

OCTOBER–DECEMBER 2013

ARMY SUSTAINMENT

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FROM

TO

HARD HARDER

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Iraq to Afghanistan

Plus:

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Future of
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A mine-resistant, ambush-protected vehicle is processed at the 2nd Battalion, 402nd Army Field Support Brigade, redistribution property accountability team yard at Joint Base Balad, Iraq, April 23, 2011. (Photo by Galen Putnam)

Editor's Note: This issue covers three months, as opposed to our standard two. The Armywide civilian furloughs this summer required an adjustment of our production cycle. We return to our bimonthly cycle starting with our January–February 2014 issue.

“As we transition from an Army at war to an Army of preparation, it is important that we refocus our thinking with a mindset fixed on what we might have to do instead of what we have done.”

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Shaping the Future of Sustainment

The Combined Arms Support Command developed a white paper that identifies plans to help shape and prepare a globally responsive sustainment force for the next fight.

■ By Maj. Gen. Larry D. Wyche



“ Globally responsive sustainment seeks to produce a future sustainment capability end state that is linked to a range of strategic guidance, such as joint and Army capstone concepts that include strategic land power. ”

Through nearly 12 years of continuous combat operations, valuable lessons have been learned. Our sustainment formations have evolved in order to support operations in Iraq, Afghanistan, and elsewhere around the world. This evolution produced sustainers and sustainment organizations that are battle-tested, confident in their abilities, and mission-focused with an all-embracing desire to support the Soldier.

As we transition from an Army at war to an Army of preparation, it is important that we refocus our thinking with a mindset fixed on what we might have to do instead of what we have done. We must continue to analyze, adapt, and develop our Soldiers, Army civilians, and capabilities for the next fight.

A Document for Change

As the Army's premier sustainment think tank, the Combined Arms Support Command considered these challenges and opportunities in detail and developed a white paper that critically looks to the future. This paper identifies a wide range of plans to help shape and prepare a globally responsive sustainment force for the next fight.

The Globally Responsive Sustainment white paper is a key document for change in the sustainment community and discusses both the revision of the Army Functional Concept for Sustainment and the broader force modernization process. It leverages the Global Logistics 2020 effort by the Army Materiel Command and looks at the

contemporary issues driving change and the shape of the sustainment community in the future.

The white paper also provides a broader, integrated view of national strategic issues, the industrial base, the generating force, and the operating force that is responsible for executing sustainment activities in support of the warfighter. We cannot afford to take a myopic view of sustainment in the future. Thus, the paper considers broader issues such as fiscal austerity and support from the American industrial base and our strategic partners.

Globally Responsive Sustainment

The white paper proposes an approach called globally responsive sustainment. It is an approach that seeks to produce a sustainment system that is optimized, integrated, synchronized, affordable, and relevant to support unified land operations and the joint warfighter while minimizing redundancy. This is the purpose for our work and will focus our thinking in shaping the future sustainment force.

Globally responsive sustainment seeks to produce a future sustainment capability end state that is linked to a range of strategic guidance, such as joint and Army capstone concepts that include strategic land power. This end state will incorporate the following attributes: agile and flexible, integrated, protected, trained and ready, and precise and responsive. Both the generating and operating forces require these attributes in order to meet the needs of the future Army.

Big Ideas

The white paper also identifies a range of “big ideas” and capability focus areas that will enable our future efforts. These ideas and focus areas are derived from a range of events in the sustainment community, including the Global Logistics 2020 Decisive Action concept rehearsal held at Fort Lee, Va., earlier this year. These big ideas will help us realize globally responsive sustainment:

- Creative and adaptive leaders and Soldiers.
- Enabled mission command and training for sustainment forces.
- Institutional Army, operating force, and strategic partner integration.
- Special operations forces and conventional forces integration.
- Effective integration of the Ready Reserve.
- Maintenance of a viable industrial base capability and capacity.
- Integration of the Army into joint logistics capabilities.

- Maintenance of a globally deployable expeditionary Army.
- Enabled rapid global response through pre-positioned stocks, smarter positioning of assets, and the development of rapid expeditionary basing.
- Further development of a sustainment information system.
- Exploitation of sustainment capabilities to support shaping operations.
- Improved sustainment precision through the exploitation of technology.

The white paper will shape our ideas and sharpen our thinking as we evolve into a globally responsive sustainment force. Much of this work is already in progress, but there is still more to do. As we work through these big ideas and future capability focus areas, there are bound to be other challenges and opportunities. We also have to ensure that we quickly adapt and keep pace with the strategic land power concept.

These areas are only our first step; our success lies in our ability to contemplate and discuss the ideas in this paper and determine other opportunities for further exploration. We need help from you and every member of the sustainment community to analyze this document, think about the future, and help shape our future force.

I would like to thank all of our partners who have helped with this, especially the Army Materiel Command, the Forces Command, and the Headquarters Department of the Army G-4. The white paper can be found at www.cascom.army.mil. Please look for future articles that will provide updates as we move forward. I look forward to reading your comments.

Maj. Gen. Larry D. Wyche is the commanding general of the Combined Arms Support Command and Sustainment Center of Excellence at Fort Lee, Va.



1st Lt. Charles Roberts, 289th Quartermaster Company, briefs the 1st Theater Sustainment Command commanding general, Maj. Gen. Kurt Stein, on the operational output of Forward Operating Base Sharana's materiel redistribution yard. (Photo by 1st Lt. Henry Chan)

The Seven Deadly Sins of Sustainment

The author describes the requirements for providing efficient and effective support for combat units, using the seven deadly sins as a basis for the discussion.

■ By Brig. Gen. Steven A. Shapiro

Working in the 1st Theater Sustainment Command in Afghanistan has given me a unique vantage point to see how logisticians from strategic through tactical levels are sustaining current operations while retrograding equipment no longer needed for the current fight.

As the connection between the warfighter and our strategic logistics partners, the 1st Theater Sustainment Command links the industrial base with the current fight. In this role, logisticians have a responsibility to examine and review their actions in terms of effectiveness and efficiency through a constant after action review process to avoid committing the seven deadly sins of sustainment.

The “Sins” of Sustainment

During a manufacturing forum I attended years ago, the guest speaker used the seven deadly sins as a descriptive tool to relate his perspective on manufacturing. Using these sins metaphorically, I offer the following definitions and how they apply to the sustainment mission:

- Lust—chasing unneeded capacity or capability.
- Greed—wanting more stocks “just in case.”
- Gluttony—keeping items on inventory and never saying no to requests.
- Sloth—planning imprecisely and thus overspending.
- Envy—wanting what the other guy has.
- Pride—parochialism or not sharing assets and information across services or commands.

- Wrath—reacting poorly when somebody suggests doing something different to save money or prevent shipping excess to the theater.

Combating the Seven Sins

Deployed logisticians, along with those they support, must know how to prevent the seven deadly sins in their work. To do so, they must ask this key question: How is the mission of sustainment and retrograde kept in balance and on track?

Lust. First comes the hard question: What is the requirement? In a resource-rich environment, this question is seldom taken seriously. However, today this question is critical for two reasons: to save resources and to prevent a forward stockpile of items that will just need to be retrograded. To follow up, logisticians should also ask, “Is this really needed?”

Greed. Logisticians cannot guess requirements for combat units. They need to engage them and truly determine what their requirements are. In Afghanistan, logisticians often find that less is better and is what the combat unit needs and agrees to. Units do not want a bunch of “stuff” on their forward operating bases taking up valuable space. Stockpiling just creates transportation problems later. Logisticians should relay these concerns to the highest levels of the materiel enterprise in order to prevent the pushing of unneeded materiel.

Gluttony. Stocks on hand need to be checked and a determination

needs to be made about what can be sent back to the wholesale system. An item not needed in theater may be needed in the continental United States. Working with the wholesale level allows one to determine what is excess and whether to ship it to where it is needed or destroy it in place.

Sloth. Command supply discipline in the deployed force is a force multiplier. We have to emplace control measures to ensure we are not asking for unneeded items. It is critical that we order only what is needed so that we do not take up valuable space and further burden our retrograde mission.

Logisticians and warfighters agree that we need to bring back some control measures, such as working the manager review file daily, canceling unneeded requisitions, restricting offline requisitions from the General Services Administration, reviewing all local purchase requests before they leave Afghanistan, and consuming what is on hand before ordering more. Saying no actually reduces risk by avoiding unneeded stockpiles. For logisticians, saying no is no longer taboo.

Envy. Next we need to look at what we have already spent money on and determine if spending more is worth the cost and effort. For instance, we have military construction projects that are being reconsidered based on our current manning and strategy. Senior officers are making tough calls, but they are calls that need to be made based on what we know about the future. Nothing is wrong with re-

ducing requirements with mission changes. In fact, it is the sign of a learning organization and should happen daily.

Pride. In Afghanistan, we are driven to share capability across the services. We can certainly do better, but today we have Army engineers using Navy equipment to deconstruct base camps, Marines driving Army equipment, and our coalition partners borrowing equipment from all of our military services. This way of sharing prevents unneeded shipping costs to the combined joint operations area and reduces our footprint.

We should share not only equipment but also logistics data. In U.S. Forces-Afghanistan and the 1st Theater Sustainment Command, we always say “we have no secrets” and post all information on our shared portal. Seeing our numbers on other organizations’ slides is a huge benefit and keeps us all grounded. Although not painless, creating this common operational picture has helped external organizations to develop their own common operational pictures and allowed them to focus on assisting us instead of trying to “see” us.

Wrath. As we work across these disciplines, it is important to realize that we are rewriting doctrine in many instances. At this point, no ideas are bad and all ideas are welcome. When we have battle rhythm events, our teammates are encouraged to speak up because their perspective may be the one that helps us put this puzzle together.

As we think about where we have been and where we are going, applying the above principles provides a basis for effective decision making. It has led us to adopt some tactics, techniques, and procedures. Getting this right is critical to resetting the services and allowing us to train for the next set of operations.

Taking Action at Multiple Levels

We are taking action at all levels in order to execute the above ap-

plications. Again, these actions are not set in doctrine but have been acquired over years of tough lessons learned.

Battlespace owners must own their footprints. If a reportable item is in your area, it is your responsibility. This is especially critical for functions such as contractors and

not too proud to ask for assistance.

As we transition out of Afghanistan, a framework of thought to look at sustainment issues based on lessons learned is critical. I am not advocating codifying the seven deadly sins as a change to Army doctrine. I am advocating using them as a prism to look at these is-

Deployed logisticians, along with those they support, must know how to prevent the seven deadly sins in their work. To do so, they must ask this key question: How is the mission of sustainment and retrograde kept in balance and on track?

containers on the battlefield.

The 1st Theater Sustainment Command recently cut an order to define “good enough” or “expeditionary.” This places a left and right boundary on needs.

We are looking at our major contracts, task order by task order. We need to know whom we are paying for what service. This is important, hard government work but key to reducing our footprint.

We are looking at all requirements and making tough calls. We cancel operational needs that are just no longer required and review every new task order to ensure it is a needed service.

We are touching everything. If we have not used the items in a container yet, we probably won’t. If the items are not needed, we are using multiple avenues to dispose of them, such as foreign excess personal property, Defense Logistics Agency disposition services, and foreign military sales.

We have developed an aggressive logistics battle rhythm and are talking about all of this in the open. We have linked this battle rhythm to that of the operational corps headquarters and regional commands.

We have brought in our strategic partners who can help, and we’re

sues as we transition into a period of lower operating tempo with constrained resources.

Brig. Gen. Steven A. Shapiro is the commander of Philadelphia-based Defense Logistics Agency Troop Support. He has a bachelor’s degree in political science from George Washington University, a master’s degree in logistics management from the Florida Institute of Technology, and a master’s degree in strategic studies from the Army War College. He is a graduate of the Ordnance Officer Basic and Advanced Courses and the Army Command and General Staff College.

Editor’s Note: As the Army’s official professional bulletin on sustainment, Army Sustainment provides a forum for the exchange of information and expression of original, creative, and innovative thoughts on sustainment functions. We welcome your commentaries and thoughts on any sustainment-related topic. Submit articles and comments to usarmy.lee.tradoc.mbx.leeasm@mail.mil.

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Dealing with Chaoplexity

In this commentary, the authors propose a new frame for the professionalization of military logisticians.

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

In the turbulent environment in which we expect to continue operating, the top-down habits of hierarchical organizations will suffice less and less because they cannot respond to changing circumstances in a timely manner. This environment, characterized as “chaoplex” in our July–September 2013 *Army Sustainment* article, demands the simultaneous, holistic, and continuous adaptation of entire organizations rather than individual responses to directives that trickle too slowly from higher authorities.

The military has adopted the philosophy of mission command to address the decentralization of initiative needed to operate effectively as a networked organization. Logistics organizations are driven by small teams tied together as one of the most networked organizations in the military.

We contend that the Army logistics community has not studied in detail how emerging demands and philosophical changes call for us to transform how we think about military logistics as a profession and the corresponding adaptive role of the professional logistician.

The industrial age Army of mass production is slowly losing its applicability. Today we still have remnants of the Army’s early 20th century scientifically managed design that includes an assembly-line method of creating units and preparing Soldiers, a competency-map approach to creating military occupational specialties, and commissioned officer classification systems that pair outputs with matching coded authorized positions. In this age of global interconnectedness and fast-changing operational environments, we cannot expect this mechanistic system to

keep pace with the complexity faced by our logisticians.

Instead, we need to reframe the very idea of what professionals do when confronted with novel situations in which our old knowledge structures do not work. We must shift from a view of a mechanized competency production line to an organic, complex view of people and organizational methods.

We feel there is a need to reshape the definition of our profession and place a higher value on the ability of logisticians to figure things out “on the fly.”

Professor Donald A. Schön called this “reflective practice” in his 1987 book, *The Reflective Practitioner: How Professionals Think in Action*. Schön wrote, “The nonroutine situations of practice are at least partly indeterminate and must somehow be made coherent. Skillful practitioners learn to conduct frame experiments in which they impose a kind of coherence on messy situations and thereby discover consequences and implications of their chosen frames. From time to time, their efforts to give order to a situation provoke unexpected outcomes—‘back talk’ that gives the situation a new meaning. They listen and reframe the problem. It is this ... that constitutes a reflective conversation with the materials of a situation—the design like artistry of professional practice.”

Schön proposes that professional education and practice should be recast as a matter of crafting divergent knowledge. In other words, education that targets creating knowledge through action, coupled with critical retrospection of that knowledge. Expertise comes from adapting actions based on what one knows to be the situation at hand rather than relying on preordained solutions.

In his 1995 book, *Educating the Reflective Practitioner*, Schön proposes that “if you are dealing with a unique situation, then by definition you cannot apply to it standard categories of analysis and action. Because if it’s unique, just that about it which is unique does not fit those categories. And therefore, you have to do something on the spot in such a situation, something that involves invention, which involves reconfiguring the problem, which may involve redesigning categories so that they fit it.”

We argue that Schön’s framework of reflective practice is sound. To implement the philosophy of mission command our concept of the profession of military logistics needs to change. We need leaders at all levels who continuously develop acumen for quickly and effectively adapting to complex environments.

We are not suggesting that the logistics community ignore the science that has been developed during the past century of modern military operations. We suggest that it acknowledge that this science promotes the mass production of Soldier skills. If we want highly adaptive logisticians, they need a highly adaptive sense of the continuum of knowledge as the current and future operational environments demand.

Dr. Christopher R. Paparone is the dean of the College of Professional and Continuing Education at the Army Logistics University at Fort Lee, Va.

George L. Topic Jr. is a retired Army colonel and the vice director for the Center for Joint and Strategic Logistics at the National Defense University at Fort McNair, Washington, D.C.

Foreign Area Officers for Soft Logistics

In “A Case for ‘Soft Logistics,’” by Dr. Christopher R. Papparone and George L. Topic Jr., in the May–June 2013 issue of *Army Sustainment*, the authors argue that the Army is not preparing logisticians to effectively use noncoercive means when it comes to international relations. It is a great idea and a great article. However, the Army has logisticians with the qualifications that the authors desire, and the authors even mention them in their article: foreign area officers (FAOs).

FAOs do not forsake their basic branches upon entering into their functional areas, and they are expected to maintain some level of proficiency and professional knowledge

in their basic branches. I suspect that one reason FAOs are chosen from all branches of the Army (aside from the fact that the Military Intelligence branch could not possibly fill all the FAO requirements by itself) is that a variety of backgrounds provides an assortment of experts and experience downrange. FAOs undergo rigorous training, including language, regional training (a form of immersion into the area’s cultures and the State Department), and Advanced Civil Schooling.

I am sure I am not the only FAO logistician who has sought guidance from senior logisticians about how I can use my position as an FAO to benefit my fellow Army logisticians.

Unfortunately, I have yet to receive much feedback, either from mentors or from the professional military education entities at the Army Logistics University.

Maybe there is a way the Logistics branch can better use logisticians assigned as FAOs. Perhaps it is possible to assign FAO logisticians to positions in which “soft logistics” plays a key role. I admit I offer no concrete solutions, but in this time of budget cuts and furloughs, it is hard to argue for more of anything besides doing more with what you already have.

—Maj. Donald R. Owens
Foreign Area Officer Logistician
Defense Language Institute

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- Write your article specifically for *Army Sustainment*. If you have

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- Review a past issue of the magazine; it will be your best guide as you develop your article.

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A rough-terrain container handler passes by the entrance of the Forward Operating Base Sharana materiel redistribution yard. (Photo by 1st Lt. Henry Chan)

From Hard to Harder: Iraq Retrograde Lessons for Afghanistan

This article reviews retrograde lessons learned from Iraq, compares them with the retrograde operations in Afghanistan, and discusses their application to the Army of 2020.

■ By Col. David Banian

The withdrawal from Iraq from 2009 to 2011 as part of Operations Iraqi Freedom (OIF) and New Dawn (OND) was a historic logistics accomplishment—the largest in scope since World War II—with many lessons learned. The withdrawal from Afghanistan that began in 2011 as part of Operation Enduring Freedom (OEF) is equally

historic but considerably different.

While not all lessons from OIF and OND are applicable to OEF, U.S. Forces–Afghanistan (USFOR–A) is applying many retrograde lessons. This article compares the retrograde operations of both wars, focusing on retrograde challenges, geopolitical environments, organizational structure, and joint team requirements. This ar-

ticle also includes recommendations for the retrograde from Afghanistan and some institutional recommendations for the Army of 2020.

Scope of the Retrograde Challenge

By May 2009, U.S. Forces–Iraq (USF–I) had built up six years' worth of infrastructure and supplies. To complete the retrograde, it had to

close more than 341 bases, retrograde 60,000 20-foot equivalent unit (TEU) containers' worth of supplies, and transport 40,788 pieces of rolling stock and equipment.¹ To manage the large equipment numbers, USF-I placed all equipment into one of three categories:

- Organizational property that a unit owned on its property book and brought to Iraq.
- Theater-provided equipment (TPE) left by redeploying units for follow-on rotational units, including armored wheeled vehicles, weapons systems, and communications systems.
- Contractor-acquired/government-owned (CA/GO) equipment comprising mostly materiel for establishing and operating bases, including containerized housing units, air conditioning units, and generators.

They further divided each category into disposition subcategories of retain (return, remain, or redistribute) or divest (sell, transfer, or dispose). During almost a decade of war in Iraq, the Department of Defense (DOD) had amassed more equipment than needed and used several processes to divest this excess equipment:

- Transfer ownership to Iraq by declaring the equipment excess defense articles, non-excess materiel, or foreign excess personal property.
- Transfer to USFOR-A.
- Dispose of items no longer needed or too costly to repair using the Defense Logistics Agency (DLA) Disposition Services (DS).²

| Army Equipment in Afghanistan | |
|---|--|
| Retain | |
| Nonstandard Theater Provided Equipment (TPE) | 150,894 pieces \$2.64 billion — 9.32% |
| Standard Military TPE (non-excess) | 144,766 pieces \$9.13 billion — 32.3% |
| Unit Equipment (redeploys with unit) | 530,715 pieces \$9.85 billion — 34.8% |
| Divest | |
| Nonstandard Military TPE | 277,939 pieces \$4.39 billion — 15.5% |
| Standard Military TPE (excess) | 50,954 pieces \$1.3 billion — 4.87% |
| Contractor-Acquired Property | 313,471 pieces \$944 million — 3.3% |

Figure 1. Equipment categories, quantities, dollar values, and percent of total value of equipment in Afghanistan.

By the end of its mission, USF-I had divested more than 4.2 million pieces of equipment—about 12,000 TEUs' worth.³ This divesting process saved more than \$1.7 billion in transportation costs.⁴ Furthermore, passing serviceable but excess equipment to Iraq assisted the theater security cooperation efforts of the U.S. Central Command (CENTCOM) by helping to resource the Iraqi army.

Most equipment in Afghanistan that requires disposition instructions is TPE and CA/GO. TPE is categorized as either standard military equipment or non-standard equipment. The Army then assesses

whether it is needed. Most CA/GO property that consists of base support items is declared foreign excess personal property to be transferred to Afghanistan. Figure 1 shows the equipment categories, quantities, and dollar values of the property in Afghanistan and its projected retain-versus-divest plan.⁵ The Army plans to divest 24 percent of its total equipment value in Afghanistan.

Retrograde Velocity Goals

Retrograde velocity goals are a management tool developed during the Iraq drawdown. They are metrics, expressed as items per unit of time, designed to measure progress and focus the effort of many disparate organizations.

The initial retrograde velocity goal (established in May 2009) was to retrograde 1,500 non-mission-essential pieces of rolling stock per month. In April 2010, USF-I increased the goal to 2,500 per month. Similarly, the initial goal for nonrolling stock was 3,000 TEUs per month and was later increased to 3,800 per month.⁶ The retrograde velocity goals were increased in order to meet the retrograde timeline objectives.

These retrograde goals provided planning factors that became operational goals for the logistics enterprise, which consisted of the U.S. Transportation Command (TRANSCOM), the CENTCOM Directorate of Logistics (J-4), the Army Materiel Command (AMC), U.S. Army Central (ARCENT), and the 1st Theater Sustainment Command (TSC), to orchestrate resources to support the operation.

