

July–September 2013

# ARMY SUSTAINMENT

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**Synchronizing Leader  
Development for  
Sustainment 2020**

**The Planning Process  
for Sustainers Part 3**

**Civilian Workforce  
Transformation: A  
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**Editor's Note:** You may have noticed that this issue covers three months, as opposed to our standard two. The Army-wide civilian furloughs require that we adjust our editorial and production cycles to accommodate for the loss of man-hours. Our plan is to publish this issue and the next as quarterly publications and return to our bimonthly cycle starting with our January–February 2014 issue. The loss of one issue this year has caused some backlog in editing and printing submissions. We appreciate your patience.

“The challenge is not cutting spending but optimizing readiness to ensure a highly capable force.”

Maj. Gen. Jack O'Connor and  
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# Synchronizing Leader Development for Sustainment 2020

The Army logistics community is currently working on initiatives in the education realm to shape the Globally Responsive Sustainment Strategy in support of the Army Leader Development Strategy.

■ By Maj. Gen. Larry D. Wyche



“Logistics planning involves conceptualizing, forecasting, and resourcing the future movement and support of forces.”

As the Combined Arms Support Command (CASCOM) continues to develop the Globally Responsive Sustainment Strategy, it has both the need and the opportunity to integrate the learning initiatives it is undertaking into a comprehensive logistics leader development strategy to produce adaptive and creative sustainers with the skills and knowledge to operate in the future environment.

It is imperative that our initiatives nest within the Army Leader Development Strategy (ALDS) and enable us to leverage Army resources to the maximum advantage to systematically develop the required skill sets across Soldiers' and Department of the Army (DA) civilians' careers.

## Army Leader Development Strategy

Leader development is achieved through a career-long synthesis of training, education, and experiences acquired through opportunities in the institutional, operational, and self-development domains to develop the leader attributes (character, presence, and intellect) and competencies (leads, develops, and achieves) outlined in Army Doctrine Publication 6-22, Army Leadership.

ALDS lays out how to approach that development and grants individual proponents the flexibility to develop a strategy to approach

their functional learning areas. Thus, we are developing a logistics leader development strategy that will become the logistics component of ALDS.

## Logistics Professional Education Strategy

The logistics community has been working on a number of initiatives that contribute to the leader development of our sustainers. Our contributions to the new version of DA Pamphlet 600-3, Commissioned Officer Professional Development and Career Management, include career maps that give sustainers the opportunity to develop themselves from the tactical through the operational and strategic levels of the logistics enterprise.

We have started a number of education initiatives directly tied to the sustainment competencies required over the course of a career, to include strengthening the professional military education programs and university partnerships that the Army Logistics University (ALU) has established.

Among these programs and partnerships are the College of William and Mary's Major General James Wright MBA Fellowship, Virginia State University cooperative undergraduate degree programs, and a commercial SAP [Systems, Applications and Products in Data Processing] certification program in coordi-

nation with the SAP University Alliance.

Additionally, we are examining current programs within ALU, such as the Theater Logistics Planners Program and Intern Logistics Studies Program, as well as those at the Command and General Staff College (CGSC) and the Army War College.

However, during the development of these initiatives, we have discovered that the Army has many disparate logistics education programs (both military and civilian) that are not clearly tied to an overarching strategy, Training and Doctrine Command priorities, or the capabilities described in the Globally Responsive Sustainment Strategy.

By facilitating the development of an integrated logistics education process, we will work to integrate these various programs and tie them to the Army's overarching strategies, priorities, and concepts. As first steps in this process, we worked within

the logistics community to define the logistics learning areas and established the Logistics Professional Education Board (LPEB) to guide our work.

### Logistics Learning Areas

To understand the educational requirements, we worked with our logistics partners to develop logistics leader learning outcomes and competencies tied to the demands articulated in the Army 2020 and Sustainment 2020 concepts. Those competencies, applicable to officer professional development, pertain to four main learning areas of military logistics: planning, distribution/supply chain management (D/SCM), life cycle systems management (LCSM), and defense industrial base management (DIBM). These areas are by no means mutually exclusive; yet, when considered holistically, they make up the professional discipline of military logistics.

**Logistics planning.** Logistics planning involves conceptualizing,

forecasting, and resourcing the future movement and support of forces. It includes those aspects of military planning that deal with a) design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel; b) movement, evacuation, and hospitalization of personnel; c) acquisition or construction, maintenance, operation, and disposition of facilities; and d) acquisition or furnishing of services.

**D/SCM.** D/SCM refers to a cross-functional approach to procuring, producing, and delivering products and services to customers. The broad management scope includes suppliers, internal information, and funds flow.

**LCSM.** LCSM is the process of managing systems across their entire life cycles, taking into account the fully burdened costs associated with maintaining required systems readiness, trade-offs between systems design and total ownership costs, and the importance of

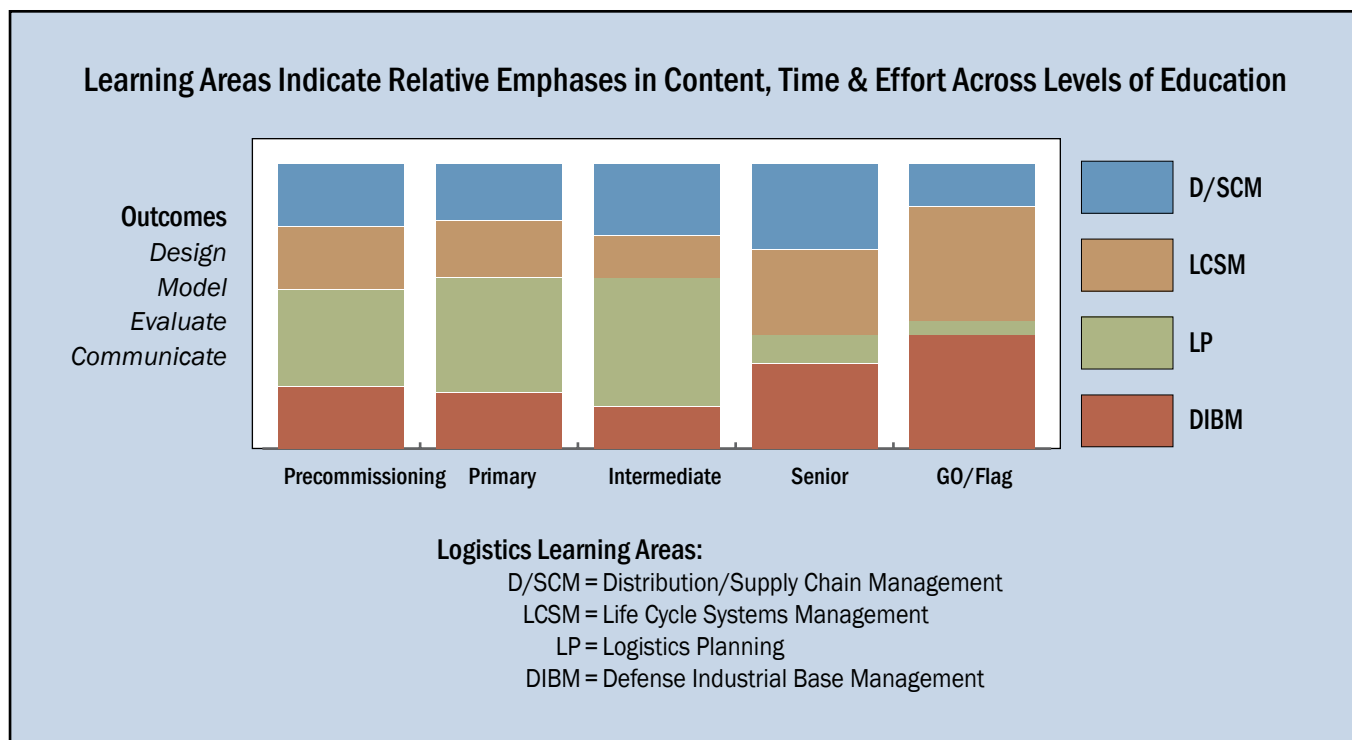


Figure 1. Proposed logistics professional education framework for officers.



comprehensive visibility over total ownership costs.

**DIBM.** DIBM pertains to co-operative management within a complementary and synergistic industrial base (private and govern-

strategies and priorities.

The LPEB comprises three of our most senior practitioners and is chartered to provide strategic guidance and oversight as we continuously adapt our educational

board will review opportunities for broadening assignments and self-development at the tactical, operational, and strategic levels throughout a logistician's career."

The charter also identifies the following specific responsibilities of the LPEB:

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By facilitating the development of an integrated logistics education process, we will work to integrate these various programs and tie them to the Army's overarching strategies, priorities, and concepts.

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ment owned) that has the ability and capacity to satisfy mission materiel requirements in peacetime and during national emergencies. It involves evaluating processes, organizations, and resources.

These four broad logistics learning areas will be considered for coverage in each level of learning. They will be emphasized relative to the scope of work or context expected at each level and cohort (officer, warrant officer, noncommissioned officer, or civilian).

In addition, these learning areas will be placed in context so that the learner may gain a sense of how these areas of military logistics play out under various conditions. The study of military logistics history and case study research, we believe, will serve that learning well. (See figure 1.)

### Logistics Professional Education Board

The LPEB was designed as a logistics professional education strategic oversight body to shape the future development of Army logisticians. The board will enable the Army logistics community to synchronize its many learning initiatives. It will also facilitate the development of an integrated logistics education process that is tied to the Army's overarching

institutions. Establishing the LPEB under ALU's purview will help the logistics community accomplish the desired outcomes.

On February 25, 2013, CASCOM sponsored the first meeting of the LPEB. Its initial tasks were to establish the board through an agreed-to charter, review the current state of Army logistics education, adopt an officer logistics education framework that integrates with the Army and joint communities, and carve a way ahead to later include civilians, warrant officers, and noncommissioned officers.

The voting members in attendance were the Army G-4, the Army Materiel Command deputy commanding general, and the CASCOM commander. Also in attendance were the director of the National Defense University's Center for Joint and Strategic Logistics; the Ordnance, Transportation, and Quartermaster School commandants; and representatives from the Human Resources Command, the Forces Command G-4, the Army War College, CGSC, and the Combined Arms Command.

One of the main accomplishments of the first LPEB meeting was drafting the board's charter. The charter states that "the

- ☐ Guide the development of an overarching logistics education strategy.
- ☐ Review and approve the four logistics learning areas.
- ☐ Review and approve the logistics education continuum.
- ☐ Review and approve the logistics learning outcomes.
- ☐ Guide criteria and processes for governance of accreditation standards for logistics educational programs, curriculum outcomes, selection of qualified military and civilian faculty, and student selection and talent management in accordance with DA Pamphlet 600-3.
- ☐ Provide personnel to participate in the LPEB Council of Colonels and action officer working group activities to conduct staff analysis and produce deliverables in accordance with the LPEB's intent.

The initiatives that we are currently working in the education realm will shape the Globally Responsive Sustainment Strategy that supports the ALDS. The end state of this strategy is a sustainer who can design and conduct effective support operations from the tactical through strategic levels and manage the business of logistics in the future environment. We will develop these skills through training, education, and experience.

---

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

Visit us online: [www.army.mil/armysustainment](http://www.army.mil/armysustainment)

# For Want of a “Chaoplexix” View of Logistics

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

**L**ogistics has long been considered one of the systems engineering sciences based on laws of physics, mathematical linear modeling, optimization formulas of operations research and systems analysis, and so forth. One could argue that this science of logistics has served the nation well and, as of late, American missions have not failed for lack of viable logistics systems designs.

Our military education institutions, developmental programs, and criteria for promotion have been rightly focused on producing leaders and managers who can solve problems and deliver the support upon which our full range of missions depend. However, we contend that there are other ways of framing logistics designs beyond the traditional systems engineering view. One way is using what author Margaret J. Wheatley refers to as “new science”—using concepts derived from the study of complexity and chaos.

The future presents a paradox: keeping our logistics systems engineering roots while embracing a complex- and chaotic-systems opposing view of logistics. We expect many more complex operations ahead, and we believe logisticians will be better served with an array of mental models that will enable them to appreciate the complexities they face, learn in more sophisticated ways, and deal with challenges that do not fit easily into computational models or doctrinal frameworks.

To face these challenges, many researchers highlight the need to develop highly adaptive and resilient people and organizations. These terms have sprung from the studies

of what author Antoine Bousquet calls “chaoplexity.” For more information on this concept, we suggest reviewing books and articles on complexity science and chaos theory by Bousquet, Russ Marion, Phillip Clampitt, Robert J. DeKoch, Eric B. Dent, Frans P.B. Osinga, and Nassim Taleb. Another resource known for its interdisciplinary approach to complexity science is the independent research and education center Santa Fe Institute, [www.santafe.edu](http://www.santafe.edu).

It should not be surprising that the current generation of strategic guidance documents—the Capstone Concept for Joint Operations (CCJO), the White Paper on Mission Command authored by the chairman of the Joint Chiefs of Staff, and recent strategic guidance published by the Joint Staff J-4, to name a few, reflect a shift in strategic logic based largely on the concepts associated with chaos and complexity theory. Marine Corps Gen. James N. Mattis, former commander of the U.S. Central Command, and Navy Adm. Mike Mullen, former chairman of the Joint Chiefs of Staff, appeared to have used these frameworks in the drafting of the 2008 CCJO.

We need logisticians and organizations capable of envisioning their part of an interconnected, complex-adaptive logistics system. Indeed, holistic systems thinking provides an opportunity—a necessary consideration—for contemporary military designers, planners, strategists, senior leaders, and, we believe, especially logisticians. The very terminology being used today by writers and thinkers in this field is useful in

demonstrating the broader perspective and innovative analytical frameworks that are possible.

We invite readers to explore theoretical concepts such as emergence, holism, mutual causality, indeterminism, polarity thinking, irreducibility, quantum physics logic (nonlinear dynamics and novelty), heterarchy, and the butterfly effect, all of which suggest ways of thinking that can offer creative solutions to some of our most challenging problems.

During the past 12 years, our logisticians have experienced an operational environment characterized by chaoplexity on the job in Iraq, Afghanistan, and in support of other missions around the world. We leave you with this question: Are our logistics doctrinal concepts and educational institutions in line with these theories and concepts?

In our next article we will discuss what chaoplexity means for the professional development of logisticians.

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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. He served as a quartermaster officer for 28 years on active duty and for three years as the deputy director for strategic logistics on the Joint Staff.

# The Sustainment Mission Command Capability

The Forces Command's sustainment mission command capability enables commanders to provide equipped and sustained forces in order to remain globally responsive and regionally engaged.

■ By Maj. Gen. Jack O'Connor and Maj. Sean D. Smith

Chairman of the Joint Chiefs of Staff, Gen. Martin E. Dempsey, in his Mission Command White Paper, dated April 3, 2012, says, "Mission command must be institutionalized and operationalized into all aspects of the joint force—our doctrine, our education, our training and our manpower and personnel process." In this statement, Gen. Dempsey describes a culture shift for mission command, and Forces Command (FORSCOM) is fully embracing the shift across all of its warfighting functions.

The sustainment mission command capability (SMCC) concept is FORSCOM's response to Gen. Dempsey's order. It creates a cohesive synergy among modular forces and targets global combatant commander needs. SMCC allows sustainment operations from home station not only to meet validated requirements but also to improve readiness and enhance mission command.

## Modularity

A 2011 RAND study describes how, in 2003, the Army adapted its formations in response to existing conflict and emerging challenges, resulting in a significant shift in structure and how the Army wages war. Perhaps the most influential change involved transitioning from a division-centric force into a brigade-centric force—a concept that has become known as modu-

larity. Under this concept, key components and capabilities that once resided within divisions were made organic to brigade combat teams.

Modularity reduced the types of combat brigades from 17 to three (infantry, Stryker, and armor). The move provided the Army with a greater number of smaller, very capable force packages, making it easier to sustain the protracted operations in Iraq and Afghanistan. Combat support and combat service support units and force structure were also redesigned to make the entire force more modular. (See figure 1.)

Opinions on modularity vary; however, few would say that it does not promote agility and responsiveness. Unfortunately, every change is met with a give and take approach, and the same characteristics of modularity that promote agility and responsiveness can also cause sustainment gaps.

Modularity, combined with a combatant commander demand for smaller modular enablers, created the unintended consequence of shifting habitual relationships. It also created leadership, mentorship, and training oversight gaps across the sustainment community. The end of operations in Iraq and the upcoming Afghanistan finale are setting the stage for yet another era of evolutionary sustainment change.

## Emerging Operational Environment

Shifting from an operational envi-

ronment of unconstrained resources to a more deliberate demand-based environment necessitates an organizational shift to accomplishing what matters with less and accentuates a need for trust and unity of effort.

Another troublesome dynamic of modularity involves supported-to-supporting command relationships. Shifting from supply point to distribution-based operations extended the commander's operational reach and lines of communications. Through modularity, brigade combat teams gained a robust sustainment posture over assets previously at echelons above brigade. Distribution and water assets previously residing in the main support battalion or corps support battalion were placed forward in the brigade support battalion and forward support companies.

As the Army refines, adjusts, and adapts its formations to optimize readiness, we must examine our integrated sustainment strategy to maximize all aspects of logistics capability and capacity. A unity of effort in a time of diminishing resources is imperative to resolving gaps.

FORSCOM's 2013 Expenditure Reduction Guidance for Fiscal Uncertainty, coupled with the Chief of Staff of the Army's (CSA's) intent to deliver strategic land power in an uncertain world, compels commanders to spend wisely and develop training plans that align resources



with known readiness requirements. However, FORSCOM's desired end state remains the same: provide trained and ready forces in support of combatant commanders and the defense strategy.

### Property Accountability

The 2012 Vice Chief of Staff of the Army Campaign on Property Accountability (COPA) illustrated that the demands of war, modernization, and modularization added \$200 billion worth of equipment to the Army inventory through rapid equipment fielding, rapid fielding initiative, theater-provided equipment, and left-behind equipment.

COPA addresses some of the "symptoms" of several overwhelming readiness challenges. Below are a few recommendations that COPA provides to cure those symptoms:

- ☐ Invigorate a culture of stewardship.
- ☐ Correct property records.
- ☐ Provide Soldiers with the right skills and tools.
- ☐ Standardize and streamline policy.
- ☐ Standardize processes for acquiring property and establishing property records.

### Mission Command Integration

The key to sustainment unity of effort and trust in this emerging

operational environment is successful mission command integration. The goal of every successful team or major organization is to strike the right balance between centralized control and decentralized execution. Under a single logistics mission command, resource management is optimized through the efficient and effective application of leadership and authority.

Leaders in both Iraq and Afghanistan struggled with this at first, but they achieved effective resource management once expeditionary sustainment commands (ESCs) arrived to integrate distribution, sustainment formations, and global

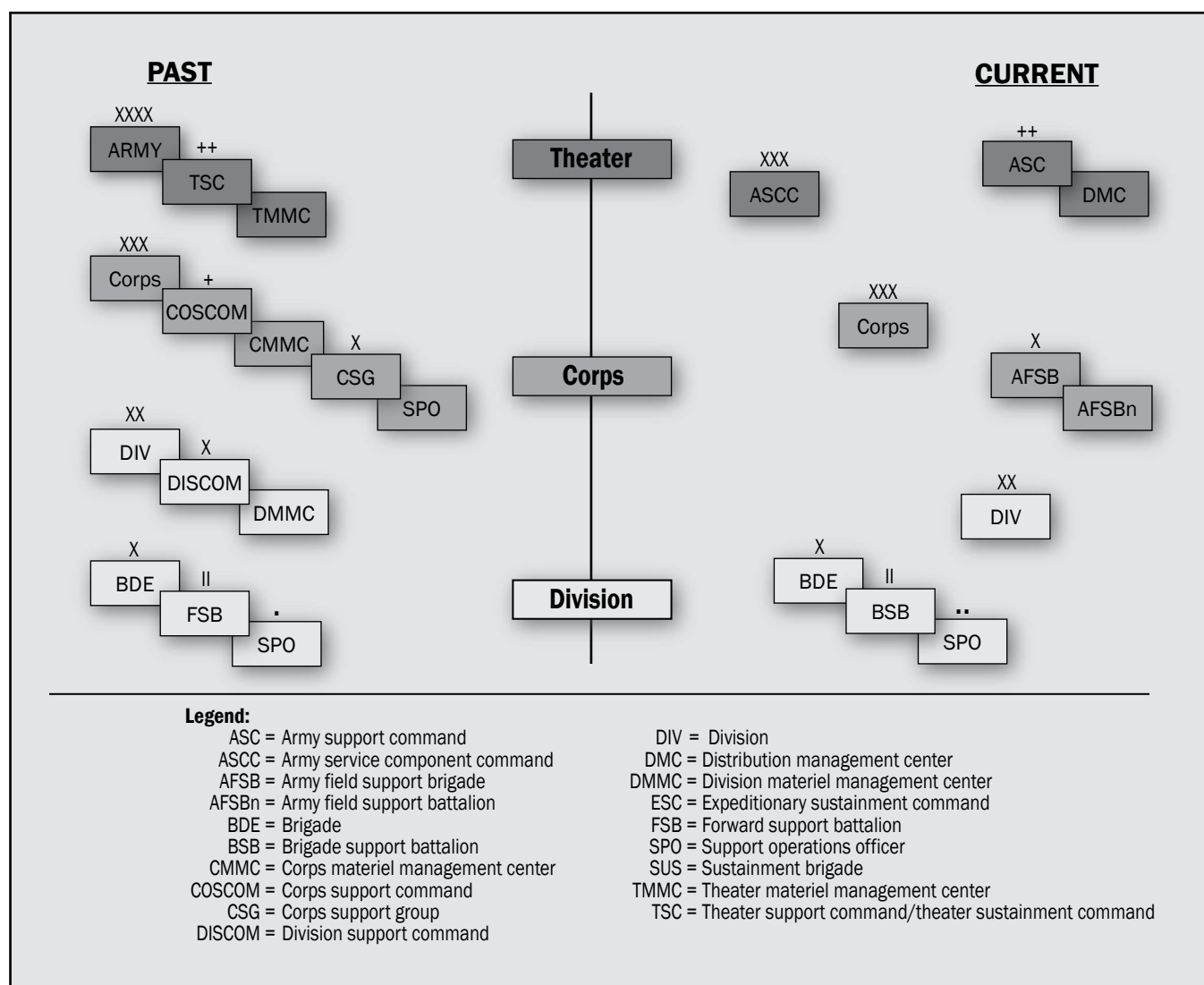


Figure 1. Changes to the Army's sustainment force structure caused by the shift to modularity.

supply chains. This is easy to do when you have regional responsibility. However, FORSCOM continental United States (CONUS) command relationships do not lend themselves to the mission command framework found in a deployed geographic combatant commander's region.

### LSOC and SOC

In 2010, FORSCOM released an updated execute order (EXORD) about leveraging sustainment organizations in CONUS (LSOC). This EXORD initiated a concept that stemmed from the two CONUS-based ESCs. The LSOC concept was approved on Sep. 8, 2010.

LSOC grants the ESCs coordinating authority on and off their respective installations. Through LSOC, the senior logistician provides perspective from lessons learned both on the battlefield and

Command, and Defense Logistics Agency) are to:

- ☐ Enable and enhance senior commanders' training and readiness authorities.
- ☐ Provide centralized materiel management.
- ☐ Leverage multiechelon sustainment capabilities.
- ☐ Replicate operational sustainment during garrison employment.

### SMCC

Because numerous boards, bureaus, centers, cells, and working groups collaborate or synchronize support to provide a holistic sustainment response, it is essential for the senior commander to have a unified sustainment view. FORSCOM enhanced the senior commanders' ability to mitigate sustainment gaps by leveraging existing installation logistics support

commander is the central figure.

In line with ADP 6-0, SMCC is guided by the following principles:

- ☐ Build cohesive teams through mutual trust.
- ☐ Create shared understanding.
- ☐ Provide a clear commander's intent.
- ☐ Exercise disciplined initiative.
- ☐ Use mission orders.
- ☐ Accept prudent risk.

As outlined in the priorities of the CSA and FORSCOM commanding general, the SMCC concept capitalizes on field observations, insights, and lessons learned pertaining to sustainment enabler integration, enhanced leader development, collective training, and readiness tracking through synergy and collaboration. SMCC also capitalizes on relationships as well as design and process efficiencies in order to ensure unity of effort, trust, and future logistics success.

One of the FORSCOM commanding general's priorities was to "improve communication—internal and external," and the SMCC achieves this goal through a consolidated sustainment network of capability. Communication within the installation sustainment community should be through the senior commander's designated sustainment focal point to synchronize sustainment operations. FORSCOM's focal point for execution is the sustainment brigade with oversight from the deputy commanding general (support) and the LSOC-aligned ESC.

As stated in ADP 6-0, collaboration is required to establish human connections, build trust, and create and maintain shared understanding and purpose. Shared understanding and purpose form the basis for unity of effort and trust.

The Army training vision states that commanders should balance current operational missions while simultaneously preparing forces to meet future requirements. FORSCOM captures this vision

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## SMCC allows sustainment operations from home station not only to meet validated requirements but also to improve readiness and enhance mission command.

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at home station. It was later determined that sustainment information could be better employed on an installation. That determination resulted in the creation of the sustainment operations center (SOC) in April 2012.

While LSOC addresses the "art side" (sustainment coaching, teaching, and mentoring) of sustainment, the SOC addresses the "science side" (materiel management and asset or personnel cross-leveling). The SOC is an LSOC subcomponent and causes no growth to the Army and minimal infrastructure adjustments. FORSCOM's SOC objectives, in partnership with other commands (the Army Materiel Command, Installation Management Command, Training and Doctrine

plans and building continuity of sustainment operations.

The future transition to Army 2020, regionally-aligned force requirements, the fielding of Global Combat Support System-Army, the Afghanistan retrograde mission, and enabling Army readiness all require the constant and consolidated visibility of senior commander sustainment functions. More importantly, they require a fusion of field- and sustainment-level partners to maximize effectiveness.

In December 2012, FORSCOM released an EXORD that expanded the current SOC concept to the SMCC in order to align with Army Doctrine Publication (ADP) 6-0, Mission Command, in which the

through the following objectives:

- Provide centralized materiel management.
- Enable and enhance senior commander training and readiness authorities.
- Leverage multiechelon sustainment capabilities.
- Replicate operational sustainment during garrison employment.

FORSCOM's SMCC embodies the concepts and principles of Joint Publication 3-0, Joint Operations, and ADP 6-0. In line with ADP 3-0, Unified Land Operations, SMCC is the commander's exercise of authority and direction using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders. Key SMCC principles include commander's intent, mission-type orders, and decentralized execution.

FORSCOM's SMCC is the senior commander's mechanism to execute his support mission. Not necessarily tied to an organization or structure, it holistically describes the ability to synchronize, coordinate, resource, and execute sustainment operations and training within the sustainment commander's span of influence. SMCC's enabling tools, assets, organizations, and personnel include the following:

- The deputy commanding general (support).
- Mission support element and mission support command logistics officers.
- The ESC.
- The sustainment brigade.
- Logisticians in brigades and support battalions.
- Support units (including medical, finance, human resources, and signal).
- Garrison support.
- Strategic and operational enablers (the Defense Logistics Agency, U.S. Transportation Command, Army Materiel Command, Training and Doctrine Command, Network Enterprise Technology

Command, Intelligence and Security Command, and Installation Management Command).

### Applying SMCC

Under SMCC, FORSCOM ESCs will provide area support. The ESCs will provide sustainment reach back capabilities to FORSCOM senior commanders and provide senior sustainment mentorship, training, and materiel management. The ESCs will also play a pivotal role in supporting senior commander regionally aligned forces requirements, and FORSCOM is reestablishing ESC CONUS relationships and roles.

Another SMCC key output is unity of effort through sustainment fusion. It ensures sustainment requirements are nested with operations, and it is essential to command and staff integration. Sustainment fusion ensures continuous requirement assessment at every level of command.

