in the brigade's four operational and logistics lines of effort: train, advise, and assist; reduce and retrograde equipment; provide assured mobility; and conduct general engineering.

Engineers on the Battlefield

Combatant commanders use engineers for unified land operations across the full range of military operations. Primarily, commanders use engineers in a deployed environment to ensure mobility, enhance protection, enable force projection and logistics, build partner capacity, and develop national infrastructure.

Field Manual 3–34, Engineer Operations, says, "Fundamental to engineer support to operations is the ability to anticipate and analyze the problem and understand the operational environment. Based on this understanding and the analysis of the problem, engineer planners select and apply the right engineer discipline and unit type to perform required individual and collective tasks. They must think in combinations of disciplines, which integrate and synchronize tasks in concert with the warfighting functions to generate combat power."

Every unit, regardless of type, generates combat power and contributes to the operation. Engineer disciplines are generally aligned in support of specific warfighting functions, although they have an impact on the others.

Survivability support is linked to the fires warfighting function. Com-

Soldiers of the 1438th Multi-Role Bridge Company, Missouri National Guard, disassemble an over bridge in Gereshk, Helmand province, Afghanistan. The over bridge was a replacement for a bridge that had been damaged during an insurgent attack. The Theater Engineer Brigade sustainment cell disassembled U.S. and NATO Acrow Bridge sets so that they could be replaced by more permanent structures that Afghan units will maintain. (Photo by Cpl. George Huley)

bat engineering is aligned primarily with the movement and maneuver and protection warfighting functions. General engineering focuses its support on the sustainment and protection warfighting functions and the reinforcement of combat engineering outside close combat. Geospatial engineering primarily aligns with the mission command and intelligence warfighting functions. Considering these associations, commanders adjust and implement the necessary command and support relationships.

TEB Sustainment Operations

Sustainment is a complex process that integrates several components, including people, systems, materiel, and health services. From a strategic perspective, sustainment builds Army combat readiness, delivers a combat-ready Army to combatant commanders as part of the joint force, and maintains combat power and endurance across the operational area.

The 130th Engineer Brigade served as the Theater Engineer Brigade (TEB) at Bagram Airfield, Afghanistan, after assuming the responsibility from the 555th Engineer Brigade. The TEB's sustainment cell was responsible for theater-level engineer sustainment and logistics preparation of the battlefield for seven battalion task forces, two naval mobile construction battalions, two construction management teams, one explosive hazards team, and one Air Force prime base engineer emergency force squadron in the Combined Joint Operations Area–Afghanistan (CJOA–A).

At the brigade level, the first challenge to managing the subordinate unit composition and dispersion was to develop and implement a fully integrated joint sustainment cell.

This cell provided logistics support for not only JTF Sapper and its trace units but also for other U.S. Forces–Afghanistan units through training, education, synchronization meetings, and the employment of competent multifunctional logisticians.

The retrograde line of effort quickly became the brigade's most challenging as JTF Sapper established its presence in the CJOA–A. Retrograde and equipment reduction were logistically complex because JTF Sapper held the largest theater-provided equipment property book in the CJOA–A.

The TEB needed to support planned retrograde requirements and

quickly develop a retrograde common operational picture and overarching retrograde operations construct. Developing this framework was critical to the brigade's success and required intense management to achieve planned retrograde goals while balancing projected, yet uncertain, operational requirements.

The construct also included the reduction and retrograde of operational readiness floats. As the route clearance force structure was reduced, the TEB had to "right size" the operational readiness floats. This supported the newly developed route clearance patrol (RCP) mission essential equipment list and helped to set conditions for future operations.

The TEB also defined the U.S. Central Command (CENTCOM) materiel recovery element (CMRE) RCP transfer concept, which resourced CMRE RCP units with the appropriate equipment to support projected mission requirements.

To support general engineering efforts, the sustainment cell established a mission essential equipment list for horizontal and vertical construction units and forward support and headquarters companies. This allowed units to begin the retrograde and redistribution of excess equipment across the theater.

To influence the active management of this complex problem set, the sustainment cell developed the TEB's logistics significant activities report, providing both internal and external visibility of sustainment operations while matching logistics requirements to theater capabilities.

This, in concert with the logistics common operational picture, resulted in the retrograde of more than 1,500 containers and approximately 23,000 pieces of theater-provided equipment. The value of this equipment was more than $853 million. The retrograde was achieved seven weeks earlier than planned.

Transportation Operations

The sustainment cell assumed a critical enabling capability that was not organic to the brigade: the role of a transportation officer. The sustainment cell's transportation cell planned and coordinated multimodal transportation in support of the TEB. It executed the drawdown of force manning levels throughout the CJOA–A and cleared up frustrated cargo for both deploying and redeploying units.

The TEB monitored unit and equipment movements by integrating numerous sustainment information systems and tools. These systems included the Battle Command Sustainment Support System, Command Post of The Future, and in-transit visibility tools.

The transportation cell's intense coordination with CENTCOM, U.S. Forces–Afghanistan, U.S. Army Central, the Forces Command, the International Security Assistance Force, the Air Mobility Division, the Transportation Command, and the Military Surface Deployment and Distribution Command ensured the timely deployment and redeployment of units and the arrival of equipment sets to units by required dates.

In support of general engineering

Command Sgt. Maj. John Etter talks with the 207th Corps Engineer Kandak's command sergeant major about equipment training methods and how to maximize soldier comprehension. (Photo by Capt. Laura Beth Beebe)

efforts, transportation was coordinated for logistics flexibility with the first ever airlift mission of armored heavy engineer construction equipment in the CJOA–A. This required direct coordination with multiple external agencies and in-depth research and analysis.

The unit had to meet Intra-Theater Airlift Request System shipping standards to send the equipment to the CENTCOM Deployment and Distribution Operations Center. The equipment was then delivered across the CJOA–A using four C–17 Globemaster III aircraft.

Train, Advise, and Assist

The train, advise, and assist mission was an intensely coordinated effort across several high-level U.S. and international organizations.

The mission remained the brigade's primary line of effort throughout the deployment and encompassed the management of several distinct organizational constructs, such as embedded training teams, engineer mentor and advise teams, and engineer brigade advise and assist teams. These teams provided training and supervision for various Afghan National Army (ANA) Corps Engineer Kandaks (CEKs) in every regional command.