In Afghanistan, USFOR-A has built up 11 years' worth of infrastructure and supplies including 560 bas-

¹ "Operation Iraqi Freedom: Actions Needed to Facilitate the Efficient Drawdown of U.S. Forces and Equipment from Iraq," Government Accountability Office, Washington, D.C., April 2010, p. 13.

² Bethany Crudlee, "U.S. Defense Logistics Agency Faces Daunting Task: Equipment Disposal," *Defense News*, Oct. 21, 2012.

³ "Third Army: Empowering Theater Responsiveness by Synchronizing Operational Maneuver," Association of the United States Army, Arlington, Va., March 2012, p. 4.

⁴ Ibid.

⁵ Logistics operations center briefing, G-4, Department of the Army, Washington, D.C., October 2012.

⁶ "Operation Iraqi Freedom: Actions Needed to Facilitate the Efficient Drawdown of U.S. Forces and Equipment from Iraq," Government Accountability Office, Washington, D.C., April 2010, p. 10.

es, 90,000 TEUs' worth of supplies, and 50,000 pieces of rolling stock and equipment.⁷

Retain or Divest

One of the lessons learned from OND that DOD, USFOR-A, and the logistics enterprise retrograde planners are applying is categorizing equipment as either retain or divest. USFOR-A is implementing the same foreign excess personal property, excess defense articles, and DLA DS procedures used in Iraq.

Moreover, just as USF-I did for Iraq, USFOR-A plans to divest a quarter of the value of its total materiel rather than ship it home.⁸ However, in stark contrast to Iraq, the Afghan government's ability and desire to absorb and maintain transferred equipment is limited.⁹ This limitation is due to Afghanistan's lack of a logistics system and the country's inability to maintain this older equipment in addition to the equipment that the U.S. government has already provided through foreign military sales (FMS).

The National Defense Authorization Act (NDAA) for fiscal year 2013 prescribes what and how items can be transferred to Afghanistan. The NDAA no longer authorizes the DOD to transfer construction equipment as excess defense articles, as it did during OIF and OND.

The 2013 NDAA provides the authority to transfer non-excess DOD items to Afghanistan's government; however, there is no provision to transfer non-excess items to coalition partners. These constraints will challenge USFOR-A's ability to transfer the amount of projected equipment to the Afghans and increase the amount of equipment to

be turned in to DLA DS for disposition because the equipment is too expensive to ship to the United States.

Before 2011, reverse flow cargo was primarily unit equipment being redeployed for unit reset. In October 2011, USFOR-A established retrograde velocity goals of 1,200 vehicles and 1,000 TEUs per month. This change emphasized retrograde and provided for unity of effort between USFOR-A and the logistics enterprise to begin reducing excess materiel and equipment.¹⁰

The USFOR-A retrograde velocity goals forced the logistics enterprise to increase the capacity and routes for the reverse flow of cargo. Until 2011, the logistics enterprise had retrograded only minimal amounts of equipment by air and on the Pakistan ground lines of communication (PA-KGLOC), the truck route through Pakistan.¹¹

In addition to shipping equipment out of Afghanistan, DOD determined that it needed to better manage equipment still flowing into Afghanistan. ARCENT, along with Forces Command, Headquarters Department of the Army, AMC, and USFOR-A, developed the Equipment Deployment/Redeployment Review Board (EDR2B). The EDR2B reviews and validates USFOR-A equipping requirements to ensure deploying units bring only the authorized types and amounts of equipment.¹²

Geopolitical Environment

From a purely geopolitical context, retrograde operations from Iraq almost seem easy when compared to Afghanistan. But in fact, retrograde operations in Iraq were extremely

difficult. Afghanistan is similar to Iraq in some ways; however, the differences are noteworthy.

Iraq has a seaport of moderate capacity from which the Military Surface Deployment and Distribution Command (SDDC) retrograded approximately 20 percent of the containers. In addition, easy access to Jordan allowed SDDC to retrograde another 30 percent of the unit redeployment containers.¹³

Iraq has relatively flat terrain, an advanced road network that facilitated convoy movement, and a purely U.S. command and control structure. The most significant advantage was having Kuwait as an intermediate staging base (ISB) to receive and stage the retrograde. The good road network leading directly to Kuwait gave USF-I operational flexibility by enabling the command to retain up to half of its maneuver force in Iraq until the final drawdown in the fall of 2011.

In contrast, Afghanistan is landlocked, has primitive road networks, severely challenging terrain consisting of high mountains, and extreme weather. Not one of the neighboring countries allows easy access or is willing to serve as an ISB, which decreases flexibility and increases cost, complexity, and risk to meeting time constraints. In addition, the International Security Assistance Force (ISAF) contains forces from 42 countries all conducting their own retrograde operations that require additional synchronization.

Because of the geopolitical situation, the primary retrograde mode is by air to nearby regional transportation hubs for transfer to a ship for delivery to the United States—a pro-

⁷ "Afghanistan Drawdown Preparations: DOD Decision Makers Need Additional Analyses to Determine Costs and Benefits of Returning Excess Equipment," Government Accountability Office, Washington, D.C., December 2012, p. 23.

⁸ Lt. Gen. Raymond Mason, "Army 2020: Top Four Logistics Priorities," *The Green Book*, Association of the United States Army, Arlington, Va., 2012, p. 178.

⁹ Afghanistan Drawdown Preparations, p. 14.

¹⁰ *Ibid.*, p. 23.

¹¹ Maj. Gen. William Rapp (former deputy commanding general, U.S. Forces-Afghanistan), personal interview, Jan. 15, 2013.

¹² "Capability Provider: Committed to Providing the Necessary Training, Equipment and Capabilities," *Military Logistics Forum*, Vol. 7, No. 1, February 2013, p. 16.

¹³ "Iraq Drawdown: Opportunities Exist to Improve Equipment Visibility, Contractor Demobilization, and Clarity of Post-2011 DOD Role," Government Accountability Office, Washington, D.C., September 2011, p. 9.

cess called multimodal. Multimodal shipments cost roughly six times more than moving equipment on the ground through Pakistan.¹⁴ PAKGLOC was a critical enabler used to retrograde nonsensitive equipment until November 2011, when Pakistan closed the route. The PAKGLOC is open and cargo is flowing in, but concerns remain regarding our ability to ship the volume of required equipment out of Afghanistan via that route.

The other surface route is the Northern Distribution Network (NDN), which was available for inbound sustainment cargo only until 2011. Air shipments out of Afghanistan cost approximately four times more than using the NDN. With Pakistan's agreement to reopen the PAKGLOC, TRANSCOM's goal is to retrograde 14.2 percent on the NDN, 19.9 percent on the PAKGLOC, and 65.8 percent by air.¹⁵

In 2012, the logistics enterprise conducted initial retrograde proof-of-principle moves on the NDN, working with the surrounding countries on what and how equipment would be retrograded. An interagency team from DOD and the Department of State continue working to open both the PAKGLOC and NDN for full retrograde operations. Unless these two surface routes are opened, the retrograde from Afghanistan will be slower and a great deal more expensive than the one from Iraq.

Organizational Structure: Iraq

The organizational structure that CENTCOM and its subordinate commands put in place in Iraq included a combination of both ad hoc and doctrinal organizations that allowed the commands to adapt to changing

requirements and conditions.

Understanding the organizational structure in Iraq starts with the consolidation of Multi-National Force–Iraq, Multi-National Corps–Iraq, and Multi-National Security Transition Command–Iraq into a single operational chain of command: USF–I. In support of the retrograde operation, CENTCOM assigned ARCENT as the executive agent to synchronize retrograding materiel and equipment from Iraq. However, CENTCOM did not create a unified structure to coordinate the variety of teams in multiple countries and units engaged in retrograde operations.¹⁶

CENTCOM left ARCENT and the new USF–I to forge unity of effort instead of mandating unity of command to accomplish the retrograde mission. Such a relationship for a large operation is in keeping with joint doctrine for logistics, which states that “unity of effort is the coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same service, nation, or organization.”¹⁷

The many organizations that were either assigned or created to support the retrograde all worked toward unity of effort where unity of command was lacking. The organizations supporting retrograde included CENTCOM J–4's Deployment and Distribution Operations Center (CDDOC), AMC's Responsible Reset Task Force (R2TF), the 1st TSC, ARCENT's Support Element–Iraq (ASE–I), the Army field support brigade (AFSB) under the operational control (OPCON) of the ARCENT G–4, and USF–I's expeditionary sustainment command (ESC). (See figure 2.)

CDDOC. CDDOC's mission was to synchronize and optimize strategic and theater multimodal resources to maximize distribution, force movement, and sustainment.¹⁸ CDDOC is an example of an organization that supports the three imperatives of the new joint logistics concept as defined by the Joint Staff J–4:

- Unity of effort—the synchronization and integration of logistics capabilities focused on the commander's intent.
- Rapid and precise response—the ability of logistics forces and organizations to meet the needs of the joint force.
- Enterprise-wide visibility—assured access to logistics processes, capabilities, resources, and requirements to gain the knowledge needed to make effective decisions.¹⁹

CDDOC operated within ARCENT headquarters to support unity of effort for the retrograde, maintain asset and in-transit visibility, and synchronize strategic transportation. It operated under the OPCON of the CENTCOM J–4 while coordinating with other members of the logistics enterprise, bringing direct reach-back to the CENTCOM J–4, TRANSCOM, and DLA by having members from all three organizations on the team facilitating daily coordination.

R2TF. The R2TF is a national-level organization created to support the retrograde of TPE from Iraq. The R2TF served as AMC's forward command post for strategic retrograde and the integration of reset in accordance with AMC's mission. The task force also synchronized AMC and ARCENT reset activities.²⁰ This ad hoc organization was developed because

¹⁴ Afghanistan Drawdown Preparations, p. 14.

¹⁵ Iraq Drawdown, p. 14.

¹⁶ “Operation Iraqi Freedom: Actions Needed to Enhance DOD Planning for Reposturing of U.S. Forces from Iraq,” Government Accountability Office, Washington, D.C., September 2008, p. 5.

¹⁷ “Joint Concept for Logistics,” Office of the Joint Chiefs of Staff, Washington D.C., Aug. 6, 2010, p. 17.

¹⁸ Joint Publication 4–0, Joint Logistics, Office of the Chairman of the Joint Chiefs of Staff, Washington, D.C., July 18, 2008, p. C–3.

¹⁹ Joint Concept for Logistics, p. 5.

²⁰ “R–CAAT Series Army Materiel Command Operation New Dawn Retrograde and Reset Lessons Learned AAR Presentation Transcript,” Combined Arms Support Command, Fort Lee, Va., and the Center for Army Lessons Learned, Fort Leavenworth, Kan., May 2012, p. 59.

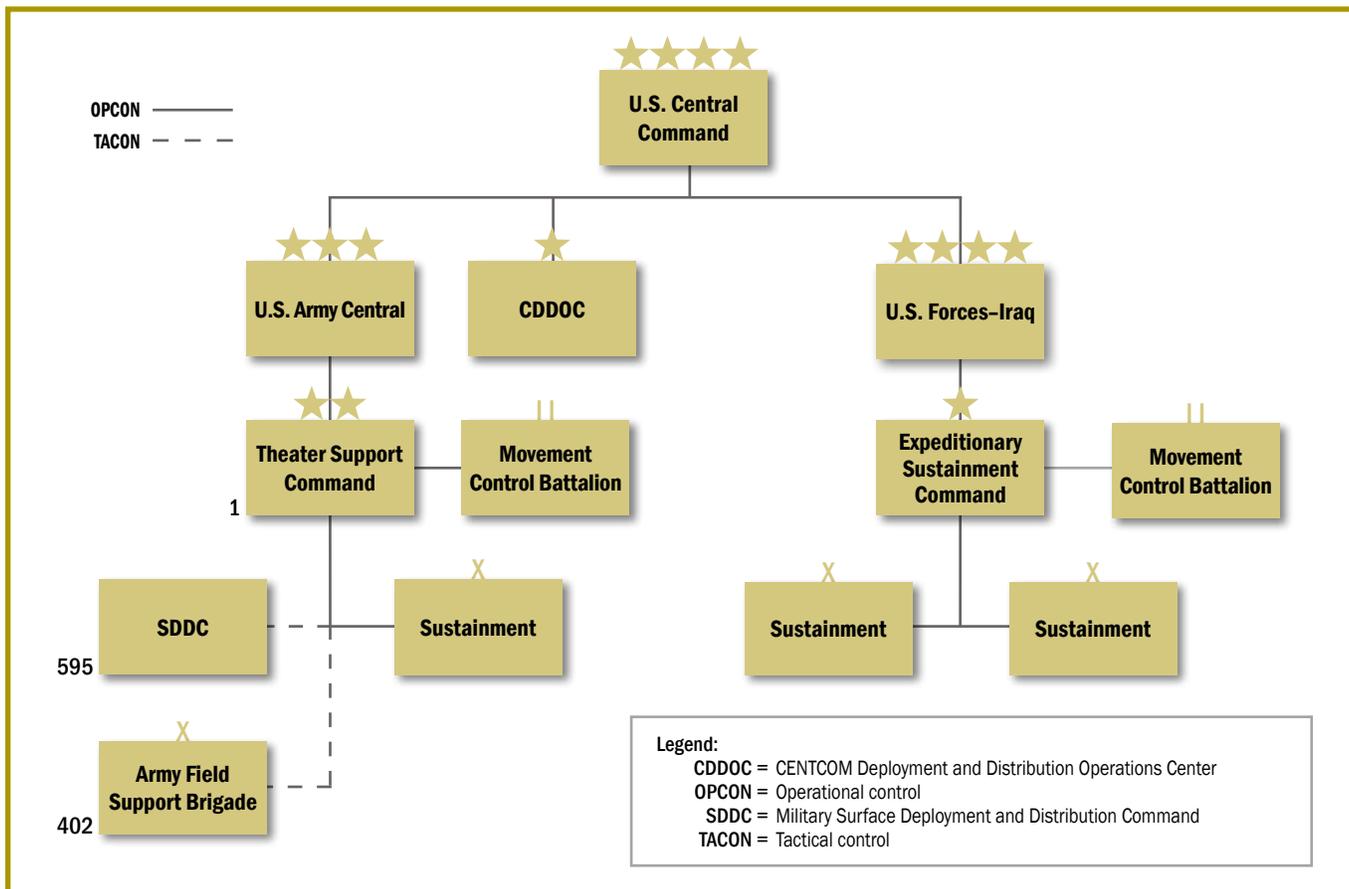


Figure 2. Operation New Dawn logistics organizational structure.

of the large amounts of TPE in Iraq that required disposition instructions. The R2TF, similar to the CD-DOC, operated under unity of effort in support of ARCENT.

ASE-I. The ASE-I directly supported USF-I’s retrograde mission by operating forward in Iraq, synchronizing, coordinating, and directing equipment retrograde. This is another example of an ad hoc organization created to support the retrograde of six years’ worth of TPE.

AFSB. The AFSB was the unit assigned the mission of managing, maintaining, and retrograding designated TPE in Kuwait and Iraq.²¹ Until 2008, when CENTCOM gave ARCENT OPCON over the AFSB, no theater-

level organization had command over it. This was problematic because the AFSB was responsible for retrograding TPE that accounted for 80 percent of all of the equipment in Iraq.

Once the AFSB was under the OPCON of ARCENT G-4, the AFSB still had no command relationship to any of the sustainment commands in theater. The AFSB is a rare example where an Army-level asset is more effective if integrated into a sustainment chain of command in theater in order to support execution at the tactical level.

The 402nd AFSB was forward deployed in Iraq, but it had only a supporting relationship with USF-I. At the end of OND, the 402nd AFSB was placed under the tactical control

(TACON) of the 1st TSC.²² Lessons learned in Iraq helped establish the 2011 Army Techniques Publication 4-91, Army Field Support Brigade, which states that when AFSBs are forward deployed, they are placed under the OPCON of the theater Army. This OPCON relationship is normally delegated to the supporting TSC or ESC as appropriate.²³

USF-IESC. CENTCOM assigned the ESC in Iraq to USF-I, rather than to the 1st TSC in Kuwait, which Field Manual (FM) 4-94, Theater Sustainment Command, indicates is the norm for TSC-ESC relationships.²⁴ FM 4-94 states that the ESC functions as an extension of the TSC and that the TSC employs the ESC as a

²¹ Army Techniques Publication 4-91, Army Field Support Brigade, Department of the Army, Washington, D.C., Dec. 15, 2011, p. 1-2.

²² “R-CAAT Series 310th Expeditionary Command 402nd Army Field Support Brigade Operation New Dawn Retrograde Lessons Learned AAR Presentation Transcript,” Combined Arms Support Command, Fort Lee, Va., and the Center for Army Lessons Learned, Fort Leavenworth, Kan., Vol. 34, March 2012, p. 40.

²³ Army Techniques Publication 4-91, Army Field Support Brigade, Department of the Army, Washington, D.C., December 2011, p. 1-2.

²⁴ Field Manual 4-94, Theater Sustainment Command, Department of the Army, Washington, D.C., February 2010, p. 3-2.

forward command post rather than as a separate echelon of command.²⁵

The concept of using the ESC as a forward command post of the TSC was not implemented in Iraq and is not being implemented in Afghanistan. Additionally, the 19th ESC is assigned to Eighth U.S. Army in Korea and does not have any command relationship to the 8th TSC in Hawaii under U.S. Army Pacific. Based on the history of ESCs being assigned to corps or joint task forces (JTFs) instead of to TSCs, the Combined Arms Support Command may need to review the doctrine of ESCs in order to better define their command relationships.

CENTCOM's assigning the ESC to USF-I, which began as the JTF, is not completely outside of doctrine. Army doctrine states that under certain conditions, the ESC may be under the OPCON of a JTF and function as a joint national support element. In the JTF assignment scenario, the TSC-ESC relationship is supporting to supported—the TSC has no direct command relationship with the ESC besides support as required.²⁶

If the idea of having the ESC as an operational headquarters of the TSC was intended to create a single logistics command in theater, then having the ESC assigned to USF-I eliminated that possibility. Additionally, the ESC in Iraq was serving as neither a joint sustainment command nor a joint national support element, so the ESC could have been assigned to the TSC with TACON being given to USF-I.

Successful relationships

ARCENT, 1st TSC, and their subordinate sustainment brigade in Kuwait supported USF-I for the drawdown. However, there was no unity of command between sustainment units in Iraq and those in Kuwait

conducting retrograde operations.

Despite the seemingly loose relationships, Brig. Gen. Don S. Cornett Jr., commander of the 310th ESC in Iraq, indicated during his reverse-collection after-action team review that “relationships between the ESC and TSC are what made the lack of single command structure logistics successful.”²⁷ Cornett was referring to the teamwork and personal relationships among the logistics organizations in Iraq and Kuwait that helped solve problems and accomplish the mission.

Achieving unity of effort required command emphasis and senior leader involvement. Senior leaders, such as the USF-I J-4, ESC commander, and TSC commander, routinely ran coordination meetings and boards, such as the equipment drawdown synchronization board, in order to monitor progress and synchronize retrograde efforts.

USF-I created a drawdown fusion center located in the USF-I J-3 to “synchronize all the retrograde efforts in Iraq; determine retrograde support requirements; provide a strategic picture of drawdown operations; identify potential obstacles; address strategic issues; and assist in the development of policy related to the drawdown.”²⁸ The center also synchronized retrograde efforts among units in Iraq and Kuwait, ensuring that everyone involved understood the requirements and priorities.

It appears from the lessons of OND that had 1st TSC been established as the single logistics command, there would have been unity of command enabling a more efficient operation. In order to achieve the single logistics command chain, the ESC and AFSB would have been assigned to the 1st TSC. Having a single logistics command would bridge the gap of strategic-level

commands supporting the operational and tactical commanders.

During OND, with the ARCENT and 1st TSC support units being close to Iraq, the concept of mission command enabled the many organizations to successfully accomplish one of the most challenging logistics feats in history. The Army's new mission command principles—building cohesive teams, creating shared understanding, and providing a clear commander's intent—were evident during both USF-I and ARCENT rehearsal of concept drills.

During the rehearsal of concept drills, both USF-I and ARCENT commanders' intents were displayed nested with CENTCOM's. The drills helped to synchronize the execution timeline, thus creating a shared understanding. Both the decentralized commands and execution worked across the levels of command from strategic to tactical, implementing commander's intent and collaborating for mission effectiveness.

Organizational Structure: Afghanistan

In 2012, ARCENT and USFOR-A established logistics unity of command by deploying a 1st TSC forward command post, called the 1st TSC (FWD), to create a single logistics command. Unlike in Iraq, the Afghanistan retrograde operation will largely occur under the concept of unity of command.

The logistics enterprise applied many of the organizational lessons learned from Iraq. USFOR-A created a retrograde fusion cell to conduct analysis and assessments on the status of the return, reset, redeployment, redistribution, and disposal (R4D) of equipment.²⁹ Before the single logistics command was established, the fusion cell in Afghanistan provided

²⁵ Ibid.

²⁶ Ibid.

²⁷ R-CAAT Series 310th Expeditionary Command, p. 16.

²⁸ “Operation Iraqi Freedom: Actions Needed to Enhance DOD Planning for Reposturing of U.S. Forces from Iraq,” Government Accountability Office, Washington, D.C., September 2008, p. 3.

²⁹ “Key Leader Interview: Brig. Gen. Edward F. Dorman III, USFOR-A Director Materiel Enterprise Integration,” Center for Army Lessons Learned, Fort Leavenworth, Kan., June 6, 2012, p. 3.

