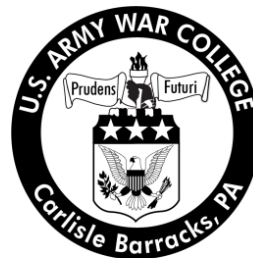


Civilian Research Project USAWC Fellow

FROM HARD to HARDER: IRAQ RETROGRADE LESSONS for AFGHANISTAN

by

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United States Army



United States Army War College
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The U.S. Army and DoD have been conducting redeployment and retrograde operations from both Iraq and Afghanistan for the past 11 years. Both Iraq and Afghanistan are unique with their own geographical, operational, and political challenges resulting on different lessons learned. However, many lessons from the Iraq withdrawal are being applied in Afghanistan. This paper will review the joint redeployment/retrograde lessons learned from Iraq and Afghanistan. The author proposes five recommendations to support the retrograde from Afghanistan, including: increase divesting opportunities, increase the rate of base closure, increase the monthly retrograde velocity goals, plan for a location to store residual equipment post 2014, and synchronize JOPES retrograde timelines with the commercial contract system for a coordinated retrograde common operating system. The author offers three recommendation from the retrograde lessons learned for potential application to Army 2020

FROM HARD to HARDER: IRAQ RETROGRADE LESSONS for AFGHANISTAN

The withdrawal from Iraq in 2009 to 2011 as part of Operations IRAQI FREEDOM (OIF) and NEW DAWN (OND) was a historic logistical accomplishment—the largest in scope since the Second World War—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 from Iraq due to the geopolitical environment. While not all lessons are applicable, US Forces-Afghanistan (USFOR-A) is applying many retrograde lessons. This paper compares the two retrograde operations from the perspective of drawdown timelines for Iraq and Afghanistan, the scope of the retrograde challenges, the geopolitical environment for the two theaters, and the command and control (C2) and joint team requirements. This paper concludes with recommendations to support the retrograde from Afghanistan and some institutional recommendations for Army 2020.

Retrograde Timelines

On 14 December 2008, the governments of the United States and Iraq signed a Security Agreement that set the deadline for the phased withdrawal of all American forces and equipment by 31 December 2011.¹ On 27 February 2009, President Barack Obama announced the drawdown from Iraq, with combat operations to end on 31 August 2010, confirming that all US military forces would be withdrawn from Iraq by the end of 2011. He further stated that by the end of August 2010, “boots on the ground” would decrease from 140,000 to 50,000 troops, whose mission then would be to advise, train, and assist Iraqi forces.² On 1 January 2010, Multi-National Force-Iraq merged the three major commands of Multi-National Force-Iraq (MNF-I), Multi-National Corps-Iraq (MNC-I), and Multi-National Security Transition Command-Iraq (MNSTC-I) into a single

headquarters—US Forces-Iraq (USF-I)—to facilitate the mission change.³ The transition from MNF-I to USF-I was made easier by the fact that all non-US Coalition forces had departed Iraq by July 2009.⁴ The kinds of strategic and organizational changes that needed to occur meant that the Department of Defense (DoD) began planning and executing retrograde operations more than three years before the final redeployment of more than 150,000 US forces.⁵ This early planning set the conditions to enable USF-I to meet its withdrawal objectives.

In June 2011, President Obama outlined a phased reduction of the 33,000 surge forces that had deployed to Afghanistan from 2009–2010. The phased reduction plan would remove 10,000 troops from all Services by the end of 2011 and 23,000 additional troops by the end of September 2012, leaving 68,000.⁶ The President also stated that troops would continue coming home steadily as the Afghans assume responsibility for their own security by 2014.⁷ Table 1 compares the overall Afghanistan drawdown timeline to that of Iraq.

Table 1. Comparison of OIF/OND and OEF Troop Drawdown Timeline

OIF/OND	36 Months				
	Dec-08	Feb-09	Aug-10	Oct-11	Dec-11
Boots on the Ground	157,000	140,000	50,000	40,000	0
OEF	43 Months				
	Jun-11	Dec-11	Sep-12	Feb-13	Dec-14
Boots on the Ground	101,000	91,000	68,000	34,000	0–20K TBD

Joint Pub 3-35, *Deployment and Redeployment Operations*, cites the critical decisions for redeployment that include “withdrawal timetables, residual forces and

reserve stocks to remain in the host country.”⁸ The President, DoD, and the International Security Assistance Force (ISAF) are assessing and determining the long-term strategy that will lead to decisions on the follow-on missions and capabilities. Once determined, the decisions will shape the nature and pace of the redeployment.⁹ Gen John Allen, former Commander ISAF, offered military options to the Secretary of Defense “that would keep 6,000 to 20,000 US troops in Afghanistan after 2014.”¹⁰ The mission and size of this force will shape the retrograde operation. The residual force options on the low end would be capable of providing limited counterterrorism capability and require primarily organic vehicles and limited unit support. The higher troop-strength options could provide logistics support and training for Afghan National Security Forces (ANSF). The high-end option would require significantly more vehicles and materiel to remain in country. However, Deputy National Security Advisor Ben Rhodes indicated during a radio interview that leaving no residual force is also an option.¹¹ Having troops remain in Afghanistan after 2014 would have significantly different logistics implications from the withdrawal from Iraq, where all military units departed and all equipment had to be removed or signed over to the Department of State (DoS) or Government of Iraq by the end of 2011. Any residual force would also be in a position to support the retrograde of any remaining equipment.

As occurred in Iraq, the main effort in Afghanistan is shifting from partnering and combat to training, advising, and assisting.¹² As the mission changes, the US is replacing Brigade Combat Teams (BCT) with newly-designed Security Force Assistance Brigades (SFABs), which are similar to the Advise and Assist Brigade (AAB) model developed in Iraq. The SFABs are BCTs that deploy at about half strength and focus

more on training and mentoring Afghan National Security Forces than executing combat and counterinsurgency missions.¹³ The organizational change from BCTs to SFABs supports the planned reductions in forces and equipment as well as the transition to Afghan-controlled security.