A concerted sustainment effort was required to establish and field the National Engineer Brigade (NEB), which serves as the sole ANA engineer brigade. With the establishment of the NEB, the sustainment cell developed a complementary concept of support. The concept of support was adjusted regularly to meet the persistent challenges of this particular mission.

Some of the support constraints were the use of the Afghan Security Forces Fund, the foreign excess personal property (FEPP) process, the coordination between the TEB and associated Turkish and Bulgarian security forces advise and assist teams, and the use of the Afghan logistics system for supply procurement.

FEPP proved to be instrumental in the procurement of all classes of supply. In situations where normal contracted timelines would be too long based on operational need or in which materiel was deemed excess, using the FEPP process to donate materiel to the ANA proved invaluable.

Discussions about ANA sustainment operations began to focus on the following problem: For how long does the TEB resource the train, advise, and assist mission using established NATO processes, and when should the ANA use its own sustainment channels?

Normally, a CEK would request materiel support through its respective corps. However, the NEB did not align under a corps and thus submitted and received classes of supply as theater-level assets directly from the ANA general staff G–4.

As ANA sustainment channels began to function appropriately, the dependence on NATO resourcing waned, and the result was the fielding and establishment of the NEB consisting of two CEKs: the Construction Engineer Kandak and the Specialty Engineer Kandak. These two units, under the tutelage of the aforementioned entities, trained in several engineer specialty skills, including bridging, water well digging, and horizontal and vertical construction.

During this deployment, the key to logistics success was the integration of external support agencies, such as ManTech, Product Manager Assured Mobility Systems, and AC First, into the sustainment working groups, forums, and logistics synchronization efforts.

Sustainment success for the TEB in Afghanistan, defined as uninterrupted combat power projection and the support of the commander's objectives, hinged on remaining dedicated to sustainment as a joint interdependent capability, integrating external support agencies, and leveraging acquisition, logistics, and technology functions. In short, success was achieved by ensuring all the key players were sitting at the table.

These efforts enabled the sustainment cell to triage sustainment issues, which ensured the fleet readiness of 54 RCPs. As a result, the TEB eliminated more than 140 improvised explosive devices, protecting coalition forces and Afghan citizens alike.

Because JTF Sapper supported nation building through training, advising, and assisting, the ANA now has an organic engineer capability to conduct assured mobility operations, bridging operations, water well drilling, and general engineering construction.

Sustainment forces supporting combatant commanders need to provide committed forces with flexible support for their operations. The TEB set the conditions for assured mobility operations, general engineering, and the train, advise, and assist mission so that units in Afghanistan can continue to transition and posture for final operational support within the CJOA–A.

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Spc. Caden Hanrahan, a transportation specialist with the 15th Sustainment Brigade, loosens a binder in order to unload a vehicle from a heavy equipment transporter during a network integrated evaluation at Fort Bliss, Texas. (Photo by Sgt. Adam Hinman)

Providing Movement Support for Two Training Exercises Simultaneously

■ By Capt. John H. Stanczak

In April 2014, the 15th Sustainment Brigade support operations mobility section (SPO Mobility) set up at Logistics Support Area (LSA) Wagonmaster at Fort Bliss, Texas, to provide transportation support for the 2nd Brigade, 1st Armored Division, network integrated evaluation (NIE) and the 4th Brigade, 1st Armored Division, brigade gunnery. SPO Mobility conducted all transportation movement releases (TMRs), including emergency TMRs, for the units participating in the NIE. This was the first time in more than 10 years that the 15th Sustainment Brigade had participated in an exercise of this magnitude at LSA Wagonmaster.

Planning

Planning for the NIE started on March 3, 2014, and the first movement of 32 amphibious assault vehicles took place a month later. Both the 2nd Brigade and the 15th Sustainment Brigade conducted rehearsal of concept drills to review transportation operations, applying the eight Army troop leading procedures. Planning drills identified main supply routes and alternate supply routes.

The sustainment brigade held weekly meetings with customer and subordinate units to identify movement issues and address projected shortfalls. Most shortfalls resulted from not having enough personnel to complete the brigade's move-

ment operations within a short time frame because of last minute movement changes. The 15th Sustainment Brigade had 84 fully mission capable heavy equipment transporters (HETs) on hand and 39 HET crews to support the NIE and the brigade gunnery from April to July.

The next step in planning was route reconnaissance. The reconnaissance consisted of truck masters, convoy commanders, and a motor transport operator who had driven the routes the year before. The reconnaissance team took one HET with it to ensure roads were wide enough for movement.

After collecting the data regarding distance and time estimates, the information was sent to the 15th Sustainment Brigade, the 2nd Brigade, and the 4th Brigade. Next SPO Mobility selected a site, coordinated, and secured for a rest overnight at Rhodes Canyon. SPO Mobility coordinated latrines and created a TMR for a 5,000-gallon fuel truck, which provided fuel for the HETs at Rhodes Canyon before they returned to the LSA.

Next, the 2nd Brigade arranged for its military police to provide support for the HETs when they crossed Highway 70. The last part of planning consisted of spot checking all convoy commanders to ensure they had permits allowing the HETs to travel on the designated routes.

Before the execution phase, the project was briefed to the 15th Sustainment Brigade commander and the Army chief of transportation, who asked many questions ranging from permits for vehicles traveling on main supply routes to in-depth questions about the TMR process. When all questions were answered satisfactorily, the senior officers approved the movement plan.

Execution

The NIE kicked off on April 3, 2014, at the Fort Bliss rail yard. The 15th Sustainment Brigade supported the NIE in the movement of classes I (subsistence), III (petroleum, oils, and lubricants), VII (major end items), VIII (medical materiel), and IX (repair parts). Pushes for most classes of supply were scheduled for Mondays, Wednesdays, and Fridays. After the 2nd Brigade established its tactical operations center, movement of supplies slowed to emergency resupply only.

> Technology is a great advantage, but the Army should be prepared to deal without it.