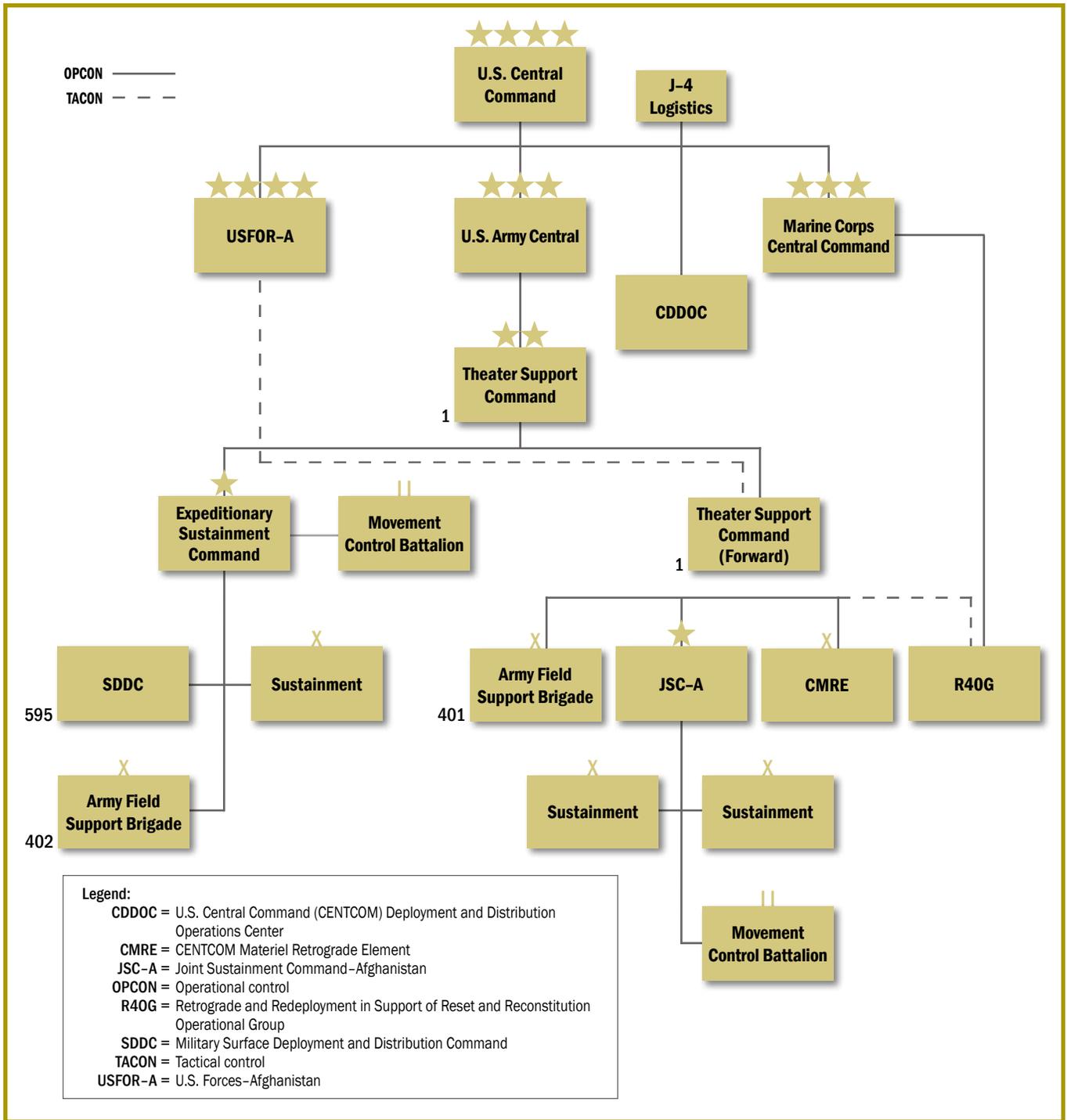


Figure 3. Operation Enduring Freedom logistics organizational structure 2013.

a central coordination point to synchronize, integrate, and execute the retrograde operations. The fusion cell provides a common operational picture of the retrograde status and progress, tracks friction points, and supports the commander's decision cycle.³⁰

This fusion concept is also being

applied stateside at installations, where Forces Command calls it the support operations center. The fusion centers do not command; they enable unity of effort where a formal command and control structure may not exist or is complicated by decentralized and nonstandard operations.

These fusion centers become horizontal and vertical integrators—an example of organizational agility.

In coordination with AMC's R2TF, ARCENT placed an ARCENT Coordination and Support Element-Afghanistan (ACSE-A) in the USFOR-A fusion cell.

ACSE-A's mission is to integrate and synchronize sustainment, distribution, and retrograde functions.³¹ The CDDOC also deployed a small CDDOC forward to operate within USFOR-A. Similar to OND, at the staff level, the unity-of-effort integration proved effective.

Until 2012, the ESC in Afghanistan was assigned to USFOR-A, which was similar to the logistics command structure in Iraq. The USFOR-A organizational structure is more in line with FM 4-94 because the ESC is designated as Joint Sustainment Command-Afghanistan. Lessons learned in Iraq determined the need to increase unity of command and effort, resulting in ARCENT and the 1st TSC giving TACON of the 401st AFSB in Afghanistan to the ESC in Afghanistan.

Based on completing the Iraq drawdown and reviewing the lessons learned there, CENTCOM, ARCENT, and USFOR-A established a 1st TSC (FWD) command post in Afghanistan in 2012 that is under the TACON of USFOR-A. The establishment of the 1st TSC (FWD) created a single logistics chain of command over all the support forces in Kuwait and Afghanistan.

This change allows for the ESC to focus more on sustainment requirements and for the 1st TSC (FWD) to take on the retrograde challenges of synchronizing strategic enablers such as DLA and SDDC elements. The new single logistics command enhances the mission command for retrograde in Afghanistan's extremely challenging environment. Additionally, the 1st TSC (FWD) now has OPCON of the ESC and AFSB, enabling it to synchronize all retrograde execution in Afghanistan. (See figure 3.)

CMRE

Because of the region's geopolitical constraints, the single logistics command is more important in Afghani-

stan than it was in Iraq.

To overcome the geopolitical obstacles of Afghanistan and deal with the volume of materiel, number of bases, time remaining, and imposed limitations on transferring equipment to the Afghans, CENTCOM established the CENTCOM Materiel Retrograde Element (CMRE). The CMRE is a sustainment brigade whose mission is to facilitate materiel redistribution, disposal, and retrograde.

The CMRE is manned by a combination of logisticians and engineers who assist units as they prepare to re-deploy, close down bases, and retrograde equipment. The CMRE is designed to increase retrograde velocity by increasing property accountability, providing disposal instructions, and supporting units still engaged in advising the Afghans while simultaneously planning and executing re-deployment and retrograde operations.

The CMRE coordinates critical capabilities that are both internal and external to the brigade to support the retrograde mission. (See figure 4.)

USFOR-A initially gave the ESC TACON of many of the above enablers, but saw the need to have enablers focused under the mission command of the CMRE. Most of the external CMRE enabling organizations listed in figure 4 were originally designed to support OND.

The CMRE tasks its enablers through fragmentary orders, direct communication, and by hosting coordination meetings for enhanced mission command.³²

The logistics enterprise adapted to the challenging environment in Afghanistan by establishing a single logistics command to synchronize the efforts of all involved in retrograde operations. CENTCOM also deployed a new brigade to support the retrograde challenges, increase property accountability, and close down bases while the units occupy-

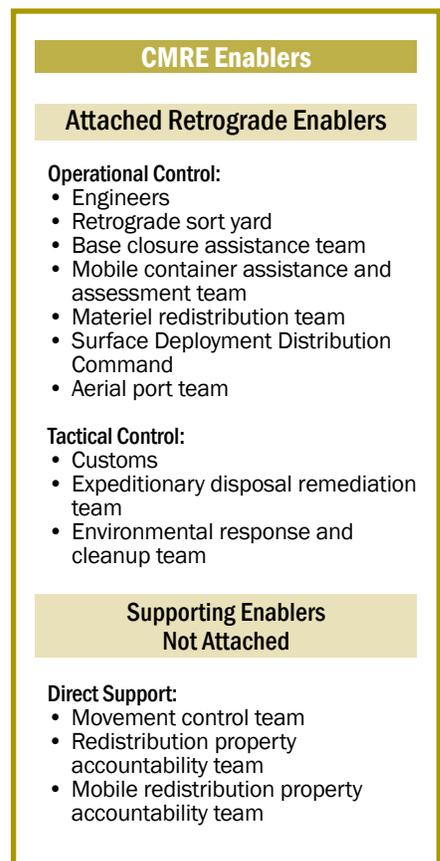


Figure 4. CMRE attached and supporting enablers.

ing them are still engaged in ongoing operations.

Joint Team

The joint partners that create the logistics enterprise will be critical to the successful retrograde from Afghanistan, even more so than in Iraq. The geopolitical limitations surrounding Afghanistan will force more than 80 percent of the retrograde to move via multimodal transportation, which relies heavily on joint processes, procedures, and coordination. The Army's systems and processes must be interoperable with joint systems to facilitate coordination of support across the services and commercial industry.

The CDDOC is a joint element

³⁰ Ibid.

³¹ Cpt. Tracey Frink, "ACSE-A Spells Success in Afghanistan," *The Desert Voice*, March 31, 2010, p. 3.

³² "CENTCOM Materiel Recovery Element Concept of Collaboration for Mission Success," Center for Army Lessons Learned, Fort Leavenworth, Kan., Jan. 1, 2013, p. 7.

designed to synchronize and optimize national and theater multimodal resources. The CDDOC must synchronize TRANSCOM's transportation efforts and initiatives with both USFOR-A and 1st TSC so that all understand the strategic support capabilities and efforts. With the establishment of the 1st TSC (FWD) as the single logistics command in Afghanistan, the opportunity arises to place TACON of the CDDOC with the 1st TSC. This would increase unity of command.

In collaboration with the logistics enterprise, international logistics providers have created and sustained global supply chains that stretch almost literally from factory to foxhole.³³ These commercial supply chains are critical enablers for moving a large portion of the materiel both into and out of Afghanistan.

The military does not have the political authority, which means Pakistan will not let U.S. military trucks convoy equipment to its ports. The commercial carriers moved a large portion of the materiel into Afghanistan through commercial supply chains. Using commercial supply chains has caused SDDC to position teams forward across Afghanistan in order to coordinate and synchronize the commercial providers' support to the operational commander.

Assuming the PAKGLOC fully reopens for retrograde and that the NDN's capacity increases, SDDC will be working with the commercial surface shippers to retrograde cargo directly from the forward operating bases to the units' home stations using a process called door-to-door shipping. Until the surface routes open, TRANSCOM is contracting, and SDDC is executing, retrograde by commercial air out of Afghanistan. Another joint partner, the Air

Mobility Command, flies the equipment that is not moved commercial out of Afghanistan.

JOPES

One challenge for this process is that CENTCOM has directed that all services use the Joint Operation Planning and Execution System (JOPES) to plan, coordinate, validate, and execute retrograde operations. Using JOPES helps with forecasting requirements in order to ensure that adequate transportation capability is available to meet the command's needs. However, it has gaps when it comes to coordinating with partners.

CENTCOM and TRANSCOM must synchronize the JOPES retrograde timelines and the commercial carrier shipping schedules, which are not in JOPES. JOPES uses the ready to load date (RLD) to indicate when the unit must be prepared to depart its origin and the required delivery date (RDD) to determine when cargo must be delivered to its destination. The RLD is most important to the unit on the ground for planning when its cargo will depart the theater during redeployment and retrograde. The RDD indicates when cargo will arrive at home station and depots for reset.

The commercial contract and schedules are planned primarily to support the RDD, which is not as important to units trying to depart the theater. In order to ensure timely commercial movement of cargo, TRANSCOM should consider modifying its contract to require the commercial carriers to meet RLDs. CENTCOM and TRANSCOM must collaborate to ensure that the JOPES and commercial shipping timelines are effective in meeting USFOR-A's retrograde requirements and the redeployed unit's reset timelines.

Ideally, Army systems such as the Property Book Unit Supply-

Enhanced, the Reset Management Tool, and the Transportation Coordinators'-Automated Information for Movements System II (TC-AIMS II) would interface with JOPES to transfer data for movement planning. Unfortunately, service systems do not interface well, and transportation data often must be retyped from one system to another, a time-consuming process that introduces errors.

The manually intensive data transfer effort delays passing retrograde movement data from the ESC through CENTCOM to TRANSCOM and SDDC. The JOPES retrograde movement data supports only immediate lift planning and does not allow SDDC to achieve deliberate, cost-efficient plans for returning reset materiel to the industrial base or depot.³⁴

As new systems are developed or modified, potential interface partners should be identified to ensure the data can be transferred automatically. Having the JOPES retrograde data available at least 60 days in advance of RLD would improve the retrograde supply chain and facilitate commercial carrier forecasting.

Using JOPES for nonunit cargo is a new concept that supports movement forecasting; however, movement data is not provided far enough in advance to support transportation resource planning. Most retrograde cargo is moved on commercial airplanes and ships that are coordinated through contract acquisition systems that are not linked with JOPES. CENTCOM and TRANSCOM must synchronize the planning timelines in both JOPES and the contract systems for common movement timeline planning.

Recommendations for USFOR-A

During the next two years, most U.S. forces and equipment will come out of Afghanistan. This section summarizes the recommendations provided throughout this article to

³³ Daniel Gouré, "Acquisition and Logistics Lessons from a Decade of War," Early Warning Blog, Oct. 11, 2012, www.lexingtoninstitute.org, accessed on Aug. 15, 2013.

³⁴ R-CAAT Series Army Materiel Command, p. 80.

help USFOR-A meet its retrograde timeline and capture the lessons learned from the retrograde operations of two wars.

Increase divesting opportunities. There are three specific ways for USFOR-A to increase divesting opportunities:

- The Office of the Secretary of Defense (OSD) should consider requesting from Congress the authority to transfer excess construction equipment to the Afghans, which is something the law currently does not allow.
- OSD should also consider requesting from Congress the authority to transfer non-excess materiel to coalition partners.
- DLA DS should consider increasing its capacity to demilitarize equipment and dispose of the excess, as it did in Iraq.

Increase retrograde velocity. To increase the retrograde velocity and maintain a steady reduction of excess, USFOR-A should consider increasing the rate of large-base closures. This effort will produce substantial amounts of excess equipment to move out of the theater and will stress the transportation system. The added transportation requirements will prompt TRANSCOM to evaluate and plan capacity to meet the demands during the next two years.

Increase net velocity goals. As a forcing function to reduce excess, create transportation requirements, and retrograde all materiel by December 2014, USFOR-A should consider increasing the monthly net retrograde goals to 1,400 pieces of rolling stock and 3,100 TEUs. The increased velocity goals would clear the theater by the end of 2014, assuming a linear timeline. USFOR-A should continually reevaluate the velocity goals based on the withdrawal timeline and residual

force in order to determine if it needs to readjust the goals.

Decoupling. DOD should consider decoupling the people redeployment timeline from the equipment retrograde.³⁵ Decoupling means that the equipment retrograde timeline may extend into 2015 until the U.S. government can coordinate a more cost-efficient surface route.

Equipment storage. USFOR-A should find a place to store equipment in Afghanistan past 2014. Accepting the potential reality that not all equipment will leave before December 2014 will force the United States to factor a prudent equipment component to the post-2014 presence negotiations with Afghanistan's government.³⁶

Synchronize timelines. CENTCOM and TRANSCOM must synchronize the planning timelines in both JOPES and the contract systems for common movement timeline planning. This effort will help manage expectations and provide realistic information to the logistics common operational picture.

Reduce additional equipment. USFOR-A will never empty the theater if units continue to bring in additional equipment. In addition to reducing unit deployed equipment, DOD must reduce its appetite for new equipment and capabilities. As the operational force requirements decrease, rolling stock and nonrolling stock become available to retrograde.

Lessons for the Army of 2020

The Army should incorporate into future doctrine, policies, and procedures lessons learned that recognize the importance of a whole-of-government approach to defense access challenges.

Also, the Army should reevaluate how best to employ the ESC and define its command relationships with the TSC for the Army of 2020. The

Army and JTFs have experimented with different command relationships between the TSC and ESC during OIF, OND, and OEF. One set of command arrangements does not fit all theaters or situations. In Iraq, unity of effort was sufficient across the Kuwait and Iraq border. In Afghanistan, ARCENT and USFOR-A are experimenting with the single logistics concept to see if they can gain some efficiencies to overcome the incomparable geopolitical challenges of Afghanistan.

The logistics enterprise recognized a need for many retrograde enabling capabilities to support the OND and OEF retrograde operations. Based on the requirement for these capabilities, the Training and Doctrine Command should conduct a doctrine, organization, training, materiel, leadership and education, personnel and facilities review to determine which capabilities should be written into doctrine as new requirements and which should be added to existing units.

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³⁵ John Klotsko (Director, Strategic and Operational Logistics, Office of the Assistant Secretary of Defense for Logistics and Materiel Readiness), personal interview, Jan. 3, 2013.

³⁶ Klotsko, email to author, Jan. 13, 2013.

Strategic

Strategic thinking skills can help transportation leaders focus on their operational environment.

■ By Chief Warrant Officer 4 William L. McClain



Thinking

for Transportation Leaders



Soldiers assigned to the 1245th Transportation Company, 1034th Combat Sustainment Support Battalion, escort military vehicles as they prepare to leave on their convoy escort team mission en route to two forward operating bases in Regional Command North, June 18, 2013. (Photo by Sgt. Sinthia Rosario)

The motto of the Transportation Corps, “Nothing happens until something moves,” is a good tool for leaders to rally transportation Soldiers to go out and accomplish great things. Similarly, stating the motto as a concluding remark during official functions validates the significance of the Transportation Corps spearheading logistics into the future. With the Army’s mandate for the Transportation Corps to reduce its personnel and equipment over the next decade, corps leaders will need to do some strategic thinking. The motto will remain relevant only if leaders use good strategic thinking skills now to focus on the overall operational environment in which they function.

Strategic Planning

The first step in understanding strategic thinking is to recognize the role of strategic planning. Every day, strategic planning across the Army occurs shortly before mission execution. For example, at the tactical level, convoy commanders plan their con-

voys using the eight troop-leading procedures. At the operational level, the commander of a transportation movement control battalion plans the reception, staging, onward movement, and integration of personnel and equipment using the military decisionmaking process (MDMP).

At the strategic level, the Chief of Transportation uses the MDMP to plan better transportation leader development and to improve support for deployment and distribution, among other strategic initiatives. It is appropriate, therefore, to ensure that leaders can think strategically to produce viable plans.

Strategic Thinking

Leaders who think strategically display specific personal traits, behaviors, and attitudes. For example, leaders within a transportation formation may be on their way to becoming strategic thinkers if they demonstrate curiosity, flexibility, a future focus, a positive outlook, and openness. However, change is con-

stant, and embracing change starts with establishing the strategic thinking competencies that all leaders in the Transportation Corps need. Examining strategic thinking for individual leaders reveals the competencies that a leader should have in order to achieve sustainable change. These are presented in figure 1.

Scanning. Often people wait until a mandate or serious accident occurs to bring about needed change. Since Transportation Corps leaders do not wait, it is vital that they align their strategic thinking with the Chief of Transportation’s lines of effort through 2020. This involves scanning the Transportation Corps’ strategic priorities for people, materiel and equipment systems, force structure, training, doctrine, and collaboration. Transportation Corps leaders should use strengths, weaknesses, opportunities, and threats analysis to find their strengths and weaknesses. (See figure 2.)

Visioning. Although it is important to assess where the Transportation Corps is, it is equally important that those leading the change effort devote time to the vision. This means making sure a road map is in place to plan the course. To achieve this requires support of the Transportation Corps’ vision: “To be ... a bastion of transportation innovation, adaptive training, and expertise producing people and materiel that permeate all facets of military logistics and operations with relevant vigor and spearhead logistics into the future.”

Effective strategic change requires a vision of what the leader is trying to accomplish. However, for Transportation Corps leaders to be effective leaders of change, they must paint the picture of what the future state will be like, communicate the vision to all involved, and reinforce the vision through words and deeds.

Reframing. A core attribute of strategic thinking is the willingness not to revert or stand still in one’s mindset but instead to teach the mind to focus on the future. The trick is to develop an eye for signs that to-

| Competency | Description | Example |
|---------------------|--|--|
| Scanning | Assessing the organization. | Strengths, weaknesses, opportunities, and threats analysis. |
| Visioning | Creating a view of what the organization should be. | A vision statement. |
| Reframing | Finding signs that together present a new pattern that will be useful in strategic planning. | Restate the implicit belief. |
| Making common sense | Establishing a shared framework of the situation. | Create ways to discuss unbridgeable subjects. |
| Systems thinking | Discerning the relationships among different variables in a difficult circumstance. | If product cost is an important factor for a consumer, then an increase in price may be perceived as disloyalty. |

Figure 1. Five strategic thinking competencies needed for sustainable change.

gether present a new pattern that will be useful in strategic planning.

For example, the October 2011 U.S. Government Accountability Office report to Congress, “DOD [Department of Defense] Has Made Progress, but Supply and Distribution Challenges Remain in Afghanistan,” states that the department is not effectively tracking and managing cargo containers for Afghanistan operations. Based on this information, transportation leaders should question everything and seek to see things differently until a new pattern surfaces.

Until the deployment and distribution process meets or exceeds that of FedEx and the United Parcel Service, transportation leaders must continue observing operations with fresh eyes.

Making common sense. We all know more than we can put into words. When we add the task of creating a shared understanding of a situation, misinterpretation and conflict can occur. Bridging the gap between junior and senior leaders within the Transportation Corps is critical to applying common sense to the operational environment and the challenges ahead and to facing those collective challenges.

Methods of broaching indescribable topics between junior and senior leaders include building a shared understanding through visual images, dialog, metaphors, stories, and other visual and verbal tools. For instance, the quarterly Transportation Corps Connect (live broadcast) is an ideal forum for developing a shared view of the current and future state of the Transportation Corps and discussing ongoing strategic initiatives. This ensures that all past, present, and future leaders have a shared view of the way ahead.

Systems thinking. Many problematic situations confront leaders and organizations today. Dealing with these problems and creating solutions frequently creates doubt about the outcome. One approach that helps explore all possible results is systems thinking. Systems thinking

| Strategy | Scanning Question | SWOT Analysis | |
|--|---|---|--|
| People | Are you delivering trained, innovate, and adaptive transporters who understand logistics? | Strengths: Weaknesses: Opportunities: Threats: | Yes or No Yes or No Yes or No Yes or No |
| Materiel and equipment systems and force structure | Are you developing modern solutions that meet the customer's needs? | Strengths: Weaknesses: Opportunities: Threats: | Yes or No Yes or No Yes or No Yes or No |
| Training and doctrine | Are you providing functional expertise to meet commander and Army requirements? | Strengths: Weaknesses: Opportunities: Threats: | Yes or No Yes or No Yes or No Yes or No |
| Collaboration | Are you fully integrated in the deployment and distribution enterprise? | Strengths: Weaknesses: Opportunities: Threats: | Yes or No Yes or No Yes or No Yes or No |

Figure 2. Strengths, weaknesses, opportunities, and threats (SWOT) analysis framework for transporters.

is extremely effective in solving problems by seeing the big picture versus the little picture. In essence, if you focus only on your section and disregard the big picture of the organization, you lose sight of the outcome of your actions.

