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Reception, Staging, Onward Movement, and Integration



Lessons and Best Practices

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U.S. Army Europe Reception, Staging, Onward Movement, and Integration

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Foreword

For close to a decade and a half, U.S. forces deployed on a rotational basis and were not required to exercise critical short-notice, unit-level rapid deployment skills. As a result, the Army's ability to project units rapidly with its full complements of authorized equipment has atrophied.

The time and location of the nation's next major conflict is unknown, but we know we must be ready. To be ready, it is imperative the total force build the collective skills of power projection and large-scale deployment readiness so, if called upon, we can provide a viable land force that is prepared to operate across the conflict continuum.

As a continental U.S. (CONUS)-based expeditionary Army, we must train deployment readiness relentlessly, and practice these skills at the "speed of war." The Army must leverage every training opportunity, such as deployments to and from combat training centers, rotations of forces in support of combatant commanders' theater security and cooperation plans, and emergency deployment readiness exercises.

Bottom line: The Army must build its capabilities and instill a mindset to be ready to rapidly alert, marshal, deploy, and upon arrival in theater, be ready to fight. Installations are the power projection platforms, and deployment readiness begins in the motor pools. Leaders must build unit capacity to marshal and upload equipment at home station, move equipment by rail, line haul, or inland barge, or convoy equipment to any of the nation's 23 strategic seaports.

The successful reception, staging, onward movement, and integration (RSOI) of deploying units is critical to the massing of combat power for the combatant commander. Many entities are involved out front and behind the scenes in a unit's deployment. Strategic enabling commands, including U.S. Forces Command (USFORSCOM), Army Materiel Command (AMC), and U.S. Transportation Command (USTRANSCOM), must practice fort-to-port and port-to-port tasks to rapidly load sea-going vessels to sail combat power to foreign ports of debarkation.

When units arrive, theater enablers, including the Army service component commands, theater sustainment commands, and assistance from allied support agreements, will facilitate deploying units' RSOI tasks, which are key to building and providing ready-to-fight forces to the joint force commander.

While history provides us with experience and a frame of reference, the benefits end there if we do not build upon the lessons learned. Readiness can only be attained through focused effort, continued action, and a relentless desire to master deployment tasks.

The Army may enjoy only a narrow window of opportunity to prepare for the nation's next conflict. The period we are in now will be described as the current generation's interwar years. We do not know when or where the next fight will take place, but as history shows, it will most certainly come, and we must be ready.

Repetition is key, and Army leaders should leverage every unit movement as a deployment training opportunity. Each movement should be viewed as an opportunity to build deployment readiness in the Army's warfighting formations.

By repetitively practicing and mastering the skills associated with deployment and global power projection, the Army will ensure it is ready to deploy, fight, and win when it is called.

A handwritten signature in black ink, appearing to read 'K Ryan', with a horizontal line extending to the right.

MG Kurt Ryan
Commanding General
Military Surface Deployment and
Distribution Command (SDDC)

USAREUR RSOI	
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Introduction

“Arm yourselves, and be ye men of valour, and be in readiness for the conflict ...”

Winston Churchill, Wartime Speech, 19 MAY 1940

Purpose

This bulletin provides lessons and best practices for units deploying to the U.S. Army Europe (USAREUR) area of responsibility (AOR) as well as units supporting (theater and strategic enablers) these deployments. Specifically, it chronicles the deployment of 3rd Armored Brigade Combat Team (ABCT)/4th Infantry Division (ID), located at Fort Carson, CO, to Poland in support of Operation Atlantic Resolve (OAR). The bulletin addresses questions within Army Warfighting Challenge Learning Demand No. 20, Develop Capable Formations. Specifically, it hones in on:

- 20.7 g. Provide equipment, organizational designs, and deployment tactics, techniques, and procedures (TTP) that enable formations to deploy and rapidly transition into operations significantly reducing requirements for reception, staging, onward movement, and integration (RSOI)?
- 20.7 h. Allow maximum integration of improved protection, lethality, mobility, and power generation without negatively impacting deployment or sustainment?
- 20.9. Can the pooling of resources (i.e., transportation assets, fuel, and weapons systems) reduce deployment requirements while enabling formations access to resources to conduct operations of ample duration and in sufficient scale to accomplish the mission?

Its intended audiences are the brigade combat teams (BCTs) that will perform this mission and the sustainers and enablers that will support this type of mission in the future.

3rd ABCT/4th ID faced two key problems. The first was deploying from home station to Poland “fort to foxhole” within the timeline directed by USAREUR. The second was learning to become an expeditionary force. Key factors contributing to this problem were the visibility of a common operational picture (COP), unity of effort, training repetitions, and the mission command and relationships to the units involved.

- Chapter 1 details the activities of the deploying unit and the lessons and best practices gathered from the fort-to-foxhole perspective.

- Chapter 2 provides activities performed by 21st Theater Sustainment Command (TSC) and 16th Sustainment Brigade (SB) as well as their lessons learned and best practices. The reader should understand the 16th SB only had responsibility for preparing logistics support in Poland, while the TSC had overall responsibility for the deployment from the port to Poland.
- Chapter 3 provides the activities performed by Military Surface Deployment and Distribution Command (SDDC) and its lessons learned and best practices. SDDC was responsible for the trans-Atlantic move.

The bulletin will chronicle the unit's movement from "fort to foxhole" while detailing the roles of enablers during the deployment. For instance, SDDC's role in the trans-Atlantic movement of the ABCT, as well as 21st TSC and 16th SB's roles in traversing Europe.

Common Themes

Common themes evolved from visits and interviews with the unit:

- Plan for deployment
- Establish a mission command plan for key nodes
- Conduct rehearsals
- Synchronize sustainment force flow
- Human dimension at key nodes
- Multimodal operation

Background

The U.S. Army has always been a power projection force since becoming a global power. The need to quickly project power into Europe has become more critical with the drawdown of forward stationed forces. The Army is significantly smaller than the force that won the Cold War and Desert Storm but only slightly smaller than the forces used during Operations Iraqi and Enduring Freedom. It is based largely in the U.S., but with a minimal forward presence in Korea and Germany. For now, the Army will deter aggression primarily through its ability to rapidly project lethal, versatile, expandable, and sustainable forces to accomplish objectives rapidly with minimal casualties.

During major contingencies, forces will deploy from power projection platforms within the U.S., or from forward bases. The first forces to deploy secure lodgment for receipt of follow-on forces. Initial forces generally arrive by air in tactical configuration. They may be followed by personnel transported by air who draw pre-positioned equipment. Most Soldiers are transported by air, but the majority of equipment travels by sea. Historically, 90 percent of all cargo by weight has been transported by sea, with the remaining 10 percent transported by air. These percentages have remained relatively constant in both major and lesser regional contingencies.

Following the Russian intervention in the Ukraine at the beginning of 2014, USAREUR-led land forces continued efforts on behalf of the U.S. military by conducting enhanced multinational training and security cooperation activities with allies and partners in Eastern Europe. These multinational training and security cooperation activities take place in Estonia, Latvia, Lithuania, Poland, Romania, Bulgaria, and Hungary and are part of OAR.

Operation Atlantic Resolve demonstrates the U.S. commitment to the security of NATO allies on air, land, and at sea. To ensure its own security, NATO must have strong, committed, and capable allies, which is why the U.S. has fought, exercised, and trained with its European allies for the past 70 years. The U.S./European strategic partnership is built on a foundation of shared values, experiences, and commitment to a Europe that is stable and prosperous.

The training and security cooperation activities improve interoperability, strengthen relationships and trust among allied armies, contribute to regional stability, and demonstrate U.S. commitment to NATO. “Think of Operation Atlantic Resolve as a year-long, continuous series of exercises from Estonia to Bulgaria,” said LTG Frederick “Ben” Hodges, USAREUR commanding general. Since April 2014, USAREUR has led land forces efforts on behalf of the U.S. military by conducting continuous, enhanced multinational training and security cooperation activities with allies and partners in eastern Europe.

Many such exercises fall under the auspices of OAR. Other activities supporting OAR include deployment of 4th ID, Mission Command Element (MCE), a regionally aligned division headquarters located in Baumholder, Germany, since 2015. The MCE provides a tactical headquarters for U.S. land forces and USAREUR a division-level mission command capability.

Chapter 1

Deploying Units

“Force does not exist for mobility but mobility for force. It is of no use to get there first unless, when the enemy arrives, you have also the most men — the greater force.”

Rear Adm. Alfred Thayer Mahan
Lessons of the War with Spain (1899)

“Units must learn what it means to be expeditionary.”

COL Curt Stewart, Commander,
598th Transportation Brigade

RSOI To Build Combat Power

*Ready to “fight tonight” means 90 percent
of the unit postured for operations*

As of May 2017, 3rd Armored Brigade Combat Team (ABCT)/4th Infantry Division (ID) was the third U.S. ABCT to deploy to Europe in support of Operation Atlantic Resolve (OAR). The deployment of 3rd ABCT/4th ID in January 2017 marked the start of back-to-back, nine-month rotations of U.S. Soldiers and equipment to the region.

Unlike previous ABCT deployments, 3rd ABCT/4th ID of about 3,500 Soldiers and officers brought its organic equipment of 87 M1A2 Abrams tanks, 144 Bradley fighting vehicles, 18 Paladin howitzers and more than 400 high mobility multipurpose wheeled vehicles (HMMWVs). Following the ABCT’s consolidation in Poland (near the Drawsko, Pomorskie and Zagan training areas), the 3rd ABCT dispersed across seven locations in Eastern Europe for training and exercises with European allies. These rotations enhance the deterrence capabilities of North Atlantic Treaty Organization (NATO) forces, increase the ability to respond to potential crises and defend NATO and its allies.

Skills of the theater army’s capability and capacity to conduct reception, staging, onward movement, and integration (RSOI) of forces are skills that have atrophied since the end of the Cold War and removal of the threat of a Soviet Union attack into Western Europe. The same holds true for a host nation’s (HN’s) ability to rail load and tactically road march equipment across its roads and rails. Regionally aligned forces (RAF) deployments in recent years have highlighted challenges in the processes and capabilities necessary to support RSOI.