Aligned with ADP 6-0, the principles of SMCC assist commanders and staff in balancing the art of command with the science of control. SMCC is enabled by a system of personnel, networks, information systems, processes and procedures, facilities, and equipment. The desired end state involves determining the most effective means for getting the supported commander what he needs, when he needs it, and where he needs it.

FORSCOM logisticians are aggressively working through SMCCs, generating greater efficiencies and effective outcomes in the Army's supply chain. By building a network of networks that is mutually supporting, FORSCOM installation SMCCs are meeting the Army's 2017 auditability goal and contract reduction by replacing contracts with troop labor.

FORSCOM's SMCC assists commanders at all levels in establishing and overseeing resource control measures such as the management review file, commanders' exception report, and monthly materiel review sessions (logistics readiness reviews).

Working with near real-time data

offers logisticians a significant advantage. The CSA's marching orders direct us to "train as we fight—make it realistic and challenging," and FORSCOM's SMCC allows the sustainment formations to use daily synchronization as a training opportunity.

As stated in FORSCOM's 2013 Optimizing Readiness EXORD, we must adapt by improving efficiency and effectiveness. As budgets constrict, leaders will be presented with difficult choices. But they also will have an unprecedented opportunity to eliminate inefficiencies, improve processes, and focus formations more sharply on their missions. The challenge is not cutting spending but optimizing readiness to ensure a highly capable force.

FORSCOM's mission is to provide trained, ready forces to meet combatant commander requirements. FORSCOM's SMCC leverages multiechelon field sustainment functions, enabling FORSCOM senior commanders to provide equipped and sustained forces in order to remain globally responsive and regionally engaged. Without question, SMCCs offer a logistics evolution, provide the sustainment backbone for the Army's regionally aligned forces, and facilitate uncompromised readiness for the decisive action force.

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*Soldiers of the 3rd Brigade Combat Team, 25th Infantry Division, participate in a training exercise May 8, 2013, at Schofield Barracks, Hawaii. The exercise targeted critical thinking and tactical skills. (Photo by Sgt. Brian Erickson)*

# Understanding Mission Command

**Mission command, as a recognized methodology, is not new to military doctrine. To fully grasp the concept, leaders must understand its background and legacy.**

■ By Col. (Ret.) James D. Sharpe Jr. and Lt. Col. (Ret.) Thomas E. Creviston

*“Mission command is the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander’s intent to empower agile and adaptive leaders in the conduct of unified land operations.”*

**M**ission command is a war-fighting function and the Army’s philosophy of command described within the latest revision of Army Doctrine Publication (ADP) 6-0, Mission Command. While mission command may be new to Army doctrine vernacular, the principle of trust—mission command’s guiding principle—has been followed by successful leaders for centuries. It is trust in subordinates

who can plan, coordinate, and execute flexible yet disciplined decision making throughout increasingly complex operational environments that gives commanders the confidence to conduct decisive action boldly.

Because trust is the glue that binds mission command, leaders must understand the dimensions of trust and its impact on Soldiers and units. In executing mission command, sustainment commanders must have a

broad perspective, understanding, and knowledge of activities throughout the operational area. They must share their vision of operations and the desired end state.

The principles of mission command demand that understanding come “from the bottom up and not just from the top down” in order to ensure success, given the many challenges within the anticipated operational environments.<sup>2</sup> With the

<sup>1</sup> Army Doctrine Publication 6-0: Mission Command, U.S. Army, Washington, D.C., 2012, p. 1.

<sup>2</sup> Army Doctrine Publication 4-0: Sustainment, U.S. Army, Washington, D.C., 2012, p. 11.

development of trust comes the decentralized execution and distributed leadership that are necessary for the execution of mission command.<sup>3</sup> To fully grasp the concept of mission command, leaders must first understand its background and legacy.

### Mission Command History

Mission command, as a recognized methodology, traces its roots back to Prussian Generals Johann David von Scharnhorst, August Graf Neidhardt von Gneisenau, and Carl von Clausewitz.<sup>4</sup> Following the Prussian defeat at the battles of Jena and Auerstedt, Germany, in 1806, the generals began an in-depth review of Prussian doctrine and, in 1837, updated the Prussian field service regulation.

Central to their findings was that the “French achieved high tempo through rapid communication of Napoleon’s intentions and rationale. Perhaps most important, the exercise of initiative by junior officers was tolerated ... the result was an operational tempo which left the incredulous Prussians bewildered.”<sup>5</sup>

Based on these findings, the Prussians added to their own field service regulation that “if an execution of an order was rendered impossible, an officer should seek to act in line with the intention behind it.”<sup>6</sup> Officers were then expected to exercise thinking obedience and “mistakes were preferable to hesitancy to enable decisive bold action.”<sup>7</sup>

This was a major departure for an army and officer corps built on strict obedience to orders. The fact that the Prussians accepted that subordinates may err when taking aggressive action underscores the significance of senior

leaders trusting their subordinates to act quickly within the scope of their operational intent, even when orders are not immediately rendered.

Throughout the remainder of the 19th and 20th centuries, the advances in armaments and technology further solidified the need for decentralized or distributed leadership and the requirement that organizations practice what would become the tenants of mission command.

### Trust in Mission Command Doctrine

In 2012, Gen. Martin E. Dempsey, Chairman of the Joint Chiefs of Staff (CJCS), published the Mission Command White Paper. In the paper, he argues that the potential for asymmetric threats and the dynamic security of the future demand the application of mission command. He also establishes three basic principles to be implemented at the joint level. These principles—commander’s intent, mission type orders, and decentralized execution—are now prevalent in current joint and service doctrine.<sup>8</sup> The paper does not place a priority on any one principle—all must be weighed and applied equally in order for mission command to succeed.

Although not listed by the CJCS as a joint-level principle, trust is critical to the way ahead for mission command. In the paper, Dempsey states that “our leader development efforts must create the climate for greater trust, and challenge leaders to the point of failure as a way to evaluate character, fortitude, and resiliency of personality.”<sup>9</sup>

Shortly after the release of the Mission Command White Paper, the Army published ADP 6-0. The

Army expanded on the principles put forward by the CJCS and adopted six principles of mission command. They are build cohesive teams through mutual trust, create shared understanding, provide clear commander’s intent, exercise disciplined initiative, use mission orders, and accept prudent risk.

Much like the CJCS white paper, ADP 6-0 does not identify which principle is most important. However, the ADP specifically refers to trust as a requirement for successfully implementing mission command.

According to the dictionary, trust is “the reliance on the integrity, strength, ability ... of a person or thing.”<sup>10</sup> In his foreword for ADP 6-22, Army Leadership, Chief of Staff of the Army Gen. Raymond T. Odierno states that “Soldiers trust their leaders. Leaders must never break that trust, as trust is the bedrock of our profession.”

In the Army, trust is essential not only to leading units but also to accomplishing the mission. The relationships between commanders and subordinates and the relationships between units are based almost entirely on two dimensions of trust—human and organizational.

### The Human Dimension of Trust

The human dimension of trust includes Soldiers who share values based on the Profession of Arms, Soldier’s Creed, and Army Values. These values are the foundation “upon which good units are built; units that can be trusted to accomplish their assigned missions.”<sup>11</sup> It is in the human dimension that leaders establish the climate of respect, honesty, and trust. As re-

<sup>3</sup> Keith G. Stewart, “The Evolution of Command Approach” (Paper 192), paper presented at the International Command and Control Research and Technology Symposium, Santa Monica, Calif., June 2010, p. 10.

<sup>4</sup> Ivan Yardley and Andrew Kakabadse, “Understanding Mission Command: A Model for Developing Competitive Advantage in a Business Context,” *Strategic Change*, Vol. 16, No. 1-2, January–April 2007, pp. 69–78.

<sup>5</sup> Stewart, p. 4.

<sup>6</sup> Yardley and Kakabadse, pp. 69–78.

<sup>7</sup> Stewart, p. 6.

<sup>8</sup> Gen. Martin E. Dempsey, “Mission Command White Paper,” Office of the Chairman of the Joint Chiefs of Staff, Washington, D.C., April 2012, p. 3.

<sup>9</sup> Ibid., p. 8.

<sup>10</sup> Merriam-Webster Online Dictionary, <www.merriam-webster.com>, accessed 2012.

<sup>11</sup> Training and Doctrine Command Pamphlet 525-3-7-01: *The U.S. Army Study of the Human Dimension in the Future 2015–2024*, U.S. Army, Washington, D.C., April 2008, p. 54.



*Soldiers from 3rd Brigade Combat Team, 25th Infantry Division, take cover after blast while they wait for the command to move forward during a May 8, 2013, exercise that stressed the importance of communication and leader development. (Photo by Staff Sgt. Cashmere Jefferson)*

search indicates, when subordinates trust their leaders, they are willing to follow and trust in their actions.<sup>12</sup>

Trust in an organization's leadership is closely linked to organizational success and subordinates' performance.<sup>13</sup> Conversely, research also shows that once trust is broken or abused, severe and undesirable effects can happen.<sup>14</sup> When leaders exhibit poor accountability or violate a given set of values, they stand to lose not only the trust of their subordinates but also the trust of their senior leaders.

A potential complication with establishing trust in the application of mission command is leader-subordinate distance. Because of the hierarchical structure of Army organiza-

tions and the distributed nature of many Army operations, commanders and leaders at all levels can be both organizationally and physically separated from many of their subordinates. Research has found a positive correlation between immediate leadership (leadership in close proximity to the follower) and trust. Research has also shown that the same level of trust was not accorded to organizational leadership (leaders not in close proximity).<sup>15</sup>

Other studies, however, have found that positive personal interactions between organizational leaders and distant subordinates help to develop a perceived closer relationship that contributes to the development of

trust. When subordinates are physically separated from their parent organizations, these individuals often look at the organization's leaders' past accomplishments, interactions, reputations, and the organizational goals to develop a level of trust.<sup>16</sup> With the development of the human dimension of trust, leaders can implement the principles of mission command.

### The Organizational Dimension of Trust

The establishment of organizational trust is critical to the successful implementation of mission command. Intraorganizational trust, which is the trust among the members and entities of a single organization, is closely linked to the human dimension of trust through esprit de corps.<sup>17</sup> Research has shown that organizations with high levels of intraorganizational trust not only perform better but also show higher levels of esprit de corps.<sup>18</sup>

While there are a variety of influencers on intraorganizational trust, such as Soldiers' faith in their training, equipment, and leaders, none of these individual elements exert as much influence as esprit de corps. Esprit de corps is the intangible that ties an organization together. It is the extent to which members of an organization feel obligated to the organization, its goals, leaders, and each other.<sup>19</sup>

The organizational energy that is developed with esprit de corps can carry an organization through the toughest of times. As members of an organization develop esprit de corps and build a loyalty to the organization

<sup>12</sup> Vicki L. Goodwin, J. Lee Whittington, Brian Murray, and Tommy Nichols, "Moderator or Mediator? Examining the Role of Trust in the Transformational Leadership Paradigm," *Journal of Managerial Issues*, Vol. 23, No. 4, December 2011, pp. 409–426.

<sup>13</sup> Alejandro Torres and Michelle Bligh, "How Far Can I Trust You? The Impact of Distance and Cultural Values on Leaders' Trustworthiness," *Journal of Leadership, Accountability and Ethics*, Vol. 9, No. 2, pp. 23–38.

<sup>14</sup> Donald L. Ferrin and K.T. Dirks, "Trust in Leadership: Meta-Analytic Findings and Implications for Research and Practice," *Journal of Applied Psychology*, Vol. 87, No. 4, 2002, pp. 611–628.

<sup>15</sup> Ibid.

<sup>16</sup> John Antonakis and Leanne Atwater, "Leader Distance: A Review and a Proposed Theory," *Leadership Quarterly*, Vol. 13, No. 6, December 2002, pp. 673–705.

<sup>17</sup> Kirsimarja Blomqvist and Pirjo Stahle, "Building Organizational Trust," paper published at the 16th Annual Industrial Marketing and Purchasing Conference, Bath, England, 2000, pp. 221–233.

<sup>18</sup> Sven Volpel and Eric Kearney, "Trust Within Organizations—Benefiting from Demographic Changes by Fostering Intra-Organizational Trust," *Forum on Public Policy*, September 2008, Vol. 2008, No. 1, pp. 1–17.

<sup>19</sup> William D. Reisel, Swee-Lim Chia, and Cesar M. Maloles III, "Job Insecurity Spillover to Key Account Management: Negative Effects on Performance, Effectiveness, Adaptiveness and Esprit de Corps," *Journal of Business and Psychology*, 2005, Vol. 19, pp. 483–503.



and each other, a cycle develops that perpetuates itself as new members join.

Establishing esprit de corps does not happen by accident. The explicit codes of organizational culture, such as the Soldier's Creed and Warrior Ethos, provide the basis for an Army organization's conduct. Organizational leadership positions also have standards such as competency and moral and ethical leadership that set the tone of the organization.

However, the explicit actions of leaders contribute most to building organizational trust and esprit de corps. Leaders who adhere to the Army Values, Soldier's Creed, and Warrior Ethos provide tangible actions that subordinates can emulate and propagate.<sup>20</sup>

Leaders of confidence, competence, and high moral values exude esprit de corps and provide a contagious commitment to the organization and its norms.<sup>21</sup> The old adage that actions speak louder than words is absolutely true and supported by research. Organizational trust gained through the displayed values and actions of its leaders and subordinates is critical for the successful implementation of mission command.

### Decentralized Execution

The doctrinal terms decentralized execution, decentralization, and empowering agile and adaptive leaders, all imply the same thing—distributed leadership.

According to author James P. Spillane, "distributed leadership is first and foremost about leadership practice rather than leaders or their roles, functions, routines, and structures."<sup>22</sup> It is not about the elimination of a formal leadership structure or the democratization of the leadership process. On the contrary,

distributive leadership requires a strong central leader who is willing and able to develop subordinates and encourages the sharing of leadership responsibilities.

Army Regulation 600–20, Army Command Policy, charges commanders to develop subordinates. Part of this developmental process is the distribution of leadership responsibilities to subordinates. Good leaders recognize they cannot, and should not, shoulder all leadership requirements.

It is through this leadership practice that commanders take the time to develop their subordinates' leadership skills, cultivate the human dimension of trust, begin to delegate responsibility and authority to others, and subsequently build a distributive leadership network.

The distributed nature of many Army operations often leads to physical separation of commanders from their subordinate organizations. The development of a distributive leadership network allows commanders to disseminate their intent to subordinate leaders, have a collaborative dialog, and resolve potential misunderstandings. It is through this collaborative and distributive process that leaders are able to benefit from the input and strengths of others and develop a shared understanding of the operational environment.<sup>23</sup>

Although the term mission command is new to the Army lexicon, principles of the associated doctrine have been in practice in other armies since the early 19th century. Even in the U.S. Army, the tenets associated with mission command have been used by good leaders throughout history. While no tenet of mission command is singled out as the most important, trust is absolutely critical

if mission command is to be effective in conducting decisive action.

Leaders must visualize and communicate an understandable plan before boots hit the ground; their subordinates must be ready to implement the plan right away. Leaders must trust that their subordinates will not hesitate when presented with challenges and that they will act decisively within the operational intent. The key to making mission command work is, and will always be, the continued development of trust and understanding between leaders and subordinates produced through the distributive and collaborative leadership process.

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<sup>20</sup> Scott Vitell and Anusorn Singhapakdi, "The Role of Ethics Institutionalization in Influencing Organizational Commitment, Job Satisfaction and Esprit de Corps," *Journal of Business Ethics*, 2008, Vol. 81, No. 2, pp. 343–353.

<sup>21</sup> Ibid.

<sup>22</sup> James P. Spillane, "Distributed leadership," *The Educational Forum*, 2005, Vol. 69, No. 2, pp. 143–150.

<sup>23</sup> Alma Harris, "Distributed Leadership: According to the Evidence," *Journal of Educational Administration*, 2008, Vol. 46, No. 2, pp. 172–188.

# Civilian Workforce Transformation:

## Enterprise Management of the Army Civilian Corps

The Civilian Workforce Transformation initiative is designed to manage the civilian workforce, meet training and development goals, and provide a path for professionally developed civilians to meet the Army's needs.

■ By Barbara G. Mroczkowski





*A Department of the Army civilian logistics intern attends the tactics section of a basic officer leader course at Fort Lee, Va.*



**A**t the Association of the U.S. Army 2010 annual meeting and exposition, Under Secretary of the Army Joseph W. Westphal announced the Civilian Workforce Transformation (CWT) initiative, which is designed to change how the Army hires, trains, develops, and sustains its civilian workforce.

The purpose of CWT, as announced, was to create an enterprise approach to how the Army manages its civilian corps based on the long established, highly effective, centrally managed and resourced leader and professional development model that is used by the uniformed force.

CWT is the result of a number of efforts over the past 10 years designed to ensure that Army civilians have the necessary skills to accomplish their missions. As CWT integrator Scott Rowell has said, "The Army faces a period of monumental change and now, as never before, the Army is calling upon its civilian corps to assume greater levels of responsibility and accountability."

The Army civilian corps makes up about 23 percent of the total

In the past decade, the roles of civilians have increased significantly, not only in technical, professional, and support areas but also in the number and levels of leadership roles. Despite the reliance placed on Army civilians, the Army historically has not viewed the development of civilians in an integrated or enterprise manner. To a great degree, civilians have been expected to come to their jobs with the requisite skills.

Compare this situation to that of Soldiers. From the time a Soldier (enlisted or officer) enters the Army, he knows that both his technical skills and his leadership skills will be developed. The Army has made a commitment to do this and seriously invests in training and education with the end result being that our Soldiers are the best in the world. If the role of the civilian corps is equally critical to the success of the Army Total Force, civilian development also demands focus, structure, and resources.

#### **The Intent of CWT**

The mandates for CWT include hiring the right people, managing the entire workforce within career

ule (GS), wage grade, and senior executive service talent to ensure planned succession in critical positions. This initiative has the full support of the Secretary of the Army, the Under Secretary of the Army, and senior leaders throughout the Army.

#### **Responsibilities**

The Army Deputy Chief of Staff, G-1 (personnel), is responsible for bringing the CWT program to fruition and for leading the effort to establish a competency-based civilian management system. The Deputy Chief of Staff of the Army G-3/5/7 (operations, plans, and training) is leading the effort for the Civilian Training, Education, and Development Program.

The Training and Doctrine Command is ensuring that the civilian portion of the Army Leader Development Model is developed in sync with CWT. Commands at all levels are responsible for reviewing position descriptions and making assignments of positions to individual CPs.

The functional chiefs (FCs) and their representatives (FCRs) who are responsible for leading CPs have been given a greater role in strategic human capital planning. With the establishment of new CPs, new FCs and FCRs are being named and educated on their responsibilities for their programs. CP offices are currently developing career maps and training plans for all series for which they are responsible.

#### **CWT Accomplishments**

Two years have brought great progress to the CWT initiative, which now benefits from greater coordination and ease of administration.

**CPs.** A memorandum dated Jan. 26, 2012, that provided a CWT update to civilian careerists highlighted the successes of the first year, which focused on establishing the infrastructure for CWT. Existing CPs were reviewed and eight

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**The CWT initiative will also develop and deploy competency-based education and training systems to cultivate general schedule, wage grade, and senior executive service talent to ensure planned succession in critical positions.**

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Army force, encompassing more than 300,000 professionals serving in almost 500 unique job series both in the United States and around the world. Of these employees, more than 25,000 have been deployed in support of the wars in Iraq and Afghanistan since 2004 and almost 3,000 are currently deployed to Southwest Asia.

programs (CPs), meeting civilian workforce training and development goals, and providing a pathway for professionally developed civilians to meet the Army's needs of today and tomorrow.

The CWT initiative will also develop and deploy competency-based education and training systems to cultivate general sched-

new programs were added to the list to support the wide array of civilian positions in the Army. (See figure 1.)

Position descriptions for all Army civilians were reviewed to determine in which CPs the careerists best fit. As a result of the update, some assignments to programs are still being fine-tuned. The FCs and FCRs have taken on their new or expanded roles. The Army validated the manpower requirements for this mission with additional positions expected in fiscal year 2014. In the meantime, a contract supported bridging strategy was established for fiscal years 2012 and 2013.

**Army Senior Enterprise Talent Management.** Another result of CWT is the Army Senior Enterprise Talent Management (SETM) initiative, which was established by the Secretary of the Army in March 2012 and is administered by Assistant Secretary of the Army (Manpower and Reserve Affairs) and the Civilian Senior Leader Management Office. The SETM's purpose is to provide for a more coordinated management plan to prepare senior civilians at the GS-14 and GS-15 levels to assume duty positions of the greatest responsibility across the department.

Selection for SETM is linked to a careerist's past and present duty

performance, potential for leadership and career progression, and the needs of the Army. SETM candidates should be the best of the best. Currently, the SETM program has four developmental pathways available to GS-14 and GS-15 leaders. Detailed information about the SETM program is available at <https://www.csldo.army.mil/index.aspx>.

**Civilian student training account.** Another result of CWT is the civilian student training account for funding civilians' attendance at senior service colleges. The account mirrors the central account for military attending such training. This alleviates the burden

<b>CP10</b> Civilian HR Management	<b>CP11</b> Comptroller	<b>CP12</b> Safety and Occupational Health	<b>CP13</b> Supply Management	<b>CP14</b> Contracting and Acquisition
<b>CP15</b> Quality and Reliability Assurance	<b>CP16</b> Engineer and Scientist (Non-Construction)	<b>CP17</b> Materiel Maintenance Management	<b>CP18</b> Engineers and Scientists (Construction)	<b>CP19</b> Physical Security and Law Enforcement
<b>CP20</b> Quality Assurance Specialist (Ammo Surveillance)	<b>CP22</b> Public Affairs and Communications Media	<b>CP24</b> Transportation and Distribution Management	<b>CP26</b> Manpower and Force Management	<b>CP28</b> Equal Employment Opportunity
<b>CP27/29</b> Installation Management	<b>CP31</b> Education Services	<b>CP32</b> Training, Capabilities and Doctrine (Warfighting Dev)	<b>CP33</b> Ammunition Management	<b>CP34</b> Information Management
<b>CP35</b> Intelligence	<b>CP36</b> Modeling and Simulation	<b>CP50</b> Military Personnel Management	<b>CP51</b> General Administration and Management	<b>CP53</b> Medical (FC/FCR Designated)
<b>CP55</b> Inspector General (FC/FCR Designated)	<b>CP56</b> Legal (FC/FCR Designated)	<b>CP60</b> Foreign Affairs and Strategic Planning (FC/FCR Designated)	<b>CP61</b> Historians/Museums Curators (FC/FCR Designated)	<b>CP64</b> Aviation (FC/FCR Designated)

**Legend:**  
 CP = Career program  
 FC = Functional chief  
 FCR = Functional chief representative  
 HR = Human resources

Old

New

Figure 1. Army civilian career programs.



*Left and center, DA civilians train with Army Logistics University cadre on course instruction at Fort Lee, Va. (Photos by Julianne E. Cochran, Army Sustainment)*



on commands to pay salaries while senior civilians attend senior service colleges and allows immediate backfills for vacant positions.

**Army Career Tracker.** The web-based Army Career Tracker (ACT) was expanded to incorporate civilian careerists in all CPs. ACT allows both Soldiers and civilians to use a single website aligned by cohort for information on their individual careers, education, and training, gathered from up to 14 separate Army databases.

For civilians, ACT is a source of information on career plans for job series within each CP. It also provides a means of communication between program leaders and civilians since every CP has an individual landing page similar to those for each military occupational specialty.

**Program assessments.** The Army CWT Report for 2012 describes the program's continuing progress,

which is resulting in more responsive and flexible civilian professional development, better management of the Army's civilian workforce from an enterprise perspective, and the development of more capable civilians who are well grounded as leaders and technically proficient to meet the mission.

Army Civilian Training Education and Development System (ACT-EDS) plans and workforce assessments have been conducted for all 31 CPs. All Army civilians are now assigned to one of the 31 CPs, which have 488 career maps to cover the entire GS workforce. Plans for developing wage grade series career maps are in the works. An additional 86 CP support positions were validated in order to manage professional development.

**Way ahead.** A major initiative for CWT and its logisticians will focus on how CWT support for wage grade employees can best be achieved. The

Civilian Logistics Career Management Office (CLCMO), located at Fort Lee, Va., is involved in a wage grade series pilot program to develop logistics wage grade career maps and career path templates that will be tied to competencies.

The goal is to provide wage grade employees with opportunities similar to those provided to GS employees. Eventually, CWT will ensure that all CPs achieve full operating capability and continue to develop and integrate competencies in the design and development of training, education, and professional development.

### **Support for Civilian Logisticians**

Almost 64,000 Army careerists, or 22 percent of the Army civilian workforce, are logisticians. Four CPs support the civilian logistics workforce: supply management (CP-13) with 22,439 careerists, materiel maintenance management (CP-17)





*Chief Warrant Officer 2 Monica Bolton mentors Nekoletta Brown, a logistics management intern specialist assigned to the Ft. Carson, Colo., Mission Support Element Logistics Office. (Photo by Spc. Andrew Ingram)*

with 31,521, transportation and distribution management (CP-24) with 6,984, and ammunition management (CP-33) with 2,628.

CLCMO provides central management of the first three programs, and the CP-33 Career Management Office located at the Joint Ammunition Center at McAlester, Okla., services ammunition management careerists.

CLCMO centrally manages the ACTEDS Intern Program for logisticians as well as centrally supported professional development opportunities. Logistics careerists are encouraged to avail themselves of the opportunities offered through these programs as they continue their life-long learning and professional development.

Civilians should stay abreast of the progress in CWT by visiting the website at [www.cwt.army.mil](http://www.cwt.army.mil). CWT will provide road maps for success with training and developmental

opportunities to assist careerists in achieving career goals, but they must take advantage of them.

Civilians should also visit the Civilian Training and Leader Development website at [www.civilian-training.army.mil](http://www.civilian-training.army.mil) for news on how the Army provides training, education, and operational experiences to develop leader competencies and enhance the functional and technical capabilities of the Army civilian corps.

The ACT website, [www.actnow.army.mil](http://www.actnow.army.mil), outlines opportunities shown on the logistics career landing pages. Civilians should work with their supervisors and CP office staffs to pursue these opportunities.

As Secretary of the Army John McHugh charges, "I hold each Army Civilian accountable for mapping and navigating a progressive program of self-development. Commanders, supervisors, and managers share responsibility for enabling

Army Civilian employees to reach their full potential."

Ms. Barbara G. Mroczkowski is the director of the Civilian Logistics Career Management Office. She is responsible for career management for more than 60,000 Army civilian logisticians in supply, materiel maintenance management, and transportation and distribution management and for developing human capital strategy policy for civilian logisticians. She centrally executes the Department of the Army Civilian Training, Education and Development System Intern Program for logisticians as well as the Competitive Professional Development Program for civilian logisticians.

Career Workforce Transformation:  
[www.cwt.army.mil](http://www.cwt.army.mil)  
Civilian Training and Leader Development:  
[www.civiliantraining.army.mil](http://www.civiliantraining.army.mil)  
ACT: [www.actnow.army.mil](http://www.actnow.army.mil)





A close-up photograph of a person's hands holding and firing a black and red M4-style assault rifle. The rifle is pointed towards the right. The background is a blurred outdoor setting with a concrete wall and some foliage. The title text is overlaid on a semi-transparent grey box in the upper left quadrant.

# Department of the Army Logistics Intern Program

**Two paths are available for individuals wishing to enter the Army's civilian workforce as logistics interns.**

■ By Carey W. Radican

*A Department of the Army (DA) logistics intern fires a weapons simulator at Fort Eustis, Va. (Photo by Barbara Gomoll)*





*DA logistics interns prepare presentations as part of the Intern Logistics Studies Program at the Army Logistics University, at Fort Lee, Va. (Photo by Julianne E. Cochran, Army Sustainment)*

**T**he Department of the Army (DA) Logistics Intern Program mission is to recruit, hire, train, develop, and mentor top quality individuals to perform as premier logisticians throughout the Army. The intern program includes a highly selective hiring process and is centrally managed. It equips individuals with the functional and multifunctional capabilities to immediately contribute to any organization's logistics mission.