Consider looking at the One Army School System (OASS) initiative through the systems-thinking lens for a long-term benefit. According to the Transportation Corps Strategic Blueprint, the OASS will allow the Transportation Corps to synchronize the three Army component school systems (active duty, Reserve, and National Guard) into one training capability to give officers and non-commissioned officers the ability to attend the right class at the right time regardless of component.

From a systems-thinking perspective, one should slow down, step back, ask questions, assess the requirements, and see the interrelationships before planning. If the OASS does not provide a balanced and equal training opportunity for students regardless of component, then reframing the landscape is needed.

The Army is transforming, and leaders within the Transportation Corps must understand the Army vision and concept for the next 15 years and be prepared to support it. This begins with competence in good strategic thinking skills. Mastering these skills allows leaders to become true strategic partners. For this reason, leaders in the Transportation Corps must lift their heads above day-to-day work and think, envision, shape, set conditions, and integrate with a strategic thinking mindset.

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CMVRE

Mission Command of Retrograde Enablers in Afghanistan

■ By Lt. Col. Michelle M.T. Letcher



Lt. Col. Michelle Letcher, commander of the 18th Combat Sustainment Support Battalion, discusses disposition of materiel with Lt. Gen. Raymond Mason, Army Deputy Chief of Staff G-4, at the Bagram Airfield, Afghanistan, retrograde sort yard. (Photo by 1st Lt. Henry Chan)

The 18th Combat Sustainment Support Battalion assumed tactical and operational control over several enablers that worked diligently to push excess materiel out of Afghanistan.

In June 2012, the 18th Combat Sustainment Support Battalion (CSSB) deployed in support of a presidential directive to reduce the force manning levels in Afghanistan. In conjunction with the 62nd Engineer Battalion, the CSSB served as half of the U.S. Central Command (CENTCOM) Materiel Retrograde Element (CMRE), which focused on redistribution, disposal, and retrograde of excess materiel in Afghanistan.

The 18th CSSB, an active component unit out of Grafenwoehr, Germany, assumed mission command of a non-doctrinal mission to reposition the operational footprint, assist with achieving the directed force-manning

levels, reduce excess, and descope contracts. This mission was accomplished through various command relationships with tactical and strategic support units. The battalion provided mission command and began the tough work of meeting the strategic partner agreement that was signed by President Barack Obama in May 2012.

The Commands

When the 18th CSSB arrived in Afghanistan, most of its subordinate elements had already arrived and were tactically controlled by a sustainment brigade. The 18th CSSB assumed tactical and operational control of 350 personnel across 25 locations.

It was important from the outset for the CMRE to focus its efforts on informing and influencing audiences at all levels across Afghanistan—from companies and battalions on remote combat outposts to the regional commands and policymaking levels.

The CMRE hosted more than 30 distinguished visitors to discuss effective and efficient methods for redistributing excess materiel in the Combined Joint Operational Area-Afghanistan (CJOA-A).

The 18th CSSB had a direct mission command relationship with several commands.

The 1st Theater Sustainment Command. The 1st Theater Sustainment Command (TSC) maintained op-

erational control over all CMRE elements. The TSC maintained a forward presence in Afghanistan specifically to support the retrograde mission and ensure a common operational picture for sustainment leaders regarding theater retrograde.

The Joint Sustainment Command–Afghanistan. The 3rd Sustainment Command (Expeditionary) from Fort Knox, Ky., acted as the Joint Sustainment Command–Afghanistan and maintained logistics mission command over all sustainment units in Afghanistan until January 2013.

The 593rd Sustainment Brigade. The 593rd Sustainment Brigade arrived in Kabul, Afghanistan, on June 17, 2012, and was the key component in bringing the 1st TSC headquarters to full operating capability. It assumed single logistics mission command in the CENTCOM area of responsibility, which included the newly conceived CMRE.

The 593rd Sustainment Brigade CMRE was then re-missioned to Kandahar Airfield, Afghanistan, to assume mission command of all CMRE elements in Afghanistan on Aug. 9, 2012, 50 days after arriving in theater.

By the time the 593rd Sustainment Brigade left Afghanistan in March 2013, the CMRE consisted of a joint brigade headquarters and three joint subordinate battalions (two engineer battalions and one CSSB). It had grown to more than 4,400 Soldiers, Sailors, Airmen, Marines, and Department of Defense contractors and civilians in direct support of the International Security Assistance Force Joint Command.

The 18th Combat Sustainment Support Battalion. The 18th CSSB provided tailored, multifunctional, multicomponent, joint-enabled, and contractor-supported mission command task organized to execute redeployment assistance, redistribution, retrograde, and disposal of materiel and equipment across the CJOA–A.

The 62nd Engineer Battalion. An Active component engineer battalion headquarters, the 62nd Engineer

Battalion planned, coordinated, and directed engineer activities in support of base closures and transfers.

The Enablers

Several smaller units and teams under the mission command of the 18th CSSB were critical to the retrograde mission.

Base closure assistance teams. Base closure assistance teams (BCATs) began as a military-resourced solution to assist the regional commands with base transfers and closures. BCATs provided direct property support to units tasked with closing or transferring a base.

The teams assisted, assessed, and advised units on real and personal property. They also assisted with de-scoping contracts, providing information technology, and coordinating transportation for the retrograde of non-mission-essential items. Each team included three military personnel and six contractors.

Retrograde sort yards. Retrograde sort yards (RSYs) received, sorted, and identified materiel and ensured that its accompanying documentation was correct. RSYs brought to record excess non-mission-essential equipment and materiel and provided disposition instructions for redistribution, retrograde, or disposal.

Materiel redistribution teams. Materiel redistribution teams provided onsite support. These teams sorted through containers and identified, segregated, processed, and brought to record excess non-mission-essential equipment and materiel. These teams were originally all military but eventually had two military members and 10 contractors. The teams served in RSYs or materiel redistribution yards when they were not on mobile missions.

Customs and agricultural inspection teams. Customs and agricultural inspection teams ensured materiel met U.S. Customs and Border Protection and Department of Agriculture standards. These teams operated in conjunction with the redistribution property assistance teams and

RSYs. The inspection teams were joint and included Army and Navy customs border clearance agents.

Environmental response and clean up teams. Environmental response and clean up teams were designed to provide environmental expertise in managing deconstruction activities for projected base closures and transfers. These contracted teams also reviewed site closure surveys.

Expeditionary disposal remediation technicians. Expeditionary disposal remediation technicians were part of a Defense Logistics Agency element that provided technical expertise and assistance in demilitarization, disposal, and disposition of unserviceable materiel, equipment, and scrap.

Mobile container accountability and assistance teams. Mobile container accountability and assistance teams conducted periodic site audits of container control officers (CCOs) in order to validate container management processes and procedures. CCOs, appointed by a base commander (or appropriate authority), established and maintained control and accountability of all containers in their designated areas. Being a CCO was a primary duty and included performing container inventories and ensuring the proper in-gating and out-gating of containers.

The CMRE Common Operational Picture

The initial force array dispersed teams across 25 locations throughout six regional commands. Retrograde support worked in reverse, from “spoke to hub” and then to the strategic bases.

Originally, the retrograde plan included pushing directly from the outlying bases to the three strategic hubs. However, it became apparent within the first 60 days that the task forces were accumulating excess at their operational hubs. In response to the needs of the regional commands and task forces, the CMRE developed forward retrograde elements (FREs).

In Iraq, excess materiel sort yards were collection points for onward

movement to Kuwait, where the RSYs were located. Unfortunately, the geographic isolation of Afghanistan made it impossible to mirror the sustainment base method used in Iraq and Kuwait.

In order to provide retrograde support, CENTCOM established three main strategic hubs: Kandahar Airfield, Bagram Airfield, and Mazar-e-Sharif. The level of maturity required of an RSY in Afghanistan had to be on par with the mature process in Kuwait because no further sorting would be done once the excess left Afghanistan.

Most of the excess received at the RSYs remained in country for redistribution or disposal. Approximately seven percent of what exited Afghanistan went to Kuwait, and about nine percent was shipped back to the United States. This required an efficient method of receiving, storing, and processing for shipment large quantities of military and government-owned contractor-managed excess.

Once the RSY matured and gained momentum, it was clear that the systems shaping and feeding the RSY also needed maturing. Following the forward logistics element model, the 18th CSSB developed the FRE concept. The FRE nested all the enabler teams and provided green-tab leadership at the platoon level to coordinate with the task force commanders and base mayors.

The FRE allowed logisticians to anticipate requirements and coordinate efforts with the strategic support elements in Afghanistan, Europe, and the United States. Retrograde operations shifted into a deliberate planning and operations effort across the CJOA-A.

Once the commander gained an understanding of the scope of the problem and recognized the locations where the requirements were exceeding the capability, the battalion reorganized and surged resources at the operational hubs. The forward operating bases (FOBs) that needed those resources met the following criteria:



Soldiers from the 427th Brigade Support Battalion and 1462nd Transportation Company pack oxygen cylinders into bundles for transportation at the Bagram Airfield retrograde sort yard. (Photo by 1st Lt. Henry Chan)

- The FOB served as a geographical hub for retrograde, where task force logisticians conducted normal supply distribution and transfer and where convoys rested overnight.
- The FOB served as a mission command center, where maneuver units resided as a task force headquarters at the brigade level and where an associated brigade support battalion and combat engineer unit were located.
- The FOB could support a FRE with facilities and land.
- The FOB and the associated task force served as a CJOA-A main-effort location for the International Security Assistance Forces Joint Command, the 1st TSC, the 593rd Sustainment Brigade, or within the regional command.

Using these criteria, the 18th CSSB created and developed seven FRE locations with the flexibility to create an additional two.

The Army resourced a mission command headquarters, the 18th CSSB, to lead reposturing efforts in the CJOA-A and reduce materiel excess across the theater. With the support of several commands and enablers, the headquarters effectively planned and operated a multicomponent, joint-enabled, and contractor-supported solution to theater closing.

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101st Sustainment

Validates for Deployment

The brigade conducted extensive predeployment training to improve its mission command capabilities for what could be its last deployment in support of Operation Enduring Freedom.

■ By Col. Charles R. Hamilton and Lt. Col. Christopher R. Liermann



Brigade

The 101st Sustainment Brigade "Lifeliners" command team, along with Maj. Gen. James C. McConville, the commander of the 101st Airborne Division (Air Assault); Col. Clay Hatcher, the chief of Operations Groups Sierra; and Brig. Gen. (Ret.) Phil Mattox, the brigade commander's senior mentor, participate in a rehearsal of concept drill during the unit's validation exercise, Unified Endeavor 2013. (Photo by Sgt. 1st Class Mary Rose Mittlesteadt)

As the new commander and staff of the 101st Sustainment Brigade prepared for deployment, they decided on the following priorities of work: set the base for a decisive unit, build the team while ensuring Soldier and family resilience, lay out a strategy for predeployment and deployment, build relationships, coordinate with current and future headquarters, and effectively communicate the command's mission to both military and nonmilitary organizations.

Formulating a plan for these priorities came from many sources, including a May–June 2011 *Army Sustainment* article by Lt. Gen. (Ret.) Mitchell H. Stevenson, “Tips From Sustainment Brigade Commanders.” Stevenson’s article outlined tips that focused on predeployment, engagement, nesting, and mentoring. The Lifeliners’ command group used these tips from successful sustainment brigade commanders’ experiences to shape the training objectives for their upcoming deployment validation exercise.

With many tools at hand, which ones should the command choose to build the pillars of success? What training and validation is required to train one of the most dispersed units—a unit with arguably the greatest mission command challenges and one of the most diverse mission sets—in the Afghanistan theater of operations?

This would be the 101st Sustainment Brigade headquarters’ third deployment to Afghanistan in five years. Although the brigade would occupy the same terrain as in previous deployments, the deployment process remained a challenge because the Afghanistan environment is continuously evolving and the brigade had to adjust to those changes.

The brigade looked at the tools the Army offers to prepare for the diverse mission set. The Mission Command Training Program is the most effective method used by the Army to validate a sustainment brigade before deployment. Unified Endeavor 2013

(UE 13–1), a division and corps level exercise, served as this validation for the 101st Sustainment Brigade.

Objectives

The command, in coordination with the staff, developed the following training objectives that would be critical to successfully developing the brigade’s staff and subordinate units:

- Exercise mission command.
- Exercise and gain battle rhythm proficiency.
- Operate in an environment that effectively replicates the logistics demands of the combined joint operations area.
- Exercise the battle staff in prioritizing, allocating, and managing ground transportation and aviation assets across the area of operations.
- Familiarize the staff with the U.S. Central Command (CENTCOM) Materiel Retrograde Element (CMRE).
- Train staff on mission command and knowledge management systems.
- Develop an understanding of the deployed operational environment and its complexity.
- Understand how other enablers, including outside agencies, support the unit and its mission requirements.

Mission Command

Mission command, the warfighting function that serves as the foundation of all others, is taught by the Mission Command Training Program’s Operations Group Sierra, a brigade-level staff training team from the Combined Arms Center at Fort Leavenworth, Kan. In order to achieve the Lifeliners’ training objectives, mission command had to be the essential synchronizing function for the brigade staff and subordinate units.

Mission command is defined in Army Doctrine Reference Publication (ADRP) 3–0, Unified Land Operations, as “the related tasks and

systems that develop and integrate those activities enabling a commander to balance the art of command and the science of control in order to integrate the other warfighting functions.” (See figure 1.)

Getting the staff integrated and synchronized with the commander’s intent was challenging, but as the preparation and training progressed, the brigade proved to be adept and ready.

Training

Preparing an organization after multiple deployments has its challenges. The most notable challenge is training the people to the mindset of the current and upcoming fight. A systematic approach is needed to build a flexible, yet cohesive, team.

Refit with a completely new staff, the brigade went to the Leadership Training Program (LTP) conducted at Fort Polk, La. LTP is staff-oriented training that hones the skills of battalion- and brigade-level staffs in the military decisionmaking process (MDMP) and mission command. This was an opportunity for the staff to work through the detailed problem-solving and staff synchronization exercises required to build a cohesive team.

In the end, the brigade staff worked through mission analysis and course of action development—not completing the MDMP. However, the time, effort, and energy expended proved invaluable to the staff and command team. It increased their confidence in one another and validated the doctrinal process used. This was demonstrably effective in helping the command understand, visualize, describe, direct, lead, and assess the plans and operations the units were about to conduct.

The next training step in preparing for UE 13–1 and the deployment to Afghanistan was for Operations Group Sierra to facilitate a seminar and demonstrate to the organization what would be expected during the culminating exercise at Fort Campbell, Ky. The seminar included reviewing doctrine, such as ADRP 5–0,

The Operations Process, and ADRP 6-0, Mission Command, and describing the doctrinal roles and responsibilities of the commander and staff during the MDMP and tactical operations center (TOC) operations. This seminar was extremely valuable to the command and staff, re-emphasizing the brigade's desired training outcomes as well as the symbiotic relationship with the staff.

The Culminating Exercise

During UE 13-1, the staff conducted multiple problem-solving ex-

ercises based on real-world scenarios. This allowed the staff to focus on the inherent friction points within a staff and the notional external support role performed by the brigade's support operations office (SPO). These scenarios involved events that replicated support to the Soldier but also dealt with internal systems and potential incidents.

The scenarios allowed the staff to practice their standard operating procedures, internal and external synchronization, and internal coordination of information. Operations Group Sierra brought a rigorous

training program tailored to the staff along with training objectives. These objectives enabled the Mission Command Training Program team to influence how the staff saw itself conducting mission command. During the exercise, it became apparent to the command that the objective, self-reflective method of measuring the brigade's process proved successful as the staff members shared information with each other, subordinates, and the commander.

In addition, the scenarios required the staff to analyze the possible second- and third-order effects of the

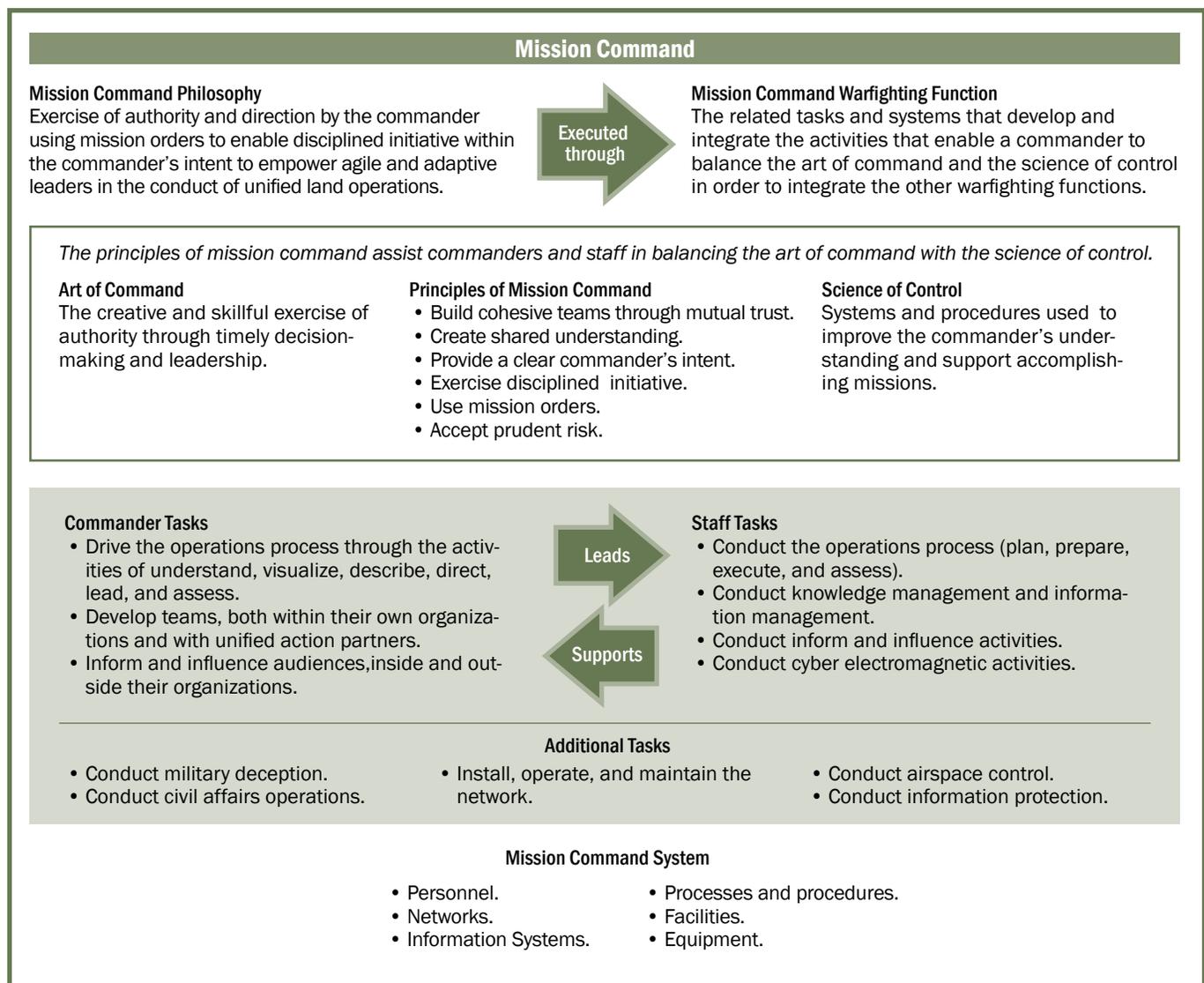


Figure 1. This chart depicts the principles, tasks, and roles of mission command as well as the challenges that a staff and commander must balance and overcome to achieve synchronization. Together, the mission command philosophy and warfighting function guide, integrate, and synchronize Army forces during unified land operations.

organization's actions or actions of the enemy. These events were grueling because of the constant monitoring of the situation and extensive internal and external coordination. The staff learned how changing or fine-tuning procedures improved information dissemination to the right staff sections for action during scenarios.

Outside of the realm of the training exercise, the brigade conducted multiple rehearsal of concept (ROC) drills for senior leaders during the exercise. These senior leaders included the commanding generals of the 101st Airborne Division (Air Assault) and the Combined Arms Support Command and the deputy commanding general for support for the 101st Airborne Division.

The ROC drills focused on two major operations for the Lifeline brigade, the concept of support for the

multiple regional commands, and the CMRE process—recycling, demilitarizing, recovering, and retrograding equipment and supplies out of the Afghanistan theater. This helped the senior leaders understand the complexity of the brigade's mission.

ROC drills play a vital role in a planning process because they reinforce the tasks and objectives the staff must focus on to successfully accomplish the mission. They also bring the diverse team together in a common mission.

After Action Reviews

After the ROC drills and throughout the exercise, the best way to validate that the brigade was ready for its deployment was to conduct after action reviews (AARs).

Operations Group Sierra facilitated the AAR process with the entire brigade staff and the command

for UE 13-1. The first AAR, called the mid-exercise AAR, had multiple objectives. The first was to recognize anything significant that required immediate attention. Next it identified systems or procedures with shortfalls that could be addressed before the final AAR. Finally, it analyzed and identified individuals and teams that needed assistance in their tasks to be more efficient. This entire process showed how all of the moving pieces fit into the fundamental art of command and science of control philosophy.

During the initial days of UE 13-1, Operations Group Sierra simulated all of the identified training objectives and addressed them during the mid-exercise AAR so corrections could be made as the exercise moved forward. During the mid-exercise AAR, the brigade assessed itself to be in the lower half of the "information" area of its TOC functionality. (See figure 2.)

The staff began to produce and disseminate information laterally within the staff and also vertically to the brigade's higher headquarters and subordinate units. This visualization of where the staff saw itself played a critical role in how the brigade would continue to improve in its processes, procedures, and common operational picture.