Between April 3 and May 22, SPO Mobility conducted 75 missions, moving 454 tracked vehicles. During the last phase of the NIE, SPO Mobility moved units 188 miles from LSA Wagonmaster to White Sands Missile Range, New Mexico.

Challenges

SPO Mobility encountered multiple challenges throughout the NIE and the brigade gunnery. The top three challenges were a limited network at LSA Wagonmaster, cost effectiveness in movement operations, and having to use secondary courses of action because of last-minute changes.

Network. The communications network (telephone and Internet) at LSA Wagonmaster was limited throughout all operational phases. SPO Mobility had one secret Internet protocol router network computer and one nonsecure Internet protocol router network computer. Only two Soldiers were authorized to access each computer. Once SPO Mobility identified this situation, some of its Soldiers returned to the rear to be more effective in supporting daily movement operations.

A limited telephone and Internet network is a challenge but also a great training opportunity. Daily Defense Connect Online meetings that facilitated communication with customer units and enabled last-minute changes regarding movement operations came to unexpected halts when the network went down.

Many sections in the 15th Sustainment Brigade would slow overall productivity while waiting for the network to come back on line. SPO Mobility did not have that luxury. Its alternative plan when faced with a downed network was to conduct reconnaissance to identify new pickup sites on the training field. This allowed SPO Mobility Soldiers to see and understand how they enabled the ground movement of company-level Soldiers and their equipment.

Reconnaissance also allowed SPO Mobility Soldiers to talk with commanders and transportation officers on the ground from the 2nd Brigade to ensure everyone was on the same page for movement operations. Communicating without email, phones, or Internet was an essential learning tool. Information collected on the training field was briefed to the 15th Sustainment Brigade commander and his staff.

Cost effectiveness. As the military continues to cut costs, when reviewing TMRs, leaders need to ask if it makes sense to take action. For example, a not mission capable Bradley fighting vehicle that has been secured at the brigade support area should be left where it is and moved back with the tracked vehicles when the main body returns to the rear.

Two emergency movement requests to move not mission capable vehicles were postponed, and instead, the vehicles were moved with the main body. This action saved fuel, manpower, and wear and tear on military equipment. This lesson learned caused a new battle drill to be established and placed in SPO Mobility's standard operating procedure.

Another lesson learned from the NIE and 4th Brigade gunnery was to maximize crews and take only one convoy to complete a mission rather than building multiple convoys.

Each convoy requires a tractor and a wrecker with a contact team.

Cost effectiveness favored moving all vehicles in one push and establishing a minimal Soldier crew to provide security until the mission required further action. On two occasions, HET crews were not maximized because of last-minute location and time changes.

Last-minute changes. Time is of the essence. It takes time to plan and more time to change plans when locations change. Even with careful planning, SPO mobility overlooked a few objectives.

The NIE was scheduled to end on the first day of the four-day Memorial Day weekend. The SPO decided that because of the limited number of crews, movement operations would continue through Friday and Soldiers would receive Tuesday off instead of Friday. However, the division G–4 notified SPO Mobility that all Soldiers would be out of the field before the beginning of the holiday weekend.

SPO Mobility had to change its main course of action to ensure all Soldiers were home on Thursday. Because of last-minute changes, SPO Mobility had to build extra convoys and movement started earlier than expected. The 4th Brigade decided to road march back to the wash rack to meet the new suspense.

Meeting the Challenges

The lessons learned from the NIE and the brigade gunnery include communicating with limited resources available, collecting transportation data, and using the data for future training missions. The lessons learned were easily adopted when the SPO Mobility team was educated on the 15th Sustainment Brigade's mission essential task list, which provided training objective guidance for both exercises.

Communication. The biggest challenge SPO Mobility faced in the two exercises was communication. With limited Internet and telephone reception, SPO Mobility could not rely on the network. The section proved during the exercises that it can function and carry on the mission without the network. It was successful in executing a secondary plan of action, which included face-to-face communication and reconnaissance using military vehicles. These actions proved to be highly effective in addressing a downed network.

Consistently throughout the exercise, the status of SPO Mobility's convoy was unknown. Without Joint Capabilities Release on the HETs and palletized load systems, a real-time picture of movement operations was not available. Technology is a great advantage, but the Army should be prepared to deal without it. The Army needs to train its units in secondary communication methods they can use if the network is unavailable.

SPO Mobility's secondary option for the NIE, though not always effective, was a Single Channel Ground and Airborne Radio System FM radio with a speaker. This allowed information to be collected when the convoy commander called in rally points and when the convoy reached the final destination. Going back to the basics with radio communication and direct conversations proved effective and allowed SPO Mobility to support the 15th Sustainment Brigade throughout the exercises.

Collecting data. Before planning for the exercises, SPO Mobility did not have a continuity book and was just beginning to collect and archive data. The TMR records dated back to Jan. 6, 2014. The first priority for SPO Mobility before the NIE and the brigade gunnery was to develop a continuity book and a standard operating procedure.

SPO Mobility also built a logbook for TMRs and logistics support requests (LSRs). The logbook dates back one month and holds all future TMRs and LSRs. Documents over a month old were filed in the SPO Mobility office by month and year. A backup method was implemented, which included placing all data from TMRs and LSRs into a word document and then burning it onto a compact disc. A master tracker was built to track and list TMRs and LSRs monthly.

The next step in collecting data is placing movement data in the Defense Training Management System (DTMS). Currently, DTMS tracks Soldier readiness, the unit mission essential task list, and unit training, which can be tracked on the DTMS calendar.

It would be ideal to place movement data on the network and allow leaders throughout the Army to see movement operations. A hyperlink could allow military members to see archived transportation movements in a calendar format. It also would be beneficial to highlight key training events and provide detail about how many TMRs were executed and what assets and crews were needed to execute the training event.

The 15th Sustainment Brigade began preparing to support the NIE and brigade gunnery at the beginning of March. SPO Mobility provided transportation support for the events simultaneously, with the NIE concluding at the end of May and the brigade gunnery ending the first of July. These events provided training not only for the 2nd Brigade and 4th Brigade but also for the 15th Sustainment Brigade, particularly the SPO Mobility section. The 15th Sustainment Brigade will use the lessons it learned in supporting these events to improve its operations and thus its ability to support future operations.