Logistics interns in supply management (career program [CP]-13), materiel maintenance management (CP-17), and transportation and distribution management (CP-24) are trained in the latest logistics concepts and methods. They are also taught the latest business, resource, and program management principles and practices. All interns are cross-trained in each of the three

logistics career programs.

The DA Logistics Intern Program also manages and executes the logistics portion of the Army Civilian Training, Education, and Development System (ACTEDS) Pathway Internship Program for students.

Both sets of intern curricula are driven by a logistics master intern training plan (MITP). The MITP describes the universal requirements for logistics intern training and development as well as the unique requirements associated with each specialized field.

Functional chief representatives approve the MITP. This Senior Executive Service-level oversight ensures the program is nested in the overall mission and direction of each career path.

#### **DA Logistics Intern Program**

The full-time 18-month intern

program is based at Fort Lee, Va. Interns are hired at the GS-7 level, promoted to GS-9 after successfully completing 12 months of the program, sent to their permanent duty locations, and promoted to GS-11 at 24 months of service.

Interns are assigned to a program manager who coaches, teaches, and mentors them through the process. The program manager ensures that the interns understand the program requirements, complete distance learning in accordance with the schedule, and meet all of the training objectives addressed in the MITP.

An 18-month training plan is used as a guide to prepare each intern's specific individual development plan (IDP). Four months of the program are spent in the Intern Logistics Studies Program (iLog) classroom, four in one of the logistics Basic Officer Leader Courses (BOLCs), and four in on-the-job training (OJT). Six months of the program include training on conflict management, time management, presentation and briefing techniques, communication and writing skills, and team building. Input is solicited routinely from the field to ensure the program is focused on providing trained individuals to major logistics commands.

During the program, interns complete iLog, enroll in Defense Acquisition University distance learning to become Level I Life Cycle Logistics certified, complete the required Civilian Education System courses for their grade level, and attend one of the logistics branch BOLCs where they serve in key roles during the Sustainment Warrior Field Training Exercise. In addition, interns complete OJT at up to three Army, Department of Defense (DOD), or commercial industry logistics-related organizations.

**iLog.** The four-month iLog program is taught at the Army Logistics University at Fort Lee. Courses include instruction in Army logistics, major end-item management,

secondary-item management, supply chain management, joint logistics, multinational logistics, defense distribution management, quantitative applications, the Logistics Modernization Program, and contracting.

**Distance learning.** Interns must complete more than 130 hours of distance learning. This training includes Six Sigma awareness, fundamentals of systems, acquisition management, acquisition logistics fundamentals, systems sustainment management, designing for supportability in DOD systems, performance-based logistics, mission support planning, and mission planning, execution, and performance assessment. Interns must also complete the Civilian Education System Foundation Course.

**BOLC.** Interns attend one of the three logistics BOLCs to enhance their understanding of the customer and the challenges that logisticians encounter in garrison and on the battlefield. This “greening” process builds a corporate identity that ensures the intern appreciates and understands the urgency of a request from a logistician working in some far away location supporting Soldiers.

Supply management interns attend the Quartermaster BOLC. Materiel maintenance management interns attend the Ordnance BOLC. Transportation and distribution management interns attend the Transportation BOLC.

Each course’s curriculum consists of common core and functional training. Common core training teaches the interns to apply the theory and principles of battle-focused training. In addition, BOLC teaches the skills required to lead small elements in combat and garrison, survive on a modern battlefield, develop and maintain discipline, supervise maintenance activities, and perform property accountability. Interns also learn about Army leadership doctrine and receive instruction on effective oral and written commu-

nication, Army Writing Program standards, and briefing preparation.

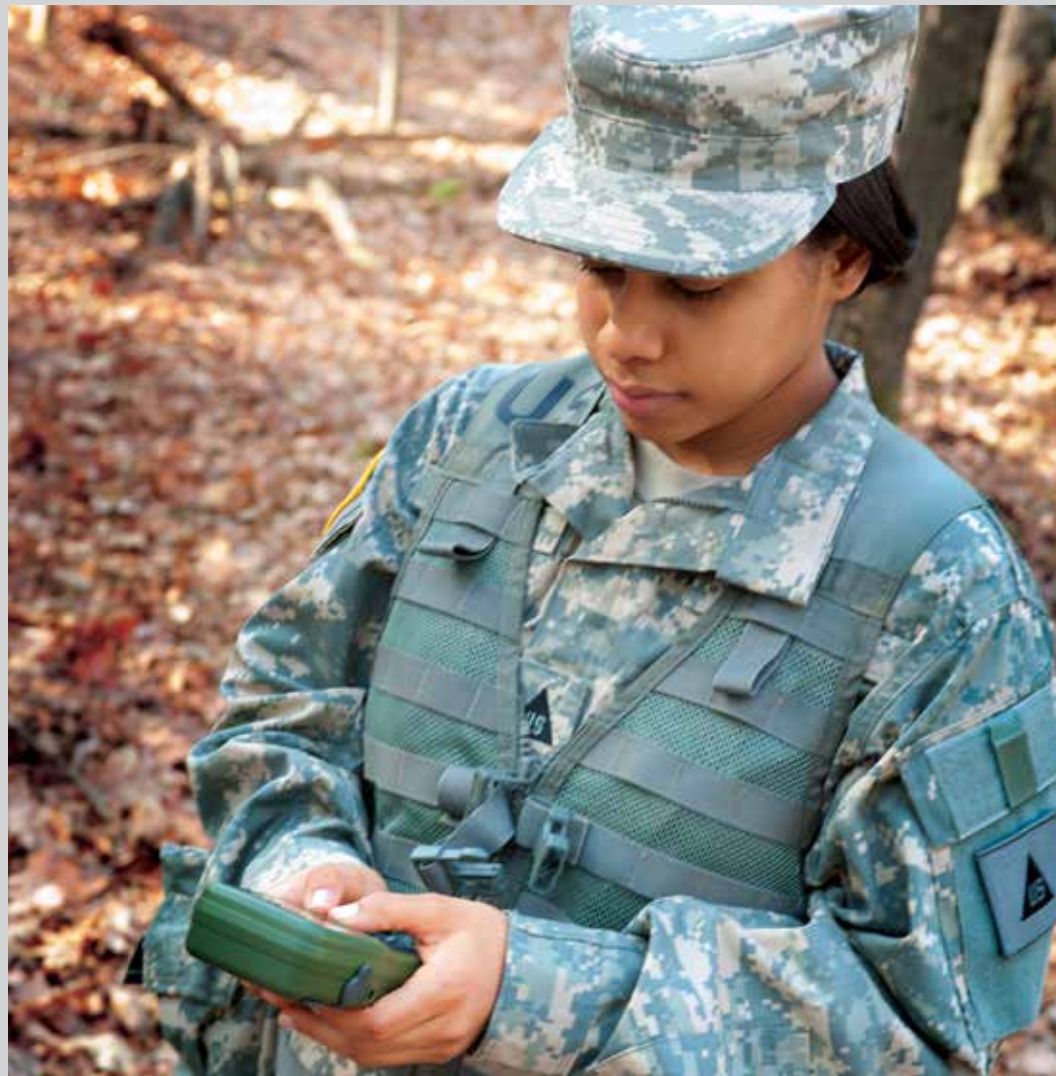
The Quartermaster BOLC training includes tactical logistics instruction focused on petroleum and water, supply support activity, aerial delivery, field services, sling load, subsistence, and mortuary affairs operations.

The interns attending Ordnance BOLC focus on unit movement, communications, military history, maintenance and supply, conventional munitions, digital battlefield operations, metalworking, automotive maintenance, recovery principles and application, and automo-

tive and armament maintenance of combat systems and small arms.

The Transportation BOLC interns learn about unit movement, moving the force, strategic mobility, tactical transportation operations, and Force XXI battle command operations.

**OJT.** OJT provides interns with opportunities to gain firsthand experience in a wide variety of logistics organizations. By the end of OJT, the interns will understand the various supply, maintenance, and transportation functions. Using a diverse set of organizations, the interns are provided projects that give them the



*Brandi Berry, a DA logistics intern, participates in land navigation training during a 2011 Basic Officer Leader Course as part of the DA Logistics Intern Program.*



opportunity to reinforce classroom instruction and learn through application. These opportunities also provide the interns with insight into the bigger Army picture.

### Position Assignment

Once logistics interns complete their training, they are available for worldwide assignment based on the needs of the Army. A board comprising gaining command representatives selects interns based on current staffing needs in conjunction with each intern's permanent duty location preferences. Historically, about 95 percent of the logistics interns get one of their top three permanent duty assignment choices. Permanent changes of station are centrally funded and interns are assigned to gaining activities' tables of distribution and allowances and funding.

### ACTEDS Pathway Internship

The ACTEDS Pathway Internship Program provides an opportunity for high school, vocational school, and college students to enhance their academic program of study by gaining work experience while attending school.

The students' government work experiences must be designed to be consistent with the student's academic studies or career goals. The program requires the student to complete a minimum of 640 career-related work hours before graduation. ACTEDS Pathway interns who successfully complete the part-time program may be considered for noncompetitive selection into the DA Logistics Intern Program once they graduate.

Both the DA Logistics Intern Program and the ACTEDS Path-

way Intern Program rely heavily on the Civilian Logistics Career Management Office's dedicated recruiting program. Candidates who have the desire to grow and learn, possess a positive attitude, demonstrate leadership traits, are energetic self-starters, and epitomize the Army Values are encouraged to apply.

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Carey W. Radican is a Department of the Army logistics intern program manager and a retired Army lieutenant colonel. He holds a bachelor's degree in marketing management from Old Dominion University and a master's degree in computer systems management from the University of Maryland University College. He is a Six Sigma Green Belt and a graduate of the Command and General Staff Officer Course and the Logistics Executive Development Course.



*DA logistics interns tour facilities at Fort Eustis, Va., as part of the DA logistics intern program. (Photo by Barbara Gomoll)*



# Pursuing Professional Development Through Long-Term Training

■ By Katie Smith

Working at the Army Deputy Chief of Staff, G-4, Logistics Innovation Agency offers many opportunities for new experiences and advancement. Because I joined the agency directly after my training as a Department of the Army (DA) transportation intern, I felt confident in the transportation aspects of my job. As I progressed in my career, I gained experience with technology and the military.

However, because agencies expect logisticians working at the headquarters level to have experience in the basics of each logistics function (supply, maintenance, and transportation), I still felt that I should refine my logistics skill set. That is why I chose to take a long-term training (LTT) assignment.

At first, I was hesitant to apply for a developmental assignment because, at the time, I was heavily engaged in a project that I was passionate about. Then I remembered what a senior logistician had once told me: "There is never a 'good time' for training, so when an opportunity presents itself, go for it!"

So, I applied for an assignment with the Directorate of Logistics (DOL) at Schofield Barracks, Hawaii. I chose this LTT because it would give me the "where the rubber meets the road" experience in all logistics functions. I had gone from being an intern to working at the DA headquarters, and I felt that I was at a disadvantage when compared to my coworkers who had spent parts of their careers at field-level assignments. By accepting this LTT, I was able to enhance my project management and logistics analysis skills through developmental assignments in the Transportation, Supply and Services, Maintenance, and Plans and Operations Divisions of the DOL.

In the Plans and Operations Division, I successfully negotiated and executed the post's vehicle utilization review board for nontactical vehicle (NTV) turn-in efforts, which involved all local major commands. My efforts ultimately saved the garrison approximately \$350,000 in annual NTV costs. I also helped stand up the DOL's first government insourced privately-owned vehicle storage program for single deployed Soldiers.

In the transportation division, I participated in multiple unit training exercises and Operation En-

during Freedom deployment operations. I served on deployment and redeployment transportation teams, coordinated air load plans and ground support transportation for personnel and cargo, and helped account for Soldiers as they arrived on chartered flights from theater. I provided tracking information daily using the Global Transportation Network and the Single Mobility System.

I obtained technical transportation of hazardous materials certification through the DOL's deployment training center. I led efforts to train satellite location leaders at Schofield Barracks and Fort Shafter. I helped them determine operations, policies, procedures, and the assortment of vehicles needed. I calculated and analyzed the financial commitment for transportation motor pool contracted drivers versus subcontracted drivers. Because of my analysis, the director hired two additional drivers, resulting in a weekly savings of \$6,500.

In the maintenance division, I used my analytical skills to support efforts to cost-track Army Force Generation maintenance programs. While working there, a maintenance mentor explained the various battalion priorities and maintenance shop statuses. He also taught me how to troubleshoot the daily maintenance management reports in order to identify issues.

In the Supply and Services Division, I reviewed and analyzed local DOL policies and suggested efficiency improvements in several facilities.

The training with DOL allowed me to develop leadership skills and a strong connection with DOL culture. I left the assignment appreciative of the mentorship and grateful for the enhanced leader, logistics, and functional skills I had acquired.

For logistics careerists looking to enter developmental long-term assignments funded by the Army Civilian Training, Education, and Development System, I suggest researching the advertised positions first. If a position appears to be a good fit, then go for it. Once selected, you should work with both your current supervisor and the assignment supervisor to develop a training plan and negotiate work-related expectations and training outcomes.

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Katie Smith is a Logistics Management Specialist at the Army Deputy Chief of Staff, G-4, Logistics Innovation Agency. She holds a bachelor's degree in business administration from Christopher Newport University and an MBA with a specialization in international business from Walden University. She is a graduate of the Transportation Basic Officer Leader Course.



*A Department of the Army civilian student practices his briefing skills on classmates during a class at the Army Logistics University at Fort Lee, Va. (Photo by Julianne E. Cochran, Army Sustainment)*

# Civilian Professional Development: What's in It for You?

**The Army has developed an extensive program to enhance civilian professional development. Online tools are available to help civilian employees map their career course using training, education, and other resources.**

■ By Valerie Helms

**A**rrmy civilians number 330,000 and comprise over half of the Army's generating force. This means that Soldiers, leaders, and units at all Army levels benefit from multiskilled civilians with varied experiences and perspectives. A competent, engaged civilian workforce helps secure our freedom by removing distractions from the operational force.

Soldiers must have confidence in their support elements in order to fight and win wars. Army civilians perform critical tasks, often deploy with Soldiers, and provide continuity that Soldiers cannot because of fre-

quent deployments and assignments. A well-trained professional civilian workforce is essential to the successful execution of Army missions. Although civilian training and development opportunities are not as mature as those for the military, the Army is trying to close the gap.

## **Civilian Workforce Transformation**

The Civilian Workforce Transformation (CWT) was initiated in 2010 by the Assistant Secretary of the Army for Manpower and Reserve Affairs. CWT was chartered to offer recommendations and modifications

to existing civilian workforce programs to realize the Army's vision of a civilian development program. The intent was to recruit and retain top talent and prepare the civilian workforce to succeed in leadership positions throughout the Army.

One of the first actions under CWT was to assign each Army civilian to a career program (CP), which is similar to an occupational branch for Soldiers. In order to complete this, seven new career programs were created, bringing the Army's total of civilian career programs to 31. The next step was to review the position descriptions for all 330,000 civilians and assign each employee to the correct CP.

### Army Career Tracker

Army civilians were also spiraled into the Army Career Tracker (ACT) between April 2011 and September 2012. ACT is a leader development tool that integrates training and education into one personalized, easy-to-use website. Users can search multiple education and training resources, monitor their career development, and receive personalized advice from their leaders.

ACT was first implemented for enlisted Soldiers and has expanded to include officers and Army civilians. It offers a road map to help civilians determine what they have to do to reach the highest levels in their career programs so that they can put a plan in place to reach their goals.

Anyone can review the information in ACT by going to the website at <https://actnow.army.mil>. The site contains career maps for most GS (general schedule) occupational series, which are similar to military occupational specialties for Soldiers. This is helpful for employees working toward promotion or changing jobs or veterans trying to become Army civilians.

### CP Administration and Training

Each career program has a functional chief representative and a functional point of contact. This can be related to a military branch man-

ager with one very important difference: career program offices deal only with training and development, not assignments or promotions.

Each career program office receives

an IDP, so check with your command to find out which one you should use. However, ACT also has an IDP capability. The key to IDP success is for supervisors and employees to work

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Although supervisors need to be involved, civilian employees are ultimately responsible for taking the initiative for their own professional development.

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Army Civilian Training, Education, and Development System (ACT-EDS) funds annually for training and development. ACTEDS funding is only one of five sources of funding and is distributed using a competitive process. The other sources of funding are Headquarters, Department of the Army central funds, organizational funds, personal funds, and Defense Acquisition Workforce Development funds (only available for personnel in acquisition-coded positions).

The ACTEDS catalog outlines various types of training and development available for civilians. Because not all CP offices offer the same opportunities, you must also consult the ACTEDS plan for your CP. The types of training for civilians include long-term training (120 days or more), short-term training (less than 120 days), and academic degree training, which allows civilians to obtain an associate, bachelor's, or master's degree.

The training sources range from internal government sources, such as the Army Logistics University and Defense Acquisition University, to external institutions, such as Penn State, Georgia Tech, or Harvard. The key is to identify your training or competency gap and find a course curriculum that can help you to close it.

A very important tool for every civilian to design, develop, and use is the individual development plan (IDP). Multiple manual forms and automated systems can be used to create

together to complete the employee's development plan. Although supervisors need to be involved, civilian employees are ultimately responsible for taking the initiative for their own professional development.

Many tools are available to assist you in developing your professional road map for success. Mentorship, formal training, developmental assignments, the Civilian Education System, and the Senior Enterprise Talent Management Program are just a few options and programs.

Invest the time to research your options. Your personal investment in lifelong learning will help you achieve your personal and professional goals. You will enjoy a rewarding career and contribute to fulfilling the Army's mission. People, both Soldiers and Army civilians, are the Army's most valuable resource.

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# The OSD Fellows Program

■ By Randal Kendrick

Understanding different perspectives is crucial to working together across service, agency, and organization lines to accomplish the Department of Defense (DOD) mission. The Office of the Secretary of Defense (OSD) Supply and Transportation Fellows Program offers a unique opportunity to gain new perspective by expanding both the breadth and depth of one's knowledge base.

Most DOD employees spend their careers within a particular service or agency, often within a specific career field, which limits their knowledge base. The OSD fellows program is designed to overcome this by exposing fellows to joint and interagency perspectives while providing experience in transportation policy and supply chain integration.

Different perspectives among the services are the inevitable result of the legal framework for the armed forces. Three separate sections of Title 10, U.S. Code, charge the Secretaries of the Army, Navy, and Air Force to recruit, organize, supply, equip, train, and maintain their forces. Left unchecked, each service would likely achieve mission effectiveness without regard for economies of operation and scale.

However, Section 133 of Title 10 gives authority to the Undersecretary of Defense for Acquisition, Technology, and Logistics to establish policies for logistics, maintenance, and sustainment support DOD wide.

By design, the OSD staff reviews business practices from each service and agency and formulates policy to implement the best ideas across the DOD. Whether tracking retrograde movements or developing demand forecasting algorithms, the services have much to learn from each other.

As a participant in the fellows program, I had the opportunity to participate in interagency discussions on ocean transportation with a number of federal agencies. I also represented OSD at an interagency meeting on hurricane preparedness where I briefed the DOD's role in Jones Act waivers for the use of non-U.S. built, owned, and flagged vessels in the event of an emergency.

To develop the depth of their knowledge base

(that is, the ability to understand processes from the strategic down through the operational and tactical levels), fellows work on special projects. One of my projects was to prepare an exception to policy for the Deputy Secretary of Defense to sign, which would allow contractors to depart Iraq on a space-required, nonreimbursable basis.

Although this appeared to be a straightforward task, I had to ascertain the details down to the forward operating base level and work with each organization, from the local contracting activity through U.S. Forces-Iraq to various DOD offices. Through this and other projects, I was able to make policy recommendations and see them move toward fruition.

The fellows program also provides participants with enough autonomy over their agendas to achieve a good balance between training objectives and work accomplishments. White space on the calendar can be filled with functional area meetings, shadowing OSD employees, or pursuing outside professional development. I pursued countless opportunities to enhance my leadership skills and gain familiarity with the logistics processes of the military services and DOD agencies. I attended joint forums, such as the Joint Logistics Board, Supply Chain Executive Steering Group, and Strategic Human Capital Executive Steering Group, and conducted site visits to the U.S. Transportation Command, Defense Logistics Agency directorates, and the Department of Energy. I also participated in university training, such as the Advanced Program in Logistics and Technology with the University of North Carolina, and the Congressional Operations Seminar taught by the Georgetown Government Affairs Institute.

A year from now I will have forgotten the specific commands required to navigate OSD's tasker system, but perspective does not fade quickly. The OSD fellows program broadened my perspective in a way that will in turn broaden my career and enhance my contributions to the DOD.

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Randal Kendrick is a member of the Office of the Secretary of Defense Supply Chain Integration staff. He holds a bachelor's degree in business management from Grove City College and a master's degree in business administration from Cameron University. He is a graduate of the Logistics Executive Development Course and the OSD Supply and Transportation Fellows Program.

# Modification of the Planning Process for Sustainers Part 3: Orders Production, Rehearsals, and Sustainment Assessments

■ By Dr. John M. Menter and Benjamin A. Terrell

The planning process, beginning with Army design methodology and continuing with the military decisionmaking process, helps the planner prepare to create the operation order (OPORD). Once the staff produces an order, it must be rehearsed and assessed. In this article, we will discuss the orders production, rehearsal, and assessment processes.

The doctrine describing the OPORD format is most applicable to corps-level orders production. This causes a bit of consternation for the sustainment planner. For sustainment commands, battalion and higher, Paragraph 4 (Sustainment) and Annex F (Sustainment) of the OPORD or operation plan describe the internal concept of support. Paragraph 3 (Execution) and Annex C (Operations) detail support operations and elaborate on the supported unit's internal concept of support.

## Order Production Responsibilities

Order production is the responsibility of the J/G/S-3 (operations) section. This section compiles the components of the order and issues it to subordinate units. It also creates the portions of the order that deal with missions of higher and adjacent units, subordinate units' tasks, coordinating instructions, command information, and control information (the main body of the order). The

operations section is also responsible for the parts of the order that cover decision support products, rules of engagement (Annex C [Operations]), protection (Annex E), civil affairs operations (Annex K), and information collection (Annex L).

The theater sustainment command has a G-5 (plans) section. This section facilitates planning, but the responsibility for issuing the order still rests with the J/G/S-3. The G-5 facilitates the development of draft plans that can be rapidly converted into orders. It also writes Appendix 1 (Design Products) of Annex C and, as the lead of the plans cell, helps develop plans for branches and sequels.

The support operations division is responsible for developing the concept of operations.

The J/G/S-4 (logistics), with assistance from the J/G/S-1 (personnel), the staff judge advocate, the chaplain, and the finance officer, prepare Paragraph 4 of the main body of the operation order, Annex F, and Annex P (Host Nation Support).

The staff engineer position, which varies in section depending on the echelon, is responsible for Annex G (Engineering) and engineering subjects in the main body of the order and Annex F.

## OPORD Format

In the main body, Paragraph 1.e. (Missions of Adjacent Units), fol-

lows the prescribed format. Include customers and suppliers who are not in your chain of command. Then, relist customers and suppliers and describe their concept of support in Annex C, Paragraph 1.d. (Friendly Forces).

The expeditionary sustainment command recounts the concept of support from strategic partners and division-equivalent organizations. Sustainment brigades describe customer brigade support battalion, or equivalent, concepts of support. Brigade support battalions specify support concepts of the battalions they support by phase. Details include locations, Department of Defense activity address codes, and geographic routing identifier codes.

The format of Paragraph 3.b. (Concept of Operations) and Annex C must differ from Army Tactics Techniques and Procedures (ATTP) 5-0.1, Commander and Staff Officer Guide, in order to present the information required to describe support operations and meet the intent of the doctrine. This variance does not take away from, but adds to, prescribed formatting. See figure 1 for our recommended format for the main body of the OPORD.

A technique to limit the number of pages in the main body is to provide a simple paragraph narrative for Paragraph 3.c. The narrative should focus on major hubs, routes, priority of effort, and priority of support

## Outline for the Main Body of the OPORD

3. (Classification) Execution.
  - a. (Classification) Commander's Intent.
  - b. (Classification) Concept of Operations.
    - (1) (Classification) Phase [#] (Title).
      - (a) (Classification) Decisive Operation. Task(s) and purpose.
      - (b) (Classification) Shaping Operations. Task(s) and purpose.
      - (c) (Classification) Sustaining Operation. Task(s) and purpose.
  - c. (Classification) Scheme of Support Operations. This subparagraph replaces the traditional "Scheme of Maneuver." It does not address the schemes of mobility and countermobility or obscuration; address these in paragraph 3.e. (Scheme of Protection), if necessary. The subordinate paragraph order follows the format of paragraph 4 (Sustainment) in Annex F (Sustainment):
    - (1) (Classification) Scheme of Material Readiness.
    - (2) (Classification) Scheme of Transportation.
    - (3) (Classification) Scheme of Supply.
    - (4) (Classification) Scheme of Field Services.
    - (5) (Classification) Scheme of Distribution.
    - (6) (Classification) Scheme of Contracting.
    - (7) (Classification) Scheme of Human Resources.
    - (8) (Classification) Scheme of Financial Management.
    - (9) (Classification) Scheme of Sustainment Automation System Management.
    - (10) (Classification) Scheme of Surveillance and Reconnaissance.
  - d. (Classification) Scheme of Intelligence.

The paragraph should continue in accordance with doctrinal guidance.

*Figure 1. Recommended format for the main body of an operation order (OPORD).*

for support operations. In this case, include the "Scheme of Mobility" subparagraph and an overview of distribution operations. Also include the "Scheme of Information Collection."

Detail information in Paragraph 3.a. (Scheme of Movement and Maneuver) of Annex C. Rename it "Scheme of Support Operations" and follow the subparagraph format listed above, but this time omit "Scheme of Information Collection."

### Considerations for Annexes

In Annex A (Task Organization), consider including contractors, customers, and suppliers as appendices.

Include location, contact information, and identifiers (such as Department of Defense activity address codes and geographic routing identifier codes).

In Annex B (Intelligence), focus on information most pertinent to a sustainer.

In Annex C, include the support operations overlay. Use multiple overlays as needed to clearly depict support operations. Include supplier and customer graphics as much as possible. Always include the support operations synchronization matrix and decision support tools. Omit the appendices that do not apply to the situation. If gap cross-

ing, air assault, airborne, amphibious, or special operations apply, address the support operations plan for each operation in detail.

Annex D (Fires) can typically be omitted when information about fire support is covered in the main body of the OPORD.

Annex E (Protection) refers to internal operations but should discuss coordination with outside agencies (such as the base defense operations center) as required. Reference other documents, such as the personnel recovery plan dictated by the maneuver unit that controls the area of operation, rather than repeating it. Ensure that the referenced document is available to subordinate units. Appendices usually will not be required.

Annex F (Sustainment) follows the doctrinal format. This annex applies to internal operations. Use appendices, tabs, and enclosures as required, but avoid detailing standard operating procedure information. Also, reference higher headquarters' guidance, such as legal and financial management information, rather than repeating it.

Annex G (Engineering) should be omitted if Annex B and Annex F cover required engineering subjects.

Annex H (Signal) references internal signal operations. Address sustainment automation systems management in the main body of the order and Annex C.

Use Annex J (Inform and Influence Activities) only when necessary. Typically, all required information is available in the main body of the OPORD under "Themes" in the "Coordinating Instructions" subparagraph of Paragraph 3.

Annex K (Civil Affairs Operations) may require a lot of detail if the sustainment unit is a primary supplier of class X (materials for nonmilitary programs). If not, consider discussing any details in Paragraph 1.f. (Civil Considerations) of the main body of the OPORD or Annex C and omit this annex.

