THE ARMY'S OFFICIAL PROFESSIONAL BULLETIN ON SUSTAINMENT

MARCH–APRIL 2015

ARMY SUSTAINMENT

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CMRE

17th CSSB Closes Out Historic Chapter

Inside

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ON THE COVER

ARMY G-4

Q&A WITH THE TRADOC COMMANDER

FEATURES

Soldiers from the 17th Combat Sustainment Support Battalion wait for the chance to reunite with their friends and families at the Buckner Physical Fitness Center at Joint Base Elmendorf-Richardson, Nov. 18, 2014, after completing their U.S. Central Command Materiel Recovery Element mission in Afghanistan. (Photo by John Pennell)

"One of the key capabilities that specifically the United States has is the ability to deploy and conduct expeditionary maneuver and sustain ourselves almost indefinitely in any part of the world."

Gen. David G. Perkins
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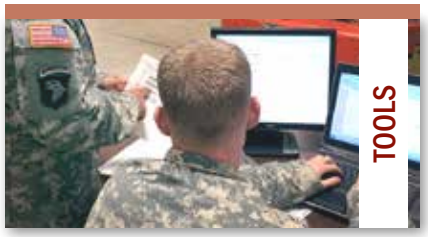
DEPARTMENTS



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Synchronizing Sustainment Efforts in a Time of Change

The Army G–4 staff is using several approaches to generate focus, synchronize efforts, and make the most efficient use of limited resources.

■ By Lt. Gen. Gustave "Gus" Perna

> "It is important that we spend time thinking strategically five or more years into the future while the exceptional leaders in our sustainment and maneuver units take care of the present."

Six months ago, I was honored to assume duties as the Army's G–4. Not long after, I asked my team to explore the possibility of creating a regular column in *Army Sustainment* so that I can share insights from the Army staff level and from my visits with professional logisticians across our formations.

In this first column, I will discuss how I believe logisticians must approach the present challenges of supporting greatly increasing requirements with declining resources. In particular, I would like to share several approaches we are taking within the Army G–4, both for your awareness and because you may find similar approaches useful within your own formations.

The last 10 years have been hard on the Army as it fought difficult wars on two fronts. We succeeded, but it took courage, sacrifice from many Soldiers, civilians, and families, and support and resources from the nation's people. I believe the next 10 years will be even harder as resources decline and demands for trained and ready Army forces increase.

Currently, we have nine of 10 divisions committed, and logisticians must find ways to support formations on all continents, restore and sustain readiness across the Army, divest equipment, reposition and modernize Army pre-positioned stocks, create and sustain equipment activity sets, field the Global Combat Support System–Army, and when directed, set a theater for sustainment and onward movement in order to support forces in a complex and uncertain global environment—all while reducing manpower.

I am confident that we can succeed because we have great leaders and the finest Soldiers in the world. But as resources drop sharply, commanders and staffs must ensure they have processes and systems in place to focus and synchronize their efforts; we cannot afford an inadvertent waste of time, energy, or money.

Here is what logisticians on the Army staff are doing to generate this focus and synchronization and to ensure we make the most efficient use of our limited resources.

Prioritizing

First, in the G–4 we are focusing on what is really necessary. The G–4 is a small team that shoulders big responsibilities.

To ensure our limited staff focuses on what is really important, we are working to ensure that every team member has internalized the Army Chief of Staff's (CSA's) five priorities: Adaptive Army Leaders for a Complex World, a Globally Responsive and Regionally Engaged Army, a Ready and Modern Army, Soldiers Committed to Our Army Profession, and the Premier All-Volunteer Army.

The G–4 team knows our work must support these priorities and that everything we do must be connected to them. If an effort does not

support one of these priorities, we do not need that program, do not have to create that policy, or do not have to attend that meeting. All G–4 personnel have a copy of the CSA's priorities sitting on their desks or hanging on the wall, so if they need a reason to do or not do something, they just have to look up.

Challenging the Status Quo

Second, G–4 leaders and experts are charged with challenging the status quo. The projects and processes that guaranteed success during a 13-year, forward operating base-centered war with an Army Force Generation Army may or may not be the same ones we need to restore the Army's ability to project large, trained and ready formations on short notice anywhere in the world. Determining what work we should continue or discontinue (so we can shift resources elsewhere) requires critical thinking.

It also requires a constant review of the CSA's priorities to ensure anything we spend time, energy, or money on provides a benefit that can be linked to a priority. The most important thing we can do in this turbulent time is determine what we are not going to do so that we focus the right resources and energy on the missions that we must do.

Operating at the Right Level

Third, to help ensure optimal use of our small staff, as well as to make sure that we do not detract from important work being done elsewhere in the Army, G–4 leaders are ensuring we maintain our focus at the right level. Just as a battalion commander needs to focus on duties that are uniquely his or hers—and not try to command subordinate companies—we will work to keep Army G–4 focused within its own lane.

It is important that we spend time thinking strategically five or more years into the future while the exceptional leaders in our sustainment and maneuver units take care of the present. Accordingly, within G–4 we regularly talk about the Army five years from now as well as the Army of 2025 and beyond.

Our job is to describe clearly a vision for Army logistics in that time and then provide implementing guidance that synchronizes the efforts of the entire team toward that end state.

Implementation

To generate this synchronization within the G–4, we recently published logistics strategic planning guidance that focuses on three lines of effort (LOEs): leadership development, readiness, and the Army Operating Concept and Force 2025.

These LOEs directly support the CSA's priorities and help greatly with synchronization because we orient all major internal G–4 processes and meetings on the three LOEs. Every G–4 directorate is focusing its efforts on objectives designed to support one or more LOEs.

At the individual level, all members of the G–4 are becoming conversant in how their daily efforts support both these LOEs and the CSA's priorities.

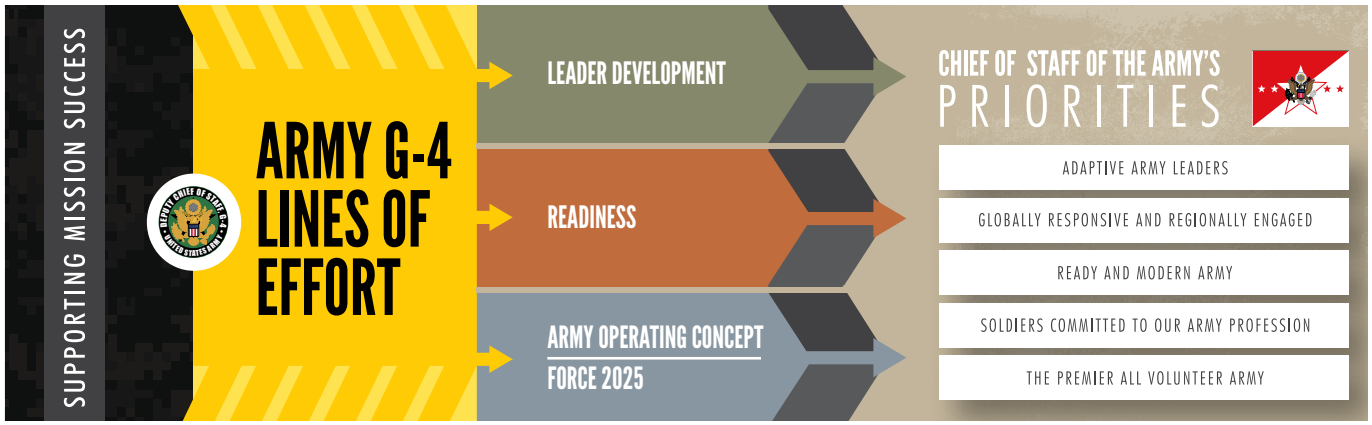
Further, as the G–4 staff operates within the overarching department-level processes used to plan and program for the Army—such as the budget program objective memorandum, the total Army analysis, and the long-term investment requirements analysis—we are using the new G–4 lines of effort to shape our inputs and to ensure we remain aligned within both G–4 and the larger sustainment community.

Finally, we have completely shifted our approach from a key department-level process, the Army strategic readiness assessment, to a metrics-based approach that allows us to measure progress along the LOEs toward the Army of 2025 and beyond.

Objectives for Force 2025

The G–4 leaders are developing objectives that fit within the new lines of effort and clearly support the CSA's priorities. Accordingly, here is a partial list of the objectives we are pursuing in coordination with key logistics stakeholders:

- ☐ Ensure the Army can provide trained and ready logistics forces to fulfill combatant command responsibilities.
- ☐ Ensure logistics forces are manned,



trained, and equipped to project, receive, and move forces.

- ☐ Ensure logistics force structure is properly aligned to provide support tactically, operationally, and strategically.
- ☐ Optimize field and depot maintenance processes to support tactical readiness and ensure strategic readiness.
- ☐ Operationalize materiel management and distribution management, and ensure we have the right structure at the right levels to execute operations in support of Army readiness.
- ☐ Operationalize operational contract support, and institutionalize the lessons learned from two wars characterized by unprecedented levels of contractors on the battlefield.
- ☐ Streamline central issue facilities and overhaul garrison dining facility operations.
- ☐ Implement the second wave of the Global Combat Support System–Army, fielding it for motor pool, property book, and supply room operations. Set conditions to create and execute aviation, transportation, and ammunition modules.
- ☐ Improve tracking and reporting of worldwide sustainment operations so we can identify and mitigate issues before they become problems.
- ☐ Establish an operational energy mindset that drives innovation to reduce logistics structure on the battlefield.

Many of these objectives are obviously complex and far-reaching, but if we follow the adage of "think big, start small" and drive ourselves toward the end state with focused and synchronized efforts, I am confident that we can get there. Our Army and our nation require nothing less.

Over these next few years, the decisions we make as logisticians and leaders can lead to great success—I know we can get it right. I challenge logisticians of all ranks to be involved and help ensure Army leaders make the right decisions as we work through this period of sharply increasing requirements with declining resources.

I look forward to hearing about your ideas and experiences during my travels to our training centers, installations, centers of excellence, and schoolhouses. Army Strong!

Lt. Gen. Gustave "Gus" Perna is the Army Deputy Chief of Staff, G-4. He oversees policies and procedures used by 270,000 Army logisticians throughout the world. Prior to joining the Army staff, he was the Deputy Chief of Staff, G-3/4, at the Army Materiel Command.

Tell *Army Sustainment* What You Think

Have you read an *Army Sustainment* article that triggered some thoughts on a subject? Do you feel you can offer an alternative perspective? Or do you agree with the author and want to share your points? Then you should consider writing a letter to the editor of *Army Sustainment*.

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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.

Sustainment and the Army Operating Concept

This Q&A with the commander of the Army Training and Doctrine Command highlights how sustainment training and operations will support the future fight.

■ By Julianne E. Cochran

Published in October of last year, the U.S. Army Operating Concept: Win in a Complex World 2020–2040 describes how future Army forces will prevent conflict, shape security environments, and win wars. It envisions a future military that is more adaptive, more collaborative, and more innovative.

Gen. David G. Perkins, commander of the Army Training and Doctrine Command (TRADOC), briefed the Army Operating Concept to lieutenants, captains, and majors attending the Army Logistics University on Feb. 2, 2015.

During his visit, *Army Sustainment* took some time to ask Gen. Perkins about how the Army Operating Concept (also known as TRADOC Pamphlet 525–3–1) applies to sustainers. Here are his responses.

Army Sustainment: Can you describe how the Army Operating Concept addresses developing adaptive leaders for a complex world and how this will affect training sustainers?

Perkins: In the world I grew up in, we tended to optimize the Army for known problems—whether it was the Soviet Union, the central plains of Europe, or whatever. So we were looking for people who could really execute known problems in a known environment.

[In the Army Operating Concept] we say the future is unknown, unknowable, and constantly changing. So I have to have leaders who are very good at understanding a very complex environment and are very adaptive to the problem at hand, but they're also very innovative.

When I take a look at sustainers, part of the issue of being adaptive and innovative is saying, "There may be different ways to provide sustainment, and can I collaborate with the maneuver folks and say, 'If you maneuver like this, you are going to create a demand that I cannot sustain, but if you maneuver differently, I can meet your demand.'" So it's much more collaborative. So when you say people are more adaptive, that also means they're more collaborative, so we can't have stovepipes.

> The challenge is only getting much greater for our sustainers, not less.

Army Sustainment: How have the wars in Iraq and Afghanistan shaped Army leader development and education?

Perkins: As we wrote the Army Operating Concept, we wanted to be informed by the wars in Iraq and Afghanistan but not captive to it. We said that may give us a glimpse into the future. One is that we learned that you can't predict where you're going to fight. Nobody in their wildest dreams on 9/10 would have predicted 9/11 or would have thought a few months later we'd be in Afghanistan.

What you need to focus on is describing the enemy, not predicting them. So, one of the things we said is, "What is the enemy going to do?" They are going to come at us in an asymmetrical manner. So we've got to build a force that doesn't have asymmetrical weaknesses.

So our force has to be very adaptive. In other words, we have to say, "Look, this is a very quick rate of change with the enemy. They change very quickly, so we have to train leaders to change quickly."

We have to have organizations that are built to learn and change in combat, and then we have to have an acquisition process that can deliver changing materiel as the tactics are changing.

So, what Iraq and Afghanistan did was enlighten us to the fact that the rate of change is going to increase dramatically, and therefore we have to build an Army to change, innovate, and adapt very quickly.

The other thing is they [our enemies] generally are not going to go toe to toe with whatever we are very good at. So we have to present multiple dilemmas to the enemy. We have to have multiple capabilities that they try to avoid. So we can't build sort of one-trick ponies.

Army Sustainment: When you say the rate of change has changed, what does that mean? Does that

mean the amount of effort put into projects is going to be smaller?

Perkins: In a known world, when you looked at innovation, you would talk about level of differentiation. So you'd spend effort on getting a huge difference between the capability you buy and what the enemy has. What I'm saying is that, in the future, you don't know what the enemy is going to have. It's not that it takes more effort. It is focused differently.

Gen. David G. Perkins, commander of the Army Training and Doctrine Command, explains the U.S. Army Operating Concept: Win in a Complex World, to majors attending Intermediate Level Education at the Army Logistics University at Fort Lee, Virginia, Feb. 2, 2015. (Photo by Adam Gramarossa)

While you're in war, situations are going to change rapidly and you are going to have to innovate to keep up with them. So that means, for instance, when you buy a vehicle, you can update it very quickly. What are the things that change most quickly? The sensors, the electronics, etcetera. So you'd better not hardwire them in; you'd better make them modular so you can update that.

Your leaders, they have to understand that whatever tactics they're using now [are] only going to last for a little while and then eventually the enemy is going to figure them out. So, are they already thinking about the second and third [moves]?

Army Sustainment: How does the Army Operating Concept shape the future of sustainment, given the complex environment?

Perkins: Our Army is becoming a more CONUS-based Army. I just spent last week in Europe. When I was there as a lieutenant, we had hundreds of thousands of Soldiers, and now we're down below 50,000. And so since we're becoming a CONUS-based Army, we're going to have to deploy and execute expeditionary maneuver from the United States, which means we have to have a great sustainment capability to do that.

In some ways, we are relying more upon the sustainers because we are not forward-positioned yet. We see the rate of human interaction is going to increase, so actually we may have more periods that we have to deploy than less.

Since the [Berlin] Wall came down, we've been all over the world. So, it's really a more volatile world, a more chaotic world, which means the requirements for our sustainers are more difficult because you don't have that huge base of support you used to have in Europe. You've got to do it very quickly, very rapidly, and you've got to leverage a very immature infrastructure. The challenge is only getting much greater for our sustainers, not less.

Army Sustainment: How would you say logistics enables the strategic Army?

Perkins: One of the key capabilities that specifically the United States has is the ability to deploy and conduct expeditionary maneuver and sustain ourselves almost indefinitely in any part of the world. And that is primarily because of the multifunctional logisticians and the sustainment capability of the Army. They don't only sustain the Army; they sustain the joint force as well as our coalition partners.

In many ways, they are what makes the Army strategic because we can project national power anywhere in the world. And there's really not any other country out there that can do it to the level that we can deploy anywhere in the world and stay as long as we want to based on our national command authority.

I come from a maneuver background, infantry/armor, and so what we generally bring is tactical and operational capability to the Army. What our logisticians bring is our ability to strategically deploy and sustain ourselves. So they are really what make our United States Army strategic.

For more on the U.S. Army Operating Concept: Win in a Complex World, visit the related links to this article online at http://1.usa.gov/1zy1ol5.

Logistics and the (Lost?) Art of Red Teaming

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

One of the most valuable tools used by senior managers and leaders in almost all types of organizations is known as "red teaming." It is the process of critically examining and challenging the basic assumptions underpinning professional knowledge, planning, programming, ideas, or initiatives.

Red teaming is used by competitive businesses when preparing proposals to win contracts. Similarly, national security exercises routinely have red team cells for the express purpose of considering out-of-the-box approaches and offering blunt challenges to the organizations and leaders that participate.

We are interested in the logistics community's answer to this question: How often and how well does the U.S. defense logistics enterprise red team its major efforts? If it is not especially effective at this process, it might be useful to look at why and consider ways to improve a valuable process.

In his book, *Cleopatra's Nose: Essays on the Unexpected*, Pulitzer Prize-winning historian Daniel J. Boorstin asserts that "the history of Western science confirms the aphorism that the great menace to progress is not ignorance but the illusion of knowledge. … The negative discoverer is the historic dissolver of illusions." The point he makes, and the one we intend here, is that institutions tend to depend on habituated knowledge structures and processes that often go unchallenged.

Based on our experience and observations over the years, we believe that this phenomenon is often seen across the joint logistics community. In fact, logistics is an area where red teaming may offer a very high payoff, yet it appears unused. Our community does not seem to engage routinely in organized knowledge red teaming.

