



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

From Hard to Harder: Iraq Retrograde Lessons for Afghanistan

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

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

historic but considerably different.

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

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

Scope of the Retrograde Challenge

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

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

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

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

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

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

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

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

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

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

Retrograde Velocity Goals

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

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

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

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

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

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

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

⁴ Ibid.

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

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

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

Retain or Divest

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

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

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

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

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

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

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

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

Geopolitical Environment

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

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

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

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

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

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

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

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

⁹ Afghanistan Drawdown Preparations, p. 14.

¹⁰ Ibid., p. 23.

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

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

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

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

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

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

Organizational Structure: Iraq

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

requirements and conditions.

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

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

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

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

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

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

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

¹⁴ Afghanistan Drawdown Preparations, p. 14.

¹⁵ Iraq Drawdown, p. 14.

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

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

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

¹⁹ Joint Concept for Logistics, p. 5.

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

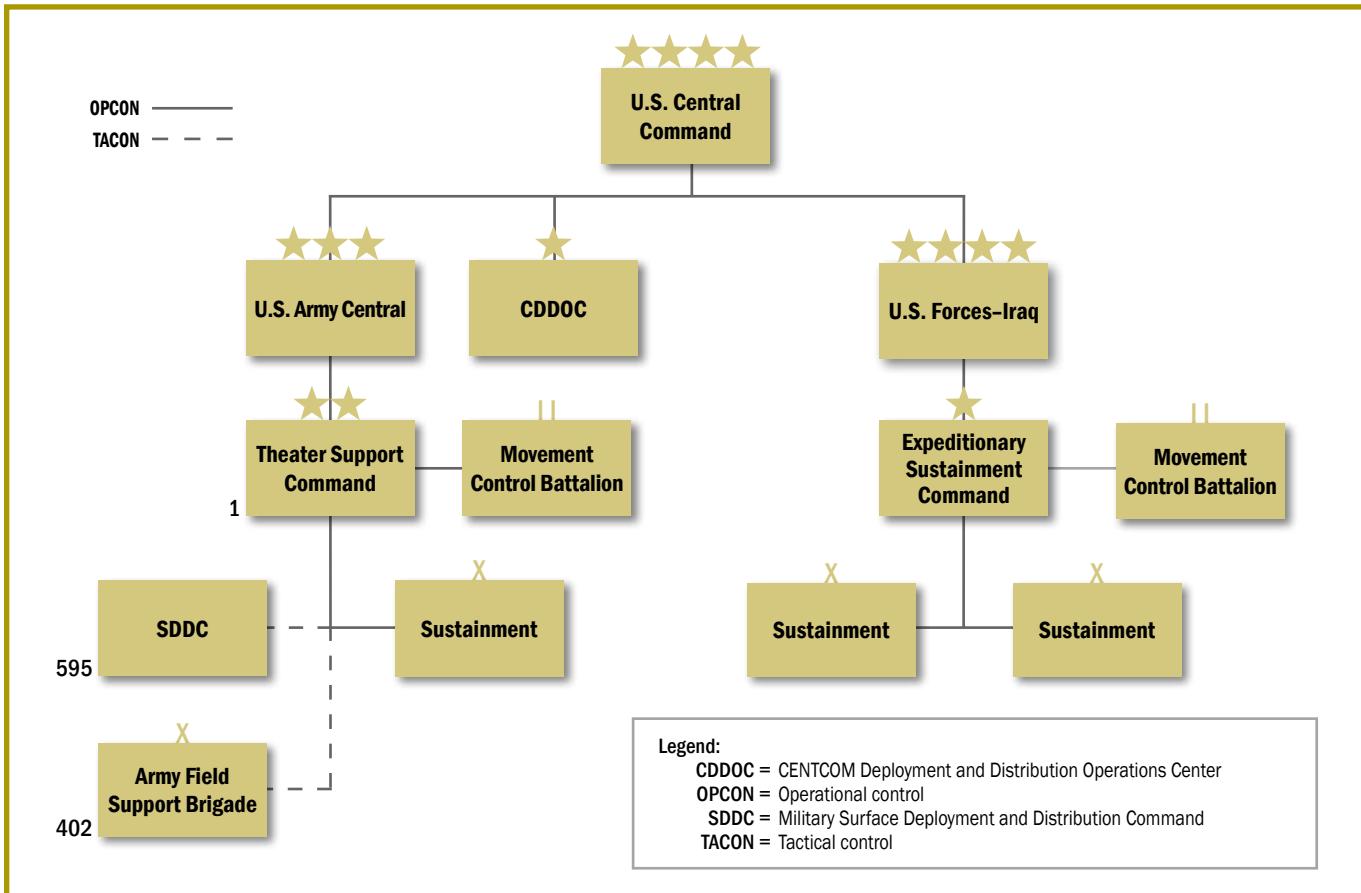


Figure 2. Operation New Dawn logistics organizational structure.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Successful relationships

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

conducting retrograde operations.

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

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

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

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

commands supporting the operational and tactical commanders.

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

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

Organizational Structure: Afghanistan

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

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

²⁵ Ibid.