Annex L (Information Collec-



tion) may be omitted because sustainment personnel do not normally have the training and resources to conduct reconnaissance and surveillance. If the unit does have designated information collection tasks, then include the annex.

Annex M (Assessment) is critical to the process. We will discuss assessment in detail later.

Annex P (Host Nation Support) and Annex V (Interagency Coordination) address different topics but are similar in that they deal with organizations with which the sustainer must coordinate. In a sustainment OPORD, Annex P addresses host nation contracting on a large scale. Similarly, Annex V details coordination with sustainment partners but has only an overview of other agencies operating in the area.

In Annex R (Reports), use the appendices to detail the battle rhythm, report formats not found in Field Manual 6-99.2, U.S. Army Report and Message Formats, and board and meeting agendas (sometimes referred to as “7-minute drills”).

Annex S (Special Technical Operations) and Annex U (Inspector General) are for echelons above brigade; omit them. Occasionally higher orders may contain pertinent information in these annexes. If so, incorporate that information into “Coordinating Instructions.”

## Rehearsals

Sustainment is a highly complex operation. Without a rehearsal, the sustainment commander is standing on blind luck and the ingenuity of his subordinates to accomplish the mission. As sustainers, we have to ask a great deal from our subordinates. Let us not do them the disservice of failing to rehearse.

The military decisionmaking process step of the course of action analysis provides for wargaming. ATTP 5-0.1 defines wargaming as an “attempt to visualize the flow of the operation.” Wargaming is the first rehearsal that a unit conducts.

The object is to coordinate and synchronize events and identify enemy and civilian impacts on operations.

Following the issue of an order, the sustainment unit should conduct an internal rehearsal with subordinate elements at least two levels below. This rehearsal verifies the subordinate units’ understanding of the order and timing required. It provides a great deal of assistance in supporting the planning effort and clarifies required coordination.

As with planning, the sustainment commander and staff must consider the advantages and disadvantages of integrating directly into the maneuver customer’s rehearsal schedule, conducting a completely separate rehearsal, or doing both. In a time-constrained environment, the integrated rehearsal is best. In a high operating tempo operation, conducting two rehearsals (integrated and sustainer specific) is best.

## Formal Rehearsal

Some rehearsals are more important than others. During an upsurge of forces or a theater closing, sustainment operations become the decisive operations. In such cases, senior commanders (division level and above) become very interested and request rehearsals of concept in order to ensure coordinated, synchronized, and effective execution of the operation.

To execute a formal rehearsal, allow appropriate time. Subordinate units must have time to prepare their portions of the operation. The executing command must plan on conducting collaboration meetings and at least three prerehearsals. Subordinate units must submit products on time, and the executing command must complete the quality review before the rehearsal and effectively manage versions of the briefing.

There are important points to consider for effective presentation. The executing commander establishes certain themes that each participant addresses throughout the rehearsal.

During collaboration meetings and prerehearsals, the participants develop “linkages” among presenters, reduce friction points, and eliminate conflicting information.

The executing command nests its themes into higher headquarters plans and includes adjacent units (suppliers and customers) in the rehearsal. Mastery of material and confidence in presentation lead the recipients of the rehearsal to trust the participants to be able to execute as presented. Use of a common font, color scheme, and backgrounds in the presentation material makes the presentation easier to digest.

Preparations include the briefing area and administrative requirements. Briefing area preparations include the sand table (or equivalent), wall maps, graphics, unit icons, seating, sound, projector, videography, and telephones. Administrative preparations include security (facility, gates, doors, and transportation), parking, refreshments, location, clean-up, drivers and transportation, billeting, meals, and protocol (VIP guest list and invitations, escorts, social, formal dinner, flags, placards, and special instructions).

As a final note, think of rehearsal as the alter ego of wargaming. The more thorough the unit conducts the course of action wargaming, the smoother the rehearsal. If wargaming is conducted quickly or merely as a “check the block” action, the quicker the rehearsal will degenerate and ultimately desynchronize the OPORD or operation plan.

## Sustainment Assessment

Failure to assess is tantamount to planning to fail. Assessments begin with indentifying tasks. Through analysis of the tasks required of a unit and the commander’s desired end state, the sustainment planner determines measures of effectiveness (MOEs) and associated indicators. An MOE states a measurable condition; the civilian equivalent of the term is “metrics.”

Indicators provide the observable means for measuring the MOE. These indicators are very similar to the evaluation criteria described in ATTP 5-0.1.

Using inspiration from the information collection matrix, we have added a “Means of Evaluation” column to the indicator description to identify the collection method. (See figure 2.) MOEs and indicators identified during mission analysis become the evaluation criteria used during course of action analysis and continue throughout mission execution.

Sustainment planners derive MOEs directly from task requirements deduced during mission analysis. Tactical and hazardous risks originate in factors that may lead to the failure to meet an MOE. These factors have a negative effect on the systems that contribute to success. This link between MOE and risk focuses protection efforts of critical asset identification, vulnerability analysis, and protection (or mitigation) efforts.

Sustainers use assessment continuously. Current operations assess mission progress. Support operations branches assess the statuses of the tasks within their functional areas. At times, leaders find it difficult or inconvenient to define “right” or how to measure it. There are many excuses available to crawl into such a rut, but none are valid. Sustainers

must define their tasks and the means by which to measure progress and success. This is logistics analysis.

High quality logisticians conduct analysis and assessment so that their commanders have a thorough understanding of their operational environment and what decisions are required. Sustainers conduct logistics analysis and assessment in such detail that the supported commander is never caught unaware with a critical shortage or failure of systems. Sustainers deal daily with a data deluge.

As a rule, sustainers are adept at using charts and graphs to mold data into information. Comparing the information to assessment criteria provides the sustainer with the knowledge needed to provide the sustainment commander with situational understanding. Comparing information to assessment criteria also provides sustainers with evidence of a variance from the anticipated flow of events and alerts them to the possibility of the need for a branch, sequel, or full revision of the plan. The standardized tool to conduct assessment and analysis is the running estimate. (See part 2 of this series in the May–June 2013 issue of *Army Sustainment* for a discussion of the running estimate.)

Sustainment planning, rehearsal,

and assessment conform to doctrine. As with all functional areas, sustainers should feel free to modify formats to fit their specific needs. Doctrine provides a standard process, but planners must still effectively analyze and plan for their individual situations. Doctrine works. It is time proven, but it is also flexible—a foundation and framework, not a prison.

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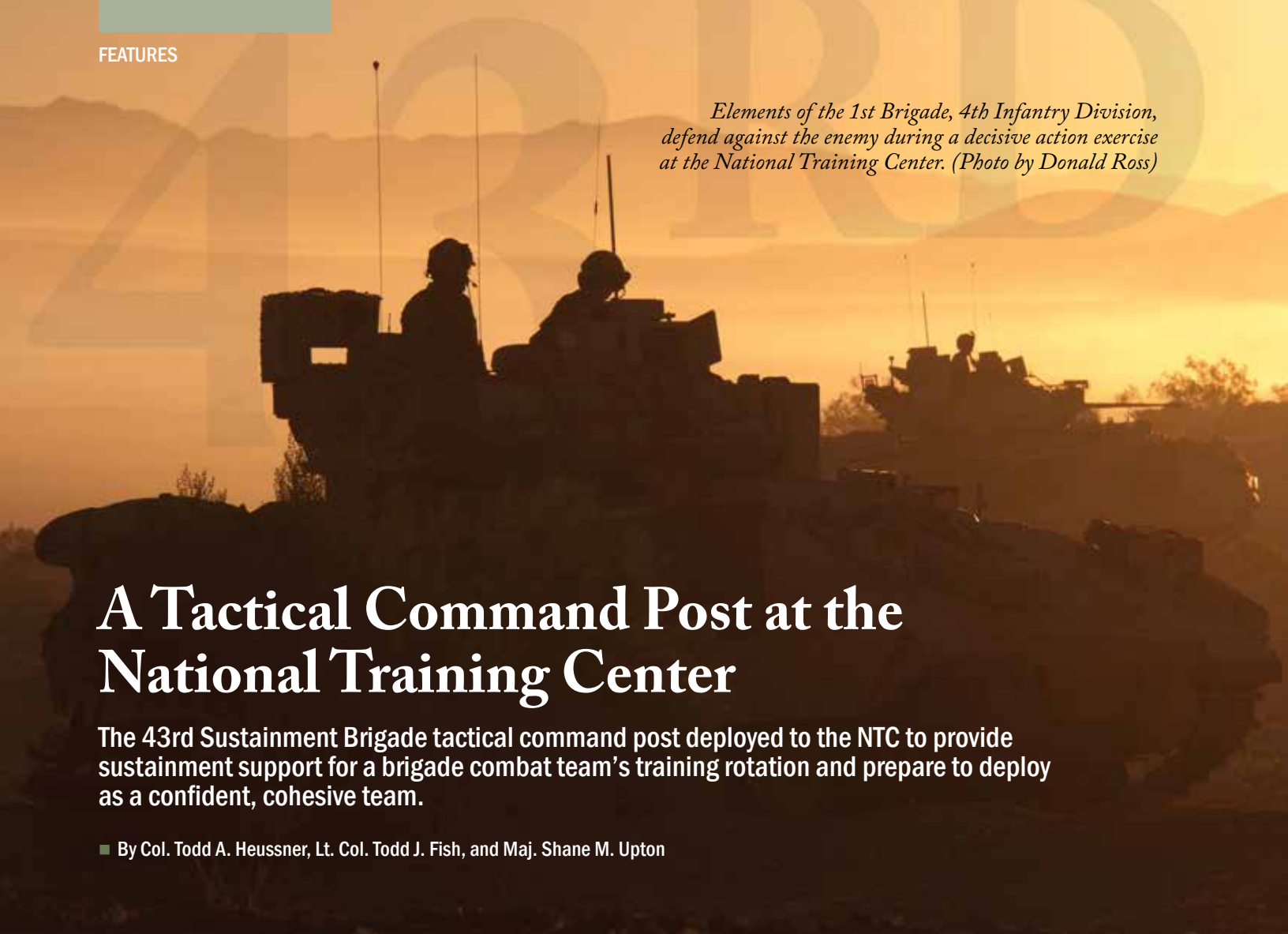
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Measure of Effect	Indicator	Means of Evaluation	Unit of Measure	Benchmark
[Customer unit] has the necessary sustainment to complete its mission.	Class of supply status	Logistics Statistical Report	Quantity in days of supply	5 days of supply
	Materiel readiness status	Logistics Statistical Report	Operational Readiness	90% operational readiness
Forward Operating Base in-gating is efficient	Wait time for trucks outside of gate	Gate Report	Hours	3 hours

Figure 2. Measure of effectiveness matrix.





*Elements of the 1st Brigade, 4th Infantry Division, defend against the enemy during a decisive action exercise at the National Training Center. (Photo by Donald Ross)*

# A Tactical Command Post at the National Training Center

The 43rd Sustainment Brigade tactical command post deployed to the NTC to provide sustainment support for a brigade combat team's training rotation and prepare to deploy as a confident, cohesive team.

■ By Col. Todd A. Heussner, Lt. Col. Todd J. Fish, and Maj. Shane M. Upton

The Army has seen, and will continue to see, reduced funding as it transitions from simultaneous wars in Iraq and Afghanistan and deal with the fiscal challenges of our nation. These cuts force leaders to re-examine their training strategies as they work to maintain tactical excellence in an era of fiscal austerity.

Sustainment units can fulfill training requirements by participating in their supported units' training, both at home station and at the combat training centers (CTCs). Executing a training center rotation with habitually and geographically assigned units, from forward support companies all the way up to a sustainment brigade, ensures unity of effort and facilitates the development of the

entire sustainment team.

Including habitually and geographically assigned units in training center rotations is a low-cost way to achieve long-term improvements in professional leader development. It teaches Soldiers about synchronizing multiple levels of sustainment operations in unified land operations.

The Army is known for ensuring that Soldiers are well supported and enter combat with the best equipment available. In the past 10 years, changes have been made to sustainment operations and organizations at the tactical level, which are increasingly distribution focused. Now the Army is beginning to draw down while changing the training focus from counterinsurgency operations to combined arms maneuvers.

As sustainers, we are at a critical juncture with a very small window of time to harness the knowledge of officers and senior noncommissioned officers who have experience preparing for and fighting combined arms maneuver engagements.

## Sustainment Support at the NTC

A recent National Training Center (NTC) rotation of the 1st Brigade Combat Team (BCT), 4th Infantry Division, was a prime opportunity for the 43rd Sustainment Brigade to support the 4th Infantry Division and validate its mission command processes before deploying in support of Operation Enduring Freedom.

The 43rd Sustainment Brigade's tactical command post, consisting of 51 personnel, deployed to the NTC

to provide integrated and synchronized sustainment support, ensuring that the 1st BCT operated with no sustainment shortfalls during its rotation. The 43rd Sustainment Brigade established and maintained an accurate sustainment common operational picture, used an established battle rhythm, and leveraged battle command systems as a final check and validation of its mission command capability before deploying to the NTC.

By participating, the sustainment brigade ensured that key leaders and battle staff members were trained and proficient in planning, resourc-

ing, and integrating logistics capabilities across the battlefield. Soldiers and leaders also increased mission-essential task list proficiency in core logistics capabilities.

After completing the NTC rotation, the "Rough Riders" of the 43rd Sustainment Brigade were prepared to deploy as a confident, cohesive team, capable of going anywhere in the world in support of global contingency operations.

#### **Training Shortfalls**

Presently, BCTs train using a building block approach that culminates in a CTC rotation certifying

that the brigade is ready to deploy and is able to fight effectively. The CTCs are the best resourced, most realistic, and most challenging training experience a unit can be exposed to other than combat.

Before attending a CTC for training and validation, BCTs train at the platoon, company, battalion, and brigade levels. During the CTC rotation, the brigade is exercised to determine both its strengths and weaknesses before deploying and is evaluated by observer-coach/trainers.

However, more than a third of Soldiers and units are not assigned to a BCT and are unlikely to have

*A disabled vehicle gets a ride back to the maintenance area at the National Training Center. (Photo by David Vergun)*





the opportunity to train in the high-intensity and realistic environment of a CTC. Some Soldiers may have the chance to train at a CTC with an echelons-above-brigade (EAB) unit, but they often do not have the same access to resources and highly trained observer-coach/trainers as BCT Soldiers.

Sustainment brigade headquarters Soldiers never receive this invaluable training opportunity. Figure 1 demonstrates the gap in readiness of a non-BCT unit in relation to the resources it receives for training.

According to the Army Chief of Staff's guidance in Army Doctrine

Publication 7-0, Training Units and Developing Leaders, "Individuals, teams, sections, and units train to standard as part of a combined arms team. Major training events, CTC exercises, and operational deployments link together as a comprehensive progressive and sequential training and leader development program."

The manual also states, "Multi-echelon training is a training technique that allows for the simultaneous training of more than one echelon on different or complementary tasks. It optimizes training time for subordinates during higher unit

training events."

Unlike BCTs, sustainment brigades do not have mandated training gates that must be accomplished before they are certified to deploy. They do have a recommended training strategy to follow, but the actual validation or certification is left to the sustainment brigade commander and the senior mission commander's discretion. This results in a number of different strategies that yield varying results.

To date, no organization or headquarters has been tasked with certifying a sustainment brigade headquarters. Training is sought at the

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Using CTC rotations as capstone events for sustainment brigades will ensure that Soldiers are trained to succeed in their assigned mission sets and that their skills match the BCTs they support.

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discretion and motivation of the sustainment brigade commander and is limited by resource constraints that are far below those of a BCT. Mission certification is purely subjective and is accomplished at the senior mission commander's discretion.

### The CPX-S and MCSIT

On a per capita basis, sustainment brigade headquarters are designated for deployments just as often as BCTs, but they do not have a CTC rotation or other way to validate mission command competency. If they are not included in CTC rotations, mission rehearsal exercises, or deployment exercise-type training opportunities, sustainment brigades must actively seek out and piggyback off of other units' training events.

The Combined Arms Support Command (CASCOC) and For-

es Command (FORSCOM) have mitigated some of this training gap with the command post exercise-sustainment (CPX-S) training event for EAB sustainment units and the mission command systems integration training (MCSIT) phases I, II, and III.

The purpose of the CPX-S is to prepare sustainment commands for deployed operations using a digital communication simulation that has mission event synchronization injects. These are beneficial exercises for staff and commanders, but they are not the same level of training as a CTC rotation, nor do they provide the intensity needed to validate a sustainment brigade in mission command. The Army remains BCT-centric in its warfighting doctrine and training methodology and places less emphasis on mission command

of other formations.

FORSCOM's MCSIT exercises bridge the gap between new equipment training provided by materiel developers and the requirement for a staff that is capable and confident in establishing and employing the mission command systems (personnel, networks, information systems, processes and procedures, facilities, and equipment) to support the commander's decision making.

The CTC training environment provides the best possible training for the sustainment brigade staff and commander. Combat formations rely on competent, well-trained, aggressive, and agile sustainers who can solve complex problems in support of operational requirements. The Army could increase readiness and improve sustainment support by requiring EAB sustainment units to support

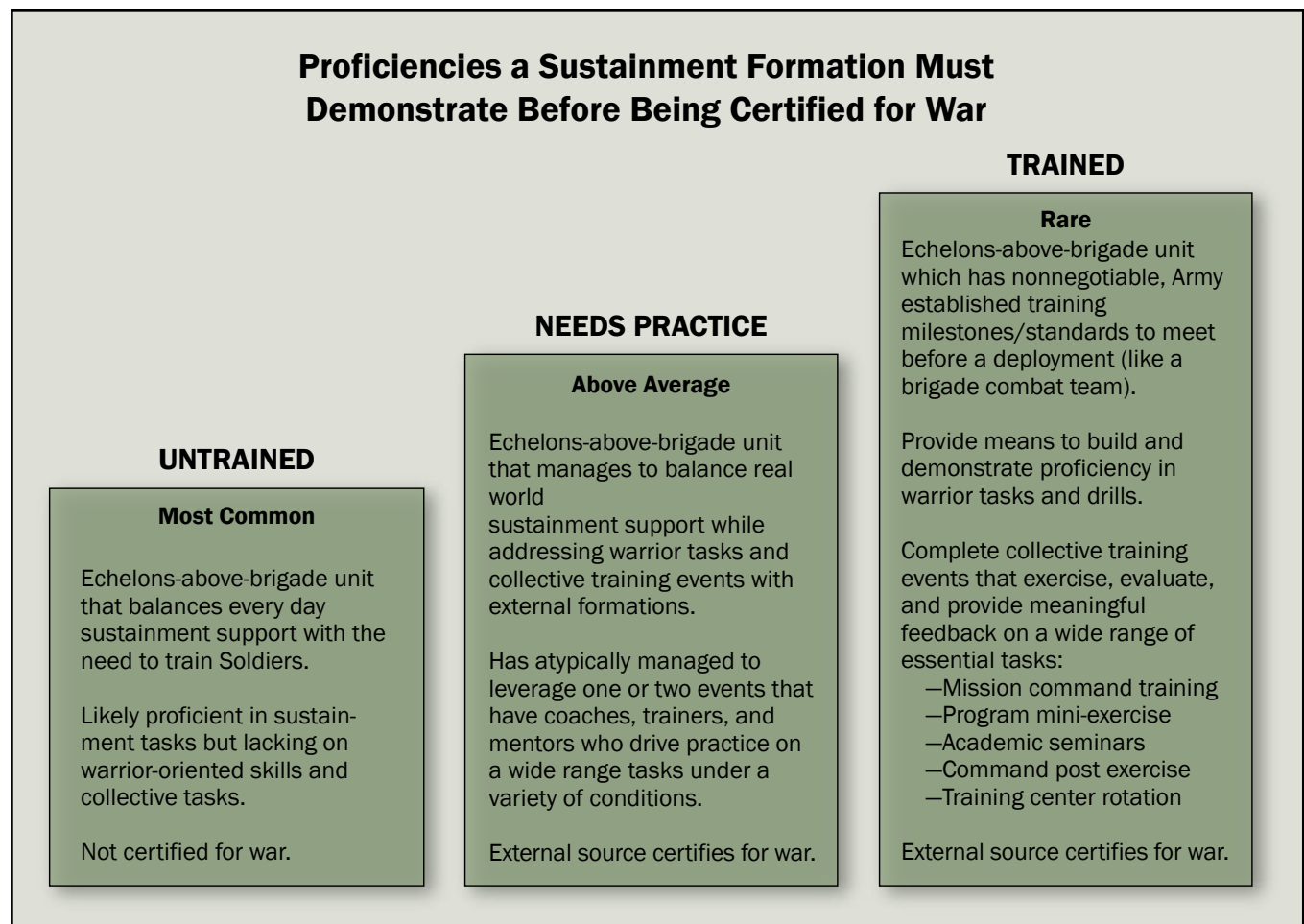


Figure 1. The gap in readiness of a non-BCT unit in relation to the resources it receives for training.

CTC rotations and other rigorous, nonvirtual exercises that emphasize providing actual commodities of services and support.

### Preparing for the NTC

The 43rd Sustainment Brigade's training at the NTC was a multi-echelon training event to exercise the staff before it deployed to Afghanistan. The brigade executed a progressive training model encompassing individual and collective tasks.

The scheduled training required the brigade to move directly from its CPX-S at Fort Lee, Va., to the National Training Center. The CPX-S was a great primer for the NTC. The skills learned in the virtual, constructive environment at Fort Lee helped Soldiers refine their skills on systems they were required to operate successfully at the NTC.

This progression from the virtual world to the real world is the same model that the Army uses to train BCTs. The model is sound and produces a unit well trained in mission command and capable of operating on a complex battlefield. After attending these training events, the sustainment brigade leaders and staff were confident, comfortable, and proficient in using creative thinking to solve unanticipated problems.

The brigade conducted training through digital simulation exercises to better synchronize the staff. These training events were invaluable in building cohesion among the staff and developed systems and processes that would drive operations at the NTC. Both the digital simulation, where the brigade was able to leverage strategic enablers, and the tactical prowess gained by executing in a deployed environment were invaluable for deployment.

### Multiechelon Training

Sustainment on the battlefield is a collaborative activity requiring teams at multiple echelons to work in concert to provide the required support. Deploying a team of habitually associated units that are based at the same



*A logistics observer-coach/trainer monitors the movement of a supply convoy during a decisive action exercise at the National Training Center. (Photo by David Vergun)*

location (in this case, the 43rd Sustainment Brigade, 68th Combat Sustainment Support Battalion [CSSB], and 4th Brigade Support Battalion [BSB] at Fort Carson, Colo.) allows for plans development, rehearsals, relationship building, and professional mentoring and development.

Training during a CTC rotation allows for mission-essential task list training that is not easily replicated at home station because of the amount of resources required. The 43rd Sustainment Brigade exercised the reception, staging, onward movement, and integration (RSOI) of its own formation while critically observing and supporting the RSOI of a BCT and several separate units while they deployed their own home station equipment and personnel.

The NTC rotation provided the entire sustainment team with the opportunity to exercise the same staff integration and planning tools and systems used for the strategic movement of personnel and equipment to a deployed location. The greatest benefits were the real-world and real-time mission sets that drove and stressed sustainment brigade systems

and processes in mission command as the sustainment team provided an accurate logistics common operational picture to the division headquarters, the BCT, and subordinate units.

Conducting operations away from Fort Carson in a real-world environment allowed unit leaders to experience command, control, communications, computers, and intelligence (C4I) under conditions that cannot be replicated in a virtual exercise. Planning sustainment operations in the midst of thousands of Soldiers, tanks, Bradley fighting vehicles, and other rolling stock reinforced the requirement to integrate, synchronize, anticipate, and improvise to shape the outcome of the battles.

An initial concern was that having a sustainment brigade tactical command post at the NTC would detract from the rotational unit's training. This concern proved false early on in the rotation as it became apparent to all echelons of command that the sustainment brigade tactical command post was worthwhile as both a sustainment enabler and as an additional trainer for the BSB.



*Soldiers at the National Training Center have their Bradley fighting vehicle refueled. (Photo by David Vergun)*

The BCT commander was never logistically constrained, and the sustainment brigade's daily coaching and team building with the BSB and CSSB enhanced the planning, forecasting, anticipation, and synchronization of logistics throughout the rotation. Having a senior logistician involved in the training, development, and mentoring of BSBs and forward support companies offered some clear advantages.

In past deployments, sustainment brigades provided mission command over battalions not aligned with them at home station. This caused challenges in building cohesive, well-trained teams. During the NTC rotation, the 43rd Sustainment Brigade exercised mission command over its administratively controlled and co-located CSSB and also coordinated with a BSB. The relationships built and the training executed at Fort Carson before the NTC rotation di-

rectly contributed to the sustainment success of the BCT.

### **Partnering for Success**

Partnering with the 916th Sustainment Brigade, from Fort Irwin, Calif., provided an additional opportunity for the 43rd Sustainment Brigade to share, learn, and grow. The 916th Sustainment Brigade managed the RSOI process for the BCT and transferred control of sustainment operations as the BCT moved to the maneuver area. The exchange of liaison officers between the sustainment brigades ensured the BCT received uninterrupted support for the duration of the rotation. Liaison officer interaction allowed both teams to capitalize on the experience by learning from and sharing with one another.

The 916th Sustainment Brigade's subordinate unit, the 1916th CSSB, which includes many civilians, pro-

vided an interesting opportunity for the 43rd Sustainment Brigade. The 43rd provided mission command to the 1916th CSSB and experienced the limitations and nuances of working with contractors on the battlefield.

The partnering of these units and supporting actual maneuvering formations added a degree of realism that digital simulation could not have replicated. The need to provide for other Soldiers increased awareness and narrowed the focus on the criticality of support.

### **Lessons Learned**

While the training benefits of going to the NTC were indisputable, the additional cost of sending a portion of the sustainment brigade to train at the NTC was a concern. The brigade reduced the cost by sharing transportation assets already supporting programmed units. The



sustainment brigade's portion of the rotation cost less than \$100,000, which is relatively inexpensive for the world-class training of a sustainment brigade staff.

As the Army moves into a more fiscally constrained environment, the sustainment brigade support operations staff must be extra careful in executing materiel management functions. During the NTC rotation, the 43rd support operations officer (SPO) reinforced the need to energize the human dimension in regard to managing materiel and monitoring its flow.

To enable the 1st BCT to maintain combat power, a great deal of interaction was necessary among the sustainment brigade SPO, BSB SPO, Army Materiel Command representatives, Defense Logistics Agency personnel, and item and project managers. An offensive sustainment mindset was directly applied to the problem of procuring and managing critical class IX (repair parts) in support of the 1st BCT's decisive action mission.

The sustainment brigade SPO had the right materiel managers at the NTC, who demonstrated the capability to support the BCT's requirements. The SPO materiel managers could locate required repair parts not on hand at the warehouse and contact appropriate item managers or other FORSCOM units to order and ship the parts expeditiously to the NTC to build much needed combat power.

Furthermore, those same 43rd Sustainment Brigade Soldiers recommended ways to develop a better authorized stockage list and make adjustments to authorization for repair parts stocked at the NTC. The recommendations were based on mission demands that had not been captured recently in a combined arms maneuver operation because of the Army's focus on counterinsurgency operations and training.

Other best practices were used to expedite class IIIB (bulk petroleum, oils, and lubricants) resupply,

class I (subsistence) resupply, and stock management of rations. These tactics, techniques, and procedures were not new but had not been extensively used for many years. For example, the sustainment brigade in a counterinsurgency environment has grown accustomed to managing large quantities of fuel and rations. In some cases, units have 80 days of supply on hand. In a combined arms maneuver combat environment, only three to four days of supplies are on hand, requiring close management and synchronization between support echelons.

Throughout the course of the fight, the brigade honed its skills of producing running estimates and aimed for accuracy in stock status reporting in order to manage the flow of commodities. Operating a "race track" resupply system for bulk fuel (using tanker-to-tanker transfers instead of pushing tankers to a static fuel system supply point) reduced upload and delivery time by 600 percent.