As logisticians pursue refinements and additions to our professional body of knowledge, we suggest that red teaming be a critical part of the change management process. One of the major issues that red teaming seeks to mitigate is groupthink, which, according to *Merriam-Webster*, is "a pattern of thought characterized by self-deception, forced manufacture of consent, and conformity to group values and ethics."

Overcoming groupthink has at least three barriers. The first is hierarchy, the governance of organizations through the authority vested in rank and position. While military hierarchy is essential to discipline and exigency, it can also ensure fearful and unquestioned compliance. We all know of situations in which leaders have stated, in effect, "Either get on board, or get out of the way." This approach will neither incentivize critical assessments nor encourage innovative ideas.

A second barrier to effective red teaming is the cultural propensity to value "the team" more than the decision that needs to be made and the consequences that follow. It is important for leaders to recognize both internally and publicly that the military institution has an unwritten ethic not to embarrass fellow members, even if their recommendations or silent consent for a decision could be effectively criticized.

Third and similarly, a degree of self-censoring may be correlated to the importance of the decision. In other words, the more important the decision, the less likely it is that the individual will speak up with an alternative idea because the suggested alternative may fail; hence, that person will receive the blame.

Logisticians, and leaders of all stripes, must find ways to mitigate some of these barriers to criticism. One way might be to institutionalize forms of anonymity for the purpose of red teaming. The cures to groupthink are arguably what would separate professional institutions from lay institutions. In academic and most professional publications, for example, double-blind peer reviews help ensure criticism is not masked by hierarchy, group affiliation, or fear of blame.

Finally we believe that military logistics teaching institutions should be at the vanguard of encouraging a culture of red teaming at all levels. While specific prescriptions for making such a dramatic cultural change are too lengthy for this column, we hope the logistics community will encourage red teaming in professional development efforts. We recommend doing a web search for the U.S. Army University of Foreign Military and Cultural Studies. The university's website explains the essence of red teaming and is a source of remedies for groupthink.

Perhaps the most important lesson we can teach our future leaders is the importance of candid and critical assessments; Boorstin's "illusion of knowledge" can truly be dangerous.

Dr. Christopher R. Paparone is a dean at the Army Logistics University at Fort Lee, Virginia.

George L. Topic Jr. is the vice director for the Center for Joint and Strategic Logistics at Fort McNair, Washington, D.C.

Improving Efficiency in Expeditionary Movement Control

Putting full responsibility for logistics movements back in the hands of the movement control battalion can save money and expedite shipments.

■ By 1st Lt. Ryan M. Waldorf

Commanders always demand an effective transportation system. They want their equipment, they want it intact and right now, and they are very vocal when their wants are not met. Conversely, commanders rarely demand an efficient transportation system. They seldom complain when their cargo is shipped unnecessarily quickly, safely, or expensively, even though such shipments have cost the military hundreds of millions of dollars during the past few years.

This cost is concealed because commanders do not pay for their own transportation expenses. Transportation costs are charged to a variety of theater-level accounts that fund transportation for all organizations in the theater. Centralized transportation funding ensures units' missions never fail because they lack transportation funds. However, it does not ensure units use funds efficiently and cost effectively.

The MCB's Role in Cost Control

To help instill cost discipline, the military developed a comprehensive theory of movement control and deployed movement control battalions (MCBs) to theaters to manage expeditionary transportation systems.

In the past, MCBs enforced cost discipline in theater by assuming the responsibility for shipping cargo. Once a customer identified cargo for shipment, the MCB processed cargo through a central receiving and shipping point (CRSP) yard, selected the best mode of transportation for the cargo, and coordinated delivery to its follow-on destination.

Over the course of the war in Afghanistan, however, MCBs relinquished the responsibility for shipping cargo. Customers began to request and coordinate their own modes of transportation and used the MCB primarily to process their movement requests. These changes resulted in an inordinately expensive transportation system.

Because customers, not the MCB, determine the transportation modes used, a significant amount of money is spent shipping cargo by needlessly quick and expensive modes of transportation. Simultaneously, since trucks are associated with individual customers instead of the MCB, significant funds are also spent on underutilized ground transportation assets, expedited ground transportation assets, and demurrage that often lengthens delivery times.

If an MCB were to resume full responsibility for shipping cargo throughout Afghanistan, the military would expedite shipments and save hundreds of millions of dollars on transportation costs that may be better spent elsewhere.

The Conflict of Interest

Our military transportation system in Afghanistan operates the way the U.S. postal system would if customers were not charged different prices for different shipping options. Postal customers generally want their packages to arrive as quickly as possible, but their desire to pay as little as possible usually discourages them from unnecessarily expediting their shipments. If customers did not pay for their own shipments, or if their expenses were charged to a government account that few people scrutinized, most customers would ship their packages via overnight air at an enormous cost.

Unfortunately, the military transportation system in Afghanistan has operated this way for years. Every new fiscal year, the military allocates hundreds of millions of dollars to theaterwide transportation accounts to cover costs that would otherwise be paid by individual units. These accounts give commanders the flexibility they need to quickly and effectively react to changing situations on the ground by eliminating the need to estimate individual transportation expenses and request new funds every time an unforeseen or unpredicted expense arises.

At the same time, theaterwide funds eliminate the incentive for commanders to examine costs. When managing an operation, commanders generally measure success by the delivery of their cargo, not the cost of delivery. Since they are not paying for their own transportation, they rarely consider whether or not they could have achieved the same result with less money.

The Case for the MCB

Because shippers have no incentive to be attentive to costs, the transportation system needs to be overseen by an organization that is not directly accountable to its customers.

This organization needs to be able to validate and, if necessary, contest customer-assigned required delivery dates (RDDs), since the government spends substantially more when expediting shipments to meet early RDDs. At the same time, this organization needs the flexibility to match in-transit safety to the cargo's value when considering different modes of transportation.

In the past, the MCB fulfilled this role; its movement control teams (MCTs) accepted logistics movement requests from customers and determined the cargo's mode of transportation based on the cargo's RDD, the cargo's value and sensitivity, enemy activity, higher headquarters guidance, and shipment cost.

After selecting the mode of transportation, the MCT then coordinated cargo movement by completing transportation movement releases (TMRs) for ground movement, completing rotary air movement requests for rotary-wing movement, or transferring the cargo to the arrival/departure airfield control group for fixed-wing movement.

If the MCB resumed this responsibility, it could better direct customers' cargo to the most appropriate mode of transportation, saving a significant amount of money in the process.

Soldiers assigned to the 10th Sustainment Brigade and the 330th Movement Control Battalion in support of retrograde operations load and secure recovered logistics information systems onto the back of a heavy expanded mobility tactical truck load handling system at the top of the Salang Pass on July 15, 2014.

The Inefficient Links

Currently, when a customer goes to his local ground MCT to send a tricon shipping container from Bagram Airfield to Kandahar Airfield, the MCT helps the customer fill out a TMR, provides the estimated pickup date, and submits the TMR to the MCB for truck allocation. Often a second customer will come in shortly after to ship another container to Kandahar. The MCT repeats the same process with the second customer.

Three more times throughout the day, different customers may come to the MCT to ship a container from Bagram to Kandahar, and each time the MCT will submit a separate truck request for a separate customer. Subsequently five separate trucks will come for pickups even though a single truck could move all five containers at a considerable cost savings.

In other cases, organizations need to resupply outlying forward operating bases with emergency cargo. To expedite shipments, they may ship their emergency cargo either by working with the air MCT to have it flown out on a plane leaving the next day or by submitting a TMR through the ground MCT to request an expensive expedited truck pickup.

While the customer and MCTs coordinate, regularly priced trucks may be leaving for the same outlying bases that day with low-priority cargo. Often, an MCT could easily have swapped out this lower-priority cargo for the higher-priority cargo.

In other instances a customer may order a truck to move a 20-foot container but may not load the truck until four days after the truck arrives. The first three days, the military incurs an implicit cost because

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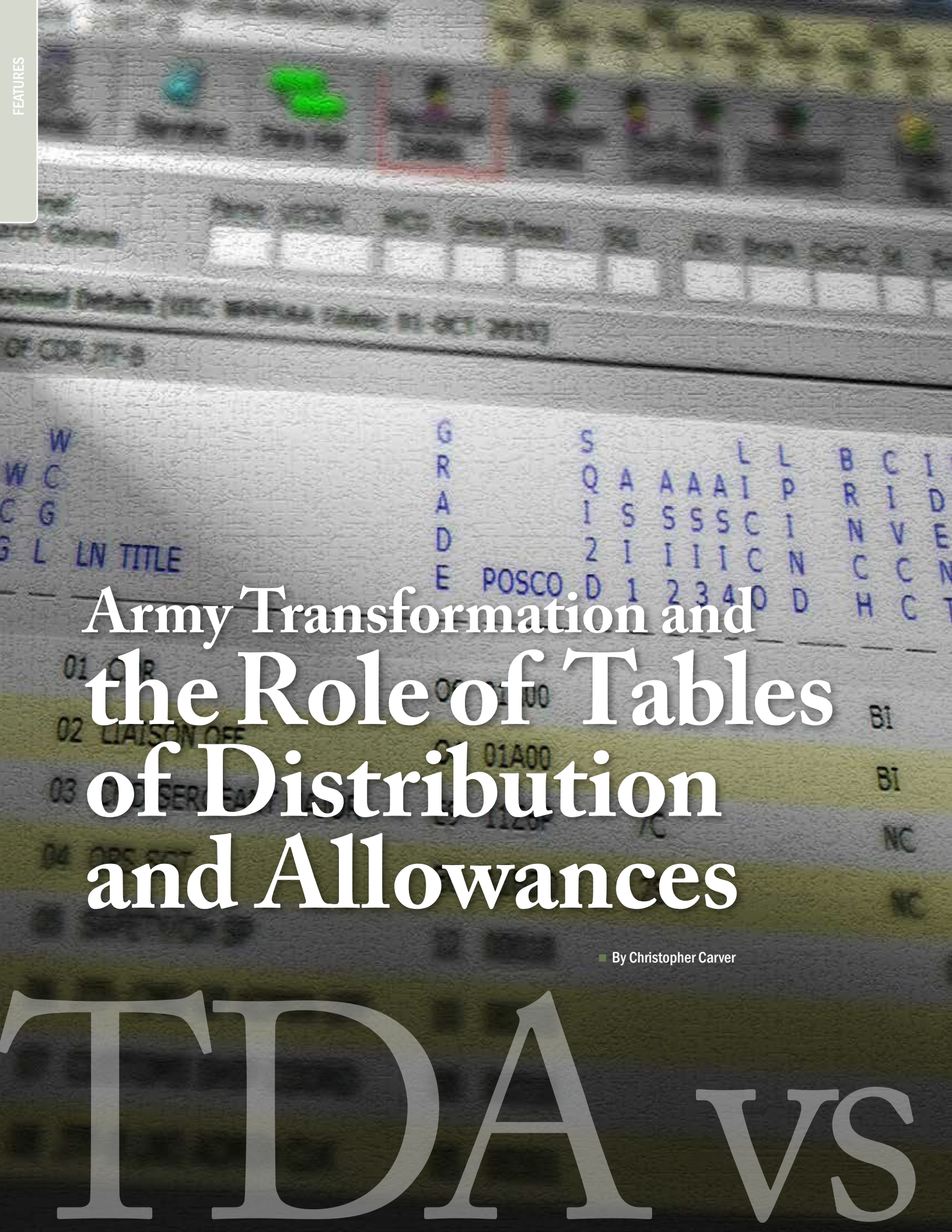
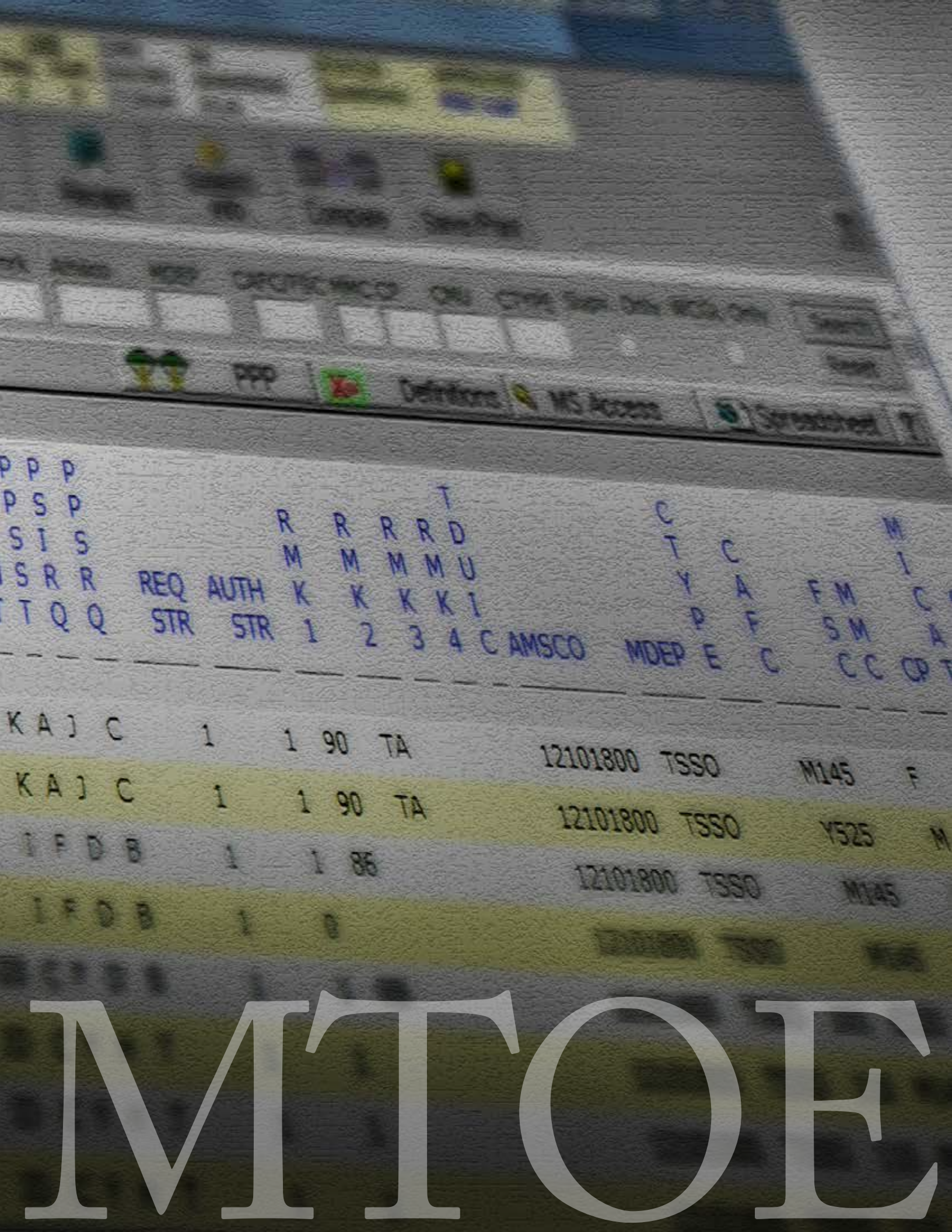


Army Transformation and the Role of Tables of Distribution and Allowances

By Christopher Carver

TDA vs


MTOE

Tables of distribution and allowances can be used to experiment with new unit structures and mission sets, leverage emerging technologies, and document unique equipment sets.

The adage "generals always fight the last war" reveals the Army's propensity to focus on how things were done in the past. This adage is traditionally associated with the strategy and tactics of warfighting, but it also can and must be applied to the process of force management.

The role of force management and its influence on military readiness, organizational requirements, and capabilities should be focused on the total force. The arrangement, allocation, and documentation of manpower, personnel, and equipment must change with the current environment, which means that old institutional paradigms must evolve or be discarded.

The use of manpower and equipment in land warfare has changed significantly since World War II and even since the first Gulf War; however, institutional paradigms have changed little over this time.

In his book *Transformation Under Fire: Revolutionizing How America Fights*, Douglas Macgregor states that current efforts of Army transformation are materiel-centric and "largely cosmetic." He writes, "Instead of recognizing that the Army's strategic problem was not exclusively equipment, but legacy structure, legacy thinking, the Army set out to buy new platforms ... this is a strategy for change that is largely centered on new technologies rather than on new ideas."

Transforming the Army for the 21st century must therefore begin with a closer examination of how the Army is structured and, further, how that structure is developed and documented. The Army force structure is recorded in two types of authorization documents: tables of distribution and allowances (TDAs) and modified tables of organization and equipment (MTOEs).

Although the majority of attention tends to be focused on MTOEs, which reflect most of the operating force, TDA documents can be successfully used to effect Army transformation. TDAs traditionally document strategic, institutional, and mission command missions and their supporting infrastructures, but the Army should evaluate the possibility of expanding the range of units and missions that can be documented in this format.

TDAs and MTOEs

Using TDAs for operating force units offers a unique opportunity to experiment with new combat configurations, incorporate new technologies, and augment certain units. However, before these possibilities can be examined, it is important to dispel some common misconceptions about Army manpower and equipment documentation.

Perhaps the most predominant institutional paradigm regarding force management is the concept that warfighting units must, by default, be documented by MTOEs and that all peacetime and noncombat units are documented by TDAs. This is simply not true. Some MTOE documents reflect units that are considered part of the institutional generating force. For example, the National Training Center's opposing force is primarily documented as an MTOE.

Also, some TDA units are involved in operating force missions. Some of the more significant, specially tailored warfighting units in the post-9/11 period are TDA units, and the use of forward deployed TDAs for critical missions is nothing new. The headquarters and headquarters company of the Berlin Brigade, one of the most visible brigades of the Cold War, was a TDA unit for almost 20 years.