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Preparing Captains for Decisive Action

■ By Capt. Timothy J. Owens

As the combat training centers (CTCs) transition to mostly decisive action training environment scenarios, the Logistics Captains Career Course (LOGC3), formerly known as the Combined Logistics Captains Career Course, must also continue to emphasize sustainment planning in a decisive action environment. This will provide graduates of LOGC3 with a greater opportunity for success as they enter key developmental positions in operational units.

This article provides sustainment leaders with an in-progress review of how LOGC3 instructors are setting up junior officers for success by providing training based on CTC lessons learned.

Logistics Leader Development Board

The Logistics Leader Development Board recently approved three training objectives for LOGC3 students:

- ☐ Design a concept of support enabling unified land operations at the tactical level.
- ☐ Manage logistics operations at the tactical level during unified land operations.
- ☐ Command logistics companies in support of combined arms maneuver and small-scale movement.

All three of these objectives address company-grade lessons learned at the CTCs. An analysis of the LOGC3 curriculum shows that the instruction, practical exercises, and unique leadership electives all address key CTC observations of company-grade logistics officers.

JRTC Lessons Learned

Task Force Sustainment at the Joint Readiness Training Center (JRTC) has long identified trends and key lessons learned from rotational units deployed to Fort Polk, Louisiana, for monthlong training exercises.

Recently, units not scheduled to deploy in support of Operation Enduring Freedom have been participating in rotations designed around the decisive action training environment. The Army is using this model to provide a realistic environment to facilitate training objectives using data drawn from operational theaters.

The decisive action training scenario is especially challenging for logistics units because they are required to provide sustainment on the move. Numerous lessons learned have been gleaned from units training at the JRTC. These insights are valuable in shaping home-station training and adjusting the LOGC3 curriculum.

The lessons learned can be broken down into four categories: roles and responsibilities, sustainment rehearsals, brigade support battalion (BSB) support operations (SPO) and S–3 fusion, and synchronized sustainment.

Roles and responsibilities. The first lesson learned is the need to clearly define staff and command roles, responsibilities, and relationships for subordinate or attached units. The following improvements can be made to assist in this effort:

- ☐ Officers need to have a better understanding of the military decisionmaking process (MDMP); all too often units conduct an incomplete MDMP with limited guidance.
- ☐ Company-grade officers must learn the art of training management.
- ☐ The BSB staff must define and understand its roles and responsibilities before this information can be relayed to subordinate and attached units.

Sustainment rehearsals. The second lesson learned topic focuses on sustainment rehearsals and their undeniable value to the supported elements. During sustainment rehearsals, sustainers need to brief not only sustainment elements but also the maneuver and maneuver support elements so that the supported element understands how its plan will be sustained.

It is essential that the warfighter understand the sustainment plan and that the plan use the eight principles of sustainment in its design and function. Rehearsals are critical to comprehending the entire plan and how each section and unit fits into the scheme of maneuver and support.

SPO and S–3 fusion. The sustainment community is unique in that it has battalion and brigade S–4 officers focusing on internal logistics as well as a SPO section focusing on external logistics support. The BSB staff must be synchronized in order to properly support the mission of the warfighter. It also must have an internal discussion about who is responsible for what.

The distinction between future operations and current operations should be delineated, and each section needs to own its piece. All too often the lines between the BSB SPO and S–3 are blurred, causing confusion and inefficiency.

The art of forecasting and the use of staff running estimates needs to be emphasized through all levels of the staff in order to be proactive in sustainment instead of reactive. The company needs to have a knowledge management system in place to capture critical information for the commander to use to make decisions.

The company command post must be fused with battalion operations. The fusion at the BSB SPO and S–3

level will trickle down to the company level and allow the company command post to share the SPO and S–3's logistics common operational picture. This will allow the company to see itself in time and space and better provide sustainment on the move.

Sustainment synchronization. All sustainment functions must be synchronized vertically and horizontally to provide timely and accurate logistics on the battlefield. Sustainment also needs to be synchronized with brigade operations to ensure seamless transitions and support. Sustainment leaders must maintain situational awareness of brigade and battalion operations.

Digital systems can level the playing field by providing all echelons with a common operational picture. However, the BSB and sustainment elements tend to use digital enablers poorly.

Developing a quality synchronization matrix appears to be a lost art. Synchronization between the BSB and the forward support companies (FSCs) needs to occur routinely. This should be a part of the sustainment battle rhythm since the FSCs should be acting as part of a deliberate and synchronized sustainment plan.

Companies also need to make sure troop leading procedures parallel the MDMP; they are just as important to ensuring mission success.

Developing and executing company standard operating procedures (SOPs) are also important. The value of a working SOP is underestimated, and organizations often scramble to conform to a different standard each time they conduct a mission. Having a working SOP mitigates this.

LOGC3's Value

LOGC3 continues to refine and update its program of instruction to adequately address lessons learned by company-grade officers. LOGC3 is divided into two phases: the common core phase and the logistics phase. Officers receive 90 hours of mission command and MDMP fundamentals in the common core phase.

The logistics phase includes 143 hours of decisive action instruction, including a sustainment overview and functional area training (transportation, ammunition, maintenance, supply, field services, and medical logistics). During the logistics phase, students are evaluated through exercises that apply the fundamentals of sustainment planning and the MDMP.

There are two capstone exercises during the final weeks of the logistics phase. The logistics exercise is a group event that tests the students' ability to apply the MDMP and come up with solutions to sustainment problems in a decisive action scenario. The final project, the individual concept of support, requires students to work alone to create a synchronization matrix and concept of support for an armored brigade combat team on the offense.

Students also receive 36 hours of digital enabler instruction, which includes training on key sustainment and mission command systems, such as the Battle Command Sustainment Support System, Command Post of the Future, and Global Combat Support System–Army.

In addition to the standard curriculum, LOGC3 provides leader professional development sessions that address the practical application of some topics discussed during the career course. These sessions involve issues ranging from the company commander and first sergeant relationship to training management and how to succeed as a commander during a combat training center rotation.