The underlying theme is to be cognizant of managing materiel closely and step away from the excess stockpiles. These stockpiling techniques are the product of an established infrastructure in a mature theater and may cause us to become less focused on managing materiel in a dynamic and resource-constrained environment.

The NTC places real stressors on C4I and sustainment systems and forces Soldiers to identify where improvement of processes and support is required. Many sustainment Soldiers and leaders have never experienced combined arms maneuver operations, and that experience is invaluable. In order for sustainment brigades to participate in future CTC rotations, a culture change is necessary. Using CTC rotations as capstone events for sustainment brigades will ensure that Soldiers are trained to succeed in their assigned mission sets and that their skills match the BCTs they support.

As the Army transitions to an era of reduced operating tempo and lower budgets, it has the opportunity to refine training and doctrine, build sustainment teams, and seek efficiencies that will improve equipment readiness, the quality of training, and Soldier support.

No venue is better for training our sustainment units than our world-class CTCs. The CTCs produce leaders and staff who are confident, capable, and comfortable in a volatile, uncertain, complex, and ambiguous environment. The sustainment brigade adds value to the rotation by providing higher level sustainment guidance, planning, and coaching, which results in uninterrupted sustainment support to the BCTs.

Training at a CTC has a high payoff that cannot be replicated in a home station or virtual environment. It is clearly the best training in the world and sustainment organizations deserve nothing less.

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# The 18th Combat Sustainment Support Battalion Forward Retrograde Elements

To anticipate and synchronize retrograde and drawdown from planning through execution at the task force level, the 593rd Sustainment Brigade task organized U.S. Central Command materiel retrograde elements as forward retrograde elements.

■ By 1st Lt. Ryan Dennison

In early 2012, the drawdown of personnel, materiel, and base infrastructure throughout the Combined Joint Operations Area-Afghanistan was in its infancy. The need for a structured, organized, systematic, and methodical retrograde process quickly became apparent. The U.S. Central Command (CENTCOM) materiel retrograde element (CMRE) concept was established by leaders and embraced as the way forward to the drawdown in Afghanistan.

## The CMRE Solution

The first CMRE stood up in April 2012 and was initially made up of Soldiers from the 427th Brigade Support Battalion, which was deployed to Bagram and Kandahar Airfields in Afghanistan and task organized under the 10th and 45th Sustainment Brigades.

On June 18, 2012, the 18th Combat Sustainment Support Battalion (CSSB) from Grafenwoehr, Germany, came into theater to provide mission command of all CMRE enablers. The 593rd Sustainment Brigade, commanded by Col. Douglas M. McBride, assumed the brigade mission in August 2012.

The CMRE solution for retrograde in Afghanistan consists of enabler teams dedicated to assisting with “re-posturing” the theater. The CMRE missions included using various retrograde teams to execute recovery, redis-

tribution, retrograde, reset, disposal of excess materiel, and base closure and transfer assistance. Initially, the teams were reactive, assisting task forces with base closures or transfers if they were in danger of missing their proposed closure or transfer dates.

The 593rd Sustainment Brigade identified the requirement for a forward retrograde element (FRE) as the solution to synchronizing theaterwide retrograde plans while maintaining the flexibility to tailor operations to local task force mission parameters. This concept allowed the CMREs to change from a reactive posture to a proactive posture.

## The Initial Concept

Base closure assistance teams (BCATs) focused on helping units to identify foreign excess personal property (FEPP) and foreign excess real property (FERP). FEPP is equipment or items such as air conditioners, t-walls, and office equipment that the owning unit determines is excess and can be transferred to the Afghan government. FERP follows the same definition but is for structures that are not moveable, such as concrete buildings.

Since the unit tasked with the physical retrograde plan was usually determined before the BCATs were requested, paperwork became critical for a successful closure or transfer. The main reason the BCATs were request-

ed so late was because of the lack of theaterwide knowledge of CMRE capabilities. In August 2012, the BCATs deployed earlier in the closure process and started their assessments with a reconnaissance conducted 180 days before closure or transfer.

A base closure or transfer served as the decisive operation for the CMREs. Other enablers, such as mobile redistribution teams or mobile container assistance teams, handled shaping and sustaining operations, including improving the overall retrograde process. Those improvements started at the tactical infrastructures and ended at the strategic bases with the retrograde sort yards.

As the teams and concepts matured, the 18th CSSB support operations officer developed a plan to push the CMREs out from the strategic bases and embed them at operating bases with the local task force headquarters and brigade support battalions. At this point, the CMRE companies were task organized as FREs. This task organization allowed CMRE teams to anticipate and synchronize retrograde and drawdown from planning through execution at the task force level.

## FRE Task Organization

The FRE consists of a mission command element, a BCAT, a mobile redistribution team (MRT), customs border and certification agents, and a mobile container subject matter ex-

pert. The mission command element consists of an officer and senior non-commissioned officer (NCO). (See figure 1.)

The officer-in-charge (OIC) allows the FRE to assist with and provide subject matter expertise for the overall retrograde plans of the brigade engineer, brigade S-4, and support operations officer-in-charge. The senior NCO primarily focuses on daily execution of FRE operations. The mission command section acts as the project management cell and ensures that drawdown timelines are maintained and CMRE teams are properly coordinated.

The base closure section consists of six contractors focused on assisting task forces and forward operating base mayors with Afghanistan base closure and transfer requirements. These

include identifying FEPP, FERP, real estate, environmental, contracting, document processing, and Logistics Civil Augmentation Program (LOGCAP) contract requirements.

The MRT consists of two NCOs and 10 contractors. The main duty of the MRT is to operate an expeditionary retrograde sort yard at an operating base to sort excess equipment before shipping it to the strategic base retrograde sort yards. The MRTs maintain the flexibility to push forward to tactical infrastructure locations to conduct short-term sorting operations.

The customs section of the FRE consists of at least two junior enlisted Soldiers. These Soldiers spend most of their time assisting the redistribution property accountability team yards and ensuring that major end items are properly inspected and customs-

cleared before being retrograded. The customs section also has the flexibility to assist local units by conducting customs inspections of their organic equipment and personnel before redeployment.

Lastly, the container management subject matter expert, a junior enlisted Soldier, is responsible for ensuring that container management is maintained throughout the retrograde process. This includes ensuring that the task force assigns container control officers who are responsible for maintaining container accountability throughout the task force area of operations. The container management subject matter expert audits the Integrated Booking System-Container Management Module for accuracy and monitors the movement of containers during retrograde.

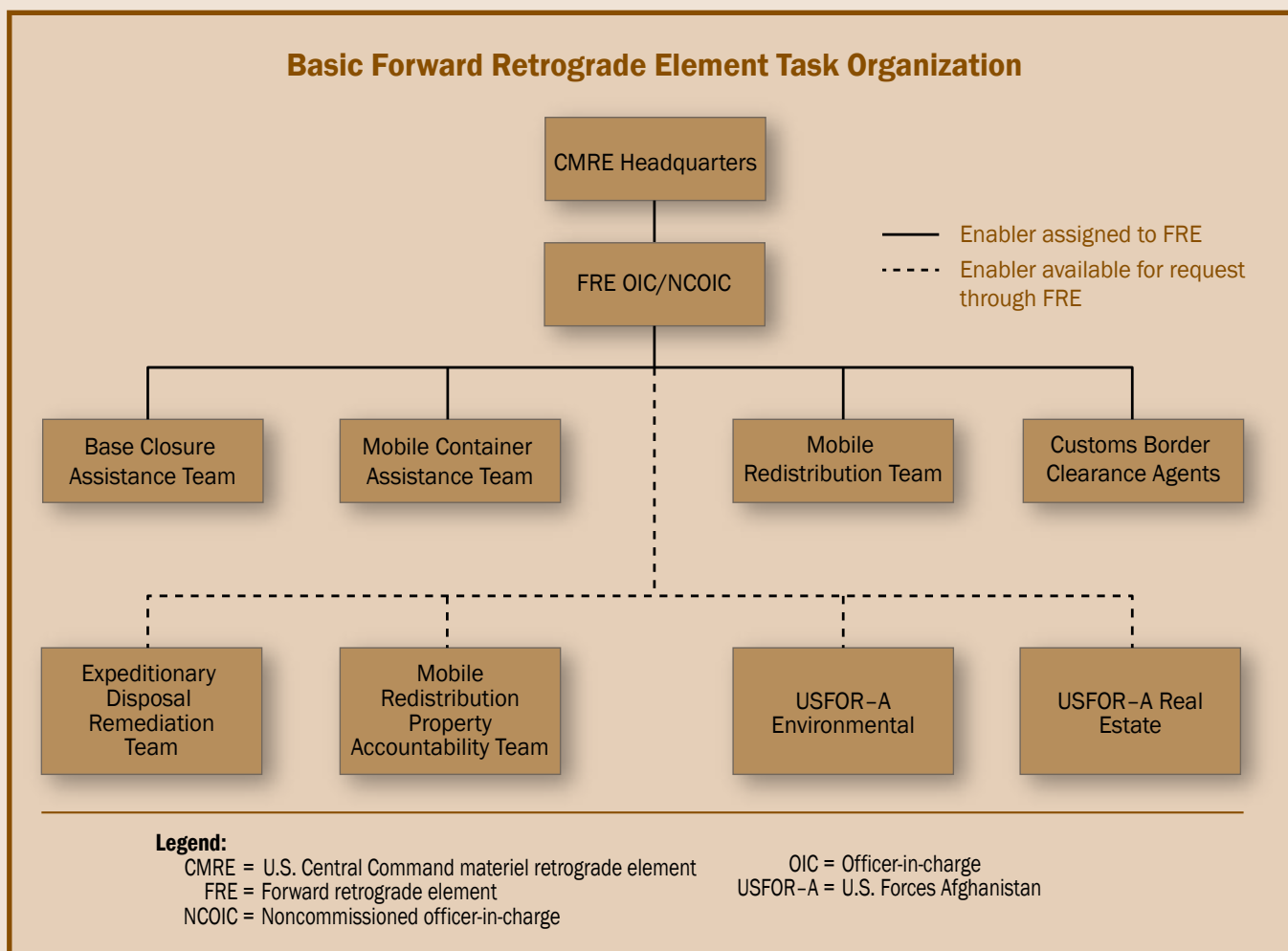


Figure 1. The basic task organization for forward retrograde elements (FREs). FREs can be tailored to meet task force requirements.



The container management specialist also assists redeploying units by certifying that containers are seaworthy. Future versions of the FRE task organization could benefit from the addition of a movement control team, a mobile redistribution property accountability team (MRPAT), and an organic expeditionary disposal remediation team (EDRT). EDRTs are currently stationed at strategic bases and pushed out to operational and tactical units when requested.

### Improvements to Operations

The FRE assists with the drawdown and retrograde from its start at the closing location through the completion of retrograde, redistribution, or disposal. From April to August 2012, the BCATs conducted assessments, ensuring that paperwork was up to date and the task force had a plan to remove excess equipment.

This methodology was an effective short-term solution for closures or transfers. But over time, this caused excess materiel to accumulate at the operating bases and other strategic hubs, resulting in the retrograde process essentially starting anew.

It was also difficult to synchronize operations between the brigade engineer and supply sections. This caused base closure teams to work mainly with the engineers, leaving the S-4 out of the retrograde loop. With the FRE's involvement from start to finish and its optimized location at the operational bases, retrograde items could continuously flow to the retrograde sort yards at the strategic bases.

The FRE's involvement in retrograde starts with an initial assessment by the BCATs. The closure team starts the required paperwork, identifies FEPP, FERP, and LOGCAP requirements, and uses lessons learned from previous assessments to advise the unit of any potential friction points.

During this assessment, the container management specialist identifies excess containers and conducts an audit of Integrated Booking System accuracy. When the closure team returns from the assessment, the FRE OIC

arranges any follow-on enabler support, including environmental, EDRT (for excess scrap metal), MRPAT (for excess major end items), and engineer support. The FRE OIC also assists the brigade support battalion support operations officer in ensuring that enough transportation assets are available and the convoy timelines are in line with the closure timeline.

As equipment is retrograded, the container management specialist tracks any containers, ensuring they are out-gated and in-gated at each leg of their trip. The container specialist works with the local container control officers to ensure that container visibility is maintained throughout the process. Maintaining container visibility allows the MRT and strategic retrograde sort yards to prepare and plan for any influx of excess equipment.

When the containers arrive at the expeditionary retrograde sort yard at the operating bases, the MRT opens the containers and sorts the equipment. Conducting sorting operations at the operational bases has many benefits. This midprocess step facilitates efficient use of transportation, ensures property and equipment are shipped to the right locations, and ensures trash is disposed of locally.

The expeditionary retrograde sort yard allows the task force to hold units accountable for sending trash, hazardous materials, and dangerous contents in containers. At first, the goal was to push the MRTs out to the forward operating bases and retrograde the excess equipment directly to strategic bases. However, because of the highly kinetic environment at these locations and the requirement at many bases to use sling load to transport equipment, it became apparent that the best location for the MRTs is at the operational bases with the FREs.

A permanent, more stationary location to conduct sorting operations for MRTs is best for efficient and effective retrograde operations. The required supplies, such as shipping boxes, and the real estate required

for storage and materials-handling equipment can be easily resourced. Many of these essential items are not available at forward locations.

Unit accountability is not easily enforced when containers are shipped directly to the strategic retrograde sort yards. Although not ideal in times of heavy retrograde, the containers can bypass the operational base sort yard and go directly to the strategic base retrograde sort yard for processing. After the excess containers are sorted, the equipment is either sent to the Defense Logistics Agency Disposition Services, retrograded back to the United States, or redistributed within Afghanistan to units that are in need of the equipment.

Over the past year, the evolution of the CMRE and FRE concept has made dramatic progress and continues to change in this dynamic combat environment. The initial mission command challenges allowed for opportunities to maximize leadership within decentralized organization. As the FRE matures, more enablers will embed into operations to specifically tailor the FRE to meet the local task force's requirements and timelines.

The FRE provides seamless retrograde operations for task forces that are otherwise focused on combat and sustainment operations. The FRE also provides a solid knowledge base, networking, and continuity for sustaining and maintaining retrograde momentum when units redeploy and are replaced. Ensuring continuous operations significantly increases the effectiveness of the overall retrograde mission throughout Afghanistan.

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*Gas cylinders await shipment from the Kandahar Airfield retrograde sort yard. (Photos by Chief Warrant Officer 3 Sulaiman Bah)*

# Streamlining Theater Closing Operations

**Retrograde sort yards in Afghanistan have room for improvement. This article suggests several ways to improve their efficiency and effectiveness.**

■ By Chief Warrant Officer 3 Sulaiman Bah

**A**rmy Doctrine Publication (ADP) 4-0, Sustainment, defines theater closing as “the process of redeploying Army forces and equipment from a theater, the drawdown and removal or disposition of Army non-unit equipment and materiel, and the transition of materiel and facilities back to host nation or civil authorities.”

In the context of this article, theater closing in terms of retrograde means the removal and evacuation of materiel and equipment from bases across the Combined Joint Operations Area—Afghanistan. This includes all classes of supply both green (military) and white (nonmilitary) and the subsequent redistribution, reset, disposal, or return to the Army supply system of that materiel while reposturing the theater.

Retrograde operations were successfully executed during the Vietnam War, Operation Desert Storm, and Operation Iraqi Freedom. However, the retrograde operation in Afghanistan remains enormous and varied in terms of the logistics requirements to conduct such an elaborate mission.

Lessons learned from Iraq proved invaluable to the retrograde mission in Afghanistan. Still, certain areas can be simplified to make retrograde much more effective. Specifically, improvements to the excess materiel generation and collection points at operational hubs and retrograde sort yards (RSYs) should be considered in the following four areas: centralized locations with specialized teams, supply support activities (SSAs), contractor-owned materiel and equipment, and major assemblies.

## Centralized Locations

Establishing a forward-deployed, centralized location responsible for supporting units within a 50-mile radius is the key to success. This location should be capable of providing specialized teams with life support, including the necessary facilities and amenities to conduct their mission—the receiving, researching, categorizing, and packaging of materials and equipment for disposition. Specialized teams reduce the transportation requirement, allow expertise forward on the battlefield, eliminate the retrograde of waste and trash, and allow an inventory before items are moved.

Servicing forward-deployed elements at the operational hubs limits the number of trucks and drivers on the road. This also eliminates the unnecessary transportation of trash and other ma-



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Segregated waste items should go straight to DLA Disposition Services to reduce waste processing at the RSY.

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*Welding cylinders packaged in many different ways arrive at the Kandahar retrograde sort yard receiving section.*





materials that should be disposed of at a remote location. The addition of the forward retrograde element, a non-doctrinal support element established by the 593rd Sustainment Brigade, reduced the amount of trash and waste pushed by 58 percent.

Specialized teams assembled forward should comprise a mix of key materiel identification and disposition personnel from agencies such as the TACOM Life Cycle Management Command, the Communications-Electronics Command Logistics Assistance Program, and Defense Logistics Agency (DLA) Disposition Services. These teams also should include representatives with hazardous material certification and property book accountability knowledge.

As teams did in Operation Clean Sweep at Fort Hood, Texas, and as part of Task Force Harvest in Germany, specialized teams should deploy to strategic areas to conduct small-scale operations. Rather than just segregating and packaging materiel and equipment to send to RSYs, like the mobile redistribution team mission, specialized teams will separate equipment at its location to determine its status. Having a specialized team at the point of collection will eliminate the unnecessary shipment of equipment to the RSY for redistribution to another location.

Another reason for the specialized teams is that by eliminating waste and trash, materiel will be properly identified and segregated when it arrives at the RSY. Having a specialist from DLA Disposition Services on site to direct units in placing items in the right bins will save time, manpower, and the cost of fuel. Segregated waste items should go straight to DLA Disposition Services to reduce waste processing at the RSY.

Many items come to the RSY without proper documentation. A specialized team should manually inventory and document items being shipped from their location. This will enhance property accountability and facilitate receipt processing at each section. Also, having the logistics assistance

representatives, field support representatives, and logistics support element at forward locations improves asset visibility and allows them to serve as a source of reference for the units.

### Supply Support Activities

The marginalization of SSAs is another area that requires streamlining. Before the advent of the RSY, SSAs were the primary means of supply support for requisitioning and turning in serviceable and unserviceable supplies and repair parts. Now the theater RSY, instead of a supporting SSA, has largely assumed the role of accepting units' supplies. Whether units with designated supporting SSAs were intended to take advantage of RSYs or not, units bypass their supporting SSAs to turn in supplies to the RSY because they perceive it as reducing the burden on the forward SSA.

The RSY operates under a "do not turn anyone away" rule and, as a result, accepts supplies "as is" with fewer procedural requirements than the SSA. One disadvantage of this situation is that the RSY does not support customer units and does not have an authorized stockage list like the SSA does. Everything that comes to the RSY is processed in the Standard Army Retail Supply System as "found on installation" and cannot be used to fill requisitions in Afghanistan except indirectly through the Defense Distribution Depot in Kandahar. As a result, customer wait time increases and the equipment remains unmoved.

After materials are processed, they are labeled as excess. The disposition does not fill any requisitions. Unlike the RSY, the SSA is set up to provide units with the right stock. Units not affected by base closure and that have a supporting SSA, should turn in their excess and "found on installation" items to that SSA. By doing so, requisitions that are due-in to the SSA or the supporting units can be instantly filled from these turn-ins. Customer wait time and requisition wait time can be reduced significantly based on the availability of the stock, greatly alleviating stress on supply chain.

## White Materiel

The amount of white materiel is comparable to green materiel in theater. Although there are standard procedures for processing and disposing of green materiel, white materiel poses significant issues. Disposal of white materiel should be handled by an organization other than the RSY.

The sheer volume of white materiel often makes cataloging a challenge. After being cataloged, the items still must be processed, packaged, and disposed of. The RSY accepts both green and white materiel, challenging efficiencies in both systems. Although some procedures are similar for dealing with both types of materiel, there are also vast differences, such as in national stock number items versus nonstandard part number items and Army-wide cataloging versus contractor cataloging.

As the retrograde mission continues with other units, we anticipate changes as business procedures and practices are implemented. Most of the white materiel will be either redistributed or disposed of in theater. If cost effective, some of these materials will be retrograded out of theater back to the United States.

## Major Assemblies

Major assemblies, such as engines, transmissions, and generators, are another area that requires simplifying. No facilities are available to accept these assemblies, so RSY personnel, along with a logistics assistance representative, conduct initial diagnostics to determine whether the item is economically repairable or not. In most cases, serviceability is determined by a mere visual assessment of the item's condition. Such determination is unreliable until a

sanctioned diagnostic test is done.

Transporting equipment to the depot would cost less if units shipped only items that are economically repairable and disposed of the rest. A facility capable of draining, testing, crating, and shipping would relieve the RSY and the LAR of having to guess at serviceability and repairability.

Streamlining the four areas highlighted above will enhance retrograde operations and facilitate output and velocity. Establishing a central location forward with the right mix of specialties would provide the means to collect and consolidate materials and equipment. Specialized individuals or teams available on site would eliminate unnecessary confusion, produce better products, and save time and money.

To increase redistribution efforts within the Combined Joint Operations Area-Afghanistan, units not affected by base closure should continue to use their supporting SSAs for supply support. Units and contractors should continue to improve their green and white equipment processes both external and internal to the RSY. Finally, a facility equipped to handle major assemblies—from diagnostic testing to draining, cleaning, crating, and shipping—is important in determining the correct disposition of materiel. These four areas of improvement would increase retrograde velocity and decrease waste and costs.



*Major end item assemblies, such as engine parts, wait to have fluids drained and purged before shipment from the Kandahar retrograde sort yard.*

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# A Comparison of D/ROPS Models in Different Theaters

■ Capt. Christopher A. Terian

**D**eployment/redeployment operations (D/ROPS) teams are designed to facilitate the reception, staging, onward movement, and integration (RSOI) of units in theater. D/ROPS teams operated as a functional concept in Kuwait and Iraq during Operation Iraqi Freedom, but those teams did not follow the same process in Afghanistan.

This article provides historical context to D/ROPS use in Iraq and Kuwait and some insight to Afghanistan's joint requirements. It describes how D/ROPS teams relate to the U.S. Central Command (CENTCOM) materiel retrograde element (CMRE) mission. It also presents the requirements, task, purpose, and function of D/ROPS.

## CMRE D/ROPS

Upon mobilization, the 427th Brigade Support Battalion's B Company and Headquarters and Headquarters Company assumed the D/ROPS mission as part of the CMRE under the command of the 18th Combat Sustainment Support Battalion (CSSB) and the 593rd Sustainment Brigade. The companies were assigned as part of the CMRE solution to the retrograde mission in Afghanistan.

The 18th CSSB D/ROPS team was part of the C-3 section, and as such, the Coalition Forces Land Component Command D/ROPS provided tasking authority in order to optimize the RSOI process. D/ROPS was intended to be a central point of contact for all deployment and redeployment functions and a coordinating authority with the ability to prioritize enablers and assets.

Joint Publication 3-35, Deployment/Redeployment Operations, and Field Manual 3-35, Army Deployment and Redeployment, provide general guidance but no specific tasks, purpose, or task organization. Nor do they identify the role that the D/ROPS team was intended to fill in the CMRE. So, the newly arrived D/ROPS teams researched available documents from the Iraq drawdown as points of reference.

## D/ROPS in Iraq and Kuwait

The Operation Iraqi Freedom model of D/ROPS was described in U.S. Army Central Operation Order (OPORD) 05-009 and in Task Force Lightning (25th Infantry Division) OPORD 09-05. These documents identify D/ROPS responsibilities as follows:

- Manage RSOI for units entering or leaving theater.
- Schedule and plan the agenda for the leader's reconnaissance for brigade and above.
- Monitor the unit's completion of required deployment and redeployment tasks.
- Assist in determining training ammunition requests.
- Coordinate ground and air transportation for the unit, including call forward functions and arranging and tracking equipment moving in and out of theater.
- Coordinate billeting and subsistence.
- Coordinate on-deck transportation (nontactical vehicles).
- Manage wash rack operations.

Two units performed D/ROPS in support of Operation Iraqi Freedom:

the 332nd D/ROPS Port Operations Cell (of the 332nd Expeditionary Operations Group), and the 651st Regional Support Group, U.S. Army Reserve (deployed under the 1st Theater Sustainment Command in 2010 and 2011).

The 332nd D/ROPS Port Operations Cell executed its mission by performing these tasks:

- Provide onsite synchronization of cargo movement for deploying and redeploying units and theater sustainment through the sea ports of embarkation and debarkation, Kuwait Naval Base, and Ash Shuwaihk.
- Provide support for Multi-National Corps-Iraq liaison officers (LNOs) and unit representatives to ensure D/ROPS timelines are met.
- Provide support for corps separate LNOs.
- Manage support packages for redeploying corps separate units.
- Coordinate between support operations and the port operations team.
- Provide mission control for port operations teams at sea ports of debarkation and Kuwait Naval Base.
- Assist LNOs with container management issues.
- Provide transportation, customs, and agriculture support to LNOs and unit movement officers.
- Assist LNOs and unit movement officers with frustrated cargo, scheduling conflicts, and transportation issues.

The 651st Regional Support Group D/ROPS performed the following tasks:





*CENTCOM materiel retrograde element Soldiers from the 427th Brigade Support Battalion, New York Army National Guard, the 18th Combat Sustainment Support Battalion, and the 1462nd Transportation Company, Michigan Army National Guard, work together in retrograde operations in Afghanistan. (Photo by 1st Lt. Henry Chan, 18th CSSB)*

- ☐ Organize travel.
- ☐ Orient newcomers to camps.
- ☐ Coordinate wash rack appointments.
- ☐ Coordinate shipments for supplies.
- ☐ Track inbound and outbound passengers and their equipment from embarkation to final destination.

Both of these teams were located at major airfields and sea ports of embarkation and debarkation in order to provide services to all units entering or leaving the theater. Their tasking authority and command emphasis obliged units to take advantage of those services. Ongoing operations enabled the teams to systematize and streamline their services.

#### **Army D/ROPS in Afghanistan**

U.S. Forces-Afghanistan (USFOR-A) outlined RSOI operations and training requirements to be conducted

at joint RSOI hubs and tasked the combined joint task force headquarters in each regional command with execution under the oversight of the USFOR-A J-7 (force development).

No publication describes or directs the use of CMRE-sourced D/ROPS for RSOI in Afghanistan. The 18th CSSB D/ROPS team found information on D/ROPS operations for Afghanistan in a draft standard operating procedure published by the 649th Regional Support Group at Kandahar Airfield, Afghanistan, in January 2010. That unit's described mission included:

- ☐ Coordinate and support a predeployment site survey for brigade and above units specific to that unit's mission.
- ☐ Coordinate and support RSOI operations to include ingated equipment and travel arrangements for personnel.

- ☐ Assist with logistics support for all training, including for class V (ammunition).
- ☐ Verify that theater-mandated training requirements have been met.
- ☐ Assist with planning and tracking the movement of redeploying equipment.

This concept is similar to the one described in the Operation Iraqi Freedom model. The 649th Regional Support Group followed an organizational chart for both steady-state and surge operations and that included a list of the required equipment. Steady-state operations have a prescribed strength of 22 personnel. The officer-in-charge is an O-4 and the noncommissioned officer-in-charge is an E-8; an O-3 slot is designated for an executive officer or training officer. The unit's support staff consists of the following:

- Operations noncommissioned officer (E-8).
- Transportation coordinators (one E-7, one E-6, and two E-5s).
- Briefing coordinator (E-6).
- Ammunition noncommissioned officer (E-6).
- Staff driver (E-5).
- Vehicle drivers (11 E-4s).

When surged, the staff is increased by 16 for a total of 38. The additional personnel include:

- Briefers (one E-6 and one E-5).
- Supply personnel (one E-5 and one E-4)
- An administrative Soldier (E-4).
- Drivers (two E-4s).
- An ammunition assistant (E-3).
- An emergency mine-resistant ambush-protected vehicle egress training team (two E-6s, two E-5s; two E-4s, and two E-3s).