MTOE documents are driven by doctrine. They are built from a standardized table of organization and equipment (TOE) developed by an Army Center of Excellence. The TOE is then modified to incorporate basis of issue plans in accordance with guidance from Headquarters, Department of the Army, and applied to a specific unit. The process of creating a new TOE or radically

altering an existing one is thus highly regimented and time-consuming.

The MTOE document and the documentation systems are built on the premise that there are preexisting doctrine, policies, and validation for the various Soldier and equipment interdependencies for that unit.

When mission requirements are constantly evolving, or when equipment is developmental or lacks a formalized support structure, the flexibility required for ad hoc structure development and updates runs counter to the design of the MTOE documentation process and software. Therefore, documenting an exception MTOE often is like trying to fit a square peg into a round hole.

TDA documents, on the other hand, are designed for unique mission sets and capabilities for which doctrine is yet to be developed or is unnecessary. The documentation process from which TDAs are produced can quickly and efficiently produce unique, adaptable units while still ensuring that Army manpower, personnel, funding, and equipment policies are enforced.

In cases where an operational unit must be established quickly and no corresponding TOE exists, the unit can be more efficiently built using a TDA, saving a significant amount of work for both the unit and the Army.

New Technologies

The 21st century has brought new threats that are quickly evolving and emerging technologies that may be used by or against our forces. In this rapidly changing environment, the Army may face challenges and threats for which there is no established doctrine and little time to develop formal policies and procedures for countering these threats.

In situations like these, TDA documents can quickly provide a prototype operating force unit in which organization, structure, and equipment can be developed and tested in real-time scenarios.

Macgregor states, "In a period when rapid obsolescence is a high risk, wildcatting with new designs, even aggressively courting failure, is absolutely necessary." Although his statement is directed toward the development of combat equipment, the same argument could be made for the development of new combat units, organizational structures, and their documentation.

Task Force ODIN

In 2006, the growing casualties caused by improvised explosive devices (IEDs) during Operation Iraqi Freedom resulted in a congressional inquiry that tasked the Army to develop a capability to counter that threat. The Army answered this challenge by standing up Task Force ODIN [observe, detect, identify, and neutralize]. The unit's mission was to negate the threat from roadside IEDs.

Task Force ODIN used existing and prototype equipment, such as unmanned aerial vehicles (UAVs) to accomplish its mission. Although units that employed UAVs for intelligence, surveillance, and reconnaissance existed, Task Force ODIN's mission and equipment set was too unique to be built from any existing TOE.

Since time was a critical factor, force developers decided to build the unit with a TDA. This approach lent itself to adaptability and efficiency. The unit was developed in August 2006 and became fully operational in July 2007. In its first year of operation, Task Force ODIN was credited with actions that led to the elimination of more than 3,000 adversaries and the capture of almost 150 insurgent leaders.

The approach used to develop Task Force ODIN can be used to develop future capabilities that, because of time constraints or the uniqueness of a particular mission, preclude the development of an MTOE.

A TDA could be used to create an operational unit that can be adapted after both warfighting concepts and equipment are tested and adjusted in the field.

After such units discover the best mix of equipment, organization, skills, and structure for the highest degree of functionality for the mission set, the Army can use this information to create the foundation of a base TOE from which future similar units can be built for the operating force.

In time, the original unit could be redocumented as an MTOE organization after the design of that unit or mission set becomes standardized. Of course, if the unit in question remains unique to the force and no other units with similar missions sets are ever developed, the unit should remain a TDA unit that would continue to evolve to fit its mission. Developing a TOE for a single, specialized capability would waste time and effort.

New Equipment

One of the significant challenges of Task Force ODIN was that much of its equipment was too new or still in various stages of development, which kept it from being assigned Army line item numbers (LINs). MTOE documents cannot reflect nonstandard equipment. However, TDA documents have a special annex section that can be used to document a piece of equipment that does not have a standard LIN.

As new technologies emerge, some of them will likely be deemed essential to mission sets before a standard LIN can be assigned. This was true in the case of the mine-resistant ambush-protected (MRAP) vehicle. Numerous types of MRAP vehicles were produced, but even after several years, no official LIN numbers were assigned.

Some MRAPs worked well in certain situations but were poorly suited for others. Also, maintenance requirements varied among the types. Thus, it was important for units to be able to select the right type of MRAP for their missions.

Only through validating and doc-

umenting the nonstandard LIN with TDAs were units able to identify the right type of MRAP for a given mission set.

This process was used for mission sets in Afghanistan. Several equipment-only TDAs were developed to supplement the equipment that was already in theater. As new units rotated in, the mission-essential equipment could be documented on the TDA.

Incoming units were told what equipment they would need to bring with them into theater as well as what equipment could be left behind. The goal was to reduce the logistics burden while ensuring that the units always had the right mix for their assigned missions, which varied significantly from their doctrinal TOE missions.

Although TDAs can be used to incorporate new and emerging technologies that are critical to the success of the warfighting mission, there are limitations to using a TDA in this manner. Using the supplemental section to list breakthrough technologies is not a complete equipping strategy because the data from the supplemental equipment section of the TDA does not feed into any automated resourcing system, nor has there been a demand for a process to propagate the data.

Therefore, trying to document all nonstandard equipment would waste both time and effort. The equipment documented in the supplemental equipment section of the TDA should be limited to those key equipment sets that are essential or that the gaining unit may be unfamiliar with.

Regionally Aligned Forces

Just as new equipment can place unique demands on the Army documentation process, so can the emerging initiatives of our national military strategy. The recently developed regionally aligned forces (RAF) concept is likely to require capabilities that are unique to a particular part of the world or even a specific country.

As the U.S. partners with other nations, regional challenges could present requirements that are critical to certain missions but are too rare in the rest of the world to justify developing a new TOE or changing the RAF unit's MTOE.

TDAs could be constructed to supplement RAF, including allied coalition forces with organizational structures and equipment specifically designed around the mission sets projected for certain areas of the world.

A 2013 RAND Corporation study identified the need for capturing such supplemental capabilities, noting that evolving changes in technologies and capabilities means that "the MTOE is therefore less relevant as a near-term gauge of readiness, and it needs to be supplemented by an indication of the extent to which a unit has deviated from that design."

The RAND study noted that this approach would be shaped by differentiating between the "designed" missions for the MTOE and the actual "assigned" mission for the deployed unit. Naturally, future capabilities that the Army deems as universal and enduring would be incorporated into the doctrinal base TOE.

However, specific capabilities may be mission essential for one particular region but have no bearing in any other part of the world. These capabilities could be documented with an "augmentation TDA" in order to supplement a specific unit.

Or they could be documented with an independent TDA for specific missions and countries that various units could rotate into. Such TDAs could be used to help coordinate coalition capabilities and determine the amount of support that the United States would be required or expected to provide.

Training unique TDA force structures may be a challenge for commanders, but this training burden might be easier to meet than trying to retrain a doctrinally designed unit to perform a mission set that was not part of the developed doctrine. Moreover, as indicated by the RAND study, doctrine tends to be based on models and expectations that differ greatly from the reality of the battlefield.

Specific Missions

In addition to manpower requirements, future support to a specific region may require the use of Army pre-positioned stocks (APS). Currently all APS documents are MTOEs.

Some equipment sets may not be incorporated into TOEs, yet they are still critical for certain mission sets. In this situation, RAF APS or theater-provided equipment (TPE) TDAs could contain supplemental equipment that would be tailored to region-specific missions.

For example, one TDA might be designed around a mission set of security assistance and protecting our embassies in a large urban environment with a developed infrastructure. Another TDA might capture mission and equipment needs for an area with undeveloped roads in a thick jungle. Just as the TPE TDAs for Afghanistan were intended to work, each of these RAF TDAs would contain an equipment set that best fits a specific region and mission.

At a forum on RAF, Lt. Gen. James L. Huggins Jr., Army G–3/5/7, advised that commanders should try to anticipate needs "far in advance to mitigate risk and delays and help the Army better apportion those assets." An RAF TDA could help commanders anticipate needs far in advance by maintaining supplemental TPE.

When a situation arises that requires Army involvement, selected units could ensure that commanders already had equipment sets validated for that environment and would know what equipment, if any, they would have to bring from their home station to augment the APS for their specific mission requirements. This would greatly reduce planning, transportation, and oth-

Spc. Jesse Searls, an aerial sensor operator with Task Force ODIN, fires his M9 pistol at a familiarization range. Task Force ODIN is an operating force unit that was built using a table of distribution and allowances. (Photo by Staff Sgt. Jack W. Carlson III)

er logistics requirements, allowing units to deploy more rapidly.

Documenting the force by TDAs is not a panacea for all the challenges the Army faces in the 21st century. It is a tool that is often overlooked when searching for ways to improve force management.

Like any tool, it can be very effective for certain jobs but may be the wrong instrument for others. The TDA is, above all, an authorization document. TDAs should not be developed for basic modeling, mission-essential equipment lists, joint manning documents, or other temporary units.

Using TDAs to meet every force management challenge would result in an unnecessary investment of time, manpower, and other resources. The attention to detail that document integrators spend on ensuring that TDAs are valid, accurate, and conform to Army guidance would be cost-prohibitive if the capabilities captured in those documents were not intended to be stable and enduring. As the Army continues to transform in an era of constrained resources the processes of force development, integration, and documentation will become paramount to ensure the Army remains viable in the modern world.

Old paradigms and archetypes must be discarded when they no longer fit the reality of the current environment. The current documentation format of Army force structure, TDAs and MTOEs, dates back to 1943. Much has changed since then and so should our methods of force development and documentation.

The TDA can be effectively used to meet emerging challenges for the future force. In cases where a long threat analysis process, combat development, and TOE development are not practical, the TDA can be a valid option for manpower and equipment management.

TDAs are not the end-all solution to the Army's force documentation challenges, but they can be highly effective for establishing new capabilities or managing unique force management requirements.

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Sgt. 1st Class Bernd Bello, a member of the 377th Theater Sustainment Command deployment support team, uses a half-ton truck to position an expandable light air mobile (ELAM) shelter onto a C-17 Globemaster for transport. The operational command post uses the ELAM as a communications hub inside its tactical operations center. (Photo by Sgt. 1st Class Angele Ringo)

Globally Responsive Logistics

By Maj. Armando K. Velasquez, Maj. Kim M. Cohen, Sgt. Maj. Antonio D. Carter, and Richard G. Dell

Army Chief of Staff Gen. Raymond T. Odierno has called upon the service to provide expeditionary, decisive land power to the joint force and be ready to perform across the range of military operations to prevent, shape, and win. The strategic guidance to meet his intent is found in the Army 2020 and Beyond Sustainment White Paper: Globally Responsive Sustainment.

Globally responsive sustainment requires sustainers to fulfill global logistics needs with a force that is regionally aligned. It demands that they be fiscally responsible and anticipate future requirements. It requires distribution and materiel systems and managers across all levels to synchronize and keep pace with advancing technology in order to meet operational sustainment needs.

This article serves as a guide to help sustainers understand the complexities of distribution and materiel management, which are the two most challenging realms of defense supply chain management.

Distribution and materiel managers must understand that the defense supply chain model is global and extremely fast-paced and that management levels overlap from strategic national providers down to the tactical sustainment unit. Strategic distribution decisions can quickly have tactical implications, and tactical distribution decisions can have strategic impacts.

The following are discussion points to support globally responsive logistics:

- ☐ Materiel and distribution managers need to understand the defense supply chain model early in their careers.
- ☐ Distribution is a complex task. The defense distribution network is robust and continues to develop.
- ☐ Materiel is requested and moved differently. Each commodity grouping uses specific materiel ordering systems and distribution booking and handling systems. Materiel may be categorized and booked for transportation as sustainment cargo or deployment cargo, and each is handled differently.
- ☐ Materiel and distribution managers must integrate electronic sustainment information systems to achieve true synchronization.

The Defense Supply Chain Model

Growing strategic logisticians is important, and that growth should begin early in a logistician's career. A strategic logistician must study the procurement, inventory, and warehousing procedures that the Defense Logistics Agency (DLA) executes and the physical distribution executed by the U.S. Transportation Command (TRANSCOM) to understand the defense enterprise supply chain management model. The defense supply chain model, taught at the Army Logistics University at Fort Lee, Virginia, has three main levels of supply chain management: source, make/repair, and deliver.

The source, make/repair, and deliver levels overlap each other. The Army's challenge is to ensure that the overlaps are seamless with respect to electronic sustainment information systems, people and organizations, and physical movements.

Without a basic understanding of how the joint defense supply system works, tomorrow's sustainer will lack the strategic vision to develop a theater logistically. It is vital to understand all layers of sustainment from tactical to operational to strategic so that a complete globally responsive sustainment network can be developed.

The operational level is where most uniformed logistics personnel will directly impact distribution and materiel management. It is the connecting link between strategic and tactical distribution and materiel management.

Understanding the flow of sustainment and mobility cargo from origin to the theater is important in order to make this link seamless. It requires understanding critical electronic distribution systems, such as the Global Air Transportation Execution System, Integrated Booking System, Single Mobility System, and the Integrated Development Environment and Global Transportation Network Convergence.

Logisticians should understand how forward enablers, such as DLA theater consolidation and shipping points, prime vendors, pre-positioned stocks, and the commercial port services available to the theater, influence and support their area of responsibility. Tools such as Battle Command Sustainment Support System–Node Management help provide the common operational picture at the operational and strategic levels for all sustainers.

A challenge for operational-level distribution and materiel managers is information and knowledge management. The personnel at the combatant command joint deployment and distribution operations center and the theater sustainment command and expeditionary sustainment command distribution management centers must be knowledgeable about their customers, all sustainment information systems, the geographic environment, and the ever evolving situation. Communicating, maximizing modes, and maintaining a common operational picture is vital to theater sustainment, and these organizations are critical to success.

Distribution Is a Complex Task

Distribution within the context of military logistics operations is simple to define but challenging to accomplish. Army Doctrine Publication 4–0, Sustainment, defines distribution as "a complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military resources between point of receipt into the military system and point of issue to using activities and units."

Distribution is made up of a series of networks to accomplish delivery. The physical, financial, communications, and information networks make up the Joint Deployment and Distribution Enterprise, or the global distribution network; all are required to ensure that distribution management occurs according to Joint Publication 4–09, Distribution Operations.

Distribution management is subject to continuous refinement within the sustainment community. Successful distribution relies on the integration of the logistics functions of transportation and supply and depends on movement control and materiel management according to Army Techniques Publication 4–0.1, Army Theater Distribution. Relying on transportation and supply systems integration and depending on movement control and materiel management to achieve successful distribution are considerable challenges within the defense logistics system.

Types of distribution. The two types of distribution—deployment and sustainment—are separate and have distinctly different processes.

Distribution education is generally based on the deployment process. It is taught to logisticians through unit movement officer courses, joint deployment courses, Joint Deployment Training Center courses, and professional military education programs, such as captain's career courses, advanced leadership courses, the Sergeants Major Academy, and the Command and General Staff College.

However, sustainment cargo does not follow the deployment distribution process, and sustainment cargo distribution processes are not as

widely understood throughout the logistics community. Sustainment cargo is largely managed at strategic and operational levels of logistics such as DLA and TRANSCOM. However, it often affects the Army at the tactical level.

For example, sustainment cargo such as class IIIB (bulk petroleum, oils, and lubricants) may be sourced, booked, and transported by a national-level provider. But, if it is not synchronized at the operational and tactical levels for delivery, problems may arise. There will always be considerations for mission, enemy, terrain and weather, troops and support available, time available, and civil considerations.

Many players and systems. Sustainment cargo booking takes place within a few centrally managed offices through a number of data-sharing booking systems. TRANSCOM, the distribution process owner, manages day-to-day booking operations through the Air Mobility Command and the Military Surface Deployment and Distribution Command. Systems such as the Cargo Movement Operations System, the Direct Vendor Delivery Electronic Data Interchange, Global Freight Management, and the Integrated Booking System are used to connect the materiel release points to the shipping mode operator.

TRANSCOM is the distribution process owner. This means that it is the interface among strategic providers such as DLA, the Army Materiel Command, the Joint Munitions Command, and any other provider requiring transportation.

After the strategic booking takes place, the item is physically moved from the port of embarkation to the port of debarkation. At the port of debarkation, the materiel reaches the operational level of materiel and distribution management. This is an important stage because the materiel has now reached the mission command level that is managed by forward deployed military forces.

One of the biggest challenges at this juncture is gaining visibility and programming lift against ever-changing priorities. The Army continually prioritizes shipments and commodities based on the commander's plan. Operational and tactical distribution is fluid and changes as the operation develops. The defense system cannot simply use a first-in, first-out system. At the operational and tactical levels, distribution is driven by the commander's priorities.

Airmen from the 455th Expeditionary Aerial Port Squadron push cargo from a C-5 Galaxy aircraft at Bagram Airfield, Afghanistan, May 26, 2014. The squadron services an average of 1,300 aircraft, 12,000 tons of cargo, and 9,000 passengers per month. (Photo by Staff Sgt. Evelyn Chavez)

Materiel Is Requested and Moved Differently

There are many transportation and distribution systems between the strategic and unit levels that ensure distribution occurs within the pipeline. There are also numerous materiel management and supply requisitioning systems. As requirements grow, so does the need to develop systems that procure and distribute supplies most efficiently.

Today, the integration of both transportation and materiel management systems leaves much to be desired. Gaps, blind spots, and choke points must be overcome for a more streamlined and responsive distribution and materiel management capability. Thanks to technology, distribution time lines are shrinking. But technology changes at a rapid pace and the distribution manager must be able to keep up with it to ensure that sustainment information systems continue to meet requirements.