After the staff assessed its internal processes, the TOC environment as a whole improved. All personnel were required to attend the AAR. This requirement was beneficial because often during the exercise individuals did not realize the impact their action or inaction had on other staff sections and the entire mission. Painting this picture was a key and essential bridge for the staff and resulted in positive, constructive action. Based on the actions and improvements made after the mid-exercise AAR, the brigade staff continued to improve on its journey toward validation and deployment.

The final AAR focused on the scenarios themselves and how the organization responded through

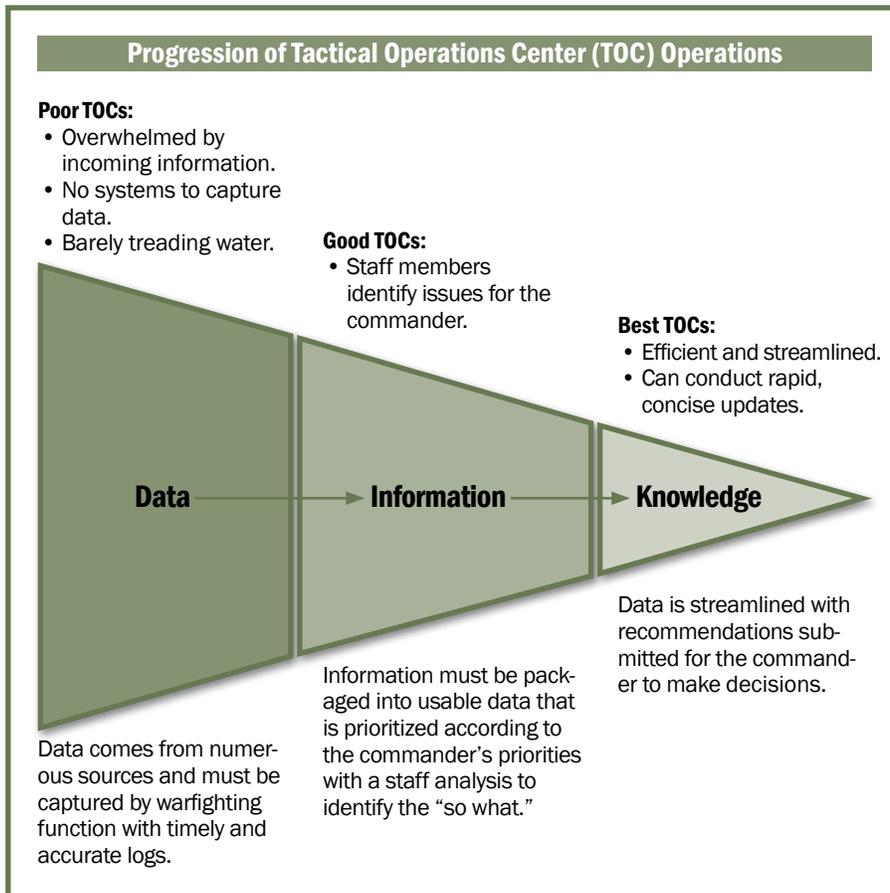


Figure 2. This chart illustrates how a tactical operations center can progress from sharing and disseminating data to information to knowledge (left to right).



Col. Charles R. Hamilton and Command Sgt. Maj. Eugene Thomas, the command team of the 101st Sustainment Brigade, 101st Airborne Division (Air Assault), case the brigade colors, April 12, at Fort Campbell, Ky., before deploying to Afghanistan. (Photo by Sgt. Leejay Lockhart)

the processes in place and the improvements of those processes from the mid-exercise AAR. The trainers continued to tailor the scenarios to mimic real-world missions within the Afghanistan theater so that they could be cross-coordinated and synchronized by the staff. By the time Operations Group Sierra prepared and delivered the final AAR, the brigade staff had grown in its understanding of staff processes, procedures, and the command-staff relationship. As shown in figure 2, the brigade moved into the higher echelon of providing timely, accurate information and into the realm of sharing knowledge.

Understanding processes and procedures and sharing information and knowledge enable growth within an organization. The organization becomes cohesive and productive when efficient systems and procedures are in place, constraints and restrictions

are known, and information is dispersed correctly to those who need to know.

The brigade's ability to perform self-assessment before conducting sustainment operations in Afghanistan allowed the commander to execute his intent for mission command and have the faith that his staff and subordinate commands could execute using decisive action.

Below are some insights and objectives for units deploying or going into a significant training exercise:

- Engage your spouses and Soldiers early and often. Implement resiliency training in all aspects of your plan, and inform them of the plan for predeployment, deployment, and post-deployment.
- Review and learn doctrine, starting with ADRP 5-0 and ADRP 6-0; it works and proved invaluable to the brigade.

- Seek training opportunities wherever you can; LTP was a training event that greatly enhanced our staff preparedness.
- Bring the Mission Command Training Program into your organization at the earliest opportunity. The trainers' professionalism, experience, and knowledge will make you and your team better, and their nonbiased coaching and mentoring is crucial.
- Use a ROC drill to add value across the spectrum by providing mentorship opportunities for junior officers and improving data mining, communication, knowledge sharing, and overall professional development for junior and senior leaders.
- Keep it "old school"—a map on the floor with leaders briefing and walking across the map by phase of the operation encourages discourse. New nuggets of information came out every time we briefed it.

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The Soldier Support Institute used the Army Learning Model to redesign its Noncommissioned Officer (NCO) Academy courses and improve the quality of education provided to adjutant general, financial management, recruiting and retention, and chaplain assistant NCOs.

■ By L.Z. Harrison Jr.

Soon after taking command of the Soldier Support Institute (SSI) in March 2012, Brig. Gen. David MacEwen set his top priority as redesigning the SSI Noncommissioned Officer Academy (NCOA) curriculum. During his initial assessment, he concluded that a large part of the NCOA's curriculum was neither operationally relevant nor sequential and progressive in teaching new concepts, doctrine, organizations, and material.

His priority was to redesign the courses to provide a curriculum that integrates and enhances operational knowledge in the adjutant general (AG), financial management, recruiting and retention, and chaplain assistant career fields. He charged SSI leaders and course developers to integrate skills, techniques, and procedures into courses that are instructed by a well-disciplined, adaptive, highly

NCOES Course Redesign at the Soldier Support Institute

skilled, confident, and operationally relevant team.

The objective was to have an NCOA instructional team that provides the Army with adaptive leaders who are confident and prepared to perform their training and wartime missions whenever needed in any strategic, operational, or tactical environment. MacEwen's focus was on redesigning curriculum, but his intent was so much more than that.

In his words, "If we don't train the young Soldier coming out of advanced individual training right, the NCOs will fix it. If we don't train the young officer coming out of [the] Basic Officer Leader Course or the Captains Career Course, the NCOs will fix it. However, if we don't train the NCO right, there is no one in the field to fix it; we must get it right."

Army Learning Model 2015

MacEwen's assessment of the state of the curriculum and the subsequent findings by a curriculum redesign team were directly in tune with what Training and Doctrine Command Pamphlet (TRADOC Pam) 525-8-2, The U.S. Army Learning Concept for 2015, describes as the outdated baseline model of instruction prevalent in Army institutional schools. The challenge of meeting operational adaptability gained through a decade of conflict compelled the Army and SSI to re-examine the learning model used to develop and deliver training at the NCOA.

The curriculum redesign team found several issues with the curriculum, including the following:

- Courses were not progressive and sequential.
- A cycle of learning, testing, and forgetting material was prevalent within the courses, which resulted in an unhealthy focus on tests.
- A knowledge-based versus performance-based curriculum, including a lack of real-world assessments.
- Outdated instructional methods, such as lecture-based instruction.



Students conduct a small group collaboration during the Senior Leaders Course pilot at the Soldier Support Institute Noncommissioned Officer Academy.

Conversely, the Army Learning Model (ALM) 2015 calls for continuous learning that promotes adaptive qualities in Soldiers by improving the relevance and effectiveness of face-to-face learning experiences through outcome-oriented instructional strategies that foster thinking and initiative and provide an operationally relevant context. ALM 2015 calls for the following:

- Educational learning outcomes that are linked to 21st century Soldier competencies (figure 1) that will begin to be instilled during initial military training and then reinforced at levels of increasing depth and complexity throughout the Soldier's career.
- A learner-centric learning environment (figure 2) with instructional strategies, expert facilitators, and technologies that support the learner.
- A career-span framework that provides the operating force with a standardized set of foundational competencies tailored to suit operational and position needs.
- An adaptive development and delivery infrastructure that provides a supportive learning infrastructure.

- Adaptability and responsiveness to operational changes and evolving trends in learning technologies and methods.

The Challenge

According to TRADOC Pam 525-8-2, the Army's competitive advantage directly relates to its capacity to learn faster and adapt more quickly than its adversaries. The current pace of technological change increases the Army's challenge to maintain an edge over potential adversaries. MacEwen challenged the curriculum redesign team to quickly conduct analysis, design, and development to adapt the new courses with ALM 2015 characteristics.

The challenge was to completely rebuild the courses using the latest principles, techniques, and procedures to ensure that NCO education system (NCOES) training at the SSI NCOA was keeping it "REAL" (relevant, engaging, adaptive, and learner-centric). REAL training is relevant through a continuous, adaptive learning model that provides engaging adult-learning, experiential learning opportunities that create adaptive leaders who possess 21st century Soldier competencies in a

learner-centric, context-based, facilitated problem-solving environment.

Redesign of Course Outcomes and Objectives

The redesign effort was initially focused on the Advanced Leaders Course (ALC) and Senior Leaders Course (SLC) for military occupational specialty (MOS) 42A (human resources [HR] specialist). Based on the Army's personnel services delivery redesign, the educational outcomes of the MOS 42A courses needed to be refocused to align with the 21st century Soldier competencies.

One course redesign goal was to ensure that the courses were progressive, sequential, and no longer repetitive in nature. The ALC now focuses on producing graduates who effectively deliver HR support at the battalion and brigade S-1 levels. SLC now focuses on producing graduates who effectively plan for and execute HR support for brigade and higher level organizations, including theater-level HR organizations.

The expected outcome of both courses is to have HR leaders who are doctrinally sound and technically capable critical and creative thinkers. The level of expectations varies between ALC and SLC because of the increased experience and responsibility levels expected of our senior NCOs.

As part of the redesign process, SSI conducted a job analysis in accordance with TRADOC Regulation 350-70, Army Learning Policy and Systems. The Adjutant General School commandant held a critical task site selection board to select critical tasks that linked directly to 21st century Soldier competencies and supported the desired educational outcomes of the courses.

MOS 42A AG leaders used the results of an Armywide survey to select critical tasks and then provided the AG School commandant with recommendations on how the tasks should be trained (institution, organization, or self-development). The board members also reviewed each task to provide the conditions,

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|--|
| Character and accountability |
| Comprehensive fitness |
| Adaptability and initiative |
| Lifelong learner (includes digital literacy) |
| Teamwork and collaboration |
| Communication and engagement (oral, written, negotiation) |
| Critical-thinking and problem-solving skills |
| Cultural and joint, interagency, intergovernmental, and multinational competence |
| Tactical and technical competence (full-spectrum capable) |

Figure 1. 21st century Soldier competencies.

standards, and expected performance steps. This process was nested in the redesign effort to help ensure current and relevant training.

Current, Relevant, and Doctrinally Based

Following the guidelines in TRA-DOC Pam 525-8-2, the new courses are outcome-based, experiential learning courses that apply the characteristics of a learner-centric learning environment. The small-group experiential learning format capitalizes on the students' experiences and reinforces professional development through context-based, facilitated problem-solving exercises. These exercises are designed to be rigorous, relevant, and authentic assessments to ensure learning is applicable to the students' jobs.

Training developers and subject matter experts updated both courses to make them current and relevant, using technology and the latest in adult learning methods, techniques, and procedures. The courses blend classroom- and technology-based learning opportunities. This blended learning takes advantage of technology by using digital media to provide videos, scenarios, and interactive multimedia.

Students prepare for classes by using mobile technology. Mobile applications, or apps, can be downloaded to a smart device, or students can use their home computers to have immediate access to the course material, in-

cluding advance sheets, learning material, references, pre-assessments, and course attendance requirements.

The new doctrine-based courses are taught in modules based on the four HR core competencies and 13 key functions of HR support defined in Field Manual 1-0, Human Resources. Each module has pre- and post-assessments and integrates HR enabling systems using hands-on HR training simulators.

The modules are made up of critical task instruction using experiential learning and include both preclass assignments (reading, researching, studying), in-class assignments (small group, individual, and peer-based learning), and homework requirements (writing and web-based training assignments). Assignments reinforce the lessons and are critical to discussion and problem-solving within the classroom.

In both courses, training leads to a live and virtual culminating training event (CTE), that includes both an HR staff exercise and a field training exercise in which students apply and demonstrate what they have learned. The ALC CTE focuses on the HR considerations in the seven phases of the Deployment Cycle Support Program. The SLC CTE focuses on using the military decisionmaking process to conduct HR planning and operations.

Change for Students, Instructors, and Classrooms

Throughout the courses, students demonstrate the 21st century Soldier competencies by using reflective, critical, and creative thinking skills to complete course requirements, including written and oral communication assignments, practical exercises, small group work, facilitated discussions, and homework. No longer will a student be able to just show up and pass. The courses require the full engagement of the student from start to finish.

The course changes affect not only the students. Instructors are no longer simply on the platform delivering information; they are now facilitators

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|---|
| Context-based, facilitated, problem-solving exercises |
| Blended learning |
| Regional learning centers |
| Adaptive learning, intelligent tutors |
| Mobile learning, distance learning modules |
| Rigorous and relevant assessments and evaluations |
| Self-structured learning |
| Peer-based learning (digital social networks) |
| Performance support applications (apps) |
| Soldier-created content |
| Virtual learning environments |
| Single portal to digital learning resources |

Figure 2. Some characteristics of a learner-centric 2015 learning environment.

who guide the small groups through the experiential learning process. They must challenge the students to share their experiences and focus on the context of learning while covering the objectives of the course, to include applying those objectives during the CTE.

The classroom configuration is redesigned as well. Instead of the traditional lecture hall or old horseshoe format, the classrooms are configured into several four-person pods. This format requires the instructor to act as a facilitator and encourages a learner-centric environment. The classroom becomes a learning laboratory where students are not afraid to provide their points of view or to discuss topics related to their profession.

Gone are the days of using rote memorization skills to learn the material, test on the material, and then dump the material. The focus is no longer on meeting a grade point average in order to simply graduate. Instead, students must embrace the new learning model and instructors must encourage students to think and understand the relevance and context of the material being taught and discussed. Under this approach, students actively learn and then take that knowledge back to home stations

to improve HR support within operational units.

In the pilot courses, students recognized the importance of this new training concept. These students firmly embraced the new courses and provided great feedback to the leaders to ensure that the courses met the expected learner-centric environment described in ALM 2015.

SSI's leaders, Soldiers, and civilian staff pulled together and redesigned AG NCOES courses before SSI's change of command in early March 2013. The team's success was the result of excellent teamwork, dedication, and a desire to do what is right in training the backbone of the AG Corps. The AG Corps will benefit from developing adaptable leaders who keep pace with the Army's operational adaptability requirements and are able to lead HR support organizations across unified land operations.

For its redesign of the MOS 42A ALC and SLC, SSI was selected as the government (military) recipient of the 2013 Pike's Peak Performance Award, which recognizes organizations that have transformed their training by implementing participant-centered, results-based techniques that have resulted in increased understanding, retention, application, and transfer of training content.

SSI continues to integrate ALM into the financial management, recruiting and retention, and chaplain assistant NCO courses so that all SSI NCOA courses will include adult, learner-centric learning as the primary method of instruction.

L.Z. Harrison Jr. is the chief of the Adjutant General Branch, Training Development Directorate, Soldier Support Institute, at Fort Jackson, S.C. He holds a bachelor's degree in business administration from Campbell University and master's degrees in human resources management and development from Webster University. He has a certificate in instructional systems design from Touro University International.

What students are saying:

“The participation within the class was outstanding. Even though we worked long hours, at the end of the day we still wanted more.”

“The practical exercises have been challenging. These are the type of situational exercises we need in order to become critical thinkers and good NCOICs [noncommissioned officers-in-charge] in the field environment.”

“This is the best course ever. Leaders across the Army are given the opportunity to voice their opinions and strategies that can assist other leaders.”

“Classes are not death by PowerPoint slides.”

Extending the 1st Theater Sustainment Command's Reach Into Central Asia

The Surface Tender U.S. Central Command Region program enabled the 1st TSC to increase cross-border commerce between Afghanistan and its neighboring countries.

■ By Lt. Col. Tim Hansen

The 1st Theater Sustainment Command (TSC), a key Army logistics unit managing sustainment and retrograde operations in Afghanistan, successfully expanded an economic development initiative aimed at increasing cross-border commerce between Afghanistan and its neighboring countries in Central Asia.

The Surface Tender U.S. Central Command (CENTCOM) Region (STCR) program provides transportation for locally purchased goods and materials through locally hired commercial truck companies. The program is designed to create a basic transportation procurement system that enables direct participation by regional and local carriers. The main customers of the program are the Defense Logistics Agency, the General Services Administration, and other U.S. government entities.

Background

In September 2011, Marine Corps Gen. James N. Mattis, then CENTCOM commander, signed and issued Command Policy Letter 40 concerning the economic development of Central Asia in support of U.S. security cooperation and engagement missions. The policy letter specifically addressed the capacity expansion of the Northern Distribution Network (NDN), the system of highways and railways extending from Riga, Latvia, to Afghanistan.

This policy letter provided a way for the U.S. government to shift its focus from military actions in Afghanistan

to regional economic development. As part of a more comprehensive and strategic policy toward Central Asia, this letter provided the foundation for initiatives such as the STCR program. Key to STCR is the imperative of directly supporting the CENTCOM and International Security Assistance Force goal of transporting 75 percent of supplies into Afghanistan via the NDN.

According to the CENTCOM Deployment and Distribution Operations Center (CDDOC), the purpose of the STCR program was to address "the sub-optimal local purchase performance resulting from an elevated transportation rate structure above commercial market pricing." In other words, the rates of local carriers are known to be considerably more reasonable than international carriers. Cost effectiveness is a critical element to 1st TSC operations because the command takes pride in its good stewardship and conservation of resources.

Concept of Operation

CENTCOM implemented the STCR program in three phases. This incremental approach allowed local trucking companies the time to learn the rules and standards of commercial transportation and the expectations of the U.S. government.

The outcomes of the STCR initiative included:

- Establishment of accepted trade and transit practices.
- Development of an adequate road and highway infrastructure.

- Support of local procurement.
- Lower shipping costs.

- Establishment of accepted trade and transit practices.
- Development of an adequate road and highway infrastructure.

Phase I. In the first phase, the CENTCOM J-4 defined STCR policy and the CDDOC ran a pilot program supporting local purchases. The CDDOC captured lessons learned for the essential program management capabilities needed in the subsequent phases. This pilot program ran from April through September 2011 and served as a proof of principle for the program's feasibility. The total cost of Phase I deliveries was \$103,000.

Phase II. The second phase involved transition and expansion and ran from October 2011 to January 2012. CDDOC acted as the program manager. Third Army/U.S. Army Central executed the program and assigned the 1st TSC to increase capability to handle local trucking companies and related services in support of all U.S. government agencies. During this phase, local companies successfully made three deliveries at a cost of \$250,000. According to the Defense Logistics Agency, the STCR transportation costs were an average of \$155 less per kilometer than previous shipping contract costs.

Phase III. The third phase is enduring operations that began in February 2012 and will last beyond the completion of the U. S. and coalition retrograde. The desired end state of this phase is the continuation of cross-border commerce between

Afghanistan and its Central Asian neighbors. This phase is event-driven because changes in the operation dictate force realignments and repositioning. Despite the fluidity of this phase, as of July 22, 2012, 14 tenders had transited the NDN through the STCR program. The program's initial funding was \$1.3 million and may increase to \$4.3 million.

The Bidding Process

The STCR program is a one-time bid for local trucking companies that are registered with the program. Before registering, all carriers must sign a generic tender, a written statement of expectations. The carriers also must provide two points of contact and be available 24 hours a day by email or telephone.

STCR releases the tender for bid and has one day to vet and award the carrier a mission. All valid bids are evaluated according to two criteria: price and past performance. The carrier receives a completed tender to sign and has 24 hours to respond with acceptance.

Essential Paperwork

The driver must have the following paperwork before heading to pick up cargo: a customs clearance request, a letter of introduction, and letters of

authorization for Kazakhstan, Kyrgyzstan, and Tajikistan.

The customs clearance request and letter of introduction will be sent to the U.S. Embassy in Kabul for processing. The carrier has complete responsibility for all customs processing. The carrier's Department of Defense Form 577, Appointment/Termination Record—Authorized Signature, and commercial bill of lading must be signed by a U.S. government employee and then sent to STCR.

Performance Criteria

The STCR program evaluates all carriers based on the following five criteria: on-time pick up, on-time delivery, on-time daily in-transit visibility reports, complete/safe delivery status, and equipment used. Scoring begins with the tender award and is used in bidding on future tenders. As with the success of most businesses, time is a key factor.

Although the STCR program is still young, the wheels of progress are turning. The NDN is working and is gaining interest as a significant regional economic boost.

As profits are realized, the Central Asian republics may become more open to other U.S. business ventures

and the promise of greater regional economic expansion. Most importantly, the cross-border traffic will promote cooperation and stability. In addition to the positive economic influence on the participating countries in the future, the U.S. expects to save significantly on the cost of alternative shipping arrangements.

The 1st TSC's management of the STCR program fully supports U.S. strategic economic objectives and CENTCOM theater logistics requirements. As the U.S. retrogrades troops and equipment from Afghanistan, the STCR program will endure and provide a means for Central Asian states to gain greater autonomy and benefit from a continued partnership with the United States.

Lt. Col. Tim Hansen is the public affairs officer for the 1st Theater Sustainment Command. He has worked the public affairs mission at the operational and strategic levels. He is a graduate of the Quartermaster Officer Advanced Course, the Petroleum and Water Officer Course, the Public Affairs Officer Qualification Course, the Russian Linguist Course at the Defense Language Institute, and Intermediate Level Education.