“Lieutenant General Hodges wants to create the sequel to return of forces to Germany (REFORGER). You can see the exercise objectives are similar to the REFORGER days, especially to test our ability to deploy over strategic distance; contribute to NATO assurance and deterrence; and conduct reception, staging, and onward movement (RSOM); with additional emphasis on freedom of movement within Europe. Lieutenant General Hodges has stressed the need for a military version of the Schengen Zone.”¹

RSOI Functions

“Units must learn, or relearn, the environment (central Europe) prior to deployment. This includes defining the environment from terrain, culture, infrastructure, and the enemy. Units must learn/re-learn multi-national interoperability and how to fight with allies in Europe. From a doctrinal standpoint, this includes how the enemy will fight U.S. forces. U.S. forces must train on how we will fight the enemy and equip them.”

BG Christopher Donahue,
Commanding General,
4th ID Mission Command Element

Units need to perform many functions within their organization upon notification of deployment. Doctrinally, the unit plans and organizes itself to manage and accomplish the following tasks:

- Update organizational equipment list (OEL) and develop a unit deployment list (UDL) based on the warning order.
- Identify equipment shortages.
- Review and updates training statuses.
- Review maintenance posture, perform scheduled services, begin expediting repairs, and calibrate equipment.
- Identify and report personnel shortfalls.
- Review leave and pass statuses of personnel.
- Review Soldier readiness processing (SRP).
- Submit updated unit status report.
- Review and test unit recall procedures.
- Review and update vehicle load plans and container packing lists.
- Validate and submit requisitions.
- Request additional containers.²

“If you publish nothing else, publish this: We are utter failures at hazardous materials documentation. Of all the containers deployed with HAZMAT, not one has passed U.S. Coast Guard inspection.”

MG Kurt Ryan, Commanding General,
Military Surface Deployment
Distribution Command (SDDC)

“Units with deployment missions are required to have an appropriate number of personnel trained to perform special deployment duties. These duties include unit movement officer, unit loading teams, hazardous cargo certifying officials, and air load planners. Some commands and installations maintain a local capability to provide deployment training to ensure the supported units have ready access to the required training.”³

The “to do” list under “RSOI Functions” states “reviews and updates training status.” The training includes individual and collective tasks, and mission training. In the case of 3rd ABCT/4th ID, its mission was to conduct a deployment/rotation that had not been done in decades.

There is a critical need for properly trained personnel in hazardous material (HAZMAT) documentation. Knowing what theater provided equipment (TPE) (gleaned from the predeployment site survey [PDSS]) is available as far as HAZMAT will alleviate some of these issues, but units will still ship various organic equipment not provided and deemed HAZMAT.

“At least one individual will be on orders and trained to certify hazardous cargo at each unit level (company and/or detachment-level). The hazardous cargo certifying official is responsible for ensuring the shipment is properly prepared, packaged, and marked. The certifying official is also responsible for personally inspecting the item being certified and signing the HAZMAT documentation. Hazardous cargo certifiers must be trained at a DOD-approved school within the past 24 months and receive refresher training every two years. Upon training completion, they are authorized to certify documentation for commercial and military truck, rail, sea, and air. A common mistake occurs when the HAZMAT certifier is sent with the advance party, leaving no one to accomplish the HAZMAT inspections during departure operations.”⁴

Insight: Units would benefit by having at least two personnel trained on the handling of HAZMAT certification and documentation. Ensure personnel have attended training or recertification prior to deployment. Have trained personnel contact and work with SDDC prior to movement to port.

“Our training challenge is doing something that has not been done before.”

MAJ John Zdeb, Chief of Operations,
3rd ABCT/4th ID ABCT

Another piece of the deploying unit’s planning must be the contact and coordination between the unit and NATO force integration units (NFIU), which are located throughout the gaining country. NFIUs have the mission of developing relationships with civilian and military organizations to understand the personnel, processes, procedures, infrastructure, and HN support capabilities and capacities within the designated country. As each country has its own specific timeline, process, and procedures for foreign military forces to operate within its sovereign borders, U.S. forces must utilize the aligned NFIU to facilitate their deployment.⁵

The 16th Sustainment Brigade (SB) maintains a sustainment maturation team (SMT) within each NFIU. As part of the planning, it is also imperative the deploying unit establish and maintain coordination with the 16th SB and SMT for the nation it is deploying to. Additionally, the 16th SB maintains a forward tactical command post (TAC) within the Multinational Corps Northeast (MNC-NE) operational environment (OE) currently in Poland.⁶ This TAC is deemed by the 16th SB commander to be such a valuable asset the commander created the TAC “out of hide.” The TAC is tasked “to increase NATO’s ability to track movements in the OAR joint operations area (JOA), while also managing and synchronizing the efforts of the SMTs at each NFIU.”⁷

Insight: Use of the NFIUs to aid in the classification of SECRET Internet Protocol Router (SIPR) documents to “NATO SECRET” prior to the deployment facilitates the RSOI process. Units will not be using valuable time and losing critical training time performing something that could be done prior to arrival.

Predeployment Site Survey (PDSS)

The PDSS provides a deploying unit the opportunity to see the OE first hand. A PDSS normally occurs six to nine months prior to deployment.

A thorough PDSS is critical to mission success as it allows the unit ample time to address and resolve issues the unit identifies. The mission will dictate what needs to be included within the PDSS, but generally includes:

- Seaport of debarkation (SPOD)
- Routes for ground convoys
- Railheads for loading and off-loading (if applicable)

- Tactical assembly areas (TAAs)
- Training requirements, both U.S. and NATO
- Forward positions
- Operational contracting support (OCS) needs
- COP set up
- Communications security (COMSEC) requirements

A PDSS, however, will not always identify critical needs. Commanders and staffs vary in their information requirements. A good example is the COP. As conditions change (new units, enemy force updates, topography, etc.), the COP will as well. Commanders will provide their intent and vision to the staff.

The 4th MCE, as the 3rd ABCT/4th ID higher headquarters, has a liaison officer (LNO) with the 21st Theater Sustainment Command (TSC) to coordinate sustainment issues. 16th SB did have an LNO within the 4th MCE which aided the reception and integration into Poland.

Insights: Although the U.S. maintains an MCE in Poland, in this case, 4th MCE, direct liaison authorized (DIRLAUTH) between the deploying unit and the 16th SB SMTs and TAC must be granted. This DIRLAUTH will allow the unit to get immediate answers and feedback on issues presented without wading through various levels.

Creating a COP is the hardest part. Having an idea of what the commander wants the COP to portray needs to be determined prior to deployment, if possible. Staffs must be able to build a COP based on the commander's intent and vision. Although not an austere environment, the OE is immature as far as connectivity. It will improve in time, but staffs need to prepare for this. A standardized COP across the organizations involved in the RSOI process [USAREUR (U.S. Army Europe), 21st TSC, 4th ID, 3rd ABCT/4th ID, SDDC] can prevent duplication and inaccuracies in reporting and situational awareness.

Identify COMSEC requirements during the PDSS for immediate operations upon arrival. Ensure personnel that hand-carry documents are trained and qualified for handling and the personnel are on appropriate orders.

Locations for positioning of LNOs must be identified during the PDSS. This will be mission directed but commanders must look at providing an LNO to not only maneuver units, but also support units.



Figure 1-1. An M2A3 Bradley fighting vehicle crew from Apache Troop, 4th Squadron/10th Cavalry Regiment, 3rd ABCT/4th ID, secures its vehicle to a rail car at Fort Carson, CO, 15 NOV 2016.

Training

Leading up to the deployment, 3rd ABCT/4th ID conducted several exercises and a rotation to the National Training Center (NTC). Issues that arose during these training opportunities for logistics dealt with the unit's Department of Defense activity address code (DODAAC). The typical train-up for a rotational ABCT consists of field training exercises (FTXs) and gunnery at home station from Table VI (crew qualification) through Table XII combined arms live fire exercise (CALFEX). It also includes a home station certifying training exercise prior to a deployment to the NTC. By the time 3rd ABCT/4th ID deployed to Poland, it sustained approximately 40 percent crew turnover and was nearing the end of its nine-month qualification window. Rotational ABCTs should conduct crew qualification early in their rotation. The execution of the live fire accuracy screening test (LFAST) and zero of M1A2s/M2s as a measure of ready-to-fight status during RSOI is a condition-setting event for this gunnery requirement.

Insight: Sustain the execution of LFAST/zero during ready-to-fight certification as part of RSOI followed by a Table VI (crew qualification) during the initial stages of the ABCT rotation.

Coordination between 4th ID, III Corps, and Headquarters, Department of the Army (HQDA) staff allowed 3rd ABCT/4th ID to deploy with its home station DODAACs, instead of establishing deployment DODAACs. While there were several concerns raised close to execution which could have been avoided with earlier coordination (e.g., G-8 sections at echelon

experienced difficulty in the separation of funding, accountability and authorities between 4th ID, III Corps, and USAREUR), 3rd ABCT/4th ID reported many positives associated with this technique. Maintaining home station DODAACs is credited with preventing inadvertent cancellation of parts, a common problem for deploying units. Furthermore, it allowed 3rd ABCT/4th ID to order parts at Fort Carson and have them (20 military vans [MILVANS] of parts) delivered to Germersheim and forward positioned to its respective TAAs upon arrival to Poland. These parts, ordered during the 3rd ABCT/4th ID post NTC maintenance period, were consumed by immediate maintenance requirements during RSOI.

Insight: Continue to monitor home station DODAAC use as a course of action for future units that deploy with its organic equipment.

During collective training, 3rd ABCT/4th ID conducted a home station brigade FTX IRON STRIKE and NTC Decisive Action Rotation 16-09. The brigade FTX design included a focused RSOI period, where the brigade leadership and staff managed requirements identical to those they would have to face during NTC RSOI. Along with the necessary staff tracking products, the brigade conducted a daily RSOI status brief to 4th ID leadership, one of which was delivered in person by brigade and battalion commanders to the commanding general. Additionally, the brigade divided RSOI task groups and held battalion commanders accountable for owning their respective assigned missions. The RSOI demands at NTC built upon the RSOI experience gained at the brigade FTX. This directly resulted in RSOI mission success in Poland.

Insight: Brigade FTX design should include RSOI requirements that model those at the NTC, as this builds the requisite products and muscle memory for BCTs to excel at RSOI in theater.

3rd ABCT/4th ID and the 4th ID conducted a rehearsal of concept (ROC) drill at Fort Carson in October, less than two months prior to deployment. The ROC drill included all key participants for the deployment of the BCT, including USAREUR, 21st TSC, 7th Army Training Command (ATC), SDDC, U.S. Transportation Command (USTRANSCOM), Army Materiel Command (AMC), and the BCT. This rehearsal covered the BCT's load out from Carson, actions at the sea port of embarkation (SPOE), initial reception at the SPOD, and the conceptual planning for its onward movement to tactical assembly areas in Poland. This event was critical in synchronizing this complex logistical task.