Scope of the Retrograde Challenge

By May 2009, USF-I had built up six years'-worth of infrastructure and supplies. USF-I closed more than 341 bases, retrograded supplies measured in 60,000 20-foot equivalent unit (TEU) containers, and transported 40,788 pieces of rolling stock/equipment.¹⁴ To manage the large equipment numbers, USF-I placed all the equipment into one of three categories: (1) organizational property that a unit owned on its property book and brought to Iraq; (2) theater-provided equipment (TPE) that was left by redeploying units for follow-on rotational units that could include armored wheeled vehicles, weapons systems, and communications systems for a few examples; (3) contractor-acquired/government owned (CA/GO) equipment comprising mostly life support materiel to establish and operate operating bases that consists of containerized housing units, air conditioning units and generators. They further divided each category into disposition subcategories of retain (return, remain, or redistribute) and divest (sell, transfer, or dispose). During almost a decade of war in Iraq, DoD had amassed more equipment than it needed. DoD used several processes to divest this excess equipment: Excess Defense Articles (EDA), Non-excess materiel, and Foreign Excess Personal Property (FEPP) as methods to transfer ownership to Iraq; transfer to USFOR-A; and Defense Logistics Agency (DLA) Disposition Services (DS) to dispose of items. DLA DS demilitarizes and disposes of materiel no longer needed or too costly to repair

or ship home.¹⁵ By the end of its mission, USF-I had divested more than 4.2 million pieces—the equivalent of approximately 12,000 TEUs-worth—of equipment.¹⁶ This divesting process saved more than \$1.7 billion in transportation costs.¹⁷ Furthermore, passing serviceable but excess equipment to Iraq assisted the Theater Security Cooperation efforts of US Central Command (CENTCOM) by helping to resource the Iraqi Army.

The majority of equipment in Afghanistan that requires disposition instructions is TPE and CA/GO, because it is not owned by Army units or part of their permanent property book. As both contractors and commands complete their missions, they inventory 100% of their items to determine what they need to retain or divest. Equipment inventories are sent through the chain of command to determine other unit needs or to confirm the property disposition recommendations. TPE is categorized based on equipment type, i.e., standard military equipment or non-standard equipment. For the standard military equipment, the Army assesses whether it is needed; for example, five-ton cargo trucks or M16A2 rifles may be divested as excess. The Army also evaluates non-standard items purchased to support operations in theater to determine if there is a future need and to retain or divest it. The majority of CA/GO property that consists of base support items are all declared as Foreign Excess Personal Property for transfer to Afghanistan. Figure 1 shows the equipment categories, quantities, and dollar values in Afghanistan and its projected retain-versus-divest plan. The Army plans to divest equipment valued at 24% of the total equipment value in Afghanistan.

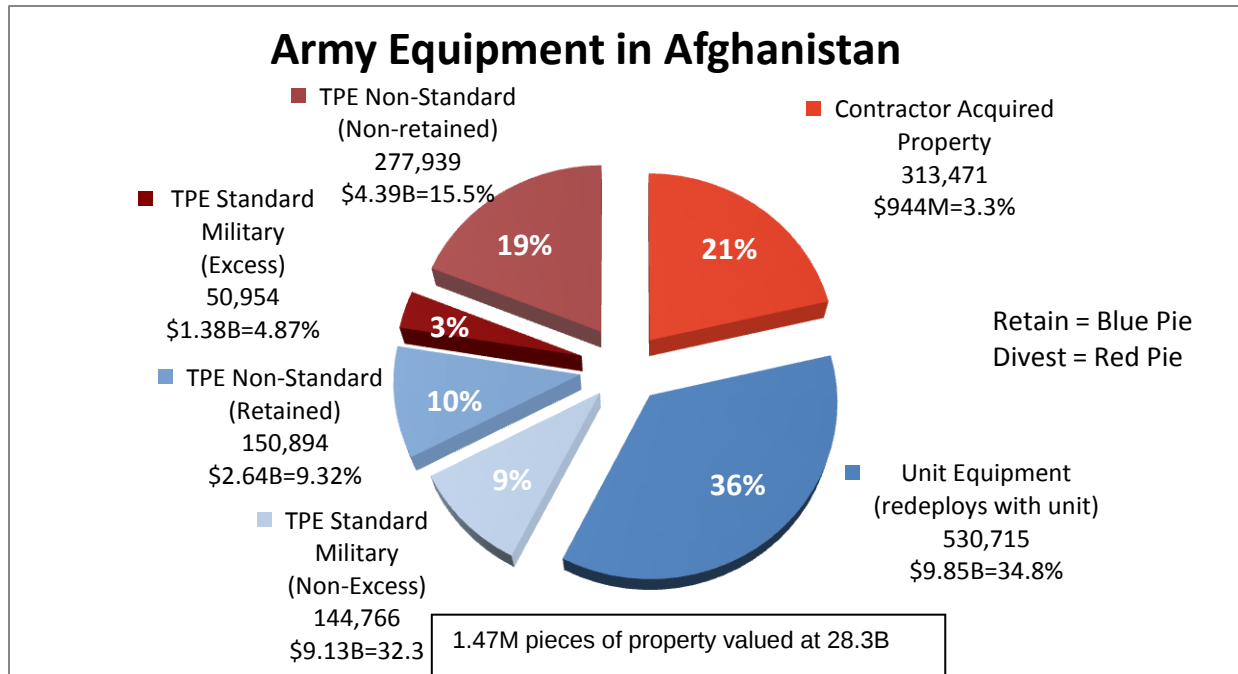


Figure 1. Army Equipment in Afghanistan¹⁸

A management tool developed in the Iraq retrograde was retrograde “velocity goals.” Retrograde velocity goals were a metric, expressed as items per unit of time, designed to measure progress and focus the effort of many disparate organizations. The initial velocity goal (established in May 2009) was 1,500 non-mission-essential pieces of rolling stock per month. In April of 2010, USF-I increased the goal to 2,500 per month. Similarly, the initial goal for non-rolling stock was 3,000 TEUs per month and 3,800 per month thereafter.¹⁹ The retrograde velocity goals were increased in order to meet the retrograde timeline objectives. These retrograde goals provided planning factors that were operational goals to the “Logistics Enterprise,” which consisted of US Transportation Command (TRANSCOM), the CENTCOM Directorate for Logistics (J4), Army Materiel Command (AMC), Army Central Command (ARCENT), and the 1st Theater Sustainment Command (1st TSC), to orchestrate resources to support the operation.