### Marine Corps D/ROPS in Afghanistan

Upon arrival in theater in April 2012, the 18th CSSB D/ROPS teams moved to Camps Leatherneck and Dwyer, Afghanistan, to support the Marine Corps retrograde and redeployment in support of the reset and reconstitution operations group (R4OG) in Regional Command Southwest. The Marine Corps R4OG was under the operational control of the Joint Sustainment Command-Afghanistan.

The R4OG was a battalion-sized element with a headquarters on Camp Leatherneck and a company command on Camp Dwyer. Its mission was to assist redeploying Marine Corps units by returning their equipment to the supply system and back to the marine expeditionary forces.

The concept allowed Marines and Sailors in Regional Command Southwest to continue their mission unimpeded by the onus of retrograde, which was delegated to a team of logisticians with specialized subject matter experts on hand (such as engineers, signal personnel, and armorers)

to appropriately manage the disposition of equipment.

Over the course of approximately 60 days, the CMRE D/ROPS teams were used to coordinate the use and maintenance of several vehicle and equipment wash racks. It became clear that the small size of the R4OG made coordination among several sections unnecessary. Daily staff meetings filled that purpose.

Initial estimates determined that if the R4OG had been a brigade-level or higher element, it may have required a section dedicated to coordinating assets and personnel. Ultimately, the personnel assigned to the D/ROPS team were absorbed into the operations cell of the R4OG until the team was recalled to Kandahar to be assigned to different missions.

### Re-missioned D/ROPS

In August and September 2012 the D/ROPS teams under the 18th CSSB were re-missioned to support the redeployment operations of Task Force 1-82 Airborne Brigade Combat Team and Task Force 4-82 Airborne Brigade Combat Team in Regional Commands South and East, respectively. The 45th Sustainment Brigade and the 10th Sustainment Brigade planned and executed a "Four Corners" redeployment operation using the Iraq model of the Four Corners, Camp Virginia, Kuwait, redeployment operation and that of the National Training Center, Fort Irwin, Calif.

The intent of using D/ROPS in support of Four Corners operations at Kandahar and Bagram Airfields, Afghanistan, was to validate the current mission of D/ROPS against a mission similar in scope to that of a D/ROPS node in the Iraq model. The Four Corners concept was to provide a single site for redeploying units to download select classes of supply upon arrival at the joint RSOI hub.

The emphasis on speed and efficiency allowed Soldiers to clear hand receipts and be postured for forward movement. In the Four Corners model, the operation was a 10-day

mission resulting in troop aerial port of debarkation movement under the authority of the Coalition Forces Land Component Command C-3.

Although the Four Corners missions were successful in Afghanistan, no specific duties or responsibilities from the Iraq model D/ROPS were executed over the course of the operations. The task of sorting classes of supply, cataloging, and transferring materiel is a mission of the CMRE materiel redistribution teams already in operation in the Combined Joint Operations Area-Afghanistan and missioned by 18th CSSB.

D/ROPS teams operated as a functional concept in Kuwait and Iraq but their methods proved to have little significance to theater closing operations in Afghanistan. The D/ROPS task and purpose as described above includes personnel movement and redeployment processing; the CMRE mission focused on equipment and materiel rather than personnel.

Although placed against missions that most consistently fit the existing doctrine and historical examples, CMRE-sourced D/ROPS in Afghanistan are not correctly manned, positioned, or task-organized to execute the Iraq model. Regardless, those Soldiers who filled the D/ROPS ranks consistently displayed their versatility, agility, and innovation as they broke new ground in retrograde operations.

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# Managing and Maintaining Equipment for a Materiel Recovery and Retrograde Mission

Because retrograde sort yards use heavy equipment and vehicles to move supplies, the retrograde mission requires a maintenance program to keep the equipment running. This article outlines the U.S. Central Command materiel retrograde element's integrated maintenance concept.

■ By Capt. Christian S. Nomba

In the summer of 2012, the 18th Combat Sustainment Support Battalion (CSSB) headquarters deployed to Afghanistan to provide mission command of U.S. Central Command materiel retrograde element (CMRE) units supporting the excess equipment reduction and retrograde mission. Complying with the manning requirements they received before the deployment, the battalion and all of its assigned CMRE units deployed without organic maintenance capabilities. Most of the equipment that they took with them supported the retrograde sort yards' mission requirements.

The battalion developed a comprehensive program that integrated maintenance operations into mission planning. After improving maintenance practices within the battalion for 90 days, the 18th CSSB achieved 100-percent mission capable status. After that, the unit kept its operational readiness rate above 90 percent, which represented a significant increase from the low of 20 percent it had when it assumed mission command.

This article reviews maintenance activities before mission assumption, the integrated maintenance concept, and the successful transfer of maintenance responsibilities to a contract operation.

## Retrograde Sort Yard Beginnings

Maintenance operations before the 18th CSSB assumed mission command reflected the task organization needed to support retrograde operations at three strategic locations: Kandahar Airfield, Bagram Airfield, and Mazar-e-Sharif. The Joint Sustainment Command-Afghanistan (JSC-A) had established the first strategic retrograde sort yard in December 2011 at Bagram Airfield to conduct retrograde operations, with yards at Mazar-e-Sharif and Kandahar Airfield to follow. All three operated as major retrograde hubs for the recovery, redistribution, retrograde, and disposition of excess materiel in support of the reposturing efforts in Afghanistan.

Before the 593rd Sustainment Brigade assumed mission command of the CMRE in August 2012, the JSC-A had organized the three retrograde sort yards under two sustainment brigades. When the 18th CSSB took over, it conducted an early assessment of operations, which revealed the importance of materials-handling equipment (MHE) and movement equipment (trucks and trailers) in retrograde operations. This assessment uncovered a similarity in maintenance activities and practices at all three retrograde sort yards, although each was organized under a different brigade headquarters.

Maintaining heavy equipment, such as MHE and heavy trucks, is challenging and largely depends on a maintenance program that aggressively enforces preventive maintenance checks and services (PMCS). Because the Soldiers working in the retrograde sort yards came from diverse backgrounds and were grouped into autonomous entities with parallel chains of command, the provisional company commanders who owned equipment in the yards did not have administrative control of the Soldiers who operated the equipment.

Sustainment brigades submitted requests for augmentation and received additional Soldiers from National Guard units deployed to Kuwait to augment the manpower in retrograde sort yards in Afghanistan. Request-for-augmentation Soldiers arrived with their own company commander and first sergeant. Thus, the commander of each provisional company operating a retrograde sort yard was no longer the only commander in the yard.

This situation resulted in two captains claiming command responsibilities over personnel, but only one captain clearly owned the equipment. The consequences of a lack of coordination and clearly defined roles and responsibilities were a dual leadership environment and poorly implemented programs such



as maintenance and equipment training.

As a result, MHE and movement equipment suffered from poor operator skills and deficient maintenance. Each retrograde sort yard relied on the maintenance company to provide support. However, because of the workload, the maintenance companies only gave priority to CMRE equipment when they were told to by the sustainment brigade support operations officer.

As soon as the 18th CSSB assumed command and identified the problem, the goal became very clear: develop a comprehensive maintenance program based on an integrated concept.

### Comprehensive Maintenance Program

The 18th CSSB CMRE initiated and developed an integrated maintenance concept with the goal to achieve three objectives:

- Integrate maintenance activities into CMRE operations planning and objectives.
- Consolidate all CMRE equipment maintenance under a single program and leadership.
- Prepare CMRE equipment for a successful transfer of management and maintenance responsibilities from military to contractors.

***Integrate maintenance activities.*** It was evident that MHE and movement equipment represented critical assets to the CMRE mission. Every maintenance fault that grounded any MHE or truck affected operations at the retrograde sort yard and consequently retrograde output. Maintenance operations focused their efforts on enforcing daily PMCS and scheduled services by qualified operators in order to minimize equipment breakdown that would slow down production goals.

The maintenance program standard

operating procedure required proper reporting to The Army Maintenance Management System (TAMMS). To achieve the reporting requirement, the 18th CSSB obtained authorization from the 45th Sustainment Brigade to continue to distribute the maintenance report through the brigade's Standard Army Maintenance System-2 Enhanced (SAMS-2E) temporarily.

The drivers training program also became very important in the new maintenance program. Licensed and qualified operators are less likely to cause unnecessary damage to forklifts, rough-terrain container handlers, palletized load systems, medium tactical vehicles, and associated trailers. The headquarters company commander initiated the drivers training program, linked it to maintenance, and turned licensing into a critical subcomponent of the maintenance program.

***Consolidate CMRE management.*** The newly developed concept orga-



*Soldiers from the 1462nd Transportation Company guide a forklift operator in loading damaged tires for transport. (Photos by 1st Lt. Henry Chan)*

nized maintenance operations under the headquarters company commander. The battalion maintenance cell provided oversight, and a battalion maintenance supervisor managed daily maintenance activities.

The battalion maintenance cell also tracked maintenance activities throughout the battalion and reported to the brigade headquarters through TAMMS. These changes enabled the unit to conduct cen-

have required organic maintenance equipment and dedicated qualified personnel. A single maintenance leadership cell has its limitations, and the battalion accepted those risks after careful evaluation.

The battalion was located at Kandahar Airfield. To report its equipment maintenance through TAMMS with accuracy, the maintenance representatives in the retrograde sort yard at Bagram Airfield

maintenance team in the retrograde sort yard, the battalion maintenance program provided the coordinated effort needed to use the few available maintenance support options.

***Prepare CMRE equipment for transfer to contractors.*** The U.S. government created a performance work statement (PWS) for each contractor covering its respective obligations and responsibilities in retrograde sort yard operations. The resulting contract agreement covered the operation, management, and maintenance of all equipment supporting retrograde operations. To meet these requirements, contractors would have to own the equipment in order to accept responsibility.

To prepare the equipment for transfer, the maintenance cell had to coordinate technical inspections, repair deficiencies in order to meet the required standard, and complete property book transfers. The battalion assumed the risk and liability for retrograde mission disruption during the transfer of equipment because of its lack of internal maintenance capabilities. Engaged leadership and deliberate maintenance management assisted in risk mitigation. The contractual clause transferring MHE and movement equipment to contractors also helped mitigate the risks for a unit with no organic maintenance capability.

The transition to civilian-led maintenance was a challenging process that the maintenance team carried out successfully. The battalion developed this maintenance program and executed it as a bridging solution until the unit transferred all equipment to contractors at each retrograde hub.

### **Transferring Responsibilities**

The 18th CSSB could not transfer equipment to contractors without including it in the contract. The unit developed a long-term CMRE maintenance concept in collaboration with contractors and the Defense Contract Management Agency and added it to the scope of work



*A rough-terrain container handler loads a 20-foot shipping container of retrograde materiel onto an out-bound convoy vehicle.*

tralized planning and coordination without hampering the decentralization of maintenance tasks, which was crucial to the success of operations.

With no organic maintenance capabilities, the headquarters company command team and the battalion maintenance supervisor requested expedited maintenance support from local maintenance contractors and military maintenance units. However, a more reliable maintenance program that would have significantly reduced the waiting time for repairs at local maintenance facilities would

and Mazar-e-Sharif had to call the battalion maintenance cell at Kandahar Airfield immediately after each manual job order to input equipment in the SAMS-2E. The maintenance cell at Kandahar Airfield and the maintenance companies providing area support at Bagram Airfield and Mazar-e-Sharif had to jointly order class IX (repair parts) through their respective SAMS-2E.

This practice had its limits: slowing down the process and decreasing the efficiency of maintenance operations. In the absence of an integrated



(SOW). The PWS, which served as the basis for negotiation, had already mentioned that the government would provide the contractors with the equipment that they would operate and maintain.

To support the maintenance requirements, the original SOW needed some in-depth modifications that took four months to accomplish. To overcome setbacks and avoid the disruption of CMRE operations, all parties involved used letters of technical direction (LOTD) as incremental outputs to modify and clarify standing clauses in the PWS. This resolved issues derived from the lack of an SOW at the time of transfer of operations to contractors.

The concept called for the transfer of government-furnished or -provided equipment to contractors while allowing the military leaders to maintain control of operations in retrograde sort yards. During the 180 days that followed the assumption of command, the 18th CSSB maintenance efforts focused on getting the MHE and movement equipment ready for a transfer to DynCorp International in the south and Fluor in the north.

The battalion had the obligation to meet the contractual requirement that equipment must meet the -10/20 maintenance standard before a lateral transfer to contractors. Contractors and service members involved in this operation conducted technical inspections of all equipment and identified deficiencies that the battalion maintenance team had to correct before the lateral transfer, which had to take place within 60 days of the publication of the LOTDs.

With no organic capabilities and an average wait time of 90 to 120 days at local maintenance facilities, the task challenged the transition timeline. A mix of interpersonal skills, networking abilities, support from military maintenance facilities, and negotiations with the gaining contractors made it possible to meet suspense dates.

## Lessons Learned

The 18th CSSB compiled the following lessons learned from this experience:

- Maintenance operations are more efficient if supervised under an integrated battalion-level concept.
- Government furnished equipment must meet -10/20 standards before being transferred to contracting companies.
- Equipment must be listed in the contract or in an appendix as part of the contract before it can be legally transferred to contractors.
- Coordinate with the administrative contracting officer of an LOTD in order to modify contractual clauses or direct the contractor to perform a service.
- Ensure that the contract specifies the minimum amount of equipment that the contractor must continuously maintain during operations.
- Ensure that the contract specifies the time window for the contractor to repair or replace government-furnished equipment in order to avoid disruption of operations.
- The sustainment brigade CMRE and the CSSB CMRE must develop and maintain good relationships with non-CMRE sustainment brigades and CSSBs that provide maintenance area support in order to overcome the CSSB CMRE's lack of internal maintenance capabilities.

The final lesson learned was to implement a multipronged approach to equipment acquisition as follows:

- Submit an operational needs statement and search the Theater-Provided Equipment Planner for available equipment.
- Request equipment acquisition through either procurement and purchase commitments or the

joint acquisition review board.

- Submit a request through the brigade S-4 for intrabrigade cross-leveling.
- Negotiate informally and educate sister units in theater to release equipment that is non-mission essential for them but critical for the CMRE mission.

During the assumption of a non-doctrinal mission built with multiple organizations, a leader needs to review maintenance activities before assuming the mission. He then needs to explore the integrated maintenance concept and the successful transfer of maintenance responsibilities to a contracted solution or another military organization.

The success of CMRE operations in Operation Enduring Freedom during the 2012–2013 deployment was tied to the ability of the 18th CSSB CMRE to navigate the maintenance and contracting requirements in a deployed environment. Many factors helped set conditions for successful CMRE operations, but without a comprehensive program, equipping and maintaining equipment would have hindered the establishment of operations.

The program must be part of the centralized planning process yet allow decentralized operations for retrograde sort yards to maximize locally available resources. In an environment where maintenance resources are scarce, interpersonal skills and networking abilities become essential to completing the task and contributing to mission accomplishment.

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# Responsible Retrograde

In preparation for the withdrawal of U.S. troops from Afghanistan, the 701st Brigade Support Battalion reestablished the retrograde yard at Forward Operating Base Sharana.

■ By Capt. Michael A. Smith

**R**esponsible retrograde is an integral part of the U.S. mission to close or transfer bases to the Afghan National Security Forces in 2014. To facilitate this process in the Paktika and Ghazni provinces, the 701st Brigade Support Battalion (BSB), 4th Infantry Brigade Combat Team, 1st Infantry Division, reopened the retrograde yard at Forward Operating Base (FOB) Sharana in June 2012.

This was done as part of the brigade's mission to reduce materiel and equipment at FOBs and combat outposts (COPs) throughout the Paktika and Ghazni provinces. The materials that had accumulated over the past 10 years in these provinces had to be removed or transferred to the local communities or the Afghan security forces.

The 701st BSB had to support the Soldiers who were still in contact with the enemy. Using old fashioned cross-level distribution allowed for accumulated materiel to be made available to units still conducting operations in the area. Cross-level distribution sped up receipt time and reduced the cost of purchasing and shipping materiel from other locations.

## Retrograde Mission

In May 2012, the 701st BSB was given the retrograde mission. The unit was directed to take in materiel from across two provinces and process it for either redistribution to U.S. units, shipment to Bagram Airfield (BAF) for retrograde, or transfer to local nationals in order to reduce the brigade's footprint. This set conditions for the eventual closure or transfer of bases to Afghanistan.

The first task was to determine what

this mission entailed and what equipment and personnel were required to complete it. When planning the retrograde yard process, I used my own experience as a logistics officer, the BAF retrograde sort yard standard operating procedures, and information left behind by a previous unit.

## Getting Organized

The mission started with pulling together personnel and equipment from companies across the 701st BSB. The personnel came from a variety of military occupational specialties (MOSs), not only logistics, which proved to be both a help and a hindrance. With only logistics personnel, the unit would have had a knowledge base to process materiel faster. However, having personnel from different MOSs facilitated the identification of many items and minimized the time spent in research and documentation.

First, we identified the equipment needed to run the retrograde yard. This list started with trucks to transport personnel to and from the yard and for moving materiel around the yard and to other designated locations. For example, hazardous materials (HAZMAT) needed to be moved to a disposal facility on FOB Sharana. We also needed materials-handling equipment, including forklifts and a rough-terrain container handler (RTCH).

We started with two 10,000-pound capacity variable-reach forklifts and a set of 6,000-pound forks to use on a 10,000-pound forklift to move items in and out of containers. However, as time passed, we ended up with only one 10,000-pound forklift and had to file transportation movement releases when we needed smaller forklifts

and RTCH support. We often used RTCHs from FOB Sharana to unload containers from inbound trucks, move containers within the yard, and load trucks for outbound movement to the next higher level facility.

Next, we identified the need for automation systems to operate the Nonsecure Internet Protocol Router Network, Secret Internet Protocol Router Network, and the U.S. Central Command Regional Intelligence Exchange System. We used these systems to identify materiel and to tell our customers and higher headquarters what we received, processed, and shipped.

We also needed a facility for processing materiel. This at least needed to be a tent large enough to allow for the simultaneous sorting of multiple packages by supply class. Although not always possible, a facility large enough for containers to be dropped, unpacked, and repacked was ideal.

## Retrograde Process

After determining what equipment would be used, we identified the process for responsibly downsizing materiel stores with the eventual withdrawal from Afghanistan in mind. This process needed to be sustainable by U.S. military personnel and would likely continue for a while after the official transfer of bases back to Afghanistan to ensure that all materiel and equipment had been recovered or transferred.

The process that we used included three different stages of sorting to ensure that all materiel was identified and designated as one of the following:

- ☐ Able to be processed for further retrograde.
- ☐ Disposable through local-national

- trash or scrap metal pickup.
- ☐ Disposable as HAZMAT.
- ☐ Nonretrogradable materiel.

The process started with customer units and contractors dropping materiel at the yard in a number of different configurations and providing paperwork with at least a description of what they were dropping. They also provided, if possible, information such as national stock numbers or part numbers to facilitate the sorting and identification process.

Personnel then began identifying each package according to the supply class of its contents. Next, HAZMAT, scrap metal, and other nonretrograde materiel that would slow down later processes were identified. These items were segregated and consolidated into different locations to facilitate their packaging and disposal through different agencies and processes.

We then moved the packages into "further sort," where we broke them down into specific classes and identified materiel that the customer had not identified or that was missed on the initial paperwork. During this step, materiel was also identified for redistribution, which was a vital part of the retrograde process because it provided cost savings to units and made materiel available when needed.

Lastly, materiel was moved to the "final sort" area where it was packaged based on whether or not the materiel needed escort for shipment to the next level of retrograde. At this stage, materiel had one last chance to be redistributed to units. After it went to outbound, materiel was no longer available for redistribution. This ensured that the proper documentation of a container or truck's contents was provided to the next level of retrograde at BAF.

## Getting Started

The next step was to establish the kinds of materiel that would be processed through the yard with the understanding that at times items would arrive that did not fit our guidelines but would still have to be processed. We determined early on that the ma-

teriel this yard would process included classes I (subsistence), II (clothing and individual equipment), IV (construction and barrier materials), VIII (medical materiel), and IX (repair parts). At times, HAZMAT, scrap metal, and other miscellaneous materiel would arrive in containers and kicker boxes and would still have to be processed for retrograde or disposal.

After identifying what we would receive, we needed a tracking system. A Microsoft Excel spreadsheet was created to document the items during processing. The unit also needed to track the movement of packages, including received kicker boxes, crates, containers, shipped containers, and the value (recorded in dollars) of items received, redistributed, shipped, and processed.

When our gates first opened on June 21, 2012, the 10th Sustainment Brigade provided us with a mobile

weeks. Within 10 days, we were fully self-sustaining and processing \$8 million to \$10 million worth of materiel every month.

## Retrograde Support Operations

Nonretrograde materiel removal is vital to the overall operation of a retrograde yard because of the amount of materiel that is brought in from FOBs and COPs and by contractors. We removed nonretrograde materiel, such as scrap metal and HAZMAT, through a couple of different ways.

First, a Defense Logistics Agency scrap removal team visited the yard about every two to three weeks with locally contracted trucking services to remove scrap items. The scrap usually included miscellaneous metal parts (nonarmor or mine-resistant armor packages), tires, and plastic items, such as large water tanks. The Defense Lo-



*Retrograde yard Soldiers and materiel reutilization team members sort materiel by class of supply. (Photos by Capt. Michael A. Smith)*

redistribution team that was made up of personnel from the 1462nd Transportation Company, Michigan Army National Guard, to assist in establishing operations. The team was trained in identifying materials for retrograde and disposal and helped to further streamline our processes. It also aided us in quickly setting up and obtaining operational readiness within a few

gistics Agency personnel and the yard officer-in-charge or noncommissioned officer-in-charge (NCOIC) checked each item before it was loaded to ensure it could not be used against coalition forces.

Second, every other week the retrograde NCOIC collected from the mayor cell local nationals who visited the FOB for work. He brought them



*A Soldier uses a 10,000-pound variable-reach forklift to move materiel across the retrograde yard.*

with trucks to remove the accumulated trash for disposal at the burn pit. Both missions were necessary because of the amount of nonretrograde materiel that was created through the retrograde process.

The movement control team, which controlled trucks entering and leaving the FOB, provided an avenue for requesting trucks and containers provided by national carriers to move materiel from the retrograde yard to the retrograde sort yard at BAF.

Most of the time when customers dropped materiel for retrograde, it was not in containers. The best way to transport this materiel was to contract with local-national trucking companies because obtaining containers through normal military channels was cumbersome and time-consuming. Using local-national trucking also provided work for the Afghan people.

We preferred for customers make appointments to drop off materiel, but that was not always possible because of mission requirements. It was our policy not to turn anyone away, even without paperwork; we just informed them of what they needed to provide for the next delivery.

### **Required Documents**

For personnel bringing materiel to the yard, the only paperwork required

was a Department of Defense Form 1750 (shipping document) with as much detail as possible. The form allowed the operations personnel to properly identify all materiel flowing through the yard for initial sort and its value.

For items that had held HAZMAT, like engines and axles, the only additional item we asked for was a memo documenting that the HAZMAT had been drained from the item, which was provided through our battalion portal. For customers who did not have access to the portal, we printed it off for them to fill out.

When HAZMAT was brought to the yard, we packaged it and took it to the HAZMAT yard on FOB Shahrana for proper disposal. This should not have been a normal part of operations, but it occasionally happened when units from off the FOB had no other way to retrograde their waste for proper disposal. However, for units on the FOB, if we identified HAZMAT items before we off-loaded them, we informed them of the proper disposal process and sent them to the HAZMAT yard.

The retrograde yard had more than 1,000 customers and visitors, many of them visiting multiple times. The customers included units from on and off the FOB, contractors, and other orga-

nizations. Not a day passed without at least one visitor. Many of the customers and visitors we received were not delivering materiel but were looking for materiel to support their missions. This included drivers needing basic issue items for their trucks and repair facilities personnel looking for components to get vehicles and weapons fixed and back in the fight.

We even had personnel from the Army Materiel Command (AMC) looking for items to send to repair facilities to get them back into the Army system. For example, when we took over, the yard had a target acquisition system worth over \$500,000 that AMC personnel were able to send to BAF repair facilities. That system was back on the shelf for use in less than 30 days.

Retrograde yard operations are a necessary part of combat operations. For every mission, the materiel that was brought in to support it eventually must be reduced. Any complex mission must have plans beyond the supply support activity for redistributing materiel. The retrograde process should be implemented as early as possible so the yard can provide a location for units and contractors to retrograde excess materiel from operational areas and allow for the redistribution of items that are hard to get.

These operations must continue until the last service member or contractor leaves to ensure that everything is removed. No mission is complete until all materiel and equipment have been recovered and handled as required.

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# Operation Slim Warrior

**A brigade combat team set the conditions for operating in a budget-constrained environment through an initiative to identify equipment on hand, return excess to the Army system, leverage the unit's operations and maintenance funds, and ingrain supply discipline into junior leaders.**

■ By Lt. Col. Bradford T. Duplessis and Maj. Matthew S. Arbogast

**B**ecause of the impending Army budget cuts that are clearly outlined in the 2012 Army Posture Statement, it has never been more imperative for leaders to inculcate stewardship of resources and the command supply discipline program (CSDP) into their organizations. Leaders must optimize resources through requisition management, careful review and accountability of supply inventories, and detailed property book management. If discipline and resource management innovation are not prevalent within the unit's culture, fiscal constraints will reduce monetary flexibility for commanders and potentially affect unit readiness and objectives.

At Schofield Barracks, Hawaii, leaders of the 2nd Stryker Brigade Combat Team, 25th Infantry Division (2-25 SBCT), successfully instilled a culture of CSDP awareness and resource optimization through an initiative called Operation Slim Warrior.

## The Foundation for Slim Warrior

While the 2-25 SBCT was deployed in support of Operations Iraqi Freedom and New Dawn from June 2010 to June 2011, unit leaders leveraged the Army Materiel Command's redistribution property assistance team (RPAT) sites to retrograde more than 7,000 items of excess theater-provided equipment from Iraq, including more than 300 rolling-stock items.

Upon return to Schofield Barracks, SBCT leaders wanted to capitalize on the experience and developed Operation Slim Warrior, based on an

internal RPAT-like consolidated excess collection point (CECP), to reduce excess organizational property within the SBCT.

Operation Slim Warrior was designed to:

- ☐ Identify equipment on hand.
- ☐ Return excess equipment to the Army system.
- ☐ Fully leverage the unit's budget allocation for operations and maintenance.
- ☐ Ingrain command supply discipline in junior leaders.

## A Command Supply Discipline Culture

Since most of the junior leaders in the unit entered military service after 9/11, establishing CSDP awareness within the unit culture was the cornerstone of the plan. A resource-constrained environment was unfamiliar to leaders accustomed to a wartime Army that was rightfully responsive to the equipment and force protection requirements of units on the ground.

Establishing a culture of CSDP awareness across the formation required cost-saving initiatives and, more importantly, commander involvement. Publishing the order that made Slim Warrior a priority greatly increased its emphasis to company commanders.

The commander's intent was for Operation Slim Warrior to promote command supply discipline and enforce stewardship and care of government property. Once complete, the SBCT would obtain 100 percent accountability of all supplies and

equipment on hand, actively maintain a supply load for expeditionary unified land operations, and optimize its use of resources. To achieve the BCT commander's desired end state, the unit conducted this operation in five phases.

## Phase I: Identifying Excess

In Phase I, the SBCT property book officer (PBO) developed a consolidated list that served as a baseline of excess property. This list of excess equipment served as the starting point for directing internal lateral transfers. However, the BCT lacked proper visibility of excess equipment that was not listed on unit property books.

A large amount of materiel that was accumulated through fielding initiatives and commercial off-the-shelf purchases during more than a decade of conflict was never brought to record. To remedy this problem, Phase I included a BCT-led standards check of company, troop, and battery storage bays and containers that were consolidated in the BCT's deployment storage facility.

