

JANUARY-MARCH 2020

# ARMY SUSTAINMENT

WWW.ALU.ARMY.MIL/ALOG

LOOK  
INSIDE

# ALLIES & PARTNERS



## INSIDE

>>> **Multinational Operations**

>>> **Backbone of Deterrence**

An interview with Retired Lt. Gen. Ben Hodges

>>> **Interoperability: Embrace it or Fail!**

>>> **People, Allies, and Partnerships**

>>> **Empowering our Competitive Advantage**

An interview with Retired Command Sgt. Maj. John Troxell



# CONTENTS

- 4 **AMC COMMANDER**  
Allies and partners key to strategic readiness  
*By: Gen. Gustave "Gus" Perna*
- 5 **ARMY G-4**  
Expeditionary muscle memory  
*By: Lt. Gen. Duane A. Gamble*
- 7 **INTEROPERABILITY: EMBRACE IT OR FAIL**  
Interoperability necessary, but difficult in large-scale combat operations  
*By: Maj. Gen. Rodney Fogg*
- 12 **BACKBONE OF DETERRENCE**  
An Interview with Retired Lt. Gen. Ben Hodges  
*By: Arpi Dilanian and Matthew Howard*
- 18 **PEOPLE, ALLIES, AND PARTNERSHIPS**  
8th TSC establishes favorable sustainment conditions by setting the theater  
*By: Lt. Col. Edward K. Woo, Maj. Mishenda S. Siggall, and Maj. Jimmy Y. Chang*
- 22 **RESILIENCE, REDUNDANCY AND RELATIONSHIPS**  
Logistics interoperability a valued asset, strategic enabler  
*By: Australian Army Brigadier Todd Ashurst and Lt. Col. David Beaumont*
- 28 **MUNITION OPERATIONS INTEROPERABILITY**  
Differences in ammunition across the services may lead to issues in future conflicts  
*By: Chief Warrant Officer 3 Michael Lima*
- 32 **JOINT PERSPECTIVE**  
An interview with Lt. Gen. Giovanni Tuck  
*By: Arpi Dilanian and Matthew Howard*
- 38 **BUILDING RELATIONSHIPS**  
Iraqi logistics advisors to add value to partner-nation advising logistics operations in Operation Inherent Resolve  
*By: Maj. Thomas Knothe*
- 44 **MULTINATIONAL OPERATIONS**  
Joint Logistics Support Group offers effective role with allies, partners  
*By: Lt. Col. Aaron Cornett*



**53 SUSTAINING FIRES**  
**2nd SFAB advisors help Afghan National Army improve maintenance program**  
*By: Staff Sgt. Christian Clapp*

**56 MASTERING FUNDAMENTALS**  
**An interview with Gen. Michael Garrett**  
*By: Arpi Dilanian and Matthew Howard*

**62 EMPOWERING OUR COMPETITIVE ADVANTAGE**  
**An interview with Command Sgt. Maj. John Troxell**  
*By: Arpi Dilanian and Matthew Howard*

**68 SUSTAINING AVIATION**  
**Recognize differences between BSB, ASB to ensure critical sustainment capabilities are not overlooked**  
*By: Maj. James Polk and Chief Warrant Officer 4 Dustin Case*

**72 PACIFIC REACH 2019**  
**Brigade inspection tests soldier, APS watercraft readiness**  
*By: Capt. Joseph Waicunas and Chief Warrant Officer 3 Matthew Sabo*

**76 DEFENDING THE COMMAND POST**  
**Training a division headquarters for base defense and convoy live fire**  
*By: Maj. Kevin Krupski*

**80 RAISING THE BAR**  
**Army's Master Logistician certificate program offers accredited professional development**  
*By: Bill Moore*

**82 SDDC'S EIGHT READINESS LEVERS**  
**Explore capabilities, capacity SDDC brings to the fight**  
*By: Maj. Gen. Stephen E. Farnen*

**86 DEMOBILIZATION PLANNING**  
**Examination of allied logistical challenges at end of World War II offers important lessons**  
*By: Canadian Army Sgt. Simon D.H. Wells*

**"While we must be capable of fighting and winning on our own, we are stronger and more formidable when we can rely on partner nations and allies to stage, support, maneuver, and execute the fight together."**

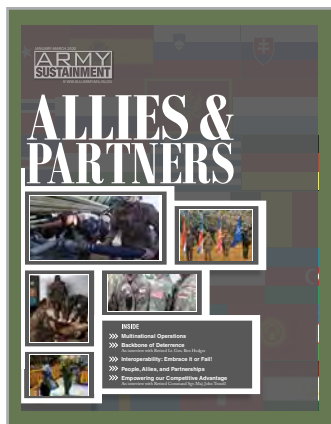
Gen. Gustave "Gus" Perna

*A group of U.S. Army Paratroopers assigned to Chosen Company, 2nd Battalion, 503rd Infantry Regiment, 173rd Airborne Brigade, along with Italian and Slovenian Paratroopers, conducts a tactical road march towards their objective during Exercise Immediate Response at Cerklje ob Krki airbase, Slovenia, May 14, 2019. Exercise Immediate Response is a multinational exercise co-led by Croatian Armed Forces, Slovenian Armed Forces, and U.S. Army Europe. The logistics-focused exercise sought to test and improve the ability to move forces and equipment rapidly from one location to another. (U.S. Army Reserve photo by Staff Sgt. Austin Berner)*

## READ ARMY SUSTAINMENT ONLINE

For the current and past issues of *Army Sustainment Professional Bulletin*, go to

**WWW.ALU.ARMY.MIL/ALOG**



## ON THE COVER

This month's wraparound cover features a compilation of photos featuring various partners and allies working and training with members of the U.S. military. (Contributed Photos)

## BOARD OF DIRECTORS

### MEMBERS

**Maj. Gen. Rodney D. Fogg (Chairman)**  
Commander, Combined Arms Support Command

**Lt. Gen. Duane A. Gamble**  
Deputy Chief of Staff, G-4 Department of the Army

**Lt. Gen. Paul A. Ostrowski**  
Principal Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology

**Lt. Gen. Edward M. Daly**  
Deputy Commanding General, Army Materiel Command

**Lt. Gen. Thomas A. Horlander**  
Military Deputy for Budget to the Assistant Secretary of the Army for Financial Management and Comptroller

**Lt. Gen. R. Scott Dingle**  
Army Surgeon General

### EX OFFICIO

**Brig. Gen. Douglas M. McBride Jr.**  
Quartermaster General

**Brig. Gen. Heidi J. Hoyle**  
Chief of Ordnance

**Brig. Gen. Jered P. Helwig**  
Chief of Transportation

**Col. Stephen K. Aiton**  
Commander, Army Soldier Support Institute

**Maj. Gen. Paul H. Pardew**  
Commanding General, Army Contracting Command

**Brig. Gen. Michael J. Talley**  
Commanding General, Army Medical Research and Development Command

## ARMY LOGISTICS UNIVERSITY

**Michael K. Williams**  
President

**William R. Stanley**  
Civilian Deputy

**Col. Brent D. Coryell**  
Commandant/Military Deputy

### STAFF

**Gregory E. Jones**  
Editor

**Amy N. Perry**  
Associate Editor

**Stefanie L. Antosh**  
Assistant Editor

**Sarah Lancia**  
Graphics Designer

**Capt. Emily M. Williamson**  
Intern

This medium is approved for the official dissemination of material designed to keep individuals within the Army knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development.

By Order of the Secretary of the Army:

**JAMES C. McCONVILLE**  
General, United States Army  
Chief of Staff

Official:

*Kathleen S. Miller*

**KATHLEEN S. MILLER**  
Administrative Assistant  
to the Secretary of the Army  
2001001



PB 700-20-01  
VOLUME 52, ISSUE 1  
JANUARY-MARCH 2020

PHONE: 804-765-4754 (DSN 539-4754)  
ARMYSUSTAINMENT@MAIL.MIL  
WEBSITE: WWW.ALU.ARMY.MIL/ALOG

*Army Sustainment* (ISSN 2153-5973) is a quarterly professional bulletin published by the Army Logistics University, 2401 Quarters Road, Fort Lee, VA 23801-1705. Periodicals postage is paid at Petersburg VA 23804-9998, and at additional mailing offices.

**Mission:** *Army Sustainment* is the Department of the Army's official professional bulletin on sustainment. Its mission is to publish timely, authoritative information on Army and Defense sustainment plans, programs, policies, operations, procedures, and doctrine for the benefit of all sustainment personnel. Its purpose is to provide a forum for the exchange of information and expression of original, creative, and innovative thought on sustainment functions.

**Disclaimer:** Articles express opinions of authors, not the Department of Defense or any of its agencies, and do not change or supersede official Army publications. The masculine pronoun may refer to either gender.

line pronoun may refer to either gender.

**Reprints:** Articles may be reprinted with credit to *Army Sustainment* and the author(s), except when copyright is indicated.

**Distribution:** Units may obtain copies through the initial distribution system (DA Form 12 series). Private domestic subscriptions at \$30.00 per year and international subscriptions at \$42.00 per year are available by visiting <http://bookstore.gpo.gov>. Subscribers should submit address changes directly to *Army Sustainment* (see address below). *Army Sustainment* also is available at <http://www.army.mil/armysustainment>.

**Postmaster:** Send address changes to:  
EDITOR ARMY SUSTAINMENT/ALU/2401  
QUARTERS RD/FT LEE VA 23801-1705.

# From the Editor



**T**his time last year I was writing a 'from the editor' about changes here at *Army Sustainment Professional Bulletin*. A review of the Combined Arms Support Command's Table of Distribution and Allowances had resulted in reductions and other actions that caused a near complete turnover of the staff of ASPB, and we experienced periods of half staffing or less.

That staffing shortage required some changes in how we do business, some of which were great changes that we will keep, but others which were not ideal. Those less ideal changes included a reduced acceptance of articles from the field and an overall reduction in our content both in print and online.

Fortunately as we move into 2020, we enjoy relatively robust manning and while we are sticking with a quarterly publication cycle, each quarter will be filled with much more content than we were able to produce last year, including a return to online only content.

So, for you, the reader, you'll be getting more of what we think makes you pick up and read this publication. For our contributors in the field, this will mean that we will be able to publish more of your submissions. Last year, we were turning away roughly 75 percent of submissions. This meant that there was a lot of good, relevant content that we weren't able to publish.

Going into 2020, we think we'll

be at roughly the opposite ratio; we expect to accept the majority of submissions, while only turning away content that really isn't a good fit for our publication.

## **Better Visibility on Upcoming Issues**

We also have a more developed vision of themes for upcoming issues and should be able to publish our themes several issues in advance. This will help our regular and new contributors to shape their submissions to the theme of a given issue. This will also mean that our content will be more on-point for our readers.

In this issue we focused on Allies and Partners. Our next issue, April to July, will focus on the topic of Building Strategic Readiness. July to August will focus on Defining the Strategic Support Area. Deadline for submissions is May 1. To finish off this year, we plan to revisit an ongoing topic of interest and a top priority for senior Army leadership, Modernization of Sustainment, for the October to December issue. The deadline for submissions will be Aug. 1.

Please visit our webpage at [www.alu.army.mil/alogs](http://www.alu.army.mil/alogs) and check out the 'submissions' tab for more information on how to submit to *Army Sustainment Professional Bulletin*.

## **Upcoming Surveys**

We here at Army Sustainment Professional Bulletin want to make sure we are meeting the needs of our audiences. We take our best guess at selecting and publishing content, but we do that best when we have solid

data and input on which to base that best guess.

To further that, we plan to conduct surveys and other information gathering efforts to help determine what content is most useful to you, our reader. Later this year you can expect to see some sort of survey online and perhaps also in a printed form. When you do, we ask that you take the time to fill it out. It will help us better determine the right content to deliver, and the right means by which to deliver that content.

## **To Our Contributors**

Finally, I want to close with a direct note to our contributors, especially those regular, repeating contributors who spend so much time putting together great content from the field for submission to our publication. 2019 was a rough year. Frankly, we had to turn down a lot of your submissions that were good, well-written, and deserved to be published simply because we did not have the capacity to publish them. Each and every time we had to send a note back to a contributor saying, "No, thank you," it was indeed frustrating.

As I mentioned above going into 2020, we now have a more robust capacity and can publish a lot more of what you submit to us. So, those of you who may have received a rejection letter for a submission in 2019, I would encourage you to try again this year. We plan on publishing a lot more, and we think we will have to say "No, thank you," a lot less!

**Gregory E. Jones**  
Editor, *Army Sustainment*



# Allies and Partners Key to Strategic Readiness



■ By Gen. Gustave "Gus" Perna

**I**n almost two centuries, the U.S. military has not fought a war alone. The next war will likely be no different. While we must be capable of fighting and winning on our own, we are stronger and more formidable when we can rely on partner nations and allies to stage, support, maneuver, and execute the fight together.

In the sustainment community, we must set the conditions now to maximize interoperability and minimize coordination delays at the time of need. Three key efforts we must focus on include power projection, prepositioned stocks, and partner capacity.

Allies and partners enable strategic readiness—the Army's ability to mobilize, deploy, and sustain forces in large-scale combat operations. Our

installations and power projection platforms, which allow our military to train and move to the fight—across land, sea, and air—do not exist solely on U.S. soil. We rely on partner nations for use of terrain, ports, rail, roads, airfields, and critical infrastructure that receives, stages, and speeds troops to the frontlines. Multinational exercises, such as Pacific Pathways and Defender 2020, allow logisticians to train side-by-side with our allies and develop the essential tasks necessary for joint security, staging, reception, and onward movement operations. We must continue to exercise the ability to stage together, move together, and fight together.

Our intention will always be to deter war and aggression, and Theater Stocks and Army Prepositioned Stocks (APS) serve as key strategic deterrents. For the past two years, we have focused on combat configuration by adding enablers such as communications equipment and weapon systems to ensure prepositioned equipment is ready to draw and quickly move to the fight. We are also reviewing all APS sites to ensure equipment sets are located, sized, and configured to best meet theater requirements. However, make no mistake; our ability to maintain healthy, robust prepositioned stocks requires the support of partner nations. Through, and in support of, combatant commands (CCMD) and Army Service Component Commands (ASCC), we must continue to cultivate the critical relationships that allow us

to strategically locate, store, project, and maintain APS.

The strength of our allies directly correlates to the overall strength of the coalition force. We build partner capacity and strength through programs such as Foreign Military Sales and Security Assistance Training. FMS fosters long-term relationships with allies and partner nations, providing access to the "total package" of material, spare parts, publications, technical documentation, maintenance support, and other services. Meanwhile, we leverage Security Assistance Training teams to train and advise partner armies, bolstering complementary capabilities and interoperability that will serve us well on the battlefield.

Strengthening alliances and attracting new partners is key to the strategic approach in the National Defense Strategy, and Army leaders have consistently reinforced allies and partners as a priority. From increased interoperability on the battlefield to partner agreements that enable freedom of movement and maneuver, our allies and partners will be critical to deter war, and, if necessary, fight and win war. The sustainment enterprise must remain in close coordination with, but more importantly in support of CCMDs and ASCCs to foster these critical relationships.

**Gen. Gustave "Gus" Perna is commanding general, Army Materiel Command at Redstone Arsenal, Ala.**

# Expeditionary Muscle Memory

| Annual exercises offer opportunity to practice key sustainment functions



■ by Lt. Gen. Duane A. Gamble

**B**eginning in February, our Army's competitiveness will be on display in ways not seen since the Cold War. As we mobilize for the Defender 2020 training exercise in Europe, we will rehearse our ability to project capabilities and defend our allies and partners.

The exercise involves about 20,000 U.S.-based Active, Guard, and Reserve troops; 9,000 European-based U.S. troops; and 8,000 troops from 17 allied nations—almost enough Soldiers to fill two Madison Square Gardens. It will be a dead sprint to move heavy equipment; deploy personnel; convoy wheeled vehicles; and get everyone enough food, water, and ammunition across

several European countries.

I know from my experience when we did smaller exercises in Europe back in 2016, that the training value starts way left of the exercise. For Defender 2020, the training value started weeks and months ago as units prepared for expeditionary deployment. Whether we win in Defender 2020 will depend on four factors that will determine our success and demonstrate our total readiness.

First: Logistics preparation of the battlefield. We must understand the operating environment; in particular, the rules of sovereign nations. We must be sensitive to the political and diplomatic atmospherics and the governed laws of our host nations and train to operate within their guidelines.

We should not be surprised that sovereign nations have rules similar to what we have at home: when we move equipment from state-to-state, we need a convoy clearance and states dictate when we drive our oversized heavy equipment on their roads.

We must configure our vehicles so they meet European Union regulatory standards with specific fire extinguishers and NATO placards for trucks carrying ammunition

and hazardous material. We can't assume away the problem. We must clearly understand the rules and be prepared to operate in the environment.

Next, we must build reflexive competence in the operation and maintenance of our equipment, to include issuing and drawing Army Prepositioned Stocks (APS) and learn to do so at the speed of war. Units must know and rehearse their responsibilities. The material enterprise must make the process seamless. Units trained and practiced in executing their APS draw responsibilities must be able to deploy with their individual gear and weapons, fall in on a unit set or combat-configured equipment, conduct Pre-Combat Checks (PCC), and move to the line of departure.

To that end, Soldiers from the Idaho National Guard's 116th Armored Brigade Combat Team (ABCT) will put APS-2 to the test, drawing tracked- and wheeled-vehicles and other equipment from the stocks. Our goal is to get the equipment issued in 96 hours. To speed the process, Army Materiel Command (AMC) is placing APS data into GCSS-Army, enhancing visibility to all stakeholders prior to the exercise to ensure seamless

issue, sustainment, and technical inspections of APS-2 equipment.

Although the National Guard will test APS, most Soldiers coming from the continental United States will deploy their own heavy equipment. This will exercise our ability to project combat power at the speed of war. Over the last few years, we have increased our tactical readiness with home station training, but tactical readiness is meaningless if we cannot project it and move it across seas. This will help us assess our ability to project warfighting capabilities from power projection platforms in the Strategic Support Area to three ports of debarkation in Europe, then onward to unit assembly areas and through various modes of transportation to get to point of need. Defender 2020 is an opportunity to test our ability to project combat power to meet the objectives of our National Defense Strategy.

Lastly, we will exercise our expeditionary sustainment capability.

When Soldiers arrive in Europe, there will be no great logistics infrastructure that will greet them. Units must be able to do their job, at every echelon, whether it is an operator having reflexive competency in his or her equipment, or a maintainer understanding how to properly diagnose and rapidly return a piece of equipment to fully-mission capable status.

Sustainment excellence at echelon is decisive to winning in large-scale combat operations. We must be trained and ready to perform our sustainment mission at the speed of war in a harsh, austere, and unpredictable environment. During the exercise, logisticians will combat threats within a multi-domain context that will inform future unit and institutional training.

Our exercises should inform our behavior. For example, to move equipment from fort to port, do we

need additional investment in rail heads and containers? If putting APS equipment into GCCS-Army helps speed the delivery, how do we accelerate the GCCS-Army changes required to make this our standard? What other technologies do we need to invest in to move us into the Information Age? How will artificial intelligence change future battlefields?

This exercise should also inform our multi-national interoperability opportunities. Our allies often carry similar supply commodities and logistics capabilities as we do, but cannot digitally share their data, resulting in clogged ports and a tremendously large logistics footprint. Many countries fight with U.S. equipment—we must eliminate obstacles to interoperability.

As part of a new Army “Strengthen Allies and Partners” program, here in the G-4 we are creating a roadmap on how to improve interoperability over the next decade. So as we train alongside our partners in Defender 2020, we will assess our initiatives and identify those things we can do better together. Our objective is to use a common logistics picture; share in-theater reception, staging, and onward movement requirements; and exchange commodities in an automated manner.

Ultimately, we should all look at Defender 2020 as an exercise that provides a deterrent effect that keeps us in the competition phase, but it is also an excellent opportunity to practice fighting and to practice winning.

***Lt. Gen. Duane A. Gamble, Deputy Chief of Staff, G-4, oversees policies and procedures used by U.S. Army Logisticians. He has masters of science degrees from Florida Institute of Technology, and Industrial College of the Armed Forces.***



# INTEROPERABILITY: *Embrace it or Fail!*

| Interoperability necessary, but difficult in large-scale combat operations



■ By Maj. Gen. Rodney Fogg

**Y**ou are deployed in support of Multi-Domain Operations (MDO) in an Expeditionary Sustainment Command (ESC) in Europe in 2030. Your ESC is the U.S. Army lead for the sustainment of a Multi-National Corps (MNC)—part of a larger Task Force consisting of NATO and other allied nations.

*This coalition formed to prevent a peer/near-peer adversary from changing the present world order to one where it would dictate and dominate global affairs and security.*

*Your mission is simple (or so it seems): Contribute to the sustainment of the MNC in order to ensure it has the necessary combat power to win.*

*You make a list of key concerns and*

*problems:*

*1. Each nation operates its own sustainment/logistics information system with little or no data transfer or information exchange capabilities.*

*2. There is no standardization of ammunition across the MNC; and highlighted at its very basic level is small arms ammunition consisting of 5.56 mm standard NATO, 7.62 mm standard NATO, and 6.8 mm, along with smaller quantities of other calibers.*

*3. Fuel interoperability is almost non-existent with each nation using different fuel blends.*

*4. Maintenance, repair, and recovery capabilities and standards significantly vary.*

*5. Transportation and intermodal transfer of out-sized and over-weight combat systems between platforms provided by contributing nations and services at the various distribution nodes have been an afterthought.*

*You quickly realize that the sustainment of this Multi-National Corps is going to be really difficult—with each nation having its own stove piped supply chain from National Support Base (Strategic Support Area) through to its own warfighting capabilities.*

This lack of standardization, along with limited interoperability is really going to make things difficult. If only we had previously considered the significance of interoperability and its importance in winning large-scale

combat. Upon completion of mission analysis, you realize this may be “mission impossible!”

## Context

A review of large-scale combat operations (LSCO) in the last 100 years highlights numerous alliances and partnerships that were formed in order to successfully campaign against a peer/near peer adversary. There are numerous World War I and World War II examples of successful battles that were characterized by interoperability amongst allied forces. The level of interoperability within any alliance or partnership has a direct correlation with the collective force’s ability to maneuver and sustain itself.

The U.S. Army has released its new operating concept: The Army in MDO in 2028, which describes how Army forces contribute to deterring and defeating peer/near-peer adversaries in competition and conflict. The central idea of MDO is how Army forces, as an element of the joint force, prevail in competition. When necessary, Army forces penetrate and disintegrate enemy anti-access and area denial (A2AD) systems and exploit freedom of maneuver to achieve strategic objectives and force a return to competition on favorable terms. The 2018 Army Strategy establishes four lines of effort (LOE) aligned with the objectives of the MDO Concept. The fourth LOE is “Alliances and

Partnerships,” which calls for the U.S. Army to continue to train and fight with allies and partners and strive to integrate them further into operations to increase interoperability.

As we move into a more challenging and complex future operating environment, it is time to take a look at interoperability and how it can assist the sustainment of LSCO.

## Interoperability: What it is and Why it is important

Interoperability is vital to success. Army Regulation 34-1, Multinational Force Interoperability, defines interoperability as the ability to routinely act together coherently, effectively and efficiently to achieve tactical, operational and strategic objectives. Interoperability activities are defined as any initiative, forum, agreement, or operation that improves the Army’s ability to operate effectively and efficiently as a component of the joint force and as a member or leader of an alliance or coalition across the range of military operations. It is unlikely that the U.S. Army will operate in 2028 and beyond without unified action partners. Interoperability is necessary to deploy and employ military capability across a unified action partnered force, to enable leveraging of economies of scale and specialized/unique capabilities and commodity sharing with allies and partners. An MDO force may have days, not weeks or months, to become operationally effective in key functions and capabilities. However, interoperability is often an oversight and not a part of the planning process at any echelon. Interoperability must become a fundamental condition of how the U.S. Army, as part of a force conducting unified action, plans to fight tonight, fight tomorrow, and prepares to fight in the future. These efforts must be championed, made routine in training exercises, and captured in both After Action Reviews and Center for the Army Profession and Leadership (CAPL) publications whenever possible. Interoperability must be brought into mainstream Army

practices (and more widely within the DOD). One way to do this is adding interoperability to doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P); this will enable strategy-led, resource-informed, funded capabilities with clear responsibilities through-life and interoperability by design.

Within this framework, the characteristics of interoperability are:

- Breadth. “Human” (mutual trust and understanding gained through routine connectivity), “procedural” (shared policy, concepts, and TTPs), and “technical” (adoption of agreed standards to inform design of capabilities and systems—i.e. NATO Standard Agreements (STANAGs) and American, British, Canadian, Australian, and New Zealand Standards).

***Interoperability is necessary to deploy and employ military capability across a unified action partnered force, to enable leveraging of economies of scale and specialized/unique capabilities and commodity sharing with allies and partners.***

- D e p t h .

Interoperability in the near term (0-5 years), mid term (5-15 years) and long term (15+ years).

- Levels of Ambition.

Interoperability requires nations to spend money, take risk and cede sovereignty in order to

increase legitimacy, cohesion, mass and agility. The level of ambition for each relationship will depend on the cost/benefit risk appetite and likelihood of use.

## The three levels are described as:

- Deconflicted. U.S. Army can coexist with key allies and partners but forces cannot interact together. This level requires alignment of capabilities and procedures to establish operational norms, enabling multinational partners to complement U.S. Army operations.

- Compatible. U.S. Army is able to interact with key allies and partners in the same geographic area in pursuit of a common goal. Multinational partners have similar or complementary processes and procedures and are able to operate effectively with U.S. Army forces.

- Integrated. U.S. Army is able to integrate with key allies and partners upon arrival in theater. Interoperability

is network-enabled to provide full interoperability. Multinational partners are able to routinely establish networks and effectively operate alongside or as part of U.S. Army formations.

## **Sustainment Interoperability**

Coalition efforts are critical to sustain Force Elements (FEs) beyond the initial 30 days (currently a national responsibility). FEs need the ability to support actions after 30 days regardless of who provides the support. Such responsibilities include:

- Provision of sustainment functions (materiel management, distribution, maintenance, and recovery)
- Services (postal, operational contract support, and bath and laundry)
- Personnel support
- Basing requirements (energy management and waste)
- Winning resources, CBRNE, tactical air resupply and health sustainment (excluding health operations)

The sustainment provided by coalition partners should maximize the opportunities to harness economies of scale, share commodities, and seek to optimize the sustainment footprint to reduce the threat of enemy interdiction and increase operational agility.

This sustainment footprint should be underpinned by the creation of a dynamic Sustainment Support Network (SSN) that would provide the physical framework for the delivery of sustainment effects. The unique requirements of each nation's National Support Base (NSB) must be understood and mitigated to ensure the successful sustainment of the force. This requires centralized command, control, and coordination of the theater gateway and the movement of personnel, equipment, and commodities along the strategic Line of Communications (LoC) between respective NSBs and the operational theater.

In order to reduce the sustainment footprint and resource cost to contributing nations (personnel, equipment, and commodities), efficiencies must be identified to prevent unnecessary duplication of effort.