In Afghanistan, USFOR-A has built up 11 years'-worth of infrastructure and supplies. Their numbers compared to USF-I's in Table 2.

Table 2. USF-I and USFOR-A Total Bases, Supplies in TEUs and Rolling Stock

	Bases	Supplies (TEUs)	Rolling Stock
USF-I ²⁰	341	60,000	40,788
USFOR-A ²¹	560	90,000	50,000

One of the lessons learned 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 FEPP, EDA, and DLA DS procedures that were 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 (See Figure 1).²² However, according to Government Accountability Office officials, in stark contrast to Iraq, the Afghan government’s ability and desire to absorb and maintain transferred equipment are limited.²³ This limitation is due to Afghanistan’s lack of a logistics system and to an inability to maintain this older equipment on top of the quantity of equipment that the US Government has already provided to Afghanistan through the foreign military sales (FMS) system.

The National Defense Authorization Act (NDAA) prescribes what and how items can be transferred to Afghanistan. Unlike Iraq, the 2013 NDAA no longer authorizes DoD to transfer construction equipment as EDA. The 2013 NDAA provides the authority to transfer non-excess DoD items to the Government of the Islamic Republic of Afghanistan (GIROA); however, there is no provision to transfer non-excess items to Coalition partners. An example of non-excess materiel that may be transferred to

Afghanistan is M1114 Up-Armored High Mobility Multi-purpose Wheeled vehicles (HMMWV) to support the Afghan National Army. In order to transfer non-excess materiel to GIRoA, DoD must complete the steps shown in Figure 2. These constraints will challenge USFOR-A's ability to transfer the amount of projected equipment to the Afghans while increasing the amount of equipment that will have to be turned-in to DLA DS for disposition, because the excess equipment is too expensive to ship home. The Joint Staff and Office of the Secretary of Defense may consider requesting that Congress authorize the transfer of construction equipment to the GIRoA and non-excess materiel to Coalition partners in the 2014 NDAA.²⁴

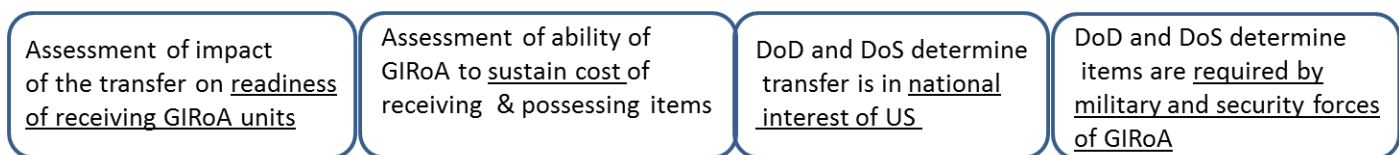


Figure 2. Steps Necessary to Transfer Non-Excess Materiel to GIRoA

Until 2011, planners at USFOR-A focused on inbound sustainment to deal with the distribution challenges of Afghanistan and to ensure there were enough supplies and equipment to support the surge forces of 2008–2010. Force strength increased in the beginning of 2008 and peaked at 101,000 in 2009. Before 2011, reverse flow cargo was primarily unit equipment being redeployed for reset.²⁵ This changed in October 2011 when USFOR-A established retrograde velocity goals of 1,200 vehicles and 1,000 TEUs per month. This change emphasized retrograde and provided for a unity of effort between USFOR-A and the logistics enterprise to begin to reduce excess materiel and equipment.²⁶ USFOR-A troop-strength determines the requirements for rolling stock, and the number of bases determines the number of TEUs of supplies. As more troops

redeploy and troop-strength is reduced, rolling stock becomes available for retrograde; similarly, as bases close, TEUs with excess materiel become available. 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 (PAKGLOC), which is the truck route through Pakistan.²⁷

A forcing function to reduce excess, create transportation requirements, and retrograde all materiel requirements by December 2014, is to increase 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. Unfortunately, forces never redeploy on an even timeline, so the transportation system will require the ability to surge to meet demands. USFOR-A should continually reevaluate the velocity goals based on the withdrawal timeline and residual force in order to determine if they need to adjust the goals again.

In addition to shipping equipment out of Afghanistan, DoD determined it needed to better manage equipment still flowing into Afghanistan. ARCENT, along with US Army Forces Command (FORSCOM), Headquarters Department of the Army (HQDA), 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.²⁸

Geopolitical Environment

From a purely geopolitical context, retrograde operations from Iraq seem almost easy compared to Afghanistan. In fact, Iraq was extremely difficult. Afghanistan shares some similarities with Iraq; however, there are more noteworthy differences. Iraq has a seaport of moderate capacity from which the US Army Surface Deployment and Distribution Command (SDDC) retrograded approximately 20% of the containers. In addition, easy access to Jordan allowed SDDC to retrograde another 30% of the unit redeployment containers or TEUs.²⁹ Iraq had an advanced road network that facilitated convoy movement, relatively flat terrain, and a purely US C2 structure. The most significant factor was having Kuwait as an intermediate staging base (ISB) to receive and stage the retrograde. The good road network leading directly to Kuwait provided 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, is covered with extremely challenging terrain consisting of high mountains, and experiences strong weather conditions. None of the neighboring countries allow easy access or are willing to serve as an ISB, which decreases flexibility, and increases cost, complexity, and risk to meeting time constraints. In addition, ISAF contains forces from 42 countries, all doing their own retrogrades, and that will require additional de-confliction and synchronization during the operation. Due to the geopolitical situation, the primary retrograde mode is by air to nearby regional transportation hubs, and then transferring the cargo to a ship for movement to the US, a process called Multi-Modal. Multi-modal air shipments cost roughly six times more than moving out equipment on the ground through Pakistan.³⁰

PAKGLOC was a critical enabler, used to retrograde non-sensitive equipment until November 2011, when Pakistan closed the route. While open-source reports indicate the PAKGLOC is open and cargo is slowly flowing in, only initial proofs-of-principle shipments have moved out of Afghanistan on that route. The other surface route is known as 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. Figure 3 shows the routes into and out of Afghanistan. The orange truck routes are the NDN. With Pakistan's agreement to reopen the PAKGLOC, TRANSCOM's goal is to retrograde 14.2% on NDN, 19.9% on the PAKGLOC, and 65.8% via air.³¹



Figure 3. CENTCOM Area of Responsibility Route Map³²

In 2012, the logistics enterprise conducted initial retrograde “proofs-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 DoS 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 that of Iraq.