The LOGC3 curriculum covers the fundamentals that junior logistics officers should know prior to key developmental assignments. The blocks of instruction also adequately address critical company-grade lessons learned from the Army's CTCs. These lessons and blocks of instruction are posted on the Sustainment Unit One Stop website and are linked to the Forces Command Leader Development Toolbox, providing officers and leaders with key materials at home station once they graduate from LOGC3.

Persistent emphasis on sustainment in a decisive action environment, mission command, and the MDMP will all be critical for future success.

The cornerstone of LOGC3 instruction will continue to relay the importance of the principles of mission command and the MDMP. Mission command and employing the MDMP are the main elements of success for completing LOGC3 and for survival at the CTCs. Having officers on a battalion or brigade staff who understand how to apply the MDMP is essential. Officers must also learn how to conduct sustainment rehearsals and briefing techniques to effectively relay their message to subordinates, peers, and supervisors alike.

Persistent emphasis on sustainment in a decisive action environment, mission command, and the MDMP will all be critical for future success. LOGC3 instructors will continue to coordinate with the CTCs on observations and with home-station units on complementing instruction with follow-on training.

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Ten Things You Need to Know About Operational Architecture

Operational architecture can accurately identify force requirements to illustrate the investments needed to move the Army forward.

■ By Juan Giraud Jr.

Operational architecture (OA), as a capabilities development function, represents a dramatic change in thinking about requirements determination and generation. Nevertheless many Army capability developers shy away from the topic, intimidated by its complexity. If you have ever thought about designing or building a house you have already taken a crash course in OA.

You probably do not need to create a model before putting together a doghouse. It is not very complex, and if the house fails, the consequences are probably not too dire. However, if you consider building a more complex family dwelling, the need to model is more important because the consequences of this structure failing are more serious.

House Plan Analogy

In the concept of a house, the floor plan is similar to OA. The floor plan of the house is determined by the tasks you will conduct in it. For example, since you need to prepare food, you will need a kitchen.

The systems architecture specifies the systems and their functions that will enable you to perform the operational activities. In order to prepare food, you will need to be able to store it, wash it, and cook it. So you will need systems: a refrigerator, a sink, and a stove.

Most homeowners are not even aware of the hundreds of technical standards that constrain the design of the systems in their homes. Examples of these technical standards are the voltage, power, and current standards for the electrical appliances and the pipe size and threading standards for the plumbing.

Views

Think of it this way. House blueprints have three components. The first component, the floor plan, can be compared to a version of OA commonly called operational view and defines operational processes and information requirements. This view explains what you are trying to accomplish.

The Combined Arms Support Command (CASCOM) capability developers and architects are responsible for developing the OA view for the Sustainment Center of Excellence, while program managers are responsible for developing technical and systems views. Together, these three views give a complete blueprint of a capability that can be used for design development and acquisition. This blueprint is the basis for implementation. (See figure 1.)

With that in mind, here are the 10 things you really should know about OA.

1. What Is OA?

OA is the art of taking unstructured problems and giving them enough structure to enable decision-makers to plan further useful action. OA is presented from the viewpoint of the warfighter through the following activities:

- ☐ Analyzing operational concepts to frame the requirements (mission, task, and purpose).
- ☐ Continually refining requirements for doctrine, organization, training, materiel, leadership and education, personnel, and facilities analysis, which ensures the examination of a wide range of potential solutions.
- ☐ Producing standard products.
- ☐ Using common formats for integration and interoperability.
- ☐ Describing a function, who performs it, and why, when, and how often it is performed.

The OA provides a disciplined and documented approach to linking military concepts and doctrine to the employment of technology used in executing military operations; developing an investment strategy; managing the complexity of command, control, communications, computers, intelligence, surveillance and reconnaissance; identifying redundancy of functions and information requirements; and developing future requirements.

2. Who Can Help Me With OA?

The CASCOM commander's lead for architecture support requirements is the logistics architecture cell (LAC) located in the Enterprise Systems Directorate. The LAC's mission is to provide support and advice to the CASCOM commander on architecture requirements, coordinate with CASCOM directorates and external support agencies, pro-