Insight: Sustain the execution of a robust rehearsal for each significant movement that deploying RAF ABCTs will conduct. However, an earlier execution of this rehearsal would have allowed greater lead time to address identified friction points.

Staging

Staging is the part of the RSOI operation that reassembles and reunites unit personnel with their equipment and schedules unit movement to the TAA, secures or uploads unit basic loads, and provides life support to personnel. These activities occur at multiple sites in controlled areas called intermediate staging bases (ISBs) that are required because space limitations normally preclude reassembly of combat units at ports of debarkation. In general, there will be at least one ISB for each SPOD and airport of debarkation (APOD) pairing.⁸

Operation Atlantic Resolve requires units to deploy from the continental U.S. (CONUS) to Europe. As previously stated, 3rd ABCT/4th ID is the first to make this deployment with its organic equipment. Once at the port, the unit was to draw its equipment from the ISB. Issues at the ISB prevented a smooth transition. Those issues varied from vehicle switches being left in the “on” position (which drained vehicle batteries) to no fuel in the vehicles to canvas for vehicles being loaded in separate containers (thus there were vehicles without protective canvas road convoying during winter months).

If the checklist does not remedy an issue, a pre-positioned maintenance push package consisting of a multi-class parts warehouse and maintenance contact team should be at the ISB when the vessel arrives.

Insight: Personnel should perform thorough preventive maintenance checks and services (PMCS) prior to vehicles being loaded onto the vessel. Provide a checklist for each vehicle necessitating basic movement requirements, such as vehicle power switches in the “off” position, vehicles loaded with 3/4 full fuel tanks, and canvas in vehicle bed.

Speed of Assembly

U.S. Army Europe looks for a 72-hour turnaround from port to railhead for rail transported vehicles. There are two critical components to speed of assembly: loading and off-loading. The loading of a vessel is dependent on absolute data (vehicle weight, dimensions) provided by the unit. The Joint Operational Planning and Execution System (JOPES) is the critical tool used in working speed of assembly.

JOPES is the integrated, joint command, and control system used to support military operational planning, execution, and monitoring activities. JOPES incorporates policies, procedures, personnel, and systems, and underlying global command and control system (GCCS) information technology support to provide senior level decision makers and their staffs with enhanced capability to plan and conduct joint operations. JOPES provides



Figure 1-2. A group of Army Bradley Fighting Vehicles from 3rd ABCT/4th ID, wait to be loaded onto a railcar for shipment to Poland at the port in Bremerhaven, Germany, 7 JAN 2017.

the mechanism to submit movement requirements to lift providers in the form of time-phased force and deployment data (TPFDD). The TPFDD is both a force and a transportation requirements document.⁹

Where this became problematic for 3rd ABCT/4th ID was two-fold. First, JOPES is only as reliable as the data that is entered by the unit. For example, an M1A2 Abrams tank has a known dimension and weight from the manufacturer. U.S. units modify these with additional equipment configurations. Additional modifications may change weight, dimensions, or both. Units and the unit movement officers (UMOs), however, do not modify the data within JOPES to reflect the actual characteristics of the vehicles. Therefore, the UMO becomes one of the most important officers within the battalion prior to deployment. Units designate UMOs, an additional duty which includes:

- Create, maintain, manage, and update unit equipment, personnel, and deployment information files. The UMO must contact the battalion with the changes that need to be made in the deployment files or source database.
- Develop plans for known exercises and deployment scenarios.

- Prepare and execute convoys.
- Create a UDL from the OEL based on information supplied either through a TPFDD or from the battalion commander. The UDL is forwarded to the battalion mobility noncommissioned officer (NCO) for further action.¹⁰

These officers attend two weeks of training and then are told to carry out the duties for which they were trained. Experienced UMOs have more than two weeks of experience under their belts and still do not know it all. Top that off with the notion that a UMO may change units and the problem magnifies.

Another critical asset for any battalion is the mobility warrant officer (MWO). Usually a chief warrant officer 2, an MWO is the unit's subject matter expert (SME) on movement. Duties of the MWO include:

- Review company movement plans and develop them into movement plans for the battalion.
- Audit the company's asset management sections for accuracy.
- Validate battalion movement plans to brigade.¹¹

The problem for 3rd ABCT/4th ID was when the equipment arrived at the SPOE, the data in JOPES did not match the data provided by the units. All the equipment had to be measured again, delaying loading of the ship.

Insight: UMOs and MWOs must have accurate data on unit vehicles and equipment. When modified, UMOs and MWOs must re-measure, re-weigh, or both, and input into JOPES immediately. They then have the most current and valid data within JOPES to preclude issues at the SPOE. Effort on the front end will result in minimal to no issues on the back end.

Second, when the unit received notice of USAREUR's change of mission (COM) which required a different configuration of the transport trains, the vessels were loaded with a certain assembly in mind once off-loaded. The COM added approximately 12 hours to the movement plan.

Insight: Although difficult to regulate, a "no changes after date time group (DTG)" must be the standard by which units deploy. All understand events and circumstances change with new developments and units must maintain a level of flexibility. However, if COM does occur, timetables must also adjust to allow units time to adequately change their configuration. If not, accidents will occur.



Figure 1-3. 3rd ABCT/4th ID stages its vehicles after officially crossing into Poland from Germany after conducting a three-day convoy, 12 JAN 2017, for its nine-month deployment training alongside multinational partners.

In-Transit Visibility

Deploying units contribute to the operational picture and the employment planning of commanders by properly marking and tagging their equipment for input into the DOD automated identification technology (AIT) system and the Defense Transportation System (DTS). Prior to departing their deployment stations, units must properly prepare vehicles and equipment for shipment to include securing basic issue items, weighing, and affixing the necessary markings, labels, and in-transit visibility (ITV) devices to their equipment, containers, and 463L pallets. This includes military shipping labels (MSL), pallet identifications, and radio frequency identification (RFID) tags. ITV is achieved as the progress of the container or vehicle is recorded as it passes through the network of interrogators. ITV preparation begins during predeployment and continues through the load out of vehicles and equipment. Ensuring AIT storage devices are accurate, properly attached, and readable, facilitates ITV throughout the transportation pipeline. AIT readers and interrogators report the movement to automated information systems (AIS), allowing deployment managers to track and control the flow of equipment.¹²

Knowing where assets are during movement is critical to speed of assembly and building combat power. Accountability is maintained primarily via the RFID as vessels discharge cargo. However, there is only one permanently installed RFID tag interrogator in the Bremerhaven area and



Figure 1-4. German military police officers assist 3rd ABCT/4th ID Soldiers in Oberlausitz, Germany, during their third day of convoying to Poland.

it is not positioned to capture movement of cargo out of the ISB area. The interrogator is positioned in a location in the port area too far from ISB, by HN agreement, where U.S. unit deployment cargo is discharged. This positioning does not adequately facilitate the process.

3rd ABCT/4th ID assets moved to its TAAs in three modes: contracted rail haul, tactical road march, and contracted line haul. The tactical road march allowed the unit to maintain visibility of the vehicles and personnel within. The rail haul, nor the tactical road march, caused a problem with visibility.

Contracted line haul, however, presented the unit with a severe problem. Drivers were contracted to deliver their cargo to a set location by a set date. What they did not have to do was drive a prescribed route with designated checkpoints. The unit had no way of knowing the status of its cargo until arrival at the ultimate destination. To expand the problem further, USAREUR and the 21st TSC were lacking in RFID interrogators (handheld device that reads the RFID and provides the location and status of cargo).

Insight: When writing the contracts for contracted line haul, the contracting officer needs to direct a determined route for drivers to follow, to include check points that drivers must stop at for RFID interrogation.

Also, USAREUR and the 21st TSC must obtain more RFID interrogators and position personnel at checkpoints to conduct the interrogations.

Issues with rail haul must be considered as well in the planning process. There are things the U.S. takes for granted when it comes to international rail carriers. Unless mandated, the rail carrier (in this case, DB Schenker) does not operate on Sundays within Germany. This created a delay within the onward movement of 3rd ABCT/4th ID equipment. These trains held the major firepower for the brigade on their rail cars. Once again, the brigade had to adjust its timeline to accommodate the delay. The rail load plan was, by design, ambitious, and made more rigid by DB restrictions on the number of military border crossings per day, exacerbated by the near-simultaneous movement of other allied forces. Incomplete U.S. understanding of the actual dynamics of rail loading at the seaport caused planners to misinterpret the advice of experienced local nationals, and assess their estimates of 12-hour load windows as excessively conservative. The U.S. failed to understand “load windows” at the SPOD to include time for DB to spot the cars, and stevedores to inspect, configure, and (in inclement weather) salt and de-ice the cars. All of these count against the load window on the front end. Likewise, inspecting and pulling cars out count against load windows on the outbound side. The result is an eight-hour load window can easily drop to four hours of actual loading time once the aforementioned requirements are taken off the front and back. Reduced time is compounded when one train-loading overruns its own time, and encroaches on the next loading window. Eventually, one is faced with the requirement to load a train with zero time left in the loading window.

DB Schenker has been as accommodating as its down-line schedule has allowed, and the supporting teams (U.S. and contractor) have made adjustments to reduce delays in loading for many trains as the mission has proceeded, but unpredictability in timeliness of car spotting, dynamics of German labor law and weekend hours, and slow loading brought about by inoperable or difficult to load (engineer) equipment, kept U.S. forces from staying ahead of the rail loading for very long, even after they gained a four-plus-hour lead 11 JAN 2017. Scheduled spotting of the next train’s rail cars could not be accelerated to allow the forces to capitalize on the catch-up going forward.

Insight: Prior to deployment, request the TSC or SB provide an LNO to the rail carrier to negotiate transport uncommon to carrier.

Predeployment Playbook

The ABCT, Army field support battalion (AFSBn), and the brigade logistics support team (BLST) from 4th ID developed a “predeployment playbook” for others to use. It provides planning cycles, briefs, schedules, standard operating procedures (SOPs), and other reports found to be useful in preparation of the deployment.

Use of the playbook is “a way” to conduct predeployment planning. It is not an end-all, be-all document. It is what worked for the deploying ABCT, AFSBn, and BLST units from Fort Carson.

The playbook can be found on the Joint Lessons Learned Information System (JLLIS) website at <https://www.jllis.mil/index.cfm?disp=cdview.cfm&doit=view&cdrid=107655>. Common access card (CAC) required.