DoD should consider de-coupling the people redeployment timeline from the equipment retrograde.³³ De-coupling means that the equipment retrograde timeline may extend into 2015 until the interagency coordinates a more cost efficient surface route. Simultaneously, USFOR-A should identify a location to store equipment in Afghanistan past 2014. Accepting the potential reality that not all equipment will leave before December 2014 will force the US to factor a prudent equipment component to the post-2014 presence negotiations with the GIRoA.

The retrograde from Afghanistan is a prime example of the importance of the whole-of-government approach to defense access challenges. The *Army Capstone Concept* describes the future operational environment with adversaries who employ anti-access campaigns.³⁴ As Iraq and Afghanistan demonstrate, access is more than something gained and maintained by military means alone. In the context of the largest military operations of the last decade, and two of the largest logistical operations of a generation, access entails strategic policy, diplomacy, and logistical planning. The lessons learned from using all instruments of government power together in a coordinated manner—a.k.a., whole-of-government—to gain and maintain access to

countries surrounding Afghanistan will have potential application to the future operational environment in both deployment and redeployment phases.

Command and Control

The C2 structure CENTCOM and its subordinate commands put in place to execute the retrograde operations has evolved to support the retrograde from both Iraq and Afghanistan. A combination of both ad-hoc and doctrinal organizations allowed the commands to remain adaptable to changing requirements and conditions.

Iraq

In Iraq, ARCENT supported OND under the unity of effort concept meaning it did not have a command relationship to any of the units in Iraq supporting the retrograde. ARCENT had a similar support relationship with OEF, unity of effort, but no command relationships. Understanding the C2 arrangement in Iraq starts with the consolidation of the MNF-I, MNC-I, and MNSTC-I into USF-I into a single operational chain of command. In support of this retrograde operation, CENTCOM assigned ARCENT as the Executive Agent to synchronize the retrograde of materiel and equipment from the Iraq Theater of Operations. However, CENTCOM did not create a unified structure to coordinate the actions of the variety of teams in multiple countries and units engaged in retrograde operations.³⁵ CENTCOM left ARCENT and the new USF-I to forge unity of effort versus 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.”³⁶

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 J4's CENTCOM Deployment and Distribution Operation Center (CDDOC); AMC's Responsible Reset Task Force (R2TF); ARCENT's Theater Sustainment Command, ARCENT's Support Element-Iraq (ASE-I), Army Sustainment Command's Army Field Support Brigade (AFSB) under the operational command (OPCON) of ARCENT G4; and USF-I's Expeditionary Sustainment Command (ESC).

The CDDOC's mission was to synchronize and optimize strategic and theater multi-modal resources to maximize distribution, force movement, and sustainment in the CENTCOM area of responsibility.³⁷ The CDDOC is an example of an organization that supports the three imperatives of the new joint logistics concept as defined by the Joint Staff J4:

- Unity of Effort—the synchronization and integration of logistic capabilities focused on the commander's intent.
- Rapid and Precise Response—the ability of logistic forces and organizations to meet the needs of the joint force.
- Enterprise-Wide Visibility—assured access to logistic processes, capabilities, resources, and requirements to gain the knowledge necessary to make effective decisions.³⁸

CDDOC operates within the ARCENT headquarters in order to support unity of effort for the retrograde, maintain asset and in-transit visibility, and to synchronize strategic transportation. CDDOC operates under the OPCON of the CENTCOM J4 while coordinating with other members of the “logistics enterprise.” It brings the power of direct reach-back to CENTCOM J4, TRANSCOM, and DLA by having members from all

three organizations on the team who facilitate daily coordination with those strategic logistics organizations.

AMC's R2TF is a national-level organization created to support the retrograde of TPE from Iraq. The R2TF's mission is to serve as AMC's forward command post for strategic retrograde and the integration of reset in accordance with the AMC's mission and to synchronize AMC and ARCENT reset activities.³⁹ This ad-hoc organization was developed because of the large amounts of TPE in Iraq that required disposition instructions. The R2TF, similar to the CDDOC, operated under unity-of-effort in support of ARCENT.

The ASE-I operated in direct support to USF-I's retrograde mission by operating forward in Iraq synchronizing, coordinating, and directing the execution of equipment retrograde from Iraq. This is another example of an ad-hoc C2 element created to support retrograding six years of TPE.

AFSB was the unit assigned the mission of managing, maintaining, and retrograding designated TPE in Kuwait and Iraq.⁴⁰ Until 2008, when CENTCOM gave ARCENT OPCON over the AFSBs, there was no theater organization with command authority over it. This was problematic because the AFSB was responsible for retrograding TPE that accounted for 80% of all of the equipment in Iraq. Once the AFSBs were OPCON to ARCENT G4, 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 had no command relationship, only a supporting relationship with USF-I. At the end of Operation NEW DAWN, the 402nd AFSB was placed under the tactical control (TACON) of 1st TSC.⁴¹ Lessons learned in Iraq helped establish the new Army Techniques Publication (ATP) 4-91, *Army Field Support Brigade*, published in 2011 that states when AFSBs are forward deployed, they are placed OPCON to the theater Army. This OPCON relationship is normally delegated to the supporting TSC or ESC as appropriate.⁴²

CENTCOM assigned the ESC in Iraq to USF-I, rather than assigning it to 1st TSC in Kuwait, which FM 4-94 *Theater Sustainment Command* indicates is the norm for TSC–ESC relationships.⁴³ FM 4-94 states that the ESC functions as an extension of the TSC and that the TSC employs the ESC as a forward-deployed command post rather than as a separate echelon of command.⁴⁴ 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 in Korea is assigned to 8th Army in Korea and does not have any command relationship to the 8th TSC in Hawaii under US Army Pacific (USARPAC). Based on the history of assigning ESCs to Corps or Joint Task Forces (JTFs) instead of to TSCs, this may be an opportunity for the Combined Arms Support Command (CASCOM) to review the doctrine for command relationships of ESCs in order to better define their C2 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 OPCON to a JTF and function as a joint national support element. In the JTF assignment scenario, the TSC–ESC relationship is supporting to supported,

meaning the TSC has no direct command relationship with the ESC besides providing support as required.⁴⁵ 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 not serving as 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.