For example, if a materiel management system improves efficiencies for warehousing and cataloging but cannot effectively communicate with the distribution systems, then a choke point occurs. And if a distribution management system becomes so efficient within the transportation realm that materiel management systems cannot keep up with inbound and outbound shipments, then a blind spot occurs. Choke points cause shortfalls in military operations, and blind spots cause commanders to make decisions without all of the facts. Both choke points and blind spots elevate operational risk.

System diversity. Army sustainment information systems do not provide full end-to-end connectivity or visibility of the requisitioning or

distribution flow. In fact, no single system processes all classes of supply requests from initiation to fulfillment. Some classes of supply have their own exclusive systems and seldom interface with others. For example, class V (ammunition) has one system, while classes II (clothing and individual equipment), IV (construction materials), and IX (repair parts) have another, and class IIIB has a third.

Senior Airman Terrin Oharra and Senior Airman Brittany Hogue, both assigned to the 3rd Aerial Port Squadron, load cargo onto a C-130H Hercules aircraft from the 145th Airlift Wing on Jan. 21, 2015, at Pope Army Airfield, North Carolina. The operation supported daily joint airborne/air transportability training sorties conducted there. (Photo by U.S. Air Force)

Also, a request not only passes from one Army system to another but also can pass through a joint or Department of Defense system, depending on the fulfilling agency. Likewise, the movement of materiel has similar system crossovers. At each point between systems, there is the possibility of information loss or delay and an associated loss of visibility.

Some sustainment information systems overcome this by having active interfaces with their handoff partners. Others rely on the "sneaker net," which is the process of transporting a copy of the information to the next operator of an automated system. In some cases, the process requires time-consuming manual re-entry of information. These manual data transfers introduce the possibility of human error and multiply the likelihood of visibility loss.

Data transfer points, depending on location and complexity, can become information gaps, blind spots, or choke points that impact the distribution flow. That said, in spite of these gaps, the distribution process manages to succeed. One reason for this success has been the proliferation of email and cell phone communication employed within an area of operations. These "offline" communications networks have been used at every level, not only by the requester and personnel in the chain of supply but also by industrial base representatives throughout the theater.

The offline networks have sometimes even provided materiel to the user before the standard program of record process could, but they create yet another layer of complexity. A lack of accountability, unexpected deliveries, unintended excess, and exceeding unit funds can cause frustration.

System interrelationships. To better visualize the interrelationships of the various systems, one might consider the twines of a supporting cable of a suspension bridge. The cable's construction comprises several smaller cables intertwined to increase its combined strength.

In this illustration there are three "cables"—supply requisitioning, distribution, and offline communications networks. The intertwining of these three cables ensures a single purpose is met, and to the uninitiated it appears to be a single cable performing a function.

Furthermore, if any one of these cables is frayed or has a small break, the two surrounding cables continue to provide connectivity. The frays or breaks in the cable equate to information gaps, blind spots, and choke points. To break it down further, each of the three individual cables comprises smaller individual systems or "cables," intertwined to create a single subordinate system.

This construct reflects why we have been unable to achieve the efficiencies of distribution giants like Walmart, Amazon, or FedEx. Although the distribution and materiel management processes have a single overall purpose—getting Soldiers what they need, when they need it—the ownership over the various systems and associated applications prevents the single-minded management that private logistics industries possess.

The structure and framework of commercial logistics companies are focused on a single goal—making money. Outside agencies and activities become part of the company's process based only on the relative value they add and their conformity to the company's structure.

The Defense Department's systems involved in global distribution serve many competing priorities and do not share a single architectural structure and language. The use of middleware, system interfaces, and policy directives ensures logisticians eventually obtain the required information, but this pro-

cess falls far short of the instantaneous and single point of entry systems that commercial logistics companies enjoy.

Synchronizing Systems

As mentioned earlier, many of the gaps, blind spots, and choke points in the information flow are created as information passes between incompatible systems. TRANSCOM and the Army have taken action to overcome these problems by eliminating some systems and integrating some individual systems and functions into a single source or database. This provides the user with a single source for information and data entry.

TRANSCOM combined the integrated development environment (IDE) and Global Transportation Network (GTN) into the IDE/GTN Convergence and shifted the Worldwide Port System (WPS) functionality into the Global Air Transportation Execution System (GATES), creating GATES–Surface (the replacement for WPS) and GATES–Air. Soon TRANSCOM will integrate Joint Total Asset Visibility functionality into IDE/GTN Convergence.

The Army has initiated the fielding of the Global Combat Support System–Army (GCSS–Army), an enterprise resource planning system that will replace the supply, maintenance, and property book systems in tactical units by the end of fiscal year 2017. GCSS–Army will eventually replace the Standard Army Retail Supply System, the Property Book Unit Supply Enhanced, and the Standard Army Maintenance System–Enhanced. This will place all of those functionalities into a single database and provide the user a single entry point.

GCSS–Army also integrates financial accountability within its system by working with the General Fund Enterprise Business System. This function will help the Army meet its congressional directive to be auditable. After fiscal year 2017, several other functions could be supported by GCSS–Army, depending on funding. They include:

- Transportation and distribution currently managed by the Transportation Coordinators' Automated Information for Movement System II.
- Ammunition supply managed by the Standard Army Ammunition System–Modernization.
- Army pre-positioned stock operations at the installation and tactical levels, which are currently managed by the Army War Reserve Deployment System.
- Aviation maintenance for both manned and unmanned airframes, which is managed by the Unit Level Logistics System–Aviation Enhanced and the Aviation Logistics Platform–Enhanced.

Other possibilities include functionalities that are not currently automated, such as bulk and retail fuel management; shower, laundry, clothing and repair; and petroleum quality analysis and quality surveillance, to name a few.

The transition in the tactical arena to an integrated enterprise resource planning system will overcome many of the existing gaps, blind spots, and choke points and provide Soldiers a single screen for most logistics operations, minimizing keystrokes as entries move from one functionality to another. These changes hold the promise of the Army overcoming challenges that have affected logisticians for decades.

Achieving globally responsive logistics will require tomorrow's logisticians to understand the entire process and fundamentals of distribution and materiel management. The Army must grow strategic logisticians who understand the defense supply model and the complexities within the model.

As we move forward, strategic logistics will affect tactical decisions, and tactical decisions will have strategic impacts. Logisticians must be conscious of how their decisions affect the mission. Lastly, the globally responsive logistician must understand each distribution and materiel management system and how commodities move through their respective pipelines in order to integrate transportation and supply across all domains, systems, and staffs.

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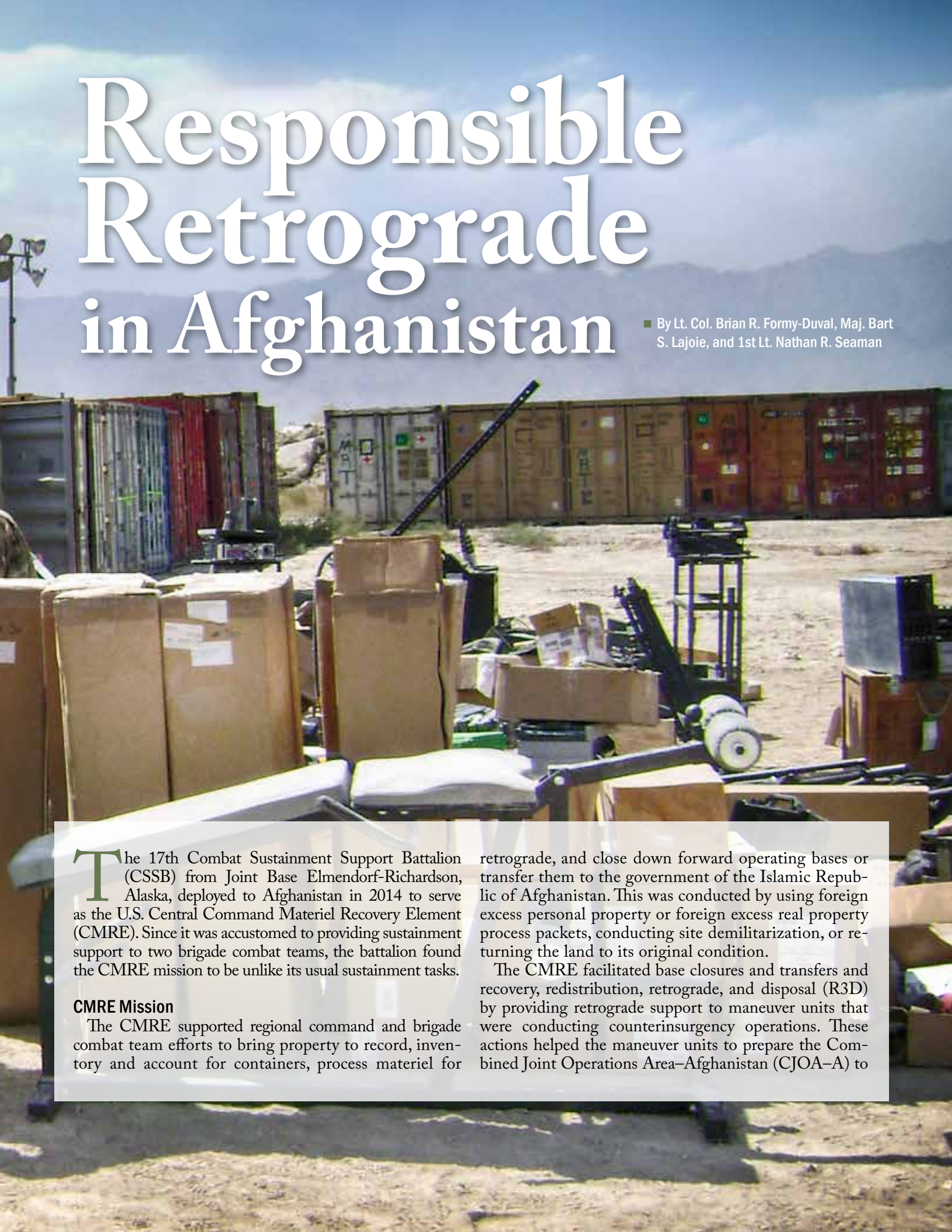
Editor's Note: This is an edited version of a paper of the same title. The full version of the paper along with associated charts can be accessed here: http://www.alu.army.mil/alog/2015/MARAPR15/PDF/GloballyResponsiveLogistics.pdf.

Col. Robert Barnes and Kenneth Gaines contributed to this article.

The 954th Quartermaster Company materiel redistribution team sorts through hundreds of containers filled with years' worth of supplies that had been passed from unit to unit. (Photo by Chief Warrant Officer 2 Dannie Garnett)

Responsible Retrograde in Afghanistan

By Lt. Col. Brian R. Formy-Duval, Maj. Bart S. Lajoie, and 1st Lt. Nathan R. Seaman



The 17th Combat Sustainment Support Battalion (CSSB) from Joint Base Elmendorf-Richardson, Alaska, deployed to Afghanistan in 2014 to serve as the U.S. Central Command Materiel Recovery Element (CMRE). Since it was accustomed to providing sustainment support to two brigade combat teams, the battalion found the CMRE mission to be unlike its usual sustainment tasks.

CMRE Mission

The CMRE supported regional command and brigade combat team efforts to bring property to record, inventory and account for containers, process materiel for retrograde, and close down forward operating bases or transfer them to the government of the Islamic Republic of Afghanistan. This was conducted by using foreign excess personal property or foreign excess real property process packets, conducting site demilitarization, or returning the land to its original condition.

The CMRE facilitated base closures and transfers and recovery, redistribution, retrograde, and disposal (R3D) by providing retrograde support to maneuver units that were conducting counterinsurgency operations. These actions helped the maneuver units to prepare the Combined Joint Operations Area–Afghanistan (CJOA–A) to

meet post-2014 strategic operational objectives and transition forces to Operation Resolute Support.

The key CMRE tasks were as follows:

- ☐ Align capacity with requirements to maximize assets in order to increase R3D.
- ☐ Define future requirements and build capacity at retrograde sort yards to maximize R3D.
- ☐ Educate the CJOA–A forces on CMRE capabilities, resources, and expertise in order to expedite R3D.
- ☐ Establish systems and processes that focus energy, effort, and attention on support, maintenance, accountability, resources, and training.
- ☐ Standardize systems and procedures so routine actions are executed to standard, allowing the team to focus forward in order to anticipate problems, analyze data, and provide creative solutions.
- ☐ Develop and maintain relationships that facilitate teamwork and share information, resources, and expertise.

The CMRE mission can be summed up in two words: responsible retrograde. After 13 years of continuous military operations with unit after unit conducting reliefs-in-place and falling in on supplies left by previous units, a huge amount of excess materiel had accumulated.

Leaders must be good stewards of government property through accountability. Logisticians should consider property accountability and ask themselves these questions: How do I responsibly clean up my unit's area of operations, who can show me what is salvageable, and where can I turn this stuff in? The CMRE provides these answers and capabilities.

The multifunctional CMRE mission required strict mission command of nine different retrograde capabilities, or enablers:

- ☐ Materiel redistribution teams (MRTs).
- ☐ Forward retrograde elements (FREs).
- ☐ Retrograde sort yards (RSYs).
- ☐ Medical retrograde sort teams (MED RSTs).
- ☐ Base closure assistance teams.
- ☐ Mobile container assessment teams.
- ☐ Ammunition abatement teams.
- ☐ Customs inspection teams.
- ☐ Operation Ammunition Clean Sweep (OACS) teams.

Most of the CMRE enablers were manned by both military and contractor personnel. When combined, they resulted in a very large battalion footprint and a robust capability to assist bases with future closures, transfers, and materiel reductions.

MRTs

MRTs were the "tip of the spear" for responsible retrograde. These small teams, made up of both military personnel and contractors, were sent to outlying bases to assist units by identifying, sorting, and shipping excess materiel of all classes of supply back to the major RSY control hubs.

The MRTs would sort through materiel on site and identify, segregate, and prepare excess, non-mission-essential items for shipment. MRTs required minimal support from the units they supported, and they could usually complete the mission in less than a week at a site.

During the last five months of the CMRE mission, the MRTs completed more than 103 missions and processed more than 2,000 20-foot equivalent units (TEUs) of excess materiel. Materiel that was returned to the Army supply system was valued at over $57 million.

The MRT was extremely successful because it used an aggressive marketing campaign to inform units of what assistance was available to them. Weekly MRT fliers were sent out across the Kandahar and Bagram email distribution lists. Fliers were also posted at bus stops and dining facilities, and the MRT was even advertised at the weekly senior enlisted advisors working group. This resulted in a 300-percent mission increase and instant recognition across CJOA–A by word of mouth.

FREs

FREs were strategically established throughout the CJOA–A in order to maximize the R3D of materiel at large or central bases designated by each FRE site. FREs differed from MRTs in several ways but had a very similar mission or end state. FREs had double to triple the personnel conducting R3D and had materials-handling equipment to assist with the materiel being received, sorted, and shipped back to an RSY for final disposition.

MRTs would sometimes push materiel to the FREs for another layer of screening to ensure that no materiel was transported unnecessarily by convoy to the RSYs. The purpose of the FREs was to provide materiel interdiction and determine if materiel was not serviceable and needed to be disposed of, demilitarized, or packaged and shipped to the RSY.

On average, 80 to 85 percent of materiel received a disposition for disposal or demilitarization, keeping more than 1,900 Soldiers off the road and saving over $42.5 million in transportation costs since the materiel was not sent to the RSYs by convoys.

RSYs

The heavy lifters and most visible of CMRE operations were the RSYs. These yards not only managed all the materiel sent from the MRTs and FREs but also from the units assigned to the base. The three RSYs were established at the largest CJOA–A bases. Their capabilities were significantly more robust than MRTs or FREs.

R3D operations were conducted 24-hours a day by both military personnel and contractors. Each yard had a large amount of materials-handling equipment and transportation assets to move materiel and containers as they arrived or moved to one of the supporting agencies for final disposal. Providing a key

capability unique to the RSYs, logistics information systems allowed materiel to receive a final disposition and be returned to the Army supply system.

With base closures requiring descoping and materiel reduction, the RSYs established the capability to drain and purge thousands of heating, ventilation, and air-conditioning units along with commercial and military generators identified for disposal.

The true success story for RSYs is the amount of money saved by returning classes of supplies to the Army supply system. From December 2011 to November 2014 when the CMRE mission ended, supplies valued at more than $1.2 billion were returned directly to the Army supply system, and more than $6.9 billion worth of supplies and equipment was reissued and used by units operating in Afghanistan.