Surface tender awaits clearance at Port 1, Hairatan Gate, Balkh province, Afghanistan.

Lean Six Sigma Improves Base Closure Efficiency

Five officers from the 18th Combat Sustainment Support Battalion used Lean Six Sigma to improve the effectiveness of the base closure assistance teams that were supporting base closure and transfer efforts in Afghanistan.

■ By Chief Warrant Officer 3 Robert Lopez Jr.

In 2005, the Army adopted the Lean Six Sigma methodology to facilitate process improvement. Lean Six Sigma assists leaders in focusing on quality management methods that improve overall operations and maximize the potential to reach calculated goals. Its certification levels include master black belt, black belt, and green belt.

Since 2009, green belt courses have been taught throughout the combat zone. The 18th Combat Sustainment Support Battalion (CSSB) completed the first ever black belt course in a combat zone on Dec. 28, 2012, certifying five officers who were part of the U.S. Central Command Materiel Retrograde Element (CMRE). One officer's first completed Lean Six Sigma project focused on improving the effectiveness of the base closure assistance teams (BCATs) operating throughout Afghanistan in support of the base closure and transfer efforts.

The Mission

The 18th CSSB deployed from Grafenwoehr, Germany, to Kandahar, Afghanistan, in June 2012. The mission required theaterwide responsibility for the mission command of most CMRE-enabling teams, including BCATs. The traditional support operations section was transformed into several "fusion cell teams" that focused on total operational oversight of specific enablers at more than 25 locations.

Before the battalion arrived in Afghanistan, eight military BCATs were operating under engineer entities from task forces tactically controlled by the regional commands. Upon arrival, the 18th CSSB took operational, tactical, and administrative control of the BCATs and established a detailed concept of support. The support operations section developed and published the first standard operating procedures to ensure all teams operated identically and focused on the objectives directed by U.S. Forces-Afghanistan (USFOR-A).

In July 2012, the U.S. government contracted an additional 12 BCAT teams to augment the military. Through a detailed decision-making process, the 18th CSSB command decided to dismantle the eight existing teams and operate with 12 combined military and civilian BCATs. Each combined BCAT included three military members that provided oversight, quality assurance surveillance plan requirements, training, and assistance to six logistics contractors.

BCATs are designed to advise and assist military site supervisors, brigade logistics officers, brigade engineers, and task force commanders in drawdown and support operations. The teams provide a detailed analysis of the base's readiness to meet projected closure or transfer timelines. BCATs assist in planning, conducting, and managing inventories of both foreign

excess real property (FERP) and foreign excess personal property (FEPP) and the transfer of the property to Afghanistan's government.

The teams also assist with container inventories and tracking updates and advise on engineering, environmental, communication drawdown, and contract reduction or elimination. BCATs play an important role in ensuring the supported location meets all milestones and fulfills all requirements to close or transfer the base.

Applying Lean Six Sigma

The Lean Six Sigma project focused on the BCATs' long lead times for individual site visits. At the start of the project, the BCAT visits ranged from one day to one month. Moreover, approximately half of the FERP and FEPP packets were turned in after the USFOR-A deadline of 60 days prior to base closure or transfer.

During the initial phase of the project, the 18th CSSB focused on key customer issues that affected BCAT operations. A major issue was that the customers misunderstood the BCAT's roles and responsibilities. Units expected the BCATs to relieve them of base closure responsibilities, which required the BCATs to stay longer at each site.

One project goal was to standardize the BCAT site-visit process so that each visit would last no more than seven days. This would increase

the number of bases visited monthly. More importantly, the BCATs needed to meet the required 60-day FERP and FEPP submission requirement 100 percent of the time.

Data was collected for the number of days BCATs spent on site, the number of days prior to closure that the visit was conducted, and the number of days before closure that FERP and FEPP packets were submitted. The results of the data collected demonstrated the following:

- BCAT visits to combat outposts or tactical infrastructures averaged three days, and site visits to forward operating bases averaged 23 days.
- Site visits were conducted an average of 86 days before closure or transfer.
- FERP and FEPP packets were submitted an average of 65 days before base closure.
- More than 50 percent of the bases failed to meet the FERP and FEPP submission deadlines.

During the analyze phase of the Lean Six Sigma project, the 18th CSSB focused on the FERP and FEPP turn-in failures and the average number of days prior to closure that the visits were conducted. Through the use of a cause and effect diagram, the process identified six critical problems that directly affected BCAT operations.

The problems included transportation troubles going in and out of bases, the large size of some of the bases being supported, the need for prior coordination with the battlespace owner, the team's inability to have access to Logistics Civil Augmentation Program property books, and the team's lack of access to all locations of the base. These areas were the focus of the improvement efforts.

During the project's improvement phase, the 18th CSSB developed and executed a pilot plan that focused on negating the problems and improving the BCAT processes. The plan included these goals:

- Position BCATs at least 120 days before closure.
- Limit all site visits to seven days.
- Develop a detailed concept of operations before every mission.
- Conduct in-depth mission planning in order to forecast BCAT missions at least nine months in advance.
- Establish a forward retrograde element concept in order to position the BCATs as far forward as possible so they can quickly deploy and work closely with task force engineers.

The Results

A key step in a Lean Six Sigma project is to collect and evaluate data before and after implementing changes to the process. Data collected after the pilot plan was implemented demonstrated a noticeable operational change.

As a result of the pilot plan, the 18th CSSB increased the number of bases assisted monthly by 50 percent. Increasing the monthly BCAT visits for all 12 teams saved the U.S. government an estimate of \$6.5 million for the year.

First, the study showed that the submission date of the FERP and FEPP packets did not correlate with the amount of time a BCAT spent on site. However, the data demonstrated that the number of days before closure that a visit was conducted directly correlated with the submission timeline of the FERP and FEPP packets. As the days prior to closure increased, so did the earlier submission and approval of the packets.

As a result of the pilot plan, the 18th CSSB increased the number of bases assisted monthly by 50 percent. Increasing the monthly BCAT visits for all 12 teams saved the U.S. government an estimate of \$6.5 million for the year.

New predictability in the BCATs' mission planning helped increase the average time a site is visited prior to

closure from 86 days to 172 days. The average date FERP and FEPP packets were submitted increased from 65 days to 105 days before closure. The number of bases meeting the FERP and FEPP turn-in requirement of 60 days improved by 30 percent.

It is imperative to provide an efficient BCAT support process as base closure operations continue. Longer missions involving the closure or transfer of multibattalion bases will directly affect the BCATs' ability to support all locations across the battlefield. Strict management will ensure the planning and execution of base reduction, closure, and transfer procedures are accomplished in a timely matter. The primary goal is to meet the established milestones for USFOR-A retrograde and eventual equipment turn-in to Afghanistan's government.

BCATs continue to provide commanders and base supervisors with planning, evaluation, and execution assistance for a successful operation. Through the implementation of Lean Six Sigma, the 18th CSSB surpassed the projected goals and provided more opportunity to place additional CMRE enablers to meet the overall base closure timelines and goals.

Chief Warrant Officer 3 Robert Lopez Jr. is the base closure assistance team fusion officer-in-charge for the 18th Combat Sustainment Support Battalion. He holds a master's degree in human resources from Webster University. He is a graduate of the Warrant Officer Advanced Course, the Operational Contract Support Course, and the Lean Six Sigma Black Belt Course.

Preparing for the Retrograde Customs Mission in Afghanistan

The 427th Brigade Support Battalion provides its lessons learned from supporting the customs mission for U.S. Central Command retrograde operations in Afghanistan.

■ By 1st Lt. Jennifer Speeckaert

The intent of the U.S. Military Preclearance Program is to simplify the return of Department of Defense (DOD) materiel from deployments. It does not replace customs inspections; instead, it assists customs and border patrol agents (CBPAs) in ensuring that the items that are arriving are free of contraband and infestations through the use of customs and border clearance agents (CBCAs) who preclear materiel. Stateside CBPAs still inspect items that have been precleared but more as a quality control check than an overall inspection of all items entering the United States.

The program helps to maintain relationships with other countries because it ensures the United States does not ship dirty items through its transportation systems.

U.S. Central Command (CENTCOM) Regulation (CCR) 600-10, Customs and Border Clearance Program, recommends that 10 percent of personnel in every unit deploying to the region be CBCA trained. Commanders who may be tasked to provide CBCAs need to know the certification requirements, understand the mission, and be prepared to work with other military branches and civilians. A smoothly running mission lets CBCAs focus on their jobs, which helps prevent agriculture disasters.

How CBCAs Joined the CMRE

Traditionally, Army and Navy military police administer the U.S. Mil-

itary Preclearance Program. However, as the need for preclearance has grown in Afghanistan, Soldiers with no prior training have taken on the role as part of the CENTCOM Materiel Retrograde Element (CMRE) mission.

The customs and agricultural teams of B Company and Headquarters and Headquarters Company (HHC), 427th Brigade Support Battalion (BSB), arrived in Afghanistan in April 2012 after receiving three days of training as CBCAs. The companies were tasked with providing a CMRE-sourced customs solution.

These units were the beginning of the CMRE mission in Afghanistan. Customs personnel initially were assigned to support the redistribution property assistance team (RPAT) yards. Two months later, the companies were task organized under the 18th Combat Sustainment Support Battalion (CSSB) from Grafenwoehr, Germany. After a few more months, H Company, Navy Expeditionary Logistics Support Group Forward, augmented the customs mission, expanding the roster to 48 customs personnel and establishing the first joint customs teams in the CMRE.

CMRE Customs Mission and Purpose

The CMRE customs mission is to support the movement of materiel out of Afghanistan. This means that the customs element supports the RPATs and retrograde sort yards

(RSYs), which move vehicles, equipment, and containers.

CMRE personnel provide customs inspections for RPATs and units managing RSYs that ship materiel from Afghanistan. The customs agents develop a working relationship with the yards, which are operated by mainly contractors and Department of the Army (DA) civilians. This varies from a traditional customs mission in which units request support for redeployment and the interaction lasts only as long as the appointment.

Since a need for permanent CBCAs in the RSYs was recognized, their role has expanded. This is because the large number of units leaving theater without replacements has increased requirements at RPAT yards.

CBCA Requirements

In order to be CBCA certified, a Soldier must be trained by both the U.S. Department of Agriculture and Customs and Border Protection (CBP). The training is coordinated through CBP. Any Soldier who is not qualified in a military police branch military occupational specialty must be an E-4 or above in order to be a CBCA.

Furthermore, CBP conducts background checks before the training. This ensures integrity and reduces the risk of blackmail. The regulation states that potential CBCAs may not have any record of disciplinary action that would bring into question the

individual's integrity. CBCA candidates may not have any prior record of theft, drug, or alcohol abuse. CBP has the final word on whether or not an individual is qualified.

CBCA training is difficult to get in theater because CBP agents, not the military, must conduct the certification. CBP agents must be flown to Afghanistan to teach the class, which presents a challenge to a deployed unit requiring the training. The class must be coordinated through the regional customs program manager. Because of these complications in coordinating training in theater, it is important to conduct the training before deployment, if possible.

The training provided by the CBP covers the regulations, but there is more to the mission than what is covered in training. For that reason, on-the-job training with military police customs units, either Army or Navy, can greatly assist in properly executing the mission.

Regulations and Command Structure

Regulations, including CCR 600-10 and the Defense Transportation Regulation 4500.9, Chapter 5, cover the customs processes, but changes to the processes can be made in the course of operations. For example, when B Company arrived in theater, items being shipped to Kuwait were required to have a full customs inspection, which had not been the case in Iraq. Many civilians and military units assumed that the rules of the Iraq redeployment still applied to Afghanistan operations. Several units had to learn the regulations. However, a few months later an agreement was reached with Kuwait and the requirement was lifted.

Regulatory changes are not always widely published, and it is important to keep in contact with program managers (including the CENTCOM customs program manager, Afghanistan customs program manager, and the manager for each regional command in Afghanistan) who have an established hierarchy to help maintain these standards.

In addition to regulatory oversight, customs teams require a clear command structure to optimize the support relationship and ensure the CBCAs understand their roles and responsibilities. For B Company, the arrival of the Navy's customs unit provided unity of effort and validated the subject matter expertise of the team. B Company joined with HHC, 427th BSB, to create unity of command and one standard across the Combined Joint Operations Area-Afghanistan.

Additionally, the BSB found it important for small teams to have a direct support relationship instead of a command relationship with the supported unit. For this reason, it is imperative to assign at least two CBCAs to the site and ensure military leaders are engaged in the mission. Clear command structure and direct support relationships with supported units help CBCAs to enforce stan-

dards and determine if an item passes inspection.

A Joint Effort

When H Company, Navy Expeditionary Logistics Support Group Forward, joined the 18th CSSB, the CBCAs of B Company and HHC found themselves working alongside Sailors. Some of those same Sailors had provided initial on-the-job training for B Company Soldiers when they arrived in theater.

The Navy CBCAs were attached to the 18th CSSB to provide additional CBCA subject matter expertise and helped to provide unity of command. The Sailors had technical expertise in custom operations since they had been doing it for more than 10 years; however, the Soldiers had been performing the RPAT and RSY missions for several months and had an in-depth understanding of what was needed for the opera-



Army Chief of Staff Gen. Raymond T. Odierno greets Petty Officer 1st Class Janelle Switzer, a customs and border clearance agent, during a visit to the Bagram Airfield retrograde sort yard in Parwan province, Afghanistan, Feb. 21, 2013. The joint facility serves as a central part of the logistics chain for the redeployment of military property in Afghanistan. (Photo by 1st Lt. Henry Chan)

tion. All of the Sailors and Soldiers embraced the “one team, one fight” concept, combining their knowledge to provide the best support.

Support from Civilians

The RPAT and RSY require contracted support. Only a small team of military personnel manage a military operation that is executed by a contracted solution with more than 100 contractors and DA civilians.

The wash rack at the Kandahar Airfield RPAT yard primarily cleans vehicles that are ready to be shipped out of Afghanistan. This operation is executed by third-country nationals, many of whom do not speak English. The CBCAs assigned to the wash rack communicated with the contractors to show them the areas that still needed to be cleaned. The CBCAs also coordinated with the wash rack supervisor and program managers, none of whom were military.

Many DA civilians and contractors are military veterans. These veterans understand how the Army works; however, they also know that they are not obligated to follow military orders. Civilian contractors have contracts restricting what they can and cannot do. They generally require written proof of changes being made before they will accept a change or new requirement.

When contractors cannot execute orders immediately, it may frustrate Soldiers. However, if contractors go outside the realm of their contract, the government can refuse compensation. As such, asking contractors to perform a new duty can require a review by superiors and often a lengthy perusal of the contract to determine if it can be done within the scope of the existing contract.

To receive full support from contractors, Soldiers should strive to develop relationships with them and take the time to understand their mission. No matter how we view their roles, they are not military. They are paid to work a certain number of hours and provide certain services. Many contractors will go above and

beyond to assist in any way they can. However, they are under no obligation to do so. Relationship building with the civilian workforce allows for a better understanding of the regulations, increasing the first-time pass rate.

The development of the CMRE joint customs mission was and will continue to be successful if the lessons learned by the 427th BSB and 18th CSSB can be applied to future missions. The Soldiers that arrived in theater with certifications were able to work immediately, while those arriving without certification caused a delay that interrupted the mission.

The Soldiers learned how to work with their civilian and military counterparts in order to make the mission run more smoothly. Once a clear command structure was developed, with the Navy customs act-

ing as the final inspection authority, both Soldiers and Sailors were able to focus on executing their mission. The mission continued expanding, and eventually the companies supported 11 customs teams at nine different locations.

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Soldiers from the 247th Quartermaster Company and Sailors from H Company, Navy Expeditionary Logistics Support Group Forward, work together in the customs mission to protect the U.S. borders. (Photo by 1st Lt. Henry Chan)

Mobile Container Assessment Team Missions, Responsibilities, and Troop Leading Procedures

■ By 1st Lt. Steven Oh

In April 2012, the 427th Brigade Support Battalion (BSB) began conducting the U.S. Central Command (CENTCOM) Materiel Retrograde Element (CMRE) mission to assist units with processing materiel for retrograde, redistribution, redeployment, reset, and disposal. The 18th Combat Sustainment Support Battalion (CSSB) assumed mission command of the BSB's headquarters and headquarters company and maintenance company.

The 593rd Sustainment Brigade assumed mission command in August 2012 and refined the metrics for successful retrograde velocity. Success was measured in the number of 20-foot shipping containers retrograded per month.

MCATs in Afghanistan

Mobile container assessment teams (MCATs) assist units in establishing and conducting container management in order to gain container property accountability for sustainment and retrograde, redistribution, redeployment, reset, and disposal operations. Following troop leading procedures (TLPs) ensures that mission planning, execution, tracking, and assessment are executed throughout the phased operations. Before executing MCAT missions, it is imperative to conduct mission planning at the battalion, company, platoon, and team levels of operations.

In order to understand how specific MCAT tasks apply to the mission in Afghanistan, a brief overview of how forces are arrayed is necessary. The

Combined Joint Operations Area–Afghanistan (CJOA–A) is divided into six regional commands (RCs): North, South, Southwest, West, East, and Capital. Each RC is responsible for any task force in its area of operations.

Each task force is responsible for a specific number of bases within its area of responsibility. The bases can be described as operating on a hub and spokes model. One centralized base acts as the main operational base (a hub) with smaller bases (spokes) surrounding it.

Container Management

The container management structure in the CJOA–A is organized under the Joint Sustainment Command–Afghanistan and is described in depth in the CENTCOM Container Management Policy Letter of Instruction (CM LOI).

The container management process proceeds this way:

- The unit assigns a container control officer (CCO), preferably located at the base for which he is responsible for container management.
- The CCO is assigned responsibility for one or more geographic locations (GEOLOCs). (A GEOLOC is a container yard location that is created and maintained in the Integrated Booking System–Container Management Module [IBS–CMM]. At least one refrigerated or five dry containers are needed to establish a GEOLOC.)

- The CCO receives training on IBS–CMM from the Military Surface Deployment and Distribution Command either online or in person.

- The CCO maintains the inventory and the status of containers in IBS–CMM.

Each task force should assign two CCOs, one to be the container officer-in-charge and another to be the noncommissioned officer-in-charge, for the bases within its area of operations. These individuals manage the CCOs located at each base in the task force's area of responsibility. Each RC should assign a regional container manager responsible for ensuring that CCOs or yard managers are assigned and trained on IBS–CMM for each base and location.

Yard managers provide monthly container inventory information for bases without GEOLOCs to the CCOs located at hub bases. The container information is updated in the hub base's GEOLOC; the actual location is noted in the remarks column in IBS–CMM. If a GEOLOC is established later, then the container number can be in-gated into the newly established GEOLOC.

An area container manager is assigned by a sustainment brigade and is typically located at one of the major operational bases, such as Kandahar Airfield, Bagram Airfield, or Camp Leatherneck. The area container manager is responsible for maintaining accountability of containers located at the cen-

tral receiving and shipping point or empty-container control point and for filling unit requests to use empty government-owned containers.

The area container manager also assists with ensuring that carriers are notified of empty carrier-owned containers that are ready for pick-up. Commercial carriers charge detention fees to the U.S. government for containers that are not returned within 15 days after delivery.

The country container authority is responsible for creating and closing GEOLOCs and providing supervision and guidance for reducing detention fees. The country container authority works with the container management element located in Kuwait to ensure that each GEOLOC is properly managed in IBS-CMM. The container management element is responsible for managing and operating IBS-CMM, providing CCOs with IBS-CMM user identifiers, and granting CCOs temporary or permanent access to update GEOLOCs.

The container management structure is designed to be operated by the units on the ground and to provide, through IBS-CMM, commanders and planners with a common operational picture of containers on the battlefield.

The MCATs are designed to fulfill the quality assurance function by assessing CCOs (acting as quality control managers) and their container management operations. The assessments include physical inventories of containers located at the various bases and GEOLOCs.

MCAT Missions

MCATs conduct missions based on requests by RCs and units located therein. MCATs also complete the CM LOI requirement to conduct periodic assessments of CCOs and GEOLOCs. RCs may request the direct support of an MCAT in order to assist CCOs in ensuring that all of the containers located on the base are included in IBS-CMM.

Containers that are not already in IBS-CMM need to be entered, or

“created,” in the system. Containers that are already created in IBS-CMM but not reflected in the correct GEOLOC need to be in-gated to the correct GEOLOC inventory record.

Containers that have moved out of the GEOLOC will need to be out-gated. Once the container is received and in-gated at the destination base, it will be reflected in the correct GEOLOC.

When a unit arrives at a new base, it may fall in on many containers that have accumulated there over the past decade. Containers already located at the base are considered installation property and contain items needed for life support (often in refrigerated containers) and force protection. Unit commanders are not required to sign for this property, and it is frequently managed by the mayor’s cell on larger bases.

All of the containers located on the base are required to be inventoried and updated in IBS-CMM. Units often fail to inventory all containers because they are not accountable items on their property books.

Maintaining container inventories is necessary for improving the availability of U.S. government-owned containers to be used as distribution platforms. The practice also helps to identify carrier-owned containers for movement to an empty-container control point in order to reduce detention costs.

The MCATs help to ensure that all of the containers are brought to record in IBS-CMM so that carrier-owned containers can be tracked and returned to carriers and empty government-owned containers can be made available to units.

Troop Leading Procedures

Mission planning for the MCAT is conducted through TLPs. The following guidelines are intended to assist leaders and planners by identifying key considerations. They are not intended to be an inflexible checklist to be followed in chronological order, but they should assist with maintain-

ing consistency and preparing for planning and execution.

The MCAT’s TLPs included the following:

- Receive the mission.
- Issue the warning order.
- Make a tentative plan.
- Initiate necessary troop movement.
- Conduct reconnaissance.
- Complete the plan.
- Issue the complete order.
- Supervise and refine.

Receive the Mission

TLPs do not necessarily have to be executed in sequence, with the exception of the first TLP, receive the mission.

CENTCOM provides the following stated mission for MCATs in the CENTCOM CM LOI dated Sept. 28, 2011: “Mobile Container Assessment Teams will conduct periodic site visits of container control officers to validate container management processes and procedures. [U.S. Forces-Afghanistan] will develop processes and procedures, to include organic sourcing, for regional MCATs.”