When a common requirement can be achieved by more than one contributor, a lead nation should be considered to

provide that sustainment effect (i.e. bulk fuel management and bath and laundry services). Coalition members will have to commit national assets when their requirements cannot be met by a coalition partner or there is a national caveat. An effective coalition sustainment effort must be enabled by sustainment core services, providing seamless communications. Furthermore, it is imperative that all coalition nations adopt associated NATO STANAGs and ABCANZ Standards.

Opportunities for the sharing of assets and supplies must be maximized in order to reduce the sustainment footprint. The sharing of the following capabilities should be considered routine:

- General transport
- Movement Control
- Military Police
- Infrastructure support
- Postal and Courier Services

Compatibility and sharing of the following should be subject to further inquiry:

- Specialized transport (e.g. Heavy Equipment Transport, fuel)
- Aerial delivery
- Modular distribution
- Maintenance and recovery assets
- Classes of supply

Personnel Administration is unlikely to be shared other than providing the interface with national systems and NSEs.

## **Sustaining Coalition LSCO**

A coalition force operating in an expeditionary, contested, austere, peer/near-peer, and A2AD environment needs to maximize shared sustainment and reduce unnecessary duplications of effort. Currently, sustainment is a national responsibility that perpetuates inefficiencies into the broader coalition network. This results in the duplication of sustainment capabilities and the inability to understand and capitalize on an individual nation's capabilities.

The future operating environment will be characterized by complex terrain, technology proliferation, information



warfare, the need to shield and exploit signatures, and increasingly nonpermissive or denied environments. In response to our competitors' formidable and growing A2AD capabilities and systems, sustainment systems will need to be distributed, and embrace joint/coalition partners to achieve mass and posture to provide support at greater distances.

In a highly lethal battlefield, sustainment systems or key nodes may become overwhelmed where the capacity of platforms and sustainment units may be exceeded for significant durations of combat. In this environment, commanders need information to make decisions that allow them to shift their Main Effort (ME) as the conflict unfolds. Key to assisting the agility of decision-making is the generation of visibility effect through a Recognized Logistic Picture (RLP). The RLP will provide essential sustainment information to the Common Operating Picture (COP) and give visibility of the capacity and limitations of supporting coalition logistics nodes to enable a shift in ME.

MDO and sustainment of forces fighting therein will require a tailored approach. It is likely that economies of scale, congruent with the intent to optimize sustainment capabilities, will need to be achieved to reduce the logistics footprint and to increase the agility of the maneuver commander. The need for sustainment mass to support greater maneuver mass creates a greater target to the enemy.

In order to achieve optimal effects for sustainment of LSCO in a MDO environment, the coalition must place greater emphasis on interoperability when setting the theater. Setting the theater includes logistics (materiel management, maintenance, and transportation), financial management, personnel services, health service support to military engagements, and security cooperation as well as sustainment preparation of the OE. These sustainment actions are the foundations for ensuring coalitions have the necessary sustainment requirements to prosecute a quick transition to conflict with an ability to deliver effects at the level required to return to competition. A coalition that has agreed on standardization will be able to rapidly set the theater and effectively move into subsequent phases.

## Logistics Information Systems

The biggest challenge to sustainment interoperability is the ability to share data between forces. Data from national

Enterprise Resource Planning (ERP) tools (i.e., GCSS-Army) must be collated within a shared data warehouse that is "hosted" within the Mission Partner Environment (MPE). Coalition forces will need to adopt the use of a common logistic planning tool (i.e. Logistics Functional Services (LOGFAS)), that will use the data in the MPE to generate a RLP. This information provides sustainment situational awareness with graphically enabled displays showing critical information items: friendly forces, enemy forces, significant activities, warfighting operational graphics, and control measures. This complements common sustainment reporting and uses national command and control (C2) sustainment systems to digitally exchange information.

Impeding this sharing of information products is a constraint to maintaining national C2 systems. Common service applications were not designed for interoperable plug-and-play coalition information exchange. For years, nations have engineered 'add-on' software solutions either in forms of 'translator gateways' or common messaging formats to overcome this interoperability deficit. These ad hoc engineering processes necessitate significant coalition pre-exercise testing, pre-deployment testing, and risk-reduction activities to validate various levels of interoperability. The need for ad hoc engineering processes can be resolved by adopting a common approach to presenting logistics data into a shared data warehouse within the MPE.

Overclassification within the U.S. Army stifles interoperability. The Army struggles to effectively operate at the Secret//Releasable (S//REL) classification level that enables information exchange on an MPE. This is due to both the lack of integration of an MPE capability in the enterprise and the reliance on Secret Internet Protocol Router (SIPR) as the primary operational network for operations. The Army is in the process of transitioning from a primarily SIPR enclave to a S//REL classification and integration of the MPE capability into the Army's enterprise and tactical networks.

## Training

We have to train as we fight! A critical tenet of sustainment capacity enhancement through interoperability is the ability to conduct bilateral and multinational training. Sustainment has not been exercised to a satisfactory level, providing "life

and administrative support" is what logisticians do on a daily basis. Sustainment coalitions need to be stressed and tested similar to maneuver units. Preparing sustainment force elements through multinational training must be a priority. Defender 2020 presents an ideal opportunity to train as we mean to fight and should be the springboard for subsequent interoperability development.

Training in environments that replicate the complexity of MDO is essential. The complexity of sustaining a force that is in constant motion, under constant contact, and requiring agile solutions to enable endurance requires challenging training scenarios that fully stretch the sustainment system and identifies the frictions of sustainment interoperability. The U.S. Army must develop its ability to "plug and play" with coalition, joint, interagency, intergovernmental, and multinational partners and be able to effectively operate across the human, technical, and procedural domains to achieve tactical, operational, and strategic objectives.

## Suggested Way Ahead and Recommendations

There are many ways the U.S. Army can enhance its interoperability with allies and partners. The following are proposed sustainment priority aims:

- Adopt an open systems architecture, to enable "interoperability by design" in platforms and systems, thereby avoiding a plethora of bespoke systems (both materiel and information) unable to communicate outside of their design parameters.

- Actively pursue opportunities to conduct bilateral and multilateral sustainment training. Influence training designers to consider sustainment requirements (NOT life support) and the ability to stress test them.

- Add interoperability to DOTMLPF-P to ensure that it becomes everybody's business and facilitates "interoperability by design."

- Help to develop, ratify and adopt NATO STANAGs and ABCANZ Standards, as 'agreed standards' (with an open systems architecture) to form the basic building blocks that will form the foundations of successful interoperability. For example, commodity sharing is predicated on technical interoperability; unilateral changes to small arms ammunition from 5.56 mm NATO standard to 6.8 mm is counterintuitive to interoperability. Also the storage of ammunition and life of type standards vary between nations.

- Don't commit classification fratricide. Proper classification and routine sharing of sustainment information with trusted allies and partners through the use of an MPE is critical.

*It is now 2035 and you find yourself deployed to a theater within the U.S. Indo-Pacific Command general area of operations where tensions are high. Your previous experience in Europe highlighted a disjointed approach towards sustainment and logistics yielding sub-optimal solutions. You remain hopeful that NATO and ABCANZ nations have learned from previous challenges and are better prepared for LSCO in your new theater.*

*Your mission remains similar to the previous one: contribute to the sustainment of the MNC, but you are hopeful that each nation has learned from more recent LSCO experience. You conduct a quick assessment of potential coalition sustainment challenges and realize that much has changed in the last five years:*

- 1. Although there are still some logistics information system frictions, each nation is able to share and exchange logistics data, providing a RLP as a layer of the Common Operating Picture.*

- 2. The types and natures of ammunition used across the MNC has significantly reduced and you are pleased that there is a single, agreed standard for most nations in use across the entire force.*

- 3. Fuel interoperability has been significantly enhanced. Primary fuel blends and connectors have been standardized, simplifying the previous distribution challenges.*

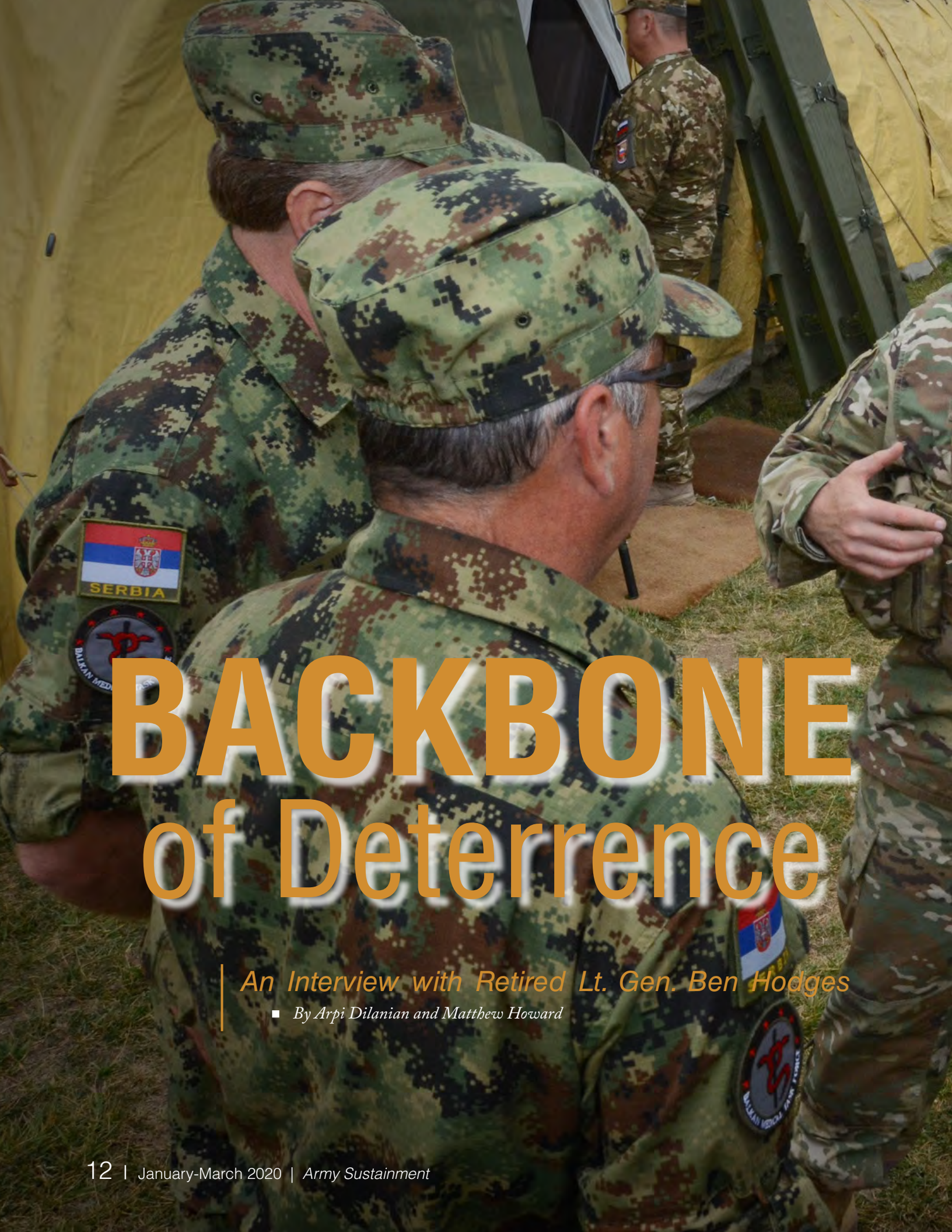
- 4. Each nation has agreed on similar maintenance, repair, and recovery doctrine including an agreed understanding of what can be done across each echelon—light, medium, and heavy repair/recovery.*

- 5. Transportation and intermodal transfer has been enhanced with agreed modular packaging standards. This approach enables myriad different platforms to efficiently transport supplies from the strategic support area right through to the close area.*

*You realize that the level of interoperability has been significantly enhanced through building trust and through the development and adoption of standards by each nation.*

**Maj. Gen. Rodney Fogg, commanding general of the Combined Arms Support Command, is a graduate of the Quartermaster Officer Basic and Advanced Courses, Command and General Staff College, and the Army War College. He has a master's degree in logistics management from Florida Institute of Technology and a master's degree in strategic studies from the U.S. Army War College.**






# BACKBONE of Deterrence

*An Interview with Retired Lt. Gen. Ben Hodges*

■ *By Arpi Dilanian and Matthew Howard*



A photograph of Lt. Gen. Ben Hodges, a man with short brown hair and a serious expression, wearing a camouflage military uniform with a name tag that reads "HODGES". He is in the foreground, looking slightly to the right. In the background, several other military personnel in camouflage uniforms are visible, some standing and some in motion. The setting appears to be an outdoor training area with trees and a yellow tent in the distance.

*Lt. Gen. Ben Hodges, former commanding general, U.S. Army Europe, speaks to members of the Balkan Medical Task Force during a mass casualty medical training event as part of Exercise Saber Guardian 17, held at Mihail Kogalniceanu Air Base, Romania, July 16, 2017. Saber Guardian is a U.S.-led, multinational exercise with more than 25,000 military members from 22 allied and partner nations. (Photo by Sgt. Tyler Meister)*

**F**ew know the importance of allies and partners better than retired Lt. Gen. Frederick “Ben” Hodges. Across his 37-year career, the former commander of both United States Army Europe (USAREUR) and the NATO Allied Land Command completed three combat tours in the Middle East and six assignments overseas. Now the Pershing Chair in Strategic Studies at the Center for European Policy Analysis (CEPA), Hodges continues to strengthen partnerships abroad. Here are his insights on the role sustainers play in deterring our adversaries.

***You started and ended your career in Europe. What changed in between?***

As a lieutenant in Germany in 1981, the mission was to deter the Soviet Union, assure our allies, and protect America’s strategic interest. When I came back as the USAREUR commander in 2014, the mission was to deter Russia, assure our allies, and protect America’s strategic interest. The difference? In 1981, we had almost 300,000 troops; in 2014, we had 30,000 and no tanks—the last armor had been sent home and we all thought Russia was going to be our partner.

When I took command, I realized we had to be an economy of force and make 30,000 look and feel like 300,000. In a way, I actually enjoyed the challenge of that,

professionally, because it forced us to be smart about what we were doing, and that’s how we came up with the five pillars.

**First:** put more responsibility on young people. We had captains who were the senior Army officers in a country. We even had a convoy from Germany to Romania led by a cadet on her summer Cadet Troop Leader Training Exercise. The brigade commander didn’t even ask; they knew I would approve it because the expectation was young people and noncommissioned officers gain responsibility.

**Second:** get more out of our allies. We depended on allies for everything from bridging to transportation, so we constantly had to find ways to work more closely with host nations.

**Third:** get more out of the National Guard and Reserve. By design, nearly three-quarters of the Army’s logistics are in the reserve component. Units were calling us every day asking to come participate in exercises, and we needed those capabilities.

**Fourth:** take advantage of rotational forces. When the Army recognized the need to bring armor back to Europe, it was done through rotational brigade combat teams. How were we going to get the most out of them?



The same was true for rotational combat aviation brigades, but both significantly increased our

**Fifth:** dynamic presence, which, as the staff joked, meant saying "yes" to everything. We said "yes" to every exercise no matter what, whether it was Estonia, Bulgaria, Turkey, Georgia, Ukraine, North Macedonia, Greece, or even Serbia. By being as visible as possible, it looked like we had a lot more than 30,000 troops.

### ***How are we getting back to the basics of blocking and tackling?***

We've had to relearn a lot about fighting a peer adversary, such as the Russians. We've learned so much from the Ukrainians. When we started supporting them at the training center in Yavoriv, we had to evolve as we figured out this mission set. I've never been under Russian artillery or rocket fire, nor—to my knowledge—been jammed on radio by Russian electronic warfare (EW); all the Ukrainians have.

So we watched how they developed capabilities and used our equipment. Take the Q36 Firefinder Radar: because they were getting hammered by the Russians all the time, they learned how to better operate in a very competitive EW environment. That system is much better than we even knew. So we began giving the opposing force (OP4) those capabilities during our training at Grafenwoehr and Hohenfels, and eventually back at the National and Joint Readiness Training Centers. I've always believed if you want to change the Army, you do it at the training centers.

From a logistics standpoint, ammunition consumption is a major factor, particularly artillery and preferred munitions. Between simulations at U.S. European Command (EUCOM) level and actual exercises in the dirt, ammunition expenditures are off the charts. We obviously need more, so that helps put a demand signal

back on the Department. But keep in mind, we're not the only customer.

Transportation has always been my favorite logistical function; without it, none of the other stuff really matters. Think about how big the theatre in Europe is now. Going from Grafenwoehr to Tallinn, Estonia, is the same distance as going from St. Louis to Bangor, Maine; Baumholder to Mihail Kogalniceanu (MK) Air Base in Romania is like driving from St. Louis to Miami. It's not the same Cold War, West Germany Theater where everything was within three or four hours.

Relearning rail movement efficiency is critical. There isn't enough capacity to move everything we need, so the rotational brigades have had to become very good at rail movements. While their center of gravity is in western Poland, on any given day, one of their battalions is down in Romania or Bulgaria, and another is in Grafenwoehr doing gunnery exercises; they're all over and moving by rail all of the time.

***While the U.S. probably would respond, the Russian bet assumes others would avoid entering into a nuclear conflict over what would likely be seen as a limited attack. I see the risk of them making that terrible miscalculation increasing only if they believe we cannot move as quickly as they can.***

Our rotational forces also give us practice deploying and redeploying at a variety of forts and ports. We're getting reps in loading and unloading everything from Abrams tanks or Blackhawks to Bradleys or Paladins. It may seem silly now, but when a ship arrives and every tank's batteries are dead because it's your first deployment in a very long time, it can be pretty painful.

The Defender 20 Exercise taking place this year is recognition that we have to practice all of this, just as we did with the Dragoon Rides a few years ago. For young captain troop commanders to lead Stryker movements all the way from Estonia back to their home base in Vilseck, it was a great test of our transportation capabilities, especially our maintenance.

We also did a shock exercise to deploy a Patriot battery

from Baumholder up to Poland. The battery had about three days' notification before making the 1,000-kilometer journey. One support vehicle had a minor problem; that was it. It was incredible. Everyone had confidence in their vehicles, confidence in their support system, and confidence in their young leaders. After that, I had lieutenants from other batteries asking when I was going to shock them; they wanted it. That's the mentality we must continue to foster.

Having said this, the interoperability piece cannot be overlooked. We are task-organized in a multinational way at a much lower level than when I was a lieutenant. In those days, you usually didn't go below brigade level; you might have an allied battalion mixed in, but generally you'd have an American brigade, a Dutch brigade, and so on. As a result, logistics interoperability was not a big deal.

Compare that to today's Enhanced Forward Battle Group in Poland. There's an American tank battalion from the Tennessee Army National Guard on rotation now. They have a British company, a Croatian company, and a Romanian Air Defense Battery under them, and that whole battalion is under a Polish brigade. Interoperability is a significant challenge. For instance, every vehicle has a different fuel receptacle. That's a problem for us because everybody depends on American logistics. You can be sure every army in Europe knows who the 21st Theater Sustainment Command is; they know who the 16th Sustainment Brigade is.

I had a young fuel specialist who discovered a NATO kit that's essentially a Swiss army knife with six different adaptors depending on who is putting fuel into what vehicle. I was astounded we had to do that, but more importantly, I was proud of this young officer who figured it out. At the end of the day, interoperability of logistics is just as important as interoperability of mission command.

### ***Can you discuss the challenge of speed of assembly throughout the theater?***

We've worked hard on mobility in recent years, but it's an area I don't think I was as effective as I thought I might be. Deterrence is all about having capability and the demonstrated will to use it such that the adversary says,

"We will either fail, or it will be so painful if we attack that we don't want to."

Russia's objective to undermine the alliance and cause nations to lose faith to the point they attack into Lithuania, Latvia, Poland, or Romania is bolstered by talks of using nuclear weapons in all their exercises. While the U.S. probably would respond, the Russian bet assumes others would avoid entering into a nuclear conflict over what would likely be seen as a limited attack. I see the risk of them making that terrible miscalculation increasing only if they believe we cannot move as quickly as they can.

That's why speed of assembly is so important. It starts with speed of recognition of what's happening, and the speed of a decision to begin doing things like pulling ammunition out of the depot at Miesau, getting priority on rail, and getting priority on contract Heavy Equipment Transporter Systems (HETS). When do you decide to put the reactive armor tiles on tanks? Because once you do, you can't use them on trains anymore; this all takes time.

Then there's the actual speed of assembly: how fast can we get a force somewhere? It's key to note this will all happen under peacetime conditions. Under European Union (EU) law, most countries have to declare a crisis in order to waive peacetime regulations, an act that could be seen as escalatory or provocative. Assuming most countries would be unlikely to make such a declaration, it starts getting a lot more difficult to move.

There are three components for movement.

**First:** the diplomatic piece, which addresses the legal aspects of crossing borders. Ideally, we'd want something like a military Schengen Zone where we could move across borders freely the way folks can for private travel and commerce—but any changes require EU-level action.

**Second:** capacity. Is there enough rail? Right now, there is only enough to simultaneously move one-and-a-half armored brigades. That's not just Germany; that's it.

**Third:** capability. Can we actually cross certain areas, especially where the infrastructure is so limited? I love having tanks and Soldiers love hiding behind them, but they're too heavy at 80 tons, and then you start slapping on reactive



armor—it's too much. The infrastructure in central and Eastern Europe just does not support heavy vehicles. Many railheads are also too small or are side loading. It is harrowing for an Abrams tank to turn sideways and then drive, and it's not what you want to be doing in a dark, snowy environment. We have to get more HETs in theater, and we have to find ways to reduce weights while still protecting crews and maintaining lethality.

### ***What other logistics challenges did you face?***

Host nation support is essential, especially now with a smaller force in Europe. Germany provides tremendous support when it comes to access and infrastructure to enhance forward presence. Without the ability to use critical airports like Bremerhaven and Hamburg to fly into Munich, Nuremburg, or Frankfurt, it would be impossible for the alliance to have any rapid reinforcement capability.

I'm very worried about cyber protection of critical transportation infrastructure because it's not under one hat. While a German cyber command exists, it's only for protecting the military. I'm more concerned about the overarching responsibility for protecting the airports, seaports, and rail network.

An article by Andy Greenberg in *Wired Magazine* highlighted the Russian “NotPetya” cyberattack a few years ago. While intended for Ukraine, the attack ricocheted digitally to all parts of the world. Danish company Maersk's shipping line—responsible for over 75 ports, 800 vessels, and nearly a fifth of the global shipping capacity—was shut down for several weeks, causing hundreds of millions of Euros in damage.

We would be so vulnerable if Bremerhaven was shut down, and you wouldn't have to shoot a single missile. In my mind, cyber protection of critical transportation infrastructure is so important, it's on the same level as buying Patriot missiles to protect the ports. We have to continue working with our allies on this and find ways to incentivize greater investment.

Establishing a logistics hub in Powidz, Poland, was another important step. Former USAREUR commander Gen. B. B. Bell recognized the need to have a footprint in the Black Sea region and established MK Air Base in Romania.

It's become such an effective logistical hub that we used the same model at Powidz. We're building up the railhead and ammunition storage points, and the base is home to Army Pre-Positioned Stocks paid for by NATO. Now, there are about 1,000 troops—mostly logisticians from the National Guard and Reserve—responsible for support in the Baltics and Poland.

Bringing in infantry, artillery, and armor—that's the easy part. The challenge is having the logistics footprint set and people knowing how to get to you where you need for rapid reinforcement. If we don't have the logistics infrastructure in place, I don't think our deterrence efforts are taken seriously. Whenever I would get reports of Russian troop movements, I would ask, “Do you see any large field hospitals?” If there weren't any, we knew they weren't serious because they weren't preparing for sustained combat operations. The logistics are the indicator.

### ***How has seeing the region through a new lens complimented your military perspective on the way ahead for the Army?***

I'm extremely proud of the work CEPA does, and it's nice no longer having the stress and responsibility that Gen. Tod Wolters at EUCOM, or Lt. Gen. Chris Cavoli at USAREUR, have. Where I have matured in my thinking is the maritime domain—the role of the navies of the alliance is so much more significant than I had appreciated. Unfortunately for our great Navy, we don't have enough to do what needs to be done.

Understandably, the Navy is focused on the Atlantic and the Pacific, but that means it can't get into the Black Sea and the Baltic Sea as much as we'd like. I think the greater Black Sea region is the real place of competition and poses the greatest potential for conflict. The Russians have annexed Crimea. They have no intention of respecting sovereignty in the Donbas. Ukrainian soldiers are still getting killed every week, three years after the agreement to a ceasefire. 10,000 Russian troops still occupy 20 percent of Georgia, 11 years after saying they would leave. You have almost 2,000 so-called Russian peacekeepers in Transnistria. And it's the launching pad for all the mischief they've caused in Syria.



Then Lt. Gen. Ben Hodges speaks with a Ukrainian soldier assigned to 1st Battalion, 80th Airmobile Brigade, during a visit to the International Peacekeeping and Security Center, Lviv, Ukraine. During his visit, Hodges witnessed the opening of a new grenade range and observed Ukrainian soldiers during their 55-day training rotation at the Joint Multinational Training Group-Ukraine. (Photo by Staff Sgt. Elizabeth Tarr)

### ***What would you tell a young Soldier about the importance of logistics?***

We have to compete in the region and work to achieve coherence of NATO's eastern flank from the Baltic Sea to the Black Sea. That means ensuring there's freedom of navigation, protecting our allies: Romania, Bulgaria, and Turkey; and working with partners like Ukraine, Georgia, and Moldova.

Don't wait until you're 60 years old to realize that! I put huge demands on our logisticians from battalion command on, but I don't apologize for doing so. The fact is: it's hard. Make sure you think through consumptions, transport, and ways to enable and make sure logisticians are included from the beginning. Don't present the plan and expect them to solve it for you.

When we invaded Iraq in 2003, the current G-4 of the Army, Lt. Gen. Duane Gamble, commanded our Forward Support Battalion for 1st Brigade in the 101st Airborne; he was exceptional. We left Kuwait in early 2003 and moved all the way up near Mosul. We occupied Qayyarah Airfield West, the destroyed Iraqi air base that became our home for

the next 10 months. There were no forward operating bases, no contractors, none of that. We were at the far end of the line of supply and communication, which made replacing anything from tires to t-shirts a challenge. Gamble figured out how to do it—fuel, water, everything. It took creativity and trusting and empowering young leaders to do a lot.

To young leaders today: assume you will have more responsibility dumped on you than you ever imagined when you were sitting in your basic course. You're expected to figure it out, whatever "it" may be. I guarantee your operational commander is never going to think of everything, so you have to be able to anticipate—every day, vehicles use fuel; people eat and drink water; they get hurt; weather and terrain conditions change. Anticipation—that is the key!