MED RSTs

An area that needed attention during the CMRE mission concerned expendable and non-expendable class VIII (medical materiel). With role 2 and role 3 medical facilities spread throughout Afghanistan, recovering excess class VIII was critical not only

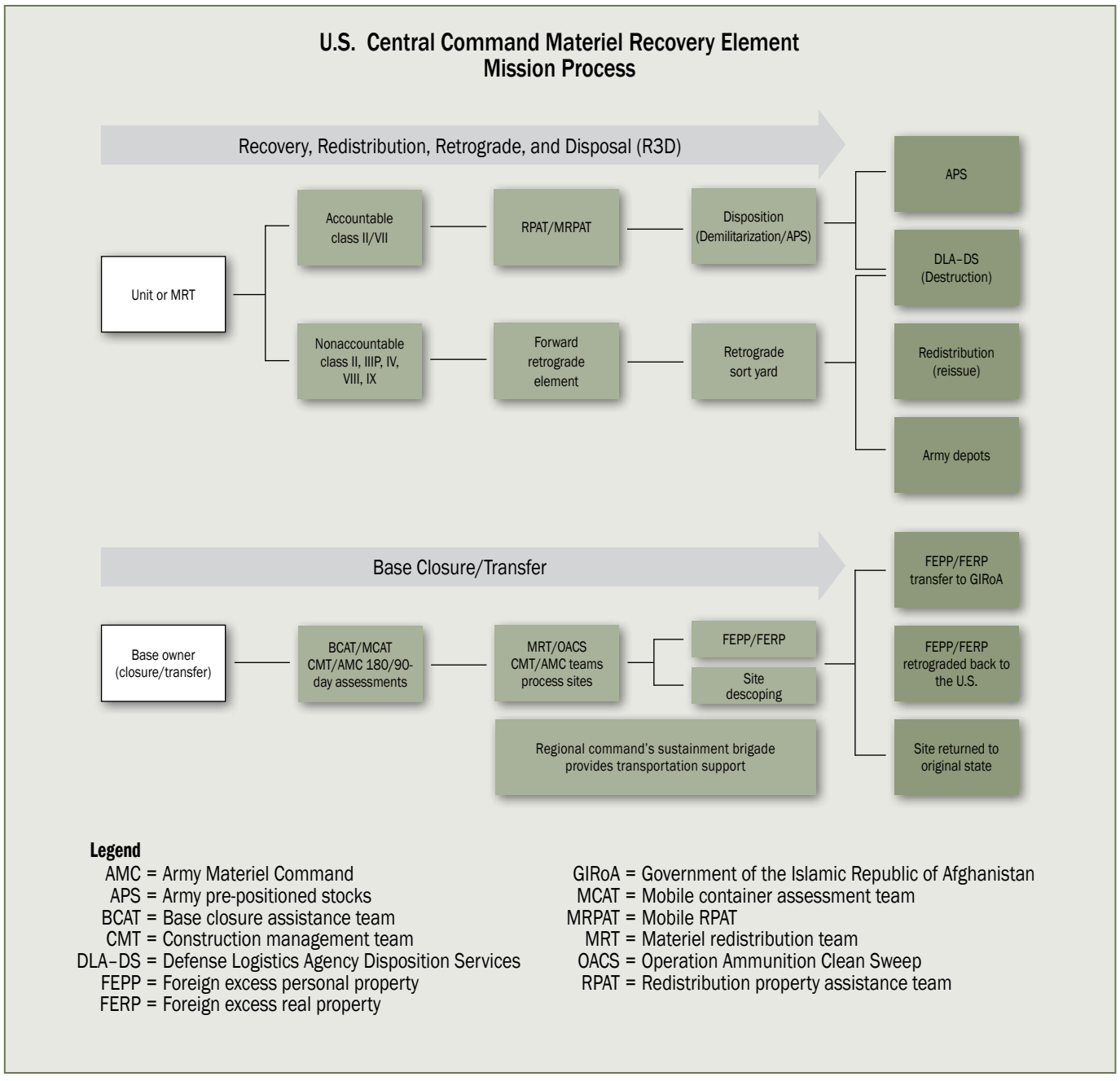


Figure 1. The U.S. Central Command Materiel Recovery Element mission process is used to determine the disposition of materiel and real property in Afghanistan.

Command Sgt. Maj. Jacqueline Williams, 17th Combat Sustainment Support Battalion, walks Shindand Air Base's forward retrograde element yard where multiple classes of supply have been turned in from units for sorting and retrograde. (Photo by 1st Lt. Katherine Curra-Spurger)

to U.S. forces but also to coalition partners.

By establishing MED RSTs at the RSY, the CSSB was able to sort serviceable class VIII and reissue it to units still in the fight. In five months, the MED RST redistributed over $3.7 million worth of class VIII to U.S. units throughout the CJOA–A. It also worked with the U.S. State Department to legally gift the Afghan National Army with class VIII materiel that had been identified for disposal.

MED RSTs were sent to role 3 medical facilities to assist with retrograding class VIII equipment and supplies to the RSYs. They acted in an MRT capacity when conducting off-site missions. MED RSTs saved money and increased Soldier survivability by providing the supplies needed for initial first aid by a combat lifesaver.

Base Closure and Container Assessment

Base closure assistance teams and mobile container assessment teams, consisting of both military personnel and contractors, were critical to establishing a plan for bases to meet their closure or transfer dates. Their missions were to inventory personal property and structures with the base owners and assist with submitting documents to U.S. Forces–Afghanistan. This was the initial requirement for establishing a backward planning timeline on how each base would meet its closure and transfer date.

All CMRE assets were identified during the initial assessment, and the sustainment brigade's support operations (SPO) team and the construction management team coordinated to execute a detailed support plan for descoping operations and materiel retrograde.

Ammunition Abatement

The 17th CSSB was tasked to provide more than 100 personnel to support the 401st Army Field Support Brigade's redistribution property assistance teams (RPATs). The RPATs were responsible for a variety of missions in support of theater-provided equipment property being turned in and eventually retrograded to depots throughout the world for reset.

The 17th CSSB Soldiers support-

ing the RPATs conducted three main functions on a daily basis. First, the ammunition abatement teams focused on removing all ammunition from equipment being turned in to the RPATs. Equipment went through five inspection phases, with different Soldiers conducting each phase with the purpose of finding live or expended ammunition.

Equipment had to be thoroughly inspected and validated at each phase in order to prepare each piece of equipment to leave the country or for demilitarization. The demilitarization part was especially critical because of the possibility of live ammunition being hidden in a seam and igniting while the piece of equipment was cut with plasma cutters. More than 2,000 pieces of rolling stock were inspected with zero mission failures.

Customs Inspections

The second RPAT function involved providing customs inspections for retrograding excess materiel and rolling and nonrolling stock out of country. The customs teams were stationed throughout the CJOA–A at RPAT sites. This was also true for the ammunition abatement teams that worked hand in hand with customs. Both teams assisted each other with ammunition sterilization and ensured each piece of equipment went through a thorough washing process before the actual customs inspections took place.

Third, RPAT customs teams assisted the RSYs with materiel being shipped via 463L pallets or 20-foot containers. This was another critical function the CMRE played while conducting responsible retrograde and meeting the U.S. Department of Agriculture and customs and border protection requirements.

OACS

In October 2013, OACS teams were established with both military and Department of the Army civilian ammunition specialists to assist bases and units with their class V (ammunition). Their task was to inventory each unit's on-hand ammunition, identify excess based on their unit basic load, identify code H (unserviceable) items for demilitarization, and leave the unit basic load required to maintain operations.

All excess and code H class V was packaged for shipment by the OACS team and shipped to one of two ammunition supply points for final demilitarization and disposition.

During 12 months of operation and 70 OACS missions, the CMRE demilitarized more than 2,900 tons of ammunition valued at $54.6 million. Bringing this capability directly to each unit's location allowed units to focus more on their missions and not be concerned about how they were going to simultaneously conduct tactical and sustainment operations while reducing the excess footprint to meet base closure dates.

Mission Command

Providing mission command for eight units and three contractor agencies that were conducting nine separate operations at dispersed locations across the CJOA–A took predeployment planning and coordination in order to fully understand the dynamics of the CMRE mission. Most of the battalion staff functioned normally; however, the SPO shop had to reorganize in order to provide specific oversight of RSYs, FREs, MRTs, base closure and assistance teams, mobile container assistance teams, MED RSTs, OACS, customs, and ammunition abatement teams.

The SPO was divided into three main sections. Before deploying, each section's officer-in-charge and noncommissioned officer-in-charge tackled current CMRE procedures and standards in order to grasp this unique logistics operation and understand the systems established for planning and tracking daily production. This prepared the battalion and the SPO for assuming the mission prior to deploying.

A must for the CMRE mission was the close relationship between the SPO and the battalion S–3. Daily operations and constant CMRE enabler support movements around the CJOA–A required a balance between the S–3 and SPO sections.

The S–3 had to incorporate each team's unique role into a comprehensive retrograde component and track each team's progress throughout the CJOA–A. The SPO was primarily responsible for all mission coordination, daily reporting by each team and site, intratheater equipment and personnel movements, and advertising of the CMRE capabilities through aggressive marketing campaigns.

The 17th CSSB closed out this historic chapter of military operations in Afghanistan. Many lessons have been learned since the CMRE began. Billions of dollars' worth of equipment was recovered and returned to the Army supply system.

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Spc. Kayla Vines works at a Standard Army Retail Supply System station to re-enter stock into the Army supply system. (Photo by 1st Sgt. Johnny McMullins)

Retrograde Sort Yard Operations

At the Bagram Airfield retrograde sort yard, the 803rd Quartermaster Company collected, retrograded, redistributed, and disposed of excess Army materiel.

■ By Chief Warrant Officer 2 Tanya Leupp

The U.S. Central Command (CENTCOM) Materiel Recovery Element (CMRE) was developed to recover military equipment and excess materiel from Afghanistan and return it to the Army supply system. Retrograde sort yards (RSYs) and forward retrograde elements (FREs) played a critical role in this mission.

In August 2014, the 803rd Quartermaster Company assumed responsibility of the Bagram Airfield (BAF) RSY. The BAF RSY was the main retrograde hub for Regional Commands North, East, and Capital and supported up to three additional FREs located in northern and eastern Afghanistan.

The RSY accepted excess nonproperty book items from units, sorted them, determined their disposition, and then shipped the items to be returned to the Army supply system. Additionally, they provided a wash rack, drain and purge services, crating and palletizing, and customs inspections.

The BAF RSY had five main sections in support of the CMRE mission: sort, demilitarization and recovery (DEMIL), processing, shipping, and transportation.

Sort Section

The sort section was responsible

for receiving and sorting all materials that were turned into the RSY. During the 803rd Quartermaster Company's time in Afghanistan, 766 20-foot equivalent units (TEUs) of materiel and equipment were received in the yard. Soldiers assigned to the sort section examined the contents of each container received, identified individual items, and sorted them by type into labeled tri-wall containers.

Durable class II (clothing and individual equipment) and class VII (major end items) were staged for movement to the redistribution property assistance team (RPAT) yard. Class V (ammunition) items were secured in the DEMIL section. Class IX (repair parts) items were moved to the processing section. Other types of items that were separated included metals, plastics, wires, straps, hazardous materials, and radio frequency identification tags.

The sort section was also responsible for ensuring that all containers received in the yard were emptied and prepared for reutilization and shipping. This often involved removing paneling, lighting, and other installed comfort items from containers that were previously used as offices or workshops.

DEMIL Section

The DEMIL section of the RSY was responsible for the security, recovery, and demilitarization of any sensitive items received in the RSY. The DEMIL section of the RSY worked hand in hand with logistics assistance representatives from life cycle management commands, such as the TACOM Life Cycle Management Command, Communications-Electronics Command, Aviation and Missile Command, and Joint Munitions Command to recover sensitive and high-dollar items managed by their respective sources of supply.

Processing Section

The processing section of the RSY used the Standard Army Retail Supply System (SARSS) to reintroduce class IX and select class II parts back into the Army supply system. When items were received in the processing section, they were sorted by national stock number and researched in the Federal Logistics Data log.

The SARSS team looked at catalog information such as nomenclature, class of supply, price, source of supply, acquisition advice code, shelf-life code, and recoverability code. After the processor determined that an item should be returned to the supply system, he used a SARSS workstation to bring the item to record.

All items were entered into SARSS as "found on installation." A materiel release order was generated from SARSS and attached to the items. The items were then staged for verification by stock control personnel. Once stock control verified that the national stock number, quantity, and condition code were accurate, they moved the item to the proper tri-wall container or designated area for shipment to the disposition location.

During the 803rd Quartermaster Company's deployment, the processing section produced 2,692 materiel release orders, putting $12.68 million worth of class IX items back into the supply system.

Shipping Section

Once the items went through the processing section, they were staged in the shipping section. The shipping section of the RSY managed the cleaning and customs clearance of items being shipped from the RSY. The shipping section manually cleaned all dirt and debris off items and their packaging and staged them for customs inspection.

After customs approval, the items were moved into the appropriate TEU for shipment to Kuwait or the United States. During the deployment, 19.3 TEUs of equipment were sent to Kuwait and 18 TEUs of equipment were shipped to the United States to be reentered into the Army supply system.

Transportation Section

The primary duty of the RSY's transportation section was to move items to their final destination at the RPAT yard or Defense Logistics Agency (DLA) Disposition Services. The transportation noncommissioned officer-in-charge submitted transportation movement releases to the empty container control point and DLA Disposition Services to remove empty containers from the yard.

Movements from the RSY were often limited by the number of licensed operators, equipment constraints during the drawdown, and DLA Disposition Services' hours of operation. Coordination was required with all involved agencies to ensure no unnecessary backlog was created.

Yard Security

Physical security of the RSY was a top priority for the BAF RSY leaders and required staffing of both entry and exit control points. With excess retrograde materiel and equipment passing through the yard on a daily basis, the RSY established standard operating procedures that allowed units to sign for items or additional equipment.

Additional systems were put in place to allow units to access the yard when accompanied by RSY members. The Soldiers at the access control points were responsible for ensuring that all customers and containers of the yard were logged in when they entered and exited.

Support From Other Units

A platoon from the 354th Medical Logistics Company (MEDLOG) was assigned to the BAF RSY to sort and dispose of class XIII (medical materiel). The platoon processed $24.7 million of expendable and nonexpendable medical supplies and equipment during its seven-month deployment. The BAF MEDLOG team, consisting of 11 personnel, redistributed more than $5.4 million of supplies and equipment to more than 60 units in theater.

The team worked with the 45th Sustainment Brigade and U.S. Forces–

Spc. Samuel Lansdon clears a reusable triple-wall cardboard container, also known as a kicker box, for sorting. (Photo by 1st Sgt. Johnny McMullins)

Afghanistan to advertise available medical supplies to organizations such as the Afghan Ministry of Health and the Kabul Embassy. Through these efforts, the MEDLOG platoon provided $1.9 million worth of medical supplies for local hospitals and for medical training for Afghans.

The yard was also augmented with two noncommissioned officers from the 956th Movement Control Team. Their responsibilities included requesting unit line numbers for the movement of full containers requiring shipment outside of Afghanistan, supporting container movement at the flight line, and maintaining accountability of all RSY containers in the Integrated Booking System–Container Management Module and in daily reports to RSY leaders. When the movement control team redeployed in September 2014, its responsibilities were turned over to 803rd Quartermaster Company.

Contractor Support

Contractors assigned to the RSY under a Logistics Civil Augmentation Program performance work statement worked alongside members of the 803rd Quartermaster Company in the sort, processing, DEMIL, shipping, and transportation sections. The civilian company operated the drain and purge section and a heating, ventilation, and air conditioning section within the yard.

Contractors purged hydraulic fluids, oils, and refrigerants from equipment and parts locally so that items could be turned into DLA Disposition Services directly from the yard. Contractors also staffed the RSY's onsite wash rack and crating and palletizing stations to handle the cleaning and packaging of large items.

Class II Warehouse

The BAF RSY also offered a unique service for the units stationed at BAF: the class II warehouse. During the sort process, expendable class II items, such as printer cartridges, notebooks, shipping envelopes, cleaning supplies, and binders, were set aside for the yard's class II warehouse. These supplies were kept in shipping containers inside the entry gate of the yard.

Department of Defense personnel could browse the warehouse and sign for needed supplies. The 803rd Quartermaster Company issued over $1.7 million worth of class II items to units at BAF during a three-month period alone.

Transition to the FRE

During September and October 2014, the yard transitioned from a fully staffed RSY to a forward retrograde element (FRE) in support of Operation Resolute Support. Under Operation Resolute Support, the BAF FRE is now managed by two Department of the Army civilians and a team of contractors. With a smaller footprint and smaller workforce than the RSY, the BAF FRE is still responsible for all retrograde and disposal operations.

Key tasks managed by the 803rd Quartermaster Company during the transition to Operation Resolute Support included providing new letters of technical direction to the contractor, training the contractors on tasks previously managed by the military (including access control and container management), reducing the footprint of the yard (including making changes to the work and office areas), and conducting technical inspections and turnover of equipment to contractor management.

RSYs and FREs in Afghanistan have directly contributed to the CMRE mission to responsibly redistribute and properly dispose of property across the Combined Joint Operations Area–Afghanistan. The BAF RSY and the 803rd Quartermaster Company recovered tens of millions of dollars' worth of valuable equipment and returned it to the Army supply system. The actions and coordination of the RSY Soldiers and contract staff demonstrated their dedication to fiscal responsibility of the Army's assets.

Chief Warrant Officer 2 Tanya Leupp is a supply systems technician assigned to the 803rd Quartermaster Company. She is a graduate of the University of Dayton and the Warrant Officer Advanced Course.

Base Closure Assistance Team: A Valuable Resource for Closing FOBs

The base closure assistance team helped forward operating base leaders determine the disposition of equipment and real property as they prepared to leave Afghanistan.

■ By 1st Lt. Joseph Fumo

As the war in Afghanistan drew to a close, few people were aware of the long planning process and considerable effort that went into leaving. The United States had maintained military operations there since 2001, so substantial amounts of equipment, infrastructure, and personnel had been invested in the war effort.

Closing down U.S. operations and setting the Afghan government up for success was an extremely difficult and delicate mission. This article will discuss the first steps in closing down the numerous forward operating bases (FOBs) that the U.S. military had established and expanded during the war. Safely withdrawing the U.S. military's footprint presented some significant planning considerations.

FOB Disposition

The first step in closing a FOB was the initial assessment phase during which the U.S. Forces–Afghanistan leaders determined which FOBs would close and which would be transferred to Afghanistan's government. Next, the leaders notified each FOB of its closure or transfer date, which allowed the FOB mayor, base operations support integrator (BOS–I), or officer-in-charge for a geographic location to start the backward planning process.

Often, the most cost-efficient choice was to transfer demilitarized equipment to the Afghan government instead of paying to ship equipment back to the United States from the landlocked country. It was more cost-effective to leave infrastructure in place than to tear it up and remove it.