ARCENT, 1TSC, and their subordinate sustainment brigade in Kuwait were in support of 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, BG Don Cornett, Commander of the 310th ESC in Iraq, indicated during his Reverse-Collection After-Action Team (R-CAAT) review that “relationships between the ESC and TSC are what made the lack of single C2 logistics successful.”⁴⁶ BG Cornett was referring to the teamwork and personal relationships between the logistics organizations in Iraq and Kuwait working together to solve problems and accomplish the mission.

Even with good relationships between the ESC in Iraq and the 1st TSC and its sustainment brigade in Kuwait, the lack of single logistics C2 structure between the Iraq Joint Operating Area and Kuwait negatively impacted using transportation assets fully and flexibly. There was a movement control battalion in Iraq and one in Kuwait, both under separate commands, which at times caused confusion on coordinating and assigning trucks to meet movement requirements. An example of this confusion was a requirement to “clear out” bases thought to be closed, but which in fact still had equipment to retrograde. The Kuwait-based Movement Control Battalion assigned

transportation assets to retrograde materiel in accordance with scheduled transportation movement requirements (TMR). On occasion, the Iraq-based Movement Control Battalion needed the transportation assets to “clear out” US equipment from bases that the Kuwait Movement Control Battalion believed to be closed, but that still had materiel waiting to be retrograded.⁴⁷ The inefficient use of transportation assets was because the Kuwait Movement Control Battalion tasked the trucks based on transportation movement requirements, but different cargo was often available or at different locations because of the dynamic equipment moves, accountability, and in-transit visibility problems. Once the change was determined, the units in Iraq had to coordinate with the trucks’ parent unit in Kuwait to re-task the trucks. If all the tactical logistics units were under the command of the 1st TSC, this would permit more agile, flexible, and responsive C2. However, regarding the control of forces, there is a perennial debate around where it should take place involving the trust of commanders to provide adequate support.

Achieving unity of effort required command emphasis and senior leader involvement. Senior leaders such as the USF-I J4, ESC Commander, and TSC Commander routinely ran coordination meetings and boards such as the equipment drawdown synchronization board (EDSB) in order to monitor progress and synchronize retrograde efforts.

USF-I created a Drawdown Fusion Center located in the USF-I J3 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.”⁴⁸ The Drawdown Fusion Center also synchronized retrograde efforts between units in Iraq and Kuwait, ensuring that everyone involved understood the requirements and priorities.

Figure 4 illustrates the tracking mechanisms the Fusion Center developed to fuse data from many organizations in order to track US force and contractor drawdown, vehicle retrograde, and base closures. The Fusion Center provided leaders at all levels a common operating picture (COP) on the status of the retrograde operation.

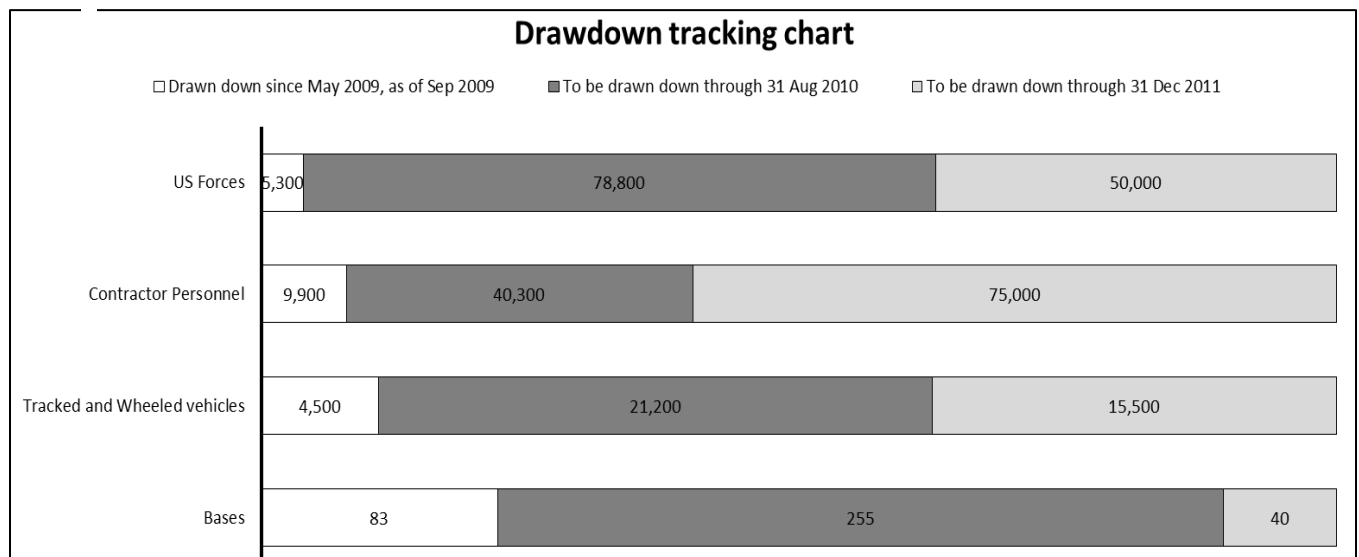


Figure 4. Example of a Drawdown Tracking Chart⁴⁹

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

During Operation NEW DAWN, with the ARCENT and 1st TSC support units being close to Iraq, the concepts of Mission Command enabled the many organizations to successfully accomplish one of the most challenging logistical 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 (ROC) drills. During the ROC drills, both USF-I and ARCENT commanders' intents were displayed nested with CENTCOM's. The ROC drills helped to synchronize the execution timeline creating a shared understanding. Both the decentralized commands and decentralized execution worked across the levels of command from the strategic to the tactical, implementing commander's intent and collaborating for mission effectiveness.