***Arpi Dilanian is a strategic analyst in the Army G-4's Logistics Initiatives Group. She holds a bachelor's degree from American University and a master's degree from Rensselaer Polytechnic Institute.***

***Matthew Howard is a strategic analyst in the Army G-4's Logistics Initiative Group. He holds bachelor's and master's degrees from Georgetown University.***



*First Lt. Caitlin Martin, 65th Ordnance Disposal Company (Explosive Ordnance Disposal), 303rd Ordnance Disposal Battalion (EOD), 8th Military Police Brigade, explains the robotic controls system to a Japan Ground Self-Defense Force soldier during a subject-matter expert exchange held Jan. 25-26, 2017, at Schofield Barracks, Hawaii. (Photo by Staff Sgt. Taresha Hill)*



# PEOPLE, ALLIES *and* PARTNERSHIPS

## **8th TSC establishes favorable sustainment conditions by setting the theater**

■ *By Lt. Col. Edward K. Woo, Maj. Mishenda S. Siggall, and Maj. Jimmy Y. Chang*

**T**he Indo-Pacific Theater, 8th Theater Sustainment Command (TSC) manages shaping activities designed to establish favorable sustainment conditions for the rapid execution of military operations, otherwise known as “setting the theater.” Vital to this mission is deepening U.S. ties with host nations

through relationship-building, access agreements, collaborating with allies, and synchronizing efforts which collectively underpin our ability to reach the desired effects to set the theater in the Indo-Pacific.

Constantly challenged by the tyranny of distance, the 8th TSC sets the theater by having the materiel and

capabilities in place to expeditiously achieve the desired outputs that enable freedom of maneuver, extend the operational reach, and prolong endurance. FM 4-0 amplifies that, “Setting the theater is a continuous shaping activity and is conducted as part of steady-state posture and for contingency or crisis response operations.” ADP 4-0 further

**The 2018 National Defense Strategy (NDS) highlights strengthening alliances as an integral defense objective and a critical aspect of the nation's strategic approach.**

elaborates that setting the theater, “begins with the identification and analysis of host and partner nation resources, and capabilities ... Planners leverage whole-of-government initiatives ... [which include] activities such as theater opening, establishing port and terminal operations; conducting reception, staging, onward movement, and integration; and providing Army support to other Services and common-user logistics.” The Korean theater of operations is a recent success story on setting the theater.

### **The Alliance and Threat**

In 2017, the status of the Republic of Korea (ROK) and U.S. alliance was mature and developed due to decades of alliance-building and multinational investment in the region. The alliance faced numerous acts of North Korean provocation as primary stimuli and determinants brought to bear the testing of regional and international resolve. North Korea refused denuclearization and continued its persistence of missile tests. Decidedly, the decades-long alliance and investment across multilateral partnerships throughout the region resulted in an improved defense posture. Combined readiness across all operational aspects developed through training, planning, and executing a succession of well-developed drills. The Joint Force established its footprint across all warfighting functions, mitigating any vulnerabilities with security cooperation, collaboration, and mutual accord of the necessity of access to allies and partners in anticipation of imminent threats.

Despite political differences in Tokyo and Seoul, the ROK-US alliance proved its resolve through sustained solidarity with a swiftly coordinated, three-sided defense after multiple provocations by North Korea in 2017. These major states executed common initiatives across the entire spectrum of regional influence to deter war by conducting intergovernmental meetings on topics related to cyber warfare, countering weapons of mass destruction, and the future of the alliance.

### **Setting the Peninsula: Decades in the Making**

The 2018 National Defense Strategy (NDS) highlights strengthening alliances as an integral defense objective and a critical aspect of the nation's strategic approach. Explicitly, the NDS reflects that “mutually beneficial alliances and partnerships are crucial to our strategy, providing a durable, asymmetric strategic advantage that no competitor or rival can match. This approach has served the United States well, in peace and war, for the past 75 years.”

After the conclusion of the Korean War, several mechanisms were implemented to provide access to ports, terminals, airfields, and bases to include: the mutual defense treaty of 1953, mutual logistics support agreements, wartime host nation support, status of forces agreements, and other international agreements. Over time, the presence of U.S. forces in Korea became a symbol of U.S. commitment, and the establishment of Korea rotational forces optimized

combined readiness. When setting the Korean peninsula became the Chief of Staff of the Army's priority, disintegration risk across allies and partners was low to none, largely due to multiple decades' worth of alliance-building and combined command post exercises. Lines of communications were already established from the host nation to receive commodities delivered from the strategic support area.

## From Factory to Foxhole to Factory

The foundation to setting the theater is the strategic support area. ADP 4-0 describes the strategic support area as "the area extending from the joint security area within a theater to the continental United States (CONUS) or another combatant's area of responsibility (AOR). It includes a vast array of DOD, government, and private sector agencies that participate in the sustainment enterprise. The support provided includes materiel integration and sealift support conducted by United States Army Materiel Command (USAMC), United States Transportation Command (USTRANSCOM) and the Defense Logistics Agency (DLA)." As the logistics enterprise integrator, 8th TSC provides the capability to leverage critical commodities resourced from the industrial base in support of critical power projection and execution of onward movement into the Korean peninsula.

## Partnerships

One high-visibility vignette that took multiple efforts to negotiate

was the deployment of missile defense capabilities that Terminal High Altitude Area Defense (THAAD) brought to the peninsula. In this instance, not only did the U.S. strategic support area have to distribute its assets, but the ROK government had to build readiness from its national pipeline as well. U.S. military leadership negotiated with Lotte Corporation for land and infrastructure at the Seongju Golf Course area, where THAAD was positioned. The ROK Ministry of Land, Infrastructure and Technology (MOLIT) also played a key governmental role in allowing access for the THAAD battery to construct on its property. Furthermore, through a combination of interoperability operations, the staffs of United States Forces Korea (USFK) and Combined Forces Command (CFC) worked exhaustively together to ensure the THAADs were functional with ROK systems to establish a defensive posture. USAMC played a critical role in delivering critical commodities in partnership with the joint deployment and distribution enterprise. As a result of the strength of the ROK-U.S. alliance, defensive posture improved interoperability against North Korea.

## Continuing Implementation

A critical lesson learned came from the inculcation of multilateral partnerships and agreements among US-JPN-ROK to ensure a shared understanding to deter the North Korean threat. The alliances proved critical to maintaining stability in Northeast Asia. Change and volatility are constants; throughout

these realities, alliances, trust, mentorship and agreements prevailed. Continuing its emphasis, during his first week of command of USF-K and visit to the Joint Security Area in November 2018, Gen. Robert Abrams "reaffirmed that the ROK-U.S. Alliance remains ironclad and will continue to play an important role in preventing armed conflict on the Korean Peninsula and promoting peace and stability in the region." Strengthening readiness in Northeast Asia was an undercurrent of combined and enterprise efforts which achieved the affects today through "all things enterprise" initiatives. Although the events on the Korean peninsula in 2017-2018 are only one example, the ability of a nation, its allies, and its partners to project power was clear on the international stage. Fostering relationships with allies and partners is essential to securing the Indo-Pacific region. Bilateral and multilateral agreements are absolutely vital in maintaining the support required for the TSC to set the theater.

***Lt. Col. Edward K. Woo is chief, Distribution Integration Branch, at 8th Theater Sustainment Command. He holds a bachelor's degree from New York University and a Master in Military Arts and Science degree from the U.S. Army Command and General Staff College.***

***Maj. Mishenda S. Siggall is chief, Commander's Initiative Group, 8th Theater Sustainment Command. She holds a bachelor's degree from Campbell University, a Master of Human Relations degree, and a Master of Arts degree with emphasis in international relations from University of Oklahoma.***

***Maj. Jimmy Y. Chang is executive officer to the commanding general, 8th Theater Sustainment Command. He holds a bachelor's degree from University of Washington.***



Cpl. Oliver Brandon, 2nd Battalion (Amphibious), Royal Australian Regiment, covers a doorway during urban assault training with U.S. Marines during Exercise Rim of the Pacific (RIMPAC) at Marine Corps Base Hawaii, June 27-Aug. 2, 2018. RIMPAC is the world's largest international maritime exercise and provides a unique training opportunity to build interoperability for participants who are critical to ensuring the safety and security of sea lanes. (Photo by Cpl. Kyle Genner, Australian army)

# R ESILIENCE EDUNDANCY and ELATIONSHIPS

***Logistics interoperability a valued asset, strategic enabler***

■ *By Australian Army Brigadier Todd Ashurst and Lt. Col. David Beaumont*





**I**n 2018, Australia and the United States finished celebrating ‘100 years of Mateship,’ noting our distinguished history of operating alongside each other since World War I. A key factor of success in our early engagement was thanks to logisticians. Ever-resourceful and seeking to give commanders and their combat operations the best chance of success, logisticians drove a support culture across the Western Front and enabled cooperation and combined arms action on the battlefield. This has continued throughout the decades to the point that it is rare that the two armies do not support nor assist in sustaining one another at the tactical and operational level whilst deployed. Doing so has offered opportunities, force multipliers, and enabled ‘coalitions of the willing’ that might not have existed had partners had to operate independently. As a consequence, we invest considerable time and effort discussing and improving combat service support (CSS) interoperability through forms like Army 2 Army staff talks, as well as many other regional;



**More flexible regulations will need to be put in place to allow defense industries to work across national borders. This will induce greater sharing between defense industries underpinning land forces, enabled by policies allowing the sharing of technologies, techniques, and skills between the partner nations.**

engagements, with outcomes ensuring increased effectiveness, efficiency, and preparedness.

While the emphasis toward CSS supportability has served both armies well for the last twenty years, it has potentially limited our view of interoperability to standardizing doctrine, preparing interoperability handbooks, and enabling tactical integration. This emphasis must now expand to face the needs of the next twenty years. We believe that in a contested and competitive strategic environment, at a time where preparedness will differentiate a relevant military from one not so, true logistics interoperability will be a strategic strength. Both the U.S. and Australia, and their partners, need to now concentrate on concepts, behaviors, and agreements which create resilience and redundancy through integration and opacity of strategic sustainment capability and capacity. What follows are a few ideas that our armies should consider as they modernize to meet the needs of the future.

### **Why is strategic logistics interoperability important to us now?**

Strategic logistics underwrites preparedness by resourcing the military machine (and therefore future options of military commanders) while tying directly into the economic power of the nation-state. The logistics and sustainment arrangements made now determine what is practically possible when military options are ultimately required by governments. This understanding is of vital importance,

as we are unsure where and when military power will be required. The Australian army recently released the futures statement Accelerated Warfare in recognition of the strategic uncertainty Australia faces, with the Chief of Staff of the Army describing partnerships as a way of contributing to success in times of competition. Effective logistics supports the development of offsets and deterrence pre-crisis and empowers flexible responses during one. Military partnerships exponentially improve the depth of logistics capacity available, creating force posture options that may not have existed before, shape regional capability, and influence long-term commitment through the sharing of organic and non-organic national industrial capability. Interoperable and integrated logistics networks, capabilities and systems can be leveraged to create situations of tremendous advantage.

Maj. Gen. Edward Dorman, combatant command director for Logistics and Engineering at U.S. Central Command, recently wrote on the importance of strategic logistics. “Nothing creates the flexibility for deterrent options and decision space more than national logistics that are underpinned by a vibrant, thriving economy that in turn is linked to partners and allies ...” He saw this outcome being delivered through preparing the environment with regional partners and ensuring the right coalition resources were in the right place at the right time; and by pursuing opportunities to strengthen alliances such that partners are able to provide one another support.

Partners who conceive of logistics as a shared capability can more flexibly “develop, produce, deploy, distribute, store, and execute the acquisitions, logistics and distribution that underpin successful deterrence.” More specifically, interoperable forces will have greater redundancy and resilience in allowing a response than they might ever have had alone.

It is easier, of course, to provide a case for improved logistics interoperability than it is to deliver it. There are numerous barriers to logistics interoperability. The Australian and U.S. armies, as well as other partners, operate an enormous range of different materiel with different sustainment requirements. They’re bound by different procedures and constraints, some of which are based upon government industry and economic policies. Each defense force has different priorities, demonstrably different capabilities and capacities, and unique needs that must be met. Aligning multiple strategic logistics systems to work effectively without disrupting that of a partner is unequivocally an art. Improving the way a coalition may sustain itself, as difficult as it is, is a reflection of a capacity of that coalition to be operationally meaningful, if not sustainable. What follows are suggestions on where the Australian and U.S. armies may wish to start.

### **How can we improve resilience, redundancy, and relationships through strategic logistics interoperability?**

Firstly, we can look at the direct benefits to the Australian and U.S. armies through interoperability. It may

seem counter-intuitive to suggest that the first step to achieving greater logistics interoperability is to embrace strategic self-reliance. There are two principle reasons why this is the case. The first is that each army must ensure its bespoke capabilities are appropriately supported such that coalition resources do not become essential for these capabilities to be operationally useful. Secondly, a level of self-reliance is warranted to ensure that when forces do deploy, they can be sustained effectively until the coalition’s strategic sustainment system is active. The objective in both cases is that neither army becomes a logistics liability for the other, but better coordinates effort where it is most required.

Partnered armies must be prepared to share knowledge concerning logistics capabilities and resources and must signal one another when a shared supply chain is likely to be required. Strategic risks must be examined collectively, and both armies must be open about problems that afflict the supply-chains and processes that impact upon the materiel each army depends upon. This will assist in identifying areas in which each army can best contribute, with resources and responsibilities earmarked for later use. Triggers and demand signals might also be agreed upon, allowing partners new ways to alert each other to logistics needs or opportunities. All this must be exercised; it is noteworthy that the Australian and U.S. armies do not presently share a major strategic logistics exercise in which to consider how they might respond, together, in a crisis. Without testing the collaborative logistics enterprise, it will be difficult to conclude where the

most pressing problems to address are.

Integrated approaches to sustainment should, where possible, become normal. Interoperable acquisition and sustainment programs would see planning increasingly global but provision potentially local. Investment or clear demand signals of sovereign industries to credibly contribute to meeting coalition as well as national demands would support the development of regional capability, providing alternative and potentially shorter supply chains. This would also make it easier to assure delivery. A new approach to intellectual property (IP) rights is warranted, allowing for greater flexibility within a coalition and transparency across the supply chain writ large. This may require both armies to accept a greater level of risk in their materiel worthiness regimes to allow for greater sharing in componentry or commodities. But this risk is rewarded by diversifying supply chains for common parts manufacture, repair, or refurbishment providing greater strategic resilience and operational sustainability. Perhaps it is time to move beyond industry resource base recognition to combined planning and execute national industry options in order to become a truly shared, integrated endeavor. If one nation struggles with insufficient capacity to manufacture or produce, then clear demand signals and ready IP access would enable trusted nations to supplement supply chains for each and other trusted allies.

Neither the U.S. or Australian army, nor the defense forces they belong to,



can achieve these outcomes without government policy in support. Political and policy levers must be in place to set in motion endeavors that manifest in interoperability outcomes. Negotiation will be required between governments to facilitate non-indigenous support of materiel. Barriers will need to be reduced, especially those that influence export controls or any other regulation that constrains the ability of either army from establishing business arrangements with the other. The corollary is that more flexible regulations will need to be put in place to allow defense industries to work across national borders. This will induce greater sharing between defense industries underpinning land forces, enabled by policies allowing the sharing of technologies, techniques, and skills between the partner nations. Strategic logisticians

must provide a way forward to governments on these issues.

Finally, we can look to interoperable strategic logistics as a way of supporting national and regional security. Success in regional strategic competition must include a logistics component. Logistics, as a critical component of 'setting the region' in that it normalizes consultative and respectful long-term behavior, supports the capacity of regional partners to sustain themselves and helps with the establishment of economic infrastructure. For example, Australia has recently established a \$1 billion (Australian dollar) export financing agency to assist developing regional industries. In doing so, mutually beneficial supply chain options are created, and a grounding in logistics interoperability can be established. Similarly, continued

effort towards refining 'Mutual Logistics Support Arrangements,' 'Standing Offer Panels,' and host-nation support arrangements can also enhance the capability of regional partners and any military coalition.

The environment is such that we need to not only broaden our views on what constitutes the 'national support base' or 'defense technology and industrial base,' but create action to enable the benefits of close national relationships. If strategic requirements necessitate us imagining greater interoperability, it is similarly important that the same apply to the leveraging of national industrial capability and capacity. As we wrote above, it is important that the Australian and U.S. armies are able to operate independently, and with national resources available to suite the contingencies and crises



*U.S. Army Staff Sgt. James Craft, signal support specialist, 10th Support Group, instructs American and Australian service members on how to operate a Satellite Transportable Terminal (STT). The STT provides seamless connectivity to strategic facilities for distribution of services throughout the tactical network. (Photo by Mass Communication Specialist 3rd Class Daniel L. Zink)*



*An Australian soldier explains the different components of a RBS-70 man-portable air defense system to U.S. Army Maj. Marshan Daymon, deputy logistical director, Combined Logistical Group for Exercise Talisman Saber 2019, following a live-fire exercise in Queensland, Australia. The biennial exercise is designed to improve U.S. and Australian interoperability through realistic, relevant training necessary to maintain regional security, peace, and stability. (Photo by Sgt. 1st Class John Etheridge)*

that demand this approach. However, it is equally important that we have considered how national resources can be better integrated to more effectively and efficiently respond to threats to shared interests. A coalition can ill-afford ‘logistics fratricide’ by competing for available resources, driving up costs and increasing supply chain risks, particularly when seeking the support from allies and partners critical to success in a time of competition.

## Conclusion

Interoperable logistics creates strategic resilience and responsiveness. However, it will not be improved unless we take time to resource its achievement. The U.S. and Australian Armies, and their many partners, have concluded that interoperability is operationally important. All have a proud legacy in supporting one another

on a wide variety of operations. It is important that interoperability should now take an increasingly strategic tone at a time where we are preparing for the next operation. Improved strategic logistics interoperability is not a way to avoid the development of costly logistics capabilities. It’s a way that partners can support one another more readily, giving them options before, during and post-crisis that they may not have had before. In a particularly competitive strategic environment, this approach is not only important but patently necessary, and a means to gain advantage over potential adversaries.

Even as a smaller military with a lower scale of logistics capabilities, the Australian Army can meaningfully contribute to a broader coalition effort especially within its immediate geographic region. It

may be possible that another partner deploying nearby can more readily draw upon Australian resources to avoid vulnerable global supply chains, and vice versa. A strategically wise approach to interoperability is one in which problems are shared, resources efficiently planned, and key acquisition and sustainment decisions are made such that the right support is delivered, in the right place, as fast as practically possible. Logistics interoperability will create a new source of leverage at a time when every strategic advantage may just make a tremendous difference.

***Brigadier Todd Ashurst is Director General, Logistics, Australian Army. He has commanded at multiple levels including at strategic logistics units. He is a graduate of the 2018 Class of the U.S. Army War College.***

***Chief Instructor Lt. Col. David Beaumont is the Commanding Officer of the Australian Army School of Logistics Operations. He writes regularly at [www.logisticsinwar.com](http://www.logisticsinwar.com).***



# Munition Operation

The commodity of ammunition is a unique class of supply categorized as Class V. The commodity is a consumable supply item that requires additional expertise to transport, store, and conduct issuance. Contractors, service members, and Department of Defense (DOD) Civilians need specialized knowledge to manage Class V at the various echelons. Each of the services has its function in munition logistics, and each is required to identify a total munitions requirement to perform their assigned military mission. From funding to the development process, production, and procurement; the acquisition process is similar across the military services. As ammunition logistics moves along the supply chain, each service has its unique management. Individual service members may not be familiar with each of the services ammunition management decreasing interoperability for Common-User Logistics (CUL). Understanding ammunition management at each service relates directly to the effectiveness at the tactical level, which is linked to the success of the joint force.

## Strategic Level

At the strategic level for the military services, the Army maintains the role of single manager for conventional ammunition (SMCA) with an organic industrial base (OIB) that provides most of the production of ammunition

and explosives used by defense weapon systems. Each of the military services conducts Non-SMCA and missile acquisition with the Missile Defense Agency. Each service has similar procedures for the munitions requirements process to identify their own services' total munitions requirement and to utilize the Program Objective Memorandums cycle. Appropriation Budget Activities provide funding for each of the services' ammunition procurement. The DOD level with supporting agencies conduct strategic level decision making on acquisition, procurement, and production. Strategic level production decisions dictate how the joint activities complete the operational distribution process from the Army's OIB to the forward line of troops.

## Operational Level

Joint Munitions Command's transportation coordinating activity ensures proper transportation prioritization and port utilization. The activity uses United States Transportation Command's (USTRANSCOM) distribution process through the service owned components of Air Mobility Command, Military Sealift Command, and Surface Deployment and Distribution Command; Air Force, Navy, and Army, respectively. The USTRANSCOM command is one of ten unified commands that are fully integrated and allows for interoperability among the military services. The unified command allows for common processes



# ns Interoperability

## Efforts to normalize Ammunition across services will improve joint operational readiness

■ *By Chief Warrant Officer 3 Michael Lima*

among services as intermodal transportation with primary and secondary modes of transportation can easily be transferred from one service to another service. The ease of interoperability is the reliance on the services using DOD regulations as the common denominator for transportation processes. The operational level distribution process is under the command and control of one unified command using integrated defense regulations. As ammunition logistics reaches down to the tactical level, interoperability becomes the most difficult.

### Joint Logistics Support

The most common types of munition transactions completed are when one service component supports another by either common item support or cross-leveling, both require reimbursement from the service receiving support. Reimbursement is as repayment in like items. Cross-leveling is used to support immediate missions or training and reduce joint operations area inventory imbalances. Common item support, also known as CUL, is used to identify one service as the single-source provider to reduce redundancy in a designated joint operations area.

### Tactical Level

At the tactical level, joint logistics is the coordinated use, synchronization, and sharing of two or more combatant

commands or military services' logistics resources to support the joint force in the joint operations area. Ammunition supply activities provide munitions support, but naming conventions and automated systems vary depending on the military service that provides the support. These two are not the only differences among the services that must be understood to increase interoperability among joint munition operations. The difference includes authority for responsibility and accountability, organizational structure, and documentation for transactions. Understanding how each service conducts ammunition leads to better awareness of the joint logistics environment in multi-domain operations.

### Army Ammunition

The Army is the land warfare service branch of the Armed Forces. As such, ammunition distribution at the tactical level is land-based with the emplacement of ammunition support activities to build and sustain combat power. The Army's ammunition support activity is made up of ammunition supply points that can be field, semi-fixed, or permanent storage areas of various sizes and ammunition transfer holding points which are small, temporary holding areas. The Army utilizes the Standard Army Ammunition System (SAAS), which automates and integrates ammunition management functions between the using units, support

activities, and theater managers. SAAS-ammunition supply point is the system of record for retail level accountability, and SAAS-Material Management Center manages the theater wholesale within an area of operations. At the user level, Total Ammunition Management Information System (TAMIS) is used to submit electronic Department of the Army Form 581 to request munitions from supporting ammunition supply points.

## Air Force Munitions

The Air Force is the aerial and space warfare service branch of the Armed Forces. Munitions operations are air-based around airfields with flight line activities and munitions storage area. As the only military branch without warrant officers, Munitions Accountable Systems Officers are senior enlisted personnel and are the Accountable Property Officer. The Air Force uses the Combat Ammunition System (CAS) as the single system of record for management of conventional munitions. Commanders are announced and recorded on G-series orders following Air Force instructions. Unit commanders delegate their authority to selected individuals on Air Force Form 68, Munitions Authorization Record, to request, receive, and submit expenditures for their command using the CAS documentation. The Munitions Systems Section/Flight conducts the flightline support

activity with inspection, maintenance, assembly, and flight line delivery for missiles and Precision Guided Munitions.

## Navy Ordnance

Navy ordnance management has two broad categories of afloat and ashore activities, managed by afloat units and Navy Munitions Command (NMC) activities' ammunition forward stock points. Afloat units include Cargo/ammunition ships, Fast Combat Support Ship, and ammunition stowage spaces aboard Fleet vessels that require space for munitions and missiles. The NMC manages ammunition forward stock point activities and maintain stockage levels to support fleet ammunition positioning requirements properly. Underway transfer of ammunition is the method of replenishment for ships that are specifically designed to transport and transfer ammunition, using DD Form 1348-1A as documentation. Normal replenishment speed for transferring ammunition from ship to ship in 12 to 16 knots, and some ships have vertical replenishment facilities to use vertical lift assets. The Navy uses the Ordnance Information System (OIS) for the integration of ordnance logistics systems used for asset management and accountability. The OIS-Wholesale system tracks requirements, assets, production, expenditures, costs, and technical inventory, and OIS-



*Special missions aviators from 41st Rescue Squadron (RQS) carry ammunition to an HH-60G Pave Hawk during a spin-up exercise at Patrick Air Force Base, Florida, Aug. 17, 2018. During the exercise, Airmen faced realistic scenarios and situations to prepare them for what they may encounter downrange. (Photo by Airman Janiqua P. Robinson)*





*Lt. Cmdr. Anthony Harris, commanding officer, Mark VI Patrol Boat Company, Coastal Riverine Squadron 3, and Quartermaster 1st Class Troy Wilson load .50-caliber ammunition into a M2A1 machine gun mounted onboard the patrol boat. (Photo by Chief Boatswain's Mate Nelson Doromal Jr)*

Retail is for retail ammunition asset management and reporting. The Marine Corps has adopted the system.

## Marine Corps Class V(W)

This service divides their ammunition operations into two subclasses, Air (A) and Ground (W) support. The ammunition company of the Marine logistics group provides Class V (W) supply support to the Marine expeditionary force. Marine aviation logistics squadron is the Marine Corps' tactical aviation logistics organization and provides direct Class V (A) support to aircraft squadrons. The Marine Corps follows Navy regulations for Class V (A) support. The ammunition company can be tasked and organized to operate two separate direct support ammunition platoons providing distribution from Field Ammunition Supply Points and may be augmented by aviation ordnance personnel when supporting aviation combat elements. The Marine Corps uses its version of OIS, named OIS-Marine Corps (OIS-MC), which merges the wholesale and retail ammunition management functions into a single integrated system and set of processes. For Class V (W), the service uses TAMIS for allocating, forecasting, requisitioning, and expenditure reporting. The system is used much like the Army and is the service that has the most interoperability.

## Conclusion

The four services all use ammunition and have many of the similar training requirements using the same items. Other weapon systems are different and vary when it comes to combat ammunition. The difference between the services is very noticeable and is not prone to interoperability, especially in situations that require one service to support another for any length of time. Future threats will see large-scale combat and multi-domain operations that will require each of the services to be dependent on each other in a Joint Operations Area. Joint munitions operations must be exercised as we move ammunition logistics away from linear service-oriented operations. To trained forces that can achieve interoperability to fight and win the next large-scale combat operation.

**Chief Warrant Officer 3 Michael K. Lima is the ammunition warrant officer for 10th Support Group, at Torii Station, Okinawa, Japan. He is an accountable officer of an ammunition supply point at Kadena Air Base. He was battalion senior warrant officer advisor for 6th Ordnance Battalion and the accountable officer for 52nd Ordnance Company in the Republic of Korea. He holds a doctorate in business administration and a master's degree from Baker College Center for Graduate Studies.**

**Lead photo by Sgt. Cameron Christensen.**



# JOINT Perspective

**AN INTERVIEW WITH AIR FORCE LT. GEN.  
GIOVANNI TUCK**

■ *By Arpi Dilanian and Matthew Howard*



*Air Force Lt. Gen. Giovanni Tuck, then commanding general, 18th Air Force, speaks with Airmen from 60th Aerial Port Squadron during a tour of Travis Air Force Base, Calif., Feb. 12, 2018. (Photo by Louis Briscese)*

ive



**A**s the Joint Staff J-4, Air Force Lt. Gen. Giovanni K. Tuck is the primary integrator of logistics planning and execution across the combatant commands (CCMDs) and the services. A command pilot with more than 4,800 flight hours, Tuck's previous assignments include commander, 18th Air Force; director of Operations and Plans, U.S. Transportation Command (USTRANSCOM); and commander, Defense Logistics Agency, Energy. In the face of an evolving mission set, we sat down to hear his perspectives on Joint readiness for the future fight.