Reducing an entire FOB "down to the dirt" required engineer assets and a much larger transportation element. This process put transiting Soldiers and equipment at risk of enemy attack and required more time and money to accomplish the task. If the Afghan citizen who owned the land agreed to take what the U.S. military was willing to leave, the Army saved a tremendous amount of time, money, and risk to Soldiers' lives.

BCAT

A base closure assistance team (BCAT)—a group of qualified contractors and military personnel—visited FOBs to assist them in reducing their footprints in the safest, most cost-effective way. Most BCAT contractors were prior military with a background in supply or engineering and had spent years as contractors in either Iraq or Afghanistan, some for as long as a decade.

These highly qualified individuals were assigned to a unit working under the U.S. Central Command Materiel Recovery Element (CMRE). The 17th Combat Sustainment Support Battalion (CSSB) served as the CMRE during the transition to Operation Resolute Support.

The military unit to which the BCAT was assigned acted as a conduit to the military chain of command. The 17th CSSB used a quality assurance surveillance program to provide oversight of the BCAT and ensure that it was providing the agreed-upon services.

The CSSB also processed missions, evaluating when the bases requesting assistance would be ready for the BCAT. The support operations section ensured that all mission and life support requirements were met before sending the BCAT to a FOB.

The BCAT provided the FOB mayor with a detailed assessment on which enabler teams would further assist in deconstructing the base and suggested what property and infrastructure to leave behind for the Afghans. [The FOB mayor is responsible for managing the daily operations of the base, including facility maintenance, contractor oversight, billeting, and supplies.]

Equipment Disposal

When a base was ordered to close completely, no infrastructure could be left behind. Many FOBs had a sewage system in place, power lines buried in the ground, roads paved with asphalt, a number of concrete pads poured, and hard standing buildings. All of these needed to be removed with engineer assets and hauled to a landfill, another base, or a central hub.

The BCAT provided the FOB mayor with guidance on the order of tasks for reducing its footprint. Nonessential assets were removed first and reductions continued until only essential force protection and life support remained. The BCAT provided guid-

ance and input on how other FOBs had managed these processes.

Real Property Transfer

When a decision was made to transfer something to the landowner or the Afghan government, a few challenges sometimes arose. First and foremost, it was often difficult to determine who owned the land before the U.S. military occupied the area. When the name of the landowner was not clear, it had to be discussed in depth with the Afghan government and the local tribal officials. Once identified, the owner was consulted on what could be left behind and what needed to be taken down and hauled off with the military unit.

The transfer of infrastructure was conducted using the foreign excess real property (FERP) process. FERP includes items that cannot be picked up and moved, such as buildings, roads, and underground utilities. A tent could be picked up and moved and therefore is considered foreign excess personal property (FEPP), but the concrete pad poured for the tent to stand on is considered FERP.

If the owner used the land as farmland in the past and wants it returned to its natural state, any infrastructure in place would have to be removed. When a FOB was in a town or a densely populated area, it could be donated to the Afghan government or Afghan locals through the FERP process.

Equipment Transfer

The Army could not simply leave property behind for the Afghans. Equipment was gifted through the FEPP process. FEPP included any United States-owned equipment that the Army had been authorized to give to the Afghan government.

Mixing politics and logistics could make the FEPP process confusing. For instance, several hard standing structures that could have been left for the Afghan National Army, other government agencies, or coalition partners still in the area came with air-conditioning units and other appliances that required a power source.

Military generators were available that could have been demilitarized and gifted in order to run the air-conditioning units and appliances. However, often even though the generators were available, the recipient would not have been able to obtain enough fuel to keep the generators running.

The BCAT was responsible for providing the FOB mayor with assessments that determined the feasibility of the Afghans using gifted items.

The BCAT was responsible for providing the FOB mayor with assessments that determined the feasibility of the Afghans using gifted items. In the end, it was about setting the Afghans up for success and not giving them equipment that they could not maintain or operate.

Assisting Command Decisions

The FOB mayor had a plethora of issues to worry about, such as security, units occupying the FOB, property accountability, and contracts. The BCAT could handle all the minor details of deconstructing a base; however, all the major decisions were still made by the FOB mayor.

After the BCAT completed its assessment and briefed the leaders on the courses of action available, other enabler teams, including military or civilian engineer assets, the materiel redistribution team, and the forward retrograde element, began conducting the deconstruction process chosen by the leaders. The materiel redistribution team was responsible for disposing of or organizing any equipment or materiel to be shipped back to a central hub.

Shortly after the FOB mayor or BOS–I received initial guidance and had the follow-on enabler teams start deconstruction, additional questions about the best way forward were raised. The BCATs became very busy and did not have enough time to revisit each site to conduct a reassessment as soon as it was needed.

This was mitigated by establishing the forward closure assistance team concept. This team consisted of a single officer designated as the FOB mayor's or BOS–I's assistant for anything regarding deconstruction and retrograde of the FOB and any enablers that could assist with the process.

This was an effective concept; it consolidated all efforts and decisions into one office instead of having up to five different enabler teams working independently based on guidance from a CMRE unit located outside the FOB. The forward closure assistance team could also provide the FOB mayor or BOS–I with the overall status of the descoping mission and continue to coordinate all CMRE enabler capabilities required to meet the base closure or transfer timeline.

During the five-month deployment, the 17th CSSB BCAT section executed more than 37 missions to over 30 different locations. The teams assisted in documenting and accounting for over $95.5 million in FEPP and $327.5 million in FERP that was transferred to the government of Afghanistan. The BCAT completed the transfer and closure packets for more than 25 different locations that were transferred to the Afghan National Army or permanently closed.

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Staff Sgt. Jermaine Hope, 133rd Quartermaster Company, directs materials-handling equipment in the Kandahar Airfield retrograde sort yard. (Photo by Spc. Wilson Cuevaquiroga)

Scrap, Transfer, or Retrograde

■ By 1st Lt. Petar Mostarac

The U.S. Central Command Materiel Recovery Element (CMRE) had the task of retrograding, redistributing, and disposing of more than 50,000 20-foot equivalent units (TEUs) of Army equipment that had accumulated after a decade of war in Afghanistan. This proved to be a monumental task that showcased the U.S. military's logistics strength. It also changed the way planners think of retrograde operations on such a vast scale.

The task was further complicated by the fact that Afghanistan is a landlocked country. To get around being landlocked, the military used a combination of strategic air assets, truck routes to ports in Pakistan, and the Northern Distribution Network, which is a complex chain of transportation by truck, rail, and sea that meanders through Northern Afghanistan, Asia, and Europe.

The CMRE Mission

One of the main goals of the CMRE mission was to bring Army property to record by sorting, inventorying, and counting containers, processing materiel for retrograde, and ultimately shipping equipment back to a military depot to be put back into the Army supply system. This retrograde process accounted for only part of the equipment in theater.

Another portion of the equipment was transferred to Afghanistan through the foreign excess personal property process, disposed of as general waste, or scrapped and demilitarized in coordination with the Defense Logistics Agency (DLA) Disposition Services.

The portion sent back to the continental United States (CONUS) was where the Army really made back its money. Since volume did not necessarily equate to dollars, it made economic sense to sort through the materiel in Afghanistan before blindly shipping it home.

The cost to ship a 20-foot container back to CONUS is more than $20,000. It would be incredibly wasteful to ship containers full of scrap metal, trash, and obsolete military and commercial equipment that could have been disposed of in theater. That is why the CMRE was needed.

RSYs and FREs

The retrograde sort yards (RSYs)

were the heart of the CMRE. The RSYs were located strategically at Kandahar Airfield, Bagram Airfield, and Camp John Pratt. Feeding into the RSYs were the forward retrograde elements (FREs), which were located at Forward Operating Base (FOB) Shank, FOB Pasab, FOB Walton, and Shindand Airbase.

Designed based on FOBs in Afghanistan, the RSYs were the major hubs and the FREs were the smaller ends of the spokes. The FREs captured materiel as far forward on the battlefield as possible. The concept was to capture the scrap and other obsolete materiel forward and avoid paying intratheater movement costs from the FREs to the RSYs.

By disposing of materiel at the FREs, the Army saved approximately $2,000 per 20-foot container in transportation costs from the FRE to the RSY. If it did not make sense to ship scrap metal home, it certainly did not make sense to ship it from Shindand to Kandahar Airfield. It was easier to sell the scrap and dispose of other unwanted materiel directly at the FRE.

The FREs were also important in sending the potentially recoverable materiel back to the bigger RSYs, where they could be efficiently identified, processed, and shipped back to CONUS. The RSYs received a filtered wave of materiel from all of the outlying FREs around the hub. They also received an unfiltered mountain of equipment from units as they left the central hubs.

An RSY would then apply its filter in sorting through the equipment coming through the yard. Obsolete military equipment was sent for demilitarization through DLA Disposition Services. Commercial equipment that could not be put back into the supply system was ultimately scrapped through DLA Disposition Services as well.

The hidden gold, often buried in the obsolete equipment, was the class IX (repair parts). Over the past decade, component items would get separated from their main systems and accountability would be lost.

The process established through the RSYs allowed units to bring excess found-on-installation class IX to the yard and drop it off. This gave the units a responsible way to reduce their footprint while allowing a quick and efficient way to process the items. Items could then be returned to the Army supply system, where they regained visibility through the network of Army supply depots.

SARSS

The brain behind the processing was the Standard Army Retail Supply System (SARSS). SARSS processes class IX parts and keeps track of them as they flow from the depots to the supply support activities (SSAs) and ultimately to the units.

SARSS is a live system that receives daily updates. It keeps track of the dollar value of individual items, who is ordering them, and where in the world they need to go based on their priority and condition. Type into the system an item's national stock number (NSN) and its condition code, and SARSS will give you the dollar value and the disposition of where the item needs to be sent.

In the CMRE's case, most of the items being processed from the RSYs were going to either Sierra Army Depot in California, Tobyhanna Army Depot in Pennsylvania, or Kuwait. SARSS was smart enough to reroute items directly if a unit had made a request through its local SSA. The Kandahar Airfield, Camp John Pratt, and Bagram Airfield RSYs were equipped to route processed parts directly to the local SSA if a unit made the request.

For example, imagine that a unit requests a new transmission for its mine-resistant ambush-protected vehicle that broke down in theater. If a found-on-installation transmission were processed at an RSY, SARSS would print out a materiel release order to send the transmission to the requesting SSA. The RSYs would then quickly ship the item via strategic air, or truck if it was on the local FOB, and deliver it to the SSA where the requesting unit would pick it up.

This process allowed for a much quicker turnaround time and allowed for the utilization of items that had fallen off the radar.

Partnership with LCMCs

The RSYs provided a central location to send excess equipment. With the RSYs in place, the next question was how to identify all of the items. Not every item had an NSN. There were thousands of different pieces of equipment, some of them for obsolete military systems.

Subject matter experts (SMEs) were needed to help sort these items. So, the Army Materiel Command sent some of their SMEs to help. Each Life Cycle Management Command (LCMC) oversaw its own portion of Army property. The Aviation and Missile LCMC was responsible for aviation parts, missiles, and unmanned aerial vehicles, and the Communications-Electronics Command was responsible for a variety of electronic equipment. The TACOM LCMC was responsible for vehicles and weapon systems.

The SMEs from the LCMCs worked alongside the Soldiers and helped them identify valuable parts that might otherwise have slipped through the system. This partnership was an efficient way to retain as much high-value materiel as possible while retaining the velocity needed to complete the retrograde.

The RPAT Yard

Another key partnership was between the RSY and the redistribution property assistance team (RPAT). The RPAT processed all of the major end items leaving theater, including a variety of weapon systems, generators, and other miscellaneous equipment.

However, the biggest thing the RPAT handled by volume was vehicles. The RPAT yard cleaned, inspected, and shipped more than 10,000 vehicles back to CONUS. Through a constant daily relationship, the RSYs redirected billions of dollars' worth of equipment to the RPAT yards to be returned to the United States.

Staff Sgt. Antoine Davis, 133rd Quartermaster Company, uses the Standard Army Retail Supply System to input equipment previously identified to be returned to the Army supply system. (Photo by Spc. Wilson Cuevaquiroga)

Successes and Lessons Learned

During its mission, the CMRE was incredibly successful. Between December 2011 and December 2014, the RSYs processed more than 25,000 TEUs of equipment and produced more than 960,000 materiel release orders in SARSS. Of the 25,000 TEUs processed, 2,700 were shipped back home with $1.2 billion worth of equipment inside.

With the assistance of the LCMC SMEs, 4,400 TEUs of equipment were redistributed across theater. The equipment was accounted for and placed directly with units in country that needed it. TEUs that were not retrograded or redistributed were sold as scrap in Afghanistan.

Even with all of the success, there are still ways to improve the retrograde process. It may be some time before the United States has another large-scale war, but it makes sense for logisticians to prepare for the future.

Logisticians should ask these key questions: Is there a way to retrograde faster if necessary? If so, at what cost? The velocity of retrograde operations may be increased, but at what cost? Perhaps we could reduce our footprint more quickly, but it might mean destroying valuable equipment that could have been recaptured. With excess speed comes mistakes and waste. Logisticians and planners must balance velocity with responsibility when planning future operations.

Another problem in the recovery efforts was capturing commercial equipment. In the rush to meet the needs of Soldiers in the early parts of the war, the military used commercial equipment to fill requests that could not be met by the Army supply system. Many of these items were never standardized and had no NSNs. Thus, there was no standardized way to capture these items and return them to the United States.

Over the years, massive amounts of unused or serviceable commercial equipment accumulated in theater. In the future, we need to consider how to balance the needs of our troops on the battlefield with the need to retain accountability of and responsibility for equipment.

The reduction of the U.S. military footprint in Afghanistan has been one of the most massive logistics feats accomplished in the modern military world. Hopefully the successes and lessons learned from this mission will be used to shape even more efficient and impressive logistics operations.

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Staff Sgt. Adam Holen, 152nd Combat Sustainment Support Battalion, South Dakota Army National Guard, operates a rough-terrain container handler to move containers with guidance from two Soldiers from the Maryland Army National Guard's 1129th Transportation Company at Kandahar Airfield. (Photo by Sgt. 1st Class Theanne Tangen)

The Mobile Container Assessment Team

The U.S. Central Command Materiel Recovery Element used the mobile container assessment team to maintain container accountability.

■ By 1st Lt. Joseph Fumo

The mobile container assessment team (MCAT) mission was the Army's means of gaining accountability for all containers that were shipped into and out of Afghanistan. Most of the equipment brought to Afghanistan was shipped in 20-foot and 40-foot containers, which is the most cost-efficient way to move heavy or bulk equipment and materiel.

Once the containers entered the country and their contents were delivered, most units found alternate uses for them. Whether they were used as a secure way to store equipment or modified to be offices or billets, all containers were, or should have been, tracked using the container number and geographic location.

Rented Containers

Containers are extremely valuable for many reasons. Some were originally rented through contracts from businesses located outside of Afghanistan. Some of these rented containers accrued detention charges, meaning the Army paid a monthly rate over many years to rent the container.

Some containers ended up costing the U.S. government as much as $100,000 for a single 20-foot container that originally cost around $3,000. A lot of containers were put into use in Afghanistan and never returned to their original owners. This could have been prevented if the military had bought the containers from the start or had ensured the rented containers were clearly marked with a return date.

Container Accountability

The U.S. Central Command

(CENTCOM) Materiel Recovery Element (CMRE) added MCAT enablers to its mission because units were not abiding by the CENTCOM container management policy letter of instruction. The letter directed units to provide properly trained personnel to maintain container accountability within the CENTCOM footprint.

A container control officer (CCO) was required to complete a monthly inventory and update the Integrated Booking System–Container Management Module (IBS–CMM), which was used to account for every container in Afghanistan. This system requires the user to complete an online certification and classroom instruction upon arrival in country. However, the appointed CCO really needed to go through more extensive training for IBS–CMM.

The appointed CCOs were nominated by the unit, base operations support integrator (BOS–I), or forward operating base (FOB) mayor. One regional container manager (RCM) for each region of Afghanistan was responsible for ensuring that the CCOs completed their monthly inventories and IBS–CMM updates.

The system in place would have been effective if there had been more emphasis on the importance of container accountability. The BOS–Is and FOB mayors were responsible for maintaining container accountability and holding units responsible for assigning CCOs for their respective areas. If everyone had been held accountable for their areas, there would have been no need for an MCAT mission at all.

Containers accrued a rental fee for each month the military did not return them. Many units in Afghanistan did not realize that the containers originally used to bring their equipment into theater and then put to use as offices were costing the government thousands of dollars each month. Bagram Airfield had over 13,000 containers at one point. The detention costs were extremely high and in the future could be avoided altogether.

A way to avoid detention costs in future operations would be to mark rented containers so they do not enter the country. Once they arrive in Kuwait, the materiel or equipment would be taken out of the container and shipped into country by other means. The container would then be put back on the ship and returned to its owner.

This solution involves coordination with numerous personnel involved in shipping supplies into Afghanistan, which is landlocked, so it has a few potential points of failure. A better solution would be to not rent containers at all.

MCAT Lessons Learned

The MCAT mission was executed by teams of six civilian contractors overseen by three or four military personnel. This setup had positives and negatives. The most prominent positive result was continuity. Contractors stayed in country much longer than Soldiers who were on five-to-nine month deployments. This gave contractors better visibility of the FOBs, and they knew their FOB's history.

The downside to having contractors conduct the MCAT mission was that it was a relatively simple task that could easily have been conducted using a military squad-sized element with far less labor costs. The mission involved moving throughout the country to each FOB, counting containers on ground, and making sure each container was tracked by its container number in the IBS–CMM.