The BCT executive officer, S-4, and battalion and squadron executive officers led the inspection and identified numerous deficiencies including:

- ☐ Missing load plans.
- ☐ Excess equipment.
- ☐ Authorized equipment on hand but absent from unit property books.
- ☐ Stored excess repair parts.
- ☐ Not-mission-capable equipment requiring maintenance turn-in or code-out.

Upon initial inspection, it was clear that subordinate units were spending precious operations and maintenance, Army (OMA) funds to order items that were already on hand elsewhere in the organization.

Items found in unit containers included repair parts, weapon sights and magazines that had been shipped to Iraq and never opened, materiel received by convoy at remote sites in Iraq, and basic-issue items that were unknowingly stored in unit containers for several years.

officer conducted a walkthrough of the deployment storage facility with the 25th Infantry Division's deputy commanding general (support) and G-4, during which the BCT's challenges and way ahead were clearly articulated. Recognizing that the problems of excess and accountability were not unique to the SBCT, we exposed its challenges to division senior leaders to gain assistance and spread awareness of our solution for common CSDP shortfalls.

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## Slim Warrior was an overwhelming success for 2-25 SBCT, returning 501 lines of supply consisting of 3,912 items across all classes of supply to the Army system—a savings of \$4.1 million.

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The problem was clear and required leaders to fix it. Meticulously going through the deployment storage facility allowed the S-4 to address the problems with the junior leaders (the executive officers, platoon leaders, and supply sergeants) who really knew what was being stored. Knowing exactly what was on hand enabled the unit to conduct an internal basic-issue item swap so that some troops and companies could fill shortages without placing items on order.

### Phase II: Setting Standards

During phase II, the BCT established deadlines for subordinate units to complete BCT-internal lateral transfers. This resulted in \$8.76 million of property transfers during the first three months of Slim Warrior.

This phase of the operation also marked the reach of the Slim Warrior concept across the division. The brigade support battalion (BSB) commander, support operations officer (SPO), and BCT executive

### Phase III: Removing Excess

During phase III, the BCT established a CECP at the deployment storage facility, which brought all property accountability stakeholders to the unit's property storage location. Establishing this remote property processing point increased the speed and efficiency of the operation and decreased transportation and manpower requirements across the BCT.

The decisive operation for this phase of Slim Warrior was the execution of a rehearsal of concept (ROC) drill, which included the following stakeholders:

- The BCT brigade logistics support team (BLST) chief.
- Logistics assistance representatives (LARs) from the Army field support battalion and Defense Logistics Agency (DLA) Disposition Services.
- Company, troop, and battery supply personnel and leaders.
- Battalion and squadron executive officers.

- The SPO and supply support activity (SSA) personnel from the BSB.
- BCT property book office representatives.

Led by the BCT S-4, this ROC drill served to clearly define turn-in procedures, outline property book holder requirements, and build unity of effort across the enabling agencies.

The ROC drill was followed by a pilot iteration dubbed the "proof of principle." The BCT's headquarters and headquarters company implemented the pilot to help refine the plan and share best practices across the formation, using the following five-day template developed by the BCT S-4 and SPO.

**Day 1.** Download all containers and consolidate non-property book items and excess components of end items and basic-issue items. Prebuild equipment identification folders containing all available information and inspection records. Execute a line-by-line review of the unit property book to identify shortfalls and excess and ensure accuracy.

**Day 2.** PBO representatives identify items' disposition instructions or classify them as found on installation (FOI) to establish accountability at the deployment storage facility. Unit maintenance teams conduct technical inspections as required.

**Day 3.** PBO representatives continue to receive disposition instructions or FOIs to establish accountability. Unit maintenance teams will continue technical inspections as required.

**Day 4.** Army Materiel Command LARs and DLA Disposition Services, in conjunction with the BLST chief, assist with equipment identification and technical inspections and validate condition codes. Units execute turn-ins.

**Day 5.** LARs continue to assist with equipment identification, technical inspections, and verification of condition codes. Units execute turn-ins to SSA representatives and complete transactions with the property

book representatives to ensure that turn-ins are posted to unit property books on site.

The CECF schedule was built by battalion, typically one per week. Each battalion was free to adjust the five-day schedule to maximize manpower and CECF resources. The process worked best when battalions allocated one company-, troop-, or battery-sized element per day.

The key to Phase III of Slim Warrior was linking the BSB's organic combat repair teams and other enablers to troop-level supply sergeants and executive officers to facilitate technical inspections in preparation for the turn-in or code-out of equipment.

Using the BLST as the key integrator, the SBCT was able to collaborate and synchronize with the Materiel Enterprise to include capabilities of LARs from various life cycle management commands (LCMCs), the directorate of logistics' supply and services division, and DLA Disposition Services. These key enablers prevented both frustrated materiel and processing backlog.

The BLST chief orchestrated LAR support to ensure unknown equipment and components with limited or no markings were identified. Additionally, the LCMC LARs reviewed condition codes and military expenditure limits to determine where and how items were processed.

#### **Phase IV: Developing Load Plans**

During phase IV, units developed and posted load plans for their storage spaces and storage containers. After a decade of combat the BCT recognized the fact that junior leaders at the company, troop, and battery level did not possess the knowledge and experience to develop the expeditionary load plans needed for rapid deployments and contingency operations.

#### **Phase V: Standards Check**

Field-grade officers conducted final standards checks and inspections to ensure compliance with

the commander's intent. The BCT commander directed battalion-level field-grade officers to supervise the process on site at the collection point. Key leaders cultivated the CSDP culture through a coach, teach, and mentor approach.

#### **Lessons Learned**

Slim Warrior ended each day at 1600 hours with an after action review involving all participants and a weekly after action review involving leaders from both the outgoing and incoming units. The daily after action reviews were valuable development sessions for junior leaders. It was essential for the BCT S-4 and SPO to attend these sessions to help instill a positive CSDP culture in junior leaders. (Units could also record participants at the site to obtain credit for official CSDP training.)

To streamline operations and ensure that all transactions were posted to unit property books, maintenance, PBO, and SSA representatives refined processes along the way.

As with any operation, leadership was essential. Field-grade officers and the BCT's chief warrant officers provided critical leadership and expertise to coach, teach, and mentor junior leaders and Soldiers while processing materiel and turn-ins to standard.

The BCT S-4 briefed the results of Slim Warrior to the BCT commander weekly, and Slim Warrior was covered at the BCT's monthly command and staff briefing. This level of leader emphasis and oversight directly contributed to the success of the operation.

Slim Warrior was an overwhelming success for 2-25 SBCT, returning 501 lines of supply consisting of 3,912 items across all classes of supply to the Army system—a savings of \$4.1 million. This resource stewardship increased training flexibility for the BCT commander, creating enough monetary savings to sup-

port the battalion's training exercise deployment to Korea in fiscal year 2012.

The 2-25 SBCT's plan to reduce excess was captured by the U.S. Army Pacific Inspector General as a best practice and is a program that can be adopted across any formation. While providing increased training flexibility was important to the unit, the true value of Operation Slim Warrior was the inculcation of command supply discipline into a generation of future senior leaders; as such, its true impact has yet to reverberate across the force.

Emphasis on command supply discipline has never been as critical as it is in today's Army. Reducing excess, cross-leveling supplies, and managing inventory are fundamental practices that must return to our culture. With more fiscal constraints anticipated for the foreseeable future, BCTs must employ common business practices that drive cost savings and profitability. Finding ways to reduce OMA costs while maintaining training proficiency will help ensure that commanders maximize available resources while maintaining core proficiencies and achieving unit objectives.

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# The Sustainer's Foxhole and Preparing for Unified Land Operations

Our Army has vast wartime experience, but because sustainment units have been operating from established forward operating bases, Soldiers and leaders have not developed the skills necessary for effective field operations.

■ By Capt. Eric M. Stangle

**T**he decisive action training environment is designed to re-focus and reorient the Army for unified land operations in austere locations through the simultaneous combination of offensive, defensive, and stability operations. For tactical sustainment units, this means supporting on the move and employing certain skill sets and field craft, many of which have been largely under-trained or greatly diminished over the past decade.

Training in the field is the only way to become proficient at field operations. Regaining and honing the skills needed to operate in the field poses a challenge for sustainment units because they must balance the daily support requirements of their customer units and the training needs of their Soldiers.

The need for decisive action training extends beyond enlisted Soldiers; many noncommissioned officers (NCOs), company-grade officers, and even some field-grade officers have not had the opportunity to participate in this type of training for a long time.

## FOB Versus BSA

Supporting from an established forward operating base (FOB) differs greatly from supporting from a brigade support area (BSA). The ways that we train for the two types of operations also differ.

During mission rehearsal exercises at combat training centers over the past decade, sustainment units almost exclusively operated out of

fixed facilities that replicated any given FOB in Afghanistan or Iraq. During these exercises, life support, entrance control points, maintenance areas, motor pools, bunkers, and perimeter defenses are already established and usually transferred over to the incoming unit as they would be during the relief-in-place process. Units typically do not have to establish these necessities from scratch, and the training environment has reflected that fact.

On the other hand, during decisive action rotations and unified land operations, it would be very unlikely that suitable hard-stand facilities would exist to establish support areas; therefore, support units would have to operate in the field, particularly during offensive operations when maintaining momentum is key to success.

Operational sustainment in decisive action brings into the planning and execution processes skill sets and procedures such as site reconnaissance and quartering party operations, tactical march techniques, site establishment, security, and incorporating additional entities, such as field trains command posts and joint and multinational partners. These skills are not necessarily used during a typical deployment to a FOB.

As an Army, we have vast wartime experience. Indeed, most of our leaders and Soldiers have several deployments under their belts. However, a FOB mentality is prev-

alent and a significant knowledge shortfall exists in conducting field operations.

## Basic Field Craft

The enemy gets a vote, and for the tactical-level sustainer, managing logistics data, providing distribution, providing medical treatment, or conducting maintenance can only be accomplished after first securing yourself or you may not live long enough for logistics to matter. Securing the perimeter is a top priority of establishing a BSA, and so is clearly delineating priorities of work in order to do so quickly.

Leaders may be unfamiliar with the resources and time it takes to accomplish the multiple tasks required to establish and secure new field sites. Soldiers and NCOs may be unfamiliar with common tasks that support mission-essential tasks, so simultaneously establishing security and life support and conducting logistics tasks can be difficult. The consequences are unsynchronized and inefficient operations and inadequate rest plans that hinder operations as time progresses.

Many Soldiers just do not know what their individual responsibilities are in a field environment and are uncertain as to why these tasks are important. Many company-level leaders are equally inexperienced and therefore cannot adequately identify training requirements or effectively manage myriad tasks during field operations. Senior trainers

at the Joint Multinational Readiness Center have observed the following trends:

- ❑ Unfamiliarity with properly constructing and emplacing fighting positions and concertina obstacles.
- ❑ Difficulty transitioning from cell phones to tactical communications.
- ❑ Unfamiliarity with drafting and understanding range cards and sector sketches.
- ❑ Not using camouflage nets.
- ❑ Lack of trained field sanitation teams.
- ❑ Relative unfamiliarity with guard mount duties, responsibilities, and procedures.
- ❑ Not employing challenge and password procedures.
- ❑ Not adhering to noise and light discipline standards.
- ❑ Not comprehending the rules of engagement.
- ❑ Not positively identifying conventional and unconventional threats.
- ❑ Unfamiliarity with chemical, biological, radiological, nuclear, and high-yield explosives tasks.
- ❑ Lacking standard operating procedures for field operations.

How is it that we find ourselves in this situation? Many of our senior leaders have experienced multiple field training exercises of this nature in their careers. Certainly, most of our sergeants major have dug their share of fighting positions as they came up through the ranks.

The answer is simple; we have been focused on the wars at hand. Counterinsurgency, counter-improvised explosive device training, and managing the Army Force Generation process, along with other key tasks, was our focus as we prepared for each deployment. But more than that, perhaps it has been taken for granted that these basic, seemingly simple skills are as ingrained in our Soldiers today as they were into our senior leaders many years ago.

## Training Management and Mission Support

Providing sustainment in unified land operations is not about going “old school.” It is about sustaining the skills we have in our wartime deployments and building upon them to operate in the most austere environments. In other words, do what we know how to do without doing it from a FOB.

As logisticians, our daily duties require us to be technical experts; we are great in a motor pool, warehouse, or troop clinic. As a consequence, we tend to be less tactically proficient than our combat arms counterparts even though we have a decade of experience securing tactical convoys, reacting to enemy contact, and operating in a counterinsurgency environment. These are all skills we need to sustain and incorporate into future training.

So how do we tap into the knowledge and experience we have and build upon it? How do we get our NCOs, platoon leaders, and company commanders the knowledge they need to train their Soldiers in these

areas and be efficient and effective managers of logistics in the field? We begin with research. The Army has set the conditions for this transition and is providing resources for commanders and leaders to access.

Some doctrine and training methodologies have changed, but some have not. For example, Field Manual (FM) 22-6, Guard Duty, hasn’t changed since 1975 and is still the current doctrine for guard duty. On the other hand, FM 7-0, Training the Force, from 2002 recently evolved into Army Doctrine Publication and Army Doctrine Reference Publication (ADRP) 7-0, Training Units and Developing Leaders. But it does not matter how old or how new the doctrine is if it goes unused.

Doctrine and other training resources are easily accessible online through the Army Publishing Directorate (<http://www.apd.army.mil>) and the Army Training Network (<https://atn.army.mil>). The Center for Army Lessons Learned has newsletters and bulletins from pre-2001 training center rotations that



*Soldiers from the 3rd Squadron, 2nd Cavalry Regiment, conduct a mission rehearsal and walkthrough during a decisive action training environment exercise at the Joint Multinational Readiness Center in Hohenfels, Germany, on Oct. 24, 2012. (Photo by Spc. Fredrick Willis)*

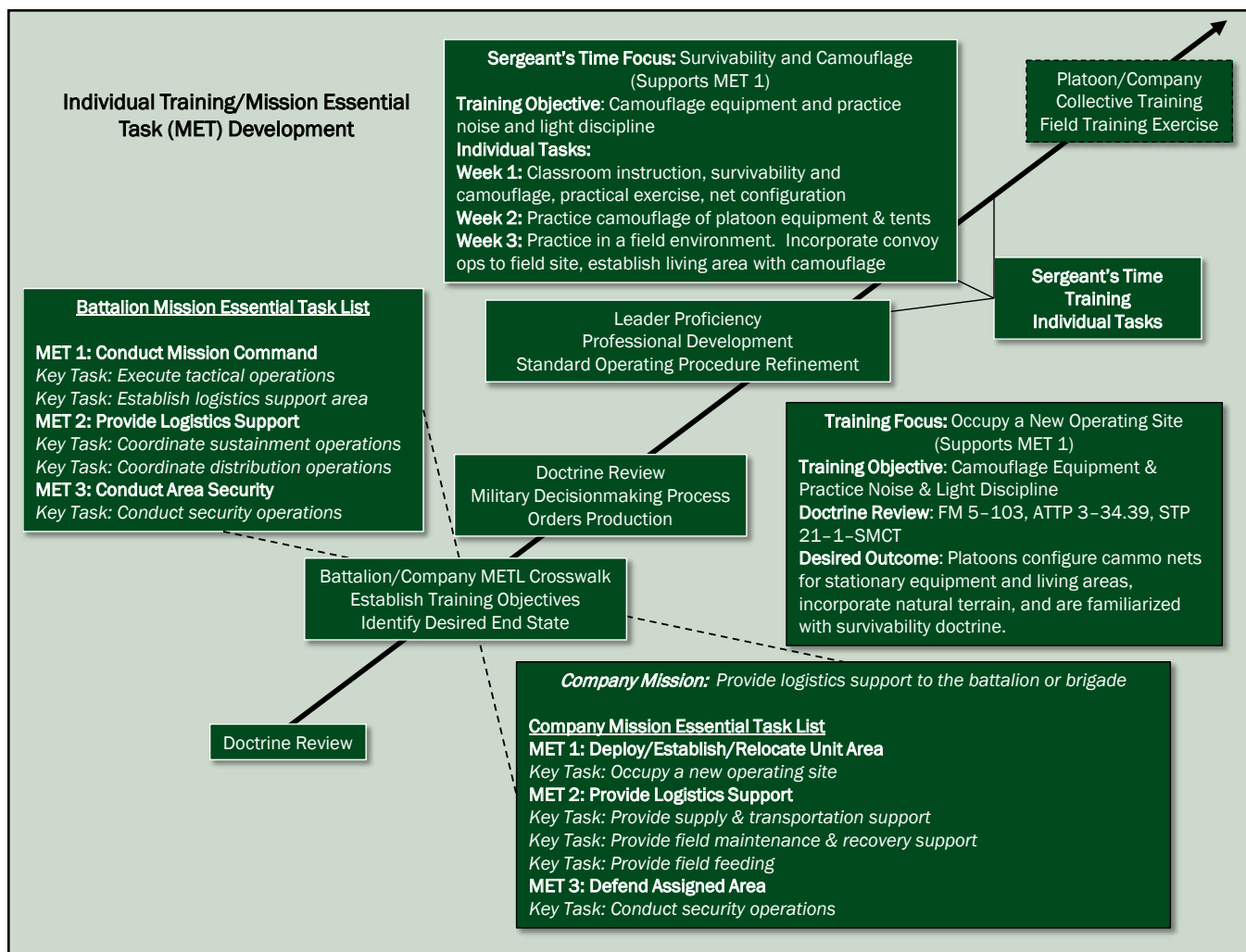


Figure 1. Individual training and mission essential task development.

cover many good tactics, techniques, and procedures for field operations that would still be effective today.

### Training Focuses

Developing and updating unit tactical standard operating procedures to include field operations would be extremely beneficial to any unit. The basic skills of field craft have not changed much over the years and can be taught almost anywhere if time is allotted. Commanders should not take it for granted that their subordinate commanders and company leaders are knowledgeable in these areas.

Leader training programs are important to incorporate into a training cycle; even an hour or two per week can have a big impact on the

ability of junior leaders to conduct and lead training events. Sustainment and maneuver commanders should look for opportunities to integrate training for maneuver and sustainment personnel whenever possible as a means to share tactical expertise and experience.

Supply lines and distribution networks are always enemy targets and sustainers must be tactically proficient or they will risk not being technically capable. Training starts at the individual level; ensuring our junior leaders are receiving the necessary institutional and professional education is important because it provides a solid foundation and prepares them for increased duties and responsibilities.

Many changes are already occur-

ring, most recently with the updates to the Warrior Leader Course and inclusion of structured self-development modules in the Noncommissioned Officer Education System (NCOES).

But individual training at the unit level is perhaps the most critical component to any training program because it is continuous and Soldiers must reach a certain level of proficiency in order to get the most out of collective training events. Individual training is also the most time-consuming and personnel intensive, and because of this, it creates the most friction in a sustainment commander's training calendar.

Sending Soldiers to NCOES courses, new-equipment training, and other troop schools, such as the Battle Staff NCO and the



Equal Opportunity Leaders Courses, among many others, will always be a necessary fact of Army life. But it also means that when coupled with daily support requirements, troop-to-task and manning requirements can quickly become a concern. When conducting training conflicts with providing support to the customer, the training event is often sacrificed.

To avoid this dilemma, commanders must clearly define their mission-essential tasks and desired end states with the intent to ruthlessly enforce training calendars. Only then can subordinate commanders conduct backwards planning, battalion and company crosswalks, and resource training and manage their support requirements effectively.

### **Sergeant's Time Training**

Only by ensuring that our NCOs have the necessary resources and time to train individuals can we expect them to execute effective training events. Commanders can further reduce uncertainty by being creative in their approach to training.

For example, leaders can conduct maintenance at a field site for a few days instead of in the motor pool, even if it is just a platoon at a time, and incorporate and reinforce individual-level field skills. Commanders should encourage junior leaders to conduct opportunity training and use any available time to train individual and collective tasks while still conducting daily support activities.

It's all about training as you fight. It's all about leader development. It's all about conducting the military decisionmaking process. It's all about efficiency and adaptability. Training individuals, teams, leaders, and units is all about a lot of things, and it can be overwhelming, especially when confronted with tasks that are unfamiliar.

### **Training Methodology**

So where should we start? ADRP 7-0 tells us to train fundamentals

first—a logical axiom that assumes the trainers are themselves proficient in the individual and collective tasks they are expected to teach their Soldiers. And if they are not, what is the next best step after reviewing the doctrine?

Officer and NCO professional development sessions present good opportunities for those most experienced to review and teach in a forum that is conducive to leader and trainer development. Start with skill level 1 tasks and work into skill levels 2, 3, and 4, along with other mission-essential task list (METL) supporting tasks. This should go beyond classroom instruction and incorporate practical exercises in a field environment. (See figure 1.)

Take your sergeants, lieutenants, and company commanders out to a field site and give them shovels, sandbags, lumber, a .50-caliber machine gun with tripod, and blank range cards and instruct them to build a crew-served fighting position to standard.

Not only will this allow them to gain appreciation for the amount of work that goes into these types of tasks in the field, but it also will give them the experience they need to expand their unit's training plan and quality of instruction.

Individual training is continuous and constantly builds and reinforces individual task proficiency through repetition with a series of desired outcomes that support the desired end state. A METL task of "deploy/establish support area," for example, encompasses multiple subtasks for subordinate units, such as "occupy a new operating site," which involves multiple collective tasks and individual tasks.

The individual task of camouflaging equipment can be partially trained in the motor pool or company area. Sewing the nets together, calculating how many and what configurations are required for assigned equipment, and the fundamentals that explain survivability

can be taught within a few hours. Build upon this to create crew drills and time standards that reinforce individual responsibilities.

Next, incorporate such training into a field environment and use the natural terrain patterns, dispersion techniques, and proper setup procedures. Several individual tasks can be trained in the same way and in conjunction with other mutually supporting tasks. In this way, we are not just checking the block on tasks, conditions, and standards; we are creating the basis for the desired outcome, which is to support the mission-essential task of establishing a support area.

As the Army transitions over the next few years, it is not a question of if we will be prepared for unified land operations and future conflicts; it is a question of how well we will be prepared. Strong command emphasis on dedicating training time and resources will help ensure the basics of field craft are incorporated into unit training.

We as sustainers and leaders must safeguard to the best of our ability the limited time we have in our schedules to conduct sergeant's time, individual, collective, and job-specific training. Officers must participate in training just as they must assign the training tasks to subordinate leaders and hold them accountable. Building efficiency in the basics of field craft will result in adaptability in any environment and will allow sustainers to better support customer units.

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# Developing an SAP Certification Course for the Army Logistics University

The Army Logistics University has partnered with Virginia State University to offer a program that prepares logisticians to use Global Combat Support System–Army.

■ By Travis J. James

As stated in the 2012 Army Posture Statement, our future Army will be smaller than the current force but able to expand rapidly when our nation calls. To structure and pace reductions in the nation's ground forces in a way that preserves the ability to surge, regenerate, and mobilize the capabilities needed for any contingency, it is imperative that sustainment organizations from the strategic to tactical levels share real-time data.

Tactical organizations will continue to face new and evolving threats while the Army increases emphasis on accountability and maintenance. Responsible stewardship will play key roles in transforming the Army into a flexible organization.

To provide "readiness at best value" within the constraints of the economic environment, the Army must further develop its integrated supply chain and logistics management system.

## GCSS–Army

Actions to foster responsible stewardship and information system effectiveness within the institutional Army are underway with the fielding of the Army's tactical enterprise resource planning (ERP) system, Global Combat Support System–Army (GCSS–Army). GCSS–Army will track supplies, maintenance operations, spare parts, and organizational equipment. It also can manage hu-

man resources, calculate total cost of ownership, and conduct other supply chain financial transactions.

This modernized application will subsume outdated standard Army management information systems that are not financially compliant and integrate approximately 40,000 local supply and logistics databases into a single authoritative system. When fully deployed, GCSS–Army will affect every supply room, motor pool, warehouse, and property book office in the total Army, improving operational and budgetary efficiency and asset visibility.

Readiness and historical ordering data will be used in forecasting and demand planning in order to reduce the variability of distribution lead times, capacity use, and inventory. Commanders at all levels will need to embrace collaborative information sharing while ensuring personnel are adequately trained to operate integrated data sharing systems.

## Preparing Through Partnership

Before the Army fielded its Systems, Applications, and Products in Data Processing (SAP)-based ERP solution, the Army Logistics University (ALU) anticipated that logisticians would need to gain a functional understanding of the SAP application suite. ALU partnered with Virginia State University (VSU) and established a continuing education program that grants both a VSU En-

terprise Information Systems (EIS) Certificate and an SAP Business Foundation and Integration Associate Certification.

During the four-month program, paid for by the students, participants complete three VSU undergraduate courses leading to the VSU EIS certificate. The VSU courses cover topics in ERP systems, project management, Microsoft Project, SAP Project System, logistics information systems, business process modeling, and enterprise resource configurations. In these courses, the students learn about the challenges of transitioning from legacy systems to an ERP system, receive an overview of ERP systems, and gain the project management skills needed to conduct full-scale ERP integration.

The EIS certificate program comprises information and logistics technology (INLT) courses 292, 485, 444, and 499.

**INLT 292, *Introduction to ERP***, covers approaches to designing, planning, and controlling logistics management. It also provides information on the core aspects of ERP infrastructure and application using extensive practical exercises.

**INLT 485, *Project Management***, covers the principles and techniques of managing logistics information systems projects, including working with project teams, project budgeting, scheduling, and planning (including Microsoft Project and SAP Project System).

**INLT 444, Enterprise Resource Configurations**, provides the knowledge to configure an ERP system to match the business requirements of an organization. Specific topics covered include business process modeling, ERP solutions for industry, creating an organizational structure, and creating master and transactional data.

**INLT 499, SAP Business Integration Consultant Workshop and Certification Preparation Course**, is an intense 10-day SAP workshop for participants who have completed the VSU courses and earned the VSU EIS certificate. An SAP-sanctioned instructor will facilitate the workshop and demonstrate how fundamental business processes interact with SAP.

The topics covered during days one through nine will include: sales order management, material and production planning, procurement, inventory management, plant maintenance, human capital management, and management accounting. On day 10, students take the Total SAP ERP 10 examination at a third-party testing facility. Students who successfully pass the exam will receive the SAP Business Foundation and Integration Associate Certification and official recognition as an SAP business consultant.

### Recommended Changes

As the pilot program matures to satisfy the training needs of Army sustainers, I recommend the following changes:

- Incorporate a foundational course to provide knowledge of global commercial supply chain processes and terminology.
- Incorporate GCSS-Army scenarios and vignettes into the curriculum.
- Expand certification opportunities.
- Develop GCSS-Army professional functional area subject matter experts.

**Incorporate a foundational course.** Based on slight terminology and procedural differences associated with the transition to a tactical ERP system, a prerequisite course or collection of courses would provide a knowledge base before the start of the program. In my experience, completing the Association for Operations Management (APICS) Certified Supply Chain Professional (CSCP) certification tremendously helped to prepare for INLT 292.

APICS is the global leader and premier source of knowledge in supply chain and operations management, including production, inventory, materials management, purchasing, and logistics. APICS is the governing body for both the Certification in Production and Inventory Management (CPIM) and CSCP certifications.

The APICS CPIM program provides students with the opportunity to understand and evaluate production and inventory activities within a company's global operations. APICS

ment) before starting the VSU EIS certificate and SAP Business Foundation and Integration Associate Certification.

Armed with the knowledge from obtaining either APICS certification, participants establish a firm learning foundation for GCSS-Army implementation success.

**Incorporate GCSS-Army scenarios.** CSCPs or CPIMs begin the program with INLT 292, Introduction to ERP, which introduces the functional SAP software through hands-on exercises and case studies of the fictional company Global Bike Incorporated. The case studies on materiel management, sales and distribution, and financial and managerial accounting are well designed for demonstrating how processes, user roles, and data are integrated throughout the enterprise's SAP software. However, an improvement would be to incorporate case studies, vignettes, and research papers related to GCSS-Army and other SAP Defense Forces and Public Security (DFPS) Solutions.