***How is the Joint Logistics Enterprise (JLEnt) ensuring we are ready to sustain large-scale combat operations?***

Everything our team is aiming towards points directly at the National Defense Strategy (NDS) and its intended outcomes, so where there is a clear focus on peer competition and the readiness required, as well as being prepared for contingencies we see in the news cycle today like in the Middle East, Africa, and South America. Our role is to assess the JLEnt, effectively apply scarce resources against the NDS priority set while providing decision space to the Chairman and, ultimately, the Secretary of Defense who assumes CCMD risk and the discussions which follow to affect an outcome. We are changing the trajectory we are on to compete with China and Russia who are outspending the United States on defense in order to keep pace. So we must explore ways to do things better (force development) and in the future do things differently (force design) in order to move and sustain the Joint Force. This must include taking new and innovative concepts and run them through exercises, war games, and experimentation.

For the last two decades, we have been comfortable with rotational force deployments and sustainment. USTRANSCOM would fly in a brigade combat team-sized element and people would descend on equipment. Today, we've actually dusted off our motor skills on how to no-kidding deploy an entire armored brigade combat team, moving men, women, and equipment sets from fort to port via rail or truck line haul,

onloading and transporting Abrams tanks, Bradley fighting vehicles, up-armored vehicles, and helicopters on commercial carriers, and then offloading onto an away port three ships' worth of capacity to then be received, staged, and moved to a tactical assembly area where Army sustainment brigades reassemble and put them at the point of contact ... this we are good at now with 50-plus of these deployments/redeployments a year. Our commercial partners provide a tremendous backbone upon which we can rely, and the same is true of our allies on the receiving end pushing to the forward edge of battle. DEFENDER 2020 will be a great opportunity to see all this play out on an even bigger scale.

***Can you elaborate on Defender Europe 2020, specifically the role our allies and partners will play?***

What makes this exercise amazing is the opportunity to work with other North Atlantic Treaty Organization (NATO) countries. Exercising interoperability and burden-sharing, we'll be able to test logistical warfighting concepts at the division level versus a single, rotating brigade. Army Prepositioned Stocks will play a role as we unpack and deploy/sustain/redeploy equipment stored in theater at the time and place of our choosing. We'll certainly test velocity, military mobility between NATO countries and our operational contracting support with organizations like the NATO Support Procurement Agency.

Defender 2020 is also shaping the work we do at the NATO Logistics Committee (29 member nations) to enable the Supreme Allied Commander Europe's (SACEUR) area of responsibility which dovetails nicely with the National Defense Strategy. These senior civil and military representatives from all 29 countries come together to talk about these concepts and how we're going to work together in execution.

A new concept underway is the Joint Support and Enabling Command, located in Ulm, Germany. This command will be responsible for synchronizing the rapid movement of logistics. Think about our expeditionary sustainment commands (ESCs), like the 19th ESC in



Korea; from rear areas, they are responsible for supporting the forward areas closest to the battle lines. With this new command, we're looking at how to do this on a NATO scale, rather than only bilateral or multilateral partnerships. Defender 2020 will help us work through how that might look.

### ***How else is the NATO Logistics Committee enabling sustainment operations?***

It's important to look at how we enable 29 countries that are together only twice a year to drive decisions. Often, NATO military representatives will have their folks address an International Committee SACEUR enablement tasker without the benefit of 29 logistics general and flag officers who will be tasked to deliver in execution. We are changing the system to be more logistics informed by our logistics committee.

So we put forth a concept on how we receive information flowing from the alliance and better insert it into the military committee. This way, from a logistics perspective, these flag officers can take a good, hard look at the issues and provide our advice as one voice going back up the chain. Then as the military committee reviews it, they know it has the position and endorsement of our full community. I'll address three topics next.

Military mobility is a topic we frequently discuss in committee. Short of NATO Article V, how do you swiftly move in exercises or contingencies between NATO countries? It's challenging because Defense Ministries in most NATO countries do not have the authority for access, basing, and overflight which may rest with Ministries of Foreign Affairs or Interior, whose view differs from the military. So we're working through the process to be able to quickly resolve diplomatic clearances and border access to meet the framework.

Contracting support is another big focus. The NATO Support and Procurement Agency in Luxembourg

is a wonderful organization. In addition to contract capacity, they can provide contracting vehicles and manage the limited commercial support to operations in order to deconflict/synchronize/prioritize contributing force movements across NATO. If every country has responsibility to have battalion- or squadron-sized elements on the hook to respond in crisis, having an integrated way to look at contracting is absolutely critical.

The other big piece is acquisition cross-service agreements. Take fuel, for example. How do we transport fuel to the north when we talk about a Baltic engagement? How do you help in the Mediterranean if you're going to support United States African Command (AFRICOM) and United States Central Command (CENTCOM) through United States European Command (EUCOM)? The Central European Pipeline System only services six NATO countries and is not connected to the other various

### ***Exercising interoperability and burden-sharing, we'll be able to test logistical warfighting concepts at the division levels versus a single rotating brigade.***

European networks. You can deliver fuel with trucks and rail, but it will depend on arrangements we have with other countries. We have an office that

tracks over 110 cross-service agreements just internally within the Department of Defense. We can get there, but must continue exploring how other countries interconnect through these agreements so we can take advantage of swaps and exchanges—particularly with things as fungible as fuel—to get the product where we need at the

### ***As our armed forces modernize, how are you ensuring the JLEnt remains integrated?***

Regular touch points with each of the Service 4s to support CCMD J-4s. As respective service programming efforts evolve, it's important we're brought into the conversation early and often. We have the advantage of being able to articulate CCMD requirements, not only for the next three to five years, but also looking more broadly at areas which will have contested logistics to operate within.

Our goal is to run these efforts through our capstone concept for Joint Operations. As eluded to earlier in this article and within this framework, we can experiment, war game, study, and exercise concepts to determine whether or not these can inform service programming processes based on what we think would close CCMDs' logistics gaps and seams.

There's also an opportunity for us to have a whole-of-government approach. We host a Worldwide Logistics Symposium, which includes a quarterly Whole-of-Government Logistics Council meeting to cross talk and information share across the interagency.

***Can you discuss the importance of work-life balance for all of our young Soldiers, Sailors, Airmen, and Marines?***

I'm always hopeful someone asks me about this because it's really an important topic, particularly for our younger force as they strive to lead organizations and ultimately command. For the last two decades, I could survive on five hours of sleep. I drank a lot of soda, ate for my country and hardly had a fitness regimen. I felt I needed to change, even though I wasn't facing any serious medical concerns.

Part of that push came after attending a course for senior leaders where they implored us to focus on four things: myself, family, work and community, all umbrella'd under this thing called faith—not necessarily in the religious sense, but in the idea that, as humans, we believe in something.

First: myself, which was mainly a focus on diet and



U.S. Air Force Lt. Gen. Giovanni Tuck, 18th Air Force commander, visits Travis Air Force Base, Calif., June 7, 2017. Tuck took command of 18th AF June 1 and is visiting bases throughout Air Mobility Command. Tuck leads AMC's operational mission as Air Forces Transportation, the air component of U.S. Transportation Command. (Photo by Louis Briscese)



fitness. I got rid of all things diet soda and switched to plant-based dairy substitutes. I also started to watch closely what I ate, staying away from high salts, fats, cholesterol and sugars shown on nutritional values on packaging labels. So I started minimizing several food groups. I like pizza. Where a normal slice might be 300 calories, I started asking places to make mine with half the tomato sauce, half the mozzarella, and half the protein. And instead of eating the whole pizza, I'd have a couple slices and take the rest home. Just from the food change I made, I started to feel healthier.

I started a fitness regimen which burned 400-700 calories a day; it wasn't so much about losing weight, but more about being active. In five weeks, I went from 195 lbs on this 5'8" frame, down to 168 lbs. I still have this as a target.

Second: family. There's a phrase I really believe in and wish I could properly give credit: virtually present is actually absence. I recall coming home after working a 10- or 12-hour day and sitting down with my family. My daughter would say, "Hey Dad, check this out," and I would look up briefly from whatever work I had brought home and then dive back in. I did this from squadron command all the way to wing command and beyond. So I decided when a family member walks into the room, the laptop closes, everything gets put away, and I am present. After a recent visit, my daughter gave me the biggest hug when she left and said, "Dad, I had the best time." Whether it was watching "The Bachelor" on television or some other activity she loved, I was present and could converse about whatever we did. Be present with the people you care about.

Third: the job. I cut down on temporary duties and decided I would no longer come to work at five or six in the morning and leave at six or seven at night. Today, I arrive at 7 a.m., try to shut it down to go home by five. I no longer do email past nine o'clock every night. I make sure I eat a healthy lunch every day, and I make time for the fitness center. Though it's harder in my current job, when it's on the calendar, it's mine to give up versus not even being scheduled in

the past. I have fundamentally shifted from what I was doing the last 20-plus years.

Last: community. As I scaled back all of those travel requirements, the team did ask, "What about this upcoming event on your calendar called the Tuskegee Airmen Legacy Flight Academy?" My response: "That is community, we're going to do that." How cool was it to go to an airfield and talk to 150 inner-city kids who might not otherwise get the chance to fly airplanes? Talk about capturing the heart of a five year old and opening the eyes of a 19 year old. You're able to do that because you're giving back to the community in which you grew up.

I went through this process about a year-and-a-half ago, and I've made it a priority in my life. My point is if you don't make these changes, something's going to catch up to you. The next thing you know, you're not going to be present for your family or friends, or around to do the things you'd like with the people who like you back.

### ***Any final thoughts?***

Thank you for taking the time to visit with me and our team. We have a solemn obligation to take care of America's sons and daughters. We do this by advising our Chairman, advocating on behalf of the CCMDs and working through our services informed by our Office of Secretary of Defense staff. Our responsibility is to set the globe, make the warfighter successful and carry forward the risk each assumes. Every one of you do tremendous work every day to make this a reality. When some youngster on the field needs something, you make sure they have it, and they should never have to wonder when it's coming. So thank you to all logisticians across the force for what you do for our nation. You are making the headlines now.

***Arpi Dilanian is a strategic analyst in the Army G-4's Logistics Initiatives Group. She holds a bachelor's degree from American University and a master's degree from Rensselaer Polytechnic Institute.***

***Matthew Howard is a strategic analyst in the Army G-4's Logistics Initiative Group. He holds bachelor's and master's degrees from Georgetown University.***




A full-page photograph of two soldiers in a desert environment. The soldier in the foreground is wearing a green and brown camouflage helmet and a tan camouflage uniform, aiming a rifle. The soldier in the background is wearing a tan camouflage helmet and uniform, also aiming a rifle. Large, bold, dark red text is overlaid on the image.

# Building Relations

**Innovation, trust required for success between advisors,  
partner nations**

■ *By Maj. Thomas Knothe*





*An Iraqi soldier with 73rd Brigade, 15th Division works to improve his kneeling firing stance with a cavalry scout with 5th Squadron, 73rd Cavalry Regiment, 3rd Brigade Combat Team, 82nd Airborne Division, at Camp Taji, Iraq, in 2015. The 3rd Bde., 82nd Abn. Div., was deployed to Iraq as part of Combined Joint Task Force - Operation Inherent Resolve to advise and assist Iraqi Security Forces in their fight against the Islamic State of Iraq and the Levant. (U.S. Army photo by Sgt. Cody Quinn)*

# Relationships



The role of an advisor is not to redefine the host country's existing systems and practices, but to enable the host country's army to become more effective through using their own systems. This is especially true for Iraq in the logistics field. The Iraqi Army's (IA) logistics operations and procedures are vastly different from that of the U.S. Army's. The U.S. Army made the decision to deploy portions of the Security Force Assistance Brigades (SFABs) to Iraq to help train the IA and assist them in their ongoing sectarian war against the Islamic State group (IS). The SFAB's objective for the sustainment warfighting function is not to transform the Iraqi system into the American system, but to enable offensive operations through the building of partner capacity. In order to do this advisors must first build

relationships with their partnered force, learn all the intricacies of the Iraqi Army's logistics system at multiple echelons, and prove to the partnered unit that including their advisors in their decision making process will add value to the organization.

The first and most critical phase to advising is building relationships with the partnered force. Logisticians typically have multiple counterparts as the IA heavily compartmentalizes logistics operations. The IA has separate senior officers and staff sections for requisitioning parts, overseeing maintenance operations, and managing supplies. Relationship building is extremely important to Iraqis as they genuinely want to get to know those they meet on a personal level before they discuss business. Initial engagements normally involve discussing families and backgrounds

while having chai, fruit, and drinks. The Iraqis pride themselves on being extremely hospitable, and often times insist on providing their advisors a quality meal if the discussion is taking place during lunch or dinner time. A dish the Iraqis commonly serve is kabobs which includes: steak, chicken, lamb, onions, tomatoes, cucumbers, rice, and flatbread followed by watermelon or plums with chai or lime tea later in the evening. It is normal to not discuss work related topics at all during a first engagement, and only after discussing families and other non-work related topics on subsequent engagements. Once they feel like they understand their advisor's capabilities and motives, they will then begin discussing their unit shortfalls and the ways they would like assistance. The IA are generally glad to have their advisors on the team and are eager to receive our help in most cases.

However, a significant hindrance to building relationships and maintaining continuity of operations is the IA's leave system. Every IA soldier takes one week of leave every three weeks, and when travel days are factored in they are typically away from work for nine out of every 21 days. This does not include the numerous holidays they observe and Fridays being light duty days. The IA accounts for the leave cycle among leaders by assigning two officers to each position—a primary and a deputy. However, the constant switching of personnel results in additional difficulty during current operations and establishing long-



Staff Sgt. Buddy Trevino teaches Iraqi army mechanics how to identify and prevent problems occurring with a semitractor trailer truck engine. (Contributed photo)





*Maj. Thomas Knothe and Staff Sgt. Neil Conder discuss the layout of the maintenance bay and vehicle inspection process with leaders within the Iraqi Army. (Contributed photo)*

term relationships. This system also slows down day-to-day processes because the primary officer is the one with signature authority and major operations rarely occur while the primary officer or commander is on leave. Most advisors use the time their partner is on leave to travel back to their designated U.S. compound to refit. This is a good time to file reports, catch up on administrative requirements, get laundry done, and conduct physical training. It also enables the advisor and their IA counterpart to pick up right where they left off upon their returns to the IA camp.

The IA takes a much more centralized approach to the way they

conduct sustainment operations than the U.S. Army. For instance, there is only one person in the entire IA that approves Class IX (CLIX) requests (a major general in Taji), and the approval process alone can take several weeks to complete. This results in vehicles and equipment remaining non-mission capable for extended periods of time. To expedite this, maintenance leaders frequently purchase parts on the local market rather than use the supply system as intended. The Iraqi Ministry of Defense (MoD) provides each division headquarters with a monthly budget – currently \$700 – to make local purchases due to the many inefficiencies within the supply requisition process. Each division

has an “Electrical, Mechanical Engineer” (EME) (usually in the rank of brigadier general or colonel) whose job is to procure repair parts and report the division maintenance readiness rates. All parts requests from the division and subordinate units are routed through him and he submits requests to the national EME using the IA’s 101 form. The form 101 is a generic demand form that units use to request all classes of supply to include major end items. If the national EME approves the parts request, he routes a letter of authorization back to the unit and the unit will travel to the national supply warehouse in Taji (this can be a 7-hour drive from some divisions) to pick up the items requested. If

the national EME disapproves the request, the unit does not receive a response and doesn't know why the request was disapproved or if the 101 form even made it the national EME.

The division EME lives and works inside an organization known as the "Battle Factory", which is where mechanics perform all maintenance and services. Each division has its own battle factory but battle factory personnel are not organic to the division they support. Battle factories typically have a maintenance bay and are well equipped with tools (mostly provided by the U.S.) but maintain only a very small number of bench stock parts on hand to repair vehicles and equipment immediately. Battle factories do not have supply support activities (SSAs) and are forced to

rely on the national supply warehouse or making local purchases for all of the repair parts.

In addition to maintenance, fuel is also an extremely controlled commodity managed from the top down. The MoD provides a certified check to the EME to take to the nearest refinery to purchase fuel. The amount of the check varies based on the number of vehicles assigned to the unit, and if they report them as operational. The IA mechanics often times state that the fuel they purchase is poorly refined and leads to further maintenance problems. The unit can request additional fuel for a combat operation, but the approval process is lengthy and their real time intelligence doesn't afford them the opportunity to wait for its arrival. This results in the unit reallocating fuel away from other future

directives or purchasing it on the local economy like they do with repair parts.

Logistics advisors at the division level and below can help overcome many of these sustainment related challenges for their partnered unit by utilizing the advisor network at the national and MoD level. When an IA division EME submits a 101 form for repair parts, it is the logistics advisor is responsible for notifying the advisor team at the national supply depot that his partnered unit submitted the supply request, provide as much information about the requirement for the parts as possible, and to follow up in order to make sure it gets processed. The national team then assists their IA partners with processing the request, reducing the timeline, or reporting back as to



*Maj. Thomas Knothe and Staff Sgt. Neil Conder discuss the division maintenance program with an Iraqi Army commander. (Contributed photo)*



why the national supply warehouse denied their request. This will provide the requesting unit an opportunity to correct the problem and resubmit the request. An added layer of complexity and substantial increase in processing time stems from that fact that the bulk of these requests occur through an “official letter” rather than an email or other automated system. The EME produces and signs the request for repair parts and the G4 signs the request for an increased allotment of fuel, food supplies, or ammunition. Normally divisions send all official letters and correspondence to the MoD or other higher headquarters buildings, which in most cases is hundreds of miles away, once per week by assigning a Soldier to drive them.

The Combat Advisor’s Training Course at Fort Benning, Georgia, teaches advisors that the way to overcome partner-based challenges is to help them utilize their own systems. The SFAB is not equipped to provide supplies and equipment directly to their partner forces, but is equipped to connect the loose ends within their existing system to achieve the same effect. It is important that advisors stick to the areas that they can influence. For instance, there isn’t anything an advisor can do to enhance the quality of the fuel the IA are receiving. However, advisors can increase CL IX accessibility by working with other logistics advisors to ensure the requests are getting filled.

Advisors from every warfighting function must demonstrate that they can add value to their partnered

organization. If a partnered organization believes that their advisor is not enabling them to accomplish their mission, then they will stop sharing information with them and including them in critical decisions. In addition to providing real, tangible results it is important that logistics advisors continuously update their partners with the status of their requests, and the actions occurring outside of the organization on the unit’s behalf. This will help build trust between the advisor and their counterparts.

Advising is much more of an art than it is a science as there is not just one correct method of executing it or single precise answer for every circumstance. The science portion of advising is seen through learning and understanding a partnered unit’s specific requirements and capabilities. The bulk of advising involves adjusting to your counterpart’s personality and reading the situation before acting. The art of relationship building involves frequent authentic positive interactions and timing. There are times that a counterpart will have too many things going on to meet, and it is important that advisors do not try to force an engagement.

It is also critical that advisors never agree to provide their partner with anything outside of their means to provide. For example, when IA partners asked the 2nd SFAB to laterally transfer them three heavy equipment transporter (HET) trailers so they could move some housing units from their old base to their new base. The SFAB is not authorized

HET trailers on its Military Table of Organization and Equipment, and Operation Inherent Resolve (OIR) is no longer resourced to transfer vehicles between the forces. The 2nd SFAB overcame this challenge and added value to the partnered organization by sending a request through the advisor network to utilize the IA’s National Transportation Brigade to move the housing units. Even though the SFAB was unable to fulfill the request of giving the partner unit three HET trailers, the SFAB was still able to solve the underlying problem.

Once an advisor makes a commitment, their counterpart will continue to ask about its status during follow-up engagements until the obligation is fulfilled. If the advisor cannot provide what they promised, they have instantly lost all their credibility and their counterpart will no longer look to them as a trusted agent. The key to victory when it comes to advising the IA is achieved through overcoming adversity, remaining dedicated to the mission, and small victories that build upon each other. Progress is slow and success will not happen overnight, but it will happen by maintaining a resilient mindset and remembering that the SFAB’s objective is not training the IA to become better American soldiers, but to become better Iraqi soldiers.

***Maj. Thomas Knothe is executive officer, 6th Battalion, 2nd Security Force Assistance Brigade. He served as an advisor to Iraq during a seven-month deployment. He is a graduate of the Army Command and General Staff College and Combat Advisors Training Course. He holds a bachelor’s degree from Auburn University and a master’s degree from Trident University International.***





*A group of U.S. Army Paratroopers assigned to Chosen Company, 2nd Battalion, 503rd Infantry Regiment, 173rd Airborne Brigade, along with Italian and Slovenian Paratroopers, conducts a tactical road march towards their objective during Exercise Immediate Response at Cerklje ob Krki airbase, Slovenia, May 14, 2019. Exercise Immediate Response is a multinational exercise co-led by Croatian Armed Forces, Slovenian Armed Forces, and U.S. Army Europe. The logistics-focused exercise sought to test and improve the ability to move forces and equipment rapidly from one location to another. (U.S. Army Reserve photo by Staff Sgt. Austin Berner)*





# Multinational Operations

*Joint Logistics Support Group offers effective role with allies, partners*

■ *By Lt. Col. Aaron Cornett*

For those without a lot of joint or multinational experience in a NATO environment, the Joint Logistics Support Group (JLSG) can seem foreign. Even for those who do have experience in those environments, the situation is much the same. The JLSG concept has been around since 2010, but is fairly new to many logisticians, both U.S. and otherwise. In addition, the JLSG has been employed very little in real-world scenarios, which leads many to wonder what exactly it is, how it can be employed, and how effective it can be. As an Observer, Trainer, Tracker, Mentor (OTTM) at Combined Joint Staff Exercise 19 (CJSE-19) in Sweden, I experienced firsthand one way the JLSG can be used and some of the challenges it faced in a joint and multinational environment.

## What is the JLSG?

Allied Joint Publication-4.6, the NATO doctrine which covers the JLSG, provides joint commanders and staffs with a common framework for the command, responsibilities, and coordination of the JLSG. The doctrine is not overly prescriptive and admits that differences in operations will force the structure and use of the JLSG to be flexible. AJP-4.6 defines the JLSG as a joint, force generated, deployable logistic capability that provides command and control of assigned logistical forces from the theater to tactical levels in support of a joint task force (JTF) made up of NATO members, partners, and non-NATO nations.

In most cases, the JLSG supports the component commands by providing common services and support to meet

their requirements through the use of a combination of its assigned forces, host-nation support, and contracts. In addition, the JLSG is capable of supporting deployment, operational-level sustainment, and redeployment of the force. In essence, and from a completely U.S. Army standpoint, the JLSG is a sustainment brigade on steroids that not only supports its Army counterparts, but also supports the air and maritime components, supports deployment and redeployment, and serves as an intermediary between the national support elements (NSEs) and the tactical forces assigned to the JTF. It can be similar to a sustainment brigade and an Expeditionary Sustainment Command (ESC) rolled into one. Ultimately, the size and composition of the JLSG in any particular operation is determined by the overall size of the JTF it supports.

## What is the purpose of the JLSG?

The main purpose for creating and utilizing the JLSG is to enable greater cooperation in logistics across NATO, optimize the logistic footprint for any given NATO operation, and reduce the overall expense of logistics to NATO and the contributing nations. While not yet completely proven in major combat operations (peacekeeping operations and exercises aside), the JLSG seeks to gain these advantages by employing a JLSG made up of a core staff element with augmentation, as well as a host of subordinate units provided by various troop contributing nations, to collectively support a joint and multinational force. It is a given that no single nation can effectively and efficiently support its forces (and possibly others) in a NATO operation. Without a single headquarters to coordinate and streamline logistics in a particular area of operations, there

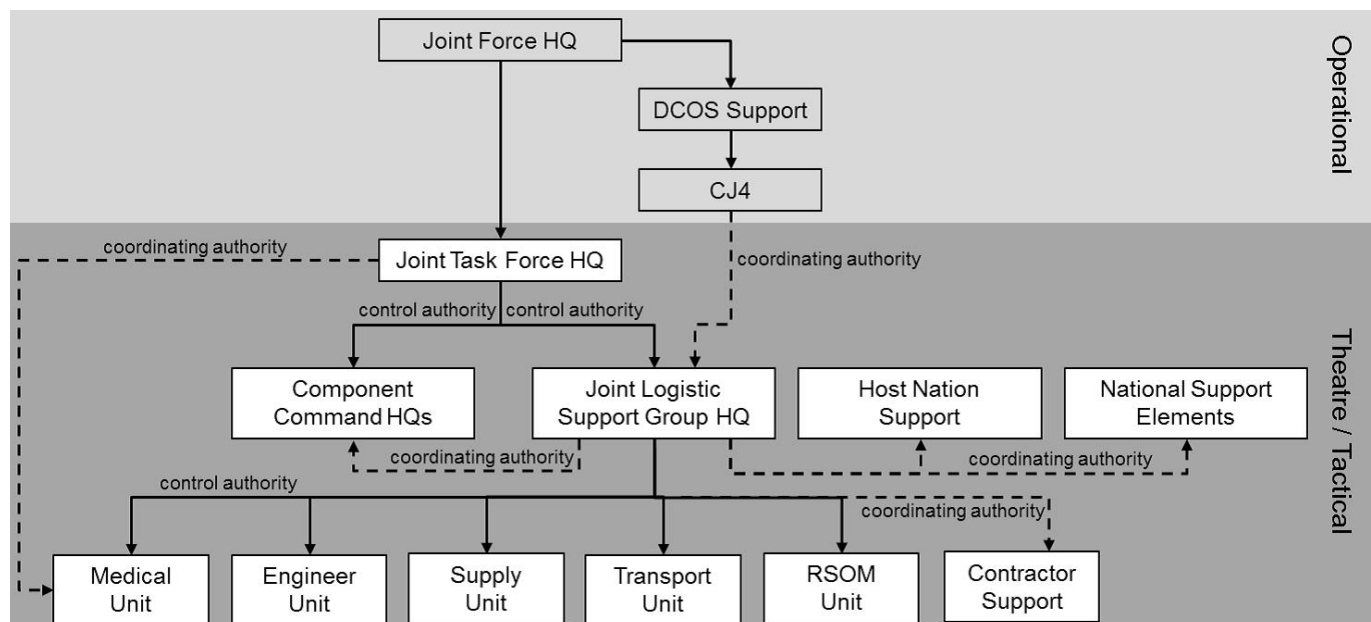
is often significant redundancy and wasted effort when nations try to go at it alone.