The CM LOI also says that U.S. regional commanders will source and employ regional MCATs to conduct full audits to validate IBS-CMM information using audit procedures and to capture and report all discrepancies between the physical inventories and IBS-CMM. Discrepancies should be tracked and reported through the container management element and country container authority until resolved.

Issue the Warning Order

For missions that have been approved by the SPO, the mission list is disseminated to the various battalion and SPO cells, including the S-3, S-2, SPO plans, and MCAT, for preparation to brief the concept of operations (CONOP).

Once the regional MCAT mission set is approved by the battalion CMRE SPO, a draft fragmentary order that explains the missions to be completed and includes relevant



Spc. Joseph Bofenkamp and Sgt. George Conkey, 1462nd Transportation Company, load 20-foot shipping containers onto an outbound convoy. (Photo by 1st Lt. Henry Chan)

contact information is submitted to the S-3.

A list of the MCAT bases to be visited is provided to the S-2. Coordinates should be provided if available. Ideally, the list should be given to the S-2 at least two weeks before execution to allow time for threat briefings to be prepared, the MCAT company to update the CONOP, the S-2 section to brief the MCAT leader, and the MCAT leader to brief the company commander, who will then brief the battalion commander.

A list of the MCAT bases and unit points of contact should be provided as a warning order. The mission planning tracker should be updated and provided to the SPO plans section for updating the production control schedule posted on a classified common-access calendar.

Make a Tentative Plan

A CONOP briefing and a composite risk management worksheet

will be developed for each mission set to be conducted by the MCAT. The MCAT platoon leader and team leader should estimate the amount of time to be spent at each base. The time at each base depends on the current container count, the contents and condition of each container, and training considerations.

Initiate Necessary Troop Movement

The MCAT leader will need to coordinate the final scheduling with the assigned bases' points of contact. It is a best practice to request that the container management contact have all units placard containers they are using so that unused, abandoned, or excess containers can be identified more easily.

The MCAT will also need to request temporary GEOLOC access for each base from the Kuwait container management element or the 1st Theater Sustainment Command. Access to the GEOLOC will permit the MCAT to have rights to create,

in-gate, and out-gate containers for the GEOLOC. Once coordinated dates are established, the mission planning tracker can be updated with those dates.

The MCAT should print out a container inventory listing for each GEOLOC to be visited, giving particular attention to carrier-owned containers and unknown-owner containers.

Conduct Reconnaissance

The MCAT leader will review the threat briefing information with the S-2 intelligence analyst before briefing the company and battalion commanders. The MCAT leader will have received additional coordination instructions from the point of contact located at the base.

Mission dates and locations may also be adjusted by request of the task force container officer-in-charge or brigade SPO based on the operational needs of the supported units. It is important to re-

main flexible when coordinating with the supported units and their respective CCOs. Since travel can be canceled because of bad weather, maintenance issues, or enemy threats, plan for an additional day or two for travel.

The base closure assistance teams (BCATs) are also augmented with an MCAT subject matter expert. Sometimes, because of the quantity of containers, the BCAT will require additional assistance from a regional MCAT. In these cases, the BCAT provides an initial container assessment.

Any risks identified from the threat briefing and unit coordination should be included in the composite risk management worksheet to be submitted to the company commander and battalion safety officer for review. The composite risk management worksheet is provided

to the battalion commander when the CONOP is briefed for mission approval.

Complete the Plan

Once the threat briefing has been completed and the mission dates are updated on the CONOP, any final information gaps are filled. The point of contact should be updated on the CONOP, which is posted on common-access portal for access by the battalion battle desk.

Issue the Complete Order

The CONOP is initially briefed to the MCAT company commander separately and then to the CMRE battalion commander. Areas to consider when conducting MCAT missions include the impacts of the presence of Afghan National Security Forces, movement, medical, container management, and base

closure and transfer.

If the mission is approved, then a copy of the signed composite risk management sheet should be provided to the battalion safety officer.

Supervise and Refine

MCAT leaders should schedule time to accompany the CCO during a full inventory of container data. They should use the CCO operations assessment to provide after action review comments. Conducting full audits of container inventories will ensure that IBS-CMM container data is accurate.

Leaders should provide a full container inventory report to unit commands and stakeholders, including CCOs and forward operating base mayors (as requested). They should identify which containers are correctly reflected in the IBS-CMM and which containers need to be created in the database.

The MCAT will conduct the container management battle drills in conjunction with the CCOs or container management stakeholders to support the unit. If a CCO is to be appointed by the unit, then the MCAT will provide a sample appointment order and initial IBS-CMM training.

The TLPs are necessary for conducting safe and effective MCAT operations. Applying the TLPs will encourage timely planning and execution while meeting the requirements of the CM LOI in a battlespace undergoing base closure and transfer.



Forward Operating Base Sharana materiel redistribution yard noncommissioned officer-in-charge Sgt. Andrew Markley, 289th Quartermaster Company, signals for a rough-terrain container handler to proceed forward to offload containers that have just arrived at his facility. (Photo by 1st Lt. Henry Chan)

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1st Lt. Joseph Lebs, Master Sgt. Jose Coronado, and Master Sgt. Isaac Gonzalez, assigned to the 311th Expeditionary Sustainment Command's Operational Contract Support Section, discuss contracts at Kandahar Airfield, Afghanistan. (Photo by Sgt. Phillip Valentine)

Operational Contract Support: Looking Forward by Looking Back

Civilian resources have historically been used to augment force sustainment. Operational contract support must continue to be taught so that future commanders can effectively use such resources.

■ By Capt. Anthony C. Clemons

Contracting civilian personnel and equipment to support military operations is not a modern concept. In 1781, Robert Morris, the U.S. Superintendent of Finance, observed contracting to be “the cheapest, most certain, and consequently the best mode of obtaining those articles which are necessary for the subsistence, covering, clothing, and moving of

an Army.” Since Morris made this observation, the Army has consistently dealt with sustainment requirements beyond its internal capability.

Recognizing the Need for Training

Today, sustainment requirements still stretch the Army’s capability and require the use of contract support—the essence of Morris’s vision.

However, the last decade of conflict has allowed little time to formally train commanders and staff officers on how to plan for and obtain supplies, services, and construction from commercial sources in support of operational needs.

In turn, many lessons learned have emerged about how to integrate contract support as a force multiplier. These lessons have allowed

commanders and staff officers to cultivate a working knowledge of acquisition terminology and contract management procedures.

The Army responded to these developments by following Joint Publication 4-10, Operational Contract Support, and by publishing Army Tactics, Techniques, and Procedures 4-10, Operational Contract Support Tactics, Techniques, and Procedures, and Army Regulation 715-9, Operational Contract Support Planning and Management. These publications provide the regulatory and doctrinal guidance for best practices in contract support integration for current operations.

Yet, even with an understanding of the doctrinal uses of contracting, commanders and staff officers have many other requirements they must manage. This has given rise to the need for Soldiers with the skills to advise commanders and staff sections in identifying, coordinating, and synchronizing contract support requirements within the concept of operations; developing and staffing acquisition requirements packages; managing contracts once they have been resourced and awarded; and

and the Army Logistics University (ALU), which offers a two-week resident course.

ALU's resident course is designed to instruct those responsible for planning and assisting in the integration of contracted support during deployed operations. The course meets this goal by teaching students how to prepare requirements packages and manage a unit's contracting officer representative responsibilities for basic service and supply contracts. To graduate, students must complete a series of practical exercises and develop a complete requirements package that includes:

- A performance work statement.
- An independent government cost estimate.
- A purchase request and commitment.
- A letter of justification.
- A contracting officer representative nomination.
- A quality assurance surveillance plan.

Upon completing the ALU course, graduates receive the additional skill identifier 3C (OCS) and gain the functional skill set to

U.S. and coalition forces from two theaters of operation, where OCS subject matter experts are needed to close out contracts. The Army is building a cadre of contract management officers by updating support organizations' tables of organization and equipment to include the additional skill identifier 3C. As a result, a spike in OCS training is probably on the horizon since various activities will need competent personnel to manage contract closeout procedures.

Yet the perceived relevance of OCS could quickly fade once U.S. forces withdraw from each theater and refocus on conventional combat operations. At that time, military leaders may find it unnecessary to train Soldiers in OCS. This idea is supported by a historical survey of the steps taken by executive, legislative, and military leaders at the close of prior conflicts.

Drawdowns

Historically, a drawdown of U.S. forces following a conflict results in significant budget cuts. In his 2002 thesis for the Army Command and General Staff College, Maj. Gary L. Thompson states that "at the cessation of hostilities, the Army experiences great pressure from Congress, families of mobilized soldiers, industry, and the general public to return mobilized soldiers to their premobilization status." When drawdowns occur, funds previously allocated for Soldier training and professional development decrease.

However, although the idea of funding cuts seems logical on its face, the amount of funding cut does not always align with the number of troops cut. In 1992, then-Army Chief of Staff Gen. Gordon R. Sullivan described the impact of hasty budget cuts: "If dollars get tighter, I will have to turn to where I get the money quickest. That's training, and it starts to get at people."

As a result of budget constraints

Commanders who encourage Soldiers to pursue professional development and education opportunities will only strengthen the long-term future of the Army. For commanders to do this effectively, funding must be allocated for relevant training priorities that align with the lessons learned over the last decade.

confirming closeout once work is complete.

Formal OCS Training

Two separate institutions provide training and education for Soldiers on topics pertaining to operational contract support (OCS) and management: Defense Acquisition University, which offers online courses,

advise a commander on best practices in contract integration and management. That counsel will play a key role in how that commander accomplishes his mission.

The Relevance Concern

The relevance of OCS in today's operational environment is demonstrated by the retrograde of



Contractors from the Bagram Airfield, Afghanistan, retrograde sort yard load a water tank onto a contracted transportation truck. (Photo by 1st Lt. Henry Chan)

in 1948, the Army cut basic training from 14 weeks to eight weeks. Thompson explains the repercussions of misguidedly considering professional military education to be a luxury: “The Army War College closed during World War II and remained closed from 1945 to 1950. During the Korean War, the War College was reopened, but the damage had already been done. The generals of the 1950s and 1960s would assume their positions without adequate preparation.”

Commanders who encourage Soldiers to pursue professional development and education opportunities will only strengthen the long-term future of the Army. For commanders to do this effectively, funding must be allocated for relevant training

priorities that align with the lessons learned over the last decade.

The OCS skill set has had more than a decade of refinement and modernization. A Soldier with additional skill identifier 3C knows how to research, write, and manage acquisition-ready requirements packets and other products needed for requesting support for a requiring activity. The detailed products that a Soldier creates before and during the acquisitions process can save the government time and money long term.

Based on the history of contracting, it seems that the way ahead has always involved the integration of civilian resources to augment force sustainment. To that end, best practices in OCS must be continually taught so future commanders

can decisively use those resources to achieve success in future contingency operations.

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The Army Command and General Staff College's New Solution to an Old Planning Problem

The Army Command and General Staff College has developed the P934 Course to provide students with the doctrinal knowledge and tools needed to meet sustainment planning requirements for the Command and General Staff Officers' Course and beyond.

■ By Maj. Michael E. Ludwick and Michael E. Weaver

In the March–April 2011 issue of *Army Sustainment*, Maj. Gen. James L. Hodge stated, “Sustaining the future force in an era of persistent conflict, under conditions of uncertainty and complexity, requires an adaptive and versatile sustainment framework that is capable of maintaining the force’s freedom of action.”

This statement, which described Hodge’s vision of the Army’s Functional Concept for Sustainment, reflects the Army’s current sustainment challenge. This challenge requires logistics, adjutant general, and medical service officers attending Intermediate Level Education (ILE) to excel with agility and versatility in a highly complex, ill-defined environment.

How does the Army teach sustainment officers attending ILE to develop a concept of sustainment that allows the commander freedom of action yet builds capacity to respond to changes within the operational environment? At the Army’s Command and General Staff Officers’ Course (CGSOC), the Department of Logistics and Resource Operations’ answer to the challenge is a sustainment planning and problem-solving course: P934.

Current Curriculum Structure

In addition to the general sustainment education provided to all

students during the Common Core Course and Advanced Operations Course (AOC), CGSOC provides education for sustainment officers, including those in the Adjutant General Corps, through the Support Operations Officer (SPO) Course. Conducted during the CGSOC elective period immediately following AOC, the SPO Course is an elective that provides branch-specific education that covers sustainment planning fundamentals and the use of various sustainment planning tools.

However, the SPO Course is taught at the end of the academic year. Several students who completed the SPO Course have asked why it is not provided before the start of CGSOC because the course could provide sustainers with a doctrinal foundation for the Common Core Course and AOC.

Bridging the Gap

Current challenges from the field and student comments prompted the Department of Logistics and Resource Operations to develop a program to bridge the knowledge gap.

The initial attempt to bridge the education gap was the Sustainment Planning Tools Seminar, a two-hour briefing that covered sustainment doctrine and planning tools. However, the seminar failed to provide

sufficient information to fill the knowledge gap identified by former students and officers in the field.

As a result, P934 was established to provide the students with a common doctrinal knowledge base and the crucial tools necessary to enhance the planning skills required during CGSOC and meet Hodge’s challenge to sustain all phases of the operation.

P934 Curriculum

P934 is an intense 12-hour curriculum delivered over two days. Subjects covered in the course include modular sustainment concepts, tactical support operations, maintenance operations, supply and field services, medical operations, movement and distribution management, ammunition and petroleum, oils, and lubricants operations, and automated planning tools.

Day one begins with an overview of Army sustainment, the levels of war, and levels of sustainment. Next, a lesson on the sustainment warfighting functions and their principles leads to the elements of sustainment.

The lesson block on logistics, personnel services, and health service support provides a common understanding of sustainment units and their capabilities on the battlefield. The block also provides an awareness of sustainment units and their com-

mand and support relationships. The first day of the course sets the conditions for the capstone exercise conducted on day two.

Day two begins with a quick review of concepts from day one, followed by a two-hour block of instruction on the military decision-making process and a sustainment overview that includes the products used in a running estimate. Collectively, lessons from both days provide an understanding of how commodities flow within a theater and set the groundwork for the course's capstone exercise.

The capstone exercise requires students to create a force structure layout within a new theater. The process requires students to analyze and brief functional areas in support of the theater; assess reception, staging, onward movement, and integration; and develop a theater-opening plan complete with a movement plan for brigade-level organizations.

The success of the exercise is measured by the success of the sustainment officers in developing an understanding of sustainment planning, unit capabilities, and requirements and passing that knowledge along to their classmates.

Automated Planning Tools

As stated in Joint Publication 4-0, Joint Logistics, "effective planning enables logisticians to anticipate requirements, and validate, synchronize and integrate them with available resources to minimize duplication of effort, resolve shortfalls, mitigate risk and ensure effective support of CCDR [combatant commander] requirements." A complete understanding of automated planning tools is essential for sustainment officers to achieve these requirements.

P934 introduces the capabilities, limitations, and operation of two automated planning tools: the Operational Logistics (OPLOG) Planner and the Logistics Estimation Workbook (LEW).

The LEW uses current doctrine, authorized force structure, and Com-

bined Arms Support Command planning factors to provide a comprehensive estimate of sustainment requirements based on user-defined criteria. The LEW provides factors for all classes of supply, maintenance, transportation, medical evacuation, and personnel. It also provides fac-

tainment professionals. Given such a complicated responsibility, sustainment planners need all the tools they can get. For sustainment officers attending CGSOC, P934 provides a common doctrinal base and an understanding of automated planning tools to rapidly plan with sufficient



P934 co-developer Lt. Col. Ray Ferguson discusses the benefits of using automated planning tools for sustainment planning during a P934 course.

tors for unique problems such as pack-mule requirements and building a forward operating base.

The LEW is relevant for today's complex operational environment. For example, during the petroleum, oils, and lubricants block of instruction, the LEW can help the staff identify a unit's capacity to store and distribute class IIIB (bulk petroleum, oils, and lubricants) during all phases of the operation. Additionally, the LEW helps identify the number and types of units required for the mission. The LEW also allows the user to tailor organizations by overriding standard inputs. The most recent version of the LEW is located on Army Knowledge Online.

Hodge's challenge to all sustainment professionals to sustain the future force in an uncertain and complex environment requires an innovative approach to educate sus-

detail to provide commanders the operational reach and freedom of action needed to complete the mission.

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Petroleum supply specialists from the 46th Aviation Support Battalion distribution company conduct refueling operations on an OH-58 Kiowa helicopter at the rapid refuel point. (Photo by Capt. Cain Claxton)

The Modern Aviation Support Battalion

The Army's newest aviation support battalion provides air and ground sustainment for the 16th Combat Aviation Brigade.

■ By Maj. DeAndre L. Garner

A combat aviation brigade (CAB) cannot maintain initiative and provide lethal fire support without a responsive aviation support battalion (ASB). The 46th ASB is the newest aviation support battalion activated as part of the 16th CAB at Joint Base Lewis-McChord (JBLM), Wash.

The 16th CAB—the largest CAB in the Army—is the only aviation asset and one of seven brigades in the Stryker-heavy 7th Infantry Di-

vision. Other brigade combat teams receive logistics support from their assigned brigade support battalions (BSBs), but the CAB receives both air and ground sustainment from the ASB.

The 46th ASB activated in October 2011 at JBLM. Before the 46th ASB's activation, the 16th CAB had no organic ASB. At the time of the activation ceremony on Aug. 1, 2011, the unit had only four assigned personnel: the battalion commander,

command sergeant major, executive officer, and personnel officer. Within a year, the 46th ASB grew to 650 Soldiers and four companies, making it the largest battalion in the brigade. The 46th ASB is responsible for a variety of sustainment operations on behalf of I Corps and the 16th CAB in garrison. On order, the 46th ASB also deploys and provides sustainment support to the 16th CAB during unified land operations.

The ASB versus the BSB

The ASB shares few similarities with the more commonly known BSB. While both battalions have the primary mission of sustaining a brigade, BSBs support ground maneuver brigade combat teams and ASBs support aviation brigades; consequently, a division has several BSBs but only one ASB.

The ASB consists of a headquarters support company (HSC), distribution company, aviation support company, and network support company. The BSB is larger since it has—in addition to its headquarters, distribution, maintenance, and medical companies—up to four forward support companies that support specific battalions within the brigade.

The forward support companies in the aviation brigade are organic to the flight battalions and do not organize under the ASB commander. The ASB does not have a medical company; it has a medical section within the HSC. The aviation brigade's signal support is under the ASB, but signal unit support in the ground brigade combat team is in the special troops battalion, not the BSB.

Because of its focus on ground combat platforms, the BSB has a more robust direct support maintenance capability in its field maintenance company; the ASB performs limited direct support ground maintenance since the main combat platform in the aviation brigade is the helicopter. The ASB's aviation support company fills this direct support role for the CAB airframes but evacuates field-level ground maintenance to the HSC. Both the ASB and BSB receive area support from a sustainment brigade.

Headquarters Support Company

The HSC, nicknamed the Spartan company, is the principal element for sustainment in the ASB. The battalion command group, primary staff sections, and support operations section reside in the HSC. In addition, the HSC provides medical treatment, food service, and ground maintenance support for the battalion and brigade.

The food service section can provide 1,600 meals daily using its two containerized kitchens. It also manages and operates the brigade dining facility in garrison. The medical section provides level 1 care to CAB Soldiers and conducts flight physical examinations for aviators to ensure they stay healthy and qualified to fly.

The maintenance section is the largest and busiest of the company operations. This section provides field-level maintenance for the battalion and the brigade headquarters company and direct support ground maintenance to the flight units in the brigade. The maintenance section completes job orders for armaments and communications and electronics equipment as well as automotive repairs beyond the unit capability and vehicle recovery operations.

Distribution Company

The mission of the distribution company, also known as Apollo, is to provide logistics support and distribution of all classes of supply except for class VIII (medical supplies). The unit has a retail fuel support capacity of 105,000 gallons per day and is responsible for the day-to-day operation of the rapid refuel point at Gray Army Airfield. The distribution company operates the supply support activity, which maintains an authorized stockage list of 1,185 lines, processes 5,000 requisition and receipt transactions weekly, and issues supplies for the brigade.

The distribution company has the tactical water purification system and the lightweight water purification system that provide the CAB with 40,000 gallons of purified water daily. With its authorized number of medium tactical vehicles, heavy expanded-mobility tactical trucks, load-handling systems, and flatbed trailers, the distribution company can move the entire battalion into an area of operations.

Aviation Support Company

The aviation support company,

called the Brave Eagles, provides the aviation intermediate maintenance capability for the brigade. The largest of the four ASB companies, the aviation support company performs sustainment aviation maintenance on all radios, countermeasure devices, and night-vision devices in the brigade's aircraft.

It performs scheduled, unscheduled, and phased maintenance on all aircraft in the brigade and provides maintenance support teams for support and technical assistance.

With its multiple fabrication and repair shops, the company performs intermediate-level maintenance on components, subsystems, and airframes and completes some depot-level aviation maintenance for the CAB.

The aviation support company distinguished itself by performing the first phased maintenance operation on a UH-60 Black Hawk helicopter by an all-military team at JBLM. This unit also performs the very important downed-aircraft recovery team (DART) mission for the brigade. It played a pivotal role during an accident in December 2011 by quickly recovering two downed aircraft and all sensitive items.

Network Support Company

The network support company, known as the Centurions, is responsible for providing tactical communications to the CAB commander and brigade headquarters, allowing him to exercise command and control of his battalions. The company's mission is to direct, manage, install, operate, and maintain the Warfighter Information Network-Tactical and tactical radio communications system infrastructure in support of the aviation brigade's mission.

Although it is the smallest company, the network support company can quickly set up its joint network node, command post nodes, and high-capacity line of sight shelters and deploy its retransmission teams throughout the brigade's area of operations, enabling the brigade to have communications within hours.

Called Into Action

Soon after activation, the 46th ASB was called into action to execute one of its mission-essential task list requirements for one of its sister units. In December 2011, two OH-58 Kiowa helicopters and their crews were lost in a serious accident. The 46th ASB's aviation support company launched the DART, several medium tactical vehicles, flatbed trailers, and SCAMPs [self-propelled cranes for aircraft maintenance and positioning] to the site.