Afghanistan

Moving to Afghanistan, in 2012, ARCENT and USFOR-A established logistics unity of command by deploying a 1st TSC forward command post to create a single logistics command. Unlike the Iraq example above, the Afghanistan retrograde operation will largely execute under the concept of unity of command.

The logistics enterprise applied many of the C2 lessons learned from Iraq. USFOR-A created a Retrograde Fusion Cell to conduct analysis and assessments on the status of the R4D which stands for re-distribute, reset, redeploy, retrograde, and dispose of equipment.⁵⁰ The fusion cell in Afghanistan provided a central point for coordination before the single logistics command establishment, to synchronize, integrate, and execute the retrograde operations. The fusion cell provides a common operating picture of the retrograde status and progress, tracks friction points, and

supports the commander's decision cycle.⁵¹ This fusion concept is also being applied at stateside installations where US Army Forces Command (FORSCOM) named it the support operations center. MG Joe Anderson, 4th Infantry Division Commanding General, described the effort as a "combat multiplier that allows us to efficiently prioritize resources and conduct effective integration due to the enhanced logistical situational awareness."⁵² The fusion centers don't command—they enable unity of effort where a formal C2 structure may not exist or is complicated by decentralized and non-standard operations. These fusion centers become horizontal and vertical integrators which are an example of C2 agility. The support operations centers are being developed and implemented at several installations across the US.

ARCENT, in coordination with AMC's R2TF, placed an ARCENT Coordination and Support Element–Afghanistan (ACSE-A) in the USFOR-A fusion cell. The ACSE-A's mission is to integrate and synchronize sustainment, distribution, and retrograde functions.⁵³ 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, similar to the logistics C2 structure in Iraq. The USFOR-A C2 structure is more in line with FM 4-94's special Note covering JTFs, because the ESC is designated Joint Sustainment Command-Afghanistan (JSC-A). Lessons learned in Iraq determined the need to increase unity of command and effort, resulting in the ARCENT and 1TSC 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 have established a forward 1TSC command post in Afghanistan that is TACON to USFOR-A. The establishment of a 1TSC forward (FWD) command element creates a single logistics chain of command over all the support forces in Kuwait and Afghanistan. This change allows the ESC to focus more on sustainment requirements and for the TSC (FWD) element to take on the retrograde challenges of synchronizing the strategic enablers such as DLA and SDDC elements. The new single logistics command enhances the mission command for retrograde in the extremely challenging environment of Afghanistan. Additionally, the 1TSC (FWD) now has OPCON of the ESC and AFSB, enabling the TSC to synchronize all retrograde execution in Afghanistan.

USFOR-A integrated the US Marine Corps' (USMC) Retrograde and Redeployment in Support of Reset and Reconstitution Operational Group (R4OG) that is responsible for the USMC retrograde mission by making it TACON to the 1TSC (FWD). Making the R4OG TACON to the 1TSC (FWD) takes a step further in creating a single joint theater logistics command, ensuring the retrograde efforts are synchronized. The single logistics command is more important in Afghanistan than was the case in Iraq due to the regions' geopolitical constraints.

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 Recovery 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 disposition instructions, and supporting units still engaged with advising the Afghans while simultaneously planning and executing redeployment and retrograde operations.

The CMRE coordinates critical capabilities both internal and external to the brigade to support the retrograde mission (see Table 3).

Table 3. Attached Retrograde Enablers

Enabler	Provision
Engineers (OPCON)	Conduct vertical and horizontal construction and deconstruction, demilitarization, and/or de-scope
Retrograde-Sort Yard (OPCON)	Receives, sorts, identifies, classifies, brings to record and retrogrades, redistributes, and disposes of excess material (Soldier)
Base Closure Assistance Team (BCAT) (OPCON)	Assists and provides technical assistance for FEPP disposition (Contracted)
Mobile Container Assistance and Assessment Team (MCAAT) OPCON	Inventories, inspects, and identifies containers and container discrepancies in the Integrated Booking System (IBS)-Container Management Module (CMM), provides guidance to Container Control Officers (CCO), trains and certifies CCOs on IBS (Contracted)
Materiel Redistribution Team (MRT) (OPCON)	Sorts through materiel on site and identifies, segregates, and prepares for shipment of excess, non-mission essential equipment and materiel (Contract/Soldier)
Surface Deployment Distribution Command (SDDC) (OPCON)	Conducts 120 day redeployment briefings; certifies containers as seaworthy; coordinates "door to door" shipments for shipment (USA)
Aerial Port Team (OPCON)	Augments aviation hubs at Bagram Air Field, Kandahar Air Field, and Leatherneck with additional capacity to inspect loads for airworthiness and load aircraft (USAF)
Customs (TACON)	Conducts customs and agricultural inspections to meet US Customs and Agricultural standards (Military Police/USCG/USN)
Expeditionary Disposal Remediation Team (EDRT) (TACON)	Contracts for the on-site disposal, demilitarization, and disposition of scrap and unserviceable materiel; provides technical advice and assistance on DLA services (Contracted)
Environmental Response and Cleanup Team (ERCT) (TACON)	Reviews environmental site closure surveys, coordinates with units to produce a corrective action plan; provides contractor management for onsite cleanup support (Contracted)

USFOR-A initially had the external enablers TACON to the ESC, but saw the need to have them focused under the mission command of the CMRE. Most of the external CMRE enabling organizations listed below were originally designed to support operations during OND (see Table 4).