The JLSG is meant to be the answer to those problems; it is an organization that supplements and eases the burden on national logistics, increases the overall unity of effort, and achieves greater economy of effort by optimizing the available forces and creating a single logistics command that can support the JTF commander. The JLSG, if utilized as planned, can also enhance the coordinated use of the existing logistics infrastructure, make the best use of national expertise to support the whole force, use common logistics funding more efficiently, and perhaps most importantly, provide the JTF commander a single, accurate, and timely logistical picture for the entire area of operations. Many efficiencies can be gained by utilizing a JLSG as an operation progresses. While it may not be possible in the early stages of an operation, transitioning to a JLSG

over time certainly improves the logistical situation. The effectiveness of the JLSG is further enhanced by utilizing several modes of multinational logistics, such as logistic lead nation, logistic role specialist nation, and multinational integrated logistic units, or multinational logistic units. The use of these modes is very similar to how the U.S. organizes for and executes joint logistics.

## How is the JLSG structured?

In order to support a variety of NATO missions and a multitude of nations, the structure of the JLSG must be incredibly flexible. It must be both tailorable and scalable to the specific operation. In smaller operations with few nations and limited joint requirements, the idea of the JLSG is easily executable. The challenge arises when the operation becomes more complex, the amount of nations involved increases, and the amount of support required by the air and maritime components



Joint Task Force command and control structure, by Joint Force Command Naples Headquarters Joint Logistics Support Group, from JLSG Handbook, ver. 3.1, March 2015.



increases. The proposed structure of the JLSG, however, lends itself to the robust responsibility it is tasked with in that type of scenario. In a perfect scenario, the JLSG not only has its headquarters section and its own internal support battalion, but also enough capability to operate a theater logistics base (TLB), operate one or more forward logistics bases (FLBs), execute distribution, and support the full spectrum of deployment and redeployment operations. In addition to those “traditional” logistics functions and assets, the JLSG is designed to provide command and control to a host of engineer capabilities and advanced medical capabilities. In many cases, the JLSG also plays a significant role in coordinating, scheduling, and monitoring both host nation and contractor support. Host nation and contractor support can be incredible force multipliers when the JLSG doesn’t have the assigned forces it might normally have.

## Where are the JLSGs?

Currently, there are four JLSGs. The two “tactical” JLSGs, which is the focus of this article, are at NATO Joint Force Command HQ in Brunssum, Belgium, and at NATO Joint Force Command HQ in Naples, Italy. They are each composed of a core staff element of about 25 personnel. That staff is augmented by approximately 95 additional personnel when “activated.” Those additional personnel come from various other NATO or national HQs, including the NATO Force Integration Units (NFIUs), or from troop contributing nations depending on agreements made during force generation.

These two JLSGs are further supported by the newest NATO headquarters, the Joint Support and Enabling Command (JSEC), and its JLSG, which became initially operational capable (IOC) in Ulm, Germany, in September 2019. The JSEC, which is essentially the rear area command during operations, for will have the wartime mission of accelerating, coordinating, and safeguarding the movement of allied follow-on forces across European borders. The JLSG within the JSEC will, in turn, be primarily responsible for NATO’s reception, staging and onward movement (RSOM) mission. This could ease the burden on a “tactical” JLSG in some situations.

The fourth JLSG, also known as the Standing JLSG (SJLSG), is also starting to build capacity and is located at Supreme Headquarters Allied Powers Europe (SHAPE) in Mons, Belgium. It will eventually move to Ulm, Germany, to be co-located with the JSEC. The SJLSG will be a predominantly non-deployable static and strategic level headquarters. To a U.S. Army officer, this is more akin to a Theater Sustainment Command (TSC). At present, the SJLSG’s mission as described in AJP-4, Allied Joint Doctrine for Logistics, is to enable the responsive deployment and employment of NATO forces by conducting enduring, continuous, and proactive planning and enabling activities. In addition, the SJLSG is responsible for the execution of joint logistics in support of NATO High Readiness Forces, including the Very High Readiness Joint Task Force (VJTF). That mission was defined

before the creation of the JSEC and its JLSG under the NATO Command Structure Adaptation, and it has yet to be written in NATO doctrine how the SJLSG mission (and perhaps others) will change to accommodate the new structure. While it is a bit unclear about what the future holds for the SJLSG’s mission, it is clear that the actual structure and composition of a “tactical” JLSG HQ will differ from operation to operation, and its success is largely dependent on it having the manning, expertise and subordinate units to execute its mission.

## What is the role of the “tactical” JLSG?

One of the questions asked early on in CJSE-19 by participating officers in the JLSG was, “What exactly is the JLSG supposed to do?” To a U.S. Army officer accustomed to large scale, high tempo, multi-service, or joint operations, the answer to that question may seem obvious, but a majority of the officers in this exercise were from Sweden and Finland, and the concept of the JLSG (or its equivalent) doesn’t really exist in their force structure. The same holds true for many nations that have smaller and less robust militaries. Much of their logistics expertise and experience lies at the battalion level and below and is focused on their respective nation and component. The thought of executing logistics operations at brigade level and above is simply something they don’t get a chance to do until they reach a certain level and have an opportunity to serve in a larger multinational logistics headquarters. So, there was a steep learning curve for many officers when it came to determining what

exactly the JLSG was supposed to do and what role it played in the overall scheme of theater logistics.

In most cases, a single “tactical” JLSG will deploy into an area of operations and set up its headquarters in a location deemed most advantageous by the commander. Sometimes that is near a significant aerial or sea port of debarkation; other times it is a geographically centered location that supports the overall distribution plan. What is likely is that the JLSG headquarters will be co-located with the main logistics base in the theater. That is commonly referred to as the TLB. The TLB serves as the main storage point and hub of distribution for most, if not all, equipment and supplies coming into a theater. From there, the JLSG has the best overview of the logistics situation and can provide the best command and control of its available assets. Some of the JLSG subordinate units will also be located at the TLB, but it is likely some of them will also be dispersed to other locations in order to facilitate the most effective and efficient flow of equipment and supplies, and to provide services, to the components.

In the most basic sense, logistics in NATO is a national responsibility. But, as mentioned before, very few nations, if any, can execute that mission all on their own. That is why the JLSG exists and why different modes of multinational logistics are employed. In a generic area of operations, as seen in Figure 4, the JLSG is responsible for monitoring and executing the logistics mission in the joint logistics

support area (JLSA). This area is also called the joint logistics support network (JLSN) in the latest version of AJP-4 and AJP-4.6. The JLSA (or JLSN) encompasses everything from the ports of debarkation down to the logistics elements belonging to the component commands. Nations send their equipment and supplies from home bases to the entry points within the theater and ultimately to a TLB. In most cases, the NSEs maintain some level of control of that material until it is needed. Then the JLSG assumes the responsibility for distributing when necessary. Other times, the NSEs turn over equipment and supplies to the JLSG once they enter theater. This is especially applicable when a nation is providing a common supply to all participating nations.

Once equipment and supplies from the nations reach the TLB, along with the materials and supplies provided by the host nation, it is up to the JLSG to manage their storage and distribution. In order to create a more effective distribution network, and at times shorten the lines of communication, the JLSG can set up forward logistics elements (FLEs). These sites are closer to the customer locations and give the JLSG more flexibility when executing its mission. These FLEs can be in addition to or co-located with the logistics elements of the components, such as a forward logistics site (FLS) for the maritime component or a deployed operating base (DOB) for the air component. Either way, once the JLSG gets the right equipment and supplies to the components, whether it be at an FLS, DOB, or other location, the components are responsible

for executing the remainder of the distribution mission. Of course, there are times when the JLSG can utilize its assets to throughput down to a lower level, but it isn't all that common. In addition, there are also times when the NSEs can bypass the JLSG and the TLB and deliver directly to the necessary component. This is especially common when a nation only has a small contingent within a particular component providing a specialized service that requires less common equipment and supplies. In this situation, whether the JLSG is directly involved or not, it is critical for all parties involved to coordinate and synchronize as much as possible to avoid confusion or a redundancy of effort.

### **What challenges did this JLSG face?**

Throughout CJSE-19 there were several challenges that the staff of the JLSG faced. Some of these challenges were associated with a lack of overall experience, some could be attributed to the construct of the exercise, but there were some that could be common to any JLSG in any given scenario. It was also evident that there could be some “natural” challenges to the JLSG simply because of the way it is designed to be manned and utilized.

The first major challenge the JLSG faces is manning. This is a challenge associated with how the JLSG was designed. The 25-man core staff element is only a fraction of what is required to actually man and run the JLSG in a real-world situation. The bulk of the staff is actually made up of 95 augmented personnel. In a perfect world, all 95 billets would be filled



by fully qualified personnel and this wouldn't be an issue. But it might be a stretch to think that can really happen, especially since there isn't necessarily a plan for where all 95 personnel will come from. It is likely some will come from other national or NATO HQs, or that other troop contributing nations will pony up personnel, but nothing is guaranteed. In a large scale crisis, some nations and NATO HQs may not have the wiggle room to give up personnel to man the JLSG. It's a roll of the dice, and without a full staff, the JLSG could struggle to accomplish its massive mission.

The second major challenge is again related to how the JLSG is doctrinally designed to operate, and it involves the command, control, and coordinating relationships. Some of this challenge is related to the relationships recommended by doctrine, while some of it is related to having a good understanding of what those relationships actually mean. It is important to note that NATO doctrine uses the term "degrees of authority" when discussing the level of command or control that a headquarters has over its subordinate units.

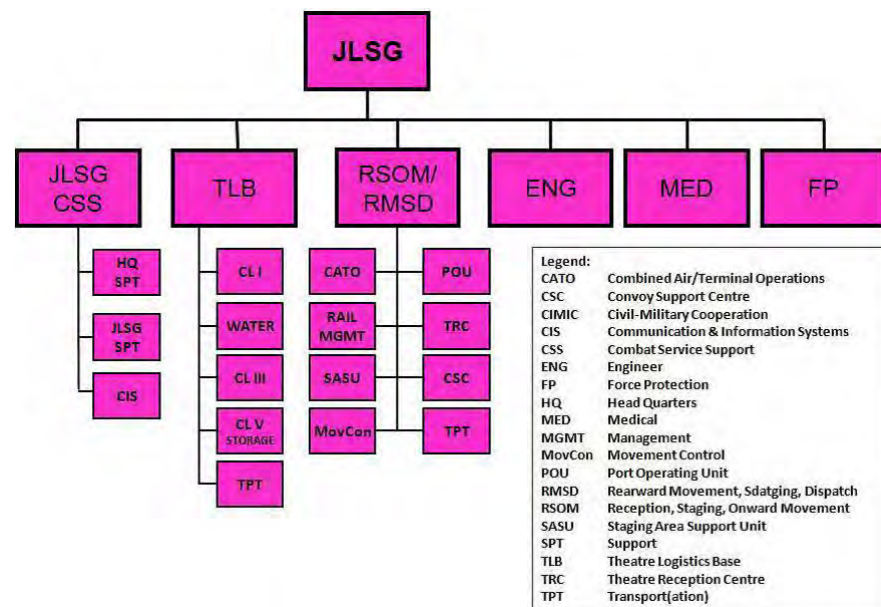
Some of those levels differ from what the U.S. and other nations use, so therein lies part of the challenge itself. In any case, nations never give full command and control of their forces to a NATO commander. Instead, nations will delegate only operational command (OPCOM) or operational control (OPCON). In the case of the JLSG, it is designed to be under the OPCON of a JTF HQ. The same goes for the units subordinate to the

JLSG. Technically, that means the JTF or JLSG commander can direct subordinate units to accomplish specific missions or tasks, which are usually limited by an agreed upon function, time, or location. Those commanders can also retain or assign tactical control to those units. In theory, this OPCON relationship gives both the JTF and JLSG commander some flexibility in terms of how assigned units are organized, positioned, and tasked.

However, in reality, it isn't as simple as that. Just because the doctrine says that is the relationship that should exist, that doesn't mean it is always the case. Nations often send forces with caveats that can tie the hands of commanders. Some caveats won't allow units to accept certain tasks, go certain places, or allow their forces to be re-tasked even if it is all for the good of the overall mission. From a logistics perspective, this can really hamstring a commander. It is important to iron out all of those details before an operation

begins in order to prevent frustration and confusion in the midst of a conflict.

Another important point to make here is the difference between the NATO definition of OPCON and the U.S. definition of OPCON. In NATO, OPCON means that a commander has the authority to direct forces assigned so that they can accomplish specific missions or tasks, which are usually limited by function, time, or location and to deploy units concerned, and to retain or assign tactical control to those units. This does not include, however, the authority to assign separate employment of components of the units concerned. In contrast, U.S. joint doctrine defines OPCON as the authority to perform the functions of command over subordinate forces that involve organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. The key difference is the fact the U.S. version of OPCON provides the authority



Generic Joint Logistics Support Group structure, from Allied Joint Publication-4.6, Allied Joint Doctrine for the Joint Logistic Support Group, C, ver. 1, Dec. 2018.

to task organize, while the NATO version does not. This highlights the importance of shared understanding across all commands and nations when it comes to command, control, and coordinating relationships.

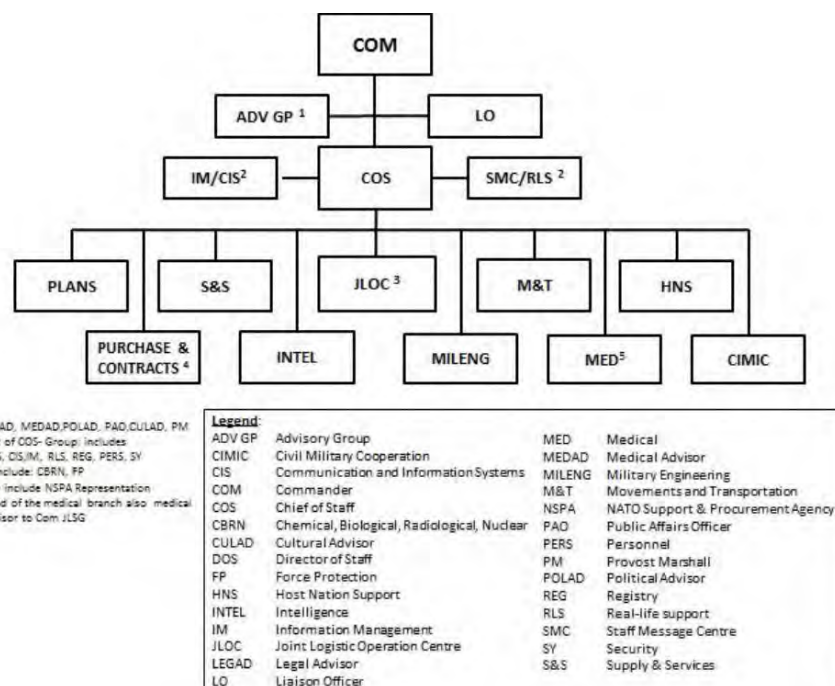
NATO also has another degree of authority that differs from U.S. doctrine. Logistic control, or LOGCON, is the authority given to a commander over assigned logistics units and organizations within the joint operations area (JOA), including NSEs, that allows him or her to synchronize, prioritize, and integrate logistics functions and activities in order to accomplish the overall mission. The authority given in LOGCON does not extend to nationally owned resources, unless that is agreed upon in advance. The closest U.S. command relationship to LOGCON is support, in which the supported commander is given access to supporting capabilities and has the

authority to provide general direction, designate and prioritize missions or objectives, and other actions for coordination and efficiency. Again, this point highlights the need for a clear understanding up front of what command, control, and coordinating relationships are in place and what they mean to all parties involved.

The next set of challenges has more to do with the execution side of things. While the challenges observed during CJSE-19 were true only of that particular exercise, all of them could be possible in any environment in which the JLSG operates. The first such challenge is the reporting and requisition processes. This isn't a unique challenge by any means, but it is one that can emerge and become a much bigger issue if it isn't addressed before an operation or very early on in an operation. There must be clear procedures and guidelines, as well

as formats and timelines, for both reporting and requisitioning. This may seem like common sense, but in a NATO environment where units come together never having worked together before, this could get overlooked. Plus, differences in language and standard operating procedures exacerbate the situation. Therefore, it is important to either put these processes in orders during planning or codify them with all key players during the initial stages of an operation.

The second execution challenge revolves around the recognized logistics picture (RLP). The RLP is essentially what U.S. logisticians call the logistics common operational picture (LCOP). According to AJP-4, the JTF J4 is responsible for development and maintenance of the RLP. The same publication states that the JLSG, along with the troop contributing nations, component commands, and host nation, contributes to the RLP. In AJP-4.6, the JLSG is given the responsibility to contribute to the RLP in accordance with the direction and guidance of the JTF commander. So, from a doctrinal perspective, it is the JTF J4's responsibility to develop and maintain the RLP with support from others. In CJSE-19, however, the JTF J4 assumed the JLSG would manage the RLP. The J4 provided some guidance, but not much. This was met with some dissension and created confusion. For the first few days there was no sign of an RLP. The JLSG wanted to adhere to doctrine, but the J4 knew the majority of the relevant information existed in the JLSG. From this observer's perspective, the J4 was absolutely right. The JLSG has much more visibility

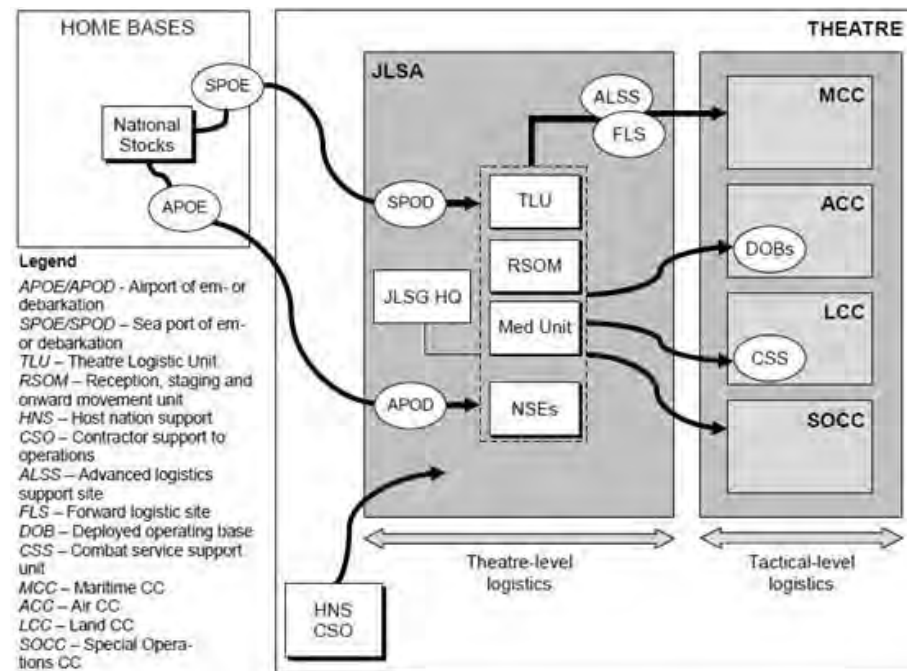


Generic Joint Logistics Support Group structure, from Allied Joint Publication-4.6, *Allied Joint Doctrine for the Joint Logistic Support Group*, C, ver. 1, Dec. 2018.



and access to the information necessary for a complete RLP. They have direct coordination with the components, host nation, national support elements, and contractors on a regular basis. They routinely receive reports from these entities. The J4 may have some of the same communication and receive some of the same information, but they don't have nearly as many touch points or the level of fidelity of the JLSG. The J4 eventually codified their delegation of this responsibility in a fragmentary order (FRAGORD), but this occurred only after valuable exercise time was lost. In the future, the J4 should make their wishes concerning the RLP known as soon as possible, and ensure all key players understand their role in the RLP sooner than later.

The third execution challenge may have been a product of this particular exercise construct, but it is worth mentioning nonetheless. As mentioned before, the nations are ultimately responsible for providing much of the equipment and supplies for their participating units. In order for the JLSG to have the visibility it needs to plan and coordinate distribution (and produce the RLP), the NSEs must provide accurate and timely information. In the case of CJSE-19, the nations were unable to provide that information in a timely manner, therefore, the JLSG was often in the dark as to what the nations were bringing in to the TLB or directly to the components. The JLSG (or the JTF for that matter) don't really have the authority to "task" the NSEs to provide this information, so it is imperative that they use their coordinating authority to ensure the NSEs communicate



The joint logistics support area, by Joint Force Command Naples Headquarters Joint Logistics Support Group, from JLSG Handbook, ver. 3.1, March 2015.

accurate and timely information. This will help the JLSG plan and coordinate distribution and allow them to paint an even clearer picture for the JTF commander in the RLP. An extension of this challenge that in and of itself could be a separate discussion, is the fact that interoperability of information systems is largely non-existent in a multinational environment. This makes the problem of providing a clear RLP even more difficult, especially when it creates a redundancy of effort for subordinate units who have to transfer data and information into whatever format the higher command wants, which is very likely not the same format their system provides.

### What Advantages Does the JLSG Have?

It wasn't all gloom and doom for the JLSG during CJSE-19, and the advantages such an organization brings to the fight were highlighted on many occasions. It is important to

acknowledge those positive aspects as well, because it is very likely that the concept of the JLSG is here to stay. The success of the JLSG in NATO's Trident Juncture 18 is another beacon of light in the relatively short history of the JLSG. In that particular exercise, the JLSG was made up of 24 different nations and over a two month period it deployed, sustained, and redeployed over 50,000 troops and 10,000 vehicles from 31 different nations. Many in NATO see that as a modern proof of concept that can be built upon in exercises and operations for years to come. The JLSG concept, with the addition of the SJLSG and the JSEC, will be tested again in the upcoming Steadfast Defender exercise.

### So, what advantages does the JLSG have if the headquarters is manned properly and given an appropriate assortment of subordinate units?

The most obvious advantage is the fact that the JLSG could be a single

headquarters that can coordinate and synchronize all logistics functions throughout an entire JOA. In the perfect situation the JLSG is the one-stop shop for anything logistics, has complete visibility of equipment and supplies as they flow from nations down to customer units, and has the ability to prioritize efforts in accordance with the commander's guidance. Granted, there are a lot of obstacles to making this a reality, but in the right environment that is truly what the JLSG can be. The second advantage is the economy of effort that JLSG can provide by utilizing common services. It is clear that not every logistics function or requirement is interchangeable, but there are many that are, and that is where the JLSG can really pay off. Some things that come to mind as universal or interchangeable are water production, vehicle recovery, and contracting. To some extent, advanced medical care can be added to the list. Perhaps the biggest advantage the JLSG brings is with supply storage and distribution. Yes, nations might have different kinds of supplies or parts, but the JLSG can gain significant efficiency through common storage and distribution. This may be a little more challenging outside of the JOA, but once inside the JOA the use of common storage facilities and distribution networks not only save time and money, but they also reduce the amount of troops on the ground necessary to complete the mission. In CJSE-19, this is one area where the JLSG excelled. Once the JLSG gained good visibility of each nation's supplies and understood what needed to go where, they were stellar about utilizing common transportation

assets (on land, in the air, and at sea) to conduct efficient distribution. Instead of having ten nations trying to deliver supplies over the same period of time along the same main supply route (MSR), the JLSG had its subordinate transportation battalions moving supplies from the common storage location to all nations involved. The JLSG had the visibility it needed, and they were able to prioritize with the success of the overall mission in mind as opposed to just the interests of a particular nation. These advantages, when allowed to shine, are what really make the JLSG a concept that can improve an operation.

### **Where might the U.S. Army fit into the JLSG?**

The JLSG is a uniquely NATO concept. It is built around the idea that a single unit, made up of different nations and services, will provide logistics command and control to a joint, multinational force. The JLSG, in most cases, will also have the support of both contractors and a host nation. In the U.S. Army, we are accustomed to providing support to other services and other nations, but the situation the JLSG likely faces is far more complex than any ESC or sustainment brigade has faced or will face. That being said, a question left to ponder is where does the U.S. Army fit into the concept of the JLSG? It seems likely that U.S. Army officers, NCOs, and Soldiers could fill some of the positions on a JLSG staff. The right amount of joint and multinational experience exists throughout the ranks. It is also quite possible that U.S. Army logistics, medical, or engineer battalions, companies, or detachments could be

plugged into the JLSG in some way. There are considerations to be given to the level of authority granted to higher commands in this case, but the capabilities the U.S. can bring to bear are certainly valuable in any situation. Lastly, but not very likely, it is entirely possible that an augmented ESC or sustainment brigade could operate as the JLSG itself. In both cases, there would be a need for both joint and multinational augmentation, especially from nations participating in the particular operation, and a fair amount of consideration given to the level of authority of the U.S. commander. The positive aspect of such a move is that the majority of the staff would be familiar with one another, and if the preponderance of the supported force was from the U.S., they would also be familiar with the customer base. In any case, there are several ways the U.S. Army could be worked into the concept of the JLSG. At this point, it is just important to understand what the JLSG was designed to do and the purpose behind utilizing such an organization in a NATO operation with a joint and multinational flair.

*Lt. Col. Aaron Cornett is an instructor and lecturer at the Baltic Defense College, Tartu, Estonia. He has served as an instructor at the U.S. Army Command and General Staff College, as a sustainment observer, coach/trainer at the Mission Command Training Program; and as Service Support Company commander, and group logistics officer, S-4, at 10th Special Forces Group (Airborne). He holds a bachelor's and master's degree in journalism from University of Kansas.*

*Retired Col. Zeljko Idek, a lecturer at the Baltic Defense College, and Dr. Tom Ward, a professor at the U.S. Army Command and General Staff College, provided significant and noteworthy contributions to this article.*



# SUSTAINING FIRES

## 2nd SFAB advisors help Afghan National Army improve maintenance program

■ *By Staff Sgt. Christian Clapp*

The role of the advisor is to “train, advise, and assist” (TAA) their Foreign Security Force (FSF) counterparts and enable them to complete their mission and become more effective in doing so. One major issue in the Afghan National Army (ANA) lies with their ability to sustain and employ their equipment, especially within the realm of small arms and artillery. The Security Force Assistance Brigade’s (SFAB) mission has a strong focus on advising. The 2nd SFAB of Fort Bragg, North Carolina, took on advising missions throughout the country of Afghanistan as of March 2019, with a high concentration of advisors in Train Advise Assist Command-East (TAAC-E). As part of Operation Resolute Support, 2nd SFAB was instrumental in training ANA soldiers on equipment and systems within their respective Corps. One major training objective for both

the SFAB and the ANA, was in training and certifying gun-crews within the ANA’s 201st Corps to benefit the ANA as a whole. The specific focus of one extremely successful block of instruction, was maintenance on the ANA’s towed artillery platform.

The ANA utilize the D-30, 122mm Howitzer, for their primary artillery platform. The D-30 has been used by the Soviet Union and its allies as well as nonaligned and post-Soviet states. This platform is towed, as opposed to self-propelled, and must be moved by vehicle or sling-load. The howitzer is robust and is designed with the most essential features of a towed field gun necessary for all conditions. It is unclear where the ANA initially received these howitzers from initially as there is no specific documentation, but they were most likely a by-product of the Soviet-Afghan war. Many of the guns’ initial manufacture date is in

the early to mid-1960s and weapons may have been relatively new when left to the ANA. With a maximum range of 15.3 km, its robust nature, and its simple design, it is quite the suitable platform for the ANA, due to their limited capabilities and harsh battlefield, on which they fight.