The aviation support company recovered the aircraft pieces and sensitive items and brought them to a facility on JBLM to enable a team to

complete an investigation. The HSC supplied food and fuel for the DART and a security force that remained on the site for the two-day operation. Working even through the night, the DART recovered more than \$12 million worth of aviation sensitive items spread over a 1-kilometer area.

Rehearsal Participation

In February 2012, as the 4th Attack Reconnaissance Squadron, 6th Cavalry Regiment, was tasked to assist a Stryker brigade exercise at Yakima Training Center, Wash., the 46th ASB received the mission to establish a forward arming and refueling point (FARP) to support the mission.

Soldiers from both the aviation support company and the distribution company put together a package of aircraft refueling equipment and vehicles, forklifts, and safety equipment and executed rehearsals at JBLM's Gray Army Airfield. Lt. Col. Mark Sisco, 46th ASB commander, provided surveillance and guidance during the rehearsals since this would be the first time for many of the ASB Soldiers to function around aircraft in operation.

Lt. Col. Sisco stressed safety to the team and leaders because of the inherent dangers and risk involved with approaching helicopters for refueling and loading live ammunition into the weapons systems.

"Continuity and consistently standardized training for all fuel specialists are critical for our 92Fs [petroleum supply specialists] given the diverse, dangerous, and complex refuel requirements for the brigade's fleet of aircraft. It's graduate level work," said Sisco.

Confident in the team after numerous rehearsals, Sisco launched the FARP team on the 3-hour convoy from JBLM to Yakima. Over the course of the exercise, the 46th ASB FARP pushed 1,600 gallons of fuel, 2,500 rounds of .50-caliber ammunition, and 67 2.75-inch rockets without accident or injury. A maintenance team from the HSC provided ground maintenance support to the operation. The 46th ASB continually proved its multifunctional logistics capability.

Battalion Training

As it is with any unit, the 46th ASB Soldiers needed to train and demonstrate proficiency in warrior tasks. The battalion staff planned and resourced a battalion-level lane training exercise to accomplish that goal.

In April 2012, Operation Bellator Stakes took shape in a small training area at JBLM. Noncommissioned officers (NCOs) from each of the four companies set up numerous training lanes, including land navigation, first



Sgt. Crystal Rocha, Spc. Anna Rodriguez, and Pfc. Thomas Shrew, water treatment specialists from the 46th Aviation Support Battalion distribution company, solve a problem with a lightweight water purification system during new equipment training. (Photo by Maj. DeAndre L. Garner)

aid, convoy operations involving improvised explosive device (IED) recognition, mounted and dismounted patrolling, combatives, and chemical, biological, radiological, nuclear, and high-yield explosives training.

The event accomplished several objectives by allowing Soldiers to train and move in a tactical environment and be evaluated by their own NCOs, allowing the battalion command sergeant major to assess the NCOs on how they train their Soldiers and providing the battalion commander with the chance to assess the efficacy of the battalion's weekly warrior time training sessions.

The event was such a success across the brigade and installation that the 46th ASB received the mission from the brigade headquarters to conduct the lane training event for the brigade's 2012 NCO and Soldier of the Year competitions and, soon after that, the I Corps NCO and Soldier of the Year event.

In June and July 2012, the four ASB companies each planned and conducted field training exercises to train mission-essential task list tasks, practice basic field craft, and conduct assembly area operations in preparation for its first battalion field training exercise at Yakima Training Center in October 2012.

The 10-day exercise was a unique opportunity for the ASB to step away from its various missions and integrate all the units in establishing a support operation. The ASB commander trained his battalion while providing support to the flight units conducting gunnery rotations.

The distribution and aviation support companies established a FARP, the network support company established retransmission capability, and the HSC performed field feeding operations in a tactical assembly area. Each company participated in small-arms ranges and a counter-IED training lane.

The battalion staff set up a fully functioning tactical operations center and monitored all support missions, unit training, and movement in and



Lt. Col. Mark Sisco, 46th Aviation Support Battalion commander, provides guidance to a Soldier during a field training exercise. (Photo by Capt. Cain Claxton)

out of the assembly area. Most importantly, the 46th ASB showed the brigade commander that it was fully capable of moving anywhere to sustain the brigade.

The Aviation Refuel Operation

The 46th ASB provides oversight for several garrison operations originating from the brigade commander's initiatives. As the summer of 2012 approached, the CAB commander tasked the ASB with establishing an aviation refuel operation at Gray Army Airfield. Until that time, only civilian contractors provided fuel to the aviation units at JBLM.

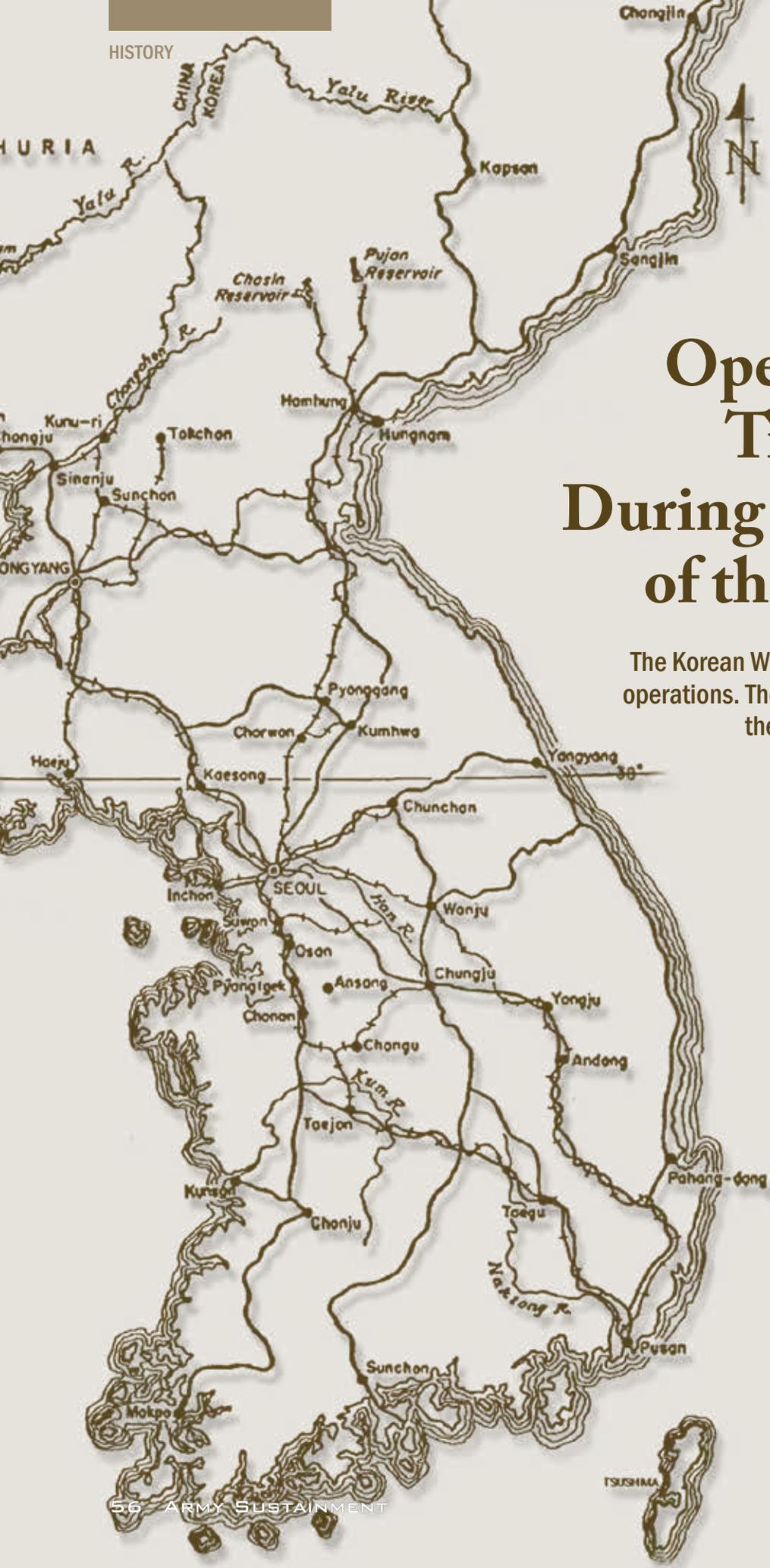
In June 2012, the distribution company's fuel and water platoon developed a training curriculum for fuel personnel and a site layout for aircraft approach, parking, fuel pads, and heavy expanded-mobility tactical truck tanker aviation refueling systems. The platoon also established a military-operated risk reduction program for the CAB aircraft and other aviation units at JBLM.

Since the operation began, Soldiers have pushed more than 515,900 gallons of aviation fuel. HSC food service personnel have been managing a refurbished dining facility. Medical personnel from the HSC took control of a medical treatment facil-

ity and created an aviation resource clinic that provides routine care and flight physical support to all Soldiers in the brigade area. The supply platoon of the distribution company operates the brigade's supply support activity, and the ASB commander manages the aviation life support equipment shop for the CAB.

The next phase in the battalion's growth is to prepare for deployment to a contingency area in support of unified land operations. The commander emphasizes capturing lessons learned through after action reviews and applying them to standard operating procedures. The pace of taskings and missions does not slow down for the 46th ASB; it continues to prove that it is definitely "First in Support" for the 16th CAB.

Maj. DeAndre L. Garner is the support operations officer for the 46th Aviation Support Battalion, 16th Combat Aviation Brigade. He holds a bachelor's degree in criminal justice from St. Martin's University and a master's degree in business and organization security management from Webster University. He is a graduate of the Support Operations Course and the Combined Logistics Captains Career Course.



Operation Yo-Yo: Transportation During the First Year of the Korean War

The Korean War illustrates how supply lines affect operations. The closer a force is to its supply base, the shorter the turnaround in logistics.

■ By Richard E. Killblane

In June 1950, the North Korean government decided to unify the Korean Peninsula under a single communist rule by crossing the 38th parallel and conquering its neighbor to the south, the Republic of Korea (ROK). The North Korean army had just returned from combat in China, where the communists under Mao Tse Tung had defeated the nationalists under Chiang Kai Shek. The inexperienced ROK Army fell back in ruin.

Consequently, President Harry Truman decided to reinforce the ROK Army and reestablish the 38th parallel. Like all wars, transportation and lines of communication significantly affected combat during the first year. Because the U.S. lines of communication expanded and contracted from Pusan to the Chinese border and back, the men unofficially called

the fighting that first year “Operation Yo-Yo.”

Port Operations at Pusan

The first objective of the U.S. intervention in the Korean War was to stabilize a perimeter around Pusan, the only deep draft port available to the U.S. Army. Pusan provided the critical link in the lifeline of men and materiel from Japan and the United States.

The bulk of supplies arrived by World War II Liberty and Victory ships from the Military Sea Transportation Service. Task Force Smith, built around the 1st Battalion, 21st Infantry Regiment, 24th Infantry Division, arrived in Korea on July 1, 1950, to buy time for the arrival of the rest of the 24th Infantry Division from Japan. With a small combat footprint, stevedores arrived to open up the port.

The 8057th Provisional Port Company, which arrived on July 2, began operations immediately, discharging 309,000 tons of cargo during July. The Far East Command quickly established the Pusan Base Command on July 4 to supervise port operations. Task Force Smith moved forward by rail and truck to fight the first U.S. engagement with the North Koreans at Osan on July 5.

With initial port operations established, a truck platoon arrived on July 8, and the 9th Army Unit Transportation Railway Service (Provisional) arrived the next day. The 25th Infantry Division began arriving on July 9, and the 1st Cavalry Division arrived next.

Rail Lines of Communication

Fortunately, Korea had a well-developed rail infrastructure, thanks to the Japanese, that could move the troops forward. The 8059th Army Unit supervised railroad operations and maintenance, but the Korean National Railroad provided the crews for the locomotives. As more logistics units arrived, the Pusan Base Command was reorganized into the Pusan Logistical Command under

Brig. Gen. Paul F. Yount on July 13.

With three Army divisions and a Marine brigade in place, the Eighth Army increased its logistics footprint. The 70th Transportation Truck Battalion arrived with four truck companies from its base in Yokohama, Japan, on July 14 to conduct port clearance. On July 18, the 709th Transportation Railway Grand Division arrived in Korea to control the operations of the Korean National

(TROB) arrived in Korea, but they were understrength and only about 20 percent of their personnel had any railroad experience. So the railroad men rode the trains mostly to make sure the Koreans stayed on schedule.

On Aug. 31, the 7th Transportation Major Port assumed control of Pusan from the 2nd Medium Port and discharged over a million tons of materiel a month, but the limit-

The first objective of the U.S. intervention in the Korean War was to stabilize a perimeter around Pusan, the only deep draft port available to the U.S. Army. Pusan provided the critical link in the lifeline of men and materiel from Japan and the United States.

Railroad by establishing communications offices at various locations along the railways.

Elements of the 2nd Transportation Medium Port, also from Yokohama, arrived on July 23, and the 69th Transportation Truck Battalion arrived at Pusan on Aug. 7 to support I Corps, which had reactivated on Aug. 2. The lead regiment of the 2nd Infantry Division arrived from Fort Lewis, Wash., in early August. Through the month of August, I Corps held the Pusan perimeter against repeated enemy attacks while transportation operations expanded.

Rail was the prime mover during this phase, since roads through the mountains were few and generally in poor condition. On Aug. 26, the 8059th Army Unit and 709th Transportation Railway Grand Division were inactivated and their assets were transferred to the Transportation Section Rail Division to create the 3rd Transportation Military Railway Service (TMRS) at Pusan.

That same month, the 764th and 765th Transportation Railway Shop Battalions and the 714th Transportation Railway Operating Battalion

ed capacity of the port left ships at anchorage for weeks. The Pusan Logistical Command was reorganized into the 2nd Logistical Command in September to receive, store, and push supplies forward to the Eighth Army.

Port Operations at Inchon

With the port and port clearance capability firmly established, the American's short lines of communication became its strength as compared to the long, vulnerable enemy lines of communication stretching back to its bases in North Korea. To break out from Pusan, Gen. Douglas MacArthur ordered X Corps in Japan to conduct an amphibious landing at Inchon on Sept. 15. This would both open up another port and threaten the North Korean Army's supply line.

The day after the 1st Marine Division landed, the 55th Transportation Truck Battalion also landed at Inchon in the early hours of Sept. 16. After two days on the beach, the battalion proceeded to Kimpo Airfield, where it unloaded cargo planes and relayed the supplies to the front in support of IX Corps, which later assumed command of the 2nd and

25th Infantry Divisions on Sept. 23. The 2nd Engineer Special Brigade brought the 7th Infantry Division ashore behind the 1st Marine Division at Inchon on Sept. 18. To operate the port of Inchon, the 3rd Logistical Command was activated on Sept. 19.

The threat worked, and the communists beat a hasty retreat. In their retreat from the ROK, the North

talion supported X Corps, and the 70th Transportation Truck Battalion conducted port clearance. With the Eighth Army just short of the Chinese border, victory seemed at hand.

Because of his success with the landing at Inchon, McArthur pulled X Corps out of fighting in Seoul on Oct. 1 and deployed it to the east side of the peninsula. X Corps landed at Wonsan on Oct. 26, at Iwon on Oct.

knew that the Chinese Army was farther from its supply base than his regiment was from its own. He was right. Tanks reopened his lines of communication and the Indianhead division fell back no further.

As the Chinese poured around the Chosin Reservoir on the east side of the peninsula, the 1st Marine Division absorbed what remained of the battered 7th Infantry Division and fought its way through 10 miles of roadblocks to Koto-ri.

There, Lt. Col. John U. D. Page, an artillery officer from the X Corps staff attached to the 52nd Transportation Truck Battalion, established a traffic control point for the Marines and Soldiers on the supply route. Page became actively involved in the defense of Koto-ri.

On Dec. 5, Marine Corps Maj. Gen. Oliver P. Smith ordered the withdrawal from Koto-ri. The 52nd Transportation Truck Battalion, having dropped from 3rd Infantry Division's Task Force Dog at Chinghung-ni on Dec. 7, met up with the Marines at Koto-ri the next day. On Dec. 9, the Marines loaded up on the Army trucks for their arduous journey south. After reaching the port, X Corps withdrew from Hamhung to Pusan from Dec. 11 through Dec. 24.

Page joined the rear guard of the retreating column that came under frequent flank attack. Blocked at Sundong near the mouth of the pass on Dec. 10, Page led the counterattack and was killed. Page's heroic action earned him the Navy Cross, which was later upgraded to the Medal of Honor.

As Eighth Army fell back, so did the Transportation units. The 69th Transportation Truck Battalion likewise withdrew on Dec. 3, arriving at Pusan on Dec. 12. Its mission shifted to transporting ammunition and supplies. The 55th Transportation Truck Battalion also fell back as far south as Pusan. Eighth Army eventually fell back to near the 38th parallel, where the war had started.

The Chinese threat to Seoul subsequently forced the 3rd TMRS to

While good logistics may not ensure success in combat, the lack of it can guarantee defeat. Lines of communication dictate the routes by which armies supply themselves and consequently fight; so the closer a force is to its supply base, the shorter the turnaround in logistics.

Koreans demolished railroads and bridges. The 3rd TMRS had moved earlier to Taegu and had organized two rail reconnaissance groups for advance service. The 3rd TMRS and Korean National Railroad then repaired the tracks and bridges behind the advance of the Eighth Army.

Advancing into North Korea

On Oct. 7, the Eighth Army crossed the 38th parallel, but the advance through North Korea was hampered by badly damaged roads. The 714th TROB meanwhile established rail transportation offices from Pusan to Taegu, and on Oct. 12 it assumed operational control of all Korean rail activities from Taegu south to the coast. The 3rd TMRS moved up to Seoul on Oct. 18. The 714th TROB then moved to Sindong and began operating as a rail traffic regulating organization rather than as a railway operating unit.

By Oct. 19, Eighth Army units occupied Pyongyang, the North Korean capital. The 69th Transportation Truck Battalion advanced to Pyongyang in November to support I Corps. The 55th Transportation Truck Battalion supported IX Corps, the 52nd Transportation Truck Bat-

26, and then opened up Hamhung as the main port of debarkation. X Corps then pushed to the Chinese border while I and IX Corps did likewise. The 52nd Transportation Truck Battalion then arrived at Hamhung in support of X Corps.

Retreat

On Nov. 29, the Chinese army poured across the border to cut off U.S. forces and destroy them in their retreat. The 55th Transportation Truck Battalion was involved in relaying cargo to the front when the Chinese attacked, and its trucks then evacuated the 2nd Infantry Division through a gauntlet of Chinese ambushes. It took the trucks of the 55th Battalion several trips to bring the 2nd Infantry Division back.

Col. Paul Freeman commanded the 28th Regimental Combat Team at Chip'yong-ni. It had fought the rear guard action to protect the retreat of the 2nd Infantry Division. Forced back from every position the U.S. Army had tried to defend, Freeman knew his men could hold this circle of hills.

While the Chinese and North Koreans mastered the method of infiltrating their enemy's rear, Freeman



Lt. Col. John U. D. Page received the Medal of Honor for his heroic actions in the Korean War. (Photo courtesy of Margaret S.W. Drew and the American Battle Monuments Commission)

relocate its headquarters back to Taegu on Dec. 18, and the railroad was used to transport as much materiel as possible south. On Jan. 1, 1951, the 714th TROB moved back to Pusan to run the rail operations of Taegu.

Stabilizing the Lines of Communication

As the frontline settled into a stalemate, the 55th Battalion advanced north to stage from Taegu, Taejon, and Wonju. The 70th Transportation Truck Battalion conducted port clearance to the depot. From there, cargo ran north by rail, and the 52nd Battalion pushed cargo out of Wonju to the X Corps rear.

The 69th Transportation Truck Battalion was relieved by the Pennsylvania National Guard's 167th Transportation Battalion in early 1951 and moved to Taegu. The 351st Transportation Highway Transport Group arrived in Korea on March 5, 1951, and on March 11 moved to Taegu to assume control of all trucking operations in Korea. The 70th Transportation Truck Battalion then moved to Hongchon on June 5, 1951, to support X Corps. The lines of communication remained stable for the remainder of the war.

While good logistics may not ensure success in combat, the lack of it

can guarantee defeat. Lines of communication dictate the routes by which armies supply themselves and consequently fight; so the closer a force is to its supply base, the shorter the turnaround in logistics. The Korean War illustrates how the length of the supply line affects operations.

The initial U.S. combat operations of the Korean War focused on defending the one major seaport left in South Korea's hands: Pusan. Once this base of supply was secured, MacArthur landed X Corps at Inchon to threaten the enemy's overextended supply line, forcing them back across the 38th parallel.

Following this success, X Corps seized the port of Hamhung and advanced near the Chinese border. With the logistics situation reversed, the Chinese intervened and infiltrated to cut the overextended U.S. supply lines, forcing I and IX Corps back to the 38th parallel. Similarly, the overwhelmed X Corps had to fall back to its supply base at Hamhung and was later ordered out. It joined the other two corps to form a new line of defense.

The war then settled into trench warfare similar to World War I for the next two years, with little advancement on either side. The Korean War ended 60 years ago in an armistice on July 27, 1953, but its lessons remain relevant today.

Richard E. Killblane is the command historian for the Transportation Corps. He has a bachelor's degree from the U.S. Military Academy and a master's degree in history from the University of San Diego. He has traveled to Southwest Asia five times to record the history of transportation operations during Operations Iraqi Freedom and Enduring Freedom and once to Haiti during Operation Unified Response. He has published numerous articles and books, including *The Filthy Thirteen*, *War Paint: The Filthy Thirteen Jump Into Normandy*, *Mentoring and Leading: The Career of Lieutenant General Edward Honor*, and *Circle the Wagons*.

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


Fred W. Baker III, 30 August 2013



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Sustainer Spotlight

Pfc. Jessica Jones and Pfc. Angelika Jansen are the first two women to be awarded military occupational specialty (MOS) 91P, artillery mechanic. The two Soldiers graduated July 16 from the 15-week course at the U.S. Army Ordnance School, Fort Lee, Va. Their new MOS is one of six that the Army opened to women last year as part of an effort to loosen the combat exclusion provisions under the Direct Ground Combat Definition and Assignment Rule. (Photo by Keith Desbois)