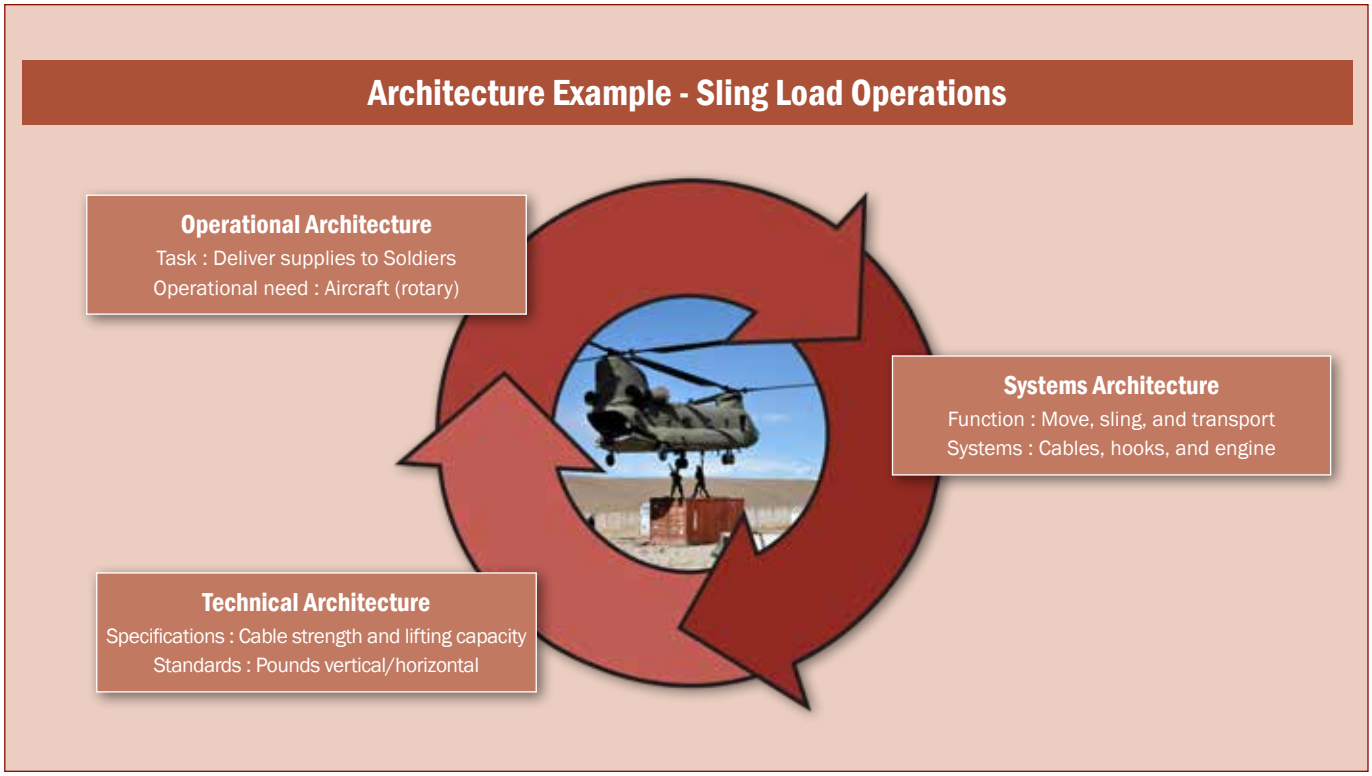

Figure 1. This provides examples of the items that might be used to complete each category for sling load operations architecture. Operational architecture is determined by the tasks or activities that must be performed. Systems architecture specifies the system functions and the systems that will be used to perform the operational activities. Technical architecture guides the systems selection for the operation.

vide technical expertise to supported units, and synchronize OA support to ensure that it reflects current and future operational requirements.

The LAC works closely with all CASCOM directorates and other Army agencies, such as the Logistics Innovation Agency and the Army Integrated Management Division, to develop OA. The resulting products are verified by subject matter experts (SMEs) to ensure they conform to applicable government standards, concepts of operations, plans, and doctrine. This procedure ensures everyone has a common perspective and that the context is complete and well-defined.

3. Who Needs to Create Architecture?

CASCOM capability developers identify an architecture requirement and begin coordinating with the LAC. The LAC, capability developers, and SMEs work together to create an architecture development plan (ADP). This gives a scope to the architecture product requirements. A signed, final ADP is then used by capability developers and LAC architects to develop a project schedule and additional supporting documents.

The LAC and the CASCOM Capabilities Development Integration Directorate (CDID) work together to develop the project schedule and timeline as part of the ADP. After the ADP has been developed, architecture development may begin.

4. What Are the Kinds of Architecture?

The three kinds of architecture are operational, systems, and technical.

Operational. OA includes a description of the tasks, activities, and information exchange requirements between each node. An operational view–1 (OV–1) is a high-level operational concept graphic. It describes a mission, class of mission, or scenario.

An OV–1 provides a picture of what the architecture is about and an idea of the players and operations involved. It can be used to orient and focus detailed discussions. Its main use is to aid communication, and it is intended for presentation to high-level decision-makers.

Systems. Systems architecture is the graphical and textual description of systems and interconnections used to satisfy operational needs.

Technical. Technical architecture consists of the universal rules and standards governing the arrangement, interaction, and interdependence of a system's parts or elements. Each rule or standard serves a specific purpose. The rules and standards are interrelated and provide a template that assists in architecture development.

5. What is the DOD's OA Framework?

The Department of Defense architecture framework (DODAF) pro-

vides a visualization infrastructure in which data is synchronized to allow the customer to view detailed consolidated information through points organized by various views. Each layer of each view offers status, methodology, and other key information. This architecture framework is especially suited to large systems with complex integration and interoperability challenges.

8. What Is the Difference Between Validation and Verification?

Validation ensures that operational input results in a realistic and reasonable operational output and passes the face validity test. Verification ensures that the OA data is compliant with DODAF guidance and the data works within the Army capabilities, analysis, development, and integration environment (ArCADIE).

Using OA facilitates intelligent decision-making during the early stages of requirements determination and establishes vision, goals, objectives, and strategies.

The DODAF views offer an overview of and details for specific stakeholders within their domains and interacting with other domains in which the system will operate. These views are tools for visualizing, understanding, and assimilating the broad scope and complexities of an architecture description through tabular, structural, behavioral, ontological, pictorial, temporal, graphical, probabilistic, or alternative conceptual means.

6. How Are the OA Views Created?

The architects work closely with the SMEs to gather information and develop required products. A series of working groups convene until all architecture products are completed. Before providing all completed architecture products to the customer, an architecture validation review (AVR) is conducted to vet the final products with designated SMEs.

7. What Is an AVR?

The purpose of an AVR is to provide an opportunity for the architects to present architecture products to the designated SMEs for review and validation. The validation process ensures that the operational input results in a realistic and reasonable operational output that passes a "face validity" test. A face validity test is a technique in which knowledgeable experts provide feedback on whether the inputs and outputs of the architecture meet their expected outcomes.

9. Can I Reuse Architecture?

Once OA products have been delivered to the customer and posted to ArCADIE, they can be reused for similar requirements. ArCADIE is an architecture repository owned by the Training and Doctrine Command and designed to house validated architectures. ArCADIE is managed by the Army Integrated Management Division and can be used to leverage existing architecture.

In order to optimize architecture development, one of the first considerations should be the reuse of existing architecture products. A key source of architecture product information used to fulfill CASCOM requirements exists in the Army integrated logistics architecture. The most current validated and verified version of this architecture resides in ArCADIE.

Additional architecture products designed for reuse are also located in ArCADIE. Anyone with an authorized DOD common access card can log in to ArCADIE and view the information.

10. How Do I Get Architecture Training?

The LAC offers a one-hour Introductory Architecture class at CASCOM once a month. Good architecture can be the difference between growth or stagnation, availability or breakdown, and success or failure.

Well-defined and validated architecture products are resource informed, integration focused, and outcome based. Our warfighters' visions and concepts lead to requirements that are the starting points and foundation of the OA process. Using OA facilitates intelligent decision-making during the early stages of requirements determination and establishes vision, goals, objectives, and strategies.