Table 4. Supporting Enablers that are not attached to the CMRE

Movement Control Team (MCT)	Processes transportation movement requests; conducts in-gating & out-gating operations; de-conflicts routes; provides in-transit visibility
Redistribution Property Accountability Team (RPAT)	Relieves units of TPE and receives, processes, classifies, retrogrades, redistributes, resets, and disposes of property book items from a fixed site
Mobile Redistribution Property Accountability Team (MRPAT)	Relieves units of TPE and receives, processes, classifies, retrogrades, redistributes, resets, and disposes of property book items from a fixed site provided equipment and receives, processes, and classifies property book items from a forward site

The CMRE tasks its enablers through fragmentary orders, direct communications, and by hosting coordination meetings for enhanced mission command.⁵⁴ The Commander of the CMRE, COL Douglas McBride, highlights an important lesson: “retrograde is nothing new, but reducing equipment stockpiles earlier is a culture shift, if we’re knee-deep in combat operations, the tendency is to hold on to materiel for contingency operations, just in case.”⁵⁵

The logistics enterprise determined there was a need for the above listed retrograde enabling capabilities during both OND and OEF. Based on the requirement for these capabilities, Training and Doctrine Command (TRADOC) should do a DOTLMPF (Doctrine, Organizations, Training, Leader Development, Materiel, Personnel and Facilities) review to determine which capabilities should be written into doctrine as new requirements and which should be added to existing units.

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 occupying them are still engaged in ongoing operations.

Joint Team

GEN Robert Cone, the TRADOC Commander, highlighted the importance of a Joint Team, stating that “our combat experience tells us that our Army is most successful when we fight as an effective partner on the joint team.”⁵⁶ GEN Cone’s statement applies to the retrograde challenge just as much to fighting the enemy. The Joint partners that create the logistics enterprise will be critical to the successful retrograde from Afghanistan, even more so than from Iraq. The geopolitical limitations surrounding Afghanistan will force more than 80% of the retrograde to move via multi-modal, 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 multi-modal resources. The CDDOC must synchronize USTRANSCOM’s transportation efforts and initiatives with both USFOR-A and the 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 the CDDOC TACON to the 1st TSC; this would increase unity of command.

In collaboration with the "logistics enterprise," international logistics providers such as Maersk Line Limited, Hapag-Lloyd, American President Lines (APL), United Parcel Service (UPS), FedEx, and DHL have created and sustained global supply chains that stretch almost literally from factory to foxhole.⁵⁷ These commercial supply chains are critical enablers for moving a large portion of the materiel both into and out of Afghanistan. The military doesn't have the capacity or political authority, which means Pakistan will not let US military trucks convoy equipment to its ports. The commercial carriers moved a large portion of the materiel into Afghanistan via the commercial supply chains. Using the commercial supply chains has caused SDDC to forward position teams across Afghanistan in order to coordinate and synchronize the commercial providers' support to the operational commander.

Assuming the PAKGLOC fully re-opens for retrograde and NDN's capacity is increased, SDDC will be working with the commercial surface shippers to retrograde cargo directly from the forward operating bases to the unit's home station using a process called *door-to-door shipping*. Until the surface routes open, TRANSCOM is contracting and SDDC is executing commercial multi-modal air retrograde out of Afghanistan. Another Joint partner, Air Mobility Command, flies that portion of equipment out of Afghanistan that is not moved commercially.

One challenge for this process is that CENTCOM has directed that all Services use the Joint Operation Planning and Execution System (JOPES) in order to plan, coordinate, validate, and execute retrograde operations similar to the redeployment process. The use of JOPES assists in requirements forecasting in order to ensure

adequate transportation capability is available to meet the needs of the command. 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 is important for units to understand when cargo will arrive at home-station and depots for reset. The commercial contract and schedules are planned primarily to support RDD, which isn't as important to units trying to depart the theater. In order to ensure timely commercial movement of cargo, TRANSCOM should look at ways to incentivize 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 property systems such the Property Book Unit Supply-Enhanced (PBUSE), the Army's Reset Management Tool (ARMT), and transportation system Transportation Coordinators' Automated Information Movement Systems (TC-AIMS) would interface with JOPES to transfer data for movement planning. Unfortunately, Service systems don't interface well, and transportation data must often be re-typed from one system to another, a time-consuming process that introduced 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.⁵⁸ As new systems are developed or modified, there should be a Joint requirement to identify any potential interface partner 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.

The Army's TC-AIMS is an unclassified system designed to manage automated movement data, but it requires an interface system to transfer data with JOPES on the classified network. There are systems available to transfer the data between TC-AIMS and JOPES, but system operators complain the systems are too slow and inflexible, so they end up manually transferring the data. Using JOPES for non-unit cargo is a new concept that supports movement forecasting; however, this movement data is not provided far enough in advance to support transportation resource planning. The majority of retrograde cargo is moved on commercial planes and ships that are planned and coordinated with 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.

Conclusion

The Army and its sister Services have learned many important lessons on how to retrograde equipment in order to drawdown from a large extended overseas operation. Figure 5 presents a good visual summary of the key tasks and supporting functions that

are required to “Empty the Theater” with many processes and systems transferring from OND to OEF.⁵⁹