Another downside was that the contractors were not authorized to change any data in the IBS–CMM. On a few occasions, time and money were spent to conduct an MCAT mission on a given FOB, and the information was passed to a BOS–I or FOB mayor. Then it was passed to a CCO, who never entered it into the IBS–CMM. This could have been avoided if the team members had been able to update the system themselves.

There are numerous ways to make the MCAT mission more efficient; however, fixing the problem at its source is the best way. The military needs to provide CCOs with more extensive training than just the online certificate currently required for the position.

The checks and balances system with which the BOS–Is and RCMs held the CCO accountable was insufficient. The MCAT could be a small military element that travels throughout the country to conduct inventories of each FOB. This could be done in monthly rotations during which the team either updates the system or verifies that the information in IBS–CMM is correct.

The tracking of containers throughout Afghanistan had many flaws. The tracking method that was used failed to verify that the numbers in the system were accurately reporting what was on ground. In the interest of saving the U.S. government money, and with the benefit of hindsight, I believe it would be better to buy containers instead of rent them. Units should have the option to keep the container and use it for another purpose or to put it back into circulation.

Despite needing some revisions to its processes, the MCAT gave BOS–Is, FOB mayors, CCOs, RCMs, garrison commanders, and U.S. Forces–Afghanistan a good understanding of how many containers were available to move equipment and materiel out of theater and how many were distributed throughout the combat zone.

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SPO Transportation's Support of Retrograde Operations

The support operations transportation section was critical in moving retrograded equipment from Afghanistan.

■ By 1st Lt. Rory A. Santos-Mitchell

The Soldiers of the 17th Combat Sustainment Support Battalion (CSSB) assumed the mission of the U.S. Central Command Materiel Recovery Element (CMRE) from the 1103rd CSSB on July 1, 2014. The 17th CSSB's support operations (SPO) transportation section played an integral role in the CMRE mission. It coordinated intratheater and intertheater support missions with various agencies, using both air and ground modes of transportation to deliver mission-critical supplies and equipment across six regional commands (RCs) in the Combined Joint Operations Area–Afghanistan (CJOA–A).

Materiel Retrograde Concept

The SPO transportation section provided integrated support and management for the movement of personnel, equipment, and retrograde materiel around the battlefield. To facilitate operations of subordinate units and staff sections in the battalion, it provided subject matter experts in all areas of movement and retrograde operations.

Through the CMRE, the Army established a way ahead for removing excess and unaccounted for equipment and materiel from the CJOA–A. The SPO transportation section assisted in moving enabler teams and provided the transportation support required to move excess retrograde materiel.

The battalion's transportation section supported the removal of materiel from the point of origin to the appropriate outlet for disposal or retrograde. The transportation section shipped a variety of cargo, including materials-handling equipment, maintenance parts, and tricons.

The responsibilities of the transportation section included assisting the headquarters and headquarters company, all enabler teams, companies and their subordinates assigned to the battalion, and all operational control units. The SPO transportation section was responsible for coordinating with the brigade for surface and air movement of retrograde equipment.

CMRE Common Operational Picture

The CMRE in Afghanistan was a historic logistics accomplishment. The country's lack of a modern road network and the fact that it is landlocked provided challenges to the CMRE's success. As the retrograde sort yards (RSYs) processed and determined the disposition of equipment and identified materiel for recovery and retrograde out of theater, the SPO transportation section coordinated with the brigade to move and retrograde the supplies out of theater.

The battalion's transportation office and the movement control team (MCT) coordinated surface and air assets. The MCT supported the CMRE mission with reception, staging, onward movement, and retrograde of personnel, equipment, and supplies.

Under the supervision of the 49th Movement Control Battalion, the MCT used the Transportation Coordinators' Automated Information Movement System (TC–AIMS) to coordinate critical transportation support using host-nation and contractor trucks and short takeoff and landing aircraft. The MCT tracked the movement of equipment by submission date, logistics movement request number, ready-to-load load date, required delivery date, origin, destination, and description of cargo.

Subordinate units within the 17th CSSB requesting movement of equipment in CJOA–A filled out and submitted logistics movement requests through the SPO transportation section to the servicing MCT. The transportation section verified and confirmed the status of the transportation movement releases through the 49th Movement Control Battalion daily.

MCT Support to the CMRE

The MCTs at strategic hubs used TC–AIMS to provide tracking and in-transit visibility. The system's capabilities allowed the MCT to produce unit deployment lists, transportation control and movement documents, radio frequency identification tags, and military shipping labels, which were all part of the unit line number packets needed for intratheater movement.

Challenges arose at some RSYs and forward retrograde elements

when their transportation coordinators redeployed, which required a change to the paperwork process for retrograding materiel. Without transportation coordinators, retrograde sites did not have anyone with the military occupational specialty needed to produce shipping documents. At those sites, the automated logistical specialists served as transportation coordinators after learning how to process the needed documents through TC–AIMS.

Improving the Retrograde Process

The 17th CSSB SPO transportation section played a critical role in improving the quality of life for Soldiers, supporting the Afghan National Army, and supporting International Security Assistance Force base closures within Afghanistan. After assuming the CMRE mission, the 17th CSSB's SPO transportation section created a more efficient way of maintaining intratheater visibility.

The transportation section provided units with timely and accurate information on the location, movement, and status of equipment and materiel by creating an easily accessible online tracker. The tracker provided the quantity and condition of incoming materiel in order to optimize inventory and minimize unnecessary asset procurement.

In another situation, the RC West RSY experienced a backlog of ManTech parts that needed to be shipped to the United States. The process of shipping unit line number equipment from the RC West RSY was taking an average of 31 days.

The noncommissioned officer-in-charge of the 17th CSSB's Kandahar SPO transportation cell, who was the liaison and subject matter expert for the MCT and the RSY, was sent to the RSY to assess and improve the processes. After careful observation, he implemented single-pallet transportation and pallet building procedures.

His innovative way of shipping using 463L pallets resulted in 85 pallets of ManTech parts being retrograded to the continental United States. This change of procedures significantly improved the efficiency of transportation by decreasing the shipping time from 31 to 7 days.

Intertheater Movement

The retrograded equipment and materiel were moved out of theater over various land routes, such as the Pakistan ground lines of communication, or flown to a multimodal site directed by U.S. Transportation Command.

The intertheater movement portion of the CMRE mission included shipping equipment and materiel out Afghanistan by air to various seaports for movement back to the United States. The strategic RSY hubs in RCs East, South, and West shipped equipment to Tobyhanna Army Depot, Pennsylvania, Sierra Army Depot, California, and other locations for redistribution.

Shipping Containers and Pallets

The use of 20-foot equivalent units and 463L pallets has revolutionized the movement of retrograde for the CMRE mission in Afghanistan. The 17th CSSB SPO transportation section moved more than 125 20-foot equivalent units of retrograde materiel to the United States. When troops began using 463L pallets to transport retrograde materiel to the United States, the shipping time decreased significantly. The 463L pallet not only improved the efficiency of transportation; it also assisted in reducing the backlog of containerized cargo.

In the past, retrograde materiel was moved by convoys through the Pakistan ground lines of communication and the Northern Distribution Network. After the RC North's RSY closed, movement procedures shifted to meet the CMRE mission deadline of the end of 2014.

Instead of waiting for a location to accumulate enough outbound cargo for a convoy, Soldiers scheduled regular air movements for containers and palletized cargo.

Lessons Learned

The support from servicing MCTs was pivotal to the success of transporting materials-handling equipment and retrograde materiel. Having a dedicated MCT for the sole purpose of retrograde is recommended for future operations.

It is important to consider the operational environment when planning policies for the shipment of retrograde materiel. For example, using the 463L pallet is very efficient. However, the MCT had one set of standards for proper pallet configuration, and the airfield departure and control group had a completely different set.

Another issue of inconsistent policies was the shipment of Air Force expeditionary airfield aluminum matting. The transportation control and movement documents needed for shipping the matting were different for the MCT and the Military Surface Deployment and Distribution Command.

Between July and November 2014, the 17th CSSB SPO transportation section played an integral role in the CMRE mission by coordinating and supervising the shipment of more than 4,177 pieces of equipment valued at over $98 million. By having an MCT dedicated solely to retrograde, improving intratheater visibility, and implementing single-pallet transportation and pallet-building procedures, the section greatly improved the transportation for retrograde materiel in Afghanistan.

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Strategic Studies Fellows Program: Broadening Seminars for Army Leaders

One of the first warrant officers to attend the HQDA Strategic Broadening Seminars reflects on the lessons he learned.

■ By Chief Warrant Officer 4 Donald R. Ungerecht Jr.

One of the newest terms circulating throughout the Army is "broadening." Last summer I was given the chance to take advantage of one of the best broadening opportunities that the Army offers—the 2014 Headquarters Department of the Army (HQDA) Strategic Broadening Seminars conducted at the University of North Carolina (UNC) at Chapel Hill. The seminars are offered as a part of the UNC–IDB [Institute for Defense and Business] Strategic Studies Fellows Program (SSFP).

The SSFP is administered by the IDB and is a collaborative effort among UNC, Duke University, Indiana University, the Triangle Center on Terrorism and Homeland Security, and the Triangle Institute for Security Studies.

The primary focus of this course is to enhance critical and strategic thinking. This program offers Soldiers the opportunity to learn these skills in one setting from some of the top academic institutions.

Enrollment, which had been limited to captains in the past, was opened to warrant officers and senior noncommissioned officers for the first time in 2014.

My class was made up of a wide range of officers, warrant officers, noncommissioned officers, and Department of the Army civilians. This mix of Soldiers and civilians made for one of the best learning environments that I have ever experienced.

The Application Process

When I saw the announcement for the strategic broadening seminars last spring, I jumped at the opportunity to be taught by professors who are at the top of their fields of study and have experience in national strategic policy. I did not know if I had the right qualifications to get selected, but I knew I wanted to at least compete for one of the programs.

Creating the board application packet for the seminars was a two-part process: completing a board selection packet and a post selection process. First, I reviewed the eligibility criteria to see that I met all the prerequisites. Once I saw that I met all the criteria, I completed the request for personnel action required to apply for the course.

The board selection packet also required a letter of recommendation from a general officer. This proved to be a little challenging since I was away from my duty station. However, my chain of command was very supportive and worked with the commandant of the Army Engineer School to secure the letter of recommendation.

The second part of the application process included applying for admission to Indiana University and filling out an IDB registration form after my selection. I also had to write a biography, resumé, and short essay on what strategic studies meant to me. From start to finish, the process as a whole was smooth and well planned by the staffs at both the HQDA G–3/5/7 and the IDB.

Educational Demands

My educational experience began even before I arrived in Chapel Hill. We were given reading assignments in *The Way of the Knife* by Mark Mazzetti to get us started. The book would be used as a reference during class discussions. (We also met Mazzetti during our course and discussed his experiences conducting research for the book.)

The program requires quite a bit of daily reading to prepare you for the next day's class. Students must remain disciplined with their reading in order to participate in class discussions.

One of the first things we were told after we arrived was to suspend disbelief. Dr. Hugh O'Neill said this to get us thinking about all the possibilities that were out there to solve a problem.

Classroom Challenges

The course focused on various national security topics, executive management, strategic thinking, decision-making, negotiations, public speaking, and diplomacy. Our core group of professors created a challenging path that kept us engaged and focused.

Professor David Schanzer, the director of the Triangle Center on Terrorism and Homeland Security, led spirited classroom discussions

that were designed to make students take a stance on controversial national strategy topics and then defend their positions. At times he would challenge both sides of the discussion to test students' passion and resolve. It was a learning environment unlike any that I have seen in the Army education system.

The faculty would put us in positions to make decisions that helped us understand why and how decisions at the strategic level are made.

Television Interview Process

One of the most interesting parts of this course was the television interview process. We were given five or six different news stories to read the night before our media relations class. On the day of the class, we were taken into the campus television studio and interviewed on one of the subjects by professor Jim Heffner.

I was completely comfortable in the situation until I realized that the bright lights and camera were on and he started rattling off questions that used my own words against me. I can see how little things you say can get twisted in the production room of a news agency. It made me realize how much preparation goes into a simple five-minute interview. It was a truly humbling and eye-opening exercise.

Scenario Analysis

The most challenging and rewarding part of the seminar was our scenario analysis. Over the course of the five-week program, we were broken into 10 small groups and given a problem statement we used to create a strategic options proposal. At the end of the process, we delivered a 20-minute briefing on our proposal to a distinguished panel from the IDB.

My group's problem statement was, "How should the United States define its security interests and implement a plan for advancing them in the Middle East, in light of persistent violence and instability in key Arab nations, the strategic threats from Iran, and the seemingly intractable Israeli-Palestinian conflict? What is the Army's role in this U.S. strategy?"

We worked through the scenario planning model that was taught throughout our course. The faculty made sure that we were given the right tools to continue our projects at just the right time in the course.

With the assistance of Dr. O'Neill and our team's assigned mentor, retired Marine Corps Lt. Gen. Richard Kramlich, we navigated the project steps and presented our options and recommendations for U.S. policy in the Middle East for the next 20 years. Although this was a very challenging project, it showed us the benefits of using this type of analysis in military applications.

Takeaways

I am not sure that I have started to realize all the ways that this experience will benefit me, but as I remember my time in this course, I know that I will continue to learn more. It was a lot to take in during a five-week program.

Going into this, I thought I understood how the government and military worked. I have been told by my past leaders and have since told my Soldiers to see how we fit into the "big picture" when we are discussing our part of a mission. I realized during the course that what I thought of as the big picture was very small in comparison to what I was learning.

This course definitely honed my critical thinking and analysis skills. I have already seen changes in the way that I approach a problem. Instead of looking for an immediate fix to whatever is in my way, I look for what caused the problem to occur in the first place and how I can create a scenario that prevents the issue from returning.

The Strategic Studies Fellows Program is an excellent broadening experience for leaders to enhance the skills that are becoming critical to doing more with less. During our mentorship meeting, Gen. Raymond T. Odierno, Chief of Staff of the Army, noted that programs like this have not been available in the past. This made me realize that the Army is making an investment in the future of our leaders by funding this program.

I hope that logistics Soldiers across the Army take the opportunity to develop themselves both personally and professionally through these broadening opportunities.

The Strategic Studies Fellows Program is an excellent broadening experience for leaders to enhance the skills that are becoming critical to doing more with less.

Chief Warrant Officer 4 Donald R. Ungerecht Jr. is the deputy course chief for the military occupational specialty 919A Warrant Officer Basic and Advanced Courses at Fort Leonard Wood, Missouri. He holds a bachelor's degree in transportation and logistics management from American Military University and a master's degree in business administration with a concentration in logistics and supply chain management from Trident University International. He is a graduate of the Warrant Officer Candidate School, Warrant Officer Basic and Advanced Courses, and the Warrant Officer Staff Course, and he has been awarded the Demonstrated Master Logistician designation by the International Society of Logistics.

A Stryker is loaded onto a Malaysian lowboy at the Port of Kuantan, Malaysia, on Sept. 5, 2014. (Photo by 1st Lt. Taylor Whitten)

Logistics for Pacific Pathways: Malaysia

■ By 1st Lt. Michael McMillan and Chief Warrant Officer 3 Brian W. Tuttle

As part of the efforts to rebalance U.S. forces in the Pacific region, the Army conducted an exercise in Asia called Pacific Pathways. During Pacific Pathways, the Army joined with multinational partners to conduct three exercises, each in a different country: Malaysia, Japan, and Indonesia.

The 1st Battalion, 17th Infantry Regiment (1–17 Infantry Battalion), and the 2nd Stryker Brigade Combat Team, 2nd Infantry Division, participated in Keris Strike, which was the Pacific Pathways mission to Malaysia. When Keris Strike was over, the units moved to Japan to conduct the next portion of the exercise. The 1–17 Infantry Battalion conducted a combined training exercise September 13 to 26, 2014, with the Malaysian Army's 5th Royal Ranger Regiment during its annual Keris Strike exercise. Task Force Buffalo-Headhunter, comprising the two units, operated in a combined environment with the 3rd General Support Aviation Battalion, the 25th Aviation Regiment, the 585th Engineer Company, the 81st Brigade Special Troops Battalion, the 2nd Brigade Support Battalion, an Air Force staff weather office, and pararescue jumpers.

The complexity of fulfilling the logistics and basic life support needs for the combined task force in a foreign country proved to be an immense challenge for the 1–17 Infantry Battalion's S–4.

Preparing and Moving Equipment

Preparation for the Pacific Pathways mission began during a successful rotation at the National Training Center at Fort Irwin, California. Establishing a unit deployment list (UDL) for mission-essential equipment early on was key to determining the order in which pieces of equipment would be repaired during the National Training Center redeployment phase. The unit movement officer (UMO) played an integral role in compiling the UDL. A UMO must be detail-oriented and willing to dedicate the time to prepare the UDL properly.

Transportation Coordinators' Automated Information for Movements System II operators also need to be detail oriented, computer literate, and willing to take the time needed to input information correctly. It is important to understand that the UDL is fluid and not complete until all equipment is on board the

ship. For example, an M1120 heavy expanded-mobility tactical truck (HEMTT) load handling system that carried a forward repair system was damaged at the port and thus removed from the UDL just before embarkation.

Another critical piece of the preparation process was to build a shop stock with sufficient parts to allow the task force to maintain the equipment so that training would not be disrupted. The maintenance technicians planned for a shop stock with 120 days' worth of parts. Requests for nonrecurring parts were sent to the 7th Infantry Division G–4 for funding approval.

The parts list was based on the amount of equipment, types of training exercises, and the length of the Pacific Pathways mission. For example, one of the training focuses was conducting live-fire exercises, so emphasis was put on remote weapon system parts.