Given the unprecedented complexity of the digitized battlefield and the current austere resource environment, forming vague requirements in generic detail will not do. OA is the combat development process that can accurately identify force requirements in sufficient detail to properly illustrate the investment decisions that must be made to move the Army forward.

Juan Giraud Jr. is a logistics management specialist in the Logistics Architecture Cell of the Enterprise Systems Directorate, Combined Arms Support Command. He holds a degree in human resource management from St. Leo University and is a retired first sergeant with over 38 years of service to the Army.

Maj. Rabi Singh, a mentor for the Regional Logistics Support Command–Southeast, programs a Blue Force Tracking system shortly before a convoy to validate the command's abilities. (Photo by Sgt. Jacob Marlin)

Optimizing C4ISR Field Support for Today's Army

A new field support concept for network and mission command systems makes Soldiers the first line of defense for troubleshooting command, control, communications, computers, intelligence, surveillance, and reconnaissance systems.

■ By Richard J. Licata Jr.

During the past 12 years of war, the push to give Soldiers the state-of-the-art command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) technology they needed to complete their missions often meant relying on civilian field support personnel for systems maintenance and troubleshooting.

When it came time to reduce field support during the drawdown from Afghanistan, the Army's mandate to reduce expenses quickly turned into an opportunity to transform an outdated network and mission command system into one that aligns with a leaner, more agile future force.

The new field support concept for network and mission command systems embraces Soldiers as the first line of defense for troubleshooting.

Pioneered by the C4ISR field support integrated product team (IPT), consisting of the Army's Program Executive Office (PEO) for Command, Control and Communications–Tactical, the Communications-Electronics Command, Tobyhanna Army Depot,

and PEO Intelligence, Electronic Warfare and Sensors, the model addresses the need to provide a baseline of support instead of a one-size-fits-all solution.

The realignment builds on a Soldier-tested and validated model that introduces a four-tiered field support process tailored to do more with less while avoiding across-the-board cuts.

> Already Soldiers are embracing an expanded role in managing and supporting their network systems. The realignment motivates Soldiers to take ownership of their equipment and develop their own sustainment training.

This new model could save the Army $65 million over the next six years. When implemented in all Army garrisons within the continental United States (CONUS), the new model could save more than $450 million during the same time frame.

Changing the System

The new field support model enables Soldiers to be at the forefront of weapon system maintenance and issue resolution. The plan, developed by the C4ISR field support IPT, consists of a multilevel support structure. Technical issues are resolved at the lowest level possible and escalated vertically through the tiers as additional, more system-specific support is needed.

The new C4ISR field support model addresses the need to provide a baseline of support instead of a one-size-fits-all solution. It realigns approximately 95 percent of the field support workload to Soldiers and multifunctional organic support units.

Under the new plan, Soldiers are the first to troubleshoot issues. If unsuccessful, they can escalate a trouble ticket to tier 1, which is a team of multifunctional logistics assistance representatives, digital system engineers (DSEs), or select field service representatives (FSRs) for mission-critical or high-density systems.

This multifunctional team has the capability to service all C4ISR systems in the field, and each member is aligned to a specific system (or group of systems) based on required skill sets. The individuals assigned to the escalated ticket not only will work to resolve the issue but also will be required to share the resolution with the requesting Soldier through over-the-shoulder training.

If a resolution is unattainable, the appropriate system-specific subject matter experts at tier 2 will attempt to resolve the issue remotely or by telephone and, if needed, pass to tier 3 engineers to determine if a hardware or software modification is needed.

The Need for an Overhaul

The new tiered system comes in response to urgent capability needs for recent deployment operations. Mission command and network systems were brought to theater at a rapid pace, equipping Soldiers with the technology needed to effectively complete their missions.

However, the quick delivery of new systems to Soldiers who were continuously engaged in deployment preparation meant that they often lacked the time to train on, operate, and maintain C4ISR equipment.

To ensure mission critical capabilities were in constant working order, the Army used the expertise of FSRs and DSEs who were embedded with Soldiers. The FSRs and DSEs worked side by side with the Soldiers to maintain the equipment and provide technical assistance.

The lack of sustained C4ISR equipment training was a major contributor to Soldiers' reliance on civilian field support. During the train/ready phase of their Army Force Generation cycle, units often sent Soldiers to weeklong equipment operator courses. However, once deployed, those Soldiers were either engaged in other duties or not assigned to the same system.

To overcome this gap, the C4ISR organizations designed mission command system integration training to augment operator and maintainer courses. This training occurred early in the Army Force Generation cycle rather than during the unit's intensive predeployment training.

The field support model worked well, providing Soldiers with timely support during two wars. FSRs and DSEs, many of whom were former Soldiers, were embedded with units and served as a dependable first line of defense for troubleshooting and repairs in theater.

However, as troop levels continue to draw down and military spending decreases, the current C4ISR field support construct needs an overhaul to support the leaner Army of 2015.

Validated Approach

In reevaluating how the Army provides field support to more than 150 systems, the C4ISR Field Support IPT focused on greater affordability and sustainability.

During the summer of 2013, the IPT conducted two pilot programs: one at the National Training Center at Fort Irwin, California, and one at the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana.

The information from the pilots was combined with an extensive data review of more than 15,000 historical combat training center (CTC) trouble tickets. This provided insight into the types of incidents occurring and the level of support required to resolve the issues.

Results indicated that approximately 95 percent of the workload could have been resolved by Soldiers or multifunctional personnel and that over 75 percent of incidents recorded at CTC rotations were training-related.

To ensure the viability of the new approach to field support, the IPT also completed a controlled exercise at JRTC in August 2013. During the exercise, the IPT monitored the implementation of the tiered model of field support and collected data in the background.

The JRTC Operations Group took full ownership of the model and successfully implemented the lessons learned from the pilot exercises, requiring minimal tier 1 and tier 2 support (or minor intervention by FSRs) and no tier 3 support (or major intervention by FSRs). The event provided evidence that the tiered system can deliver rapid and effective C4ISR field support with a reduced footprint.

By reducing the total number of field support personnel on the ground at CTC rotations from roughly 39 individuals to approximately 13 tier 1 personnel, and by realigning assets regionally to provide reach-back support, the IPT expects a savings of more than $9 million per year for a total savings of approximately $65 million between fiscal years 2014 and 2020.