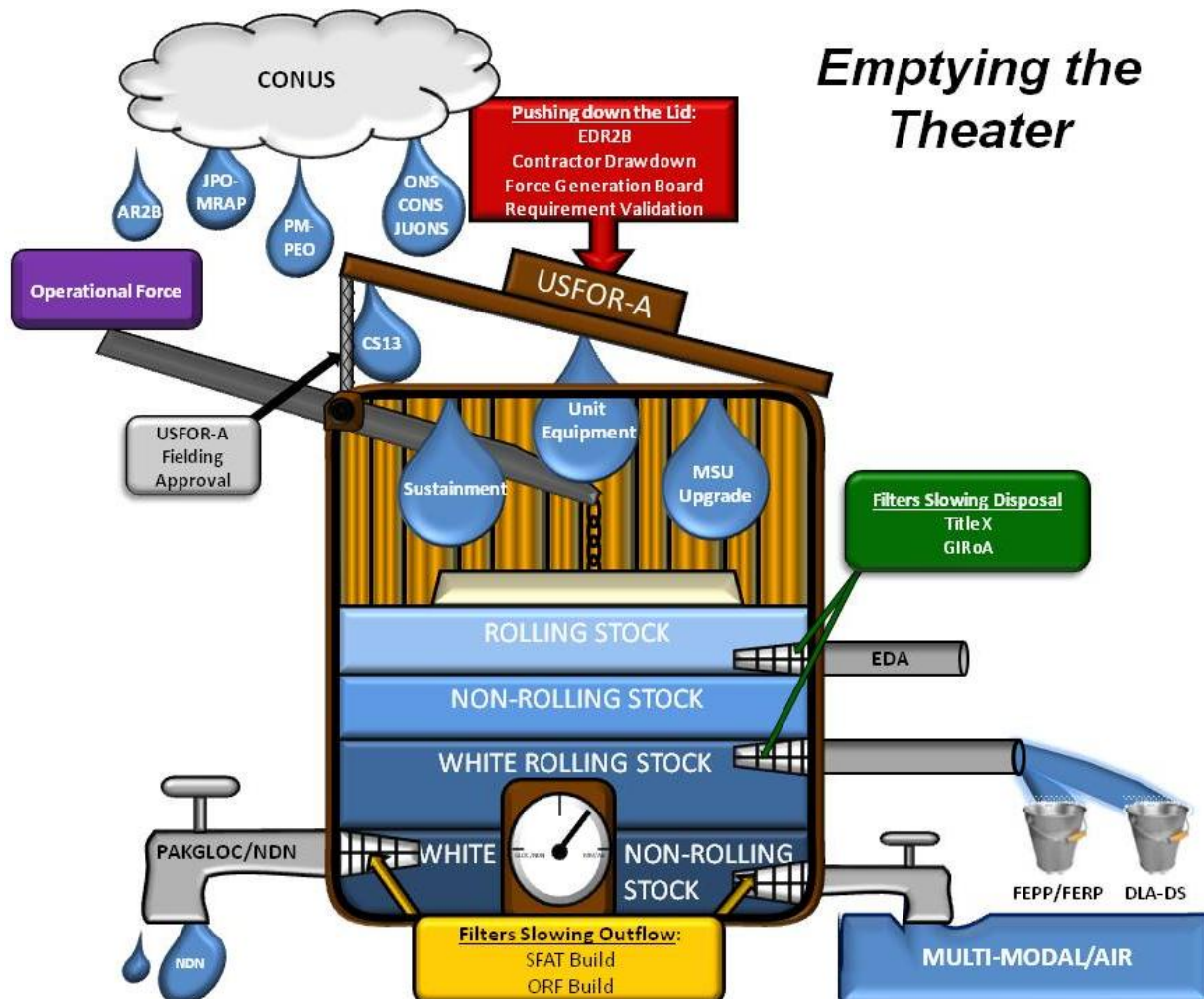


Figure 5. USFOR-A Diagram of Empty the Theater Process

The Army developed the equipment deployment redeployment review board (EDRB) to validate theater requirements before deploying more equipment into Afghanistan. USFOR-A will never empty the theater if units continue to bring in additional equipment; the EDRB approves any unit equipment before validating it for deployment. In addition to reducing unit deployment equipment, DoD must reduce its

appetite for new equipment and capabilities. As the operational force requirements decrease, rolling stock and non-rolling stock becomes available to retrograde, however, there are filters that slow the equipment reduction. Title 10 limits what will be donated and provides the disposition on where the equipment will go or be disposed of. As discussed previously, GIRoA has limitations on what it can absorb. Lastly, as the lower left corner of Figure 5 shows, the PAKGLOC and NDN currently only have a drop of capacity while the majority of equipment leaves via multi-modal/air.

Recommendations

During the next two years, the majority of US forces and equipment will come out of Afghanistan. This section summarizes the recommendations provided throughout this paper to help USFOR-A meet its retrograde timeline

Retrograde Recommendations to help USFOR-A

- There are three specific ways USFOR-A can increase divesting opportunities:
1) OSD should request from Congress the authority to transfer excess construction equipment to the Afghans, something the law currently does not allow; 2) OSD should request from Congress the authority to transfer non-excess materiel to coalition partners, and 3) similar to Iraq, DLA DS should increase its capacity to demilitarize equipment and dispose of the excess.
- In order to increase the retrograde velocity and maintain a steady reduction of excess, USFOR-A needs to increase the rate of large-base closures. This effort will produce substantial amounts of excess equipment to move out of the theater and place stress on the transportation system. The added transportation requirements will cause USTRANSCOM to evaluate and plan capacity to meet the demands over the next two years.
- Increase the monthly net retrograde goals to 1,400 pieces of rolling stock and 3,100 TEUs.

- DoD should consider de-coupling the people redeployment timeline from the equipment retrograde.⁶⁰ De-coupling means that the equipment retrograde timeline may extend into 2015 until the interagency coordinates a more cost efficient surface route.
- USFOR-A should identify a location to store equipment in Afghanistan past 2014. Accepting the potential reality that not all equipment will leave before Dec 2014 will force the US to factor a prudent equipment component to the post-2014 presence negotiations with the Government of Afghanistan.
- 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 operating picture.

OND and OEF retrograde lessons for the Army 2020

- Incorporate lessons learned on the importance of whole-of-government approach to defense access challenges into future doctrine, policies and procedures.
- Reevaluate how best to employ the Expeditionary Sustainment Command and define their 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 doesn't 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 with the incomparable geopolitical challenges of Afghanistan.

The 'logistics enterprise' determined there was a need for many retrograde enabling capabilities to support the retrograde operations from both OND and OEF. Based on the requirement for these capabilities, TRADOC should do a DOTLMPF 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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- ⁵⁷ Daniel Goure, Ph.D., "Acquisition and Logistics Lessons from a Decade of War", "*Early Warning Blog*" (Lexington Institute), October 11, 2012
- ⁵⁸ R-CAAT Series Army Material Command Operation New Dawn Retrograde and Reset Lessons Learned AAR Presentation Transcript, Volume 35, May 2012, 80.
- ⁵⁹ USFOR-A J4, "Empty the Theater" briefing slide, unknown date.
- ⁶⁰ Ibid., 29.