The ANA’s artillery equipment, at this point in time, remains in a rather dilapidated state. The equipment has suffered many of the effects of weather, frequent firing, a lack of preventive maintenance, improper use, and a non-existent maintenance program. The advisor’s primary objective is to guide the ANA to improve their maintenance program, and improve upon the ANA’s practices, while also gaining buy-in from ANA commanders and NCO instructors. These improvements are being incorporated within the 201st Regional Military Training Center’s (RMTC) program.

The 201st RMTC's inventory of tools and benchstock items, much like other ANA units, remains minimal or non-existent. This could be caused by either a lack of effective distribution from centralized depot locations, a lack of existence of parts in the first place, or an inability to manufacture parts and tools as needed. In many cases, the ANA will manage to use other tools to complete tasks, or in the case of both tools and parts, purchase similarly constructed items from the local bazaars. Items supplied through local markets often have issues with not being manufactured to the same standard of quality as the original manufactured part, often not designed to the same tolerances, and exhibit a much shorter lifespan, which can lead to many issues during both the artillery's storage and employment.

The ANA display an extremely strong knowledge of the equipment with which they work, as many of the members of the gun crew, Fire Direction Center (FDC), and technicians have been previously completed an on-the-

job-training process. Prior to receiving the training at the RMTC, many of the technicians, have gone through other formalized training programs in the nation's capital of Kabul. Their knowledge of the various functions of the equipment may not stem from formalized training. Often their specific knowledge of some of the more technical aspects of this equipment may be minimal, but their understanding of the function and employment of the weapon, as well as the portentous effects of failing to maintain it, is high.

Two concerns within the ANA have been getting technicians to travel to a centralized training location to become certified to conduct maintenance on the D-30 and for commanders to properly distribute these technicians where needed most. Often, many locations will not have any trained technicians on hand and may have them operating in positions far outside the scope of a technician. One solution proposed by SFAB advisors was to maintain a Mobile Technician Team at the

RMTC and send technicians out to the gun's location as needed to diagnose and potentially fix issues. This solution would reduce the need to remove the howitzer from combat operations and of transporting it to a centralized location.

Another ANA issue identified by the SFAB advisors, is a failure to maintain the most basic maintenance documentation. Two main problems have arisen from this: a lack of accountability of work conducted by the technicians, and an unknown status of the parts replacement history. With the former of these two issues, the ANA commander has no means except word of mouth to verify any measure of effectiveness of his technicians and the man-hours worked. The latter of these issues presents the biggest problem; the technicians have no way to determine when the last time parts or fluids were replaced. Lack of documentation prevents projection of life-spans for items that must be changed on a time or firing-based schedule.

When beginning training for ANA technicians, the first concepts covered are the most basic so as to establish a baseline of the students' knowledge on the weapon system. The advisors learned from both after action report comments and concerns expressed during their introduction that the students most value, practical exercises as a way to learn. After an introduction and overview of major components and sub-components, the students practice proper techniques of operating, assembling, and disassembling the breech on the howitzer. The breech is the most critical part needed to load and fire the weapon and it also presents the



*Students examine portions of a 122mm Howitzer (D-30) while performing an inspection of the equipment. (Contributed photo)*



majority of maintenance issues. Because of this, the students responded very well to the hands-on breech training.

After completing additional practical exercises involving disassembly and reassembly of various components of the howitzer, the students focus on one of the other major safety concerns of the weapon—the cannon tube. This includes learning how to examine the tube using a borescope system in order to identify wear, cracks, or flaws, and employ a dial gauge to measure the wear as part of the process of Pullover Gauging. When this diagnostic equipment is not available the students are relegated to using much more atavistic techniques, but nonetheless are able to diagnose the status of the tube itself. Once the students are confident in their ability to examine the cannon tube and determine its suitability for use, they are taught about the necessity to maintain a Gun Card, or a comparable system to keep track of the amount of rounds and types of charges used by the crew. This provides them a means of tracking and predicting wear on the tube over time. Unfortunately, this practice relies on the crew's accurate reporting and willingness to document use, which has been a challenge in the past and has been observed in many unit throughout the ANA.

Topics covered by the technicians included the need for a program to analyze the internal systems of the weapon and the fluids used; a system which would be something similar to the Army's Oil Analysis Program (AOAP). A very basic version of this was covered during the course, teaching the technicians how to take samples of

the hydraulic fluid used and performing a basic analysis to evaluate if these fluids show indication of damage to the system internally or an improper mix of other chemicals. The students in these cases are very interested in learning about these internal systems and often wish to take detailed notes to review at later times. This is not dissimilar to the student's enthusiasm to practice some basic mathematics, when filling the corresponding recoil system with gas. The technicians were quickly able to learn about the Ideal Gas Law and apply that knowledge to how the platform would interact in areas of high elevation or extreme temperature fluctuations.


One fundamental challenge with the training was the natural language barrier, but in the case of the D-30 training this was greatly amplified as many of the topics covered by technicians use extremely technical terms that are not commonly available in the patois of the linguist or the students. This is further hindered by the fact that many of the manuals available and the descriptions inscribed on parts or tools, is often in Russian. The U.S. Army through the Program Manager – Towed Artillery Systems has various documents available that have been translated or transliterated from Russian into English, but this still poses a problem when trying to find ways to give uncommon items definitions in the students' local dialect. Pre-training and discussions with linguists assisting in the course is extremely necessary for accomplishment of successful training.

The advisor's maintenance course at the 201st RMTC was conducted for a total of two weeks, with a combined

total of 10 training days. The Afghan students all recognized the great benefit of extending the program if possible. The program could benefit from an extra week if feasible, requiring the proper equipment, lubricants, and tools are provided for the course. Pushing for additional time and ensuring continuity with rotating units will be critical to the success of maintaining a competent technical force within the aligned FSF. Failure to maintain the inertia of the program at hand will only cause the ANA maintenance program to regress.

Training U.S. advisors to be able to pass on these skillsets and ensure the follow-through of their FSF counterparts requires external training for the advisors. The 2nd SFAB has done great work in ensuring the success of their ANA counterparts, and the 3rd SFAB will continue this important mission. The advisors have been successful in shaping a comprehensive training program for the ANA and have demonstrated that training on weapons systems in this fashion can be extremely useful to their FSF counterpart. The SFAB has shown here how proper guidance, training, and employment of the advising mission can be applied anywhere in Afghanistan and around the globe.

***Staff Sgt. Christian Clapp is a small arms and artillery repairman, and serves as the armament advisor for 2nd Security Force Assistance Brigade. He is working towards a Bachelor of Science degree in mathematics. He has completed several armament courses to include an associate degree in science for firearms technology, the Special Operations Forces Peculiar Weapons Course, and training on the 122mm Howitzer (D-30) at the Artillery School in Niinisaalo, Finland.***



*Gen. Michael X. Garrett, commanding general, U.S. Army Forces Command, cheers on Soldiers assigned to 7th Army Training Command (7ATC) during the final stretch of an esprit-de-corps run, in Grafenwoehr, Germany, Oct. 29, 2019. Garrett spoke with 7ATC leadership and observed the command for the first time after a training readiness authority restructure. (Photo by Spc. Ryan Barnes)*

# Mastering FUNDAMENTALS

**An Interview with Gen. Michael Garrett**

■ *By Arpi Dilanian and Matthew Howard*





ARMY

**A**s commander of United States Army Forces Command (FORSCOM), Gen. Michael X. Garrett is leading the charge to build and sustain Total Army readiness for large-scale combat operations. With an eye towards the Army of 2028 and beyond, the former United States Army Central (ARCENT) commander and United States Central Command (CENTCOM) chief of staff is posturing the force to ensure land power dominance anytime, anywhere. Here are his thoughts on how our sustainers and allies and partners contribute to mission success.

### ***What are your primary focus areas in leading the Army's largest command?***

My number one priority is people. Readiness has been the FORSCOM mission forever, and that won't change. Readiness is what FORSCOM does 24 hours a day, 7 days a week, 365 days a year to ensure the Army is able to fight and win our nation's wars. But people, more than anything, drive readiness.

During my initial counseling, Gen. Mark Milley, then Chief of Staff of the Army, looked me in the eye and said, "Mike, you are responsible for the readiness of our Army." What a statement. I'm a pretty simple person, and throughout my career I've tried to simplify complex concepts. Take General Milley's counseling: you could make it into a huge science project. But to me, at the base level of all of this, are the people inside of our Army.

My predecessor, Gen. Abe Abrams, put us on a positive path and at a level of readiness we frankly hadn't achieved for a long time. When your boss tells you you're responsible for readiness, it's nice that the person you are replacing has more than set our Army—and myself—up for success.

The longer I've been in the Army, I've learned you can't constantly change priorities; the Army doesn't move quickly enough. So my goal has been to maintain the priorities I fell in on. We'll make some minor adjustments to reflect the changing environment, but a big piece of this is mastering the fundamentals—and that applies to everybody.

As I've listened to commanders talk about readiness, there's concern we haven't spent enough time truly mastering the

basics. It's not fair to compare our Army against any other, so I compare us against ourselves. Take sustainment, for instance. We went from an Army I thought was incredibly disciplined in our maintenance, supply, and oversight, to an Army where we lost a lot of that. This was the result of Army Force Generation and how we rotated forces in and out of Iraq and Afghanistan, but this all happened in a decade. Our sustainers must know the fundamentals of how to do maintenance and account for property. We're getting it back, but it's going to take time.

I tell commanders at all levels to test me on this. I don't want us to move on to a higher level of training until we have completely mastered the previous one. If the guy or gal confronting the enemy with a bayonet doesn't win, or if the Soldier that's part of a tank crew can't acquire and engage a tank first and win, guess what? If we can't win at the point of contact, we're probably not going to win at all. Mastering the fundamentals is critical and a top priority.

### ***What concerns you from a sustainment perspective?***

Before I assumed command of ARCENT, I didn't have a sense of how important our Army was to the sustainment of operations throughout the theater and how much of my personal time and effort would be focused on theater-level sustainment. As Gen. Joseph Votel came on board as the CENTCOM commander, I tried to share some of what I had learned: I talked about setting the theater, logistics requirements, and Army support to other services. A few months later, he came back and said, "Holy smokes, Mike, now I understand what you mean."

The Army is the foundation of logistics in the Middle East. Regardless of the commodity, class of supply, or process, we run it. Look at our aviation units, for instance, and the importance of maintenance and special tools. In Iraq, our operations were so decentralized that it was uncomfortable; the folks advising me would say every day, "We can't do this logistically." It wasn't easy, but because we have some very talented logisticians, we did it and we did it safely. We were not constrained by logistics; we were actually enabled.

As the FORSCOM commander, it's not lost on me that





*Gen. Michael Garrett, commanding general, U.S. Army Forces Command, listens as Chief Warrant Officer 2 Naquata Witts, a supply system technician assigned to 703rd Brigade Support Battalion, 2nd Armored Brigade Combat Team, 3rd Infantry Division, talks about how to improve the flow of ordering and receiving parts during a tour of the Supply Support Activity, at Fort Stewart, Ga. Garrett toured the facility, received mission briefs, and spoke with Soldiers who provide maintenance support. (Photo by Pfc. Devon Bost)*

we ask the Army to do a lot every day. Often, the poor company, battery, or troop commander and first sergeant are left with more than they can actually do in terms of time and resources—so they actually have to choose. If we're not specific and articulate about what exactly we want them to do, they may be doing things we don't want.

I think this is the reason we've fallen off on some of the fundamentals. It's not because of what we said, but rather because of our actions. We said all of this stuff was important, but what we checked up on, and what those commanders were getting beaten up on, is what they did. Commanders at echelon have to be specific about what priorities are and take ownership of all aspects of warfighting readiness.

Command maintenance and supply discipline are an absolute must. We only have one maintenance standard in our Army: 10/20. If you go look at the manuals, they don't talk about anything else. Maintaining equipment to 10/20

standard is commanders' responsibility. But again, it's not what we say, it's what we do, and what we check.

The first visit I took as the FORSCOM commander was to Fort Hood, Texas, and focused on maintenance. I wanted to see the perspective of Private Garrett turning a wrench and using a manual and of Sergeant Garrett in that formation training Soldiers. I wanted to see the person on GCSS-Army and the folks in our Supply Support Activities (SSAs).

I found people wanting to do the right thing, but because of the tempo and how much we were asking them to do, we were forcing them to take shortcuts. 10/20 maintenance is not cheap, but a big part of that is being smart about what you're doing and ordering. In some cases, I think we overwhelmed accountable officers. Brigade commanders own their authorized stockage lists, and if they're not paying attention, Army resources can potentially be misplaced and misspent.

Across FORSCOM, we are paying close attention to our supply and maintenance processes, and I've tried to be as articulate as possible about what our standards are and how we're going to meet them. I feel good about the direction we're heading as an Army, but we have to stay focused. All of our leaders and Soldiers at echelon need to stay the course on mastering the fundamentals before we ask them to do bigger things.

### ***Can you discuss how we're strengthening interoperability with strategic partners***

We never want to fight alone, especially in a world so interconnected. We always want to fight with allies, and being interoperable with our partners is something we absolutely have to do. While larger treaties used to be much more prevalent—NATO, for instance—we do a lot more bilaterally now. As a consequence, the Army as a whole is placing much greater emphasis on the technical aspects of interoperability.

Through interoperability roadmaps we're developing with each of our global partner armies, we're able to stay synchronized with their respective modernization

initiatives. As each partner moves technology forward individually, we remain interoperable bilaterally.

Interaction before we're called upon to fight together is also required. After 18 years of coalition warfare, we have never been more comfortable operating in the same formations as our allies and partners—but there's always room for improvement. Through personnel exchange programs, a number of deputy commanders inside our corps and divisions are from our partner nations. This allows them to live our culture and better understand how we operate in the U.S. Army then communicate that to their own forces.

Multinational exercises with strategic partners also allow us to continue to mature our ability to interoperate. Several recent exercises have shown not only the need for greater interoperability, but also proof that such a capability is achievable in today's environment. We've started incorporating partners into our corps-level warfighter exercises, for instance. Elements from the United Kingdom have participated in recent exercises, and a French organization will take part later this year. It's a huge win as we work to better identify and work through challenges at echelon.



*Gen. Michael X. Garrett, commander of the United States Army Forces Command, looks inside a M1 Abrams in Fort Stewart, Georgia., Aug. 13, 2019. Garrett visited 3rd Infantry Division to discuss Soldier readiness and ongoing operations. (Photo Sgt. Zoe Garbarino)*



Just think about information sharing, particularly when it comes to sustainment. There are rules and laws that govern what can be shared, and current processes require teams to manually transfer data between partner systems. It's slow and imprecise. By training and exercising together, we can enable a sustainment common operating picture that allows our partners to almost seamlessly incorporate themselves into our network. Imagine if we had the same visibility on our partners' logistics requirements as we do our own. We've got to be thinking about those same things across all warfighting functions.

***How does the Total Army play into interoperability given the speed at which we're modernizing?***

The modernization piece is something I think about a lot. For me, it's an absolute must; we don't have a choice. It's a balance between meeting the requirement to fight tonight versus the requirement to ensure our Army is viable into the future, and if we don't get it right, we potentially face an Army that's irrelevant 10 years from now.

Gen. Mike Murray and Army Futures Command are leading the modernization effort, but it's not lost on me that FORSCOM plays a big role in figuring out how we do this for the Total Force. We have to ensure we're interoperable within our own Army. Sustainable Readiness means any unit could be called upon at any time, so the least modern unit has to be interoperable with the most modern unit, regardless of component. This backwards compatibility is absolutely critical as we move forward.

The other piece is being comfortable iterating your way through things without really having an end-state. Consider Moore's Law and the rate of change in technology: for us to think things we are considering today are going to be relevant in 2035, it's just not going to happen. We may be close, but think about where we were 10 years ago compared to today. We have to continually question where we are and be looking for the next best thing—that's what our competitors are doing.

***You've said leadership is the difference between winning and losing. Can you elaborate***

People ask me, "What keeps you up at night?" Nothing; I sleep like a baby! During the day, however, there's a lot I think about, but only a couple of things I obsess over. Leading by example and the notion of hypocrisy is something I'm focused on like a laser. You pick the formation, and we expect our leaders to be competent and confident in their ability to lead from the front by personal example. Good leaders only have to say things once: they reinforce what they want through their actions and decisions every day.

Our non-commissioned officer (NCO) corps separates our Army from every other in the world. The reason they're different is because they are experienced and empowered. I'm absolutely convinced that at the end of the day, if there's one person standing, it's going to be an NCO ensuring we win. He or she will do that because they knew the commander's intent and did everything they could to get it done.

My father is a retired command sergeant major. Growing up, it was all about the standard in our house. The four Garrett kids all knew what the standard was because my dad modeled that behavior every day. I bump into people all the time; they've read all the FORSCOM documents, they can recite our priorities, and they can tell me what I've said is important. But at the end of the day, they're looking to me to ensure the audio—what they hear—matches the video, what they see.

That's what my dad did; you never had to worry about what Ed Garrett wanted. Leadership is the most important thing in all that we do. Never underestimate the power of your own example.

***Arpi Dilanian is a strategic analyst in the Army G-4's Logistics Initiatives Group. She holds a bachelor's degree from American University and a master's degree from Rensselaer Polytechnic Institute.***

***Matthew Howard is a strategic analyst in the Army G-4's Logistics Initiative Group. He holds bachelor's and master's degrees from Georgetown University.***

# Empowering **OUR** Competitive Advantage

| An Interview with retired Command Sgt. Maj. John Troxell

■ *Arpi Dilanian and Matthew Howard*





*Retired Command Sgt. Maj. John W. Troxell, senior enlisted advisor to the chairman of the Joint Chiefs of Staff, presents opening remarks for International Week as part of the Hungarian Defense Forces (HDF) Command Senior Enlisted Course, hosted by HDF Command Sgt. Maj. Istvan Kriston at the HDF Recreation, Training and Conference Center, Balatonakarattya, Hungary, Nov. 11, 2019. International Week welcomed nearly a dozen senior enlisted personnel from partner nations such as Poland, Slovenia, Finland, Canada, and the United States. (Photo by Sgt. James K. McCann)*

**A**s the senior enlisted advisor to the Chairman of the Joint Chiefs of Staff, retired Command Sgt. Maj. John W. Troxell was the eyes and ears of the joint force. The senior noncommissioned officer (NCO) in the United States Armed Forces, Troxell completed five combat tours of duty and most recently served as the Command Senior Enlisted Leader of the United Nations Command, Combined Forces Command, and United States Forces Korea. Known for leading by example and balancing discipline and compassion across his 37-year career, we sat down with him to discuss the impact our NCO corps has across the globe.

***You've said the joint enlisted force is our military's greatest competitive advantage. What creates that advantage?***

There are three things I know for sure. First: regardless of budget instability and sequestration in recent years, we have a military that's capable of defending our homeland and way of life—not only here in the continental United States but also our interests abroad. Second: we have a military that can meet our alliance commitments and assist our partners in securing their sovereign territory. And third: we have competitive warfighting advantages in the three traditional domains of air, land, and sea, and comparative advantages in the emerging domains of cyber, space, and nuclear.

But the greatest advantage we have is in the human domain. No other nation on the planet trains,

educates, trusts, and empowers enlisted ranks like the United States. Whether it's a near-peer adversary like Russia or China, a rogue nation like North Korea or Iran, or certainly the generational threat of a violent extremist, none have that mid-level leadership known as noncommissioned or petty officers.

Our approach to their development is comprehensive. Combine a very robust education system, training exercises, deployment experiences, and self-study that we encourage; together, that all enables the ability to build trust. If you build trust, then you can empower. When you can empower, now we can execute mission command. A commander—through their orders, processes, and vision—can allow NCOs to execute disciplined initiative within the intent, apply agile and adaptive thinking, and accomplish the mission.

Regardless of where we would have to fight, any near-peer kind of threat will start off as that: near-peer with high-end equipment in the maritime, air, or ground domains. But over time—especially on the complex, expeditionary battlefield of the future—the fight will devolve and become decentralized. What must you rely on in a decentralized fight? Leaders at the tactical level who can execute commander intent and the mission statement without being supervised, and in certain cases, without an officer anywhere nearby.

On any given day, we have between 250,000 and 300,000 troops executing tasks from cooperation, to competition below armed conflict,

to armed conflict in 177 of the 196 nations around the world. In nearly four years in this job, I've made it to 59, some in which we only have NCOs operating. There are security challenges, political issues, and unrest, but I've seen first-hand the phenomenal job they're doing. This empowerment of NCOs extends the commander's reach across the battlefield, wherever that may be.

At the end of the day, that's our greatest competitive advantage. We're going to continue to invest in our people as we move forward, even if—depending on budget uncertainty—that means we have to take a pause in modernization. We will never take a premium on our people.

***How can allied and partner nations learn from the U.S. model of enlisted leader empowerment?***

I think it's a professional military model that has shown to be successful, so we're going to help them. It starts with our second line of effort in the National Defense Strategy: strengthening alliances and attracting new partners. We are the global partner of choice to assist other militaries. The best thing we can do is export professionalism, and that means helping them build a robust, professional, and empowered NCO corps.

I recently attended United States Africa Command's Senior Enlisted Leader Conference, now in its third year. The first time around, only four nations and 10 senior enlisted leaders showed up; this time, there



were 29 nations and 63 leaders from across the African continent. When you look at some of those countries, you see the challenges with unrest, meeting basic needs, and the spawn of violent extremism. But they've seen the U.S. model and what our enlisted force is doing and say, "We want to be able to do that."

From 2011 to 2012, I was the sergeant major in charge of day-to-day combat operations at the International Security Assistance Force Joint Command in Afghanistan. As I traveled around that country to see our troops in action, the Afghans would look at what the American NCOs were doing and then emulate it. If you look at the Afghan military now, a huge key to their success has been the empowerment of their NCO corps.

And as nations continue to seek out assistance, it may not come exclusively from the United States. We have great partner nations such as the United Kingdom, Canada, New Zealand, and Australia that all have very professional NCO corps as well.

### ***How must our NCO Corps evolve to maintain relevancy?***

To prepare for high-end conflict, we have to be trained to standard in our primary mission role, and that includes both collective and individual tasks. If I'm a Stryker brigade combat team, those are things like attack, defend, ambush, raid, and reconnaissance.

We also have to understand the

character of conflict is different now. We can't forget the asymmetric art we've learned throughout the last 18 years. First, the ability to communicate with, and understand, the population. Second, the ability to build partner capacity—understanding that even when we're assisting a host nation in high-end conflict, we're still going to be doing by, with, and through that partner nation. And lastly, continuing to understand the enemy.

In terms of a near-peer threat, we have to understand capabilities and capacities they may have, and then look for strengths and weaknesses. However, even though it may be high-end conflict, it could still spawn activity normally done by terrorists or insurgent organizations. So in addition to defeating that high-end threat through our primary mission role, we have to have men and women who understand the complexity of the operational environment and can focus beyond, "There's the enemy, I need to defeat that threat."

We have to be sensitive to potential asymmetry of the battlefield. That means being able to provide civil military support successfully and fulfilling our responsibilities to assure allies. It also means deterring strategic and conventional attack and competing below the level of conflict to impose cost upon a potential threat with which we have long-term power competition.

### ***Can you discuss the significance of our logisticians against a near-peer threat?***

In terms of logistics preparedness,

**We need leaders who can execute commander intent and the mission statement without being supervised, and in certain cases, without an officer anywhere nearby.**



*Command Sgt. Maj. John W. Troxell, senior enlisted advisor to the chairman of the Joint Chiefs of Staff, eats lunch with U.S. Soldiers in Powdiz, Poland, Dec. 26, 2017, during the annual USO Holiday Tour to visit deployed Soldiers. (Photo by 1st Sgt. Andrew Kosterman)*

there is no greater problem set than a high-end conflict on the Korean peninsula. I spent 27 months there, most of which was with Republic of Korea forces: getting out and making sure they were prepared, ready, and understood my commander's intent. But more importantly, I sought to understand the potential threat: North Korea.

Against North Korea, we have advantages in the warfighting domains; certainly we have the experience. But when you talk about what our Naval and Marine forces would have to do, and the number of brigade combat teams it would take, the level of detail required to ensure we could continue to pursue this threat from a logistics standpoint is enormous.

There are 1.1 million North Koreans in their military, with a conscription duty of 11 years. 750,000 are on the demilitarized zone—if you're a rifleman in a rotational brigade combat team (BCT) on the DMZ and you have to go to war, if you have 210 rounds, you better not miss. And a massive non-combatant evacuation operation would be required to get the 250,000 American citizens off the peninsula.

All of this means we would have to do combined joint logistics over the shore. Aerial and sea ports of debarkation would have to be accessible and secure to bring in material, ammunition, personnel, and resources. It's a huge mission, and the level of planning, detail, and military assets it would require to

keep the fight going until the North Koreans surrendered or we secured Pyongyang is just humongous. I don't think we've seen anything like this, if we had to do it, since Desert Shield/Desert Storm when we went into Iraq the first time.

As prepared as our combat forces have to be, our combat support and combat service support forces have to be even more so. They have to be exercised and go through rehearsals because you just don't wake up one day and say, "Hey, I've got to support 25 BCTs, and every one of them needs food, water, fuel, ammunition, and everything else." If we don't have the logistics piece right when it comes to a high-end conflict against a near-peer threat like North Korea, we're going to have some significant



challenges in being able to reach our campaign objectives.

### ***What keeps you up at night?***

My previous boss, former Secretary of Defense James Mattis, used to say nothing kept him awake at night; he kept others awake. I suppose I was one of those people!

We have a good understanding of the current threats to our homeland and way of life. But I worry about the unknown future of what threats may be, and unforecasted events that require us to take away someone's assets and reallocate them elsewhere. Will that leave our troops vulnerable?

Wherever we are in the world, and in the most austere operating environments, we have to make sure: our troops have the appropriate intelligence, surveillance, and reconnaissance; we can support them with joint fires; they have the golden hour of MedEvac; and personnel recovery assets are in a place that we can get to them if we need to. We can't leave our troops out there without those four key things and the ability to get after their mission.

The other thing I worry about is properly executing fighter management. Our current operational tempo is not going to slow down, so it's critical we continue to look after our men and women. Are we giving them the appropriate downtime so they continue to be physically, mentally, emotionally, technically, and tactically ready for the worst day of their lives? We can't run people so ragged and into the ground that they're not prepared for that day.

That comes through engaged leadership, even in a deployed environment, to ensure they are getting the appropriate food to eat, the sleep they need, and their equipment is getting reset. Most importantly, it's ensuring they're communicating with their loved ones.

A year and a half ago, I was in Syria visiting a unit that was fighting hard against ISIS in the days leading up to their surrender. They were in a very austere environment, eating MREs, and had no latrine or shower facilities ... but they did have internet. Because they were doing the mission they signed up to do—defeating a threat—and could contact and talk to their families, morale was sky high.

They had been in country about three or four months, and they hoped they would stay for a year.

If we're giving troops the ability and tools to do the job they signed up for, while still affording them that downtime to communicate with family, rest, and refit, they'll be ready to reload and go after the next mission.

### ***What is the most important thing every member of the joint force should have in their hip pocket?***

Be prepared for the worst day of your life. Understand that if today is the last day of peace and tomorrow is the first day of war and high-end conflict, you and your family must be prepared.