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**After completing the workshop and successfully passing the certification exam, participants will have the credentials of a general SAP business consultant.**

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CPIM and CSCP training will assist program participants in acquiring the foundational knowledge and skills needed to create consistency and foster collaboration through best practices and corporate communication.

Additionally, APICS certifications will enhance learning and validate that participants have mastered essential terminology, concepts, and strategies (related to demand management, procurement management, supplier planning, material requirements planning, capacity planning, sales and operations planning, master scheduling, performance measurements, supplier relationships, quality control, and continuous improve-

**Expand certification opportunities.** Project management is the art and science of managing time, personnel, and quality-related resources to complete a project. The scheduled fielding of GCSS-Army will require individuals involved in the transition from legacy systems and ERP to balance time, quality, and cost to ensure normalized data is migrated with integrity.

Using a combination of the Project Management Book of Knowledge and Microsoft Project tutorials, Project Management (INLT 485) teaches this skill while meeting a 23-hour project management education requirement for the Project Man-



agement Institute (PMI) Certified Associate in Project Management certification exam and a 35-hour requirement for the PMI Project Management Professional exam.

coursework before participating in the 10-day SAP workshop. INLT 292, 485, and 444 adequately meet this requirement, but for additional relevance within the Army commu-

personnel would master the transportation module, and human resources personnel would learn the human resources module. Finance personnel would be taught the finance module of SAP, and support operations officers, executive officers, and sustainment planners would require specialized training in the business intelligence and planning functions within SAP.

The business intelligence function within SAP allows users to create customized reports to meet the needs of their respective commands. Understanding the planning functions within SAP will allow planners to analyze the master and organizational data to perform optimized planning, budgeting, and forecasting activities. Using integrated data inputs to the military decisionmaking process allows logisticians to better determine if a mission, operation, or training event is logistically supportable in a resource-constrained environment.

The ALU and VSU partnered program, along with ongoing GCSS-Army training initiatives, clearly demonstrates ALU's ability to anticipate educational requirements and develop relevant programs to meet the demands of the smaller but adjustable Army of the future. Modifications to this pilot program will arm personnel with the skills needed to maintain real-time visibility of unit capabilities, forecast requirements, and mitigate the risk of any anticipated shortfalls within GCSS-Army.

Travis J. James is a retired Army logistics major who recently served as the course director for the Support Operations Course at the Army Logistics University at Fort Lee, Va. He holds a bachelor's degree in resource management from Troy State University, an MBA from Mississippi State University, and a master's degree in supply chain management and logistics from the University of Kansas. He is an Association for Operations Management Certified Supply Chain Professional, Project Management Professional, and Oracle database administrator.

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GCSS-Army operates on the SAP DFPS component that enhances the standard SAP functions. DFPS enables armed forces, police, and aid organizations to perform business tasks and processes from their home stations or temporary bases during operations and exercises. Organizational flexibility, accounting and funds management, materials management, support for flight operations, and maintenance are the key functionalities within DFPS.

Using the capabilities within DFPS, GCSS-Army can map process chains from planning through implementation, execution, and completion of operations and exercises. More relevant to the Army's modular structure, the DFPS component will provide commanders with a better capability to task organize units and resource requirements.

INLT 444, Enterprise Resource Configuration, introduces the considerations needed to realize the full benefits of the system as units implement GCSS-Army into their sustainment, supply chain management, and logistics operations.

As a requirement for the SAP University Alliance program, which significantly reduces SAP-related training costs, students must complete a partnered university's SAP-related

coursework before participating in the 10-day SAP workshop. INLT 292, 485, and 444 adequately meet this requirement, but for additional relevance within the Army commu-

nity, each course will require minor modifications to tailor the content to Army learners and include GCSS-Army's implementation requirements. ***Develop professional functional area subject matter experts.*** As discussed, the final phase of the pilot program is the SAP certification workshop. After completing the workshop and successfully passing the certification exam, participants will have the credentials of a general SAP business consultant. The SAP Business Foundation and Integration Associate Certification is a great entry into SAP; however, the certification program provides only a general knowledge of the SAP business processes.

In order to develop a training program that builds the intellectual capacity needed to capitalize on the software's full capability, I recommend building on the general knowledge acquired in the Business Foundation and Integration Certification program to develop functional subject matter experts.

For example, ordnance lieutenants, warrant officers, and noncommissioned officers would receive specialized training in the plant maintenance module of SAP. Quartermaster personnel would be trained in the materiel management, warehouse, and enterprise asset modules. Transportation

# Replacing the Movement Tracking System With a Joint Solution

■ By Lt. Col. Bryan J. Stephens

**T**he Joint Capabilities Release (JCR) is the Army's next generation of mission command and situational awareness software. It is not just for maneuver forces; it also provides logisticians with the capabilities required for the Movement Tracking System (MTS), including support for in-transit cargo identification and tracking requirements.

JCR integrates improved Force XXI Battle Command Brigade and Below (FBCB2) and Blue Force Tracking (BFT) capabilities into the existing MTS hardware in order to standardize the software used by the Army's ground forces. JCR with its logistics enhancements (JCR-Log) replaces MTS, enabling logisticians to support unified land operations safely and on time.

## Efficiencies and Standardization

With JCR, Army logistics units and the joint forces they support operate on the same network, which gives them visibility of each other. The network merger results in efficiencies in equipment, maintenance, sustainment, network management, and satellite airtime. Although the convergence of mission command and situational awareness were the focus of the merger, logistics platforms also inherit the improved FBCB2 capabilities found in JCR. These capabilities include a more powerful map engine that uses satellite imagery, extensive reporting templates, and a more familiar graphical user interface.

Moving from MTS to JCR software will also cut costs. Having the entire Joint Battle Command-Platform (JBC-P) family of sys-

tems use the same message sets and protocols enables the program manager to eliminate duplicate satellite channel purchases, network management operations, and help desks.

## Fielding JCR-Log

From January to September 2012, a joint team fielded 1,404 JCR systems to the Eighth Army in Korea. This was the first time JCR replaced MTS software on logistics platforms. Since then, the fielding effort has grown, reaching most major installations and Army Reserve and National Guard units.

Since October 2012, Project Manager JBC-P has fielded or upgraded 1,429 JCR systems in Afghanistan of which 360 were upgrades to MTS. JCR will continue to be fielded until JBC-P with logistics supporting functions is ready for deployment (slated for fiscal year 2014). To gain efficiencies in the network, units that have MTS hardware will receive JCR software.

## Training and Fielding Savings

By eliminating MTS software and moving forward with JCR-based systems, the JBC-P field support team has not needed additional resources. The only impact has been learning about a few new software features and the associated hardware. Savings have already been realized by combining separate training events. This single program manager approach has eliminated duplicate fielding and coordination efforts and created significant cost avoidance beginning in fiscal year 2012. Project Manager JBC-P expects similar cost savings to extend through at least fiscal year 2016.

To make the package complete, logistics variants of JCR training tools are now available, including materials for users, supervisors, and system maintainers. Before the MTS stood down, the MTS and BFT training managers collaborated to develop technical manuals and more flexible programs of instruction. They also standardized training for both maneuver and logistics forces.

Deployment of the JCR software is a significant step toward enhancing interoperability among Army logistics and mission command systems. Project Manager JBC-P intends to standardize all platforms to the next generation Blue Force Tracking 2 (BFT2) network used on JCR-equipped platforms. The BFT2 transceiver is more capable than the one employed on logistics platforms today and will provide higher data rates to meet more stringent location reporting requirements. Since it is the same transceiver used by maneuver units, it will add the benefits of a simplified network and a reduced logistics footprint.

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# Insights and Challenges of Web-Based Ammunition Management

The Army has taken steps to improve ammunition management but more still needs to be done. This article highlights Total Ammunition Management Information System functions and enterprise modernization challenges.

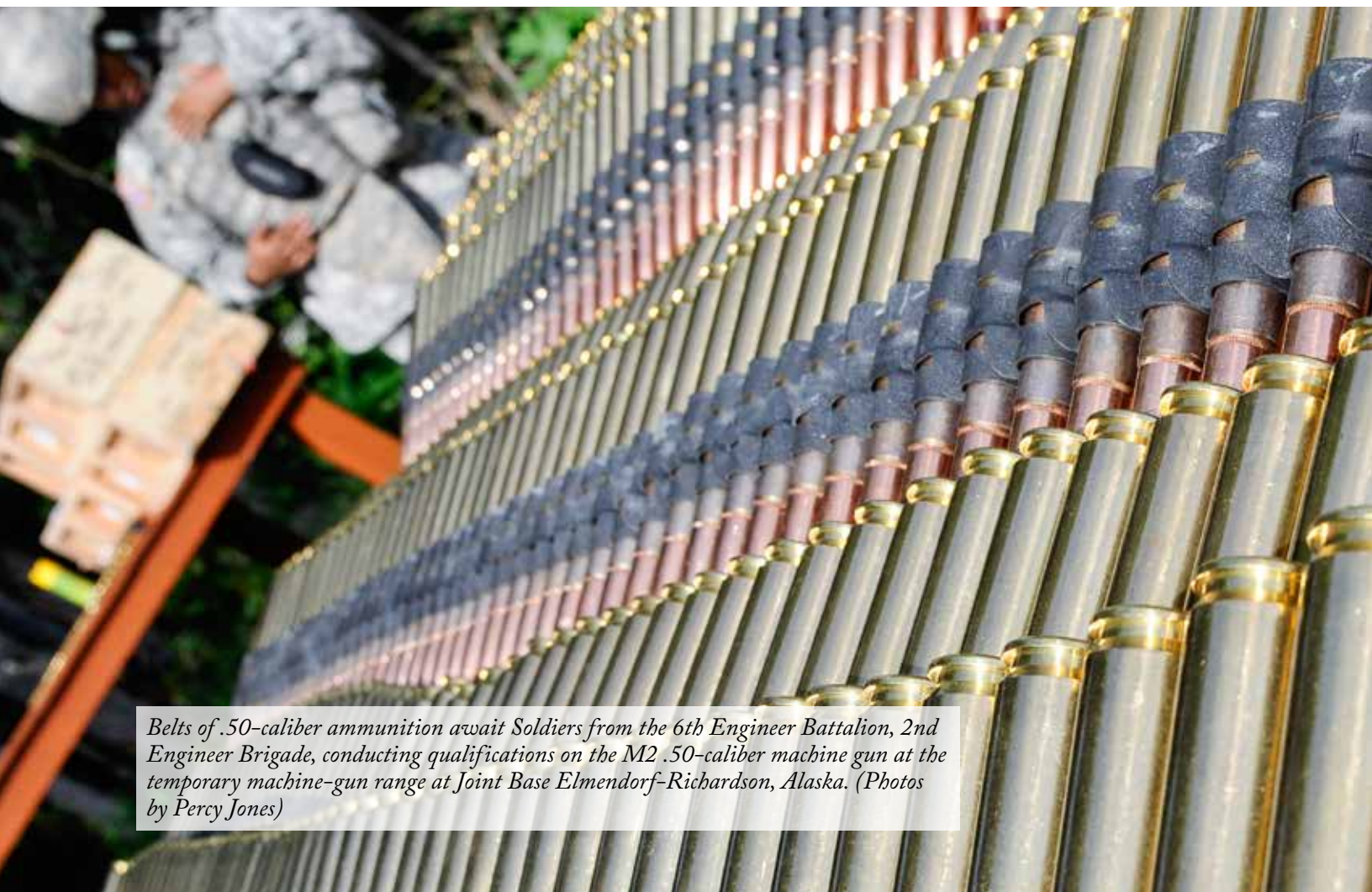
■ By Lt. Col. (Ret.) Bob Torche

**T**he Army is seeking a better connected, more agile munitions enterprise capable of meeting operational requirements now and into the future. Headquarters, Department of the Army personnel, project officers, developers, and

munitions experts have established process action teams, committees, and workgroups in pursuit of a more robust and capable munitions enterprise. Despite high-profile discussions, hundreds of briefings churned out by oversight bodies, and countless

articles in publications, Army teams have mostly produced vague promises and incomplete plans.

The Army G-3/5/7 (operations and plans) Munitions Management Division participates in these integrated sessions to ensure that the outcome



*Belts of .50-caliber ammunition await Soldiers from the 6th Engineer Battalion, 2nd Engineer Brigade, conducting qualifications on the M2 .50-caliber machine gun at the temporary machine-gun range at Joint Base Elmendorf-Richardson, Alaska. (Photos by Percy Jones)*



aligns the munitions requirements process and the Total Ammunition Management Information System (TAMIS). Most ammunition managers would consider TAMIS successful, but without a modern and reliable inventory management system at Army ammunition supply points, TAMIS and the larger ammunition enterprise cannot reach their full objective.

### **TAMIS Functions**

TAMIS executes essential functions of the munitions enterprise by calculating, developing, and prioritizing billions of dollars worth of training, combat, and test ammunition requirements and managing authorizations for the total Army—Active, National Guard, and Reserve. TAMIS's functions include forecasting ammunition requirements; preparing, processing,

validating, and routing electronic requests for munitions; and recording and calculating expended munitions.

TAMIS supports the Army and ammunition managers by ensuring that requirements, authorizations, and expenditures are accurate, visible, available, and usable when needed. It allows users to forecast and request ammunition and to access information without wait time for processing and dissemination.

The TAMIS framework is scalable and hierarchical. It is a Web-based application in which each command manages its ammunition independently of other commands. Its centralized management and decentralized execution result in a common operational picture and improved flexibility throughout the command hierarchy.

### **Updating the Standard Army Ammunition System**

As the drawdown looms, the importance of ammunition management has never been greater. The Army faces tough choices in a fiscally constrained environment that has many information technology infrastructure challenges. Committees of functional and technical munitions experts must determine how best to update the legacy warehouse munitions system—the Standard Army Ammunition System.

This effort is essential to creating an optimized and interoperable munitions enterprise. Initially, this legacy system was to be included in an overarching logistics modernization effort involving the implementation of an Enterprise Resource Planning (ERP) application. Today, however, the Army is seeking a less expensive and more tailored solution.

Although ERP applications such as Global Combat Support System—Army and the Logistics Modernization Program are best for coordinating and managing enterprise-level processes, detached systems sometimes work best for specific functions. Calculating, prioritizing, requesting, and managing ammunition requirements

under various operational scenarios require specialized features and agility that are better managed through decentralized, Web-based operations. Whether similar decentralized operations should be extended to Army ammunition supply points remains undecided.

The path forward for the new or updated ammunition warehouse system must include improved interoperability with TAMIS. Achieving a high level of interoperability requires an innovative and proactive approach. Interoperability challenges will only become harder to manage as the Army's systems grow more complex and interconnected.

The G-3/5/7 munitions office embraced a Web-based strategy for TAMIS more than 12 years ago. The office delivers ever-increasing updates and enhancements by using an agile process aimed at reducing the time and resources needed to respond to rapid changes in operational requirements. Could the same approach work for a Standard Army Ammunition System service life extension or a commercial off-the-shelf application? Or, maybe the Army should consider a stand-alone Systems, Applications, and Products in Data Processing system for ammunition supply points. As the Army gears up to spend millions more on software over the next several years, questions persist while Soldiers struggle to maintain a legacy system.

### **Network Reliability**

The success of any Internet-delivered application is only as good as its network and data center. Accessibility, availability, and network performance are paramount. Too many times over the last few years, TAMIS users experienced outages directly caused by poor data center management, network operation center disorder, and even installation information managers interrupting connectivity in the process of administering installation networks. Data centers and network managers must improve reliability, response time, and diagnostics for mission-essential systems that rely solely





*Pfc. Crystal Campbell, 56th Engineer Company (Vertical), 2nd Engineer Brigade, carries .50-caliber ammunition to a gunner during the 10-meter familiarization course at the temporary machine-gun range at Joint Base Elmendorf-Richardson, Alaska.*

on the network for mission success.

Web-based applications can increase productivity, cut costs, and enable the Army to operate more efficiently. But as surely as fast-moving Web applications can accelerate military operations, slow-moving applications can bring a force to its knees. If applications do not consistently function quickly, securely, and reliably, user satisfaction will plummet along with mission success.

To help improve its Nonsecure Internet Protocol Router Network (NIPRNET) performance, TAMIS relies on the Defense Information Systems Agency (DISA). DISA's introduction of the Global Content Delivery Service (GCDS) improves network

performance for all users reaching TAMIS via NIPRNET. The GCDS serves as a NIPRNET traffic cop, accelerating and routing traffic more efficiently than the Internet does on its own. Every externally-facing, Web-based Army application should consider using GCDS.

Unfortunately, DISA does not provide a total network solution yet. Users who access TAMIS from home computers, on the road, or away from a NIPRNET connection need similar performance. Until DISA allows commercial Internet traffic to cross over onto GCDS, application owners should consider commercial acceleration and performance optimization services to improve content delivery.

## System Security

Users must also be aware of the growing cyberthreat. GCDS and Akamai Technologies, the TAMIS commercial vendor, provide TAMIS with an in-depth defense capability by determining attack patterns and implementing countermeasures to stop them.

While the Army and Department of Defense establish a workforce to address cyberthreats, system owners and information technology managers should seek ways to build security into their applications early in the acquisition life cycle. One way to accomplish this is to ensure that contracts address requirements for secure code, software risk analysis, and an independent security review that includes both static and dynamic application analysis.

Embedding software assurance in the software development life cycle is the best approach. Security reviews help to contain, remove, and prevent vulnerabilities by minimizing the risk of possible exploitation. The TAMIS project team embraced automated tools for software assurance. Although these tools are not foolproof, they are cost effective and continue to improve. It is far cheaper to build security into the application than to diagnose and fix it later.

## Project Management

The project manager plays a key role in ensuring the design and implementation of secure applications. As custodian of the work breakdown structure, the project manager identifies and defends the nonfunctional requirements needed to build security into the application. He protects the integrity of the secure software development life cycle from those who would seek to compromise the application for short-term budget and time considerations.

TAMIS is overseen by the G-3/5/7 munitions office and governed by Army Regulation 5-13, Total Army Munitions Requirements Process and Prioritization System, but munitions managers also influence the system's development as members of the TAMIS advisory group. This group



provides a forum for user feedback on system operations and process improvement. The G-3/5/7 munitions office routinely incorporates this feedback to improve user experience.

TAMIS captures Army force structure data and combines it with weapon and platform combat-load factors and approved training strategies from Department of the Army Pamphlet (DA Pam) 350-38, Standards in Training Commission, or STRAC, in order to establish the foundation for most training and operational requirements.

Inside TAMIS, the 2012 DA Pam 350-38 became eSTRAC, more flexible and capable than ever before. The eSTRAC is easier to use than the paper version and displays event level detail by unit. Updates and changes to eSTRAC are simplified, and its annual publication is now only a click away.

The Training and Doctrine Command's approved programs of instruction, class schedules, and student tallies account for the remaining requirements. Ammunition managers validate these requirements by adjusting equipment on hand, Soldier availability, deployments, training schedules, and the number of courses planned.

Validated requirements are submitted in TAMIS to the G-3/5/7 munitions office for resourcing. Errors and misalignments in modified table of organization and equipment and table of distribution and allowances documents, together with outdated and incorrect programs of instruction, cause discrepancies in ammunition calculations, requiring managers to spend a disproportionate amount of time correcting requirement calculations. Greater amounts of automation impose stricter processes that result in more precise calculations and easier validation but only after source data is cleansed.

### Improvements Made and Needed

Army Test and Evaluation Command (ATEC) and Army Materiel Command (AMC) managers who conduct ammunition tests or require

ammunition in testing submit and manage their requirements in TAMIS. ATEC and AMC test requirements are validated and prioritized for resourcing in TAMIS. Although the management of ammunition used by testing activities has improved, managers must become more familiar and compliant with prescribed ammunition practices.

TAMIS must provide greater flexibility for ATEC and AMC so that all test ammunition, munitions compo-

nitions office, in conjunction with the Army G-4 (logistics) munitions division, passes resources to each command in the form of electronic authorizations. Each command level in TAMIS passes the authorizations to its subordinates based on approved requirements. Subordinate units, identified as the UIC (unit identification code) level in TAMIS, forecast their munitions to the ammunition supply points where they intend to pick up ammunition.



*Ammunition is loaded in an M2 .50-caliber machine gun as part of a training exercise at the temporary machine-gun range at Joint Base Elmendorf-Richardson, Alaska.*

nents, and part numbers are manageable in the same system and independent of traditionally procured Army ammunition. Even items not acquired through traditional acquisition channels, such as foreign ammunition, should be managed in a single system.

TAMIS modifications are underway, yet ATEC continues to pursue an internal ammunition system to interface with TAMIS. ATEC should abandon its internal system and fully support and adopt TAMIS.

After validating Armywide requirements in TAMIS, the G-3/5/7 mu-

TAMIS guides the user through the forecasting process and aids the user in determining how much ammunition is needed for scheduled training. But more still needs to be done to improve forecasting accuracy. Units overestimated how much training ammunition they needed by 49.3 percent in 2011 and by 51.9 percent in 2012. An upcoming TAMIS release contains an additional forecasting feature that should improve forecasting accuracy.

TAMIS's forecasting and handling of cartridge-actuated devices



(CADs) and propellant-actuated devices (PADs) needs improvement. Because CADs and PADs are flight critical and have a limited lifespan, efficient management sometimes requires units to use offline spreadsheets before identifying the requirement in TAMIS.

Improvements are now within reach. Scheduled updates to TAMIS include adding CAD and PAD lot numbers and installation dates to

TAMIS adopted the TPE structure and captures issued ammunition from the Standard Army Ammunition System. However, recording expenditures remains a manual process, and reporting features in TAMIS such as DA Form 4949 went idle when a key leader guiding its implementation rotated back to the continental United States. Without a better connected, more agile munitions architecture these problems will persist.

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## TAMIS has expanded to support Army transformation and continues to advance as the munitions office focuses on supporting a broader range of ammunition functions online.

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aircraft type and tail numbers. Integrating this data with better aircraft management and forecast procedures should simplify and advance CADs and PADs management in TAMIS.

### Preparing Ammunition Requests

When it is time for units to prepare an ammunition request, users again turn to TAMIS. Army regulations require users to submit electronic requests unless network connectivity is unavailable. TAMIS enables the preparation, validation, and routing of electronic, digitally-signed requests to the ammunition supply point. The entire workflow is automated, and users receive an email detailing the status. Each month, users create more than 5,000 electronic requests for ammunition in TAMIS.

Combat and other operational ammunition requirements are calculated based on weapon platforms and Soldiers' weapons. Units engaged in operational missions use TAMIS to select, request, and manage authorizations. Managing ammunition during war or conflict poses a particular challenge when units fall in on theater-provided equipment (TPE) and try to account for ammunition manually.

### TAMIS Training

Training is critical for improving operational support. The TAMIS project office conducts training for more than 1,000 users annually and receives nearly 500 help desk requests per month, most of which are system or ammunition related. TAMIS training is delivered in traditional classrooms, as computer-based training (CBT), or through distance learning.

Because most beginning users have little experience with ammunition management, instruction includes both TAMIS training and some ammunition management fundamentals. The high level of interaction between the instructor and students suggests that introduction to TAMIS is best delivered in traditional classrooms.

CBT offers many benefits, such as allowing the user to select specific training modules of interest whenever time is available. The challenge is in keeping updated and engaging TAMIS CBT courses within budget. Training at distance learning sites is best suited for small class sizes, but student-instructor interactivity is problematic. TAMIS training involves constantly making trade-offs. Accordingly, to improve comprehension of Web-

based ammunition management, additional instructor-led ammunition training seems appropriate.

### Mobile Device Capability

The use of mobile devices, such as smartphones and tablets, is fundamentally changing the digital landscape. TAMIS must support any device, including personally-owned devices, from anywhere at any time. Because managing munitions on personally-owned devices poses challenges, Army agencies are pursuing a variety of pilot projects that could potentially lead to more options for requesting and managing ammunition.

The big risk with mobile devices is data leakage out of the network. Because most existing mobile devices lack hardware-based security such as the Trusted Platform Module, TAMIS must seek alternative encryption to support data protection. The project team's initial approach with TAMIS is to establish a virtual environment where the session occurs on the TAMIS server rather than on the device—essentially, not storing any data on the device. Making TAMIS more mobile and interoperable remains a top priority.

TAMIS has expanded to support Army transformation and continues to advance as the munitions office focuses on supporting a broader range of ammunition functions online. Project officers and munitions experts must ensure the ammunition enterprise aligns with the G-3/5/7 munitions office's requirements-generation process and TAMIS if the Army is to attain better connected and more agile ammunition management architecture.

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Lt. Col. (Ret.) Bob Torche is the Total Ammunition Management Information System project manager for the Munitions Division, G-3/5/7, Headquarters, Department of the Army. He holds a master's degree in management from the Florida Institute of Technology and is a Level III certified acquisition professional.

# Army Sustainment Author Guidelines

**W**e are always looking for quality articles to share with the Army sustainment community. If you are interested in submitting an article to *Army Sustainment*, please follow these guidelines:

- Ensure your article is appropriate to the magazine's subjects, which include Army logistics, human resources, and financial management.
- Ensure that the article's information is technically accurate.
- Do not assume that those reading your article are Soldiers or that they have background knowledge of your subject; *Army Sustainment's* readership is broad.
- Write your article specifically for *Army Sustainment*. If you have submitted your article to other publica-

tions, please let us know at the time of submission.

- Keep your writing simple and straightforward.
- Attribute all quotes to their correct sources.
- Identify all acronyms, technical terms, and publications (for example, Field Manual [FM] 4-0, Sustainment).
- Review a past issue of the magazine; it will be your best guide as you develop your article.

## Submitting an Article

Submit your article by email to [usarmy.lee.tradoc.mbx.leeecasm@mail.mil](mailto:usarmy.lee.tradoc.mbx.leeecasm@mail.mil).

Submit the article as a simple Microsoft Word document—not in layout format. We will determine the layout

for publication.

Send photos as .jpg or .tif files at the highest resolution possible. Photos embedded in Word or PowerPoint cannot be used.

Include a description of each photo in your Word document.

Send photos and charts as separate documents.

For articles intended for the Operations department, obtain an official clearance for public release, unlimited distribution, from your public affairs and operational security offices before submitting your article. We will send you the forms necessary for these clearances.

If you have questions about these requirements, please contact us at [usarmy.lee.tradoc.mbx.leeecasm@mail.mil](mailto:usarmy.lee.tradoc.mbx.leeecasm@mail.mil) or (804) 765-4761 or DSN 539-4761.

## Departments

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

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

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

**Spectrum** is a department of Army Sustainment intended to present well-researched, referenced articles typical of a scholarly journal. Spectrum articles most often contain footnotes that include bibliographical information or tangential thoughts. In cooperation with the Army Logistics University, *Army Sustainment* has implemented the a double-blind peer review for all articles appearing in its Spectrum section. Peer review is an objective process at the heart of good scholarly publishing and is carried out by most reputable academic journals. Spectrum articles typically are 2,500–5,000 words.

**Operations** includes articles that describe units' recent deployments or operations. These articles should include lessons learned and offer suggestions for other units that will be taking on similar missions. These articles require an official clearance for open publication from the author's unit. Photo submissions are highly encouraged in this section. Please try to include 5–10 high-reso-

lution photos of varying subject matter. Operations articles typically are 1,200–2,400 words.

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

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

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

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#### Sustainer Spotlight

*Massachusetts Gov. Deval Patrick and Gen. Frank Grass, Chief of the National Guard Bureau, present Army Commendation Medals to 1st Lt. Stephen Fiola, 1st Sgt. Bernard Madore and Staff Sgt. Mark Welch with the 164th Transportation Battalion, Massachusetts Army National Guard, June 3, 2013. The medals were for their heroic acts in providing critical first response immediately following the Boston Marathon attacks that occurred on April 15. (Photo by Sgt. 1st Class James C. Lally)*