Once approved, the requisitions went through the Standard Army Maintenance System or Standard Army Retail Supply System in order to fill the shop stock to carry forward. The unit did not take its demand-supported shop stock from home station because most of the unit's equipment was being left behind and would need regular maintenance.

To manage its standard pricing and credit, the battalion used a nonrecurring demand code for ordering. This indicated that the items would not be turned in within 60 days. The unit temporarily borrowed high-dollar items, such as Stryker full up power packs, from the home station supply support activity (SSA) to carry forward.

The SSA issued the items only if notified of their use. This ensured the unit received full credit upon turn in of unused items.

The long lead time for requisitioned parts made the on-hand shop stock important. Without prior planning, the unit would not have been able to maintain its equipment during Keris Strike.

Another challenge during the predeployment process was the limited amount of hands-on time available with the equipment. Having a strong maintenance team that understood the condensed timeline was essential. The team's ability to identify faults, order parts, and fix problems resulted in a 100-percent operational rate for all equipment going on the Pacific Pathways mission.

Receiving Equipment in Malaysia

The first and most important action the 1–17 Infantry Battalion took before receiving equipment at Kem Desa Pahlawan (KDP), Malaysia, was establishing a working relationship with the Malaysian logisticians. This relationship enabled the battalion to achieve its goals in a manner that would not have been possible otherwise. The Malaysian S–1 and S–4 offered the unit an invaluable command presence and outstanding logistics support that lasted throughout Keris Strike.

Receiving equipment from the Port of Kuantan required external support and took three days. Contracted civilian lowboys and flatbed trucks transported the equipment to KDP. To assist with the download, a 20-ton crane and a 10,000-pound forklift were also contracted. The crane was a critical piece of equipment; it was used to download 90 percent of the vehicles, rolling stock, and containers.

One significant issue was dead batteries on light medium tactical vehicles (LMTVs). Having easy access to a set of NATO slave cables allowed the battalion to jump-start the LMTVs and drive them to the motor pool. With the containers arrayed, vehicles parked, and the combat repair team's equipment emplaced, the motor pool and maintenance bay were fully established.

Sensitive item containers required special treatment and processes. When bringing weapons into Malaysia, the battalion had to consider the implications with the customs officials and Malaysian Police Force. The officials and police had to inventory and verify the serial numbers of weapons entering their country. Having the Department of Defense (DD) Form 1750, Packing List, readily available to present to the officials sped up the inventory process.

Food and Water

The battalion was not authorized to ship a containerized kitchen to Malaysia. All food and water were contracted. Breakfast and dinner were catered, and bottled water was the only authorized water source. Two 20-foot refrigerated containers were contracted for ice and cold water storage.

During the exercise, 96 pallets of water (1,200 bottles per pallet) were delivered to KDP. During the mission, 41 pallets of water were consumed by 368 service members. It is worth considering reducing the amount of water based on the number of service members and the duration of the exercise.

The potential is great for cutting costs for future operations in Malaysia. A cost analysis should be conducted comparing the cost of providing catered food to that of using a containerized kitchen and having Soldiers prepare the food.

Fuel

Three M978 HEMTT tankers were located at KDP during Keris Strike. The 1–17 Infantry Battalion had one M978 that it used for ground fuel operations. The 3rd General Support Aviation Battalion, 25th Aviation Regiment, had two M978s that were used for aviation refueling.

The ground fuel was provided by a contractor who could provide fuel after a 24-hour notice. This short turnaround time allowed the aviation and ground units to effectively manage their bulk fuel levels in the M978 trucks. This, in turn, was beneficial when preparing the trucks for movement to Japan because the tankers had to have 150 gallons of fuel or less. Receiving only what was needed to complete the combined exercise prevented

additional fuel costs to the Army.

Repair Parts

Ordering and receiving parts was a time-consuming process. After a fault and replacement parts were identified, the mechanic would fill out a high priority walk-through request, which was emailed to the 7th Infantry Division G–4, who coordinated the issue of parts from the SSA on Joint Base Lewis-McChord, Washington. The parts were consolidated at the logistics readiness center, which packaged them and obtained a shipping estimate from FedEx.

After the shipping cost was approved, FedEx picked up the parts from the logistics readiness center. If there was time to receive the parts, they were sent to Malaysia, but if the cut-off day had been reached, the parts were sent to Japan. Historically, from the time the fault and parts were identified, it took 10 to12 days to receive the parts.

This process was used because the battalion's very small aperture terminal (VSAT) was damaged and not mission capable. A comparison of the two processes (VSAT versus email) indicated that the amount of time to receive the part would be the same for both processes. All requested parts should be given high priority, and transportation accounting codes should be ready for shipping the parts through the logistics readiness center.

Ammunition

Customs regulations affected ammunition shipments. Ammunition was stored in the Malaysian ammunition holding area with 24-hour guards. The relationships the U.S. Soldiers built with the guards made it easy for them to get into the ammunition holding area daily.

The ammunition remaining at the end of the exercise was stored on the ship when it docked in Japan. Any unused ammunition with a hazard classification higher than 1.4 had to be expended before the 1–17 Infantry Battalion left Malaysia. Japanese law prohibited the ship from docking if it contained ammunition with a hazard classification above 1.4, which poses a mass explosion hazard.

When planning for ammunition for an exercise, planners should consider the locations of follow-on missions. This is important when requesting certain types of ammunition, which can greatly affect operational costs.

Movement Plan

Setting the right conditions for movement from Malaysia to Japan required coordination among all units. The first step in the process was backward planning to establish a timeline.

The second was disseminating all movement requirements to the units participating in Keris Strike, to include the following:

- ☐ Submit all DD Form 1750s to the UMO.
- ☐ Pressure wash containers and vehicles.
- ☐ Conduct sensitive item and ammunition inspections.

Local contractors load shipping containers onto a flatbed in the motor pool at Kem Desa Pahlawan, Malaysia, on Sept. 26, 2014. (Photo by 1st Lt. Vincent Reil)

- ☐ Repack equipment.
- ☐ Ensure fuel levels are at a quarter of a tank or less.
- ☐ Seal the containers with one-time bolt seals.

In-progress reviews and commander's update briefs were used to disseminate the information. These meetings were essential to a timely movement from Malaysia; they brought representatives from all units together, ensuring the timeline and requirements were understood and answering any request for information.

The movement was accomplished in two days and required the right external equipment. Because of their size, LMTVs, M978 HEMTT tankers, and 10,000-pound all-terrain lifter Army system (ATLAS) forklifts were loaded onto contracted lowboys. Containers, humvees, and rolling stock were loaded onto contracted flatbed trucks.

A local 15-ton crane and 5,000-pound forklift were contracted to load the equipment. Unfortunately, the 5,000-pound forklift was ineffective, so the unit relied on the 10,000-pound ATLAS, which proved to be an essential piece of equipment. The 15-ton crane could not lift the 37,000-pound forward repair system, so a 20-ton crane was used the following day.

Units preparing for this type of exercise should conduct precombat checks and inspections of any contracted equipment to understand the equipment's capabilities. To avoid the issues with the 15-ton crane and 5,000-pound forklift, units should identify any shortfalls early and immediately contact the contracting officer to have the equipment replaced. Otherwise, the unit will risk not meeting strict timelines that could delay the vessels' movement and, in the end, cost the Army additional fees.

The complexity of fulfilling the logistics and basic life support needs for the combined task force in a foreign country proved to be an immense challenge for the 1–17 Infantry Battalion S–4. The lessons learned during this expeditionary effort are valuable. Each unit, including the Malaysian Army, had its own complex logistics problems to identify and solve. Some issues could be discovered only while conducting the combined training exercise. No problem was too great once all units came together to discuss the issue, develop a course of action, and execute the plan.

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Deploying the Global Combat Support System–Army to the JRTC

■ By Chief Warrant Officer 3 Lasandra A. Talleyrand

In April 2014, the 1st and 3rd Infantry Brigade Combat Teams (IBCTs), 101st Airborne Division (Air Assault), began using the Global Combat Support System–Army (GCSS–Army) and, less than 90 days later, deployed their supply support activities (SSAs) to the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana. The units also conducted a relief-in-place, transferring pre-positioned equipment from the 3rd IBCT directly to the 1st IBCT.

GCSS–Army stakeholders, whether deployed forward to JRTC or remaining with the rear detachment at Fort Campbell, Kentucky, were the main line of effort in ensuring that each business area performed its daily GCSS–Army tasks in a timely manner. This article provides observations and lessons learned from the deployment that may benefit units deploying GCSS–Army to JRTC in the near future.

Deployment Preparation

Units must discuss and assign GCSS–Army tasks that have to be performed before and after a deployment to a combat training center. A time line should be established to ensure personnel complete each task on time.

One lesson learned is that units should use the Combined Arms Support Command (CASCOM) GCSS–Army Combat Training Center Handbook as a planning guide. It can be found at http://www.gcss.army.mil under "GCSS–Army Updates." The document describes in detail, critical pre- and post-deployment GCSS–Army tasks that significantly contribute to a successful rotation.

The 101st Airborne Division G–4 published those tasks in a JRTC operations order for units to execute. The sequence of events is based on a time line, and units should start executing tasks no later than 120 days before the start of the rotation.

DODAAC Management

Units should decide early on whether they are going to use training Department of Defense activity address codes (DODAACs) or home station DODAACs during the rotation. The DODAACs are loaded in the Standard Army Maintenance System–Enhanced (SAMS–E) to manage and order repair parts for pre-positioned equipment drawn at JRTC.

The lesson learned is that units should request training DODAACs no later than 120 days before the start of the rotation. Failing to request DODAACs on time can result in the Logistics Support Activity or GCSS–Army activating them after the start of the rotation.

The 1st and 3rd IBCTs deployed using their home station DODAACs. Each battalion used a clean, existing direct support DODAAC to manage pre-positioned equipment. Using home station DODAACs required minimal parameter changes (such as Internet protocol addresses or training fund codes) within SAMS–E during the standard Army management information system (STAMIS) gunnery.

STAMIS Gunnery

Units questioned the value added of conducting a STAMIS gunnery when deploying GCSS–Army to JRTC because it seemed time-consuming. A STAMIS gunnery is necessary to identify issues within the entire STAMIS architecture. All systems and processes are tested and validated before deploying to the area of operations.

The lesson learned is that the gunnery confirms the connectivity of the Very Small Aperture Terminal, Combat Service Support Automated Information System Interface, SAMS–E, and GCSS–Army and validates the funding of each DODAAC. During the gunnery, the battalions verified that each SAMS–E operator set up the correct DODAAC or fund code relationship.

Units changed their home station fund codes to the JRTC fund code provided to them by the G–8. The Logistics Modernization Program search matrix for wholesale support was changed from Fort Campbell's logistics readiness center (LRC) to Fort Polk's LRC for zero-balanced and nonstocked authorized stockage list (ASL) items.

The GCSS–Army routing identifier code "ZRIC" is used to establish a retrograde destination by individual piece of materiel, materiel class, and batch or condition code range. The ZRIC table was changed to Fort Polk to accommodate unit turn-ins after the rotation. Once all parameter changes were made, the unit conducted a "washer test" to validate the ordering process before deploying to its area of responsibility.

ZPARK and Materiel Management

GCSS–Army requires each business area to perform daily tasks that are critical to successful maintenance operations. Purchase orders are held in ZPARK, where they await funding approval by the supporting re-

source manager.

Once approved, the purchase orders are forwarded to the release strategy, which is a workflow inbox that allows the unit to verify the validity of a purchase order and make a decision to pass or cancel the order. These two processes must be done quickly when deployed to a combat training center.

Requisitions remaining in ZPARK and the release strategy longer than 24 hours can essentially halt maintenance operations. All business areas must work together to ensure that purchase orders and requisitions are released in a timely, efficient manner.

The lesson learned is that sustainment brigade level 1 materiel managers, resource managers, and deployed execution managers must synchronize their battle rhythms to ensure purchase orders are passed within 12 to 24 hours, seven days a week.

The 1st and 3rd IBCTs requested overtime for the JRTC SSA contractors to pull materiel release orders and conduct walk-throughs on the weekend for zero-balanced, nonstocked ASL items. A resource manager from the division G–8 shop was co-located with the JRTC G–8 to process walk-throughs.

The resource manager preloaded the obligation amount into GCSS–Army before the unit conducted the walk-through transaction. This process was put in place to avoid receiving unmatched disbursements and transactions or encountering any other significant financial issues.

Best Practices

The following best practices can be used during the planning, deployment, and sustainment phases when deploying GCSS–Army to JRTC:

- ☐ Request and use CASCOM's GCSS–Army Combat Training Center Handbook.
- ☐ Publish an operations or fragmentary order to identify essential tasks.
- ☐ Request training DODAACs no later than 120 days before the start of the rotation.
- ☐ Perform an early scrub of each home station DODAAC to identify issues that could interrupt procurement operations (for example, an inactive status).
- ☐ Deploy sustainment automation support management office personnel, field service representatives, accountable officers, maintenance technicians, and SAMS–E and GCSS–Army operators with pertinent equipment, to include the ASL, as the torch party to conduct the STAMIS gunnery.
- ☐ Conduct a washer test to validate the funding for each DODAAC. This test also validates each step within the ordering process.
- ☐ Conduct a 100-percent ASL inventory no later than 30 days before redeployment for accountability purposes.
- ☐ Ensure command emphasis and involvement.

Soldiers of the 101st Airborne Division (Air Assault) prepare to deploy GCSS–Army from Fort Campbell, Kentucky, to the Joint Readiness Training Center. (Photo by Capt. Earl E. Wilson)

The overall success of the 1st and 3rd IBCT's JRTC rotations can be attributed to the key leaders' command emphasis on GCSS–Army. The system fostered a "train as you fight" environment, giving the 101st Airborne Division (Air Assault) the ability to operate independently without having to depend on any external supply organization to accomplish the mission.

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a three-day loading period is built into the price of all the trucking contracts. On the fourth day, the Afghan trucking company charges the military demurrage, an explicit cost that compensates trucking companies for the additional time they spent waiting instead of moving other cargo. While the driver waits, multiple other trucks may arrive, load 20-foot equivalent containers, and leave for the same destination.

Each of these examples highlights an inefficiency that results from associating trucks with individual customers. In the first instance, the MCB could have mixed and matched cargo to ensure that it fully utilized all its trucks. More cargo could therefore be put on fewer trucks, saving the military the cost of the additional trucks.

In the second instance, the MCB could have reprioritized its cargo, placing the emergency cargo on regular-priced ground transportation assets scheduled to leave that day. No ground transportation shortage required the MCB to use expedited and expensive methods of transportation.

In the third instance, the MCB could have saved money in two ways. In the immediate term, it could have avoided demurrage by placing cargo that was already backlogged on the truck waiting to be moved. In the longer term, by centralizing the shipping process, the MCB could likely reduce the average time it takes to load a truck. This would enable the MCB to reduce the three-day load time built into the contracts and therefore reduce the cost of the contracts associated with that time.

In the past, the MCB in Afghanistan minimized all these inefficiencies by fully coordinating the shipment of its customers' cargo. The MCB funneled cargo to CRSP yards where it was sorted by mode and destination and loaded onto trucks based on RDD and truck availability. The MCB ensured that trucks were fully utilized before releasing them for movement, expedited shipments on regular-priced forms of transportation, and reduced demurrage associated with truck-loading times. By reinstituting these practices, the MCB could both save the military money and accelerate shipments.

Room for Further Exploration

The Army needs to explore a few things to ensure that this change would be cost effective and consistent with the logistics mission in Afghanistan.

Does the cost of adjusting this system outweigh the cost of continuing it? From a monetary perspective, if the cost of reestablishing and operating CRSP yards, expanding existing base infrastructure, or rewriting the trucking contracts is higher than the savings these recommendations bring, then it may not be beneficial for the MCB to implement this system.

Do current MCTs have the expertise necessary to execute this system? A significant amount of control needs to be transferred to the MCTs for this system to work. If the movement control specialists that comprise the MCTs have lost the ability to operate efficiently with sound decision-making processes, then these changes could decrease rather than increase efficiency and effectiveness.

Would adjusting the logistics system adversely affect wartime operations? Logistics systems do not exist in a bubble, and this is particularly true in Afghanistan since Afghan trucking companies support U.S. logistics operations. Any increase or decrease in the amount of money paid to these companies could affect their support of the U.S. and Afghan governments and should be considered before making significant changes to logistics operations.

Will the guiding theory of expeditionary transportation continue to equally weigh cost, speed, and safety when making transportation decisions? Largely because of safety concerns, the U.S. Central Command directs its subordinate units to ship lower value cargo by ground and higher value cargo by air. There has been a push, however, to move more cargo by air and less by ground because air movement is quicker and safer, and the cost is often masked. If this push continues, the military may decide to move all cargo by air and use ground assets solely to make up the shortfall, despite the significant cost the military would incur.

The theater sustainment command should give an MCB full responsibility for shipping cargo throughout Afghanistan, determining cargo's mode of transportation, and fully coordinating cargo movements. By reducing the use of the most expensive forms of transportation, better using less expensive modes, expediting shipments on the cheapest forms of transportation, and reducing demurrage, the military would easily save tens, if not hundreds, of millions of dollars per year on transportation costs alone.

These effects could have short- and long-term significance. Our military spent years in Afghanistan, Iraq, and Kuwait developing our current expeditionary movement control doctrine.

If we allow our doctrine to lapse at the end of these conflicts, then we may find it difficult to revive for the next conflicts. Our military may cease to understand the true purpose of the MCB and, in the process, lose money that could be allocated to other areas of our current and future war efforts.

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A Soldier from the 1058th Transportation Company, Massachusetts National Guard, helps the Scituate Fire Department Dive Team extract Scituate residents from a flooded area on Jan. 27, 2015, after winter storm Juno. (Photo by Alfred Tripolone III)