Conclusion

3rd ABCT/4th ID issues could have been avoided with better insight. Although not every eventuality can be forecast, a thorough PDSS identifies most issues. Ample time for the PDSS, as well as continual coordination with the 21st TSC, 16th SB, and USAREUR staff will alleviate many of the issues for the deploying unit.

Endnotes

1. Summary of the briefing presented by BG Tim Daugherty, USAREUR assistant chief of staff, G-3, to the Maneuver Warfighter’s Conference 15 SEP 2016.
2. Army Techniques Publication (ATP) 3-35, *Army Deployment and Redeployment*, Headquarters, Department of the Army, Washington, D.C., 17 SEP 2017, page 2-7.
3. Ibid, page 2-5.
4. Ibid, page 2-6.
5. Sustainment Maturation Team Reference Guide, *Lessons and Best Practices from the 16th Sustainment Brigade*, U.S. Army Combined Arms Center, Fort Leavenworth, KS, 11 JAN 2017, page 5.
6. Ibid, page 7.
7. Ibid, page 7.
8. ATP 3-35, page 4-7.
9. ATP 3-35, page 2-2.
10. ATP 3-35, page A-4.
11. Ibid, page A-4.
12. ATP 3-35, page 2-5.

Chapter 2

21st Theater Sustainment Command and 16th Sustainment Brigade

“Readiness is the reason we exist, our *raison d’etre**.”

* The most important reason or purpose for someone or something’s existence.

MG Duane A. Gamble
Commanding General
21st Theater Sustainment Command

The 21st Theater Sustainment Command (TSC) is located in Kaiserslautern, Germany. As the TSC dedicated to U.S. Army Europe (USAREUR), its mission is to execute theater opening, distribution and sustainment operations, and enable operations to set the U.S. European Command (USEUCOM), and as directed, U.S. Africa Command (USAFRICOM) theater. The 21st TSC supports joint, inter-organizational, and multi-national partners and assures the North Atlantic Treaty Organization (NATO) alliance.

The TSC plans, synchronizes, and facilitates reception, staging, onward movement, and integration (RSOI) and executes it through the mission command of expeditionary sustainment commands (ESCs) or sustainment brigades (SBs). Theater sustainment commands build a theater infrastructure from a combination of existing and deployable assets capable of supporting the deployment process and rapid force generation. Ultimately, it relies on SBs, augmented by theater opening elements, to conduct port of debarkation (POD) support operations, provide life support, and execute theater distribution operations. The 21st TSC is also responsible for all U.S. military rail movements within the USEUCOM area of responsibility (AOR).

“The TSC is focused on strategic and operational sustainment management. The command ensures the information flow from strategic deployment, distribution, and sustainment partners is accurate, timely, and adequate to support the actions of the theater sustainment forces providing movement control for RSOI and all other sustainment operations.”¹

The TSC support operations officer provides staff oversight of TSC RSOI efforts by coordinating and synchronizing reception, staging, and onward movement (RSOM) activities with subordinate commands and strategic/joint headquarters to maintain a balanced flow of supplies, personnel, equipment, and units consistent with strategic lift capabilities and Army Service component command/geographic combatant commander (ASCC/GCC) priorities.

Collaborative planning and coordination between the TSC and strategic/joint headquarters is critical to the synchronization and integration of intra-theater deployment and distribution operations. This planning and coordination effort provides the TSC with the means to successfully:

- Monitor airlift and sealift flow.
- Provide movement control of arriving supplies, personnel, equipment, and units.
- Establish theater-wide capabilities required to meet anticipated transportation and throughput capacities.
- Provide life support.
- Establish effective liaison among the service components and strategic providers.
- Identify host-nation support (HNS) requirements.

The 21st TSC has the responsibility to provide all sustainment support to the USAREUR AOR. It was responsible for coordinating and synchronizing support of the 3rd Armored Brigade Combat Team (ABCT)/4th Infantry Division (ID) mission in support of Operation Atlantic Resolve (OAR). The 16th SB and elements of 4th SB were subordinate to 21st TSC.

21st TSC best practices and lessons learned are documented below.

Mission Command

“Except for forcible entry operations, Army forces arrive in theater via the most efficient use of available lift. Almost all personnel move by airlift, and 95 percent of their equipment and supplies move by sea. The process of reassembling personnel, equipment, and supplies is RSOI. The theater army normally assigns RSOI to the TSC and its attached ESC. Upon arrival in the AOR, attachment of the unit transfers from the supporting commander (usually U.S. Army Forces Command [USFORSCOM]) to the theater army, which passes tactical control (TACON) of the unit to the ESC or other Army headquarters responsible for RSOI. Upon arrival of the deploying unit’s chain of command, the theater army and gaining operational commander establish a relationship of direct liaison authorized

to facilitate communications and planning. The ESC receives personnel and equipment at the joint theater base established in or near the joint operations area (reception). When the unit is fully assembled, it moves as a unit to a designated assembly area within the joint operations area (staging). At this point the ESC transfers operational control (OPCON) to the gaining joint forces commander (JFC) or joint functional command, and the theater army reassigns administrative control (ADCON) to the Army Forces (ARFOR) in the joint operations area (integration).”²

Mission command for RSOI operations is a complex issue when the forces conducting the RSOI are in limited numbers. ESCs provide operational reach and span of control to TSCs, providing TSCs with a regional focus necessary to provide effective operational level support. No ESC was assigned to support OAR. ESC responsibilities fell upon the 16th SB which was responsible for conducting theater distribution and sustainment operations.

Insight: Align an ESC from the reserve component to the 21st TSC for planning purposes. This will help develop and foster a relationship and allow the ESC the opportunity to become subject matter experts (SMEs) and provide more effective/efficient support to regionally aligned forces (RAF).

Planning

“Deployment planning is a logical process that focuses on Soldiers, deployable Army civilians, supplies and equipment, ways to deploy them, and the required information to track them. In particular, deployment plans require detailed information. Knowing the right details will help guide the unit through an effective deployment. The heart of deployment planning is an accurate list of Soldiers and equipment that will deploy – the unit deployment list (UDL), which is developed in Transportation Coordinator’s Automated Information for Movement System II (TC-AIMS II) and is validated by the commander. Its importance is exemplified by its use: to manifest units for deployment and to update time-phased force and deployment data (TPFDD) so appropriate lift is scheduled for the deployment.”³

Planning considerations for analyzing the mission include:

- Identify projected mission requirements upon arrival in theater and, in conjunction with the 4th ID Mission Command Element (MCE), develop the readiness metrics and force flow based on those requirements.
- Determine force requirements at points of friction in time and space (mission command nodes [MCNs], maintenance teams).

- Using theater-specific mission requirements, identify triggers for assumption of primacy for each warfighting function. (When are digital command systems operational? When are Class III and Class IX ordered and distributed?)
- Establish command and support relationships and reporting requirements in time and space. Codify these within the deployment/operations order.

Sustainment preparation of the operational environment is the analysis to determine infrastructure, physical environmental, and resources in the operational environment that will optimize or adversely impact friendly forces' means for supporting and sustaining the commander's operations plan.⁴

The 21st TSC was not involved with 4th ID MCE for planning purposes until mid-October 2016. 4th ID MCE and 3rd ABCT/4th ID coordinated directly with 16th SB as they began the planning process.

The lack of 21st TSC involvement in the planning process resulted in key insights being overlooked, negatively affecting planning. An example is the rail movement contract with DB Schenker. 4th ID MCE was aware that due to German labor laws, DB Schenker ran reduced shifts on Saturdays and Sundays. 4th ID MCE's unfamiliarity with German business practices led to a plan that was not supportable and further led to 3rd ABCT/4th ID to miss key planning milestones.

"Nowhere in the planning factors did we take into account a Saturday/Sunday work hours slow down."

COL Ted Shinkle, Chief of Staff
21st Theater Sustainment Command

Insights: Trains in Germany have 700-meter maximum limits in length and/or a maximum of 2,000 metric tons. Maximum limits are also based on rail construction projects.

Materials handling equipment (MHE) and loading logistics working crews need to be factored in for all rail operations.

Mission command nodes are critical to operations and need to be considered early in the planning process. Forward Command Post (FCP) extends the commander's operational reach. FCPs provide timely and accurate information that facilitates the commander's decision-making process.

During OAR, 4ID MCE was located in Baumholder, Germany, while RSOI operations were executed in Bremerhaven. The lack of an MCN at the RSOI location caused a delay in information from 4th ID to USAREUR. Once an FCP was established, it was able to forward information directly to USAREUR, improving the commander's overall assessment of RSOI operations. A critical note is FCPs need to push information rather than higher headquarters pulling information to be effective.

Previous RAF rotations have identified gaps in unit deployment skills, particularly with onward movement. The installation transportation office (ITO) provides assistance in movements to continental U.S. (CONUS)-based units. Once in theater, this changes. A small distribution staff taken from the 21st TSC supports RAF. Reliance on ITOs has led to deterioration in a unit's ability to plan for and execute unit movements internally. During RAF rotations, units have continuously entered incorrect data into systems critical to force movements, such as TC-AIMS. Incorrect or incomplete data results in inaccurate unit movement lists that generate incorrect requirements for Military Surface Deployment Distribution Command (SDDC) regional brigades. The result is frustrated cargo at ports, missed shipments, and/or incomplete shipments.

Insights: Initially, the 21st TSC main (command post) should have been conducting some of the RSOI until the FCP became operational. A unit's initial plan should account for the establishment of an FCP. Having the FCP involved in the planning process early facilitates the reporting process and allows the unit to wargame systems to be used to provide in-transit visibility (ITV). The FCP needs to prepare/plan better in the future with standardized reporting (formats, timelines, etc.). The FCP needs to dictate which reports and formats to use prior to the beginning of the mission, thus ensuring everyone is doing the same thing. Wargame the systems used to provide ITV and have an overall common operational picture (COP) of where equipment/personnel are from discharge until they reach final destination.

Need to look internally at the current operations COP and at who is forward at port and FCP to influence and affect decisions. A decision maker must be located in the FCP.

The use of LNOs within the 21st TSC from USAREUR, 4th ID MCE, 16th SB, and, if available, the 3rd ABCT/4th ID is a valuable tool. LNOs serve as the “eyes and ears” of their respective units and can provide information needed in the planning process. An LNO from the 21st TSC incorporated with 4ID MCE would provide information of HN capabilities that could greatly influence operations.