Already Soldiers are embracing an expanded role in managing and supporting their network systems. The realignment motivates Soldiers to take ownership of their equipment and develop their own sustainment training. It also empowers industry to cross-train FSRs to be subject matter experts across the mission command portfolio.

Implementing the Concept

Fielding of the new structure to posts, camps, and stations within CONUS has already begun. Implementation will begin at installations in CONUS Central and will continue through installations in CONUS West and CONUS East, supplementing the brigade combat team reorganization.

A member of Product Manager Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance checks dismount equipment that is being tested by Soldiers during a Communications-Electronics Research, Development and Engineering Center exercise. (Photo by Edric V. Thompson)

The implementation plan follows a phased regionalization strategy that will realign approximately 900 field support personnel and build division and brigade field support teams, paralleling the teams implemented at CTCs.

The staggered implementation includes a comprehensive solution set that does not hinder capability or readiness. The strategy is also structured to ensure Soldier readiness through access to industry standard training and resources through the signal universities and mission training complexes.

To support the changing field support construct and streamline the trouble ticketing process, the Army has introduced a virtual reporting system, the Unified Trouble Ticketing System, to connect Soldiers with logistics assistance representatives, DSEs, and FSRs.

The new capability integrates three existing trouble ticketing systems, allowing Soldiers to resolve field support issues by creating a single automated trouble ticket, monitoring the investigation, posting a diagnosis, and recording the resolution of a service incident.

As the Army continues to simplify the tactical network and its capabilities for the end user, fewer FSRs will be required to train Soldiers and troubleshoot systems. This realignment also places the technical expertise back into the hands of Soldiers, better preparing them for future missions.

Richard J. Licata Jr. is the field support manager leading the field support optimization effort for the Readiness Management Division of the Program Executive Office for Command, Control and Communications–Tactical. He holds a bachelor's degree in organizational management from Wilmington University and is a master of public administration candidate at the University of Pennsylvania. He is a member of the Army Acquisition Corps and is level III certified in program management.

2014 Sustainment Force Structure Book Released

The 2014 Sustainment Force Structure Book is now available through Army Knowledge Online at https://www.us.army.mil/suite/files/43388276.

The Sustainment Force Structure Book is a data reference and resource that provides a snapshot of sustainment organizations by standard requirements code and includes a brief statement of organizations' missions, functions, capabilities, employment, basis of allocation, doctrinal mobility, and dependencies derived from their base table of organization and equipment.

The structures noted in the 2014 book represent Army logistics organizations for fiscal year 2015. This edition of the handbook also includes a list of organizations supporting special operations forces, several revised unit location maps, and transportation planning data. Changes driven by resource constraints, reorganization, and redesign will be incorporated as they are approved.

The proponent for the Sustainment Force Structure Book is the Force Integration Branch, Multifunctional Division of the Force Development Directorate, Combined Arms Support Command. To comment, recommend changes, or ask questions about the document, email R.W. Vaughan, robert.w.vaughan2.ctr@mail.mil, or Barry Richards, barry.s.richards.civ@mail.mil.

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I certify that the statements made above by me are correct and complete:

Fred W. Baker III, 22 September 2014

Army Sustainment Departments

Your submission should be geared toward one of *Army Sustainment*'s departments, which are described in detail below. If you have an article that does not fit into one of our departments but you think it is appropriate for our audience, feel free to contact us.

Commentary articles contain opinions and informed criticisms. Commentaries are intended to promote independent thoughts and new ideas. Commentary articles typically are 800 to 1,600 words.

Features includes articles that offer broader perspectives on topics that affect a large portion of our readers. These can focus on current hot topics, or the future of the force. These articles can be referenced, but it is not required if the content is within the purview of the author. While these articles can be analytic in nature and can draw conclusions, they should not be opinion pieces. Features typically are 1,600 to 5,000 words.

Spectrum is a department of *Army Sustainment* intended to present well-researched, referenced articles typical of a scholarly journal. Spectrum articles most often contain footnotes that include bibliographical information or tangential thoughts.

In cooperation with the Army Logistics University, *Army Sustainment* has implemented a double-blind peer review for all articles appearing in its Spectrum section. Peer review is an objective process at the heart of good scholarly publishing and is carried out by most reputable academic journals. Spectrum articles typically are 2,500 to 5,000 words.

Operations includes articles that describe units' recent deployments or operations. These articles should include lessons learned and offer suggestions for other units that will be taking on similar missions. These articles require an official clearance for open publication from the author's unit. Photo submissions are highly encouraged in this section. Please try to include five to 10 high-resolution photos of varying subject matter. Operations articles typically are 1,200 to 2,400 words.

Training and Education is dedicated to sharing new ideas and lessons learned about how Army sustainers are being taught, both on the field and in the classroom. Training and Education articles typically are 600 to 1,100 words.

Tools articles contain information that other units can apply directly or modify to use in their current operations. These articles typically contain charts and graphs and include detailed information regarding unit formations, systems applications, and current regulations. Tools articles typically are 600 to 1,800 words.

History includes articles that discuss sustainment aspects of past wars, battles, and operations. History articles should include graphics such as maps, charts, old photographs, etc., that support the content of the article. History articles typically are 1,200 to 3,000 words.

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Our "Lines of Communication" department provides readers with a forum to have their opinions published. To submit a letter, send an email to usarmy.lee.tradoc.mbx.leeeasm@mail.mil with the subject line, "Letter to the Editor." Please include your name, title, and location (for example, Fort Wainwright, Alaska) with the submission. Letters will be edited to meet the magazine's length and style requirements.

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Sustainer Spotlight

Gladys Yoshinaka, Fort Hood Logistics Readiness Center, Fort Hood, Texas; Chief Warrant Officer 2 Mariana Cruz, 2nd Engineer Brigade, Joint Base Elmendorf-Richardson, Alaska; and Chief Warrant Officer 2 Joey North with the 1073rd Support Maintenance Company, Michigan Army National Guard, pose with their units' "Best of the Best" awards at the Chief of Staff of the Army's Combined Logistics Excellence Awards at the Pentagon, Sept. 10, 2014. (Photo by Lisa Ferdinando)