²⁶ Ibid.

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

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

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

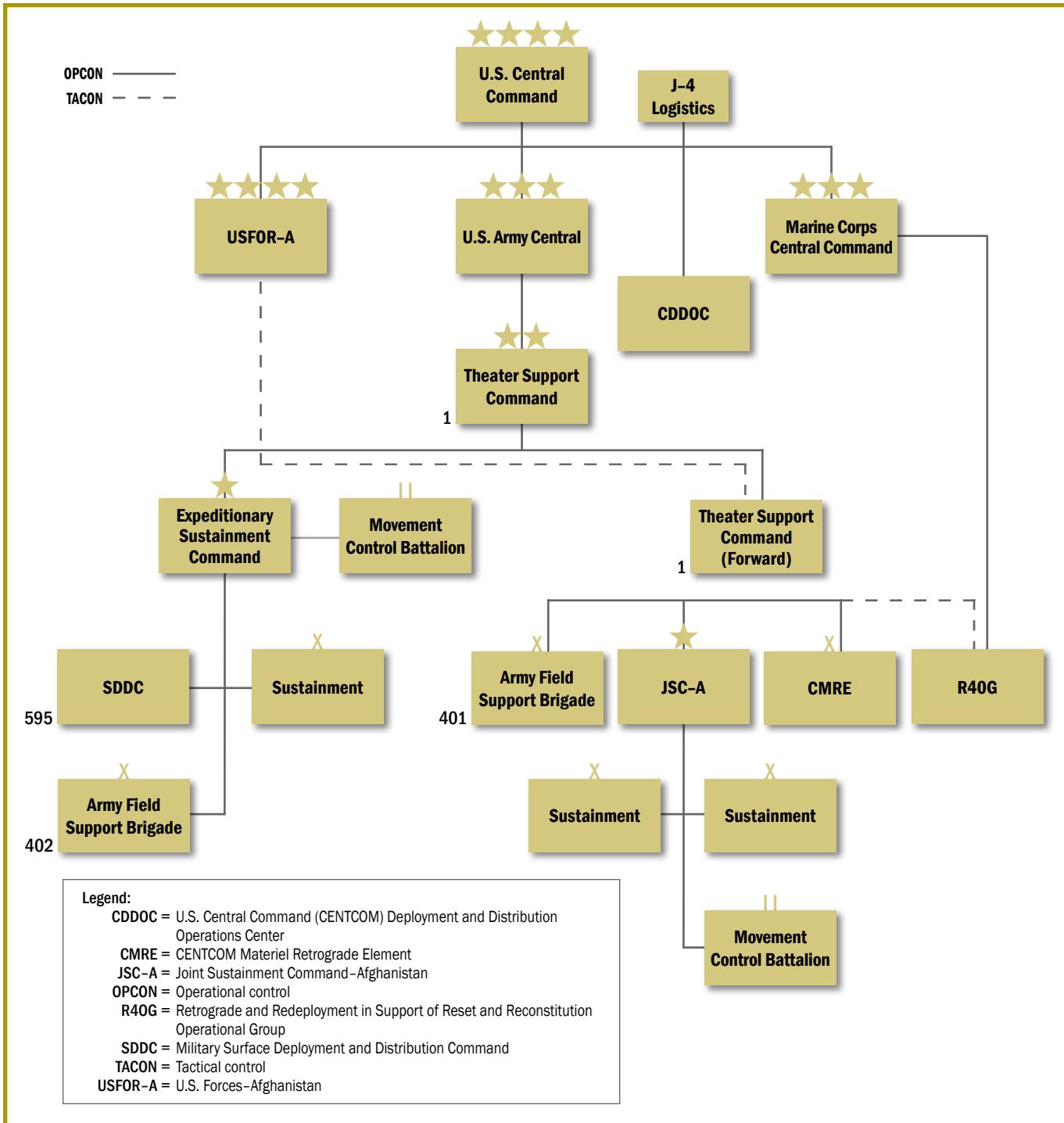


Figure 3. Operation Enduring Freedom logistics organizational structure 2013.

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

This fusion concept is also being

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

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

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

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

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

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

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

CMRE

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

stan than it was in Iraq.

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

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

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

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

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

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

³⁰ Ibid.

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

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

CMRE Enablers

Attached Retrograde Enablers

Operational Control:

- Engineers
- Retrograde sort yard
- Base closure assistance team
- Mobile container assistance and assessment team
- Materiel redistribution team
- Surface Deployment Distribution Command
- Aerial port team

Tactical Control:

- Customs
- Expeditionary disposal remediation team
- Environmental response and cleanup team

Supporting Enablers Not Attached

Direct Support:

- Movement control team
- Redistribution property accountability team
- Mobile redistribution property accountability team

Figure 4. CMRE attached and supporting enablers.

ing them are still engaged in ongoing operations.

Joint Team

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

The CDDOC is a joint element

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

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

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

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

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

JOPES

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

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

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

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

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

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

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

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

Recommendations for USFOR-A

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

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

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

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

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

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

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

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

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

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

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

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

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

Lessons for the Army of 2020

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

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

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

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

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

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