Insights: As time and other resources are finite and critical, grant LNOs a level of authority to act and speak on behalf of the commander in the event the commander, or the deputy, cannot be reached and the need is urgent.

Planning for the placement of LNOs must be included in the military decisionmaking process (MDMP). 21st TSC made great use of its LNOs positioned in the transportation and logistics liaison office (TLLO) of the German national military command center (NMCC), the Polish NMCC (actually a 16th SB officer) and DB Schenker. LNOs link all organizations (civilian and military) and facilitate information flow.

Develop and publish a theater RSOI standard operating procedure (SOP) that clearly assigns roles and responsibilities in Europe. Constantly exercise and refine the process through RAF deployment and exercise.

Unit Deployment List

When building the train loads, it was based on the original UDLs; however, the unit updated the UDLs later which caused issues when identifying which resources were needed to deploy the unit. UDL changes executed last minute could lead to either cargo becoming frustrated or the misalignment of resources to support a unit’s deployment.

Insights: Units should plan for and establish a timeline that allows for UDL changes prior to UDL lock dates established by ITOs. Unit movement officers (UMOs) need to ensure UDL information is accurate and up to date. Units should coordinate with 21st TSC prior to load out dates to discuss UDL issues and ensure the availability of required resources at the POD.

Unit should engage with the 21st TSC upon notification of deployment to coordinate efforts in the building of the UDL. 21st TSC should coordinate with USAREUR prior to said effort and be the voice for USAREUR in the RSOI deployment process.

Key Tasks (Reception)

Key tasks required of the 21st TSC for the RSOI were to:

- Coordinate with the 4th SB to determine and deconflict support capabilities at the port and each ISB along the route of march for tactical road convoys.
- Develop a triage maintenance plan (batteries, fuel, leaks, etc.) for the port. Also, develop and execute a port support activity (PSA) rehearsal of concept (ROC). From the ROC drill, the 21st TSC could apportion the support accordingly.
- Pre-position maintenance push packages (with Class III bulk and packaged) at each ISB on tactical assembly area (TAA) to facilitate the rapid repair of equipment.
- Establish a PSA MCN, along with crews, mechanics, and fuelers at the port 72 hours before the ramp comes down on the first ship in port.
- Rehearse mission command contingency operations with a ROC drill at the PSA prior to the deployment, ramp down on the ships, and the onward movement of 3rd ABCT/4th ID.

“We need to do a better job doing rehearsals. That starts with me. We had 16 hours we could have used to determine the loading of the vehicles onto the train.”

MG Duane A. Gamble

Insights: Establish and maintain a maintenance and mobility COP at the port that can be shared with the commander at the FCP.

The brigade and battalion S-1s must have privileged access to the Deployed Theater Accountability Software (DTAS) prior to deployment for rapid assumption of personnel status reporting and knowledge of personnel in theater.

Rail Operations

Units coming from the U.S. are not familiar with rail operations in Europe. The lack of familiarity (train scheduling and work schedule) led to issues as equipment was to move from ship to rail for onward movement.

Rail operations for 4th ID equipment was to start at 10 p.m. on the day of arrival. However, at that time, the contracted rail operator was conducting a shift change, delaying rail operations. The delay required 21st TSC to coordinate for last minute line haul to move equipment to allow the port to continue offload operations.

“I drove the organization to load trains aggressively, and frankly, I am not sure we gained speed that way. We loaded the train from the ship discharge without stationing on the port first. It remains to be seen if we have another seven-hour train delay as we move forward. But tactical patience might be faster in the long run and get the ship, at least partially, downloaded first and then bring the train in for load.”

MG Duane A. Gamble

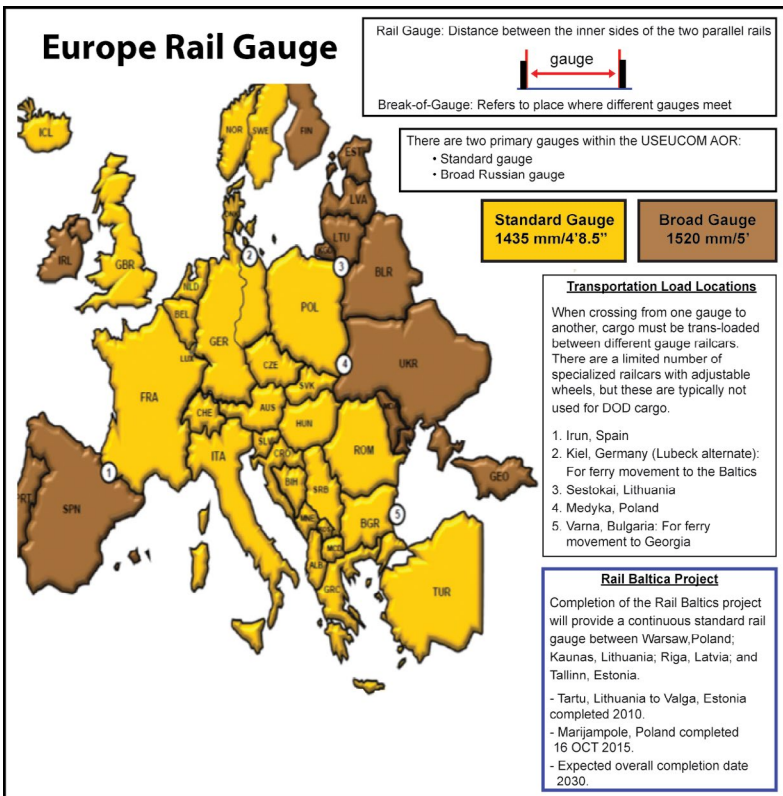


Figure 2-1. Europe rail gauge

Insights: Ensure deploying units receive a copy of European rail loading standards prior to deployment. Advise deploying units to prepare equipment for both U.S. and European rail operations to the best extent possible.

When planning for cargo moves, use a planning factor of 35 working days or 45 calendar days for ordering rail cars prior to the unit's ready-to-load date (RLD).

Abrams tanks and sensitive items need military escorts by rail. Guard cars will be provided; owning unit will be required to provide guards.

Oversized/overweight cargo needs to be identified prior to rail car ordering requests.

Onward Movement

“An important aspect of distribution is ITV. In-transit visibility is the ability to track the identity, status, and location of DOD units, and non-unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers; patients and personal property from origin to consignee, or destination across the range of military operations (JP 3-35).”⁵

“At present, there are a number of joint systems in various stages of development that provide visibility of force deployment and sustainment. Unfortunately, present systems do not completely satisfy the requirements of force tracking and much of the process must be accomplished manually.”⁶

The German rail system, by design, was deliberately stressed during the onward movement phase. Having greatly reduced the number of railcars that could accommodate heavy equipment (primarily armored vehicles), it was decided at the USAREUR level that a preponderance of equipment would move by rail, knowing the carrier was lacking sufficient railcars. With that stated, several convoys of wheeled vehicles still traversed Germany to exercise convoy procedures and test host-nation abilities to provide traffic control.

“As an ITV gatekeeper, the TSC assures the strategic-to-operational linkage of critical information and notifies strategic partners if ITV data is not accurate or provided. The TSC ensures the physical flow of inbound forces and non-unit cargo are meeting the priorities and timeline established by the ASCC, and resolves issues with timing if unforeseen events interfere with the planned timing of strategic-to-theater deliveries.”⁷

In preparation for the onward movement, these convoys created situations the 21st TSC was not prepared to encounter, notably:

- Convoys operated from planned departures instead of reporting departures through the movement control battalion (MCB). Convoys were already in motion before the MCB understood what was taking place. Deploying units need to coordinate with MCBs prior to movements to ensure clearance. It is the commander who says “execute” and accepts the risk. Convoys need to ask/report to move.
- Vehicles lacked required tarps and canvas for movement. Tarps and canvas had been packed in a separate container and were awaiting off load when the vehicles were prepped for movement.
- More than 160 pieces of frustrated cargo had no identified destination.

Insights: Develop diplomatic agreements during Phase 0 operations, or as early as possible in Phase I, to enhance freedom of movement within nations working together to deter and fight aggression.

USAREUR needs to establish standards and/or an SOP for vehicle shipments. Specifically, secondary load, basic issue items (BII), canvas and tarps, etc., for all convoy vehicles.

Contracted Line Hauling

Equipment not rail loaded, or within the ground convoy was carried via contracted line haulers. These contractors were German nationals. The contractors were provided a date time group (DTG) to arrive at their destination. There were no other controls placed upon the contractors. Due to this lack of control, ITV was lost on key pieces of equipment needed for combat power. Checkpoints were not established and the 21st TSC had no clear idea of the location for the equipment.

Freedom of movement is a key element in the onward movement phase of RSOI. USAREUR defines freedom of movement as the ability to mobilize and deploy units quickly throughout the European theater and from CONUS. For the 21st TSC, the definition expands to add the ability to move freely within theater to supply forces. It is difficult to provide sustainment to exercises and forces deployed into Eastern Europe and the Baltic regions due to cumbersome and time-consuming requirements to gain diplomatic and security clearances for convoys. The long lead time, normally requiring 30 days, and an inability to change requests make the process a hindrance to the command. The lack of diplomatic agreements, such as status-of-forces agreement (SOFA) with these nations is burdensome to the command.

Insight: USAREUR or 21st TSC must obtain more RFID interrogators and strategically place them along a prescribed route of march that contracted line haulers must follow. There should be no reason for not having ITV on critical pieces of equipment when building combat power.

“In order to make assured conquests it is necessary always to proceed within the rules: to advance, to establish yourself solidly, to advance and establish yourself again, and always be prepared to have within reach of your Army resources and your requirements.”

Frederick the Great
Instructions for His Generals, 1747

The 16th SB is located in Baumholder, Germany. As the only SB in USAREUR AOR, its mission is to provide mission command of sustainment support to the entire AOR that now encompasses 51 NATO and partner nations. On order, the brigade conducts theater opening, distribution, sustainment, and deployment/redeployment operations.

Three organic battalions are task organized to the 16th SB: the 16th SB Special Troops Battalion (STB), 18th Combat Sustainment Support Battalion (CSSB), and the 39th MCB. These three battalions did the preparation for the arrival of 3rd ABCT/4th ID into Poland.

Theater opening is a critical mission in which the SB must support ports of debarkation (air and surface) to establish sustainment bases and to facilitate port throughput for the RSOM of forces within a theater.