Every day, every man and woman in the military—from the Chairman

and myself all the way down to the lowest private, seaman, airman, or lance corporal—has to have the mentality to get after it. When it comes to high-end conflict, we need all hands on deck. We cannot afford to have somebody on the sidelines or operating at 60 percent when the enemy's operating at 90. Live the warrior ethos and be prepared to go defend our homeland and way of life.

Every day is a day of preparation, and it starts with what you are doing to make sure you're physically prepared. Make sure the leaders of your organization, and your battle buddies to your left and right, can count on you because you have a high level of physical fitness.

Every day, work on the technical and tactical aspects of your duty and strive for excellence. If you've trained for excellence no matter how degraded conditions are, when it comes time to perform your mission, you will overcome and not only survive, but thrive and win.

You are a tactical athlete, and we have to train like it. That means a lot of physical work and a lot of work on our craft to make sure we're striving for excellence in everything we do. Get after it every day.

***Arpi Dilanian is a strategic analyst in the Army G-4's Logistics Initiatives Group. She holds a bachelor's degree from American University and a master's degree from Rensselaer Polytechnic Institute.***

***Matthew Howard is a strategic analyst in the Army G-4's Logistics Initiative Group. He holds bachelor's and master's degrees from Georgetown University.***

# SUSTAINING AVIATION

*Recognize differences between BSB, ASB to ensure critical sustainment capabilities are not overlooked*

■ *By Maj. James Polk and Chief Warrant Officer 4 Dustin Case*

As the Army works through the validation of the Multi-Domain Operations Concept and begins constructing provisional task forces to fill these roles, it's important for contributors of the effort to have a full understanding of the capabilities and limitations of the units and forces arrayed. The proposed construct for the Multi-Domain Task Force (MDTF) includes helicopters and unmanned aircraft that will enhance maneuver, intelligence, protection, and sustainment.

In this future concept, the aviation force may be dependent on a Brigade Support Battalion (BSB) for sustainment. This idea is not unheard of, as some divisions have already tried this method at combat training centers and in large-scale training events. A BSB supporting helicopters faces some unique challenges due to critical differences between the BSB

and Aviation Support Battalion (ASB), in both design and capabilities. For instance, a quick comparison of the table of organization and equipment for a Stryker BSB and an ASB reveal a difference of almost 500 Soldiers, however, this aggregate number can be misleading without fully understanding the differences between the two units.

## Headquarters Company

The headquarters for these two battalions are similar except for the support operations sections. The Support Operations Section in an ASB is augmented by a 153AL (Aviation Maintenance Officer), a 15Z (Senior Aviation Maintenance Supervisor), and a 15T (UH-60 Aircraft Repair Supervisor) who bring the necessary expertise for helicopters to the section. In the BSB, the brunt of the technical expertise comes from a 915E (Senior Automotive Maintenance Warrant Officer),



a 92A (Automated Logistics Specialist, and 68Ws (Combat Medic Specialist).

Imagine maintaining the brigade's equipment without the 915E, 68W, or the 92A in the BSB's SPO section. Is it possible? Yes. Is it a bad idea? Also yes. A force-tailored sustainment headquarters must have an aviation maintenance expert to help sustain and advise on aviation combat power. Aircraft are quite complex and airworthiness requirements drive key differences in field maintenance.

Additionally, there are some other key differences within the Headquarters Company. With the recent Field Feeding Company Force Design Update, the ASB lost its organic field feeding capability and now requires external support, unlike the BSB. Furthermore, the ASB Headquarters Company has a 91-series automotive maintenance section because it is not large enough to stand alone as a separate company.

## Med Company

A typical BSB brings a significant medical capability to a Brigade Combat Team (BCT). Among other health services, the Medical Company provides a field hospital and ambulatory transfer; however, the Medical Company in an ASB doesn't exist. The much smaller Medical Platoon, in the ASB's Headquarters Company, only has eleven 68Ws and two ambulances.

The Combat Aviation Brigade's (CAB) primary ambulatory capability resides in the helicopter-borne unit of the General Support Aviation Battalion (GSAB). The Aviation MEDEVAC Company has some of the same goals as a BSB's Med Company: to provide casualty collection, lifesaving transportation, and en route care.

## Distribution and Supply

The Distribution Company in an ASB is similar to

the same company in a BSB. With 110 personnel and 140 trucks, trailers, and other rolling stock this company can operate a Supply Support Activity and distribute all classes of supply. There are some key differences; the ASB's Distribution Company has a slightly larger ammunition section, and the BSB's Distribution Company has a much larger Truck Squad and Water Section.

The most significant distribution challenge for Aviation is fuel. The POL handling and storage capability (normally found in the BSB's Forward Support Companies [FSC]) are spread out across a CAB in order to better handle the massive amounts of fuel. This is where we see the disparity between a BSB's and an ASB's total number of personnel. If we subtract the FSCs numbers from a BSB, the ASB's 487 personnel is actually larger than the BSB's 411 personnel. Each FSC in a CAB is built into

***The proposed construct for the Multi-Domain Task Force (MDTF) includes helicopters and unmanned aircraft that will enhance maneuver, intelligence, protection, and sustainment. In this future concept (BSB) the aviation force may be dependent on a Brigade Support Battalion for sustainment.***

a helicopter battalion and modified to carry enough fuel for a specific aircraft. The Chinook burns the most fuel by far, and thus the FSC supporting the GSAB and the Chinook Company has 120 personnel and more than 80 pieces of rolling stock.

The fuel use and handling requirements for a CAB are the primary cause

for friction when a BSB is tasked to support a CAB. The helicopter battalions typically bring their own FSCs capable of maintaining operations forward of the support area. In a scenario where an entire CAB is conducting around-the-clock flight operations, the total fuel that the CAB will draw from a fuel point will stagger the normal support channels. In the ASB there is also a fuel/POL handling section inside the Aviation Support Company (ASC).

## Maintenance

With nearly 300 personnel the ASC is larger than any FSC or Field Maintenance Company in a BSB. The ASC provides a field-level maintenance redundancy as well as a repair forward capability, a recovery capability, and a pass-

back capability that ties the CAB to sustainment-level maintenance. The ASC is manned and equipped to repair helicopters and other aviation specific equipment, not ground vehicles. The rolling stock and generator maintenance in a CAB is performed by maintenance platoons or sections in FSCs and in the ASB's Headquarters Company.

Repairing helicopters is similar in nature to repairing any other equipment. A key difference is that each type of helicopter has a dedicated occupational specialty for the repair. Additionally, there are seven specialties that repair aircraft components. The ASC has a repair section for AH-64, CH-47, and UH-60 as well as several component

repair sections that support off-aircraft work.

When building a MDTF the ASC's component repair capability must be factored. Engine work, rotor blade repair, RADAR and avionics repair, armament repair, night vision repair, and other maintenance is all performed by the ASC. The helicopter battalions in a CAB have Aviation Maintenance Companies (AMC), but these lighter and lesser-equipped companies cannot support all of the component repair work. Additionally, the major scheduled maintenance on a helicopter can sometimes take weeks to complete. The ASC is designed to conduct major scheduled and unscheduled repair work to allow the AMC and

its parent helicopter battalion to remain mobile.

## Training

Another significant discriminator between an ASB and a BSB is the way they train and validate unit readiness. BSBs deploy to combat training centers and execute sustainment operations as a battalion with their organic headquarters and supported battalions. Aviation units consistently task organize to support BCTs at a Combat Training Center (CTC). Platoons, sections, or sometimes individual personnel from ASBs are task organized with an aviation task force. During the short training rotations, the aviation force



*Soldiers assigned to Task Force Heavy Cav conduct refueling operations at Forward Arming and Refueling Point, Afghanistan to ensure aviation operations continue without delay. (Photo by Capt. Roxzana Thompson)*





*Soldiers assigned to 1160th Theater Aviation Sustainment Maintenance Group (TASMG), California Army National Guard, load a CH-47 Chinook on board a ship docked at the Port of Shuaiba, Kuwait, July 19, 2019. 1160th TASMG is organized to provide depot-level maintenance to U.S. Army aircraft, and was deployed to Kuwait to maintain all Army aircraft across the U.S. Central Command area of responsibility. (Photo by Chief Warrant Officer 4 Anthony L. Lambert)*

will simply operate without the component repair capability typically provided by the ASB.

Each task organized battalion in the CAB rotates through a CTC supporting a BCT. The ASB is left without a collective training event in which to execute training and validation of their METL tasks. ASBs frequently coordinate and resource their own training exercises in order to adequately train and validate mission essential tasks. Balancing the ASB's training requirements, required aviation task force sustainment during CTCs, and garrison sustainment requirements for the remainder of the aviation brigade puts a significant demand on the ASB. Further, the ASB misses out on the experience and associated learning events that come with conducting battalion

level planning, preparation, and execution for deployment, during CTC training rotations, and redeployment back to home station. With a shift to division-sized units of action and training for large-scale combat operations (LSCO), the ASB will play a more significant role in sustaining the aviation force than it has in the past. Ensuring the ASB has a collective training event as an organic formation allows Soldiers to gain proficiency and allows commanders to validate unit readiness.

As the Army looks at restructuring to support the MDTF and best array forces for LSCO, it is important to consider the capabilities, design, and functions of each unit. In name and broader concept the ASB and BSB share much commonality. However, they are significantly

different organizations with specific requirements that are not easily interchangeable. These differences must be realized and understood to ensure critical sustainment capabilities are not overlooked or misaligned.

***Maj. James Polk is Doctrine and Collective Branch chief at U.S. Army Aviation Center of Excellence. He has served as Sustainment Branch chief and in a variety of operational assignments at 82nd Airborne and 10th Mountain Divisions.***

***Chief Warrant Officer 4 Dustin Case is a doctrine writer for U.S. Army Aviation Center of Excellence. He has served as aviation maintenance officer for 4th Battalion, 2nd Combat Aviation Brigade, and for 1st Battalion, 101st Combat Aviation Brigade.***

***Lead photo:***  
***U.S. Army UH-60 Black Hawk helicopters from 3rd Combat Aviation Brigade (CAB), 3rd Infantry Division, arrive on Chievres Air Base, Belgium, Oct. 17, 2019. Chievres served as an intermediate staging area before 3rd CAB deployed to operational locations across Europe in support of Operation Atlantic Resolve. (Photo by Pascal Demeuldre)***





# PACIFIC REACH 2019

***Brigade Inspection Tests Soldier, APS Watercraft Readiness***

■ *By Capt. Joseph Waicunas and Chief Warrant Officer 3 Matthew Sabo*



The Pacific Reach 2019 (PR-19) Brigade Inspection Reconnaissance Exercise Program (BIREP) in support of Army Prepositioned Stock 4 (APS-4) provided an excellent training event while simultaneously validating watercraft readiness and the readiness of Soldiers who deployed to draw and utilize it. Forty-six Soldiers from the 7th Transportation Brigade (Expeditionary) (7th TB (X)) deployed to Yokahama North Dock (YND), Japan, in support of care of supplies in storage (COSIS) of APS-4 watercraft as executed by Army Field Support Battalion-Northeast Asia (AFSBn-NEA). 7th TB (X) Soldiers assisted them in expediting their maintenance and draw procedures. Soldiers drew the Barge Derrick (BD) to exercise AFSBn-NEA's ability to issue equipment within 48 hours. Concurrently, crews exercised various watercraft platforms including the Small Tug (ST), Modular Warping Tug (MWT), and Side Loading Warping Tug (SLWT) in order to test the equipment's maintenance readiness. AFSBn-NEA provides 7th TB (X) Soldiers the opportunity to exercise different platforms and practice rapid deployment procedures to support combatant commanders. Exercises like this do more than simply validate the readiness of APS watercraft and deployed Soldiers. On a broader spectrum, PR-19 actually tested reception, staging, onward movement, and integration (RSOI) as an overall system.

Prior to PR-19, BD-6802 was at the National Maritime Center (NMC) due to major equipment failure. The main cable sheaves and bearings required replacement, cable inspection, and load testing was also required to ensure BD-6802 was available for PR-19. This was coordinated through the Sustainment Below Depot maintenance team for all QA checks and service requirements. AFSBn-NEA received directly

reimbursable funding from U.S. Army Tank-automotive and Armaments Command (TACOM) Watercraft Inspection Branch (WIB) for a \$250K repair to the BD-6802 via a COSIS contract mod. If not completed, it would have been deferred to on condition cyclic maintenance (OCCM) and AFSBn-NEA would have experienced over 18 months of NMC time on the BD. PR-19 would have been directly affected, potentially canceling operations.

AFSBn-NEA's issue process in support of PR-19 started with a HQDA and AMC approved release of Army Prepositioned Assets. Once the authorization memo with list of approved equipment for release

***7th Transportation Brigade (Expeditionary) and Army Field Support Battalion-Northeast Asia Soldiers' efforts during the Brigade Inspection Reconnaissance Exercise Program and care of supplies in storage STET help strategic planners understand the capabilities of Army Watercraft Systems for contingency operations.***

was received, AFSBn-NEA's Storage, Maintenance and quality assurance (QA)/quality control (QC) personnel began locating, inventorying and inspecting equipment to ensure 10/20 standards were met prior to scheduled issue date.

Simultaneously, the requesting organization submitted a copy of assumption of command orders and a DA Form 1687 to AFSBn-NEA's accountable officer before items were to be issued/received. Once all documentation was in place, arrangements were made for AFSBn-NEA in conjunction with the receiving organization to conduct the equipment issue process that includes a joint inventory, equipment inspection and signing of hand receipts.

PR-19 proves Army watercraft is ready at a moment's notice. The goal is to draw the BD within a 48-hour period, but APS-4 was able to issue the BD to 7th TB (X) in under 24 hours. This solidified AFSBn-NEA's systems and procedures for issuing equipment for incoming units in case of potential conflicts. Upon the completion of the BD draw, personnel went straight into COSIS and assisted AFSBn-NEA through the

exercise of multiple platforms. Personnel from 7th TB (X) received valuable training on different platforms of the same series Army Watercraft Systems (AWS) they are assigned to at home station. This served to broaden their overall watercraft experience because no two platforms are exactly the same. Concurrently, Soldiers cross-trained on different platforms to increase licensing readiness within the unit.

With any exercise, events are often time-compressed, and this was the case with PR-19. During the course of the BIREP, 7th TB (X) assisted AFSBn-NEA in completing 60 days of work in just a 10-day period. Soldiers operated

and stressed 10 platforms in support of APS-4 COSIS initiatives which validated readiness levels for the INDOPACOM region. 7th TB (X) and AFSBn-NEA Soldiers' efforts during the BIREP and COSIS helps strategic planners understand the capabilities of AWS for contingency operations.

While supporting APS-4 initiatives, 7th TB (X) Soldiers were able to conduct internal mission essential task (MET) training to maintain their operational readiness. This dedicated time to train was a force multiplier for both units, as it provided unconstrained time to perform within their military occupational specialties, which consists of

88K (Watercraft Operator), 88L (Watercraft Engineer), and 88H (Cargo Specialist). The BD completed 12 lifts which increased a junior crew's proficiency on the platform while simultaneously exercising a strategic asset showing the platform's readiness to assist combatant commanders as needed. The ST crew exercised two platforms, which enabled AFSBn-NEA to expedite their annual usage process.

Throughout the 10 days of training, the ST crews conducted hip, stern, and push tow training. The most impressive feat was the movement of one Landing Craft Utility (LCU-2000) within the bay which helped build the crew's



*Soldiers assigned to 331st Transportation Company, 11th Transportation Battalion, 7th Transportation Brigade (Expeditionary), set a modular warping tug gangplank during a combined logistics over-the-shore exercise at Anmyeon Beach, Republic of Korea (ROK). The exercise is designed to train U.S. and ROK service members to accomplish vital logistical measures in a strategic area while strengthening interoperability and reinforcing their alliance. (Contributed photo)*



confidence. It was a confidence booster because the LCU is one of the largest pieces of watercraft and this stressed the ST to support maintenance objectives for AFSBn-NEA. The MWT crews conducted sea trials of six MWTs, and one SLWT which helped AFSBn-NEA by putting over 50 hours on the vessels and more effectively stressing their capability. The crews conducted hip tow training and allowed their junior Soldiers to operate the vessels. This helped them learn systems and functions for when they eventually become coxswains. The crews loaded mini-containers on the MWTs and transported them across the bay to exercise pier side operations. The MWT crews also helped AFSBn-NEA personnel break down MWTs while dry docked, and Soldiers will be able to use these techniques at the 7th TB (X)'s home station of Fort Eustis, Virginia, if the need arises.

The support from AFSBn-NEA, and U.S. Army Pacific Command (USARPAC) provided a great training opportunity for 7th TB (X) Soldiers and showcased AWS capability. At the same time, AFSBn-NEA was able to exercise its issue and draw procedures, and conduct COSIS in an expedited amount of time for multiple platforms, which freed them to conduct maintenance on other items which needed more attention.

In the end, this exercise proves the relevancy of AWS. The capability these platforms bring to the fight is astronomical. If a downed LCU needs to be recovered, an ST can salvage it. The BD has the capability to save the DOD millions of dollars a year in contracted lift costs. The MWTs are the core behind moving causeway pieces in support of Joint Logistics Over-The-Shore (JLOTS). AFSBn-NEA BIREP and COSIS allowed 7th TB (X)

Soldiers to gain valuable experience, while saving both time and money for APS-4. In the future, this exercise should be expanded to include LCU, LCM, and actual causeway pieces to fully exercise all equipment and provide additional training opportunities for Soldiers. The key is unencumbered training days, and AFSBn-NEA is able to provide this to 7th TB (X) Soldiers while simultaneously assisting AFSBn-NEA's overall objectives.

**Capt. Joseph Waicunas is a logistics advisor for the U.S. Military Training Mission to the Kingdom of Saudi Arabia. He has served as company commander of 73rd Transportation Company (Floating Craft) where he contributed to numerous prepositioned stock draws and joint logistics over-the-shore operations. He completed a Master of Arts degree in international relations, with a concentration in conflict resolution. He has completed the Logistics Captains Career Course, Theater Sustainment Planners Course, and National Training Center Observer Coach/Trainer Course.**

**Chief Warrant Officer 3 Matthew Sabo is marine maintenance officer for Army Prepositioned Stock 4 (APS-4) at Watercraft Equipment Base, Yokohama North Dock, Japan. He is responsible for maintaining oversight of forward-based watercraft assets critical to U.S. Indo-Pacific Command and U.S. Army Pacific strategic, operational, contingency, humanitarian, and disaster-relief mission requirements.**

**Photo on page 72: Sgt. Christian Mashtare, a coxswain assigned to 331st Transportation Company, 11th Transportation Battalion, 7th Transportation Brigade (Expeditionary), guides his vessel in to place as watercraft operators, Pfc. Cliff Taylor and Spc. Zachary Brickner, prepare to hook the vessel to a winch in order to reset the anchors during a combined logistics over-the-shore exercise at Anmyeon Beach, Republic of Korea (ROK), July 3, 2015. The exercise is designed to train U.S. and ROK service members to accomplish vital logistical measures in a strategic area while strengthening interoperability and reinforcing their alliance. (Photo by Staff Sgt. Chris Perkey)**



Contractors transfer a small tug boat from wet storage to a hard stand using a barge derrick during a combined logistics over-the-shore exercise at Anmyeon Beach, Republic of Korea (ROK). The exercise is designed to train U.S. and ROK service members to accomplish vital logistical measures in a strategic area while strengthening interoperability and reinforcing their alliance. (Contributed photo)







# DEFENDING the Command Post

## *Training a Division Headquarters for Base Defense and Convoy Live Fire*

■ *By Maj. Kevin Krupski*

The same scene occurs in every division, corps, and service component command as eager iron majors await notification of their key developmental assignment. As thoughts of armor or engineer battalions dance in their heads they receive notice of their next job: The headquarters and headquarters battalion (HHBN). The near universal response to this is: “What is a HHBN?” Many officers train to work on a division staff, but few realize they may have to run the staff that supports the staff.

The Army’s focus on readiness centers on the Decisive Action Training Environment (DATE). Divisions and corps expend a great amount of organizational time, energy, and resources on training plans to develop their staffs to synchronize the warfighting functions across their formations. To that end, the Army requires that units evaluated in warfighter exercises conduct their training under “field conditions.” However, every unit has different definitions of that requirement. Additionally, the Mission Command

Training Program (MCTP) lacks any emphasis on the evaluation of how the staff is able to maneuver and protect itself outside of the warfighter simulation. That is typically a task left to the HHBN and subordinate companies.

This article argues that tactical and operational headquarters units must incorporate HHBN collective training tasks into their training plan in order to properly train as they fight as they focus on the DATE scenario. What follows is a summary of how the 3rd Infantry Division trained for Warfighter 19-02 as well as the HHBN’s convoy and base defense live fires. Based on those experiences, I identify significant lessons learned and offer an integrated training strategy to connect operational staffs to the tactical scenarios they will experience.

### **What is an HHBN?**

All division, corps, and Army echelons have a HHBN, although the structure for each echelon’s headquarters battalion differs (FM 3-94, THEATER ARMY, CORPS, AND DIVISION OPERATIONS,

21 April 2014, 1-8). At all levels, the HHBN receives direction from the chief of staff.

At the corps level, the battalion provides “communications, transportation, and medical support to the corps headquarters. The battalion’s personnel and equipment support the main command post, tactical command post, and mobile command group. The battalion provides administrative (including the Uniform Code of Military Justice) and life support to the additional resources assigned or attached to the corps headquarters—such as a band, security assets, and joint or interagency augmentation—as required” (FM 3-94, THEATER ARMY, CORPS, AND DIVISION OPERATIONS, 21 April 2014, 4-16).

The division-level HHBN provides similar capabilities as the corps HHBN. Based on the current structure of a division HHBN, if you look at the personnel numbers, you will notice that the HHBN is a shell of an actual battalion staff. The companies are similarly short-staffed, and most personnel in the battalion are

actual members of the division staff. In addition, there is no “support” company, so the battalion must rely on external support to complete most sustainment functions.

There are two companies that encompass the entire division staff: The Headquarters Support Company (HSC) and the Signals, Intelligence, and Sustainment Company (SIS). The HSC “provides sustainment support and commands the local security section provided by an outside organization ... is designated as the headquarters commandant for the deployed contingency command post ... is responsible for administrative and sustainment support for the headquarters as well as planning and commanding the access control, perimeter defense, and reaction forces” (FM 3-94, THEATER ARMY, CORPS, AND DIVISION OPERATIONS, 21 April 2014, 2-19).

The HHBN and its subordinate elements are conduits of support, capable of limited sustainment functions but heavily reliant on external assets to properly sustain division command posts. According to modified table of organization and equipment (MTOE), all Soldiers and equipment are assigned a role in either the main or tactical command post, to include the maintenance sections. To the extent that the HHBN is capable of providing support, it will necessarily take Soldiers already assigned command post tasks to execute those functions in a secondary role.

### **Warfighter 19-02**

The 3rd Infantry Division conducted three command post exercises (CPXs) and a warfighter exercise between June and November 2018. This training path offered multiple opportunities to establish the division’s command posts. In each exercise the division deployed three command posts: Division Main (DMAIN), Division Tactical Command Post (DTAC), and Sustainment Area Command Post (SACP). Each command post maneuvered independently in the Fort Stewart, Ga., Training area.

Providing mission command for three command posts is beyond the organic capability of the DMAIN. The division

assigned a maneuver company/TACON to HHBN to provide additional protection capabilities, with a platoon attached to each command post. This is a doctrinally acceptable solution since “The division tasks a subordinate unit to secure the main and tactical command posts as required” (FM 3-94, THEATER ARMY, CORPS, AND DIVISION OPERATIONS, 21 April 2014, 6-3). HHBN then assigned a company to co-locate with each command post: HSC with DMAIN, SIS with the SACP, and the maneuver company to the DTAC. The battalion headquarters remained with the DMAIN. This configuration allowed increased situational awareness and rapid reaction to sustainment issues across the command posts.

***Divisions must take the time to train their Headquarters and Headquarters Battalions (and other support battalions) with the same vigor as their combat battalions.***

The warfighter experience identified many areas to improve. First, while the maneuver company was beneficial, that combat power is

better utilized in other areas. The division needed to better protect itself with organic assets. Doing so requires slowing of the command post operations to allow sustainable work/rest cycles. Second, tactical movement and occupation of command posts is not an evaluated event of a warfighter, but properly moving chalks and conducting occupation of areas would take much longer than current training allows.

### **Collective Live Fire Training**

A HHBN is required to conduct a base defense live fire exercise once every two years, and a convoy live fire annually. After Warfighter 19-02, the HHBN began training for a combined base defense and convoy live fire exercise that focused on the protection of the DMAIN. The training scenario directed the unit to establish the DMAIN in a “consolidation area” and then begin steady state operations, to include convoy logistics patrols against a dedicated OPFOR. This allowed HSC and SIS to each conduct iterations through a convoy live fire lane. After that, the OPFOR attacked the DMAIN, prompting a base defense that incorporated indirect fires, attack aviation, and aerial medevac. At the completion of the base defense, the DMAIN was forced to “jump” and move the entire element through the convoy live fire lane. HHBN executed dry, blank, and live iterations of each task, in day and night conditions,



which proved to be a very grueling pace of operations.

The execution of the training event was an opportunity to stress systems and identify training and equipping shortfalls to improve. The first area was Soldier-level training, the second area was small-unit leader capabilities, and the last was coordination of mission command.

A problem of any headquarters unit is finding time to simultaneously execute primary functions of a staff and train on individual and collective warfighting tasks. The same Soldiers that the headquarters relies on to man its most casualty producing direct fire weapons must also repair vehicles in the motor pool, run company supply rooms, conduct intelligence analysis, and execute other essential jobs. Not only do these tasks consume much of their time, but they also require training to maintain proficiency. Therefore, sequestering dedicated time and proficient leaders to conduct individual-level training requires a deliberate plan that garners support throughout the division staff.

Mid-level leadership experiences the same stressors as individual Soldiers: balancing competing demands. In an HHBN, many NCOs are very proficient at their occupational specialty but possess varying levels of expertise leading Soldiers in a tactical environment. Dedicating time to developing these leaders on the capabilities of their weapons systems, conducting proper checks on their Soldiers, reporting section status, and so on, will pay dividends later.

The last difficulty was coordination of all warfighting functions in an organization that spans the division staff across two companies and incorporates multiple enablers. The HHBN was dual-hatted as the higher command and exercise control for the exercise, which proved to be a stretch beyond its capabilities. In reality, the HHBN could only do one role, meaning that a full base defense requires higher echelon involvement.

## Recommendations

The combination of a warfighter train-up with a live fire exercise offered many lessons learned for how the division can better exist in real space. The following recommendations focus on an ideal training path that addresses the major lessons from these training events.

Divisions must take the time to train their HHBNs (and other support battalions) with the same vigor as their combat battalions. A battalion planning its own base defense is like asking a platoon to plan its own platoon live fire. A battalion base defense requires a division level order assigning enablers and opposing forces as well as evaluators and controllers. Ideally, the HHBN trains to a “run” as the division begins the “crawl” phase of a warfighter train-up. This limits distractors for the training of the division Mission Essential Tasks so the division staff can focus on its core functions. Better yet, the optimal training path that could take advantage of a multi-echeloned training opportunity would combine the live fire exercise (convoy or base defense) with CPX I, seamlessly combining the respective “run” and “crawl” events of each echelon.