To accomplish this mission, an SB is given mission command of a mix of functional battalions and a multifunctional CSSB. In addition, a transportation theater opening element (TTOE) will augment the SB staff to assist in managing the theater opening mission. The TTOE element provides the SB with additional manpower and expertise to conduct transportation planning. It also provides additional staff management capability for oversight of RSOI operations, terminal operations, motor transport and movement control.

Conducting efficient and effective theater opening operations requires unity of effort among the various commands and a seamless strategic-to-tactical interface. The SB interacts and coordinates with the joint deployment distribution operations center (JDDOC) – an in-theater representative of U.S. Transportation Command (USTRANSCOM) – to improve ITV and synchronize and optimize the interface of inter-theater and intra-theater distribution to ensure the optimal flow of forces, equipment, and supplies.

16th SB had the mission to prepare Poland for the arrival of 3rd ABCT/4th ID. Its lessons and best practices follow.

Transportation Theater Opening Element (TTOE)

At some point along the deployment-employment-sustainment continuum, the TTOE may be attached to the ESC to facilitate theater-level movements and distribution management in accordance with the TSC movement program and support ongoing deployment/redeployment operations. In the case of RSOI for 3rd ABCT/4th ID, there was no ESC. The 16th SB was performing these functions in the absence of an ESC.

The TTOE is attached to an SB when that brigade is assigned the mission of early entry and establishment of an area of operations (AO) logistics base. The TTOE provides an additional 55 transportation personnel and allows the brigade staff to manage the evolving/expanding distribution network and RSOI functions. Giving the SB this additional capability allows it to establish the initial surface distribution system for an AO.

More specifically, the TTOE provides an SB with the staff augmentation and functional expertise necessary to conduct theater opening and RSOI operations more efficiently and effectively. RSOI functions include coordinating, synchronizing, and clearing of airport of debarkation (APOD) and seaport of debarkation (SPOD) holding areas; staging and marshalling areas; personnel and unit equipment integration; life support; and the multi-modal onward movement of units and/or supplies to tactical assembly areas and/or distribution hubs. The execution of RSOI functions requires close coordination with supported commanders, the TSC, joint partners, and the HN.

Other TTOE functions include:

- Evaluating and ensuring the appropriate mode is employed and fully integrated with materiel distribution requirements
- Providing advice on the use and implementation of assigned, attached, contracted, and HN motor transport assets
- Providing guidance on positioning of motor transport, air, and rail assets throughout the AO
- Monitoring and maintaining the status of all modal transportation assets in the AO and ensuring proper tasking
- Providing advice on the use and implementation of assigned, contracted, and HN terminal and watercraft operations
- Providing terminal infrastructure assessment

- Monitoring and coordinating operations and positioning of all terminal operations in the AO, to include motor, rail, inter-modal, air and sea
- Monitoring and maintaining status of terminal assets in the AO to ensure they are properly employed and not over-tasked

The 16th SB was able to build from previous OAR rotations to incorporate lessons learned and best practices in its support of RSOI operations, primarily onward movement and integration of 4th ID units into the AOR.

- **Onward movement:** The process of moving units and accompanying materiel from reception facilities and staging areas to TAAs or other theater destinations, moving arriving non-unit personnel to gaining commands, and moving arriving sustainment materiel from reception facilities to distribution sites.
- **Integration:** The synchronized transfer of authority over units and forces to a designated component or functional commander for employment in the theater of operations.

In-Transit Visibility

16th SB had great visibility of support operations in Poland but lacked visibility at the port. 4th SB conducted the sustainment operations in Germany.

Reporting incremental build of combat power begins with well-understood standards for readiness. Assessments of combat power are based on unit capability, rather than simple tallies of numbers of vehicles and weapon systems on hand. Readiness and reporting are inherently operational matters, normally handled through operational channels; however, the theater movement control organization may be an appropriate channel for readiness reporting until headquarters units become operational in-theater. In this case, the 16th SB worked in conjunction with the 4th ID MCE to provide this information.

The main challenge, in the eyes of 16th SB leadership, was contracted line haul. Similar to 21st TSC, 16th SB experienced similar issues with contracted line haul. Established contracts did not establish sufficient control measures to give 16th SB accurate ITV of equipment.

Battle Command Sustainment Support System (BCS3) supports sustainment operations by providing a COP with map-centric functionalities that enable end users to access, scale, and tailor critical sustainment information in

near-real time. BCS3 offers its users access to a logistics reporting tool (LRT) that provides a standardized format for submission of sustainment status reports, ITV of supplies and equipment in the distribution pipeline, and asset visibility of resources with the units and supply points. Designed as the logistics sustainment support system-of record, this mission command system operates on classified and unclassified enterprise networks. BCS3 displays data on workstations receiving logistics sustainment information feeds from other authorized system servers used to collect data from numerous other non-MC systems. The contracted line haul drivers did not have the BCS3. So, in addition to not being bound to a directed route, the brigade was unable to maintain an ITV COP due to lack of BCS3 in non-secure vehicles; in this case, contracted line haulers.

Insight: Write into contracts provisions requiring contracted drivers to follow prescribed routes and check-in locations.

Rehearsals

16th SB, having conducted the RSOI of previous RAF ABCTs, already knew the importance of conducting multiple rehearsals. 16th SB used rehearsals to discuss and better understand the terrain, facilities, infrastructure, procedures, and cultural issues, which provided a well thought out product that helped 16th SB set the conditions in Poland.

16th SB was hard at work flushing out all the issues with the follow-on ABCTs, to include rehearsing the mission command nodes.

“The challenge (ABCT rotating into Poland for OAR) will be twice as complex next time as it will be one (ABCT) in and one out.”

COL Michelle Letcher, 16th SB commander

Endnotes

1. Army Techniques Publications (ATP) 4-94, *Theater Sustainment Command*, U.S. Army Combined Arms Support Command (USACASCOM) and Sustainment Center of Excellence, Fort Lee, VA, 28 JUN 2013, page 1-1.
2. Field Manual (FM) 3-94, *Theater Army, Corps, and Division Operations*, Training and Doctrine Command (TRADOC), Headquarters, Department of the Army, Washington, D.C., 21 APR 2014, page 2-12.
3. ATP 3-35, *Army Deployment and Redeployment*, Training and Doctrine Command (TRADOC), Headquarters, Department of the Army, Washington, D.C., 17 SEP 2017, page 1-3.
4. Army Doctrine Publications (ADP) 4-0, *Sustainment*, Training and Doctrine Command (TRADOC), Headquarters, Department of the Army, Washington, D.C., 31 JUL 2012, page 14.
5. ADP 4-0, page 15.
6. ATP 3-35, page 4-8.
7. ATP 4-94, page 1-1.

Chapter 3

Surface Deployment and Distribution Command

“The more I see of war, the more I realize how it all depends on administration and transportation ... It takes little skill or imagination to see where you would like your army to be and when; it takes much knowledge and hard work to know where you can place your forces and whether you can maintain them there.”

Field Marshall A.C.P. Wavell
(1883-1950)

“Take every movement and practice at the speed of war, to include National Training Center (NTC) and Joint Readiness Training Center (JRTC). Units have to practice deploying and redeploying. Practice every move. Installations have to practice as well. We must practice with complexity and speed.”

MG Kurt J. Ryan
Commanding General, SDDC

Located adjacent to the U.S. Transportation Command (USTRANSCOM) headquarters building, Military Surface Deployment and Distribution Command (SDDC) is a unique U.S. Army command that delivers world-class, origin-to-destination distribution solutions.

“SDDC is the Army Service component command of the U.S. Transportation Command and is a major subordinate command to Army Materiel Command (AMC). This relationship links USTRANSCOM’s joint deployment and distribution enterprise and AMC’s materiel enterprise. The command also partners with the commercial transportation industry as the coordinating link between Department of Defense (DOD) surface transportation requirements and the capability industry provides.”¹

In the chain of events for deployment from home station to the tactical assembly area (TAA), SDDC makes the shipping arrangements and monitors the vessels across the ocean to the final port.

The 597th and 598th Transportation Brigades (TB) are subordinate units of SDDC. The 597th TB was involved with the loading and shipping of 3rd Armored Brigade Combat Team (ABCT)/4th Infantry Division (ID) at the port of Beaumont, TX. The 598th TB received the vessels in the German port of Bremerhaven.

For SDDC, it was a new start. The challenges included:

- Loading and unloading vessels with brigade-level equipment (not performed in more than 13 years).
- Processing Transportation Coordinators Automated Information for Movements System II (TC-AIMS II).
- Working with hazardous materials (HAZMAT) shipment.
- The interface of systems that were developed in isolation of each other, producing data field mismatches.

To get better, units must be able to see themselves. For SDDC, the deployment of 3rd ABCT/4th ID is the first data point by which SDDC will grade itself. The amount of time it took for 3rd ABCT/4th ID to deploy from home station to its SPOD was 56 days.

“The goal for 2nd Brigade/1st ID is under 50 days for deployment.”

MG Ryan

Plan for Deployment

Geographic combatant commanders (GCC) develop operation plans (OPLANs) and time-phased force and deployment data (TPFDD),² which identify units to support each OPLAN. Service headquarters in turn issue deployment orders (DEPORDs) to actual units as soon as GCCs indicate their need to execute an OPLAN for either a contingency or exercise. As soon as a unit receives the DEPORD, it must analyze the mission it will be required to execute. This, along with guidance received from the GCC, drives the decision on which supplies and equipment are required to carry out the assigned mission. The data, in the form of the unit deployment list (UDL), is inputted into TCAIMS II, which in turn “feeds” the Joint Operations Planning and Execution System (JOPES) to finalize the TPFDD. The final TPFDD is then reviewed and validated by the supporting GCC (where the unit is coming from) and sent to USTRANSCOM for final validation.

It is imperative each unit complete its UDLs as soon as possible after it receives the DEPORD and no later than 60 days prior to the available-to-load date (ALD). If this process is not completed before the 60-day window, the TPFDD can only be opened by a general officer, and it limits the possible ships that may be available to deploy the unit to where and when it has to go.

Once the UDL has been finalized and TPFDD validated, cargo booking can proceed to satisfy the requirement. This will be discussed in the next section. Shippers/units will then prepare their cargo for shipment concurrently with cargo booking.

Now the UDL has been submitted and the cargo booking process has begun. Units have continuously generated vehicle load plans. They will now execute those plans with regard to secondary/nested loads on their vehicles; load their containers; and request movement support to installation transportation officers (ITOs)/directorate of logistics (DOL) for cargo for which the unit lacks organic capability through common user land transportation (CULT).

Radio frequency identification (RFID) tags must be programmed and affixed to all primary loads with detailed information on each piece of cargo, to include secondary loads and nested cargo. All HAZMAT loads must be accurately and completely identified and documented.

JOPES is the driving factor for a speedy deployment. Accurate data provided by the deploying unit will ensure loading of equipment goes smoothly, timely, and efficiently. However, SDDC planners found the data provided by the unit to be inaccurate from the information historically maintained within JOPES. The database in JOPES provides planning factors for planners to use, but the information is often found to be inaccurate.

Insight: JOPES data must be updated to reflect current equipment dimensions and weight. This falls on the joint staff to push through for accomplishment. As units and their unit movement officers (UMO) measure equipment in the motor pool, this information must be placed into the JOPES database and updated at the joint level. Once input, similar units with similar equipment should only need to verify data.

SDDC needs to coordinate the seaports of debarkation/embarkation (SPOD/E) and airports of debarkation/embarkation (APOD/E) to perform its mission. This facilitates SDDC's planning effort for arranging vessels, dock, dock support, etc. The deploying BCT did not have confirmed locations for SPOD/APODs until 45 days prior to shipping equipment and 60 days prior to deploying personnel. Ideally, these SPODs and APODs should be identified in the contingency plans (CONPLANS) as part of their assigned tasks in the event of conflict. As CONPLANS mature, the selection of the PODs should become more routine and the entire process will be more predictable as a result.

BCTs with DEPORDs to Europe undergo a rotation at the NTC first. This rotation is scheduled to take place about four to six months prior to the deployment. 3rd ABCT/4th ID's deployment did not support this timeline.

The unit returned from NTC less than 60 days prior to its deployment. This provided challenges to SDDC because it was missing data to properly identify resources needed to support 3rd ABCT/4th ID's deployment. This created challenges in completing all necessary predeployment tasks (services, theater-specific vehicle modifications, supply support activity [SSA] shut down and pack out, establishment of requisite U.S. Army Europe [USAREUR] accounts, etc.) coupled with the additional requirements that came with the marshalling and deployment of 100 percent of all rolling and non-rolling stock. SDDC's planning efforts were affected by the amount of time allowed between 3rd ABCT/4th ID's rotation to the NTC and rail operation to the SPOD.

Insights: Identify SPOD, APOD, and TAAs for the RAF ABCT no later than 60 days prior to its NTC rotation to enable proactive mobility planning across the enterprise.

Increase the time between the NTC rotation and the beginning of post rail outload operations. This will allow adequate time to plan, synchronize, and execute necessary deployment requirements and ensure the unit is postured for rapid reception, staging, onward movement, and integration (RSOI) upon arrival to theater.

UMOs were unfamiliar with the commander's intent for organizational equipment list (OEL)/UDL requirements. UMOs failed to remove unnecessary or turned-in equipment from the OEL creating erroneous entries and adding approximately 60,000 square feet to shipping requirements. This prevented some units from meeting UDL lock dates and required two general officer unlock requests which delayed U.S. Forces Command (USFORSCOM) and SDDC validation. The UDL information was inaccurate or incomplete when shipped from home station. The equipment scanned into the Global Air Transportation Execution System (GATES)³ program was inaccurate. Units did not take into account equipment modifications when inputting vehicle data into the GATES system. Resources that were ordered to support the move could not support the new requirements and the unit experienced delays in onward movement until additional resources could be allocated to support 3rd ABCT/4th ID deployment.

Installation transportation officers are responsible for programming a unit's movement off the installation via air, rail, or ground. The ITOs are the conduit between a deploying unit and SDDC. Unless given direct liaison authority (DIRLAUTH) to coordinate with SDDC, UMOs must coordinate with the ITO upon receipt of a DEPORD.

Insights: The information that units input into JOPES must first be validated by ITO prior to equipment departing home station.

Increase command emphasis to provide UMOs specific guidance during the planning phase to allow accurate UDL reporting. Deploying units update their OEL quarterly to capture MTOE changes in accordance with (IAW) FORSCOM Reg. 55-1, para 4.9c.

SDDC involvement with the 3rd ABCT/4th ID deployment process began at home station. SDDC headquarters and 597th TB personnel participated in unit ROC drills, sent deployment and distribution support teams (DDSTs) to Fort Carson, CO, to review unit cargo data, and built the three vessel stow plans to enable discharge of cargo in the sequence intended to match the rail onward movement plan developed between 3rd ABCT/4th ID and 21st Theater Sustainment Command (TSC). These rail load plans had to be prepared and submitted to the Germany-based commercial rail carrier Deutches-Bahnhoff (DB) 45 days prior to the required rail movement date, IAW company policy. Unit cargo moved by CONUS rail and commercial truck to the SPOE at Beaumont, TX, where 597th TB's 842nd Transportation Battalion staged the cargo in vessel load sequence. 842nd personnel ensured unit equipment was marked, in grease pencil, with the number of the train it was slated to load onto for onward movement at Bremerhaven.

SDDC and USTRANSCOM booked the cargo for a liner service-to-port move aboard three commercial vessels owned by American Roll-On Roll-Off Carriers (ARC); the Resolve, Endurance and Freedom.

“Units must know the port. There has to be a mission command node (MCN) at the deploying port.”

MG Kurt J. Ryan



Figure 3-1. M1A2 Abrams tanks and other military vehicles from 3rd Armored Brigade Combat Team (ABCT)/4th Infantry Division (ID), Fort Carson, CO, are unloaded off the ARC Resolve at the port in Bremerhaven, Germany, 06 JAN 2017.

Vessel loading commenced at Beaumont, TX, from about 14-23 DEC 2016. A winter storm delayed the upload on one vessel, but proactive use of additional shifts and hard work by the 842nd ensured all vessels departed in time to meet the desired arrival and discharge dates at the SPOD. 842nd personnel annotated on the vessel manifests all vehicles that had to be towed on-board. They also reported a high number of vehicles had low fuel levels, but this did not happen until after the vessels sailed. Low fuel levels caused significant issues at destination, and action has been taken to eliminate this issue for future home station deployment platforms.

Movement of heavy armored equipment across Europe depends greatly on rail as a primary mode. 3rd ABCT/4th ID's movement was no exception and was intentionally made even more dependent on rail availability by a leadership decision to maximize movement of all BCT cargo by rail. This was done both to stress rail capacity and to replicate movement of an ABCT in the same manner that an Army pre-positioned stocks (APS) set would be transported east for forward issue. It also met the deploying commander's intent of minimizing convoy movement over unfamiliar European roads in the winter. As a result, cargo which would normally move by other modes (convoy, organic or commercial line haul) was instead planned for rail movement from the SPOD. This added to the challenges of keeping up with continuous rail loading, conducted concurrently with vessel discharge.

21st TSC worked with the host nation (HN) commercial rail provider (DB-Schenker) to identify an inland rail loading site and increase velocity of port

clearance operations. The site needed to be far enough from Bremerhaven to be operated by labor from outside the Bremen-area labor pool supporting port rail operations. It also had to be close enough to limit the distance that cargo would have to be driven from the SPOD for loading. The selected site at Bergen-Hohne was about 170 kilometers from the SPOD, and was located adjacent to a North Atlantic Treaty Organization (NATO) training base. MG Duane Gamble, commanding general, 21st TSC, requested 598th TB (SDDC) operate the inland rail site with labor contracted under logistics civil augmentation program (LOGCAP) by 409th Contracting Support Brigade (CSB). Light-wheeled vehicles and trailers would be driven in convoys between the SPOD and Bergen-Hohne for loading onto seven pre-planned trains. Tracks, heavy equipment and containers would be rail loaded at the SPOD on three operational rail spurs at a planned rate of one train every eight hours for 30 trains. The rail plan was necessary to meet speed-of-movement timelines, and limited rail border crossings available for military trains (five per day total crossing the German-Polish Border).

RSOI Execution

838th Transportation Battalion, augmented by 598th TB headquarters personnel deployed terminal operations mission command elements to Bremerhaven SPOD and Bergen-Hohne inland rail site on or about 04 JAN 2017. 21st TSC Port Support Activity (PSA) and Forward Command Post (FCP) were established, while 4th ID SB and 3rd ABCT/4th ID PSA personnel (primarily movement control, UMOs, mechanics and drivers) arrived by strategic airlift between 05-07 JAN. Motor Vessel (MV) Resolve arrived at Bremerhaven the evening of 04 JAN, with the discharge commencing 06 JAN, 6 a.m., IAW USAREUR-specified “on the clock” start time. The first piece was driven off at 6:39 a.m.

Due to rail scheduling adjustments and unit delivery priorities, 3rd ABCT’s 3rd Battalion, 29th Field Artillery-tracked-vehicles became the first trainload for movement from Bremerhaven. Previously mentioned stowage adjustments made some of this cargo relatively difficult to access, and slowed discharge operations. Concurrent rail loading of the first train also required a division of effort by the commercial stevedoring crews, further slowing the rail loading process. As a result, the first train took significantly longer to load than expected. Rail planning factors did not account for the actual times required for DB to spot cars, stevedoring crews to inspect and accept cars, or cars to be prepared for loading. These requirements consumed one to two hours at the front end of rail loading, followed by one to two hours of post-loading tie-down and inspection prior to cars being pulled and replaced with new rail-cars. These requirements extended the time required to load each train, and drove the delays which would eventually result in cancellation of one whole train, and part of a second. These cancellations would have to be made up, in the end, by line-hauling

equipment to destination that had been initially planned for rail movement. Additional factors which further delayed rail loading periodically throughout the mission included weather (snow and ice, which had to be cleaned from rail cars and approach ramps during the first two days of operations), mandatory shift breaks, labor-law-mandated use of volunteer crews on weekends, reduced weekend shift hours and partial blockage of rail spurs that supported container operations. These factors were mitigated by coordinating with the port and rail officials. Shift breaks were staggered to avoid ceasing 100 percent of operations for extended periods. Partial train pulls were also used to prevent additional train cancellations.

Low fuel levels, especially in tracked vehicles, greatly increased the number of vehicles that had to be lifted onto trains rather than being driven. After the first two trains, unit mechanics were tasked to prepare vehicles for rail loading, and were quickly able to get two to three trains ahead of the rail loaders. Eventually port authorities granted permission to conduct fuel operations at the port to refuel vehicles to avoid future delays.