The current guidance for warfighter exercises are for units to conduct them in a field environment. However, there is little detailed guidance beyond that and there is no evaluation of tactical security by an external evaluator. Assigning personnel to evaluate the tactical security of divisions during movement, occupation, and displacement will force units to better incorporate tactical plans into their training plans. Units will react to what observers inspect. Poor command post security at the National Training Center can devastate a headquarters and units at brigade and below place a large emphasis on their protection. Surely a similar inject in warfighters would encourage division behavior.

Properly trained HHBNs generate options for the commander and efficiently utilize resources to maximize capabilities in the deep and close fights. The staff and the battalion can work hand in hand to ensure that while increasing readiness of the unit and its Soldiers.

***Maj. Kevin Krupski is executive officer for 1st Battalion, 64th Armor Regiment, and previously served as operations officer for 3rd Infantry Division Headquarters and Headquarters Company. He holds a bachelor's degree from the United States Military Academy, as well as a master's degree and doctorate in public administration from Maxwell School of Citizenship and Public Affairs, at Syracuse University. He is a graduate of Infantry Basic Officer Leaders Course, Maneuver Captain's Career Course, and Command and General Staff College.***

# Raising the Bar

*Army Master Logistician Certificate Program offers accredited professional development.*

■ *By Bill Moore*

In my role as the Army's Functional Chief for Army Civilian Logisticians—over 55,000 professionals around the world—I strive to “raise the bar” on the skills and professionalism of our civilian workforce. I also want to ensure our professionals get properly credentialed for these unique skill sets. Along these lines and through the great efforts of our Civilian Logistics Career Management Office (CLCMO), I'm proud to announce we have established the Army's “Master Logistician” Certificate Program and have received national accreditation by the American National Standards Institute (ANSI). This great program, with ANSI's approval, raises the bar of professionalism for our Civilian Logisticians and provides the Army with professional multi-functional logisticians by documenting excellence in education, training, and career experience in support of the Army's critical logistics missions.

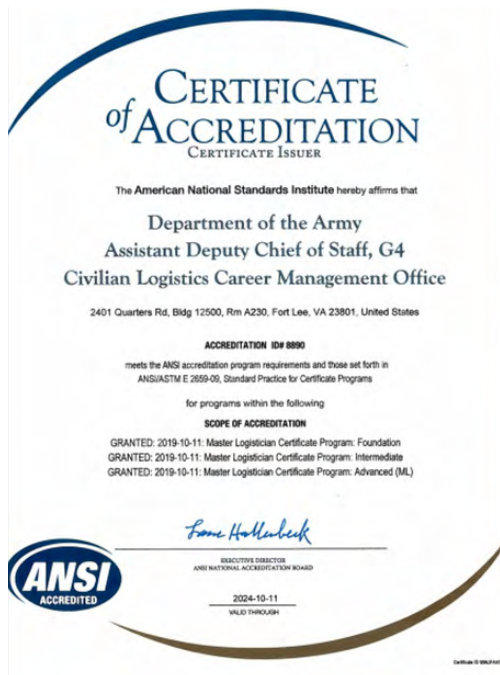
This effort began in 2017, when I authorized the launch of the Army's Logistics Management Specialist

Certificate Program in partnership with the University of Alabama, Huntsville. Given the great interest in the program, we re-engineered the intent and moved the program to Army Logistics University (ALU) in 2019, simultaneously pursuing ANSI certification. Along the way, we renamed the program to be the Army's “Master Logistician” Program which aligns with the capabilities the program is designed to deliver: multifunctional logisticians who are Masters in their craft. The program has three tiers, with training courses, years of experience requirements, and recommended education levels at the Foundation, Intermediate, and Advanced Levels. Logisticians who earn a Master Logistician Certificate at the Advanced Level will be a member of the Army's Logistics Talent Pool and are eligible for Master Logistician designated positions across the Army enterprise IAW civilian personnel rules and regulations. We currently have careerists at all grade levels taking advantage of this great professional development opportunity.

So as you contemplate the question we all ask ourselves, “How can I be more successful in my career?” I encourage you to think about the proper mix of education, training, and experience, based on your personal preferences—the work you like to do! And remember, the most important person managing your career is you; remain committed, maintain your character, and strive to improve your competence. The Master Logistician certificate is a great way to get better and to stand out as selecting officials choose individuals for our most important jobs. Finally, if you are a career professional, you need to be a lifelong learner; don't fall into the trap of avoiding training opportunities due to ego or believing you are already the expert ... the world is moving too fast not to learn!

I applaud professionals like Joe Mata, a senior Logistics Management Specialist in HQDA, with many years of experience as a logistician. In spite of already being one of the Army's premier logisticians, he just spent the last year working hard to





Turan Ayvaz, Ph.D. (right), director, Certificate Accreditation Program, American National Standards Institute National Accreditation Board, presents Bill Moore with the certificate of accreditation for the Army Master Logistician Certificate Program during the Association of the U.S. Army annual meeting, Oct. 11, 2019. (Photo by U.S. Army)

meet all of the “Master Logistician” certificate requirements. He wanted to improve his skills and earn the formal credential. With all of his years of experience, you might ask: why did Joe work so hard to obtain this certificate? Joe will tell you, he believes that through continuous learning we can improve ourselves and the organizations that we are part of. He believes, as we all should, in lifelong learning, and mentors many careerists to improve themselves, so why shouldn’t he? He completed cutting-edge classes at ALU, Defense Acquisition University, and online to earn the title Master Logistician, the highest tier in the three-tier program. Yet Joe is only the second person in the Army to earn the highest title. The Army needs more Master Logisticians, like Joe, who can expertly perform Army logistics in the future operating environment.

Today, the Army is over 55,000 Civilian Logisticians strong, the largest number of civilians in any of the Army’s 31 career programs. We provide continuity, leadership, expertise, and depth. We execute daily logistics operations and support. We improve readiness, modernize Army equipment, and reform the Army so it continues to improve, delivering high readiness at optimal cost. Most of all, we are partners to those in uniform—always committed to supporting their missions, no matter where or when they are called to duty. We, as Army Civilians, serve those who serve our nation in uniform.

So what’s next in our quest to continue raising the bar? We are looking for better ways to maintain our Master Logisticians, over time providing opportunities for continuous learning even after our

professionals receive their certificate. And, we are exploring options to potentially develop a similar program for military logisticians.

Additional information on the Master Logistician Certificate Program and ANSI Accreditation, which is managed by Army’s Civilian Logistics Career Management Office, CASCOM, Fort Lee, can be found at: <https://www.milsuite.mil/book/groups/civilian-logistics-career-management-office-cp-131724/projects/os-0346-certificate-program>.

**Bill Moore was appointed to the Senior Executive Service (SES) in October 2006 and is currently the HQDA Assistant Deputy Chief of Staff, G4 (Tier 3), responsible for Army logistics plans, policy and programs. In this role, he serves as the Army’s leading expert and foremost authority in logistics.**

# SDDC's 8 READ

■ *By Maj. Gen. Stephen E. Farmen*

**T**he Military Surface Deployment and Distribution Command exists for one purpose—to move, deploy, and sustain the Armed Forces to deliver readiness and lethality at speed. We execute this purpose as a key member of the Joint Deployment and Distribution Enterprise (JDDE), integrating, synchronizing, and providing global deployment and distribution capabilities in support of the nation's objectives. As the Army Service Component Command to, and operationally controlled (OPCON) by, the U.S. Transportation Command and an administratively controlled (ADCON) major subordinate command of Army Material Command, SDDC is the global intermodal surface connector.

SDDC links the JDDE and AMC's Matériel Enterprise at echelon, connecting surface warfighting requirements through distribution network nodes to the point of need to responsively project power and deliver desired effects in support of Combatant Commands and the Total Joint Force.

With nine Total Force transportation brigades geographically located throughout the world, the Surface Warriors of SDDC—including 2,400 active duty Soldiers,

Department of the Army Civilians and local national employees, along with 2,700 operationally controlled Reserve Component Soldiers from the Deployment Support Command—are globally postured and warfighter focused.

SDDC's provides mission assurance through effective integration, synchronization and mission command of eight readiness levers: Strategic Seaports; Rail; Vessels; Trucks/Highways; Ammunition Ports; Containers; Total Force Integration; and Analysis and Systems. SDDC's readiness levers connect combat power and lethality to conveyances, link the global distribution network to the warfighter, and provide a lens through which the command evaluates operational effectiveness, comprehensive readiness, capability, capacity, and risk in order to enable dynamic force employment, warfighting readiness, and lethality at scale.

## Strategic Seaports

Strategic seaports are the vital nodes and connectors of our nation's transportation network and play a critical role in the Department of Defense's ability to deploy forces and equipment globally. There are 23 designated strategic seaports (17 commercial and six military) in the Strategic Seaport Program.

Designation as a strategic seaport is based on anticipated requirements related to plausible major contingencies, emergencies or disasters, and war. SDDC synchronizes and coordinates DOD efforts at strategic seaports and ensures their infrastructure supports the use of heavy equipment, deep water access for large ships, access to rail and highway, security, matériel handling equipment, and cyber infrastructure to allow the flow of equipment and sustainment cargo. In addition to our continental U.S.-based strategic seaports, SDDC serves as the single port manager for more than 100 overseas seaports. Continued investment in the overseas rotations of our Armed Forces, along with a vibrant Strategic Seaport Program, will enable SDDC's transportation brigades to continue to effectively 'pitch' and 'catch' DOD Combat Power across the Atlantic and Pacific Oceans to deliver readiness and lethality around the globe. By diversifying the use of our ports, we keep them vibrant and open the aperture for sustained readiness.

## Rail

Warfighting capability relies upon rail, the heavy-lift backbone of power projection. Rail transportation moves 70 percent of the DOD's unit equipment from power projection platforms to seaports of embarkation. The Strategic Rail Corridor Network, or STRACNET, and connector



# BUSINESS LEVERS



*A wheeled vehicle assigned to 3rd Infantry Brigade Combat Team, 25th Infantry Division, rolls off USNS Brittin (T-AKR-305) vehicle cargo ship during port operations at Port of Port Arthur, Texas, Sept. 3, 2019. The operations were conducted as part of the unit's deployment to the Joint Readiness Training Center at Fort Polk, La. (Photo by John Orrell)*

lines serve more than 120 defense installations and sites of military importance throughout the continental United States. SDDC collaborates and synchronizes with six Class I and numerous short-line railroad companies to move DOD equipment and supplies. The Railroads for National Defense Program, managed by SDDC's Transportation Engineering Agency, ensures the readiness capability of the national railroad network to support defense deployment and peacetime needs by integrating defense rail needs and civil sector planning affecting the nation's railroad system. The current

commercial rail capacity of almost 48,000 rail cars, along with nearly 1,900 DODX rail cars and DOD's Defense Freight Railway Interchange Fleet consisting of more than 2,000 rail cars, provides enough capacity to meet requirements associated with major contingency deployments.

## Vessels

Vessels connect warfighting requirements to sealift and are a key enabler of U.S. power projection. Our nation's 175-ship strategic sealift fleet, comprised of government-owned and contracted commercial ships, moves

approximately 90 percent of unit equipment and nearly all sustainment cargo during deployment operations in support of major contingencies. SDDC coordinates and synchronizes strategic sealift capabilities with deploying units. Joint Force deployment requirements are heavily dependent on having adequate overall sealift capacity as well as timely access to that available capacity to enable quick response to crisis and contingency scenarios. An aging sealift fleet and shrinking commercial capacity threatens our future ability to provide timely delivery of combat-credible military forces to the point of



*A Soldier guides a tank assigned to 1st Armored Brigade Combat Team, 1st Infantry Division, as it's loaded on board a railcar at Port of Antwerp, Belgium, Jan. 24, 2019. The unit deployed to Europe in support of Operation Atlantic Resolve. (Photo by John Orrell)*

need. A comprehensive recapitalization plan to replace aging ships is important to meet national security requirements and avoid a loss of government-owned sealift capacity.

## Trucks/Highways

Our nation's highways are the intermodal connectors that provide the strategic link necessary for the DOD to deploy military forces from power projection platforms to seaports of embarkation. Collectively designated as the Strategic Highway Network, they connect important military installations to each other and with strategic seaports, providing an effective U.S. transportation infrastructure network. SDDC provides shipping rates, routing and carrier performance quality control of authorized and qualified carriers transporting DOD

surface cargo. Approximately 700 commercial motor carriers, with a capacity of over one million trucks, are registered with the DOD.

## Ammunition Ports

SDDC owns and operates two Military Ocean Terminals that are critical to supporting the DOD's wartime ammunition throughput requirements. Military Ocean Terminal Concord (MOTCO), California, on the west coast and Military Ocean Terminal Sunny Point (MOTSU), North Carolina, on the east coast are the largest strategic ammunition seaports in the world in terms of net explosive weight capability and are considered the "crown jewels" for delivering lethality. No other facilities or combination of facilities on either coast can match the ammunition throughput

capacity and net explosive weight limits MOTCO and MOTSU provide to meet global wartime ammunition out load and distribution requirements. When needed, Naval Magazine Indian Island, Washington, is available to supplement west coast ammunition requirements. Continued investment in the infrastructure of MOTCO and MOTSU, including security, personnel and the maintenance of cranes and supporting rail lines, is vital to underwriting their unique mission set of supporting Joint Force lethality around the globe.

## Containers

The Joint Force is deployed and sustained via containers. Global Container Management is one of SDDC's core competencies. SDDC plans, organizes, directs, controls,



and executes the functions and responsibilities required to provide for positive and effective use of more than 300,000 DOD and Military Department-owned, -leased, or -controlled containers. This includes functions and responsibilities of life cycle assets and operational management to support the full spectrum of operations. The availability of serviceable containers to support unit deployment and ammunition shipments remains a challenge. Continued funding of the Army's centrally-managed container fleet is critical to maintaining capacity.

## Total Force Integration

SDDC's Total Force is made up of trusted professionals from the active and Reserve components, government civilians, local nationals and commercial industry. The integration of SDDC's active force with the Deployment Support Command, its operationally controlled Reserve force of 2,700 Surface Warriors, as well as the U.S. Army Reserve Command and National Guard Bureau, ensures wartime requirements can be met and is critical to SDDC's success. With four Reserve transportation brigades and 12 Reserve transportation battalions, the DSC is the "secret sauce" to our readiness and brings a highly trained and ready Reserve transportation capability to the fight that can be rapidly integrated into operations. It is the essential component that allows SDDC to accomplish its mission. We must continue to leverage the capabilities of our Total Force to ensure mission readiness while ensuring active and Reserve component capabilities remain integrated to meet future

requirements in support of the Joint Force.

## Analysis and Systems

To accomplish our mission, data and systems must be effectively used to support operational planning and decision making. Simply put, data and analytics matter. The employment of sophisticated analysis, modeling, and simulation software allows detailed assessment of transportation plans to include throughput capability, node and route effectiveness, theater movement asset requirements, and potential bottlenecks or constraints. Comprehensive, end-to-end analysis of transportation feasibility, throughput, force closure profiles, and infrastructure assessments ensure effective support of combatant commander requirements. SDDC's interoperable surface transportation systems enable the movement, deployment and sustainment of forces across the JDDE while ensuring system protection, network security and defense from a cyber attack.

## The 4th Component – SDDC's Commercial Carriers and Industry Partners

To effectively move, deploy and sustain the Armed Forces, SDDC must build and maintain strong and lasting relationships, partnerships and friendships (the "three ships") with our "4th Component" – SDDC's commercial carriers and industry partners. Their expertise, capabilities and professionalism are an indispensable element of SDDC's success. Continued support, coordination and synchronization with our commercial carriers and

industry partners is vital to SDDC's ability to deliver readiness and lethality in support of our nation's objectives. They are not just partners, they are on the team.

## Mission Command – Integrating, Synchronizing and Coordinating

Providing global deployment and distribution capabilities to deliver and sustain the Armed Forces in support of our nation's objectives requires strategic execution. SDDC must continue to operate "left of boom," anticipating requirements, making appropriate decisions and then taking action. This necessitates constantly looking for leading indicators, getting inside decision cycles, tracking the metrics that matter, holding ourselves accountable to warfighting readiness and to the desired warfighting effects of the combatant commands. Harmonizing our efforts around the eight readiness levers ensures comprehensive readiness in these lanes and is essential to accomplishing SDDC's purpose - to move, deploy, and sustain the Armed Forces to deliver readiness and lethality at speed.

**Maj. Gen. Stephen E. Farnen is the 21st commanding general of U.S. Army Military Surface Deployment and Distribution Command, the Army service component command to U.S. Transportation Command and a major subordinate command to U.S. Army Materiel Command. He holds a Bachelor of Arts degree in history from University of Richmond and was commissioned into the Transportation Corps. He holds a master's degree in national security and strategic studies from the U.S. Naval War College. His military education includes Transportation Officer Basic and Advanced Courses and the U.S. Naval Command and Staff College. He completed a Senior Service College Fellowship as the first military fellow to attend Massachusetts Institute of Technology: Center for Transportation and Logistics.**






# DEMOBILIZATION PLANNING

**Examination of allied logistical challenges at end of World War II offers important lessons**

■ *By Canadian Army Sgt. Simon D.H. Wells*

*The transport Maui as she docked in New York with several thousand troops from all parts of the country aboard her. (Photo courtesy of U.S. National Archives)*





The unprecedented scale of World War II resulted in an equally exceptional amount of resources left in multiple theaters at the end of the war. The lack of Allied demobilization planning is a valuable general case study for logisticians seeking best practices and points for improvement for strategic planning. Three key challenges undermined the Allies demobilization efforts after World War II. First, the Allies struggled with planning variables that harmed their future capabilities. Second, the systems they employed to affect demobilization plans also lacked flexibility or coordination and suffered from planning deficiencies. Third, human resource challenges caused significant problems in forces that remained static overseas.

### **Planning variables: timing and consequences**

Logistical planning for demobilization of the vast human and technical resources in the European theater at the end of the World War II was shortsighted. American planners predicted the European war would end in late 1944 and the Pacific war would end as late as 1947, necessitating an exodus of forces from Europe into the Pacific to continue fighting in that theater. They were surprised by the sudden need to repatriate their joint forces after the atomic bomb-driven victory over Japan. Canada, on the other hand, began demobilization planning in December 1939 because of the incredible size of forces being deployed; however, the range and scale of planning assumptions meant that no operational plan could be

developed until the outcome of the war was clearer.

Finding the appropriate window to begin demobilization planning is clearly challenging. When planning starts too late or is reactionary, there is an increased risk of operational and human resources problems; however, if started too early, there will be no realistic assessment of the end state available. For example, Canadian demobilization planning in World War II seemed to ignore the potential for battle damage to transport craft and non-serviceability, which would constrain redeployment at the end of the war. Additional or reserve transport capacity must therefore be prepared ahead of demobilization.

Even the most skilled logisticians and planners may not have been able to foresee the challenges of re-mediating surplus real property and equipment. At the end of the war, the United States was responsible for over 30,000 installations on 2,000 sites across the globe. The scale of the logistical task at hand was extraordinary: the United States alone was responsible for redeployment of 1.2 million personnel and 5 million tons of material. There were long-term effects on the strategic capabilities and readiness of Allied forces caused by demobilization. The Royal Canadian Navy's (RCN) 278 hulls needed to be repatriated, repaired, and repurposed for the new vision of the RCN – a formidable task for a battle-weary service that was a leader at sea at the time. The United States Armed Forces' financial and human resource demobilization

reduced itself to a size that was below its needs for maintaining an effective force and for planning for future engagements. This became evident quickly as the Cold War emerged and the Allies recognized a pronounced need for major force generation in continental Europe opposite the newly expanded Soviet Union. Demobilization planning must begin as soon as a likely and desired end state is identified, and capabilities and resources ideally must be allocated to independently support demobilization.

### **Rigid and unilateral systems**

The systems used to facilitate demobilization after the World War II were characteristically bureaucratic. The Allies variously attempted to consolidate their forces either quickly or in an orderly fashion, but did not seem to focus on both. Canadian personnel demobilization was complicated by their aversion to a points system, based on the dominance of volunteers over draftees in their forces. Nonetheless, the Canadian approach may have been the most comparatively efficient of the Allies by the numbers: the RCN reported at the end of fiscal year 1945/1946 that 76,905 all ranks had been discharged. The Royal Canadian Air Force released 147,263 members, and the Canadian Army had released 342,361 (33,265 were engaged in compulsory service). Initially, British demobilization after the war was also rapid: 3,000 releases occurred per day in the first two months, accelerating after the atomic bombs were dropped on Japan, signaling that mass forces were no longer needed to invade.

Despite their extraordinary success in returning volumes of service members home, the urgency of British and American demobilization left a crucial personnel gap of experience and trade skill. Historically, units had been deactivated as a whole, whereas this effort was individual-based, leaving disengaged draftee replacements to take the places of hardened, experienced veterans. A longer planning timeline may have facilitated more innovative repatriation systems that could have prevented such a serious atrophy in institutional knowledge.

Systems, by nature, are constantly expanding and interconnected, and are therefore susceptible to error. For example, in Canada's case, transportation capacity issues impacted the speed with which service members returned. The final plan for Canadian personnel demobilization was withdrawal through checkpoints across continental Europe: the 1st Canadian Army disbanded, followed by its Divisions and their residual forces, and moved through Nijmegen, The Netherlands to England for a final return trip to Canada. This approach intended to use existing infrastructure "to simplify planning by reversing the reinforcement flow and retaining the logistical, administrative, and command staff already in place", as inflows of returning personnel increased by over 60 percent to 50,000 personnel in holding facilities at any time. Unfortunately, long-term Canadian planning had apparently overestimated transportation capacity. While much of the withdrawal had worked effectively for it, Canada had to bid for "tonnage" through the Combined Chiefs of Staff's Allied Shipping Pool to execute the final leg of the trip home, so Canadians were prioritized below the millions of Americans overseas, returning Allied prisoners of war (rightfully so), and interned civilian nationals.

## Human resource management challenges

As every senior non-commissioned officer knows, the backbone of a military is its personnel. Effective management of personnel is still necessary in periods of low operational tempo. At the end of the World War II, morale deteriorated

amongst deployed soldiers rapidly. Over six months after victory over Japan, British deployed personnel's morale and discipline had deteriorated so badly that a noticeable increase in service offenses was observed. When the Bevin plan (the British point system for repatriation and discharge) was amended, delaying and confusing returns for many, over 50,000 Royal Air Force personnel took the extraordinary and mutinous step of striking between 1945 and 1946. The sheer scale of the strikes appears to have prevented charges from being laid against the airmen, but their frustrations were understandable: the average British serviceman didn't return home until 1946, and total redeployment wasn't complete until 1947.

Morale was somewhat better for Canadians, though not drastically so. Minister of Veterans Affairs Ian MacKenzie visited several bases in The Netherlands in 1945 to find split opinion on the unit system of demobilization versus the point

system, and he acknowledged "a sense of grievance among the troops here that the government is not carrying out its promise to soldiers that the policy of "first in, first out" would be followed." Minister MacKenzie had actually attempted to support reintegrating veterans for

five years prior to the end of the war, starting a veteran's division in the Department of Pensions and National Health in December 1940. He recognized the immediate outcomes and long-term impacts of educating veterans, and implemented an education reimbursement program that resulted in a student population of 42-49 percent veterans between 1947 and 1949 at the University of Toronto alone. MacKenzie's approach was forward-thinking and ultimately somewhat successful, recognizing servicemen's and veterans' needs and taking action before they arose, in order to implement human resource management policies and programs immediately when required.

## Observations

Critically evaluating this exceptional case provides us with opportunities to improve logistical planning in future conflicts or operations other than war. The scale and scope

***Demobilization planning must begin as soon as a likely and desired end state is identified, and capabilities and resources ideally must be allocated to independently support demobilization***





Nearly 4,500 Australian soldiers carry banners during a five-kilometer march to protest long demobilization waits on the island of Morotai, Indonesia, Dec. 10, 1945. The protest event is known as the "Morotai Mutiny." (Photo by Ronald Leslie Stewart)

of the World War II makes it a useful case study for logisticians because its consequences are so pronounced.

Senior leaders, strategic and operational planners, and operations staff should include demobilization planning considerations in their consciousness from the very outset of any mission or task, accessing the expertise of logisticians within their or their partners' organizations. Stating a desired end state is not sufficient: logistics should be given a great deal of attention, and risk needs to be identified proactively. The example of Allied forces experiencing skill fade, needing to rapidly force generate to defend against the Soviet Union (and the Korean War), and failing to seamlessly transport soldiers home are examples of logistical consequences affecting strategic objectives.

Coordination with friendly actors and process innovation are also characteristics of strong logistical plans. In the case of Canadians waiting for spots on transport ships to be purchased, a more coordinated approach could have resulted in a more appropriate fleet of ships leased and dispatched. It may have been worth considering innovative solutions such as, for example, immediate cash bonuses for those who wish to release immediately and make their own way home. Such a process might have alleviated both the duty of responsibility over affected soldiers and at the same time prevented the serious human resources concerns of striking service members and plummeting morale.

Logistics – the broad business of

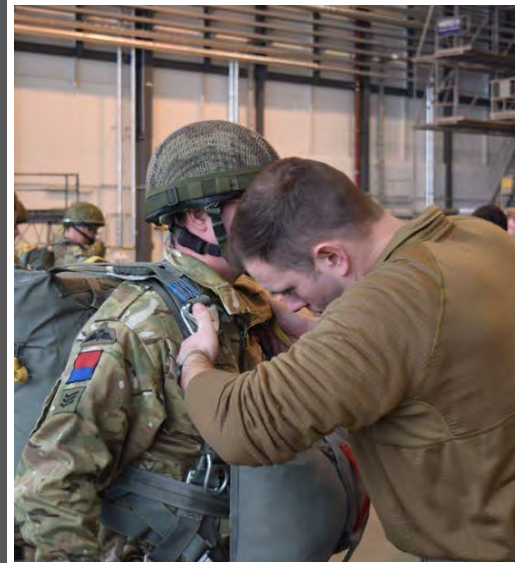
coordinating gaps and needs, staff, equipment, capabilities, resources, supplies, and fleets – should obviously be well-planned. The post-World War II Allied demobilization provides ample opportunity for reflection on current military and paramilitary logistical practices and areas for improvement, and emphasizes the need for constant strategy and process improvement.

**Sgt. Simon D.H. Wells is a member of the Canadian Army, 4th Canadian Division headquarters. He is a graduate of the Bachelor in Military Arts and Science Program at the Royal Military College of Canada, and a human security and peace building graduate student at Royal Roads University. He has served in several roles in the division headquarters, and other units, as a human resources supervisor. He spent approximately two years in federal public service as an operations, planning, and logistics officer in emergency management. Wells is a certified Professional Logistician (P.Log). His area of graduate research is space conflict and escalation norms.**

ISSN 2153-5973  
DEPARTMENT OF THE ARMY  
ARMY SUSTAINMENT  
US ARMY LOGISTICS UNIVERSITY  
2401 QUARTERS ROAD  
FORT LEE VIRGINIA 23801-1705

Official Business

PERIODICALS POSTAGE  
AND FEES PAID  
AT PETERSBURG VIRGINIA  
AND ADDITIONAL CITIES



PIN: 206166-000