Track vehicles arrived at their final destination with drained batteries. Improper shut down procedures are believed to be the reason for drained batteries. Mechanics were tasked to supervise rail loading operations and verified that operators followed the standard two-minute shut-down procedure. For future operations, track-licensed contract stevedores will be trained on the specific M1A2 shutdown procedure. M2 Bradley loading was also interrupted briefly as units were taught to position Bradley turrets at the proper angle to meet rail tunnel clearance requirements.

Despite intermittent delays, most of the BCT's rail-load designated cargo was approved for rail movement. Notable exceptions included the following: T9 Dozers which exceeded allowable height, M60 armored vehicle launched bridge (AVLB) chassis, which exceeded width, at height for T-Bars that could not be hydraulically lowered, light medium tactical vehicle (LMTV) trucks with crew served remotely operated weapons systems (CROWS) mounts installed, 70-ton AVLB bridge sections (too wide), and several shop-trailer mounted MTVs. These systems should be planned for line-haul in future iterations. M88s with the A-frame ladder modifications were initially refused by a DB wagon-meister, but were later allowed after DB approval sketches were located.

Rail movement of containers from the SPOD slowed rail loading considerably. Although stevedore equipment operators could load containers relatively quickly, they often blocked adjacent rail spurs while loading containers, preventing the pre-staging of additional railcars. In comparison, the carrier could have discharged containers directly from the vessel onto waiting commercial line-haul trucks for direct movement to destination, rather than staging them on the SPOD for rail loading. A combination of



Figure 3-2. Army M109A6 Paladins and M992A2 Field Artillery Ammunition Supply Vehicles sit on a railhead waiting to be transported to Poland, 06 JAN 2017, at Bremerhaven Seaport in support of OAR. direct delivery and pre-planned line haul could have sped up the discharge and onward movement process while reducing rail loading delays.

The ABCT planned for a single convoy to travel the entire route into Poland and planned to convoy light rolling stock to Bergen-Hohne for rail load. The most obvious issue was the unit removed and stored all its vehicle soft-tops and basic issue items (BII). The unit conducting the single convoy provided the container number where its tops and BII were stored, and the battalion located the equipment and had it discharged from the ship in time for the unit to execute the mission. The remainder of the soft-topped vehicles destined to Bergen-Hohne had to be line-hauled, rather than driven to the inland rail site. This consumed a considerable amount of time and effort, and committed the 21st TSC's full line-haul capacity for several days. Despite the setback, rail operations from the inland railhead were a resounding success, and could have been utilized to further reduce strain on SPOD rail capacity. Rail operations at Bergen-Hohne for future operations should be expanded to include heavy wheeled vehicles and possibly light tracks [M113 (field of view (FOV))].

The overall mission command dynamics of the SPOD operation developed and improved greatly over the first 48 to 72 hours of the operation. The piece-meal arrival of 4th SB and 3rd ABCT/4th ID PSA personnel (largely due to delays from the holiday schedule) resulted in a somewhat staggered implementation of a movement control team (MCT), PSA, and operator

functions on the ground. Previously underestimated mission command requirements necessary to orchestrate the operations of PSA elements for this size of deployment were met with increased communications support (SECRET Internet Protocol Router [SIPR] and multiband inter/intra team radio [M-BITR] radios, improved reporting formats and placement of LNOs at the TSC's FCP in Garlstadt), and with personnel augmentation by Army field support battalion (AFSBn) and CSB elements. Clarification of responsibilities with 4th SB also enabled improved readiness reporting of rail-loaded cargo en-route to destinations, as well as improved visibility on the ABCT's overall combat power build. Improved communication between 598th, 4th SB and 16th SB command teams allowed each to focus on their own core capabilities, such as maintenance status, port clearance or TAA closure. Addition of the TMC rail coordination cell to the SPOD command center improved direct coordination between the SPOD MC element and the commercial rail carrier. This section alone probably prevented the loss of additional trains during the movement and even got a train added at the end to police up a number of pieces, which would have taken weeks to clear by commercial line-haul.

Insight: Subsequent operations (10th Combat Aviation Brigade [CAB]) have employed Europe-based MCT teams that have greater familiarity with regional movement clearance and line haul-coordination processes. This practice has improved the SPOD element's preparedness to receive and stage cargo for onward movement, and allows for better coordination from day one of execution and should be sustained. Continuation of this practice is a must.

All told, approximately 100 out of more than 2,600 pieces of cargo planned for rail load were frustrated due to having been left off onward movement plans, exceeding loading capacity, or train cancellations. These items had to be moved via line haul or space available on subsequent trains.

In the end, vessel discharge, which is traditionally the first priority for port operators, went quickly, and was not a limiting factor in the RSOI of the ABCT. The decision to stagger vessel discharge paid some dividends, allowing the limited stevedoring work-force to focus on discharge of priority cargo and simultaneous rail loading. Commencement of un-lashing and discharge of the second vessel prior to the completion of the first had minimal impact on early rail delays, as it did not detract from the limited number of heavy track licensed stevedores servicing the first vessel and trains. The important take-away is the SPOD mission command element must consider the normal operational dynamics of the port in mission planning. These include commercial stevedoring and discharge operations' timelines and priorities, rail loading windows, impact of labor laws, weekend operations, and the impacts of winter weather on the rate of discharge and port clearance.

Insight: 21st TSC provided robust communications support for these missions, pending SDDC fielding of SIPR capabilities. 598th established habitual relationships with 405th AFSBn and 409th CSB providing SPOD MC cell augmentation, tactical air support for maritime operations (TASM-O) support (for aviation movements), and enhanced contracting officer representative (COR) capabilities for LOGCAP oversight. These capabilities could likewise be employed in support of a 405th APS site forward issue movement, operation of an inland LOGCAP ISB or other similar missions requiring expertise from multiple AMC entities.

The expressed intent for the next heel-to-toe rotation of the ABCT which will replace 3rd ABCT/4th ID is to execute on a more condensed timeline, maximizing convoy and inland railhead utilization. If these lessons are appropriately applied, all participating elements are well synchronized and multiple modes of port clearance are employed, the likelihood of success in moving the next incoming ABCT faster is achievable.

Endnotes

1. *U.S. Army Military Surface Deployment and Distribution Command*, <https://www.sddc.army.mil/Pages/default.aspx>, Accessed 13 JUN 2017.
2. *DOD Dictionary of Military and Associated Terms*, page 241.
3. *DOD Dictionary of Military and Associated Terms*, page 102.

Acronyms and Abbreviations

ABCT	armored brigade combat team
ADCON	administrative control
AFSBn	Army field support battalion
AIS	automated information systems
AIT	automated identification technology
ALD	available to load date
AMC	Army Materiel Command
AO	area of operation
AOR	area of responsibility
APOD	airport of debarkation
APOE	airport of embarkation
ARC	American roll-on roll-off carriers
ARFOR	Army Forces
ASCC/GCC	Army Service component command/ geographic combatant commander
ATC	authority to connect
AVLB	armored vehicle launched bridge
BCS3	battle command sustainment support system
BCT	brigade combat team
BDE	brigade
BII	basic issue items
BLST	brigade logistics support team
BN	battalion
CAC	common access card
CALFEX	combined arms live fire exercise
COA	course of action
COM	change of mission
CONPLAN	contingency plan
CONUS	continental United States
COP	common operational picture
COR	contracting officer representative
CROWS	crew served remotely operated weapons systems
CSB	contracting support brigade
CSSB	combat sustainment support battalion
CULT	common user land transportation
DB	Deutsches-Bahnhof
DDST	deployment and distribution support team
DEPOD	deployment order
DIRLAUTH	direct liaison authority/authorized
DODAAC	Department of Defense activity address code
DOD	Department of Defense
DTAS	Deployed Theater Accountability Software

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DTG	date-time group
DTS	Defense Transportation System
FCP	forward command post
FOV	field of view
FTX	field training exercise
GATES	global air transportation execution system
GCC	geographic combatant commanders
GCCS	global command and control system
HAZMAT	hazardous material
HHTs	hand-held terminals
HMMWV	high mobility multipurpose wheeled vehicle
HN	host nation
HNS	host-nation support
IAW	in accordance with
ICODES	integrated computerized deployment execution system
ISB	intermediate staging base
ITO	installation transportation officer
ITV	in-transit visibility
JDDOC	joint deployment distribution operations center
JFC	joint forces commander
JLLIS	joint lessons learned information system
JOPEs	Joint Operational Planning and Execution System
JRTC	Joint Readiness Training Center
LFAST	live fire accuracy screening test
LMTV	light medium tactical vehicle
LN	local national
LNO	liaison officer
LOGCAP	logistics civil augmentation program
LRT	logistics reporting tool
M-BITR	multiband inter/intra team radio
MCB	movement control battalion
MCE	mission command element
MCN	mission command nodes
MCT	movement control team
MDMP	military decisionmaking process
MNC-NE	Multinational Corps Northeast
MSL	military shipping labels
MV	motor vessel
MWO	mobility warrant officer
NATO	North Atlantic Treaty Organization
NFIU	NATO force integration units
NMCC	National Military Command Center
NTC	National Training Center
OAR	Operation Atlantic Resolve

OAR JOA	Operation Atlantic Resolve joint operations area
OCS	operational contracting support
OEL	organizational equipment list
OPCON	operational control
PDSS	predeployment site survey
PMCS	preventive maintenance checks and services
POD	port of debarkation
PSA	port support activity
RAF	regionally aligned forces
REFORGER	return of forces to Germany
RFID	radio frequency identification
RLD	ready-to-load date
ROC	rehearsal of concept
RSOI	reception, staging, onward movement and integration
RSOM	reception, staging, and onward movement
SB	sustainment brigade
SDDC	Military Surface Deployment Distribution Command
SIPR	SECRET Internet Protocol Router
SME	subject matter expert
SMT	sustainment maturation team
SOFA	status-of-forces agreement
SOP	standard operating procedure
SPOD	seaport of debarkation
SPOE	seaport of embarkation
SRP	Soldier readiness processing
SSA	supply support activity
STB	special troops battalion
TAA	tactical assembly area
TACON	tactical control
TASM-O	tactical air support for maritime operations
TC-AIMS II	Transportation Coordinator's Automated Information for Movement System II
TLLO	Transportation and Logistics Liaison Office
TPE	Theater-provided equipment
TPFDD	time-phased force and deployment data
TSC	theater sustainment command
TTOE	transportation theater opening element
UDL	unit deployment list
UMO	unit movement officer
USACE	United States Army Corps of Engineers
USAREUR	United States Army Europe
USFORSCOM	United States Forces Command
USTRANSCOM	United States Transportation Command

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